

# Consciousness, Literature and the Arts

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## **Cinema and the Unconscious Mind: from Psychoanalysis to Neurosciences**

by

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### ABSTRACT

Cinema and the study of the unconscious mind were born almost simultaneously at the end of the 19<sup>th</sup> century and they have been closely related since; in fact cinema is particularly suited to address the unconscious, when compared with other forms of artistic expression, and psychology has been extensively exploited in cinema scripts.

The relationship between cinema and the unconscious is here examined, starting with a brief review of the psychoanalytical theories that have been proposed to explain this association from the beginning of the 20<sup>th</sup> century on. Some examples are then reported from contemporary films of the metaphoric language aimed at the unconscious. The last section is devoted to the recent

advances in neurosciences which both allow us to gain insight in the way films talk to the unconscious and explain why watching a film is such a gratifying experience.

## **INTRODUCTION**

On December 28th 1895 a film was shown for the first time with a fee to the public at Le Gran Café in Paris by Luis and Auguste Lumière; just four years later Sigmund Freud's "Interpretation of Dreams" was published (1899). Since then cinema and the unconscious mind have been closely related: on the one hand psychology has been the subject of many movies (a classic example is "*Spellbound*", Alfred Hitchcock 1945) and on the other it has been used to explain what films tell our unconscious (Creed 1998).

A synthesis of the psychoanalytical theories on the relationship between film and the unconscious developed during the XX century will be reported, then the neuroscientific findings and theories which over the last two decades have allowed an understanding of the possible mechanisms of this relationship will be examined.

## **PSYCHOANALYSIS AND FILM**

At the beginning of the 20th century, the Surrealist movement drew upon psychoanalysis to explain the relationship between film and the unconscious

(Kovacs 1980). In this view, cinematic techniques are employed by the filmmaker as a means to depict themes that are repressed by her/his super-Ego and usually remain confined to dreams. Thus it follows that films are inspired by many of Freud's themes such as the return of the repressed, the Oedipus complex, narcissism, castration and so forth. "*Un Chien Andalou/An Andalusian Dog*" by Luis Buñuel (1928) is a classic example of film as a projection of the unconscious, as well as a failed resolution of the Oedipus complex is shown in Hitchcock's "*Psycho*" (1960) and "*Marnie*" (1964) as regards a boy and a girl, respectively (Creed 1998).

Also Carl Gustav Jung's theories have been used to explain the relationship between film and the unconscious, particularly as regards the Archetypes. In the words of Barbara Creed: "The Archetype is an idea or image that has been central to human existence and inherited psychically from the species by the individual" (1998). Archetypes can be subdivided in Primary (e.g. the Self and its counterpart the Shadow) and Secondary, subgrouped in Characters, e.g. the Great Mother and its dark counterpart the Terrible Mother, Situations, e.g. the Journey and the Quest, and Symbols, e.g. Light (=Life) and Dark (=Death) (De Coster 2010). In fact many if not most film plots, as well as narrative works, are inspired by these archetypes. These psychoanalytic theories were further elaborated starting in the 1970s, particularly by Jean-Luis Baudry and Christian Metz .

Jean-Luis Baudry (1986) defined film as an "Apparatus" which places the viewer at the centre, as a transcendental ego, and feeds him a smooth narrative continuum (which does not exist in reality, since the film is made up of single frames) akin to the functioning of the unconscious. In this way the apparatus conveys to the viewer an ideology which is useful to the ruling class to maintain the power in its hands. Moreover, Baudry proposes an analogy between the viewer and Jacques Lacan's child in the mirror stage of the Imaginary Period (2006): the child at 6 to 18 months identifies for the first time itself with the image shown in the mirror thus generating the first image of its body; this identification depends on two conditions, that is both a reduced capacity to move around and the dominant use of the visual function. These conditions characterize also the viewer in a theatre, helping her/him to misrecognize herself/himself as a character in the film. Thus the cinematic experience induces a regression of the viewer towards an anterior phase of development in which the boundaries between the subject and what surrounds her/him are blurred, just as often happens in dreams.

Christian Metz was less interested than Baudry in the neo-marxist aspects of the Apparatus, he focused on cinema as the "Imaginary Signifier" (1982), different from other signifiers like theatrical performances because it both involves a more intense visual and auditory perceptual experience and is totally

imaginary (e.g. there are no live actors on the silver screen, just recorded images). Moreover he went further in the analogy with Lacan's theories in that in his view, if film is like a mirror, it is not a normal mirror because it will never reflect the viewer itself. Of course the viewer has already undergone the experience of primary identification, when she/he was confronted with a mirror for the first time. Thus, according to Metz, cinema belongs also to Lacan's Symbolic Period (2006). In this period the boy, after seeing himself in the mirror, is confronted with his mother's lack of a penis. At this point he may react either by accepting or by refusing this difference. In the former case, following the laws of society he will repress his desire for his mother and search for a (re)union with a woman later in his life, whereas in the latter, since the refusal involves thinking that his mother has been castrated, he will substitute the lacking penis with another part of the body (e.g. the breasts) or of the clothing (e.g. high heels). This mechanism symbolizes the phallic mother, which in turn we find in films depicted as the character of the "Dark Lady", with close-up shots particularly apt to underline the fetishizing process (Creed 1998).

The aforementioned psychoanalytic theories were criticized on various grounds, particularly for the gender problem (Creed 1998). These theories placed in fact the male subject at the centre, leaving the female in a passive role. In brief, according to Laura Mulvey (1975), in a patriarchal society the film-

maker's unconscious portrays the woman either as an object of the male protagonist's desire or as a threat (of castration) whom in the end must be punished. As regards the female spectator, in Mulvey's view she can enjoy watching a film either by endorsing the female protagonist's passive role (a somewhat masochistic view) or by adopting a masculine approach through the identification with the male protagonist (1975).

Besides the gender problem, these theories were criticized for their repetitivism (every film is explained with the same sequence: basically the male character gazes with desire the female character who stands still in a passive role) and for the idealization of the viewer, that is the adoption of a standard observer, without taking in account variables such as her/his age, class, race, sexual preferences (Creed 1998).

In order to circumvent these criticisms, the French philosophers Gilles Deleuze and Felix Guattari (2000) proposed a new approach to the unconscious, defined as the "Productive Unconscious" which can be applied to films. Briefly, in this view the unconscious produces three different types of syntheses: connective (which link together different objects in a potentially infinite flow), disjunctive (which produce a surface encompassing the aforementioned connections by keeping the single objects at the same time distinct from one another and

inclusive of one another) and conjunctive (which represent the final stage of the process).

As regards film, multiple connective syntheses are involved, the most important being the narrative flow deriving from the camera shots which build up the story on the screen. Moreover, in the viewer's mind the connections of different objects flowing on the screen generates a number of other connections with other films, memories, experiences. At the same time disjunctive syntheses are produced, which link distinct connective syntheses in an inclusive flow.

Gilles Deleuze goes further in his interpretation of film with the movement-image and time-image theory, which in his view characterize mainstream Hollywood and New Wave productions, respectively. Movement-image assigns to purposeful actions the role of leading the narration in a smooth and continuous manner, whereas in time-image the narrative aspect is definitely less important (nothing often happens) and the viewer is left with a fragmented flow of time, through peaks and sheets of past and present (to use Deleuze's terms) (Carvalho 2009).

"*Gone Girl*" (David Fincher 2014) offers the opportunity to exemplify some of the aforementioned concepts. In the opening shot we see the back of Amy

Dunne's (Rosamund Pike) head while her husband Nick (Ben Affleck) gently strokes her hair; all of a sudden she turns around and



stares intensely off centre to the right for several seconds (Figure). The viewer is bewildered by this enigmatic gaze, since there is no clue as to its meaning. At the end of the film the director shows us again the same scene, with the same intense gaze, but now we know what this beautiful woman has done and we can decipher her gaze as harbouring evil intents, in a circle of knowledge which reminds us of T.S. Eliot's "Little Gidding" (1942): "And the end of all our exploring / Will be to arrive where we started / And know the place for the first time". In cinematic terms this is an example of the "Kuleshov effect", named after the Russian film-maker Lev Kuleshov who described the influence on the perception of a given scene exercised by previous and/or following scenes (Prince and Hensley 1992). This effect is typical of cinematic art, clearly demonstrating the utmost importance of the editing process; at the same time it is an example of Deleuze and Guattari's concept of syntheses. Moreover, in this film we find both a contradiction to a well-known correlation originally exposed by Plato in "Timaeus" (360 b.C): what is beautiful is also good (kalos kai agazos) and an exemplification of the Jungian archetype of the "Terrible Mother" (or "Dark Lady" in cinematic terms) as opposed to the more reassuring



"Great Mother" (De Coster 2010). Moreover, it should be noted that violence does not belong to Amy Dunne's character only; the internal monologues of her husband Nick are in fact marked by the same ferocity, suggesting that violence may activate a vicious circle perpetuating violent behaviours.

The main and well-known problem of psychoanalysis is the lack of measurable, replicable and falsifiable data (Kurthen 1989). All of the aforementioned theories cannot thus be supported by sound scientific evidence. As regards cinema, however, psychoanalysis deserves credit for the proposal of the unconscious mind as a possible interlocutor of film; since metaphors are usually employed to address this interlocutor, as for example in hypnosis sessions (Steckler 1992), some examples of the metaphoric language employed in films are reported in the following section.

In the opening shot of "*The Counselor*" (Ridley Scott, 2013) we see the Counselor (Michael Fassbender) and Laura (Penélope Cruz) in bed while cuddling up and chatting completely covered by white sheets. The viewer can just see the contour of their bodies shaped by the sheets and hear their voices. There is nothing strange in this scene, it just may seem too long. Only at the end of the film, or maybe when one thinks about it later on, one may understand that the sheets are a metaphor for a shroud because both characters are inexorably bound to annihilation, physical as regards Laura and spiritual as

regards the Counselor, since all events in Cormac McCarthy's (author of the script) *Weltanschauung* are pre-defined and cannot be modified.

In the opening shot of "*American Sniper*" (Clint Eastwood, 2014) a battalion is advancing among the ruins of a town when suddenly the camera zooms in on the caterpillar tracks of a tank while it loudly crashes some bricks. Why focus on this apparently insignificant detail? This could well be a metaphor underlining the destructive effect of war, to make clear from the beginning that the film is not meant to glorify war (as further explained later by the reading of Marc Lee's last letter at his funeral) but to analyse the character of Chris Kyle (Bradley Cooper).

Toward the end of "*Spectre*" (Sam Mendes, 2015), Max Denbigh (Andrew Scott), code name C, member of the British Parliament and Bond's technocrat rival in the MI6, falls out of the window and dies after slipping on broken glass whereas on the contrary a few scenes beforehand James Bond (Daniel Craig) walks fast and steady on wet terrain, scornfully ignoring the call to precaution of his colleague Bill Tanner (Rory Kinnear); the message is that, contrary to the future (Denbigh), the past (Bond) is strong and reliable .

One last metaphor is the sequence shots of characters walking frantically along the narrow corridors of a theatre that Alejandro González Iñárritu repeatedly

shows in "*Birdman*" (2014), associated with an unrelenting and chaotic drum music, which may recall the thoughts chaotically flowing through neurons and synapses within the character's brain.

## **NEUROPHYSIOLOGY OF THE SPECTATOR**

Having said all the aforementioned, a consequent question is how the mind handles all the information supplied to its unconscious by films. The technical advances in neurosciences in the last twenty years have shed some light on this topic. The activity of the brain can be indirectly evaluated by mapping the increase in blood flow in selected areas with functional Magnetic Resonance Imaging (fMRI), assuming that an increase in blood flow indicates an increased neuronal activity in a given area (Haynes 2015). Besides this assumption, another problem with this technique resides in its spatial resolution and recording speed, since every recorded voxel (the tridimensional version of a pixel) reflects the activity, both excitatory and inhibitory, of a few hundreds of thousands of neurons recorded for a few seconds, whereas single action potentials, that is the electrical activity which neurons use in order to communicate with each other, are typically less than a millisecond in duration (Haynes 2015). Studies based on fMRI should thus be interpreted with caution and their results integrated, when possible, by other methods, such as on one side High Density Electroencephalography (HDE), Magnetic Encefalography and particularly Single Neuron Recording, which allow a more detailed recording of

the brain's activity, and on the other Transcranial Magnetic Stimulation and the study of patients with brain lesions, which evaluate the correlation between a given area of the brain and a given function (Napolitani 2014, Doron 2015, Wilson 2016).

Thanks to these technical advances, at the beginning of the 1990s the existence of a peculiar family of neurons located in the premotor cerebral cortex of macaque monkeys was reported, which activate in response to the view of a purposeful action performed by another monkey (Rizzolatti 1992). In other words, the observer monkey's brain behaves "as if" the observer monkey were performing the same action (but no motor action is produced) performed by the observed monkey. These neurons were called "mirror neurons" and later studies showed their existence in the human brain too (Mukamel 2010) and their similar activation when perceiving emotions (e.g. fear, disgust, etc) in other subjects (Molenberghs et al 2012). Moreover, another family of motor neurons, which usually activate when the subject performs an action (so-called "canonical" neurons), were shown to activate also just at the sight of a manipulable object (Perani 1995), as if the observer were mentally rehearsing how to use that object. These findings not only explain a great deal about how we learn to do things, they also provide a neurophysiological basis for the development of empathy, thus addressing our capability of interacting with the people around us. An integration of the aforementioned findings led to the

development of the "Embodied Simulation" theory (Gallese 2005). According to this theory, the actions, emotions and sensations of others are reproduced by the activation of specific neurons within the observer's brain as if she/he were acting or feeling what the observed subjects do or feel, thus providing the observer both access to, and understanding of, the world of others and the possibility to interrelate with it. If we apply this theory to cinematic art, Embodied Simulation provides the neurophysiological basis for the interactions occurring at the unconscious level between the film and the viewer, as if the actions and the emotions portrayed in the film were performed and felt by the viewer. Thus she/he does not play a passive role because in her/his mind she/he takes part actively with what is going on on-screen. An interesting demonstration of this active role is found in a recent study (Heimann 2014) investigating by means of HDE the effects of different filming styles on the activity of the spectator's motor cortex. Specifically, the authors compared the effect of the same scene filmed with a still camera and with three different techniques of camera movement: zooming in on the scene, moving the camera towards the scene with a dolly (camera on tracks) and moving the camera with a steadicam (camera applied to the operator's body). The results showed that moving the camera toward the scene evoked more intense activity on the motor cortex of the experimental subjects compared with the still camera, but the statistical significance was achieved only when the camera was moved by means of the steadicam. Moreover, when asked their opinion

regarding the feeling of involvement in the scene, the study subjects reported a more realistic experience when viewing the scene filmed with the steadicam. In summary, the simulation of natural movements afforded by the steadicam, with a fluidity unachievable with a hand-held camera, provides the spectator a realistic immersion in the scene, thus enhancing Embodied Simulation.

The environment where a film is shown is also relevant: when we watch a movie we sit still in a dark theatre, paying no attention to the real world, and watch what happens on the screen from a safe distance, with no need to activate the defensive mechanisms which are deployed in everyday life. It should be noted that Jean-Luis Baudry underlined the peculiarities of this setting in the 70s (1986), drawing an analogy between the film viewers and the prisoners in Plato's cave (360 b.C.). In this setting all of our energies are available for the process of Embodied Simulation, thus providing a richer perceptual experience than in real life. This peculiar modified state of mind has been defined as a state of "liberated Embodied Simulation" (Gallese 2011), which both differs from and goes beyond the well-known "willing suspension of disbelief" in explaining why humans like stories, works of art in general and specifically films: they provide a more intense and real experience than real life events do and this happens from a safe standpoint, without any worries or dangers. Moreover, most recent cinematic techniques, such as 3D, by increasing the "immersion" of the observer in the narration, enhance this process even further.

## **CONCLUSIONS**

Since its beginning at the end of the 19<sup>th</sup> century, cinema has been in close relationship with the unconscious mind. The many psychoanalytical theories put forward to explain this relationship cannot be scientifically evaluated owing to the intrinsic characteristics of psychoanalysis. However, the demonstration of an active involvement of the spectator's brain in the events which unfold on the silver screen lends support to the existence of this relationship, which exploits the empathic mechanisms at play in everyday life with an important difference, that is the situation in which the spectator watches the film: immobile, safe, undistracted, with all of her/his energies available for the immersion in the fictional world flowing on the screen.

After this pre-cognitive, unconscious phase, the interpretation of the facts and situations portrayed in a film develops at the cognitive, conscious level, with varying results among individual subjects depending on different cultural and environmental factors.

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