The Disappearance of the Surface

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The 3D Screen

Several avenues of thought allow us to understand what one calls digital technology in cinema. I will define it both in relation to filming and screening in the digital format, and to additional technology, such as 3D and most of today’s special effects and computer-generated images. When studying the aesthetics of digital technology in cinema, or more accurately, the perceptible manifestations of digital technology in cinema, the screen plays a central role. Indeed, at a time when 3D film screenings are commonplace, it is interesting to consider it as a new expression of a both old and common saying: coming out soon on your screen. Although this saying is still topical – it still describes each new release, each new film having the privilege of being projected in cinemas – history has now managed to go even further.

Coming out soon on your screen: this is precisely one of the objectives of 3D technology, the enjoyment of seeing the bodies and objects of the movie projected – not only on screen – but in the movie theater itself, onto spectators. How surprising it is also to see salient elements protruding from the sides of the screen. The intended effect is double and comes from a long-standing desire to perpetuate the feeling of sharing a space, that of the movie, a represented world or, rather – let us use this term again as it is de rigueur here – a projected world, within the space of the movie theater. In other words, it is an augmentation of the famous impression of reality which, from André Bazin to Christian Metz, has long defined the ambivalence between the absence and presence of the spectator, between self-forgetfulness and self-projection, between immersion and impregnation.

Despite this, 3D technology is still criticized as a form of cinema based on special effects, whose manifestations merely repeat, through a diminished viewing experience (eye fatigue, heaviness of some glasses, parts of the image split in two, a darker image, etc.), what was already there: depth of field, volumes, and immersion. These criticisms are both fair and inadequate. They are fair in the assumptions listed above; fair also because the massive democratization of 3D cinema is still new, as it dates from the beginning of the 2000s; fair
again as this technology is still in its infancy, although spectacular and used mainly in larger productions.

These criticisms are, however, inadequate when they claim or assume that the use of 3D technology and its effects is nothing more than an additional aid, an unnecessary addition, vain in its operation (or, as I said previously, a technology that intensifies, in an aggressive and monstrative manner, the intrinsic qualities of a film). One should rather consider how these criticisms refer to a new relationship between the spectator and the movie. 3D engages viewers, inviting them to do more than just watch a movie: to experience it in one way or another, through playful or sensory experiences. A form of singularity is indeed at work here, and it would be too convenient not to consider it, on the grounds that it is only a protuberance.

3D technology is indeed – and it is not the least of its features – the most directive technology there can be towards spectators, as it controls them, obliges them and reminds them of their place, as demonstrated by the information panels or the small videos, which, before each screening, warn viewers or ask them to wear their glasses. Moreover – but this is more of a promotional argument than a truly effective aspect in movies – 3D technology intends to engage spectators in the action unfolding before their eyes, under their noses. The most convincing examples can be found in the adverts shown before the film, which sometimes encourage us to naively and spontaneously reach out to catch objects that seem to float right under our noses.

Right before our eyes, right under our noses. Here is the tangible and measurable progress proposed by 3D cinema. What distance have we travelled so far then? One should take another look at the screen, which, seemingly harmless, is still facing us, ever-present but now blurred. The purpose of 3D technology, as I mentioned, is not so much to repeat, with other means, the conditions for immersion – although it tends to make this immersion very physical – but to pulverize the screen, its edges and its surface, its framing and its flatness. The screen is a wall to break down, the wall that one must shatter (i.e., the recurring gimmick of an object exploding and whose fragments move towards the face of the spectator). Another purpose, and therefore another movement, echoes the forgetfulness of the spectator watching the movie: it is now the screen that must be forgotten and, furthermore, the idea of a screen as a presence in the theater.

One observes that this new configuration, although it remains theoretical (the audience looking, as usual, in the same direction), generates a tipping point compared to what I mentioned previously. To the disappearance and withdrawal of the screen behind the volumes that flow out of it, echoes the physical and motivated engagement of the spectator. It is interesting to note that the environment for the screening of a 3D movie is completely unique in the history of cinema. If theaters dedicated to 3D are equipped with technology making it possible, this is the first time that the spectator must also be fitted with a device.
It is not only the theater that is equipped (musical instruments were installed in cinemas for the very first public screenings), but the viewer is too.

The fact that the spectator must wear a device (glasses) is symptomatic of a form of cinema that no longer wants to settle for just a screen to watch, or to look at, but a world to explore (that of the movie) and a world to forget (that of the theater). The paroxysmal dream of 3D technology is not that of the faithful reproduction of relief, but rather that of the spectator as explorer, tearing him from his state of oblivion to make him physically take part in a sensory adventure. It is the perspective of a physical interaction with the movie, even fake, which is aimed at here. The impression of reality must therefore be complemented by another impression, that of being there, or being part of it. Such an objective cannot liberate itself from the material dimensions of the theater (the viewer is sitting among other spectators).

Therefore, the deployment of 3D technology, without claiming to offer a physical endurance of the seen world, tries above all to combine the space of the movie and the space of the theater, one in the other, one towards the other. One can also distinguish two dominant movements in 3D cinema, which I have already briefly outlined: one that intends to see the objects and the bodies of the movie invade the theater, and one that intends to see the spectator engage in the 3D dimension of the movie. Two meanings indeed, one consisting of seeing the movie taking on the dimensions of the theater, the other consisting of producing the semblance of a crossing point, a direct entrance into the film. These two cases both demonstrate, each in their own way, a desire to see the screen disappear or break up.

This desire to overcome the stiff resistance of the screen is not new. One must remember here the anecdote – clearly exaggerated, to the point of becoming an urban legend – of the first spectators who saw L’ARRIVÉE D’UN TRAIN À LA CIOTAT (The Arrival of a Train, Louis Lumière, 1895) jump from their seats in fear of being crushed by the train hurtling towards them. As legendary as it is, this story – here the way the facts are recalled is more interesting than how they really occurred – already shows the desire to consider the boundary of the screen as porous, fragile, and passable. Between the movie and the theater, there is only a thin white membrane that even a slow moving train could easily tear.

When filming HUGO (2011), Martin Scorsese remembered this when he shot a train not only entering a station, but pulverizing it and landing with a crash on the platforms before crashing a few meters further onto the station forecourt. Filmed with miniature models against a green screen and then digitally processed in post-production, the scene, which is a clear homage to the movie of the Lumière brothers, humbly tries to highlight the importance of the film that inspired it. The aim is not to pretend to go beyond the screen by the demonstration of the force of obviously more advanced technology, it is mainly to say that digital technology in the broad sense can overcome many things, especially
physical, tangible, and real things. The movie screen is one of those things. Thus, the train in HUGO, launched at high speed, as seemingly sucked in by the movement of 3D, seems unstoppable. It inexorably moves forward within the set and even seems to invade the theater, destroying the Gare de Lyon in a chaos of pulverized real sets and pixels. In the end, the screen, as always, comes out unscathed.

There is therefore the old desire to merge the filmic and the spectatorial space. You may recall, for example, LAST ACTION HERO (1993) by John McTiernan, a movie shot in 2D and on film, but in which coexist the two movements mentioned above, those in the theater populated by the objects in the movie and those in the movie as a territory to be explored by the spectator. The central location of the action being the movie theater, a young viewer is projected into the movie he is watching and confronted with fictional responses and rules that seem strange – to say the least – when applied in reality. Later in the film, the same character returns to the reality of the theater and his surroundings, accompanied by the fictional characters he has just met in the flesh. The boundary of the screen is therefore abolished by this back and forth interplay as we see the many anomalies and collisions caused by the incongruous and improbable meeting of two worlds, ours and that of the other side of the screen. Having benefited from the spectacular accidents caused by the interpenetration of two realities that are total opposites, one fictional, one real, the movie ends with a return to order, the return of everything into its right place, as it were, on either side of the screen. The spectacle can only exist if there are spectators, this could be the final word of the film, a screen open to the elements bringing only the chaos of conflicting rules.

The paradigm of the theater/movie must therefore once again be considered here in tangible and material terms, the screen representing what separates the two terms, the two places. The screen as a thing that shows and a thing that hides, as an open window onto the world (to use Bazin's words) and as an object that separates and divides the space in two. 3D technology, by the effects it offers, attaches itself to literally bring this screen down, replacing the paradigmatic bar by a hyphen: 3D indeed intends to re-invent and simulate the theater-movie space. It is a space where the viewer is offered the opportunity to see the movie come to him and where it is possible for him to explore it too; a space where the viewer can, even timidly, pretend to be a character in the action, probably not the main character, but someone who is involved, by putting on glasses like taking part in an adventure, or reaching out as if to touch an object that has never seemed so close in all his life. In both cases, the screen should no longer appear as a limit or as a border to cross. Between the viewer and the movie, it must simply vanish, disappear from the theater whenever the glasses are put between the movie and the eye (the dark tint of the “lenses” completing this concealment, with a kind of veil effect).
The Screen Abolished? Dissolution and Crossing Point

Regarding HUGO, I mentioned the aim of 3D technology, which must be understood in a specific way: it is the theater that is the center of attraction of the 3D dimension of the movie. In such a context, one can pinpoint a first aesthetics of 3D technology, of which the animated film A TURTLE'S TALE 2: SAMMY'S ESCAPE FROM PARADISE (Ben Stassen, 2012), although it had no other ambition than to promote its special effects, is one of the most convincing examples. In this movie, the effect of objects and bodies invading the theater is at its most effective. The film, made entirely of computer-generated images and featuring anthropomorphic fish, literally and psychologically breaks the deceptive ritual of the aquarium where, hands on the glass, one can only watch the marine animals live on the other side. In this movie, the screen and the aquarium are the surface to break. The (young) viewer thus has the sensation of being immersed among the aquatic fauna swimming within his reach, in the absence of the glass that separates him from the animals he is watching. The film literally spilling into the theater, its theoretical ambition lies less in the mise-en-scène than in the mise-en-salle, staging the movie off-stage and off-screen. It is the illusion of projection that is sought after, that of a projection that would no longer be the projection of light onto the screen, but of images towards spectators, in volume and movement.

The aesthetics of projection offered here by 3D technology not only chooses the theater, but the spectator as the center of attraction. It is no longer the screen that receives the images; it is the entire theater that receives the movie. It is tempting to describe this form of cinema as attraction cinema – which brings us back, once again, to the origins of the medium – as the spectator is waiting to be surprised by the emergence of forms that sometimes almost seem to touch his face. This denomination is even more pertinent as the industry offers movies suitable for audiences of different ages. Some horror movies indeed use the technique of projecting objects towards the spectators, simulating the effect of surprise and danger: FINAL DESTINATION 5 (Steven Quale, 2011) is a fine example of this. The attraction is no longer what is projected onto the surface of the screen, but what is projected directly into the theater. It is the spectator that attracts the objects from the movie towards him. In this inversion of the projection concept, the spectator finds himself surrounded. Although the light still comes from behind him, now it is his eyes that see objects projected towards him. The screen as a surface has therefore almost disappeared, its flatness being replaced by images in 3D that extract themselves almost physically from the screen.

There is another aesthetics of 3D that can be distinguished from the one I have just mentioned. In this second case, 3D does not favor projection effects or even the fantasized desire to see the screen dissolve somewhere between the theater...
and the movie. On the contrary, the screen is first considered, not as a surface, but as a real crossing point, i.e., a window really opening onto the filmed world. To understand the challenges raised by such aesthetics, which has more to do with an exploration than an invasion, one should return to the concept of equipment, since it is an integral part of this aesthetics. In this case, the spectator is considered from the point of view of staging and narration, as an individual wearing glasses and therefore physically able to discover the world that will be revealed to him. The truth is altogether obvious: in order to see the movie and enjoy its 3D effects, we must be equipped with 3D glasses. However, one must note that among the films that have so far marked the recent history of the technology, AVATAR (James Cameron, 2009) firstly, as the simulacrum of the equipment of an accessory as a condition of access, visibility, and persistence of an imaginary world, is an integral part of the narrative, or at least, a privileged or even necessary condition of access. To the exploration of an imaginary world, the equipment responds like an accessory for the survival of the image in its visibility and physical experience.

Thus, in James Cameron’s film, Jake Sully, a paraplegic soldier, takes possession of his avatar through a device allowing him to experience both imaginary and physically an alien world. The identification is such that James Cameron seems both too make a movie in 3D and a movie about 3D; that is to say, about the experience that this new technology intends to offer (on its release, AVATAR required theaters to be fitted with a huge range of specific technological hardware). The fact that the character is paraplegic evokes the immobility of the spectator. Like the character, the spectator must be able to equip himself to see and experience an imaginary world. James Cameron’s movie does not intend to create a form of identification; it aims above all at staging the audience, and even projecting them on screen, through the reproduction of the simulacrum of an accessory as an inevitable condition of exploration and discovery of a 3D visual world. The aim here is not so much the disappearance of the screen but the awareness of being equipped with a special and unusual accessory, conducive to the common discovery of a world (spectators discover, along with the main character, the enchanting beauty of the world that is offered to them). If the screen remains, it disappears once again behind the glasses that stand between it and the eyes of those who watch it. The goal of such aesthetics of 3D, tending more towards exploration than projection, is to transform the spectator into a member of the equipped team. It is not insignificant to note that the film that opened the way for AVATAR, JOURNEY TO THE CENTER OF THE EARTH (Eric Brevig, 2008), was also a film of adventure and exploration. 3D technology, when it does not offer to amaze or thrill by playing with sudden appearances and projections, mainly aims at helping the properly equipped spectator enter imaginary worlds.

This process, however, is not the prerogative of virtual worlds or even that of blockbusters. In this context, I would like to mention two movies, which are
among the most pertinent examples of this concept of exploration: *Twixt* (Francis Ford Coppola, 2011) and *Cave of Forgotten Dreams* (Werner Herzog, 2010). In the first, which tells the story of a writer meeting in his dreams ghosts that may have been part of an investigation he is closely following, only two scenes were shot in 3D. Francis Ford Coppola wanted the viewer to wear 3D glasses for just these two sequences, as the rest of the film did not require their use. What we know about these two scenes is nevertheless equivocal. They show two dreams experienced by the main character, in which he wanders, haggard, in a landscape filmed in chiaroscuro – as if the darkening of the image caused by 3D glasses required it. One can note two things: the first and most obvious is that the mandatory use of 3D glasses, as they have to be put on at a specific time, reiterates the idea of having to equip oneself to explore an imaginary space – here a supposedly mental and dream-like world. One should also note that the fact that the character closes his eyes echoes the fact that we cover our eyes with “tinted” glasses. In this gesture lies the idea of cutting oneself from the screen, the idea that the images that we will see no longer belong to its physical and measurable dimensions, those of images projected onto a surface. This is both the condition of a means of accessing an imagined world (the sequences, more than causing a rupture, try to show the echo effects between the real world and the dream world) and a way for us to free ourselves from the physical space of the theater.

The effect could indeed be reversed: if we have, at some point, to wear glasses, we are thus reminded of the fact that we are attending a cinema screening. An immersion is therefore replaced by another. Hence the idea of a crossing point, another means of access to the images of the movie. To access the dreams of the character, we must also be able, like him, to close our eyes, if only by barring the path that separates them from the movie screen. Here the screen is not abolished. Rather, it represents a state of enlightenment, an openness of the eyes, while the glasses add a state of sleep and semi-consciousness to it. The screen is therefore forgotten at the far end of the theater, during only two scenes, before we return to it, like returning to reality once we have removed our glasses. The idea is therefore that, by covering our eyes, we also cover the screen; by wearing glasses, we operate not so much through our perception of images than through the very reality of the theater. We indeed explore an imaginary world but only by putting aside the material reality of the screen, which is then less a crossing point to another world than a place of return, a return to reality. From 3D to 2D, Coppola – through his character and the investigation he follows – seems to seek what strikes us the most, which is a way to return the effects of 3D technology to both their qualities and contradictions. The accessory, meanwhile, is the object that comes between the viewer and the screen, a providential eyelid that reproduces a semi-dreamlike state.
In Cave of Forgotten Dreams, Werner Herzog filmed in 3D the exploration of the Chauvet cave, now completely closed to the public. From centuries-old paintings to the shooting in 3D, Herzog indeed offers to establish the measure between the images painted on the reliefs of the cave to the images in three dimensions in cinema, dimensions that can potentially escape the flat surface of the screen. One can see how Herzog strives, with his camera at arm’s length, to move around a stalactite to film its hidden part, while concealing a drawing that is now impossible to see since, for obvious preservation reasons, free access to the cave is now forbidden. Here, 3D is restored to its inoperative state; that is to say, the fact that it is only an effect that no longer allows us to see, to see better, to discover the volumes, to browse the reliefs. Somehow, in the cohabitation of cave paintings and 3D technology, one is tempted to say that the surface withstands; not only time, but also impressions and experiences.

Between the surface of the cave and that of the screen, there obviously are fundamental differences due to their relief, undulating for the first, completely flat for the second. Is there, then, a hope, thanks to 3D technology, to see the screen crumple, thereby allowing us to better perceive the reliefs of the cave, as if the screen surface had been applied to its walls? The 3D tour of the cave is thus a way of confronting the non-relief of the screen to the countless reliefs of the filmed volumes.

To this parallel between the painted surface and 3D technology is added a quite surprising journey. While discovering the primitive paintings for the first time, we can see the film crew as Herzog had to film them while they walk along the narrow path of which they cannot deviate at risk of damaging even more an already extremely fragile cave. This cohabitation between paintings and technology gives, first and provisionally, a feeling of strangeness. Herzog indeed took special care to make it look odd, as, movie after movie, he has continuously tried to present humans as the strangest of living beings, irretrievably inspired and aspired into experiences that are beyond them (the examples are countless but almost all converge to this desire to film men trying to exceed their physical limits at the peril of their lives).

Through the spectacle of these humans encumbered with technology that awkwardly walk along a narrow path in the hope of making palpable in all their volumes the numerous reliefs offered by their environment, we are reminded of our own condition as viewers of the movie. We then realize how strange we must also seem, all watching a flat screen with identical glasses, hoping to see the volumes flattened by the movie projected towards us. The main thing is that the cameras actually seem to film us rather than the paintings, as the cameras of Herzog and his team cannot avoid crossing their gaze. Such is the measure of 3D technology: it is only a manifestation, among others, of the human desire to overcome the finiteness of his physical condition. It is only a manifestation among many others of the search for ecstasy (a theme dear to the filmmaker),
both possible and vain. Thus, watching technology and paintings coexist in the
cave, we see ourselves decked out with glasses, facing a flat screen, looking for
volume where there cannot naturally be any, in a bearable way.

From Withdrawal to Extinction

3D technology therefore has for its dual and contradictory condition both the
engagement and exclusion of the spectator, of which the glasses are the symbol,
as they, in the same manner as the screen, have the ambivalence of the window
and the cover, of what opens and what confronts, they are a kind of mask, a veil
thrown over the eyes, and the visibility tool of an image that would otherwise be
blurred. In any case, it is no longer to the screen that falls the task of making us
see the world. Now equipped with glasses, spectators go over the screen. The
movie screen is, due to its flatness, what resists the idea of relief. It is the exact
opposite, the wall to break down, the base that must be hidden. The aim is
indeed the disappearance of the surface, and this will become even more obvious
when 3D projections will no longer require the use of glasses. It is the quality of
the surface that will need to be challenged, even denied perhaps, in any case
cleared of the devices that until then had built a boundary between the surface
and the eye.

Finally, one must explore another avenue of thought regarding digital tech-
nology in Hollywood productions. Special effects now make it possible to create
worlds and sequences that free representation from terrestrial – or at least
human – properties. Other screens have come in between: the famous green
screen used to digitally generate special effects and those of computers that allow
for the programming and production of movies from scratch, sometimes even
without a camera. The 3D dimension of fictional movies, which are therefore
artificial themselves, tend to replace shapes, to cover them with pixels, when
they do not totally cover the body with the motion capture technology aimed at
digitally reconstructing a body from an actor’s movements. Screens are fading
away, they disappear into digital territory, they are now the medium used by
effects that virtually recreate matter. It is interesting to observe that this trend
involves another disappearance, that of man on screen. Since it is no longer
possible to experience a real physical and human world, what are the means of
survival and recognition left to humans? Digital technology deploys its specta-
cular effects through expenses that pulverize everything, readily leaning towards
madness.

Indeed, some movies no longer seem to be “man-made.” The Adventures
of Tintin: The Secret of the Unicorn (2011) by Steven Spielberg seems
to be the perfect and ultimate example, the director being among those, or even
the one who most methodically tries to measure the effects that digital technol-
ogy has on man.³ It is as if the movie was generating itself from within, in total
autonomy, the sequences alternating without editing. For example, one can refer to the long (it actually seems endless) action scene showing the disappearance of an entire city with the destruction of a dam. The camera spins sideways, then up and down, crossing all sorts of obstacles, seeming to follow any movement, for long minutes, without interruption, without editing. How is it humanly possible? The issue is even more striking as the characters in the film are actors, who even if very well-known have become unrecognizable as they are entirely covered with a digital skin. With such use of special effects, textures and digital production, where have humans gone? Will they disappear in this pixel storm, compressed between our cinema screen and green screens, isolated behind their computer screen? Are they disappearing from the surface?

I will end my reflection by mentioning Spielberg’s latest production, *Jurassic World* (Colin Trevorrow, 2015). Filmed in 3D, it features dinosaurs that are partly computer generated. In this film, humans risk being eaten by the creatures they have recreated; the parallel between digital creation and scientific creation is clear and it is interesting to note that the whole movie is based on a system of explosion of separation, through the system of enclosures. Furthermore, all enclosures and protection devices are vitrified bubbles behind which humans are protected, at least for a while. This could be a new benchmark in our measurement scale: all screens finally give in and spectators watch themselves disappear, swallowed by some green screen that they cannot see.

Translated by Nick Cowling and Marie-Noëlle Dumaz