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Volume 31, numéro 1-2-3, 2011

Cinéma & Technologie
Cinema & Technology

URI : <https://id.erudit.org/iderudit/1027448ar>

DOI : <https://doi.org/10.7202/1027448ar>

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Éditeur(s)

Association canadienne de sémiotique / Canadian Semiotic Association

ISSN

0229-8651 (imprimé)

1923-9920 (numérique)

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Citer cet article

Wade, D. (2011). Cinema, the (Digital) Machine of the Imaginary: Revisiting Edgar Morin in the Quest to Create a Theory of Cinema in the Digital Age. *Recherches sémiotiques / Semiotic Inquiry*, 31(1-2-3), 203–221. <https://doi.org/10.7202/1027448ar>

Résumé de l'article

La technologie de l'image numérique facilite la production et la distribution des images tout en semant, simultanément, le doute sur leur intégrité. Conséquemment, les spectateurs d'aujourd'hui entretiennent autant la confiance que le doute à l'égard de l'image, tout en conservant le besoin de voir un double du monde à l'écran. Les travaux d'Edgar Morin sur le cinéma demeurent pertinents à l'ère numérique, car celui-ci reconnaît que, depuis ses origines, le cinéma a été une "machine-miroir" qui reflète la relation imaginaire et pratique du spectateur avec des images en mouvement, et ce, quel que soit son fondement technologique. Nous ferons appel aux écrits de Morin et de Christian Metz dans le but de cerner l'essentiel du cinéma : sa capacité à satisfaire, d'une technologie à l'autre, le *besoin de cinéma*. Si, aujourd'hui, le cinéma persiste sous des formes numériques c'est qu'il continue de répondre au besoin chez l'homme de voir sur un écran un double de son monde, lui permettant ainsi de négocier avec les exigences sociales de son existence autant qu'avec ses désirs personnels.

Cinema, the (Digital) Machine of the Imaginary : Revisiting Edgar Morin in the Quest to Create a Theory of Cinema in the Digital Age.¹

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The digital image can be copied, altered, posted in multiple places and seen by thousands. This ease of manipulation and mobility has enabled one website to be a virtual photo album for close to 1 billion users monthly : Facebook. The movie *The Social Network* (2010), shot on the digital RED camera, depicts the origins of Facebook. Also shot on the RED, *Contagion* (2011) depicts a world connected by social media and threatened by a mysterious virus. Both movies portray the proliferation of images in the digital world : digital images populating the Internet and pictures taken with camera phones demonstrate how easy it is to make an image and to be seen by others in an image. These movies also are part of a transition from celluloid to digital production and distribution. I wish to use these motion pictures about Facebook and a global pandemic to formulate an answer to the question “What is cinema?” in the digital age and to claim “There is cinema, still”.

Scholars debate whether cinema has survived the shift from celluloid to digital technology. Reactions to this shift include claims that digital moving images are representations that foster an elusive relation to the real (Rodowick 2007 : 86-87), and that they can be cinema as long as they have a relation to the real (Andrew 2010 : xxv). This discourse is partly motivated by the expansion of visual effects in films to the point that such effects now seem to overpower images linked to the “real”. Stephen Prince and Kristen Whissel argue that visual effects have always been an integral part of cinema; thus, digital visual effects maintain a

continuity with formal and narrative principles and are the next step in a long tradition of technological developments in filmmaking.² While contingency to a pro-filmic referent and visual effects are aspects of cinema, there is something more fundamental to cinema that remains constant throughout technological changes.

Cinema continues in the digital era because we continue to need to see images of the world on a screen to help us negotiate being in the world – which today means being surrounded by digital images. I believe that the work of Edgar Morin allows us to continue to speak about cinema even as technology changes. For Morin, cinema is a mirror-machine : it reflects the imaginary's relationship to the image and the evolution of such a relationship as image producing technologies are transformed (1956 : 212).

In his article “*Recherches sur le public cinématographique*”, Morin identified a *besoin de cinéma* (a need for cinema) (1953 : 4), which became the focus of his book *Le cinéma ou l'homme imaginaire* (*The Cinema, or the Imaginary Man* 1956). Morin's concept of the imaginary derives from his background as a sociologist and his research in anthropology. He recognized a latent desire to craft and see doubles of the world. These doubles can be exact replicas or can metamorphose into fantastical counterparts. Significant to his work on the imaginary is Jean-Paul Sartre's theory that the imagining consciousness performs an intentional act on the image, positing its object as absent or non-existent, and that this act is essential for “being-in-the-world”. According to Morin, the Lumière Brothers' *cinématographe* fascinated early spectators, but cinema first came into being when Georges Méliès used cinematic technology to transform the world into one populated by doubles and acts of metamorphosis : “all Méliès's conjuring tricks take root in *key techniques* of the art of film” (1956 : 51). These “*trucs*” used by Méliès and G.A. Smith to present “the kingdom of the imaginary” on screen transformed the cinematographic image into cinema (1956 : 76).

Using “the image's contingency to a pro-filmic as existed during the celluloid era” as the parameter for defining cinema seems out of synch with contemporary movie making and spectatorship. The demands of the entertainment market have shifted production and distribution from film to digital; at least 86% of theatres in the United States have converted to digital projection (Stewart 2013 : 42). Theatrical sales continue to be strong³, and new methods of distribution, such as Netflix and Hulu, are expanding movie spectatorship⁴. If these millions of spectators viewing digital moving images are not watching “cinema”, then what are they watching? Further, why and in what sense, are these spectators watching images supposedly disengaged from “the real”?

Morin's approach to cinema is important because it allows us to continue to think about and study cinema as technology changes. Morin bases his analysis of the need for cinema and the imaginary relation to

the moving image on an understanding that cinema is a product of an industry that constantly introduces new image-making techniques. This industry is vital for cinema's affective impact on the spectator : we must be presented with images in order to satisfy our desire to see a double of the world, but such satisfaction can only result from our knowledge that we are viewing a spectacle crafted by an industry. Morin's work provides us with a dynamic discourse that allows us to speak of cinema while acknowledging shifts in the cinema industry. Digital moving images can still present a world of doubles and metamorphosis. Thus, I propose that cinema still exists because it continues to present a "dialectical unity of the real and the unreal" which responds to the spectator's imaginary within "contemporary social complexes and their components" (quoting Morin 1956 : 169, 212).

I will first discuss the impact of digital technology on image creation and the continuation of "iconicity" in the digital era. I will bring in Sartre's work on the image which demonstrates that one's relation to the image has always been independent of pro-filmic referents : we see an object in an image because we posit its objects as not-existent or not-present. It is due to this intentional act of the imagination that a *besoin de cinéma* exists. I will discuss Christian Metz's writings on movement, *trucage*, and the "in/credulous" spectator because of their link to Morin's work and because I believe they articulate principles of cinema and spectatorship that remain constant as technology changes. I will then return to Morin's theory that cinema persists as long as it reflects technological changes and as long as the spectator is aware of the technology producing the image. I will conclude the paper with a discussion of *The Social Network* and *Contagion*. This paper focuses solely on fiction films, as they are the focus of *Le cinéma*. However, Morin states that the works of documentary filmmakers demonstrate that "the structures of cinema", the double and metamorphosis, "are not necessarily tied to fiction" (1956 : 75).

* * *

Moving image technology has always developed coincidentally with the entertainment industry's desire to generate a profit. As Morin points out, major technological changes – sound, colour, CinemaScope – happen when the industry's competitors – radio and television – capture the attention of the paying public (1956 : 142). Cinema production evolves as technological innovations change from luxuries into necessities (1956 : 142). Many spectators and filmmakers have embraced or become resigned to developments in digital technology : digital cinema is no longer a luxury, it is the standard (see Stewart 2013).

According to Morin, the individual's imaginary response to "contemporary social complexes" is realized by cinema, which is a "*machine*"

(1956 : 212).⁵ In 1956, Morin wrote “We are at a moment in history where man’s inner essence is introduced into the machine, where, reciprocally, the machine envelops and determines the essence of man – better still, realizes it” (213). This phrase is apt today when computers are ubiquitous and can fit in one’s pocket. Lev Manovich believes that “[a]s distribution of all forms of culture becomes computer-based, we are increasingly ‘interfacing’ to predominantly cultural data – texts, photographs, films [...] we are no longer interfacing to a computer but to a culture encoded in digital form” (2002 : 69-70). Technicians have changed image-making machines to produce moving images that allow, or at times require, us to “interface” with digital images.

As a result of technological differences between celluloid and digital cameras, celluloid images and digital images generate for the spectator different experiences in positing the object in the image as a not-present replica. The celluloid photograph provides an assurance of existence because of its contingency to the environment at the time of its creation. In a digital camera light is converted by pixels into code, or information, which is then converted back into light and thus into what we perceive as an image (Ascher 2013 : 208-210). Though a digital image can have great detail, the image-file is compressed by deleting information in order to store or transmit the file (Adobe). The digital image can look like a celluloid image, but we can never be sure of the integrity of the object in the image. This shift towards digital media in the “film” industry has resulted in discourse in which the digital moving image, due to the digital image’s attenuated link to its object, is questionably cinematic.

D.N. Rodowick’s concept of cinema centres on the celluloid image’s inextricable link to the past. According to Rodowick, as digital technologies predominate, the image becomes “more responsive to our imaginative intentions, and less and less anchored to the prior existence of things and people [...] Cinema will become the art of synthesizing imaginary worlds, numerical worlds in which the sight of physical reality becomes increasingly scarce” (2007 : 86-87). Further, electronic and digital screens constitute a “landscape ‘without image’” because the digital image does not

fully conform to the criteria by which in the past we have come to recognize something as a created, aesthetic image. Here we confront a new kind of ontological perplexity – how to place or situate ourselves, in space and time, in relation to an image that does not seem to be ‘one’ (93-94).

Due to our use of computers, “[b]efore the digital screen, we do not feel a powerlessness, but rather express a will to control information and to shape ourselves and the world through the medium of information” (174).

Although the digital image can exist independent of a pro-filmic referent, it nonetheless incorporates certain qualities of the celluloid image. Once the digital image appears on a theatrical or computer screen, it shares one quality with the projected celluloid image – it

can no longer be controlled. Streaming allows a spectator to pause or rewind, but the spectator cannot alter the moving image while watching it; we are still “screened” from the image, even though we interface with it as a spectator. Our interaction with images on the Internet and in games has influenced filmmaking, but movies continue to be made with the expectation that the images will be shown to spectators who cannot “shape” them. The social complexes of the digital age leave us at a perplexing point : digital culture produces doubt in the integrity of the image. However, the proliferation of digital cameras on mobile phones and tablets indicates that for many people, the photographic digital image still has a function commensurate to that of the celluloid image – representing the world.

A digital photograph may be indexical and iconic. An index is an imprint determined by a contingency (Doane 2007 : 133). Can the digital photograph be indexical? Tom Gunning argues “yes” – light strikes sensors which “imprint” the light into digital code (2004 : 40). The photograph is a unique index in that it is also iconic (Doane 2007 : 133-136). An important aspect of the photograph is its iconicity – the spectator’s ability to recognize the objects in the image determines, for the most part, its success as a photograph (Gunning 2004 : 41).

What has changed with digital technology is the image’s dependence on a prior existence for its iconicity. Consider the character of Gollum in Peter Jackson’s *Lord of the Rings : The Two Towers* (2002). Andy Serkis’s movements were recorded via motion-capture technology (a practice dating from Étienne-Jules Marey’s chronophotography [Gunning : 43]), transformed into a 3D digital model, and composited with the images of the “live” actors. Gollum’s movements are traces of Serkis’s movements, and though Gollum does not look like Serkis, he is recognizable as a creature “existing” with the other characters in the diegesis. Prince attributes such recognizability to “perceptual realism”, or the maintenance of the unity of space between the “real” and “artificial” characters through visual effects (2012 : 32-33). For Morin, comprehension of moving images is possible because of a three-dimensional “photographic orthodoxy”, which “imperturbably sets the action of consistency in motion, despite the subjective whirlwind that surrounds [...] the image. Its objectivity is the *guardrail* of the imagination. It guides perspective restoration” (1956 : 134). The principles of linear perspective still determine what a reproduction of the world should look like; an image seems realistic as long as it conforms to linear perspective (see Rosen 2001 : 311-314). Iconicity as a result of a contingency to a pro-filmic referent was a state of cinema at a time when image-making technology was analogical. Today, most images are taken with digital cameras, which changes our relation to the image : while never free from doubt, we continue to endow the image with an iconic function – the digital image is still a double of the world.

Le cinéma... permits us to speak about cinema at any period of its

technological development because Morin's argument recognizes that to speak of cinema means to acknowledge its essential bond to industry-produced technology. Instead of constraining us to categorize cinema within limitations such as indexicality, which is problematic given the digital images ambiguous relationship to the indexical, Morin's work allows us to think of cinema dynamically. What is it about the moving image that persists across technological changes? Morin identified a need for cinema that remained constant despite technological changes from silent to sound, monochrome to Technicolor. Cinema can fulfill that need as long as it continues to be a mirror-machine that produces a network of magical vision, affective participation, and aesthetic consciousness (1956 : 113).

Morin bases his analysis of the imaginary and the image upon Sartre's theory that the absence of the object in the image is critical for the act of seeing the image as something other than its substrate. To Sartre, the image is devoid of relations to the world, even when the image's substrate is a celluloid photograph (1940 : 9). The image, whether a mental image or photograph, is the result of intentionally positing its object as not-existent or not-present : if you see an image of a friend in a photograph, "*it is because [you] put him there*" (1940 : 12-13, 19; italics in original). As Sartre demonstrates, the image, even as celluloid, has always been a representation fostering an elusive relation to the real. The relation that the imaging consciousness posits between the substrate of the image and its absent object is "magical" because it produces "a certain affective impression" despite the knowledge that the object is not present (1940 : 23). For Morin, "magic" is a "certain stage and certain state... of the human mind" in which there is a residual belief in the image as a veritable double (1956 : 53-54). Yet, in order to enter this state, it is essential to know that the object of the image is not actually present (Morin 1956 : 29-30).

For Morin, this intentional positing of the object as not-present is fundamental for the imaginary, and consequentially, for cinema. Because the object of the image is absent, the "archaic person" could project his human individuality into the image so as to create a double freed from the exigencies of mortality (1945 : 26). This projective power "creates a double of everything to make it blossom into the imaginary" (1956 : 30). In writing *L'homme et la mort* (1951), he realized that the "imaginary universe of myths" was "not only superimposed on real life but [...] a constitutive part of human reality" (1978 : 221). Cinema "revive[s]" this "archaic universe" where death is evaded via the double and metamorphosis (*i.e.*, physical, temporal, and spatial transformation) (1978 : 222; 1956 : 55-66). The *besoin de cinéma* derives from cinema's presentation of images of absent or not-existent objects so as to give the spectator the opportunity to intentionally put what he wants into the image. The cinematic image has always existed because of this intentional act. Thus, the image's contingency to a pro-filmic referent is not the essen-

tial requirement for cinema. Morin identified two more basic qualities of cinema predicated on the absence of the object in the moving image.

The cinema generates a process of projection-identification with the image. Morin defines projection as “a universal and multiform process. Our needs [...] desires [...] fears, project themselves not only into the void as dreams and imaginings, but onto all things and all beings” (1956 : 85). On the other hand, “in the process of identification, the subject [...] incorporates the environment into the self and integrates it affectively” (*Ibid.* : 86). Morin believes this process of projection-identification, which “plays a continuous role in our daily life, private and social” is “at the very origin of cinematographic perception” because it “confers enough reality on cinematographic images for the ordinary projection-identifications to enter into play” with the images on screen (*Ibid.* : 91-92). To negotiate desires and fears in daily life, we not only project them onto the world, we also cloak these feelings in the “mask” and “costume” we maintain in public (*Ibid.* : 91). Knowing that the objects on screen are not really present, the spectator can once more enter the realm of magical vision – he can put aside his mask and project himself onto the image as a moving double.

The cinema is magical, heightens affective participation, and is aesthetic because it is “destined for a spectator who *remains conscious of the absence of the practical reality of what is represented [...]*” (Morin 1956 : 97). For Sartre, consciousness “must be able to escape the world” in order to imagine; yet, to accomplish this, the “world must be grasped precisely” as a world in which the object of the image is absent or non-existent (Sartre 184-185). For Morin, fiction provides such a space in which we are free to imagine : “The aesthetic imaginary, like any imaginary, is the realm of man’s needs and aspirations, incarnated[...] taken care of within the framework of a fiction” (1956 : 98). The aesthetic imaginary responds to a need which “practical life cannot fulfill[...] the need to escape oneself, that is, to lose oneself in an elsewhere[...] to better participate in the world[...] to escape in order to find oneself again” (*Ibid.* : 111-112). Thus, the cinematic image is one that represents the world, a double freed from the conditions of practical participation, so that the spectator can project himself onto the image to satisfy his need to escape society while maintaining an awareness of his status as a member of society.

While identification-projection and aesthetic consciousness are foundational elements of cinema, other aspects of cinema-making and spectatorship are sustained throughout technological evolutions. Movement, *trucage*, and the in/credulous spectator, as described by Metz, are such principles. I will discuss them briefly because of their correspondence to Morin’s work. By sustaining such principles while developing, alongside with image producing technology, cinema continues to realize the spectator’s imaginary as it is influenced by changing technology.

When viewing a cinematic work, the spectator perceives movement. In “On the Impression of Reality in the Cinema”, Metz cites Morin : “The combination of the *reality* of motion and the *appearance* of forms gives us the feeling of concrete life and the perception of objective reality. Forms lend their objective structure to movement and movement gives body to forms” (1968 : 7; see Morin 1956 : 118-119)⁶. Metz acknowledges Roland Barthes’ work on time and the photograph, but he adds that there is “a great difference between photography and the cinema[...] The movie spectator is absorbed, not by a ‘has been there’, but by a sense of ‘There it is’” (1968 : 6). The spectator knows that the digital moving image may not integrally have the quality of “having been there”, but digital cinema still creates an impression of reality because it produces movement. As Metz states, “movement is never material but is *always* visual, [thus] to reproduce its appearance is to duplicate its reality” (1968 : 9; all italics original to Metz). Forms structured by digital code may or may not have a link to a referent, but nonetheless they move, and, to use Metz’s words, we can “inject the reality of motion into the unreality of the image and [thus] render the world of imagination more real than it had ever been[...]” (1968 : 15). What allows us to enact the process of projection-identification upon the image is not its contingency to the past, but its real movement in the present. We are drawn to the cinema by a need to perceive the world reproduced before us in such a way that it *seems* like the world moving before us.

Consistent throughout cinema’s history is the spectator’s awareness that the images upon the screen are the results of technological tricks and that the creation of these tricks changes as technology develops. The “realism” of the cinematic image has always been a deception : “such is the strange destiny of cinema : to fabricate illusion with beings of real flesh, to fabricate reality out of *papier-mâché* illusion” (Morin 1956 : 158-159). In “*Trucage* and the Film” (1972), Metz explores how cinema production structures the tension between disbelief and belief in the image experienced by the spectator. *Trucages* are not special effects (such as explosions, which Metz labels a craft like costume or set design (1972 : 659). Rather, they are “interventions” in the total process of filmmaking (660-664). Metz focuses on the distinction between imperceptible and invisible *trucage*. In the first case, the spectator is not aware of the *trucage*; he does not recognize that the stuntman is not the actor (Metz 1972 : 663-664). With invisible *trucage*, we “sense” its presence, but “we could not explain how it was produced nor at exactly which point in the filmic text it intervenes” (Metz 1972 : 664). Thus, “it is this ‘machination’ which defines the official status of *trucage* in the cinematographic establishment. The result is that *trucage*[...] is *always avowed*” (Metz 1972 : 664).

Digital special effects should be distinguished from digital *trucage*. There is a new set of craftsmen – technicians who craft explosions using computers and digital devices. Perhaps what some find unnerving about

the digital is that the invisible *trucage* is even more invisible – the blend of the pro-filmic images and digitally created images is so seamless that it is difficult even to “sense” that there is a *trucage*. However, the spectator nonetheless has a basic understanding, developed from a quotidian practical use of computers and digital technology, that the image may derive, at least in part, from some digital *trucage*.

Metz builds his theory of *trucage* upon the spectator that “knows”. What Metz identifies as generating the spectator’s love for cinema is not a faith in the existence of what is represented, but the game the spectator plays between believing in the image and knowing that he perceives a trick (1972 : 667-668). To explain this, Metz references Morin :

The most naïve spectator – as long as he is accustomed to going to the movies – never loses sight of the fact [...] that the images [of the invisible man] were of necessity obtained through some special technique [...] The distancing, like the identification, is never total : it is one of the aspects of this ‘interfusion’ of the real and the imaginary which has already been well analyzed by Edgar Morin in *Le cinéma ou l’homme imaginaire* (1972 : 668).

Thus we return to Morin’s concept of cinema : technical *trucs* create “the dialectical unity of the real and unreal” and knowledge of this enables cinema to satisfy the need to perceive an imaginary double of the world (1956 : 169). Metz believes that because of this knowledge of *trucage*, cinema is beneficial for the spectator :

The powers of the cinematographic establishment thus anticipate wishes which, for the spectator, are neither superficial nor transitory [...] The very possibility of constantly dividing one’s credibility goes far to explain the hold which cinema has on the spectator. For him it represents the formation of a compromise, greatly beneficial, between a certain degree of retention of one’s defenses and thus the avoidance of anxiety (1972 : 670).

Trucage is a perennial aspect of cinema. How illusions are created changes as cinematic technology develops, but the spectator’s need to see and believe in the image, despite an awareness of the potential non-existence of the object in the image, continues.

The cinema’s status as a unique mirror persists throughout changes in technology. Though Metz does not reference Morin in *The Imaginary Signifier*, I believe that Metz and Morin’s concepts of the cinematic image can be linked. According to Morin, one’s own image upon the screen “is close to the double the child discovers in the mirror [...] strange and familiar” (1956 : 40). In *The Imaginary Signifier* Metz refers to Jacques Lacan’s work on the “mirror phase” : the recognition of one’s image among the reflections of other subjects is crucial for identity formation (1975 : 17-18). The mirror also teaches the infant spatial correspondence through the illusion of depth. This early interaction with the mirror prepares us for cinema, because the objects perceived on screen are doubles in a mirror which differs from the mirror of the infant “in one essential point : although [...] everything may come to be projected [...]

[there is] one thing only that is never reflected in it : the spectator's own body" (Metz 1975 : 48).

In order for the fiction film to succeed the spectator must act credulous. The spectator is not "duped" by the impression of reality generated by moving images. Yet, it is vitally important "for the correct unfolding of the spectacle that this make-believe be scrupulously respected [...] Any spectator will tell you that he 'doesn't believe in it', but everything happens as if there were nonetheless someone to be deceived, someone who really will 'believe in it'" (Metz 1975 :70). While Morin does not specifically reference Metz in the 1978 introduction to *Le cinéma*, he does state that the "modern aesthetic situation experienced by every spectator" is essential to viewing the film in "*state of double consciousness*" : "we do not stop knowing that we are in a seat contemplating an imaginary spectacle" (1978 : 225).

The spectator's belief in the moving image, despite knowledge of the absence of the objects within it, is the imaginary brought "to life through the totally modern action of mechanized technology, of the cinematic industry, and in a modern aesthetic situation" (Morin 1978 : 225). What is the aesthetic situation for the spectator in the digital age? The spectator knows that digital code can faithfully represent the subject of the image, or alter it, or create a new object. It is this new type of situation that the in/credulous spectator experiences when viewing cinema as digital moving images : he is not duped by the digital illusion, but it is "of vital importance for the correct unfolding of the spectacle that" the practice of make-believe continues (quoting Metz 1975 : 70).

The digital camera, though no longer necessarily made with mirrors, still functions as a mirror because it continues to create doubles appearing in a present-absent space. Digital images sustain the impression of movement, and thus the image resembles the world. The spectator is aware that such a resemblance is the result of *trucage*. Digital cinema continues to entice spectators because the spectator's image does not appear among the images on screen. This loss of our image enables us, returning to Morin, to project our fears and aspirations onto the moving images, because by not seeing our image on the screen, we know "that the action, however real, is actually outside the realm of practical life" (1956 : 93). Yet, this loss of our image does not mean that cinema allows us to escape being in the world.

Spectators seek out cinema because as representation it "allows us to reflect on the imaginary of reality and the reality of the imaginary" (Morin 1978 : 223). Morin draws from Sartre's theory that "being-in-the-world' is the necessary condition of imagination", which in turn is necessary for "being-in-the-world" (1940 : 186). Morin states that "the permanent source of the imaginary is [...] the concrete presence of man in the world : his life" (1956 : 207). Accordingly, the "human 'personality' [...] stems not only from practical exchanges between man and nature

and social exchanges between men, but also from endless exchanges between the individual and his imaginary double" (*Ibid.* : 208). Because society constrains one's image, there is a need for a double that does not replicate one's likeness. With the cinema, we can negotiate "being-in-the-world" by superimposing the imaginary onto the screened image without having to reject "being-in-the world".

The cinema continues as long as it satisfies the *besoin de cinéma*, which is to say as long as cinema is a "mirror that is also a machine". Cinema replicates the world by depicting movement and it doubles the "endless exchanges between the individual and his imaginary double" by generating affective participation with the moving image. As a result, cinema becomes a mirror that "necessarily reflects practical and imaginary realities [...] the needs communications, and problems of the human individuality of its century" (Morin 1956 : 212). Such "complexes of magic, affectivity, and reason [...] [take] us back to contemporary social complexes and their components" (*Ibid.*). This return is accomplished because the image is produced by the cinema industry. Not only is technology essential for producing the image, knowledge of the technology that produced the image, the image's "being-in-the-world", is essential for cinema (Morin 1978 : 225). In order for cinema to be – in order for the succession of moving images to be images with which we can affectively participate – it must bring doubles to life through "the totally modern action of mechanized technology" and we must always be conscious of this technology. By not permitting us to forget about the technology that produced the images, cinema makes us think about its "being-in-the-world", leading us to think about "being-in-the-world" and our "practical and imaginary realities".

Morin's work allows us to continue to speak of cinema in the digital age because his theory is dynamic and not dependent on a specific substrate : cinema exists as long as it satisfies the *besoin de cinéma*, which means as long as it evolves with technology. His concept of cinema as a mirror-machine still holds in the digital age, because "we are at a moment in history where man's inner essence is introduced into the machine", the computer, and is realized through digital images (quoting Morin 1956 : 213). Since the digital delimits our "being-in-the-world", our imaginary is now influenced by our participation with the digital and its particular *trucages*. We know that due to changes in technology an image's iconicity is no longer dependent on a contingency to a pro-filmic referent. At the same time, social media has imposed a "personality" upon one's digital image, either in social relations, through Facebook, or professional relations, through LinkedIn. News organizations publish digital photos of actual events, asking us to "trust" in the image – to posit its object as not present but not non-existent. When watching a movie today, even on celluloid, awareness that the moving images on the screen may be products of *trucage*, brings us back into "being-in-the-world". This return allows us to have a magical relation with the image

by enacting a projection-identification with the absent or non-existent objects, and putting into them our fears, hopes, and desires.

Thus, cinema can continue. By evolving with technology it continues to be a mirror-machine producing a network of magical vision, aesthetic consciousness, and affective participation that “reflects practical and imaginary realities [...] the needs, communications, and problems of the human individuality” in the Twenty-first Century (quoting Morin 1956 : 212).

* * *

Action movies that present digital technology as both a weapon for good and for evil, such as *Skyfall* (2012), tap into the anxieties of living in a digital world and provide a fictional space in which to project hopes and fears. However, the technology depicted within these films is often advanced beyond the devices we interact with on a daily basis. Thus, I will discuss *The Social Network* and *Contagion* because I believe they better reflect the use of digital image technology in society and satisfy the *besoin de cinéma* arising from such quotidian interactions with technology.

Over 829,000,000 million people log daily into Facebook via computer or mobile devices to check their Friends’ “status” and to post updates (Facebook). According to Lev Grossman (2010 : 63), the expansion of Facebook “fundamentally chang[es] the way the Internet works and, more importantly, the way it feels – which means, as the Internet permeates more and more aspects of our daily lives[...] how the world feels”. As the immense popularity of Facebook shows, the desire to reproduce oneself as image persists. Facebook users post images of the mundane and extraordinary, generating a “timeline”. Posted images are increasingly ubiquitous as other social networks such as Twitter and Instagram have gained traction. Social media has captured our images and increasingly directs our practical participation in the world.

In a digital era in which Facebook makes us align our identity with a “profile picture”, cinema becomes all the more vital because it doubles the world without re-presenting our image and demanding practical participation. Facebook and other social networks have become a virtual place for “the social exchanges between men[...] [and the] endless exchanges between the individual and his imaginary double” (quoting Morin 1956 : 208). Thus, cinema continues because it continues to be a mirror that leads us back to “the heart of contemporary problems”. By generating a “double” of Facebook out of digital moving images, *The Social Network* satisfies that need for the double upon which we can project our fears and aspirations, so that we can work through “the needs, communications, and problems” raised by social media (quoting

Morin 1956 : 212)⁷.

The Social Network leads us towards an affective participation with the images on the screen, a screen upon which the “real” Facebook is not accessible. David Fincher shot *The Social Network* on digital primarily for ease of production (Goldman 2010 : 28-29). He used the RED camera, an advanced digital camera that shoots as frame-per-second and has a sensor almost 35mm in size which captures light as a RAW (full resolution) image file (RED). *The Social Network* retains “photographic orthodoxy” while presenting digital images of youths developing Facebook in a Harvard dormitory. When *The Social Network* appears on a screen, we cannot interact with the Facebook depicted on the same screen. This frees us to project our fears and aspirations upon the moving images, in other words, to interface with the images on screen without interacting with them.

The Social Network is not a “bio-pic” – it is a mythical recounting of the founding of Facebook. The themes of power, betrayal, and the desire for recognition as complicated by the digital age structure the aesthetic framework of the narrative. The final shot of the film depicts “Mark”, the founder of Facebook, alone in a glass enclosed room sending a “Friend request” to an ex-girlfriend and refreshing the page in the hope that she has accepted. This scene mirrors this widely utilized method of initiating (virtual) social exchanges, provides a locus upon which the social media user/spectator can project fears of (virtual) isolation, and demonstrates that connection to contemporary social exchanges results from the recognition of one’s digital image.

The Social Network is an intricate network of doubles : the double of the characters (“Mark” is a double of Mark Zuckerberg), the double we project onto the characters, and a double made possible by digital *trucage* – twins played by the same actor. Convincingly depicting one actor as twins is a standard *truc* predicated on the audience’s willingness to be “in/credulous” spectators. In *The Social Network* this motion-capture/superimposition *truc* is complexly executed (Goldman 2010 : 38-41). If the spectator had not read the reviews and did not know of the actor Armie Hammer, he could have easily, initially, believed that two actors played the Winklevoss twins. Yet, the depiction of the “twins” is not perfect. Eventually, we realize that we see a digital composite of three performances (two by Hammer, one by the stand-in, Josh Pence). We perceive how we were tricked by the digital technology. The *trucage* succeeds in part because of the impression of reality generated by the “real presence of motion” of the images on the screen and the “photographic orthodoxy” sustained by the illusion of depth. Yet, in order for the remainder of *The Social Network* to “correctly unfold”, the spectator must be “in/credulous”. This state-of-being makes us recognize how easily digital technology generates doubles.

With digital cameras we can craft an image-double to post on social

media sites to present a “personality” to the world. As *The Social Network* demonstrates, such images can be manipulated, and thus, the film also reminds us of our doubts regarding the authenticity of the images we see on social networks. *The Social Network*’s use of digital technology to create the Winklevoss twins-*trucage* and the response it generates is an example of how cinema continues as a digital “mirror-machine”. It reflects the “the needs, communications, and problems of the human individuality” living in a society connected by social networks : a society in which we sometimes question the image, in which our own image can easily be duplicated, and in which our identity becomes linked to digital images seen by others.

The Social Network focuses on the origins of Facebook and does not address social media’s increasing role as a means of documentation. Social media is a tool for disseminating images of conflicts, especially in Iran, North Africa, and Syria. The immateriality of the digital image allows visual representations of current events to be transmitted in a chain of postings on websites. While there is always a risk that the image may be distorted, there also seems to be a “trust” in digital images which depict “news” or “what is happening now”.⁸ The dissemination and manipulation of digital images is one of the thematic structures unifying the divergent stories in *Contagion*.⁹

Contagion is truly science fiction. Steven Soderbergh and screenwriter Scott Z. Burns asked the virologist Dr. Ian Lipkin to create a virus originating in bats modeled on the deadly Nipah virus (Wallis 2011)¹⁰. “The essential characteristic of fantasy”, Morin wrote in 1956, “is the *rationalization* of the fantastic. There are multiple possible and different rationalizations according to the genre of films [...] Projection-identification must ceaselessly be encouraged by a timid ‘that could happen (to me).’ It needs guarantees of authenticity” (165-166). The filmmakers sought to guarantee authenticity by enlisting Lipkin’s lab to chart a realistic course of the pandemic and the digital technology used by scientists to find a vaccine (Wallis 2011). Dr. Abigail Zuger, an epidemiologist, argued that *Contagion* presents a worst-case scenario and that, most likely, a pandemic would not occur in the way depicted (2011 : D1).

Yet, the purpose of *Contagion* is not to present a most-likely pandemic, but to generate an affective participation between the imaginary and the images upon the screen. The filmmakers present, within the aesthetic framework of fiction, a probable pandemic which turns into the worst-case scenario government officials warn us about whenever such outbreaks occur. Because of the film’s various guarantees of authenticity, those scientific facts suggesting that the pandemic “could happen to me”, we can enact a projection-identification on the characters as they experience the worst. Witnessing their various fates, we can imagine how we would endure such a crisis were we in their positions.

What is significant about *Contagion* is not its digital production, but its doubling of the digital technology used by people across the world. Such doubling strengthens the notion of “this could happen to me”, that magical relation between the image and the spectator’s imagination, which the movie aims to elicit. The opening scene, Day 2 of the pandemic, depicts the index patient (the person who first spreads the disease). The woman coughs as she hands a credit card to a waitress who then touches a touch-screen cashier. We learn later that one woman contracts the virus because she hands the index patient her Blackberry. Shots of infected victims touching doors and then their mobile phones become all the more chilling when we consider how often we touch phones and keyboards after having touched a public surface.

Contagion also mirrors the tension between trusting and doubting the digital image’s status as “proof”. We can enact a projection-identification with these characters because their use of digital technology is quotidian and this leads us to think about being-in-a-digital world. A montage shows various people across the globe falling sick and dying. One man collapses on a bus in Tokyo, while another passenger records it on video using his smartphone. In terms of plot, this digital image goes viral via social media, and is then used by scientists to trace the source of the virus. Another character uses social media to sell a hoax cure. This display of the use of digital image technology doubles our interaction with the digital image. When an event happens on the street, people take out their phones or digital cameras to record it. This digital image is considered a testament by its taker to depict the event that occurred. The documentary power of the photograph still holds in the digital era : we posit the object as not-present, not non-existent. As *Contagion* demonstrates, the digital image can be manipulated by entrepreneurs or fraudsters, but this means that the movie is doubling another aspect of our contemporary social complex : today, images are both trusted and doubted.

Cinema persists because as a mirror-machine it continues to generate an affective relation between images and the spectator’s imaginary as influenced by being-in-the-world mediated by technology. As culture becomes delineated by the digital, the production of images changes and thus impacts the imaginary. Cinematic machines and *trucs* are changed so that the spectator can continue to project “contemporary social complexes” onto moving images (doubles) and negotiate being-in-a-digital-world. *The Social Network* and *Contagion*, created from and displaying digital image technology, present moving images that have the impression of reality and double the spectator’s interaction with digital images in society so that the spectator can enact a projection-identification with the images.

When attempting to construct a theory for cinema today, it can be helpful to examine the work of those who wrote about cinema during

periods when different technologies predominated. The point is to study how these writers conceptualized the relationship among image creation, perception, and technology and to take what can be extended to the digital and use it as base for further theory. Morin's work allows us to speak about cinema in the digital age because he believed that not only are technology and awareness of technology essential aspects of cinema, changes in technology do not alter cinema's fundamental quality : its ability to satisfy the *besoin de cinéma*.

I only addressed fiction filmmaking, since it is the focus of *Le cinéma ou l'homme imaginaire*, but Morin considered "cinema" to encompass both documentary and fiction films. In fact, he found that the affective participation with the image is heightened when watching documentaries (1956 :75). In viewing a documentary, we posit the objects in the image as not present, but at one time existent. Digital technology poses challenges when speaking about cinema as documentary and the ability of documentaries to satisfy the *besoin de cinéma*. Digital filmmaking has greatly facilitated documentary filmmaking. Yet, at the same time, these films must strive to overcome, or at least quell, our doubt that the image is not a product of *trucage*. Discussion of the images' contingency to a pro-filmic reference is necessary. However, documentaries are made with, distributed by, and seen on digital devices. *Le cinéma* can provide a basis for continuing to speak of digital documentaries as cinema because Morin's concept of cinema is grounded on the theory that cinema can only continue as long as it remains bound to and develops with an image-producing industry.

Notes

1. My thanks to Prof. Nico Baumbach, the reviewers of this paper, and respondents to my presentation at the 2011 IMPACT Conference for their comments.
2. Prince suggests that the digital both maintains continuity with celluloid cinema due to the persistence of the unity of space, indexical values, and narrative synthesis and leads towards a more immersive viewing experience (2012 : 52-53, 148-152). Whissel considers special visual effects to have an emblematic function of progressing the narrative as well as articulating historical and political concerns; for cinema to continue providing such emblems, it must continuously engage with new technologies (2014 : 18-20, 183-184).
3. The U.S. domestic box office total for 2013 was \$10.920 billion (Box Office Mojo). The MPAA reported that in 2012, 1.36 billion tickets were sold in the U.S./Canada market, a 6% increase from 2011 (MPAA).
4. In 2013, Netflix had at least 31.1 million members (Stelter : 2013). Digital and press media advertise movies available to stream. For an example, see "Netflix : 30 Best Films on Netflix" produced by *The Telegraph* in 2013.
5. All italics are original to the University of Minnesota Press edition of *The Cinema, or the Imaginary Man*.
6. Metz adds that Morin does not go far enough in elucidating the spectator's perception of movement (1968 : 7-8). However, Morin does acknowledge that movement is "an affective power, or *kinesthesia*" which produces the "*feeling of*

- reality" (1956 : 130).
7. *The Social Network* grossed \$224,920,315 worldwide (Box Office Mojo : *The Social Network*).
 8. For example, a photographer posted digital photographs of the 2010 Haitian earthquake on Twitter shortly after the event. Another person reposted the photographs under his own name and those images were rapidly disseminated throughout the news media (*Agence Fr. Presse v. Morel*). The Associated Press dismissed a Pulitzer Prize winning photographer after he admitted to digitally removing a colleague's video camera from a photo taken in the conflict in Syria (Associated Press).
 9. *Contagion* grossed \$135,458,097 worldwide (Box Office Mojo : Contagion).
 10. Scientists now believe the 2002 SARS pandemic started in bats (See *Australia Associated Press* 2013).

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Abstract

Digital image technology facilitates the production and distribution of images, and at the same time, instills doubt as to the integrity of those images. As a result, spectators today trust and doubt the image while still retaining a need to see a double of the world on screen. Edgar Morin's work on cinema permits us to speak of cinema in the digital age because he recognizes that from its origins cinema has been a "mirror-machine" that reflects the spectator's imaginary and practical relationship with images as experienced through new technologies. I will explore Morin and Christian Metz's writings on cinema to analyze cinema's foundational element : the ability to satisfy the *besoin de cinéma* throughout changes in technology. Cinema persists as digital moving images because by evolving technologically it responds to the spectator's need to see a double of the world on screen in order to negotiate the demands of society and personal desires.

Résumé

La technologie de l'image numérique facilite la production et la distribution des images tout en semant, simultanément, le doute sur leur intégrité. Conséquemment, les spectateurs d'aujourd'hui entretiennent autant la confiance que le doute à l'égard de l'image, tout en conservant le besoin de voir un double du monde à l'écran. Les travaux d'Edgar Morin sur le cinéma demeurent pertinents à l'ère numérique, car celui-ci reconnaît que, depuis ses origines, le cinéma a été une "machine-miroir" qui reflète la relation imaginaire et pratique du spectateur avec des images en mouvement,

et ce, quel que soit son fondement technologique. Nous ferons appel aux écrits de Morin et de Christian Metz dans le but de cerner l'essentiel du cinéma : sa capacité à satisfaire, d'une technologie à l'autre, le *besoin de cinéma*. Si, aujourd'hui, le cinéma persiste sous des formes numériques c'est qu'il continue de répondre au besoin chez l'homme de voir sur un écran un double de son monde, lui permettant ainsi de négocier avec les exigences sociales de son existence autant qu'avec ses désirs personnels.

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