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Ideals of Immersion in Early Cinema

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Résumé de l'article

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RÉSUMÉ

Avec comme point de départ le fameux cliché du cinéma « primitif », à savoir ces spectateurs prenant la fuite devant l'arrivée d'un train à l'écran, cet article analyse les diverses stratégies d'immersion et de stéréoscopie dans le cinéma des premiers temps. Bien que les trois dimensions et les modalités de virtualisation propres, entre autres, aux trains fantômes, aux Hale's Tours et aux premières prises de vue sur rails aient déjà été largement débattues, l'idée de « réalité virtuelle avant la lettre » mérite de plus amples investigations. À travers différentes stratégies techniques, textuelles et discursives, le cinéma des premiers temps, dans sa grande majorité, peut se percevoir comme un art de créer un fort sentiment de présence ou d'immersion. Avec le recours au spectacle et à la sollicitation du spectateur, ce sentiment s'avère radicalement différent de l'idée d'identification qui sera plus tard cruciale pour le cinéma classique.

ABSTRACT

With the cliché of allegedly "primitive" cinema spectators fleeing the theatre in fear of onrushing train as a point of departures, this article investigates various immersive and stereoscopic strategies in early cinema. Although the three-dimensional or virtual qualities of, for example, phantom rides, Hale's Tours, and early tracking shots have often been discussed, the notion of a "virtual reality *avant la lettre*" merits a fuller investigation. Through different technological, textual and discursive strategies, much early cinema can be seen to

> create a strong sense of presence or immersion that is, with the use of spectacle and engagement radically different than the sense of "identification" crucial to the later classical style.

My pastime of choice right now is an absorbing videogame called *Max Payne*, made by the Finnish company Remedy. This game features "self-adjusting gameplay," which means that the game modifies its difficulty depending on how well the gamer is doing. If I navigate smoothly, avoid being shot, et cetera, the game will generate more bad guys or more difficult paths, and vice versa: if I play badly (which, sadly, is often the case), then the game takes pity on me and behaves accordingly. On an unusually fine summer day of 2002, I was struggling on a level which seemed impossible to get through. I had done the same thing over and over again: running into a room blasting some people with a 12-gauge shot gun, then turning a corner for a showdown with three more villains. I usually managed to get through this obstacle, but it was always game over after that as I constantly managed to fall down a flight of stairs. When I turned the corner this time, ready to pop some caps at those pesky mobsters, *another* one suddenly and unexpectedly appeared from behind, putting a bullet through my head at point-blank range. Clearly, I had gotten so used to this level that the self-adjusting function had created a new obstacle. My reason for telling this anecdote concerns my reaction to this surprising turn of events: I screamed in terror and pulled the controller so hard I ripped the cord out of the consol, knocking over some bottles on the table in the process. Sitting alone in my apartment in front of a 28 inch television set, I had obviously encountered a kind of immersion, an experience of realism so vivid that I momentarily lost the distinction between fiction and reality. As a trained film scholar, I suppose I shouldn't be such easy prey for tricks of surprise. But there I was, cleaning up the mess I made, plugging the cord back in, and having to take comfort in these words from a review of *Max Payne*:

> Realism to the Max.
> The first PC game with photo-digitized textures,

> radiosity lighting and hardware T&L combined. All
> this tech talk just means gameplay never looked this
> real, nor frightening.[2]

I use this real-life incident as my starting point for a discussion of issues around the experience of reality and immersion in early cinema. Traditionally, the history of cinema has often been told as a progression towards either more effective or more artistic ways of telling stories. Both the teleological presumptions and the narratological one-sidedness of this view have been challenged of course. It has been suggested, for example, that the history of cinema rather is characterized by nineteenth century predictions of a medium which would work as point-to-point communication in real time. In this regard, television was not an offspring of cinema, but rather the opposite: cinema was an illegitimate child of nineteenth century fantasies of television. Although I completely agree with this notion (most thoroughly developed by William Uricchio),[3] I would like to supplement it with another nineteenth century media fantasy: that of immersion.

Total Cinema

In 1877, *Scientific American* wrote: "It is already possible by ingenious optical contrivances to throw stereoscopic photographs of people on screens in full view of an audience. Add the talking phonograph to counterfeit their voices and it would be difficult to carry the illusion of real presence much further."[4] Twenty years before the Lumière brothers, fifty years before synchronized sound film, seventy years before 3D cinema, and a hundred years before the oxymoronic notion of "virtual reality," the *idea* of an "illusion of real presence," as *Scientific American* put it, is already in effect. This is what André Bazin (1967, pp. 17-22) much later famously termed "the myth of total cinema": "a total and complete representation of reality… the reconstruction of a perfect illusion of the outside world in sound, color, and relief."

The 1877 *Scientific American* article, of a future medium combining high-end technologies such as the stereoscope and the phonograph, is more than a random example. I think it

could be productive to view almost all of film history as a sort of striving for this illusion of presence, or immersion. Different technological and aesthetic strategies have been used to fulfil this objective, and in this respect, technologies such as 3D, Smell O' Vision or Sensurround, which often have been viewed as detours in the alleged progression of film history, are crucial steps rather than anomalies. And the first twenty years of film abound with predictions of how cinema was soon to have not only color and synchronized sound, but also three dimensions.

Plunging In

One of the most often used platforms for distributing moving images today is Apple's popular application QuickTime. In marketing one of their versions, the company states:

> QuickTime VR is Apple's award-winning photorealistic cross-platform virtual reality technology that makes it possible to explore places as if you were really there.… At the intersection of commercial photography and new media technology, QuickTime VR moves the photographic image from the flat, 2D world into a more immersive experience, complete with 3D imagery and interactive components.[5]

The iconography in the QuickTime VR showreels is familliar to students of early cinema, with motifs such as views from train engines, picturesque scenes of mountains or the sea, et cetera. The pretensions of course are enormous: "as if you were really there," "an immersive experience." This highly metaphysically charged notion is what I want to analyze here.

Immersion as we know is something of a catchword these days.[6] Literally, of course, it denotes a body sunken into a liquid of some sort. And as a metaphor of technologically simulated presence it is an apt one. Diving into water, for example, or sinking into a bath, we are not only in the realm of the audio-visual sensorium; *all* our senses, in fact all of our body, is encapsulated, surrounded. In that sense, it is a *haptic* experience, not merely an optical one. And this of course is not coincidental: manufacturers of virtual environments always try to convince us that their products are multisensory. But if immersion today is

mostly used metaphorically, we would do well to think about its literal meaning. Liquid states of being can be tricky ontologically, as pointed out by Plato in his famous analogy from *Phaedo* where a straight stick put in water appears as bent.

Water has also been a preferred subject of cinema, and a challenge for filmmakers. Today, for example, water is a major challenge to computer animation (as is hair, fur, and so on). Two recent Hollywood films demonstrate this. *The Perfect Storm* (Wolfgang Petersen, 2000) and *Cast Away* (Robert Zemeckis, 2000) might be read as a competition in rendering water by the two largest companies in the field: Industrial Light and Magic (who did the animations of *Cast Away*) and Dreamworks (who did *The Perfect Storm*). In the first years of cinema, spectators were amazed at how the complex streams and waves of water were rendered in full motion. For example, of the film *Panorama of Gorge Railway* (Edison, 1900), the Edison catalogue states:

> The camera in securing this picture was placed at the front end of a train ascending the grade at a very rapid rate of speed. The combined motion of the train in one direction and the water in the opposite direction, the latter impeded and interrupted in its course by the rocky path through which it flows, sending beautiful masses of spray and foam many feet in the air, makes an impression on the audience long to be remembered.[7]

Now, this is a kind of almost *literal* immersion, with water virtually splashing into the face of the spectator. This was a common practice in early cinema, whether the water was in a liquid or vaporized state, as in this comment on Kalem's 1908 version of *Way Down East*:

> The pictures were taken on a New England farm at a time when the weather was so cold the congealed breath of the participants is actually shown in the picture. This is said to be something of a phenomena [*sic*] in motion views, and adds realism to the wintry scene pictured.[8]

Water, the origin of life, always seems to be a crucial index of representational realism. And the producers of the Edison film

already mentioned are clearly well aware of the dynamics involved, featuring motion in two directions: of the train on the one hand, that of water on the other. This of course is a frequent trope of early cinema, emphasizing the spectator's sense of motion by moving the camera or the objects filmed. A favorite motif in the cinema of attractions, trains could have an inward movement, as in any phantom ride, or the movement could be directed out-wards, as in the famous example of Lumière's *L'Arrivée d'un train en gare de la Ciotat* (1895) and all its clones.

That Thing Just Passed Me!

We all know the reports of people's supposed reactions to *L'Arrivée d'un train* and all others like it, so let me just add a Swedish example from the humour column of a 1910 issue of the film journal *Nordisk Filmtidning*:

> From a small English town, the following is reported: In the company of her young niece, an elderly lady one evening went to the town's cinema theatre. It was her first time in such a place, and everything seemed to her very strange and real. As the lady in question was gifted with unusually good sight, she could hardly imagine that her observations were erroneous. Then, all of a sudden, a large automobile approached. Far distant at first, it seemed to move with incredible speed, right toward the spot where the old lady was seated. Just as the disaster seemed to her unavoidable, it took a turn and disappeared. The old lady could not take it anymore. Taking her niece by the hand, she walked hastily toward the exit, saying: "Come on dear, this is not a safe place to stay anymore. That thing just passed me by two feet!"[9]

Tom Gunning and others have rightly claimed that anecdotes like these, rather than supporting a dubious argument of a primitive spectator, should be read as reports of a fundamentally *different* understanding of moving pictures, in regards to both production and reception.[10] I will suggest that the automobile frightening the English lady, or the train rushing toward the protagonist of *Uncle Josh at the Moving Picture Show* (Edison/ Porter, 1902), might be understood as parts of a very conscious-

ly developed aesthetic, in which presence and immersion are important components; in which the ideal spectator is seated inside the image itself.[11] I think it is more than a coincidence that the Lumière brothers would also embark on projects—such as the *photorama*, the *photostéréo synthèse*, or the *cinéma en relief*—where the virtual immersion of the spectator was even more clear.

Whether the movement is inwards or outwards, whether the energy is centripetal or centrifugal, it always seems to be question of an immersive experience. And it still is. A perhaps unconscious descendant of the phantom rides of early cinema is Microsoft's *Train Simulator*, and once again, the movement can go both ways, either inwards or outwards. And in comments on this software, we recognize the reactions of the English lady or Uncle Josh:

> "It's really cool," said one *Train Simulator* team member. "The sounds are great, as is the motion. I found myself grabbing onto things when we took curves." … "When I was standing behind the engineer and he accelerated to 100 mph," added another team member, "I had to move my foot back to brace myself."[12]

In Maxim Gorky's famous account of his first visit to Lumière's *cinématographe* in 1896, he wrote: "Last night I was in the Kingdom of Shadows. If you only knew how strange it is to be there."[13] This text has been analyzed before, but let's for now emphasize the prepositions. Gorky says that he was in the Kingdom, and tells us how strange it was to be *there*. He thus claims to have been not merely a witness to the spectacle, but actually *there*. Where was he? Well, first of all he was at the Café Aumont below the famous Moscow brothel where the event took place. But it also seems that he is referring to the Kingdom itself, that is, as if he were immersed in the images. Later in the text, it appears that Gorky is quite explicitly critical of the invention, complaining about the films being silent, black and white, and hence not convincing as a realist depiction of life. Yet his grammar nonetheless betrays that he registered the very immersion effect, being "there" *inside* the Kingdom. There is an

ambiguity at work here: on the one hand, we *are* there when watching a film; on the other hand, we *are* not there *enough*. It seems as if cinema has always tried to meet this demand of presence, of a tactile experience, of being there, or, to put it another way, of actuality over virtuality.

Narrative's Evil Twin

The cultural reception of closer framings between roughly 1908 and 1912 is a case in point of how immersion has acted as a sort of evil twin to narrativization. Much has been said about the debate on close-ups, but what interests me here is how the gradual acceptance of the device was achieved by using the same arguments *for* the closer framings that earlier had been used *against* them. And these arguments often involved the sense of immersion.

First, an example of the anti-close-up position, from *The Nickelodeon*:

> This practice of stationing the camera almost within reaching distance of the performers is like putting everything under the magnifying glass. All the crass details obtrude with hard angularity. We see the make-up of the actors, the lip paint and darkened eyebrows and the falsity of their wigs. Owing to the absence of retouching wrinkles are augmented and the flesh takes on a pockmarked appearance that is vastly unbecoming. Every detail of the *tout ensemble* suffers in like manner. Wherever there is anything false or flimsy we spot it at once, because things are viewed at such close range. It is like watching a dramatic performance from a stage box. Under such circumstances there is no chance for illusion. Nowhere does the well-known adage, "Distance lends enchantment to the view," apply with such force as to dramatic performances. Distance is an absolute requisite to any kind of idealistic illusion.[14]

The writer complains that the close-up destroys the *illusion*, it is unrealistic, enhancing all that is fake. In this next quote, on the other hand, from a 1912 issue of the *Moving Picture World*, the attitude is the opposite, and note how this time, the close-up is

praised in terms reminiscent of those used by *The Nickelodeon* a year earlier:

> In his beautiful photographs [Griffith's/Bitzer's] characters appear as through fine opera glasses. Every change of expression is more clearly pictured than if they were truly before us, and one isn't embarrassed drinking the effect in. Is it not truly soul music? Can such impressions be created in any other way than on the screen?[15]

And finally, an example from *Motography* from 1913, indicating not only that the close-up is by this time an accepted convention, but also that it is associated with realistic qualities, its ability to immerse the spectator, make her feel as if she were really there. (It's also interesting to note that this is a review of an actuality of a Cardinal of the Catholic Church. Given the statement I just quoted of how "unbecoming" closer framings are to the actors, this film, had it been reviewed only two years earlier, would most likely have been accused of blasphemy.)

> These views are stated to be the best "close-ups" of the great dignitary of the church that has thus far been possible to procure. "It is like standing alongside His Eminence," says C. J. Hite. The picture can be strongly recommended for Catholic church entertainments, and in the regular picture house it will be educative to the many who like to see, at close range, how a real Cardinal moves and acts at an important function.[16]

A somewhat simplified but I think basically accountable explanation for this shift is that with the psychologization of the characters in the early teens, the close-up took on a new role. In 1908, *Variety* writes on a gentleman in an actuality: "A few feet further forward and Mr. Kessler would have been inside the camera."[17] This kind of medium-reflexivity would hardly be likely a few years later, when the camera takes on a more illusory status, making itself invisible.

If the close-up is, or rather became, a royal road to an immersive experience, the same goes for tracking shots. As many historians have pointed out, early tracking shots were not used so much for rhetorical purposes or narrative emphasis, but rather,

as Yuri Tsivian puts it (1994, p. 207), to offer a stereoscopic view, activating the pro-filmic space. "Stereoscopic" is used here as a metaphor but also almost literally. In the early teens, commentators often used the term stereoscopic as a synonym for deep focus, as in this example from the *Moving Picture World*: "The photography is perfect and finely stereoscopic; the coloring just enough to seem natural and make one forget that it is hand painted."[18] The stereoscope, of course, had before motion pictures been the most immersive experience to date, perhaps rivaled only by the panorama.

The Third Dimension

The epistemological pretension of the stereoscope, brilliantly demonstrated by Jonathan Crary (1990), is witnessed by another article from *Scientific American*, this one from 1876. The article, "The Stereoscope as a Civilizer," is a description written in the midst of the so-called Indian wars—only four months before the battle of Little Big Horn—of how this apparatus can serve the purpose of colonization. The correspondent, calling himself a "Quaker among the Indians," reports how stereoscopic pictures of the cities in the East should be used in every Indian camp. He has tried it himself on the Comanche, with excellent results. For, he argues, when pictures such as these of extraordinary buildings and infrastructure are shown to Indians, they will realize the superiority of the white man. He tells of a war chief who looked at the pictures over and over again, gathered his warriors and showed them:

> I could understand but a part, yet would gather such expressions as these: "Look! see what a mighty powerful people they are!" meaning white people. "We are fools! We don't know anything! We just like wolves running wild on the plains!" Such an effect on the war chiefs and warriors cannot but be very salutary, and must conduce much toward deterring them from going on the war path against such a "mighty powerful people."[19]

In the early years of cinema, both inward and outward movements were perceived as stereoscopic or three-dimensional, as

evident from contemporaneous reports. These movements could include tracking shots but also characters in the film moving along the depth axis of the image. For example, a 1910 comment in the *New York Independent* compares film with theatre, and comes to the somewhat paradoxical conclusion that film, not the theatre, has stereoscopic qualities:

> But the moving picture show has a third dimension. The characters have a gradual approach and recession. The railroad train rushes toward the spectator; the horseman rides off through the woods or across the plain until he disappears in the distance.[20]

Stereography was crucial for early cinema not only in regards to iconography. It was also the particular kind of viewing physiology involved that cinema tried to emulate. Lumière's patents in the field bear witness to this, and as photography historian Georges Potoniée showed already in the 1930s, stereography is perhaps as important a predecessor to cinema as chronophotography. That Eadweard Muybridge was a stereographer before his more famous work for Stanford is interesting in this context, as is the fact that Étienne-Jules Marey noted how the stereo camera was good for registering the movement of solid geometrical figures, or for recording the "stereoscopical trajectory" of birds.[21] The affinities between the stereoscope and cinema are many, and we can note, for example, how Edison took patents on both a stereokinetoscope and stereo projection, as did the Lumières, Friese-Greene, and others. The point is that if we look at cinema "through the stereoscope," as it were, it comes out not only as a temporal object in Edmond Husserl's sense,[22] but also as a medium with pretensions to a three-dimensional conception of space.

The panorama of course is another instance in which early cinema followed what Jay David Bolter and Richard Grusin call the logic of remediation,[23] and one obvious example is how often the 360° pan was used in early actuality films. The reason no doubt was partly to show off the capacity of the medium, partly to show everything in sight at the spectator's leisure. This technique is obviously based on the panorama, not only in its

shape and spectatorial positioning, but also in its epistemology.[24] Panorama of course means "to see everything," and this vain hope of a god-like mode of vision applies to the cinematic circular figure as well. IMAX, with its giant, semicircular screen, is an obvious example, and it is no coincidence that the privileged genre of IMAX is the documentary, that is, "the actual" rather than fiction. And, the epistemological discourse of the panorama is still at work, as when one IMAX theatre urges us to be "surrounded by the immense wilderness of Alaska."[25] And when an earlier widescreen technology was introduced—CinemaScope—its tagline was to put you in the picture.[26] Cinerama had been even more optimistic in one ad: "YOU—not the camera—but you are there…"[27] One of the more short-lived formats, Hypnovista, promised an experience that would oscillate between what Christian Metz (1977, p. 61) called the "scopic regime," and a tactile one: "SEE the vat of death! SEE the fantastic binocular murder! FEEL the icy hands! FEEL the tightening noose!"[28] In short, widescreen technologies are another example of how cinema is closely tied to the concept of immersion.[29]

In his important work on new media, Lev Manovich (2001) demonstrates how cinema, as the most important medium of the last century, is a dominating matrix in the development and reception of new media objects. Researchers in the field known as Human-Virtual Environment Interaction, also often make references to the presumed "natural" understanding of cinematic devices, as in this recent example from an article in the *International Journal of Human-Computer Studies*:

> In the cinema, the flexibility of the boundaries between our bodies and the world influences the readiness with which people have a sense of presence. When the camera tilts, we feel ourselves tilting our heads to look upwards or downwards; when we see a travelling shot, we feel ourselves travelling backwards and forwards with the camera; and yet we know all along that we are sitting in a cinema seat… (Nichols, Haldane and Wilson 2000, p. 473).

The implications of the "we" recurring in this statement could of course be problematized. And as a historian, I find it dubious

to make any claim of "naturalness" for cinematic devices. Indeed, the close-up, as I have argued at length elsewhere,[30] is a perfect example of how the reception of a specific device can move from initial disgust to, precisely, presumed "naturalness." However, I think that the sense of "presence" described in the quote above as involved in watching film is indeed strong in many cases, although its attendant production strategies and reception modes have changed over time. The sense of "presence" which the old English lady experienced when she for the first time went to (and fled from) the cinema, is very different from the "presence" involved in, say, a classical point-of-view shot. I would argue that 3D perception plays a part here. When different kinds of vehicles were perceived as rushing toward the spectators, it was because these spectators seem to have had a greater ability to appreciate the "third dimension" of the film image, a visual stereo effect which seems to be almost lost to a later, more blasé audience.

Where Are We?

I began this article with some anecdotes of my reactions to a video game, claiming this experience to be indicative of a sort of immersion. Clearly, however, the phenomenon takes different forms. In playing a video game, there is an obvious tactile dimension involved: a cord joining my body with that of the hardware, and by extension, to the diegetic space. This fusion is often amplified in video and arcade games, with feedback mechanisms such as vibrations in the controller.[31] In cinema, this sensory feedback is rarely actual (although there are examples). Regardless of the promises made by some cinematic technologies—promises of how the spectator is "actually there," or "feels" the hands of a murderer, and so on—such sensory "presence" remains merely metaphorical (at best virtual).[32] However, the *ambition* of an immersive experience remains the same, whether conveyed by joysticks, steering wheels and data gloves (as in video games), or, in the case of cinema, by wider screens and surround sound.

When Richard Wagner in 1849 wrote of the theater of the future, he envisioned the spectator "transplanted" upon the stage, "by means of all his visual and aural faculties." In the

process, he "forgets the confines of the auditorium, and lives and breathes only in the artwork which seems to him as Life itself, and on the stage which seems the wide expanse of the whole World" (Wagner 2001, pp. 5-6). A hundred years later, the "father" of virtual reality, Morton Heilig, wrote of another medium of the future in similar terms. But whereas Wagner had limited himself to vision and hearing, Heilig (2001, p. 226) included (almost) all senses: "Open your eyes, listen, smell, and feel—sense the world in all its magnificent colors, depth, sounds, odors, and textures—this is the cinema of the future!"

These examples, anomalous as they may seem, stand in sharp contrast to classical film theories of audience identification in cinema. Although Christian Metz (1974, p. 4) allows for the spectator's "affective and perceptual *participation*" with the moving image, he hastens to limit this involvement to a distant one. Following Albert Michotte van den Berck, he speaks of a "segregation of spaces" between spectator and object (Metz 1974, p. 10). If this were not the case, his theory of scopophilia, so crucial to psychoanalytic film theory, would simply not hold:

> The voyeur is very careful to maintain a gulf, an empty space, between the object and the eye, the object and his own body: his look fastens the object at a distance, as with those cinema spectators who take care to avoid being too close to or too far from the screen… To fill in this distance would threaten to overwhelm the subject, to lead him to consume the object (the object which is too close so that he cannot see it any more)… (Metz 1977, p. 60).

Given the connotations of tackiness associated with many film technologies that have been developed to annihilate this distance (be they 3D glasses or "ghost viewers"[33]), or the derision heaped on attempts to mobilize senses other than vision and hearing (like Smell O' Vision or Percepto[34]), Metz (1977, p. 59) might be right in claiming that "[i]t is no accident that the main socially acceptable arts are based on the senses at a distance, and that those which depend on the senses of contact are often regarded as 'minor' arts (e.g. the culinary arts, the art of perfume, etc.)." The question is rather whether cinema belongs

exclusively to the "acceptable arts" or if, from the perspective of another historical lineage, it more strongly answers to the perceptual logic of sheer entertainment.

Conclusion

However "grand" Metz' theory is in scope, it is nevertheless more sophisticated than its critics sometimes claim. The "scopic regime" of cinema is for Metz a place of uncertainty, where the spectator is paradoxically both "there" *and* at a distance. Whether we emphasize the immersive or distancing qualities depends where in film history we look. Metz had good reasons for concentrating on classical cinema, since other practices would threaten to refute his theory (although he did analyze alternative modes of filmmaking as well). So, if the distancing aspect was of great importance to Metz, he nonetheless acknowledged its "evil twin." Similarly, a contemporaneous theorist, Roland Barthes (1980, p. 3), did remark: "A film image (sound included), what is it? A lure. This word must be taken in its psychoanalytic sense. I am locked in on the image as though I was caught in the famous dual relationship which establishes the imaginary." Note that while Barthes does not challenge Metz' views in principle, his diction nonetheless reveals different priorities, where he can choose to emphasize the immersive qualities of cinema over its narrative aspects.

In my view, the main "error" of psychoanalytic film theory is not its theoretical assumptions, but rather the omission of history. The theory corresponds as effectively to a given style or mode of filmmaking (i.e., classical cinema), as it falls short in other cases. Early cinema developed strategies for giving rise to physiological, visceral effects, making the spectator feel immersed in the action. Often, the sense of depth in the image was particularly emphasized, for example, by people and vehicles moving diagonally between the vanishing point and the foreground, or by the camera moving. These films pose other questions than do classical films, and about another kind of presence, which perhaps has more to do with perceptual psychology than metapsychology.

One year after the Lumière brothers' *cinématographe*, Henri Bergson dismissed "pure perception" as merely an ideal. Even so,

this dream is operatively valid, since every perceptive act involves an actual object and its double, or *virtual* image. Hence, perception is a "virtual action."[35] As any thought is limited to the media discourse of its time,[36] it follows that Bergson's theory of perception corresponds with the advent of cinema. And if this first period of the medium, as I have tried to demonstrate, constantly emphasized its immersive qualities, it is no wonder that Bergson (1988, p. 34) thought of a "pure perception" as one "whereby we place ourselves at the very heart of things," where the subject is "confined to the present and absorbed, to the exclusion of all else, in the task of molding itself upon the external object."

This article has articulated the concept and lure of immersion by focusing on early cinema. In the process, however, I have drawn from examples ranging from Wagner to video games. As this eclectic approach demonstrates, a strong sense of presence has informed both the production and reception of cinema as a whole—a sense of presence that is sometimes outspoken, sometimes repressed, but never entirely absent, and which continues to inform contemporary film experience. I will close with an account from one of the most successful director-producers of film history, Steven Spielberg, who in defining his aesthetic strategies in effect also forwards a theory of spectator positioning. This positioning is, as Metz', something of a paradox, as the spectator is put in one place (the theater seat), but simultaneously lifted from it (into the picture itself):

> *Raiders of the Lost Ark* is like popcorn, it doesn't fill you up and it's easy to digest and it melts in your mouth and it's the same kind of thing you can just go back and chow down over and over again. It's a rather superficial story of heroics and deeds and great last minute saves; but it puts people in the same place that made me want to make movies as a child, which is wanting to enthrall, entertain, take people out of their seats to get them involved—through showmanship—in a kind of dialogue with the picture you've made. I love making movies like that.[37]

Svenska Filminstitutet

NOTES

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2. <http://maxpayne.godgames.com/main.html>

3. See for example William Uricchio, "Technologies of Time", in Jan Olsson (ed.), *Allegories of Communication*, Berkeley, University of California Press, forthcoming.

4. "The Talking Phonograph," *Scientific American*, Vol. 37, no. 25, 22 December 1877, pp. 384–385, p. 385. The article was later reprinted in *Nature*, Vol. 17, no. 427, 3 January 1878, pp. 190–192.

5. <http://www.apple.com/quicktime/qtvr/>

6. For two interesting accounts of the history of immersive technologies, see Huhtamo 1995 and Rabinowitz 1998.

7. Most of the early film material discussed here, as well as their catalogue descriptions, can be found at The Library of Congress website, <http://memory.loc.gov/ammem/amhome.html>.

8. "Camera Catches Breath," *Variety*, Vol. 9, no. 9, 8 February 1908, p. 11.

9. "En osäker plats" [An unsafe place], *Nordisk Filmtidning*, Vol. 1, no. 20, February 1910, p. 9.

10. See for example Gunning 1995.

11. In a 1906 issue of *Variety*, a notice stated: "A report during the week said that the somersaulting automobile at the Barnum-Bailey circus was only an illusion, moving pictures causing a reality effect" (*Variety*, Vol. 2, no. 4, 7 April 1906, p. 3). As Variety was obliged to tell the audience what really happened, it must have been a strong illusion indeed, demonstrating how the illusory, virtual potential of cinema was used right from the beginning.

12. "The Making of Train Simulator," <http://www.microsoft.com/games/trainsim/making_of_trainsim.asp>.

13. Maxim Gorky [as "I.M. Pacatus"], review in newspaper *Nizhegorodski listok*, July 4, 1896, translated and reprinted in Leyda 1960 (pp. 407–409).

14. "On Filming a Classic," *The Nickelodeon*, Vol. 5, no. 1, 7 January 1911, p. 4.

15. "Comments on the Films," *Moving Picture World*, Vol. 14, no. 11, 14 December, 1912, pp. 1081-1082.

16. "Cardinal Farley 'Close-Ups,'" *Motography*, Vol. 10, no. 1, 12 July 1913, p. 32.

17. "Starting of Around the World Automobile Race," *Variety*, Vol. 9, no. 11, 22 February 1908, p. 11.

18. "Comments on the Films," Picturesque Britany (C.G.P.C.), *Moving Picture World*, Vol. 14, no. 11, 14 December, 1912, p. 1080.

19. "The Stereoscope as a Civilizer," *Scientific American*, Vol. 34, no. 6, 5 February 1876, pp. 87–88.

20. "The Drama of the People" [reprinted from *New York Independent*], *Moving Picture World*, Vol. 7, no. 16, 15 October 1910, p. 865.

21. See Gosser 1977.

22. See Husserl 1991 (§ 7).

23. See Bolter and Grusin 2000.

24. See Alison Griffith's article, "Panoramas et origines de la reconstitution cinématographique," also included in this issue of *Cinémas*.

25.   The ad is worth quoting at length: "Let yourself be surrounded by the vast wilderness of Alaska or be amazed by our living blue planet as seen from space in the world's largest film format… Nature has no frames, only different ways of being seen. At Naturhistoriska riksmuseet and Cosmonova, you can experience totality. In an afternoon." Poster for Stockholm's only IMAX theatre Cosmonova, situated at The Museum of Natural History.

26.   CinemaScope ad quoted in Belton 1992 (p. 190).

27.   Ad for *This is Cinerama* (1952), quoted in Paul 1993 (p. 326).

28.   Poster for *Horrors of the Black Museum* (Arthur Crabtree, American International, 1959), quoted in McGee 1989 (p. 112).

29.   If we extend these examples to the advertising of 3D cinema, there are even more samples of this sort, curiously recalling the English lady's experience. A poster for the first commercially successful 3D movie, *The House of Wax* (André de Toth, Warner Brothers, 1953) reads: "It comes right at you! The hand is on your throat… It comes right at you! The kiss is on your lips… It comes right at you! The horror that chills your spine…" (quoted in McGee 1989, p. 65).

30.   See Holmberg 2000.

31.   See for example Lahti 2003. My thanks to Martti Lahti for letting me read his excellent paper before its publication.

32.   The distinction between different kinds of immersion was not clear in the first version of this article. I am particularly grateful to Frank Kessler for pointing this out to me.

33.   The ghost viewer was a device invented by William Castle and handed out to the audience of *Thirteen Ghosts* (1960) in order to see additional phantoms on the screen.

34.   Percepto was another innovation by Castle, where a mild electrical charge in some of the theater chairs would stimulate spectators when watching *The Tingler* (1959).

35.   See Bergson 1988.

36.   See Kittler 1992.

37.   Steven Spielberg interviewed by Todd McCarthy in "Sand Castles," *Film Comment*, May/June 1982, p. 28, quoted in Lewis 2003 (p. 21).

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