

ON ICARUS' WINGS

The Cinematic Experience of Falling Bodies

Adriano D'Aloia

[I]t is absolutely necessary that the object not be completely given to the look which rests on it, that aspects intended but not possessed in the present perception be kept in reserve.

Maurice Merleau-Ponty¹⁾

MAYBE NOT (2005), a found-footage video by Oliver Pietsch, opens with the final sequence of Takashi Miike's GRAVEYARD OF HONOR (2002), a remake of Kinji Fukasaku's JINGI NO HAKABA (1975). After performing a sort of meditative dance atop a tower, the protagonist throws himself into the void. Thereafter, ensues a montage of leaps and falls culled from films such as GERMANY YEAR ZERO (1948), VERTIGO (1958), DR. STRANGELOVE (1964), LETHAL WEAPON (1987), STRANGE DAYS (1995), THE MATRIX (1999), THE MILLION DOLLAR HOTEL (2000), NO PLACE TO GO (2001), SPIDER-MAN (2002), and OLD BOY (2003).

The clips comprising this montage signal the extent to which the falling human body has been a recurring motif in film, communicating events such as suicides, murders, accidents, gags, jumps, sports, and flight. First, because it is rarely if ever experienced first-hand in everyday life, the fall reflects cinema's capacity to imbue intensified and apparently superficial experiences with symbolic and philosophically relevant meanings. Indeed, Icarus, who plummeted to earth when his wax wings melted as he flew too close to the sun, finds a resonant contemporary echo in the human bodies that plummeted from the Twin Towers on 9/11, as well as in the material and symbolic falls of civilization and of mankind. Deep social and psychological traumas are it seems rooted in the momentum of the fall and in its fatal conclusion: death through uncompromising impact. The fall is thus perceived as a final, oxymoronic, movement provoking sensory thrills and an abandonment to the notion of death.

In film spectatorship, the fall can be conceived as a case of strong motor and emotional stimulation wherein a particularly intense relationship is forged between the body of the character falling and the body of the spectator. The intensity conveyed by cinematic falls

1) Maurice Merleau-Ponty, *The Structure of Behavior*. Boston: Beacon Press 1967, p. 212.

ILUMINACE

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MAYBE NOT (Oliver Pietsch, 2005)

and by their social and individual significance is so strong that it engages the spectator on different levels simultaneously: neuropsychological activation in response to the strong stimuli presented on the screen, cognitive activity contextualizing and interpreting the on-screen events, and emotional investment in the characters involved in those events. Second, in the second part of the montage in *MAYBE NOT* (from 1:20 to 2:45), only the jump, i.e. the course of the falling movement, is displayed. Although clearly different in its aesthetic characteristics (e.g. black and white vs. color), aspect ratio (the originals are preserved in each excerpt) and stylistic features (e.g. speed and direction), and although performed by different characters, the same kind of movement is perceived cognitively as one continuous, unified movement. The fall featured in each fragment of footage is matched graphically to give the impression of some degree of continuity between each of the characters respective falls. In psychological terms, the linking of shots showing similar movements produces a rapid match-on-match action to generate causal spatiotemporal continuity central to classical continuity editing.

In the montage, this motor continuity is associated with basic emotional continuity through the merging of visuals, sound, and dialogue. The elegiac pop song by Cat Power (which also serves as the title of the video) endows the work with 'conceptual unity' and gives it a melancholic tone. The chorus ('We can all be free, maybe not in words, maybe not with a look, but with your mind') expresses the ambivalence – even ambiguity – of human desire inherent in the fall. It serves as a gesture to the desire for freedom, and as an extreme intensification of, and a surrender to, the insuperability of human limits;

a flight in free fall that leads to death. The editing and sound mixing is designed to capture in the movement of the falling body this sense of ambivalence, in terms of its poetic and symbolic aspects, thus involving both the motor and emotive spheres of the film viewing experience.

Crucially, the moment of impact – the ‘natural’ and inevitable conclusion to the fall – is postponed consistently. Only in the third part of the video are some impacts shown. In each case, the impact is conveyed in distinct ways. In the first case, the impact is implied through a deliberately exaggerated splash of blood on the inside of an adjacent building’s window (a recurring feature of Miike’s films). The spectator does not see the body hit the ground. Instead, s/he is shown the exaggerated physical consequences of the descent. In the second case (taken from *OLD BOY*), the impact is positioned in the background with the body smashing onto a car roof, as attention is directed to a character’s face in the foreground. And, in the third case, a fall appropriated from the opening sequences of *GRAVEYARD OF HONOR* is spotlighted via multiple bloody impacts as the body strikes a range of different surfaces; here implausibly large amounts of blood are shown, and the sequence is played in slow-motion to emphasize the staged-ness of the events. The final fall, taken from *LETHAL WEAPON*, is shot from inside a car as a body smashes onto the roof. In each of these examples, the impact is communicated without the impact of the body actually being shown; only the effects of each impact are shown. In those cases in which impact is shown, however, it is presented in exaggerated and highly stylized fashion so as to dilute the plausibility of the spectator’s being confronted with the extent of the damage inflicted on the character’s body.

The Impact Factor (or Experiencing the ‘Unrepresentable’)

The case of the falls featured in *MAYBE NOT* is emblematic of a general tendency in contemporary cinema;²⁾ irrespective of preceding circumstances, the culmination of falling movement – impact with the ground – is almost never rendered explicitly. The goal to which the motor and emotional eliciting is directed becomes hidden; it is taken out of frame. But why conceal it? One explanation would be to cite technical and budgetary limitations; the impact of the falling human body is not depicted because it would be too technically complicated, or prohibitively expensive, to achieve. These problems do not, however, exist in the world of big-budget calculated blockbuster filmmaking, in which the employment of Computer Generated Imagery (CGI) would resolve such a challenge affordably. Financial restraints may, however, meet with concerns over certification or censorship. Here the depiction of corporeal damage may risk receipt of a rating that would restrict the film’s availability, especially to younger audiences, leading to acts of individual or institutional self-censorship. The actual reason of this ‘concealing’,

2) My analysis conducted on a relatively extensive corpus of film mostly from the 1980s to the 2000s (about 200 titles selected from both mainstream and auteur most notable production in terms of box office and critic success) confirms this tendency.

I suggest, is not production practices and policies, but rather the need to weaken or even to avoid the concrete psychophysiological effect that the explicit representation of the fall would generate in the spectator. The impact is a potentially traumatic event and has to be kept off screen or, as we will see in the following pages, is presented in specific ways. Because impact is *unrepresentable*, filmmakers employ alternative strategies to make impact *experienceable*.

In spite of being acutely aware of the fact that they are viewing fictional events which have either been performed by actors who have not sustained actual injuries or have been generated digitally, spectators nevertheless tend to avoid the sight of cruel and violent events. The clearest evidence of this phenomenon is provided by cases of spectators jumping, grimacing, closing or covering their eyes, or looking away at the precise moment at which a fall culminates in an impact. Although predictable, although patently fictional, and although not shown on screen, the impact is experienced by the spectator in terms of sensory-motor activation. Even though not materially present or visually perceivable, that impact generates an instinctive and strongly adverse reaction in the spectator. The falling motion, in this sense, reaches completion even though its culminating point may not be shown on the screen.

Neurophysiology experiments have validated the hypothesis that the observer tends to complete a 'goal-directed' movement at a neural level, even if the final stage of that movement is not displayed. In an experiment on the neural correlates of occluded objects, Hulme and Zeki demonstrated that certain areas of the brain activate systematically irrespective of whether an object is visible or whether it is blocked from sight when it vanishes behind an opaque screen.³⁾ This neural activation is determined by cognition: 'when objects are directly viewed, activity within object selective regions may reflect the awareness of presence, not the direct perception, of the object'.⁴⁾ In other words, the brain responds when objects are known to be present but are obscured, meaning that a cognitive factor (awareness of presence) both precedes and influences the neural activation that allows the subject to experience an absent stimulus. This experiment suggests that the spectator is subject to the same dynamic when s/he encounters a directed movement (the fall), the final stage of which (the impact) is occluded from sight and when movement is therefore merely suggested. This phenomenon shows that the spectator's response is grounded in brain function mechanisms and that these neural mechanisms are preliminarily (and consequentially) influenced by cognitive factors.

If there was no difference in brain activity between viewing a fully presented impact and an impact which has been merely suggested, then, it would seem to matter little whether or not the fall is depicted plausibly. On the contrary, in each act of film engagement, a range of preliminary factors influence spectator understanding of the events being presented or alluded to. These factors precede and affect the sensory-motor and basic neurophysiological activation – usually weakening it – and are general conventions which constitute the 'pact' forged between filmmakers and spectator and thereby establish the

3) Oliver H u l m e – Semir Z e k i, The Sightless View: Neural Correlates of Occluded Objects. *Cerebral Cortex* 17, 2007, no. 5, pp. 1197–1205.

4) *Ibid.*, p. 1197.

general cognitive framework in which the film consumption experience takes place. Factors that cannot be neglected include: genre conventions, verisimilitude, the location within the individual film of a specific fall/impact sequence, and the spectator's emotional investment in those characters involved in the sequence. Therefore, comprehension cannot be limited to the local motor activation and to physiological mechanisms of the spectator's body or brain. Rather, it must concern those more or less conscious and deliberate mental processes (thus psychological, rather than physiological) which allow the spectator to experience the cinematic fall and the impact of the human body in the broader context of each movie-watching experience. Accordingly, although at least partially activated in each kind of cinematic fall, the film consumption experience cannot be described in quantitative terms alone. Cinematic falls come in many forms, all of which differ qualitatively according to their formal and stylistic presentation. Therefore, when analysing the cinematic fall, attention should also be directed to stylistic features generated by cinematography, mise-en-scène, pace, and diegetic time. Different uses and combinations of these devices generate fairly intense sensory-motor activations and qualitatively diverse emotional effects.

Experiments conducted by Belgian experimental psychologist Albert Michotte on the functional relations of motor stimuli and emotions discovered that the qualitative impression of an emotion depends on certain structural features of the movement such as its speed. 'Rapid movement', writes Michotte, 'gives the impression of "violence" as opposed to the "gentleness" of slow movement'.⁵⁾ As Michotte argues, 'the principles which govern the structural organization of perceptions come into play, and the emotional reactions of the agent evoke specific kinetic structure in the observer, the characteristics of which correspond at least partially to the emotions of the former'.⁶⁾ Therefore, it can be argued that the intensity elicited by the depiction of a falling human body derives from the unusual, uncontrolled nature of the movement resulting from increasing, gravitationally-induced momentum and the inevitable impact. A falling body is perceived to be subject to the force of attraction exerted by the ideal point of impact – the final point or the goal to which it is directed. In other words, the extreme stimulation and the violence of impact are charged progressively by the course of the movement preceding it, as a result of its being perceived as the point of culmination at which accumulated energy discharges instantly.⁷⁾

The withholding from the spectator of the final stage of the fall or of some of its later stages indicates that a goal-oriented action is understood ideally in terms of its intentionality – rather than in terms of its fulfilment. As we have seen however, the direction to which the fall tends is fulfilled at a very basic level by spectatorial intention. These

5) Albert Michotte, The emotions regarded as functional connections. In: Martin R e y m e r t (ed.), *Feelings and Emotions; the Mooseheart Symposium*. New York: McGraw-Hill 1950, pp. 114–126 (p. 118).

6) Ibid., p. 117.

7) For a complete excursus on Michotte's experimental psychology studies on the filmic experience see also Albert M i c h o t t e, Le caractère de 'réalité' des projections cinématographiques. *Revue Internationale de Filmologie* 1, 1948, no. 3–4, pp. 249–261; Albert M i c h o t t e, La Participation Émotionnelle du Spectateur à L'action Représentée à L'écran. *Revue Internationale de Filmologie*, 5, 1953, no. 13, pp. 87–96.

points are imbued with added significance vis-a-vis the experience of viewing human bodies falling when they are considered in light of neurophysiological experiments on action recognition. An experiment conducted by Maria Alessandra Umiltà et al. demonstrated a correlation between a type of neuron found in the premotor cortex of the macaque monkey and the response to observing object-directed action when the object is occluded.⁸⁾ This kind of neuron is called a 'mirror neuron', since it is released both during the execution of goal-related motor action and when observing other individuals (monkeys or humans) executing similar acts.⁹⁾ The study shows that a subset of mirror neurons fires during action presentation and also when the final part of the action, crucial to the triggering the response in full vision, is hidden and can therefore only be inferred. 'This implies that the motor representation of an action performed by others can be internally generated in the observer's motor cortex, even when a visual description of the action is lacking [and] these findings support the hypothesis that mirror neuron activation could be at the basis of action recognition', report Umiltà et al.¹⁰⁾ In other words, 'even when an object, target of the action, is not visible, an individual is still able to understand which action another individual is doing'.¹¹⁾ 'Full visual information about an action is not necessary to recognize its goal', they explain: '[a]ction understanding could be based on a mechanism that can trigger the internal motor representation of the action'.¹²⁾

In neurophysiological terms, the mirror neuron system generates an internal representation of the observed movement and entails an embodied simulation of that movement, by which is meant, a functional mechanism which 'mediates our capacity to share the meaning of actions, intentions, feelings, and emotions with others'.¹³⁾ Accordingly, I would suggest that the impact is experienced by the film spectator because s/he experiences empathically the meaning of a body that is falling by simulating that movement

8) Maria Alessandra Umiltà – Evelyne Kohler – Vittorio Gallese – Leonardo Fogassi – Luciano Fadiga – Christian Keysers – Giacomo Rizzolatti, I Know What You Are Doing. A Neurophysiological Study. *Neuron*, 31, 2001, no. 1, pp. 155–165.

9) On the role of mirror neurons in aesthetic response see also David Freedberg – Vittorio Gallese, Motion, Emotion and Empathy in Aesthetic Experience. *Trends in Cognitive Sciences*, 11, 2007, no. 5, pp. 197–203; Vittorio Gallese, Mirror Neurons and Art. In: Francesca Bacci – David Melcher (eds.), *Art and the Senses*. Oxford: Oxford University Press 2010, pp. 441–449. Although it is intuitive that the mirroring mechanism works better with physical co-presence, images cannot be conceived as a mere substitute. Many experiments have demonstrated that the difference between mirroring activation in direct or mediated situations is just a matter of the intensity of activation of the cerebral areas. The same phenomena occur when subjects observe film and television characters (for a survey of the empirical evidence see Cynthia Hoffner – Joanne Cantor, Perceiving and Responding to Mass Media Characters. In: Jennings Bryant – Dolf Zillmann (eds.), *Responding to the Screen. Reception and Reaction Processes*. Hillsdale, NJ: Lawrence Erlbaum Associates 1991, pp. 63–101).

10) Maria Alessandra Umiltà et al, op. cit, p. 155.

11) Ibid.

12) Ibid.

13) Vittorio Gallese, Mirror Neurons, Embodied Simulation, and the Neural Basis of Social Identification. *Psychoanalytic Dialogues* 19, 2009, no. 5, p. 520

14) See Vittorio Gallese, The 'Shared Manifold' Hypothesis: from Mirror Neurons to Empathy. *Journal of Consciousness Studies*, 8, 2001, no. 5–7, pp. 33–50. Ibid., The Roots of Empathy: The Shared Manifold Hypothesis and the Neural Basis of Intersubjectivity. *Psychopathology* 36, 2003, no. 4, pp. 171–180.

internally.¹⁴⁾ In light of neuroscience research on the link between motor simulation and action recognition, one can hypothesize the instinctive fulfilment of the partial action to be connected to an immediate, empathetic recognition and to an understanding of the meaning of that action. Insights made by experimental psychologists in conjunction with neuroscientific evidence confirm the hypothesis that the meaning of goal-directed action depends on the empathetic comprehension of the intentionality implied in the action¹⁵⁾. As far as this essay is concerned, the movements of the human body on the screen are conceived as goal-oriented actions, the intentionality of which is experienced through the tension that pushes the body towards the goal.

The spectator's instinctive reaction not to see and the tendency of film practitioners not to show the impact indicate firmly that a given film visualizes the spectator's physical and psychical disposition; film functions like the spectator does, or rather would, if s/he experienced the event first hand. The perceptual rejection of the impact can in fact be conceived as the external manifestation of a deeper, intimate rejection: the aversion to violence and death. By 'representing the unrepresentable', cinema offers a seemingly paradoxical experience involving the superficial excitation of the senses together with the embodied expression of deep meanings.

Unrepresented Impacts

Cinema does not blithely cast the spectator into a storm of emotion and let him/her be overrun by the thrill of sensorial excitement. In presenting an extreme experience such as the fall of a human body, filmmakers employ technical and aesthetic means to make stimulation of the senses and meaning both acceptable and experiencable.¹⁶⁾ In order to illuminate the correlation between neural and cognitive processes, analysis is required of the stylistic devices used to conceal impact in order to engage the spectator's brain and mind activity. These modes of presentation are concrete solutions employed across mainstream cinema to resolve situations in ways that not only fulfil technical, budgetary, and ethical requirements but which above all else contribute to the potential dramatic psychophysiological impact on the spectator of the material. This analysis involves the identification of a series of approaches used to negotiate the 'representable' and the 'unrepresentable'.

The first of the two main approaches is to avoid the on-screen presentation of the impact.

Ibid., 'Being Like Me': self-other Identity, Mirror Neurons and Empathy. In: Susan Hurley – Nick Chater (eds.), *Perspectives on Imitation: From Cognitive Neuroscience to Social Science (Vol. 1)*. Cambridge, MA: MIT Press 2005, pp. 101–118.

15) For a discussion of goal-representations and intentionality see Vittorio Gallese, Motor Abstraction: A Neuroscientific Account of How Action Goals and Intentions are Mapped and Understood. *Psychological Research* 73, 2009, no. 4, pp. 486–498.

16) On the *negotiation* role of cinema in balancing the intensification of *sensorial* stimuli and the need to give *sense* to the filmic experience see Francesco Casetti, *Eye of the Century. Film, Experience, Modernity*. New York: Columbia University Press 2008, pp. 111–140.

1. Replacement

Often the impact, i.e. the 'goal' to which are directed the pathemic and motor crescendo as well as the stylistic filmic elements, is hidden in one of several ways; by way of visual occlusion or by simulating the spectator's provoked response.

A common strategy is replacement – cutting away before the character hits the ground. At least two variants can be identified:

- a. *Emotional effect on a witness.* Usually, the shot that would feature the impact is omitted in favor of a shot depicting the reaction of a character that has seen the fall taking place. This reaction shot showcases a response intended to echo that provoked in the spectator. For example, in the opening sequence from *VERTIGO*, the impact of Scottie's colleague hitting the ground is replaced by a close-up of Scottie's acrophobic expression in the context of his hanging from the eaves of the building from which his colleague has fallen while attempting to rescue him. Other examples can be found in both classical-era and post-classical Hollywood films including *TRAPEZE* (1956) and *BATMAN FOREVER* (1995). In *TRAPEZE*, the dramatic result of Mike Ribble's stunt is replaced by a re-establishing shot in which is shown the reaction of the circus audience: stunned into silence, it stands up, and some audience members approach incredulously the acrobat's body as it lies in the middle of the circus floor. In *BATMAN FOREVER*, the death of the Greysons, which is caused by their falling in a botched attempt to rescue Gotham City from a bomb primed by villain Two-Face, is replaced by extreme close-ups of both Bruce Wayne and Chase Meridian.
- b. *Material effects on the environment.* The depiction of the impact is replaced by the material effects that it has on its immediate environment. As noted above, in *LETHAL WEAPON* a car roof is smashed by the impact; a shot taken from the passenger seat. In *THE DEPARTED* (2006), Captain Oliver Queenan lands in front of Billy Costigan, at the entrance to a building. The impact is conveyed by a spurt of blood which stains Costigan's hands. This variant is often combined with the inclusion of shots of witnesses' responses. Thus, Costigan's abrupt, involuntary reaction is intended to reflect that of the spectator turning quickly as it does to expressions of horror and despair.

2. Obscuration

Another widely used concealment approach is obscuration, or the inclusion of single-colored frames.

- a. *Subjective black.* This variant is realised by way of gaze alignment; the falling movement is displayed, at least in part, by subjective shots of the character falling, thereby enabling the moment of impact to coincide with total visual obscuration as the screen turns abruptly to black. An example of this approach is Alex DeLarge's suicide attempt in *A CLOCKWORK ORANGE* (1971). Moreover, in the finale of *OPEN YOUR EYES* (1997), César jumps from the top floor of a building and falls until his eyes close (represented by total blackness) after having put his arms in front of him immediately before impact. Similarly, in *CITY OF ANGELS* (1998), Seth decides to leave his angelic eternal life to become human. In this case, darkness is broken by a transition from black and white shots used to convey the character's life as an angel to the color

imagery used in the film to express human existence. This transition is also used in *WINGS OF DESIRE* (1987) upon which *CITY OF ANGELS* was based.

- b. *Objective black*. The insertion of black frames to stand in for the impact also characterizes cases in which the body lands directly on the camera lens thus covering the visual field – an example being Richard Brown's suicide in *THE HOURS* (2002).
- c. *Whitening*. Extreme over-illumination (rich in symbolic value) is another variant of obscuration. In *THE MILLION DOLLAR HOTEL*, for example, blinding white concludes Tom Tom's slow-motion suicidal fall. The inclusion of white frames symbolizes the achromatic transition from one form of life to another. A similar effect is used during the final scene of *VANILLA SKY* (2001) wherein protagonist David launches himself into the void to return to his real life.

Obscuration is also sometimes combined with replacement. Take *AMERICAN GIGOLO* (1980), in which Leon's fall is presented through subjective shots, with the moment of impact conveyed first by black frames, before being underscored by reaction shots of Julian Kay, the man who caused Leon's fall. Both replacement and obscuration eschew presentation of impact but differ in terms of their psychological effects. Replacement mirrors the ideal reaction elicited from the spectator. Conversely, obscuration is an expressive perceptual representation of the occlusion; at the exact moment of impact, the film exploits the spectator's desire not to see. The screen may turn to black so as to occlude the 'unrepresentable', yet making the unrepresentable 'experientiable'.

Weakened Impacts (in Physically Realistic Fictional Worlds)

In the second principal approach, the impact is fully or at least partially visible on-screen, albeit in discrete form.

3. Diversion

One variant exploits the construction of the *mise-en-scène* to direct the spectator's attention away from the impact. In such cases, the spectator's attention is drawn away deliberately from the point at which the falling body impacts the ground towards another area of, or to another point of depth within, the frame; the impact features on-screen, but its prominence is diminished by virtue of its being located at a peripheral point of the spectator's field of vision.

- a. In the *background*. In the opening sequence of *THE HAPPENING* (2008), the camera circles four workers chatting during a break. The spectator's attention is drawn to the characters' faces. Suddenly, something falls on a pile of materials in the background. The four men approach the point of impact and discover the body of one of their colleagues. This impact occurs in the frame, but it is placed in the background literally and figuratively. Moreover, the nature of the falling object remains unknown due to the velocity at which it enters into frame.

- b. In the *foreground*. The impact may also be placed too close in the foreground to be fully discernable. For example, in the prologue of *VERTICAL LIMIT* (2000), recreational rock climbing turns critical leaving Peter Garrett, his father Boyce, and Peter's sister suspended above a void – the weight of three people born by a single rope. Boyce asks Peter to cut the rope and let him fall, so that his son and daughter may survive. Peter is faced with a terrible dilemma and close-ups of his face show his growing sense of tension. The resolution to whether Peter cuts the rope or whether he dies is deferred, as the next shot is an extreme long shot of the canyon replete with sun shine and an eagle flying quietly in the bright sky – thereby providing formal and emotional contrast to the previous tightly framed, tension-filled shot. Spectators familiar with classical narration likely anticipate the gradual revelation of Peter's decision; however, Peter's father's body falls suddenly in the foreground, producing a cloud of dust as it lands. The spectator is prompted to experience surprise, having been distracted by imagery of mountains and the flight of the eagle. Clearly, Peter has decided to cut the rope and thus save his own life and that of his sister, at the expense of his father, whose body falls unexpectedly under the nose, so to speak, of the spectator.
- c. *Acoustic representation*. A second fall suddenly follows the first fall in the prologue to *THE HAPPENING*: the sound of a tumble and the sound of bones cracking can be heard both by the characters and the spectator. This second impact is audible not visible. A long shot shows a second worker's body lying on the ground. The rapid movement of a body falling into the bottom left of the screen has preceded the sound of a third body hitting the ground.

4. *Interposition*

A second optional approach is the inclusion of a surface between the falling body and the ground.

- a. *Cushioning surfaces*. The violence of an impact is sometimes cushioned by objects such as car roofs. Cases in point are the deaths of Nitti in *THE UNTOUCHABLES* (1987) and of Max Peltier in *STRANGE DAYS*. If the fall is not from too great a height, the collision with the car roof may even save the faller from death like Leeloo's landing on a taxi in *THE FIFTH ELEMENT* (1997).
- b. *Natural elements*. In films such as *STEALTH* (2005) and *STAR TREK* (2009) trees avert disastrous parachute jumps. Water serves a similar purpose in *THE SEA INSIDE* (2004), wherein a violent impact that paralyses Ramón Sampedro is conveyed by the reflux of sea water and by a cloud of sand. In *JUMPER* (2008), water also absorbs the impact and saves fallers from physical harm.
- c. *Visual concealment*. In the last fall in the initial sequence of *THE HAPPENING*, a body collides with the road but the impact of that fall is concealed by another character's shoulder and by other objects. The impact may be entirely or partially obscured by the interposition of occluding surfaces.

A combination of these approaches is found in the comedy *GET HIM TO THE GREEK* (2010), in which rock star Aldous Snow jumps into a swimming pool, with his arm

hitting the pool edge and breaking. The impact is conveyed by rapid editing and an extreme close-up of the broken arm.

Non-injuring Impacts (in Physically Unrealistic Fictional Worlds)

Thus far have been considered narrative fiction films (mostly dramas) in which the laws that govern the fictional world are similar to those governing the real world. In such cases the spectator recognizes that the fall and the impact have plausible consequences: serious injuries or violent death. Moreover, in these cases, filmmakers tend either not to picture the impact or to show it discretely. However, in other cases, wherein the laws that govern the fictional world differ from those that apply in the real world, the impact is rendered clearly and in full. Here, industrial and spectatorial fiat determines the partial or total suspension of physical laws such as that of gravity and time continuity, which in turn can facilitate the presentation of impact albeit usually in a ways intended to undermine intense reactions on the part of the spectator. Death or injuries do not ensue. Variants of this approach are as follows:

- a. *Time manipulation.* In *THE HUDSUCKER PROXY* (1994) time stops twice during Norville Barnes' fall from the Hudsucker building – in the middle of the fall and an inch above the ground.
- b. *Animation bodies.* Ignoring physical laws is both commonplace in and verisimilitudinal for animated films. In the live-action/animation hybrid *WHO FRAMED ROGER RABBIT?* (1988), for example, Detective Eddie Valiant falls from a skyscraper into an animated character's arms.
- c. *Superbodies.* The impact often does not cause physical injury to the heroes and villains of superhero movies or similar types of films in which protagonists evidently possess fantastical or superhuman powers (e.g. the *SPIDER-MAN* series' Peter Parker, the *BATMAN* series' Bruce Wayne, and the *MISSION IMPOSSIBLE* franchise's Ethan Hunt).
- d. *Fantasy or science-fiction worlds.* Examples include Neo in *THE MATRIX* rebounding off seemingly elastic asphalt, last-second rescues via teleport in *STAR TREK* or *JUMPER*, or the use of a magic potion in *HARRY POTTER AND THE DEATHLY HALLOWS – PART 2* (2011).

The various approaches within this category are also combined routinely. In *SPIDER-MAN 2* (2004), for example, Peter Parker/Spider-Man seems to have lost his powers and falls during two attempted jumps. In the first jump, he hits a building and tumbles onto a car roof; in the second attempt, he smashes onto the edge of a garbage bin and lands in a puddle of water – with, of course, no serious physical harm occurring on either occasion.

These approaches, which tend to be restricted to fantasy films, comedies, animated films, and superhero movies, bring to the fore an important point requiring clarification; a point

which, as noted above, concerns the relevance of the general cognitive framework of the film viewing experience. Comprehension cannot be limited to the local motor activation and to physiological mechanisms of the spectator's body or brain. Rather, it must concern those more or less conscious and deliberate mental processes (thus psychological, rather than physiological) which allow the spectator to experience the cinematic fall and the impact of the human body in the broader context of each movie-watching experience. Accordingly, a sense of awareness precedes spectator responses and thus influences the intensity of those responses and the specific mode of activation, both quantitatively and qualitatively. The non-injurious impact of a superhero or comic character, for example, would seem neither improbable nor unbelievable for the spectator, given that genre convention dictates the verisimilitude of the suspension or abandonment of physical laws governing the real world. In contrast, the suicidal plunge of the principal protagonist at the conclusion of a serious drama would likely produce a reaction in the spectator underwritten by sympathy accumulated across the course of the plot, even if the impact of the fall is not featured on-screen. Of particular significance is the emotional relationship between the spectator and the falling character in terms of empathy/sympathy/antipathy and therefore in terms of whether the character features in a major role, a supporting role, or a minor role, and whether s/he is a hero or a villain. A splash of blood in a Miike film may be gory, but it is unlikely to generate deep-rooted psychological suffering on account of the spectator understanding its narrative function. All of these responses depend on the specific presentation of the stimuli as well as on cognitive processes related to narrative development and to the film's diegesis.

In brief, whether it is the failure of a stunt or a climb, a tragic accident or a suicide, the use of the motif of falling in cinema always obeys the same principle. Because of the sensorial, physiological, and socially-determined shock value, spectators tend to avoid looking at the fatal impact of a fall. Filmmakers therefore have developed and naturalized a series of approaches upon which to draw when 'representing the unrepresentable'. Each approach is designed to dilute the sensorial shock that the viewing of the impact threatens to generate. In some cases, the impact is circumvented by inserting shots of a character's emotional reaction to the event or by obscuring it through the employment of subjective shots or by placing obstructive objects in objective shots. Other times, the impact is only partially displayed by diverting the spectator's attention or through the inclusion of cushioning surfaces. These approaches are employed in an effort to play down corporeal destruction in cases where the diegesis is governed by real world physical laws, or to reaffirm the physical superiority of superheroes and arch-villains in the pseudo-physical comic book worlds of superhero movies.

The Black Hint (or Experience it All by Seeing Less)

An instructive example to elucidate how cinema can effectively turn 'unrepresentable' events into 'experienceable' events, despite not showing them explicitly, is the Mexican episode, directed by Alejandro González Iñárritu, from the collective film 11'09''01 –

SEPTEMBER 11 (2002) – a poetic collection of amateur videos and live images broadcast by television networks on 11 September 2001. This example highlights some quite extreme consequences of those approaches to concealing impacts outlined above. *Iñàrritu's* segment intercuts a completely black screen with brief shots of people falling from the World Trade Center towers. This structure serves to ration and progressively to reveal a tragedy that would perhaps otherwise be too shocking if it was unspooled continuously in its totality (unsurprisingly, major US news stations elected not to broadcast images of bodies falling from the Twin Towers). The repressed returns in *Iñàrritu's* segment, as flashes of fragmented footage interrupt the blackness. This footage comprises a series of initially barely discernable images slowly increasing in length and clarity. Acoustic perception plays a crucial role in the consumption of the segment because it functions as a cue that undermines visual ambiguity. The images of the bodies falling from the towers are complemented by a soundtrack on which features somebody praying, explosions, voices of television newsreaders, and farewell calls made by victims to their nearest and dearest. It is as though the spectator's eyes were closed and then occasionally opened in order to watch the unfolding of a tragic spectacle. As in the examples cited above, the film echoes this perceptual dynamic, aesthetically and formally.

The occluded image in *Iñàrritu's* segment is not the final stage of the falling movement but rather the intermediate stages of various falls. The findings of several neuroscience experiments help to explain how spectators experience this unusual type of fall. Christine M. Filion, David A. Washburn, and Jonathan P. Gullledge determined that macaques could represent the unperceived movements of a stimulus.¹⁷⁾ These findings were the product of subjects being tested on tasks in which they needed to chase or to shoot at a moving target, which either remained visible throughout, or became invisible across parts of, its trajectory. The experiment demonstrated that this breed of monkey is both capable of extrapolating movement and of processing the fleeting disappearance of a stimulus. This capability has also been recognized in human beings. Additionally, Vilayanur S. Ramachandran and Stuart M. Anstis conducted a series of experiments on 'The Perception of Apparent Motion', during which they demonstrated that, when an object is replaced by a larger object in the visual field, the observer continues to perceive the *existence* of the first object as if it were occluded rather than absent.¹⁸⁾

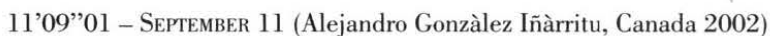
This 'continuity of existence', studied relatively recently in both neurobiology and psychology of perception, was earlier investigated by experimental psychologists. Indeed, Filion, Washburn and Gullledge's experiment provides the neurophysiological basis for famous demonstrations of the tunnel effect on human beings,¹⁹⁾ wherein a moving object

17) Christine M. Filion – David A. Washburn – Jonathan P. Gullledge, Can Monkeys (Macaca mulatta) Represent Invisible Displacement? *Journal of Comparative Psychology* 110, 1996, no. 4, pp. 386–395.

18) Vilayanur S. Ramachandran – Stuart M. Anstis, The Perception of Apparent Motion. *Scientific American* 254, 1986, no. 6, pp. 102–109. [Italics in original text].

19) Luke Burke, On the Tunnel Effect. *The Quarterly Journal of Experimental Psychology* 4, 1952, no. 3, pp. 121–138. Alan J. Gilyn, Apparent Transparency and the Tunnel Effect. *The Quarterly Journal of Experimental Psychology*, 6, 1954, no. 3, pp. 125–139. Albert Michotte – Georges Thines – Geirge Crabé, *Les Compléments aModaux des Structures Perceptives*. Louvain: Publications Universitaires de Louvain 1967, pp. 27–38.

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In light of this framework, the case of Iñàrritu's short film is particularly illuminating. Impacts are not featured at all. The black screen is used partially to obscure the move-

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ment that precedes the impact, which is therefore only evoked as the dramatic and inevitable conclusion to the falls, resulting in a reduction in tension accumulated by the spectator during the fall. As noted above, the intensity of the response provoked by the image of a falling human body derives from the increasing, gravity-induced speed of a fast and uncontrolled movement leading to an inevitable impact. If the point of impact, although not presented on-screen, is perceived as being too distant, then the spectator's sensory-motor activation will be significantly less intense or even absent.

Iñàrritu's film does not reflect the spectator's reaction to the impact, but the development of the entire perceptual process. Here, contrast the cognitive framework in which the movie-watching experience takes place and the aesthetic and formal rendition of events. The spectator's involvement may be influenced by foreknowledge of the images having captured actual un-simulated events. Iñàrritu's segment uses formal and stylistic devices to maximize the emotional responses of spectators assumed fully to be aware of the un-simulated nature of the events featured on-screen. The presentation of the images against a cacophony of noises, voices, and sounds takes place alongside a recognizable rhythmic 'score', with a progressive release of emotion making the shock palpable. A few months after 9/11, filmmakers like Iñàrritu's had begun to reinterpret the 'unrepresentable' events of that day. Nevertheless, stylistic devices were used to weaken the effect of such potentially traumatic material. Due to the extreme long shot offered by the amateur videos used in the film, spectators are unable clearly to see the faces of any of the people falling. Instead, small figures, which are barely recognizable as human beings, are visible. So, from where does spectator pity and consternation arise? What is it that disturbs and worries the spectator, even though the spectator is unlikely to have been involved directly in these events and even though an absence of close-ups prevents the spectator from glimpsing despair, fear, and resignation on the victims' faces?

The experiments described above indicate a relationship between perceptual interference in motion continuity and emotional involvement. The core of this relationship may be the reliance on the whole *sui generis* structure of the movement as amodally perceived by the spectator. The black screen represents a darkening of both the visual field and of consciousness. The distant sight of desperate, defenceless, falling bodies is experienced immediately and emphatically by the spectator because of the precarious nature of its 'representability'. The unwatchable, the unbearable, the 'unrepresentable' is therefore encapsulated in metaphorical form in the 'blind' gaze of the black screen. Deferring, fragmenting, rationing, and partially blacking out the movement, Iñàrritu distances spectators from events on-screen in order to make these piteous images at once acceptable and bearable. The film embodies both a perceptual and an interpretive approach. The unsensory (i.e. the negation of perception) communicates the insensate (the inconceivability of the events). The physical and the psychic are bound together in an empathetic process of understanding. This empathic relationship does not occur through the proximity of the spectator's body and that of the falling victims nor through the display of the victims' facial expressions, but rather through the expressive qualities of on-screen events: the film is operating literally on the edge of visual perception, working to focus bodies that are almost indistinguishable from the rubble – falling debris, souls in search of liberation, as in the sequence from *MAYBE NOT* described in the opening paragraphs of

this essay. Verticality is ineluctability; the fall is decline (indeed, the fall of the bodies anticipates and prefigures the fall of the towers themselves). The power of the expressive qualities of image and sound affects the neurophysiological basis of the spectator's emotional experience, while reaching a higher, symbolic level: movement in space offers a sense of the void – the spectator feels that s/he is plummeting. Heightening these emotions is not only the recognition of the bodily conditions of the falling bodies and the empathy that arises from awareness of human similarity to those people, but also from the 'expressive shape' of the movement. The representational forms and expressive dynamic have – or rather, they are – expressive means that refer to figurative concepts (the fall as a sense of emptiness, decline, decay, human weakness, dizziness as instability, fear; speed as an uncontrollable, inevitable force) and thus arouse emotions empathetically, i.e. in the form of an immediate understanding of the meaning of the fall: the sensate in the sensorial, and the sensorial in the sensate.

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SUMMARY

ON ICARUS' WINGS

The Cinematic Experience of Falling Bodies

Adriano D'Aloia

This essay describes the ways in which the film spectator experiences physically and psychically the cinematic representation of falling human bodies, with particular regard to the culmination of this movement: the impact. The latter is usually not shown on screen because of its psycho-physiological 'violence'. Cinema employs a series of stylistic strategies – 'replacement', 'obscuration', 'diversion', 'interposition' intended to represent the 'unrepresentable'. To explain how these strategies operate, I will draw upon both recent neurocognitive experiments and classic experimental psychology demonstrations on visual occlusion and evaluate their implications for film aesthetics. In particular, I argue that the cinematic fall is experienced empathetically. The essay concludes with a brief analysis of a short film on 9/11 by A. G. Iñàrritu in order to illuminate the bond forged between the aforementioned strategies and the symbolic dimensions of the film viewing experience.