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Virtual Interaction: Interaction in Virtual Inhabited 3D Worlds

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17.1.1 Through the Maze of the Freaks

To form some ideas of what is characteristic of narration in computer-generated multimedia compared with that of film, the article opens with two short, exemplifying and comparative analyses of a game (*The Residents Freak Show*, which the introductory text calls a "theme park of imagination" – "envisioning the future of interactive stories, music video, and digital art") and a film scene (from Kurosawa's *Rashomon*).

The analysis of a sequence of *The Residents Freak Show* focuses on the player's (the user's) relation to a variety of available attractions in the fairground, because *Freak Show* is presented as a circus that has come to the local fairground, where people can enter and go to see a series of separate acts or shows – in this case so-called freaks or monstrosities. In this way it is more like a small, travelling amusement park, where the acts in fact are like booths, in which visitors can get their entertainment by performing or witness exciting and extraordinary actions. The show people arrive, offering experiences out of the ordinary and beyond the rules and framework of everyday life.

The following is a sketch of how *Freak Show* works: (1) The user can click to see each attraction in the circus tent. (2) Those acts can also be understood as stories about each freak's fate, e.g. a kind of concentrated narrative, which in this way are created through the users' exploration of the environments and things he finds. (3) One of the paths can be described as a "trap": you end up in a room where you are apparently forced to buy other examples of the designers' products! "Buy or Die!", as a sign says. (4) Last but not least, there is a route, where the user, having entered one of the caravans that it is possible to explore, is finally twisting himself through and past something that he gradually finds out looks like the inside of a brain – nerve fibres and the like.

Apart from rows of curiosity-arousing exhibits along the route (potential detours or dead ends – teasers!) you end up in front of something looking like peepholes and, if you open and take a look outside, you see – straight into the face of another visitor. Not only are you standing inside an eye, you are also positioned as a gaze yourself, meeting other gazes. The exploration of the freaky attractions leads to the encounter with the curious audience – that you are part of yourself.

17.1.2 The Player Sees His or Her Own Activity

The gaze meets itself; curiosity looks itself straight between the eyes. The narrative meets itself in the shape of the activity that is necessary to get anything told at all. In other words, you can say that *Freak Show* makes a theme out of the very relation between the seeing and the seen, or the distance between what is narrated and the narrator. In the context of interactive media we may put it in a perspective: user activity explored as a research into virtual 3D fiction.

While this is a meta-level that is built into *Freak Show* itself and which in this way positions the player or the viewer within the universe of the narrative, this practice also defines these positions of the user and the used – not just, as it may seem at first glance, as involvement, but as distance. Any media and communication practice will define a user, player or viewer position, and so it does in this case: the curious fairground visitor who is watching the strange characters, freaks of nature, and runs the risk of becoming aware of – him- or herself. The eye is turned to – the audience itself. This means that attention is drawn to an element of narration, which is of importance to our project in general, too: the *user and viewer activity*.

17.1.3 A Choreography of Eye-Lines

Akira Kurosawa's film *Rashomon* (1950) could very well be said to resemble a game. In the framing story three men discuss a murder case. A samurai has been found dead in a remote forest. He may have been killed in a duel with a notorious bandit, been stabbed by his own wife, or committed suicide. Before his eyes, the bandit assaulted the samurai's wife, or she eventually submitted willingly, perhaps provoked by her husband's cowardly behaviour. Two of the men (a poor woodcutter and a priest), whose discussion is the film's point of departure, have given testimony at the subsequent trial. In addition to their versions – and the third man's sarcastic doubt about everybody's statements and motives – we are presented with the versions of the three involved persons: the bandit, the wife and the dead man (speaking to the court through a medium). Thus we are presented with no fewer than five versions of the incident.

Naturally, the different testimonies given about the events in the forest hold different opinions about the question of guilt. Also, the scenes showing each account demonstrate the witnesses' possible motives to tell it the way they do. Through its narrative structure and its visual style the film arranges both the level of narrative authority (the narrator) and each of the witnesses in front of the viewer who, in his turn, will take different positions on the testimonies and the film in general. From an audience perspective, the important question really isn't to find

the solution to the murder mystery, as much as it is the discussion of dilemmas, possible motives, credibility and the possibility of moral judgement etc. In other words: a game of possibilities.

A brief analysis of the camerawork in a scene can demonstrate the position of the viewer's gaze and the construction of the interplay between viewer and narration. In his version, of course, the bandit describes the incident in a way so as to show that from very early on we have a triangle, the samurai's wife willingly submitting to and choosing him at the expense of her husband. Therefore it wasn't really rape. Subsequently, according to the bandit, the woman provokes a fight until death between the two men. She will follow the winner.

The prelude to all this is: after having lured the samurai away from his wife, the bandit attacks him and ties him up. Then he leads the woman to the scene of the crime in order to show her the husband's powerlessness. From that moment on the following series of shots are composed and edited in a very special way which precisely establishes the literally triangular field of psychological tension between the characters.

One after the other, the three characters turn their heads slightly and move their eyes back and forth between each other. Traditionally this kind of cutting on eye-line matches is done by switching between the looking eyes and shots which from the exact watching position show what the characters are looking at. But, in this case Kurosawa has chosen another solution that becomes a remarkable "circular movement" between the parties of the triangle. When we see one of the characters turn his or her eyes towards one of the others, Kurosawa will cut not just to a shot showing this other character from the seeing character's point of view (POV), but to a camera position *behind* the looked-at character. As a result, the latter's back is in the foreground of the shot, while the character whose eye-line was changed in the previous shot is seen in the background, looking out towards the next person and the camera. Then, this character in the foreground turns his or her head/eyes, and a cut is made in precisely the same way to a shot from a position behind the character towards whom the gaze is directed, etc. This style figure is repeated five times, until the camera is finally moved from behind the head of the wife to an *en face* position, a moment before she tries (in vain) to attack the bandit, is overpowered, submits, and things happen the way they do.

17.1.4 The Film Viewer's Activity

As a result, this style practice (and other ways in which Kurosawa stylizes the cinematic narrative activity during the course of the film) has an influence on the viewer's way of seeing, and as a consequence on his very relation to the characters, their gazes and positions, as well as the position of the narrator. In this way, the film right from the start accentuates *the audience as privileged observers and participants in the discussion* – and on the other hand it also establishes a narrative authority with which it is possible to discuss. ("Narrative authority" is a crucial concept in Browne (1975), his pivotal article on "the spectator-in-the-text"). Thus, in this scene we have a whole system of gazes. As mentioned, the gazes of the characters are emphasized by the style of editing, and the same goes for "the point of

camera view". *The audience can see this system of gazes see.* This necessary participation in the project of narration on the part of the audience, in the same way as in *Freak Show*, again draws the attention to *the viewer activity.*

On the one hand this dialectical approach of comparing cinema and computer games confronts (traditional and new) film theory, and on the other hand hopefully leads to new concepts of both multimedia and cinema. It involves reflections on multimedia as sign systems; montage-based meaning production, and narrative practice. This also means ideas for rethinking traditional concepts of sign, meaning and montage in the new media surroundings of multimedia, taking as a point of departure the inspiration from film theory. It is essential to start a renewed thinking through of the aesthetics and the theory of the moving image. Time and space as dynamic and basic features must be seen as integrated in the sign of the moving image, not least in the context of new computer-based developments within mass media entertainment and communication.

17.2 Involvement and Distance: Whose Point of View?

17.2.1 The Cop and the Machine

The analysed examples and the interplay between (1) style, (2) narrator and (3) user/viewer which I have emphasized point to a discussion of involvement and distance. Are they contradictory elements, or can they work simultaneously? One of the points of the following discussion is that the concepts of involvement and distance are preferable to those of identification and detachment. A telling articulation of the interplay between the three: the inherent statement of visual style, the narrator, and the user/viewer can be seen in *Robocop* (Paul Verhoeven, 1987).

Traditionally the film viewer is said to be put in a character's place (or even experiencing some kind of identification) through the use of a particular fictional character's point of view. That is, the camera is placed in the exact position of that character's eyes, the idea being that we as an audience see and experience the world not only through that person's eyes, but even through the character's mind, so to speak. Also, this stylistic figure is said to cause identification with or sympathy towards the character. Without denying that this may be the case in some instances, I shall nevertheless contend that there are numerous occasions where the subjective point of view does not lead to simple identification with or empathy for the person whose POV we "borrow".

In near-future Detroit a cop, Murphy, is killed in the line of duty. But the corporation which now runs the police department transforms him into a perfect cyborg cop. Murphy, the brain and the body parts that are left of him, has lost his identity. Neither his human nor his machine parts are able to remember anything by themselves. But the machine/computer part of Robocop the Cyborg is able to plug into the police department's computer system and retrieve information about a criminal that his built-in memory has recognized and about the gang he is working with. These are the gangsters who killed Murphy, and through the files he also learns about their victim, himself. All of this we are able to follow on-screen, because the

POV of Robocop is not only the representation of his gaze, but also the interface which gives access to the information he is able to get out of the department's server.

After that, Robo-Murphy and the audience are able to go a step further. His brain and his visual centre being linked to the cyborg's hard disk, he is able to "see", which means that he can go out and search for his former home, enter it and recall scenes with his wife and family. All this the film (e.g. the narrator) is able to show us on Robocop's inner screen, so to speak, since we have been "installed" in the cyborg's POV by way of a subjective camera – in a very literal sense! This is shown in much the same way as we saw the criminal who gave him the clue to his own identity, namely through Robocop's POV. That is, through his camera–monitor–display–computer–screen–cabled gaze: the film screen is transformed into a multi-layered interface representation – which becomes the viewer and user interface, too, during the cinema experience, and which also resembles the interface of a computer desktop or game. On the one hand we have the human side of the cyborg, his view of an earlier life, family, and the gaze that can show all this to us. But the gaze has literally become a screen, monitor lines and all. The view that is supposed to drag us into his mind and life is establishing a distance, too.

But the fact is that films with a more ordinary use of POV also work the same way, as does *Robocop*. In this film it is just made more obvious and built into his, the cyborg's, camera- and monitor-like "gaze". In principle, this gaze is the same (only here half-human, half-machine) as the audience can watch in movies where a subjective POV is "only" supposed to relate the viewing position of a human character. It is much too simplifying to argue that the viewer "is" or "becomes" the character with whose gaze he sees this or that in a scene. Whether or not people sit in the movie theatre and think that way, this is how it works. The viewer watches a camera watch (or mime) a gaze watching things or other characters in a scene.

So, the point is not that you identify with a character just because of the use of subjective POV. But this style figure may very well contribute to an involvement in the event that is being shown and the characters in it, because, in a way, you have access to the fictional world through the spatially free camera. The narrator has the power to find his vantage point anywhere; consequently in subjective points of view, too. But at the same time, the involvement has as its basis that the viewer, with the distance which is established partly through the camera position, often has a broader understanding of things than the characters in a scene (e.g. knowledge about other characters, their thoughts and the preceding events of the film).

For instance, it is not unusual in thrillers or horror movies that the subjective camera point of view is positioned with threatening villains or murderers. But in the context of the situation as a whole it is perfectly possible to experience involvement and engagement on the side of the potential victims.

17.2.2 Babysitters and the Killer's Eyes

Within the very first shot of a film like *Halloween* (John Carpenter, 1978) the camera is identified with the point of view of the psychotic murderer. Through this gaze he, and we, observe his victim and follow his deed. A six-year-old boy

apparently for no reason slaughters his teenage sister. He is hospitalized, but after 15 years he escapes, returns to the small town – same street, same house – and starts looking for teenage babysitters! So, though we hardly see the murderer's face, the result of the opening scene is that many camera movements of a certain floating or gliding kind, and certainly every shot of that kind, which is also defined as a subjective point of view, is charged with the horrifying quality: *he is coming*. The viewers do not just look at the town and the girls, but do so through his eyes. But more than that: the audience sees his gaze see the victims. Involvement and distance are active at one and the same time – the former on the part of the victims, the latter by way of the knowledge of the circumstances and the threat – and both are equally necessary in creating the thrilling experience. As mentioned above in relation to *Rashomon* and *Freak Show*, users and audiences see a whole system of gazes see, and this includes the gaze of the camera and its demonstration of different characters' points of view.

17.2.3 Looking at the Looking. Playing with Distances and Involvements

The interplay between different positions and between media and users is a way of describing users' and viewers' involvement. But as the analyses show, an important element in the relation between the three levels is the distance inherent in the embedded indication of the difference from the narrative as plot or mere string of events (camera and editing style in *Rashomon*, the game's "own will" and the explicit display of the user position in *Freak Show*). The difference between user position and diegetic position lies in the question of how users/viewers become involved as such. This does not happen in terms of becoming part of something or identifying with somebody within the fiction. It may be brought about through the curiosity that people, from a certain distance, feel towards something which is told or presented in well-shaped (stylized) and well-defined forms (beginnings and endings as crucial breaks between reality and the worlds of fiction; see Kau (1996b) on beginnings and endings).

Thus, rather than talking about identification and/or detachment, it is practical and more suitable to use the concepts of involvement and distance. It is possible at a certain distance to get involved in the universe of the characters, watching them and their fictional world from a series of different positions in and around it/them. It is perfectly possible to get involved (feelings, sympathy and all), and at the same time be aware of one's distance from the fictional worlds of make-believe.

17.3 Transmission and Transformation

In his article "True lies. Perceptual realism, digital images, and film theory" (Prince, 1996), Stephen Prince has an interesting discussion of analogue versus digital imagery. And it has inspired some of my following reflections on computer games and cinema. Digital imaging technologies, both in the production of film (storyboarding, shooting and editing) and in the experience of it ("un-human" and "un-natural" transformations), create problems for parts of classical film theory, says Prince. New and creative possibilities are so many that they challenge traditional understanding of cinematic representation and viewers' response. Some of

his examples are *Forrest Gump* (1994, President Kennedy talking to Gump), *Terminator 2* (1993, computer-generated supernatural effects) and *Jurassic Park* (1993, recreation of extinct species). Although I can agree with his idea and examples, I would like to add that while Prince contends that, in a digital and computer-crazed era, these possibilities are unprecedented, this is not entirely true. In principle, at least, they are not different from cartoons and the cinematic tricks of for instance Meliès: the fact that you are able to create credible pictures which are not naturalistically mimetic is a well-known part of film history. On the other hand, if you bring this pictorial reflection back to the cinematic picture, so to speak, we may as well conclude that the exercise only reinforces the conception of cinematic fiction as radical illusion, pure make-believe. This way of thinking may end the superstitious belief in the cinematic image as indexically connected to our real world (cf. my suggestion below: to distinguish between *transmission* (the domain of indexicality) and *transformation* or creation (the domain of symbolic meaning production).

The curious point about the many strange digital creatures in new films is that "no pro-filmic referent existed to ground the indexicality of its image" (Prince, 1996, p. 29). Hence the theoretical problems as well as the creative possibilities. But theoretically and from the point of view of the creation of fictions (games or VR as well as films), as models of fantasy worlds – and the meaning they may have other than documentary-like indexical anchoring in apparently photographic reality – indexicality is precisely not the interesting aspect. What is interesting in these worlds of fiction is what meaning they are able to create apart from indexical references.

17.3.1 Plausible Artificiality/Artificial Intelligibility

Instead of using indexical references as explanation, Prince argues that our understanding of digital imagery is also based on a correspondence theory: "film spectatorship builds on correspondences between selected features of the cinematic display and the viewer's real-world visual and social experience". (Prince, 1996, p. 31). But my point is that this has only to do with recognition, the simple understanding of what things and what dimensions and so on we see in the picture. The effort to bring the index theory, and the pseudo-natural-scientific so-called cognitivism, down from its pedestal, is an exercise trying to show that it is not so-called real-world experience that decides whether pictures are realistic in terms of credibility.

The aspect of recognition in this correspondence theory is but a starting point (a necessary precondition for production) for establishing an *artificial* world with the necessary amount of credibility. *The aim is plausibility, which is defined in an internal set of relations within the fictional and constructed world itself, rather that in an external reference or correspondence relation to the real-world experience of the viewer.* Just try to think of Donald Duck, Goofy, Bugs Bunny, *The Mask*, *The Matrix*, Pat and Billy in the film about Garrett and The Kid, *Edward Scissorhands*, or *The Godfather*. Or take a western, a film noir – all genre movies for that matter. Are they plausible because of any relation to our own everyday experiences?

Things that are the basis of the pure and simple understanding and recognition of characters and things are not the interesting parts of visual fiction. What we are

able to respond to and see in (more or less) meaningful relation to the world and life of the audience, is not explained by the simple correspondence idea inspired by cognitivism. For instance, very often the interesting parts of visual narrative fiction are the *improbable ones*, things that add perspectives to ideas and thoughts and do not resemble anything. But they may offer new ideas or meaning to be taken into the viewer's world. Or we may call it an experience that is precisely *out of* one's own world (aesthetical, enjoyable, fantastic, entertaining, extravagant, surprising, thrilling, scaring etc.).

Two examples can demonstrate differences rather than correspondences: (1) watching a melodrama, you may sob because of the lovers' lack of understanding and the complications of which they are the victims; and (2) viewing crime films and thrillers, you may get angry or thrilled, maybe even outraged because of the villains' deeds. You sit in your seat and feel all this. But you would precisely not behave like that in real-life. Instead of just watching, you would explain how things really are and help the lovers, and in the other case call the police instead of just passively witnessing a fight or a robbery.

17.3.2 Acting and Understanding in What World?

We are able to understand the character-models, and we "know" from the way the world works (morality etc.), how to have an opinion about them, but even – or better: precisely the patterns of emotional reactions in the media experience are different from those of the real-world experience. In the former you have feelings when faced with examples that are put into a (narrative/aesthetic) system – and have your own views on the matter. In the latter you *participate* in and *act* with your surroundings. Recognition and perception of elements, models and prototypes that may recur from film/media to real world (or the other way around) do not result in the same or corresponding emotional reactions in those two worlds. Understanding and interpretation of the elements within the fiction trigger other things than does the involvement of oneself in events in the real world.

Neither agents nor their surrounding worlds in multimedia or films are real. Thus neither audience nor users will react to the media in the same ways as they would in real life. The consequences of this can be shown in analyses of examples from cinema, computer games and multimedia presentations, one of the questions being: how do members of the movie audience, game players and other users in fact interact with or respond to the media products or "surroundings" they are confronted with? In what way do aesthetic patterns and rhetoric of the media guide attention and action (interactivity)?

Virtual worlds and fiction are separated from the real world. Pictures and events are composed and structured in the former; the latter is neither composed, nor has it any narrative or dramaturgical structure. To keep things clear and to distinguish the use of media in fiction and in reality, I have introduced the concepts of *transmission* and *transformation*. In this understanding, transmission is a term dedicated to media practices and genres that depend on reference: much television production, documentaries, news, sports and live productions in general, whereas transformation (or creation) is dedicated to the production of different kinds of

fiction: fiction films (and their computer-generated elements, of course), cartoons, soap operas, virtual 3D worlds (not VR used as a means to carry out for instance "distance surgery", though; people working with these tools have to use very precise references, hopefully), and computer games. (Further use of the idea obviously calls for a lot of work, defining possible combinations and crossovers between transformation and transmission (for instance the use of one type in the other?), and perhaps even genres, some of the possibilities being: (1) live on tape: transmission material used to construct/edit an end product that is a transformation; (2) does the editing of an overwhelming number of camera positions during a transmission of a sports event turn it into a transformation (creating an experience of a kind of fiction)?; (3) the use of documentary type footage as raw material for otherwise computer-generated fictions/games; and (4) or the other way around, using computer-generated material to be mixed with footage containing real actors, landscapes etc.). In the present context my point is that all of the examples of this article and their described mechanisms represent elements of transformational use of the computer and film media.

17.4 From *Riven* and *Myst* to San Francisco and Ferrara. The Power of the Spaces

17.4.1 The Role of the Player

The game *Riven* is the sequel to one of the most successful games worldwide to date, *Myst* (Eugeni, 1998, p. 9). Apart from the account of the success of *Myst*, Eugeni's article is one of the best texts I have read on the subject and some of my discussions of *Riven* and games in general take it as their point of departure). Like *Myst*, the world of *Riven* is constructed as a combination of several types of elements. Video clips show the main characters inhabiting the world of the game. Actors play the parts, meeting the player at different crucial point of the game, sometimes giving information, sometimes asking questions, or handing over diaries or other books. The world of *Riven* is based on thousands and thousands of computer graphic pictures, combined with a series of impressive 3D-animations. The iconography is characterized by fantastic landscapes, uncanny jungles, idyllic beaches, ancient-looking dwellings, a medieval temple, steam-driven machinery from the industrial age and fantasy creatures. Most of it is in a style resembling the work of cartoon artist Enki Bilal. Also, the impression on the player is enhanced by the use of music and sound effects. Stone and metal doors and elevators and machines move with echoes, rumpling and clanking and creaking that literally make you hear their weight and material.

Like films and other computer games *Riven* tries to involve the user by "offering him a camera position". Right from the start the user meets the game and the first character in it from a so-called first-person point of view. The camera is defined as a subjective POV, and as a player you are positioned in it! The man, Atrus, in front of the user asks his help, and so we are on our way into the plot. Briefly, it goes something like this. Years ago, in another world, Atrus's father, Gehn, was able to create

worlds – by literally writing them. Writing a book about a world would make this world exist, and through the so-called link-books it was possible to travel between the worlds. But Gehn's worlds were not perfect, at least not in his own view, and instead of trying to make them better and perhaps save them and their inhabitants, he would abandon them and go on to new projects. He saw himself as the god of these worlds, but Atrus, who became at least as good at writing and creating as his father, couldn't bear to see whole ages collapse and their inhabitants just disappear. This fate would also be that of Riven, named the Fifth Age by Gehn, but in this case Atrus also had a personal interest, since his wife, Catherine, came from the Fifth Age. Atrus and Catherine have managed to trap Gehn in Riven. While Gehn is trying to create a new world to flee to, the user's task is to help Atrus save Catherine and her people before the inevitable collapse of Riven, trap Gehn, and let him disappear with the Fifth Age.

Apart from the paradox of this metaphorical status of the book (the power of the letter, and the literary sources for the worlds of *Riven*) in the genesis of the digitally generated life and space of the game, it is also part of the characteristics of many games, CD-ROM productions and multimedia presentations that, to a very large extent, they depend upon introductions, explanation of pre-histories, narrators or other written "sources" to get a plot going.

To reach his goal, finding the necessary tools and information, as he goes along, the user has to find his way through maze-like structures, solving a wealth of puzzles, finding all kinds of clues, and restoring power to machines and vehicles in order to make his travels between different parts of the Fifth Age possible. To do all this, the user must navigate through the space of this virtual hypertext-structured world. Basically, this of course is done by using the cursor/pointer. In Both *Riven* and *Myst* it has the shape of a hand on the screen. On moving it to different positions it changes according to what actions are possible. When looking into a landscape or a building, the user can move the hand pointing upwards/into the picture to the desired spot or path that he wants to go to and click. This will change his position moving forward. It is also possible to click on left or right pointing hands. This of course turns the view in the respective directions. In some quarters the pointing finger may be bent as though pointing over one's shoulder. Clicking in this instance turns the user 180°. Likewise the user may move up/look up or move down/look down/move back, according to hands pointing up or down with the palm turned against the player.

17.4.2 Working at a Distance

Movements and different positions are reached by transitions from picture to picture, resembling fairly fast dissolves in film. Left or right turns, on the other hand, appear like medium slow wipes or swish pans; this is not always very elegant, especially since the position of the user may change in jump cut-like fashion from one frame to the next. Each frame or computer graphics picture of *Riven* is very delicate work, many of them even beautiful. But the fact remains that the user moves through a world composed of separate graphic plates. This, combined with the manipulation of the pointer, makes the built-in distance mentioned above in

relation to camera position and point of view in the film *Rashomon* and the game *Freak Show* present, in spite of what Eugeni calls the first-person point of view of the user.

Besides moving things and opening doors and so on, the user travels and manipulates vehicles (trams, a small submarine, and the like). When set in motion, these means of transportation run as animations, and they are impressive with sometimes rollercoaster-like effects. Nevertheless, as mentioned, both involvement and distance are at play in games as well as in films, and involvement is not accomplished through subjective POV alone. You have to have something, characters or events, to get involved in, in the narrative. Were it not for the introduction to the plot by Atrus or a booklet or something else, the staging of the user's POV in relation to the graphics and the systems of movement together with the lack of events and characters during long sequences would have let the feeling of distance dominate the interaction. This is made even more evident by other characteristics of the camera of *Riven* = the user's supposedly subjective point of view. In a variety of ways it is limited. First visually/kinetically: in some positions it is impossible to look or move in certain directions – parts of the universe simply haven't been drawn. The only paths and areas available are those belonging to the routes of solutions. Secondly, the camera-eye is limited through the workings of the puzzles: range of sight and freedom to move depend on the amount of solutions the user has been able to reach. Again, we are reminded of the interplay between distance and involvement, and often in games users/players are very much aware of their role both in the game and outside the game, e.g. the player with the pointer, the mouse, the hand.

17.4.3 Four Spaces

From this description and the analytical points we may summarize elements at different levels. (1) The user is introduced into a narrative context with certain plot structures, too. (2) On the screen it is possible to move different versions of the pointer "over" the world of *Riven*. We know it as the interface, and it corresponds to the surfaces or screens that make it possible to experience other media. It is the kind of physical layer or "scene" where we can meet television productions or films. (3) From his own position, the user can observe the screen and what is happening on and in it, and get more or less involved, and by using the mouse act according to the development of the game. You might say that from his chair the user is able to touch the diegetic world of fiction. (4) All of this is governed and structured by the system of the game: its programmed script.

In his analysis of *Myst*, Eugeni calls these levels spaces, and they are useful as descriptions of the mechanics of *Riven*, too. This is the way he describes the relations between the spaces:

> First, we have seen how the logic space [my No. 4 in the above, EK] is one of the conditions for the existence of the diegetic space continuum [my No. 1, EK]. Such an underlying space, although invisible, integrates the diegetic space through metaphors: think of the many communication trenches, corridors, bends, doors, and switches that render the routes in the diegetic space navigable. So the diegetic space turns out to be

> completely structured by the underlying (and invisible) logic space, constantly depending on it and permeable to it. Second, the screen space [my No. 2, EK] is never completely transparent: the pointer is always present on the surface of the screen indicating the directions of the navigable routes in the diegetic world. Third, the diegetic space is open, through the screen space, to the use space [my No. 3, EK]: the pointer can often "penetrate" the represented world and change things (e.g., open doors, alter meter figures, turn pages of a book, press levers and buttons), displaying the user's personal participation in the fictional space. (Eugeni, 1998, p. 15)

17.4.4 Open Games, Closed Films?

Eugeni's view on film: the diegetic space is characterized by its conclusiveness; it is an "enclosed space that cannot be crossed by either screen or use spaces" (Eugeni, 1998, *ibid*), and the exhibition of that space is the goal of the organization of the other involved spaces. The screen space is said to be transparent, and "the use space is wiped out in the concealing darkness of the cinema" (Eugeni, 1998, *ibid*). But, as I have demonstrated in my comparative analyses of examples, this is not so. The organization of the cinematic screen space and the composition of shots (and editing, and camera movement, and...) is pivotal to the resulting diegetic space. The only way you find out about the diegesis and its space is by concentrating on the screen, and it is not to be forgotten of just seen through. The example I have used is the camera position and the concept of (subjective) point of view. This is something which you see on the screen and which is working in the screen space. Similarly, use space is what brings screen and diegetic space together as meaning production. True, the viewer cannot manipulate elements on the screen or in the diegetic space as in a computer game, but for the film to work as a semiotic meaning-producing machine the viewer has to be (inter) active in relation to the film, as foreseen by its originator, the director.

Much as I find Eugeni's work on game analysis innovative and inspiring, his views on film analysis and theory draw on traditional opinions about film that through repetition have apparently become a preconceived "truth", and it is time to think about the interplay between these spaces or levels in new ways. It is not true that screen space and use space do not "cross" or in other ways are active in the diegetic space. This is a blind spot in some traditional film theorists' misconception, embedded in an almost mythologizing view of the audience's self-forgetting experience, imagining that the viewers plunge themselves into the story space of the diegesis, almost disappearing there, leaving their bodies behind and forgetting the theatre and fellow-viewers around them. Furthermore, the logic space of the game corresponds to the narrator or narrative authority of the film, and in this respect, too, I find that the two media resemble each other more than Eugeni thinks. Film fiction is more open, and computer games more closed in structure, than he argues.

In its determination of what action can be taken in the use space (how, as a user, to act in the screen space in order to navigate in the diegetic space), the logic space in this type of game makes its world as conclusive as the narrative chain of events is in a film. As long as you, as a player, are within the game's fiction world (without banging against the limits of any given level), you can move about in a relatively free manner. But as soon as you want to go beyond the limits (perhaps having missed a clue, forgotten to solve a puzzle, or the like) that are set by the logic space

(e.g. what the narrator or designer as narrative authority has decided upon as the governing structure of the diegetic space and development of this particular game), you are thrown or held back within this part of the narrative space, this level of the game. Users experiences this as a limitation of their ability to move; it is a spatial limitation. The result is that not only is the space frozen, in a way, and you cannot get any further in your manipulation of things and navigation in space, but also, as a consequence, time has come to a standstill. The *spatial* trap *blocks the development over time* in the experience of narrative progress.

As a comment on this *relationship between game time and user time* you might think of examples from CD-ROM multimedia productions in the presentational genre. These do not have goals or ends that are supposed to take place in another time and space than that of the user. Games or other narratives in computer-generated simulated worlds have levels, stages or solutions to be reached within the spaces and times of those worlds themselves. Whereas multimedia presentations, too, on the one hand may construct elaborated spaces and more or less firmly organized time-relations, on the other hand the answers and solutions are to be reached at and delivered, so to speak, in the eyes and ears of the beholder in the time and space of the user's world. The user has the power to choose where to go and what information to seek. The user decides upon the pattern of movement and the moment to do this or that. To take an example, parts of the multimedia presentation *Michelangelo* (Oliver Nolin, 1995) are staged like pieces of theatre, or animated chapters with music and the voice over of a narrator. You can choose a presentation of Michelangelo's biography ("Narrative"), and in the main menu of this chapter it is possible to go to no fewer than 33 entrances about parts of his life (1475–1551). Three other chapters are (1) The Work, (2) Characters (with relation to his life) and (3) Places (where he lived and worked). Within these, you can choose between a large number of subjects, such as drawing, fresco or sculpture (in 1), politics, philosophy or religion (in 2) or Chapel, Sistine or Duomo (in 3). At any given point in this Michelangelo world you may choose to jump to any other or leave. It is even possible to go to a special menu to get information about what and how much "ground" you have covered in this material. (Similarly one could refer to many other CD-ROM productions of the presentational multimedia kind, of course. Fine examples are *Blood Cinema* (Marsha Kinder, 1994) and *Film, Form, and Culture* (Robert Kolker, 1999). Although they are of the reference book type, like *Michelangelo*, they also have the advantage of live video examples to illustrate their introductions to film history and theory).

17.4.5 The Game's Space as User's Time Trap

As we have seen, the important result of the interplay between different points of view, possible actions, and the involvement/distance dialectic is the crucial role of user activity in the dynamics and meaning production in the game. This means that the perhaps frozen time in the game fiction spreads into the time of the user space. Suddenly the otherwise involved player finds himself not in game time but in his or her own user time, and the time spent in game space is transformed into time wasted in real time. The otherwise effective and meaningful dialectic between involvement and distance which defines the experience of being "in there" (in the game) and at the same time out here having fun, may lose the

element of involvement and turn into too much distance for the time to be successful entertainment.

This is the potential problem with games: their narration is a way of or[illegible]izing and structuring space and time. If successful, the user can move about [illegible]he game's space from his or her own place, and the user's time is integrated as an [illegible]nderstandable and reasonable interactivity with the game's fiction. But if the user[illegible]s activity in time is not integrated successfully in/or met in a reasonable way by the narrative and logic space of the game, the balance between the world of the narrat[illegible]or and that of the user is lost, and the user is, so to speak, thrown back into his or her own, real, time. As a consequence, the attention is focused on the time that is spent *in vain* in *the use space* trying to find solutions in the *diegetic space*.

17.4.6 Stylized Shapes of Unreal Worlds

To compare with film once more, the user gets involved in the game travel in the same way that the viewer does in, for instance, Hitchcock's *Vertigo* or *Rear Window*. We experience the events in San Francisco and Greenwich Village "with" the main characters, Scottie and Jeff, in a special way: we do so, not just because viewers see "with" or through the characters' gaze, but also because we can see them see. Viewers have (1) the camera and (2) their own gaze on the camera and on what it is telling/showing, including the character. This is just one of the mechanisms that contribute to the difference between real-world experience and the experience of fiction film (and several other media). Also, it adds to an understanding of the fact that the experience of the computer game and its world (things, landscapes, architecture, characters, narrative, time and space as part of its structure) is radically different from the way we experience and understand our own world, reality. At the same time as we are presented with Scottie's experience of the events in *Vertigo*, and sometimes even his visions or nightmares, we are clearly defined as audience: we see him having these visions and dreams and see him seeing what he sees. Again, we have involvement and distance in one.

In Michelangelo Antonioni's last film, *Beyond the Clouds* (1995), there is a scene with two young people who are in love but haven't seen each other for some time. They meet, and while they are walking across a square in Ferrara, Antonioni lets his camera follow them. But in doing so, he moves the camera in such a way that their position within the frame in relation to the Duomo (cathedral) in the background does not change. While we can see them walk, and therefore are aware that they are moving in space, this is strangely contradicted by the way this shot is constructed. If they actually move (and if screen practice is like everyday practice), their bodies should move across the background. But, having the camera move in a certain direction and at precisely the right pace, Antonioni creates the impression that they are *moving on the spot*. The camerawork articulates the screen space (cf. above about screen space in games) so as to produce meaning or give shape to it. This strange experience of static movement (some might call it poetry in motion) is open to any viewer's interpretation, but it is fair to say that the moment is isolated and taken out of the flow of the ordinary continuity of time. Curiously and telling enough, this *time* magic is a result of *spatial* articulation, of the relation between foreground and background when articulated in time and space. That is, as movement.

In *Riven*, as well as in *Vertigo*, *Beyond the Clouds* and other games, VRs and films, the users and viewers are presented with constructions, stylized shapes of visual and unreal worlds that are referentially fictional, as Prince calls them. In a combination of involvement and distance we understand, interpret and react to them as fictional constructs. If we connect to or even like these games and film worlds and the way their meaning is shaped through stylistic construction, we do so from a position outside the fictions; and if we have difficulty in understanding and accepting them or following the rules or demands of the games, we are thrown back into our position in real time and space.

Different kinds of actions in and in front of different, yet connected, spaces of games and films shape the content which users and viewers experience in their encounters with the media. Different kinds of dialogue or interaction between audiences and media have to be analysed and theorized. Hopefully, this chapter has articulated a journey through virtual and film worlds which has contributed to the understanding of the practical and theoretical potentials of games and other computer-generated, fictional spaces, and in doing so demonstrated that it pays to practise a style of analysis which takes as its point of departure a comparison with moving pictures of film and an inspiration from film theory.

References

Bordwell, D. (1985) *Narration in the Fiction Film*. London: Routledge.

Bordwell, D. (1996) Contemporary Film Studies and the Vicissitudies of Grand Theory. In *Post Theory* (eds. D. Bordwell and N. Carroll). Madison, WI: University of Wisconsin Press.

Bordwell, D. (1997) *On the History of Film Style*. Cambridge, MA: Harvard University Press.

Browne, N. (1992) The Spectator-in-the-Text: The Rhetoric of Stagecoach. In *Film Theory and Criticism*, 4th edn (eds. G. Mast, M. Cohen and L. Braudy). Oxford: Oxford University Press.

Carroll, N. (1996) Prospects of Film Theory: A Personal Assessment. In *Post Theory* (eds. D. Bordwell and N. Carroll). Madison, WI: University of Wisconsin Press.

Eugeni, R. (1998) Myst: Multimedia Hypertexts and Film Semiotics, Special Issue of *iris* (revue de théorie de l'image et du son, 25, spring 1998/French–English: Film Theory and the Digital Image).

Kau, E. V. (1986) Nothing is what it seems. *MacGuffin* 57: December.

Kau, E. V. (1995) "You are the camera. The camera is your eye". The Staging of the Gaze in Orson Welles' Work. In *Nordisk Filmforskning 1975–95* (ed. P. Grøngaard). Nordicom-Danmark.

Kau, E. V. (1996a) Filmtilskueren som levende død. Eller hvordan film er konkret leg, der bliver til symbolske billeder; Den ex-centriske billedfortælling. Eller hvordan film er fortællen, uden centrum; and Hvem ser Pauls hemmelighed? Eller hvordan film er sindbilleder, uden identifikation. All three articles in *POV* 1: March.

Kau, E. V. (1996b) Great beginnings – and endings. Made by Orson Well. In *POV* 2: December.

Kau, E. V. (1997a) Sense of emotion – in space. Sense of place – in time. *POV* 3: March.

Kau, E. V. (1997b) Tid og rum i Filmen og Multimediet. At tænke med øjne og hænder. In *Multimedieteori – om de nye mediers teoriudfordringer* (ed. H. Juel). Odense Universitetsforlag.

Kau, E. V. (1998) Separation or combination of fragments? Reflections on editing. *POV* 6: December.

Kau, E. V. (1999) Collapsing time. In *POV* 7: March.

Prince, S. (1996) True lies. Perceptual Realism, Digital Images, and Film Theory. *Film Quarterly* 3: Spring.

Games

Riven, Cyan Inc. (1993).

Myst, Cyan Inc. (1997).

The Residents Freak Show. Ludtke, J. and The Residents (1994). Voyager, New York/The Cryptic Corporation, San Francisco.

Films

Antonioni, M. (1995) *Beyond the Clouds.*
Carpenter, J. (1978) *Halloween.*
Hitchcock, A. (1954) *Rear Window.*
Hitchcock, A. (1958) *Vertigo.*
Kurosawa, A. (1950) *Rashomon.*
Verhoeven, P. (1987) *Robocop.*

CD-ROMs

Nolin, O. (1995) *Michelangelo*, Montparnasse Multimedia, Paris.
Kinder, M. (1994) *Blood Cinema*, Cine Discs, Los Angeles (and book, California University Press, 1993).
Kolker, R. (1999) *Film, Form, and Culture* (and book, McGraw-Hill College, 1999).