

DYNAMIC MEANING CONSTRUCTION IN ACTION FILMS (SPECIFICALLY IN THE LAST JAMES BOND TRILOGY)¹

by
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In action films and, more specifically, the James Bond films, motion, pursuit and bodily conflicts are central features. As a consequence, the kinematic and dynamic aspects of the films' sign construction are foregrounded. The spatial situation must be well chosen and constructed for a proper background. This makes these films a perfect object for dynamic semiotics, which, in contrast to structural semiotics, is focused on spatial configurations, motion, and interaction in space and time. If different agents move in a chase and use different means of transport, complicated scenarios arise in which acceleration and deceleration, parallel moves, and interaction with the surrounding space (buildings, streets, neutral participants, natural forces) gain prominence; in some of the situations, a chaotic outcome is threatening; also, the rhythms of action, acceleration/deceleration, chaos and its control account for a large part of the suspense. In addition, the dominating action scenes in the James Bond films (and other action films) are embedded into an encompassing evaluative framework, based on ethical values (rescuing the nation or humanity; loyalty and trust; etc.). Finally, the control of motion and action is an evolutionarily fixed trait and has a neural correlate in the 'mirror cells' of the primate brain and its capacity for dynamic emulation.

1. Introduction

The history of film is essentially linked to the earlier technique of photography, which may even remind us of remarks by Aristotle with regard to the "camera obscura" and the fleeting imprint of luminosity on a wall or a sheet of paper. As Souriau (1969:126) shows, both film and photo refer to luminosity ("éclairages, projections

lumineuses"). Now, many arts refer to visual effects, and thus to light (in Souriau's table: drawing, sculpture, architecture, painting, dance), but in the case of the camera obscura and the film, the effects are transitory: the surface on which the film is projected is not changed by the projection and the visual impressions are momentary, and thus transient in time (including very elusive memory effects). In this respect, film may be compared to dance and theatre, although the dancer comes back on stage and the space of the theatre may be put to use for a longer period of time and its equipment stored and used again. The transitory existence is therefore a fundamental characteristic of cinema. In its early history, cinematographic techniques were at home in circuses or amusement parks, on a par with magical performances; cinema's narrative potential was developed as late as the period from 1910 to 1915. As Metz (1964: 53) argues: "Photos are unable to tell stories and if they try, they become cinema" (my translation, WW). The generation of Méliès, Porter and Griffith invented the cinematographic code for filmic narratives. It was only during this period of filmic experiments that film acquired what Metz calls a "language of film", primarily due to its intention of fulfilling narrative functions (and thereby competing with novels and other narrative literature).

From the study of oral narratives (cf. Labov 2013), we know that one can distinguish two basic functions in an oral narrative, the **referential** function, linked to the sequence of events in time, and the **evaluative** function, which in oral narratives of personal experience puts the narrator in a proper (positive) position, motivates his decisions and actions, and helps the audience understand what is happening. The referential function is typically ordered as a sequence of phases: complicating actions, a climax (e.g. maximal danger, risk of life, final conflict), and a result.

In the case of action films, the evaluative schemes are rather standard or stereotypical; the focus is placed on the referential function, i.e. on **actions**. The latter may be decomposed into protagonist and

antagonist actions. The complication phases are driven by chases; the climax is often a shoot-out or some other fight. In the case of several complicating actions, these are either ordered serially or in parallel sequences. The action may be varied using different contexts (types of places) or means of locomotion (e.g. running, using a horse, motor-cycle, car, train, ship, helicopter, plane etc.). The action can be accelerated or slowed down; in extreme cases, the narrative simulates a steady flow or, on the contrary, it may lead to a kind of tachistoscopic sequence at the edge of human perceptibility (cf. Biro 2008).

2. *The semiotic construction of space in film*

Production designers often have to make great efforts to create a place that is suitable for the illusion of the film. Such efforts are justified because the location is the anchor for all actions and makes them appear credible. In addition, characters and actions only are effective in the context of these locations; in a broader sense, this context includes the costumes and the site-specific behavior of the characters. In this respect, the basic structure of the film is already given by the construction of places and the control of the events in these places. Characteristic for the Bond movies are certain well-known places. These locations are usually distributed over several continents; still, most often the plot operates in England, which remains the central point of Bond's 'empire'. This feature is particularly highlighted in the movie *Skyfall* (2012), which commemorates the 50th anniversary of the Bond series. Transitory locations also play an important role, e.g. the lobbies of hotels, elevators, railway stations, airports, and crowded places, such as the market square of Siena, where the traditional horse races' finish takes place (featured in *A Quantum of Solace*, 2008) and the Turkish bazaar in Istanbul (in *Skyfall*, 2012).

Bond is constantly in transition and he gets acclimated to every

place he is in as if it were home. The decor of the rooms has changed in the Bond films over the years. In the film *A Quantum of Solace*, recognized and attractive locations such as Lake Garda, Siena, London, Port au Prince, and the Bolivian highlands are preferred. In the movie *Skyfall*, the pursuit over the rooftops of Siena from the previous movie is even quoted in the film's opening scene, where Bond is chasing his opponent over the rooftops of an Istanbul bazaar (but now on a motor bike instead of by foot). Such resumptions are characteristic of the Bond movies. In *A Quantum of Solace*, the climax of action (with the consolation scene announced in the title) occurs in the Bolivian desert hotel *Perla de las Dunas*. The successive explosion of parts of the building (right to left) is connected to a new technology, the use of hydrogen fuel cells. Thus, the central themes, water – water resources and water scarcity – hydrogen, come together.² In the movie *Skyfall*, the final confrontation occurs in a Scottish castle, the site of Bond's childhood. Again, the place is completely destroyed. In addition to the action-scenes, destructions and explosions are a basic dynamic schema of Bond-films.³

3. *The cinematic organization of movement in space*

As is the case for images the frame of a movie plays a determining role. By its square shape, a film in the academy format emphasizes the center and reinforces the illusion of depth. By contrast, the broadband format emphasizes the horizontal dimension, such that landscapes and action scenarios become more prominent. Actions and movements in the horizontal dimension of the filmic space can be tracked for a longer period of time without a change of focus. When the movie plays in architectural interiors, elements of the architecture, such as doors, staircases, windows, narrow corridors, room dividers, and even pieces of furniture create their own framing within the format, thereby structuring the space. Persons can

be assigned individual space sectors. These spatial divisions can be repeated when agents move through a suite of rooms. The direction of view of a person (and the camera) can go down (from a balcony, a window in the upper floor into the courtyard, the street) or up (into a stairwell or, as in the particularly extreme case of rock climbing, into a vertiginous abyss).

In connection with the spatial planning, the actions may acquire specific meanings. The structure of space, especially as an effect of separating lines and thresholds, produces meaning since it creates bonding structures between partial, thematically related fields that are spatially separated (cf. Saint-Martin 1990: 208ff). In the movies, the transformation of spatial structures is added to the movement of people and the camera. One can even view the motion picture itself as the medium of space transformation. The surrounding space can flow past the moving person, as he or she is being focused on in the foreground. This is particularly evident in older Hollywood films and in some films of the Nouvelle Vague, where overly long takes of the actors were shot while they were sitting at the wheel of a car; the driving motion was inserted via an independently filmed background. But movement may also result from the fact that the camera is moving, or it may be realized via a change of focus, the camera zooming from a long shot to a close-up. In the construction of meaning, the cameraman substantially contributes to the work (as instructed by the director). The proper sequencing of the motion scenes and the actions in different spatial segments is achieved by montage (in the editing room). In an interview for the Bond film *A Quantum of Solace*, Sam Mendes said:

A film is a mosaic. Every day we put a few pieces that have been turned into a box. This is done for a few months and at the end we open the box and fit all the parts together. (Duncan 2012: 124).

The focus of the camera and the construction of the sequence of scenes in the editing room constitute the central levels of organization of cinematic meanings. They supplement and complete the work of the actors in their performance in front of the camera. This is a major difference from the theater; here, even though spatial positions, movements and perspectives may be prepared in advance, the result cannot be manipulated in as detailed and radical a way as can be done by montage in subsequent construction.

We can thus distinguish three sub-levels of meaning-construction in the film:

1. The construction of meaning **on the set**, in front of the camera (prepared in the script, planned by stage management, and realized by the actors).
2. The construction of meaning through **the camera work** due to the choice of setting, control of lighting effects, the movement of the camera in space, and zooming. In most cases, the required film material is recorded multiply, i.e., the camera creates a potential narrative space from which a radical selection is made. Complementing the captured pictures, *off-set* or *hors-champ* is used, which can further contribute connotative meaning.
3. The **montage**. In its first stage, it is primarily privative, i.e. large parts of the film material are discarded. The film director in the editing room resembles the sculptor who shapes the figure, existing only in his imagination, from the marble block. The syntactic and narrative order, which is generated by montage, is basic and outlines the rough design of the plot on the story-board. In contemporary films, some scenes are computationally produced or supplemented by special effects. In some cases, even major parts of the film may be electronically produced and augmented using camera technology (movements of real actors may

be used for the animation of artificial characters that were formed on the computer).⁴

These three levels of meaning are essentially visual. The textual-linguistic and the musical-acoustic-dimensions are added. Different versions of a film may even use texts in other languages or be shown without music performed live by an orchestra. This demonstrates the relative independence of the three basic constituents: **Image – Text – Music**. The level of visual organization is structured as shown above: organization in front of the camera (director and actor) – camera and lighting performance – cutting, montage and special effects. The film must integrate these three levels and avoid redundancy as well as contradiction or inconsistency. The integration is done in specific zones of each organizational level, so that these remain, in general, relatively autonomous. However, the montage and organization of texts must match, as each change in the montage automatically changes the text structure and narrative content. Moreover, the focus of the camera must respect the relative importance of every person and harmonize their roles in the text. If the main person is in no way highlighted (e.g. optically, his or her size or motion being followed by the camera), specific narrative threads may not be appropriately represented. The music has to be integrated with the editing and montage, but it is also tied to the narrative structure to the extent that passages of complications and the climax phase of the story should have correlates in the music.

The dominant dimension is certainly the visual construction that is performed by the actors, the camera, and by cutting and montage. Overall, a sufficiently large space for such performance must be provided, as without it, the filmic semiosis would fail because of excess complexity. The separation of the levels of organization and their degree of autonomy is key to a necessary reduction of complexity. Historically, the silent movie has been an experiment in this regard, as it showed the degree of autonomy of the visual aspect of

film and its limits (cf. the analysis of Lang's silent movie *Siegfried* (1924) in Wildgen (2013b)). Mastering complexity is achieved using roughly the same techniques as does language. First, a standardized lexicon of pictorial and montage techniques is developed. Second, rules are provided for a syntactic organization on several levels; in this regard, we could speak of a 'language' (or 'grammar') of film. One may even speculate that the semiotic power developed since the introduction and consolidation of cinematographic techniques is comparable to the power which humans much earlier, probably some 300,000 to 100,000 years ago, have realized through their evolving language capacity. In both cases, the basic, semiotic potential of the human species unfolded under the ecological, social, and technological conditions of the world in which we live. Potential further developments will necessarily be tied to the introduction of new media of communication.

4. Realism in film and the physics of action

An old question in the aesthetics of fiction and theater is this: How realistic should the story be in order to persuade the reader or audience that the content is relevant in the world in which we live, and to avoid the impression of unnaturalness, arbitrary construal, and lying?⁵ At the end of the 19th century, the triumph of photography and its use in the arts (directly, as a preparation of paintings and theatre architecture, or indirectly, as an imitation of photographic spontaneity), together with the literary projects of realism and naturalism, triggered a new wave of realism in the theatre. The cinema continued and reinforced this trend; the aim was to make the audience forget that they were in a movie, and to eliminate all elements which show that the film is an artifact produced via a camera and a projector.⁶

Steven Spielberg, who later became a master of blockbuster films,

produced his first thriller, *The Duel* (1971 on TV, 1973 in the cinema), which is practically **one** chase and fight on the road between a car-driver and a truck-driver. The motive of manhunt (or tracking) is central to Western films and thrillers in general. It realizes the archaic schema of chase and flight and demonstrates the motor control of the protagonists and their helpers (horses or cars). In the Bond films, they make up a large part of the action-centered scenes.

The central question of realism in films concerns motion and interaction in space. Here, one may ask: Is a particular scene physically possible, given the laws of gravitation, free fall, locomotion, and possible effects of forces (jumps, blows, pistols, and moving projectiles)? In the thriller, the tendency is to approach the limits of probability in order to demonstrate the excellence of the hero (and to a lesser extent, that of his enemies).⁷ In many instances, one can doubt the physical realism of the scenes. In the film *Goldfinger*, Bond's adversary is sucked out of the plane after his bullet has destroyed a window, which can be shown to be physically impossible. In the film *Casino Royale* (2006), Bond makes a bungee jump from the top of a dam. Tolan and Stolze (2008) show that, first, the duration of the jump (13 seconds) is unrealistic given the height (300 ft), the falling body's (Bond's) acceleration, the elasticity of the bungee cord etc. The makers of the film had to use slow motion, and repeat elements of the jump from different angles, in order to arrive at 13 seconds (against a realistic value of 4.5 seconds). Many scenes are, however, at the limits of realism: Thus, in the film *Moonraker* (1979), Bond is thrown out of a plane by his enemy Jaws and tries to reach the pilot, who has jumped three seconds earlier, and is going down by parachute. Jaws, who jumps 33 seconds after the pilot, is able to reach Bond, who is now hanging on to his parachute, having successfully neutralized the pilot. Tolan and Stolze (2008) have calculated that for this to happen, the plane must have been at least 20,000 ft up in the air. Under this condition, both events could marginally be possible (actually, the plane was probably no more than 10,000 ft above ground). In *Casino*

Royale, the chase between Bond and Molakka is also at the limit of credibility: some of the jumps are so steep that the forces which the body needs to absorb at the landing are extreme (Tolan and Stolze 2008: 30 calculate them at 16400 Joule, or 1.6 tons; in the film, the stuntmen jump into a mound of cardboard boxes).

The real question is, however: Is **physical** realism relevant for the audience, even if we assume there to be a demand for maximal realism? The viewer cannot set up the necessary differential equations involved, let alone solve them. Realism, in the eyes of the viewer, is **phenomenological** in its nature, i.e. he can imagine the action (if he has performed similar actions himself) and experience the force he had to use to accomplish the action or to absorb the energy of a steep down jump. Based on this judgment, he can identify with extreme experiences when e.g. witnessing a fabulous world record being set in running or jumping. This judgment will also allow for a 'tolerance space' by which values in the neighborhood of what is known to be possible become realistic. Instead of using a metrical space, as in physical measurements, the viewer uses a coarse topology of qualitative, rather than quantitative reasoning. This kind of 'tolerance realism' will be assumed to obtain in the following analyses where, instead of physical models, we use models from differential topology (better known as catastrophe models) and from its extension, chaos theory (cf. Wildgen 1982; Wildgen and Plath 2005).

In the following section, I will analyze some aspects of the last Bond-trilogy (2006-2012), mainly the second film, *A Quantum of Solace*, in relation to action sequences, parallel actions, and acceleration versus deceleration.

5. Action, interaction, and fights in the James Bond films

Film is fundamentally different from text and image in the way it represents action, either in a verbal dispute or a physical struggle. In

particular, the action film clearly emphasizes the physical struggle (with an opponent or with adverse conditions). In action films, the dialogue scenes are usually short and do not allow for detailed consideration of the actors. Direct speech may, most likely, be rendered if the camera is focused on the respective speaker, with the help of the shot-reverse-shot technique (SRS). This corresponds to a sequence of direct quotations in a written text. The crucial difference between film and text is due to different modes of 'representation', i.e. of lending 'presence to some thing or event which is absent (existing in the past, in the future, or in some imaginary space). In written text, the course of action is rendered by verbs, prepositions, and connectors (of time and causation), i.e. via a categorial projection onto grammatical and lexical prototypes, and via their narrative organization. In movies, the representation of motion, force, and effect of forces is practically given as an analogue of real time and effect, allowing the viewers to imagine and mentally reproduce a physically comprehensible plot. This means that the narrative core is realized in a different medium, which is governed by other laws and is not commensurate with the representation in the text. This difference is assessed by computational analyses of action scenes in movies. Liu et al. (2007) calculated a motion vector from movie frames by decomposing the frame into boxes and measuring relative motion within the individual boxes. In experiments with movie viewers, these authors show that the computational motion detectors (aided by audio energy and pace) predict visual attention to action scenes. This dynamic information is absent, or at least much weaker in written text (superlatives or exclamations like those appearing in comic-strips, e.g. *Whoa!!*, are a kind of textual analogue of filmic effects).

If we take, as a characteristic example, the action and pursuit scenes (the latter particularly when occurring in the James Bond movies), we notice that in pursuit, the agent first walks through the streets of a city. As if in a dialogue, the pursuer (or the shadowing

detective) and the pursued are shown alternately. The perspective and the actors change regularly following a certain rhythm. By the regular repetition of the change, a continuity is suggested, which is actually contradicted by the change in perspective. The viewer knows that the pursued continues to move while the film clip shows the tracker. The time gaps in the parallel montage (crosscutting) must be filled in by the viewer. The rhythm of switching between cuts that show the pursued and the pursuer corresponds to a basic speed which can be adjusted up or down.

When the pursuer begins to walk faster and eventually run, his mode of locomotion can be changed by the use of a faster means of transportation: walking > riding a bike > driving a car > taking a helicopter. Characteristically, the means of transportation of the pursued person change correspondingly: first, he flees on a motorcycle; then, when the tracker uses a car, he too changes to a car; when the pursuers take a helicopter, he does, too, and so on. In Western movies, the different agents (or groups of agents) may be on horseback; alternatively, the one party moves in a stagecoach or a train. The combinations are endless, but their basis is always the relative speed of the agents and the way they react to obstacles on their way. In the James Bond films' daredevil encounters, the hero often fights several, sometimes better equipped, opponents and eventually makes use of some carefully prepared secret weapon (introduced in the first part of the film).

In addition to the movement and rhythm of the pursuers and the pursued, a third element may be introduced when the environment in which the fight takes place begins to move and change. How do the agents react to collapsing buildings, exploding rooms, or spreading fire? What do they do when the agents' gunfire causes containers with hot or corrosive liquids to leak and eventually explode? And so on.

This type of propagating the moving components generates a specific form of perceived acceleration. Of course, the progression

must achieve a final result. Thus, the pursuer may lose track of the pursued, the pursuer may become a victim of a collapsing room, or he may finally succumb in direct confrontation with the protagonist. In the classical Western movie, action almost comes to a complete standstill prior to the climax (the duel of the rivals); the tension is finally resolved by the final shootout. In the film *A Quantum of Solace*, the viewer is only granted short breaks. Only at the end, when everything is decided, the film slows down.

Action movies have their standard target: the protagonist, who stands for positive values and wins after endless confrontations. In James Bond movies, this aspect of the play is not treated satirically or ironically (as it is in some late Western films), but it is taken less seriously (it is there just to amuse the audience, who are not really frightened).

6. Dynamics and chaos control in Bond movies

The perceptual control of movement sequences is an evolutionarily basic skill that directly depends on the evolution of the eye and the brain. The brain of higher primates is equipped with 'mirror-cells' (cf. Rizzolatti and Arbib 1998) which allow the organism to translate visually experienced motion patterns into an internal representation, thereby virtually simulating the pattern in view of an efficient imitation. This also means that the movement is perceived as something that is both alien to, and simulates the movement of, the body itself. In the cinematic perception, this carries with it a strong bodily and emotional response to motion scenes. In the following, I will therefore assume that pursuit and escape scenes on the one hand engage the audience's motor reflexes and corresponding energies: inwardly, the viewer performs the movement; and on the other hand, they trigger strong emotions, usually connected with pursuit (aggression) and escape (fear). Thus, an emotional context

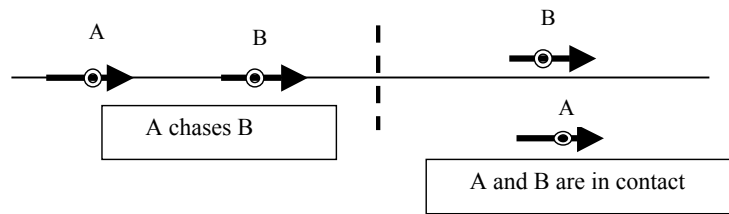


Figure 1: Schema of linear chase and contact between protagonist and antagonist

is produced in which the viewer can insert the reported narrative events (for a modeling of narrative structures, see Wildgen (1987, 1994); with reference to film, see Wildgen (2013a)).

In the following, I will examine the film *A Quantum of Solace* with respect to the structure and complexity of selected chase scenes. Similar structures can be detected in all Bond films; they belong to the genre 'action movie' and 'thriller'. I shall first describe some dynamic schemata underlying simple event and action structures (cf. Wildgen 1982, 1994).

A linear chase of two protagonists, A and B, can be described using a simple vector notation.

A simple tracking process (on horseback or in a car) is linear, when the agents e.g. move along a road (by car) or along a trail (as in the case of the coach or the rider in the Western). Only when both agents come together, a multi-dimensional microstructure is created, such as in the fight around the coach (or wagon train) in Western films, or when racing cars clash in a pursuit.

When the agents (possibly two groups or one group against a single agent) come into the vision or shooting range or engage in physical combat, the conflict stage is inaugurated. The interaction between the two agents (or adversarial groups) can be modeled using the dynamic schema of 'giving' or exchanging, which involves the two parties in the stand-off (the attractors of perception and action), as well as some exchange of objects or energy (bullets, blows, etc.).

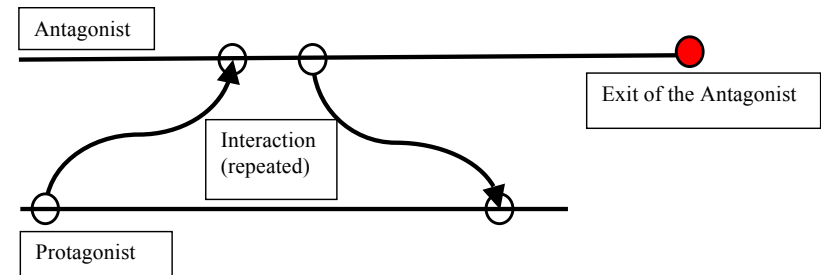


Figure 2: Schema of interaction and conflict and possible result after a series of interactions

The film *A Quantum of Solace* shows a car chase immediately following the opening credits: Cars pursuing each other along Lake Garda and past the quarries of Carrara in Italy. The pursuer must first reduce the pursued's advance, so that the latter comes into view within firing range (this phase is skipped in the opening episode of the Bond film, whereas it may be worked out in great detail in Westerns); this initial phase leads on to the action phase proper. At this point, the outcome of the chase cannot be decided by a simple shoot-out (the delay will only make the chase riskier – an additional benefit). The cars eventually make contact, crowd and push one another to the side, cut in front of each other, and so on. Sometimes, the drivers may even make eye contact (if they drive in parallel); in the movie *A Quantum of Solace*, Bond fires into the car moving alongside, when he makes eye contact with the driver. Characteristically, a third party comes into play: The traffic in the opposite direction (often in the form of eighteen-wheelers, tank trucks, or construction equipment, i.e. large, heavy obstacles); alternatively, the police may try to intervene (usually in vain). The road itself can turn out to a kind of 'indirect' antagonist: Tight curves and dangerous slopes, steep roadsides or dark tunnels, roadwork and traffic congestions must all be taken into account by the drivers.

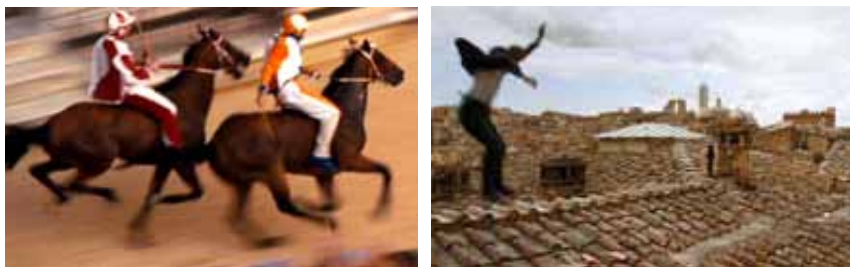


Figure 3: *The Siena horse race and Bond's chase*

The first scene of the Bond film in question escalates the chase theme and embeds it into the story that occasioned it. This escalation takes place on two levels: On the one, Siena is the place where traditional horse races are held in the city center. These races take place simultaneously with the meeting between Bond, his superior, and his tied-up adversary. On the other level, the prisoner is made to escape, so Bond can pursue him across the Siena rooftops. Figure 3 illustrates the two parallel, but not causally related chase levels.

The two processes are selectively connected: While the crowd looks at the roofs where the second level plays out, Bond's first level chase finally enters the field of the horse races and the spectators. As the crowd is cheering the winner of the race, Bond's hunt continues: down from the rooftop, then in through an apartment, while using the roof of a moving bus as a shortcut to a bell tower, from which both opponents fall down on an unstable scaffolding with a rotating freight elevator, whose cables are put to use in their fight, high up in the circus dome. At this point, the linear model is left behind and pendulum-like movements in three-dimensional space take over, the protagonists no longer following a path along a straight surface. The 'singularities', i.e. the points of local contact and conflict between the actors, are geometrically complex and difficult to control. In addition, both protagonists lose their weapons as these are swept

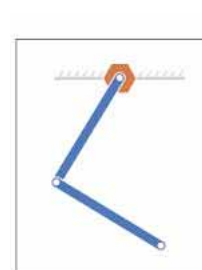
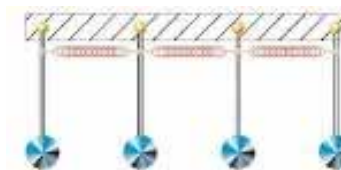


Figure 4: *Coupled pendulums (the two ropes) and double pendulums (the arm from which the rope hangs down, also moves)*

away by the movement of the scaffold and the ropes; yet, they both must get hold of them for the final shoot-out.

Here, a kinematic complication is added to the spatial one. Bond's movements depend on the oscillation of the rope and the rotation of the arm to which the rope is attached. At the last moment, Bond gets hold of his weapon and shoots the opponent (who meanwhile also has retrieved his gun). This extended model can be described as a coupled pendulum (both agents oscillating with the ropes touching each other) or as a double pendulum (if the arm on which the rope hangs, also moves). In Figure 4, models demonstrating the coupled and the double pendulum are shown on the left, together with the film's fight scenes in the dome on the right.

From physics (and chaos theory), we know that the double pen-

dulum has chaotic phases, i.e. its motions cannot be strictly controlled. Coupled pendulums may exhibit harmonic motion modes, but these are accessible only under special conditions. The viewer is obviously not a chaos theorist, but he can (almost physically) understand the increasing uncontrollability and thus appreciate Bond, the protagonist's, extreme skill.⁸

In a further perspective, this design points to a fundamental human need, one that shows up in gambling, where the players live under the illusion that they can control a complex situation, while in fact they cannot. Sutton-Smith (2007: 173) speaks of an illusory "ego-mastery". He interprets this player behavior as manifesting the expectation of divine help, or even the illusion of a game where the gods themselves are engaged, such that the player is hoping for their assistance (ibid.: 157; an implicit reference to Homer's *Odyssey* is obvious here).

In the Bond movie, the run-up of the chase scenes is followed by a short resting phase, with the Siena square emptying while the onlookers are leaving the scene. This phase, too, represents a repeat pattern. Elsewhere in the movie, after a frenetic boat race (also a classic Bond motif), Bond runs his boat into a sunny harbor where tourists are embarking, and hands over his partner, Camille (knocked unconscious during the chase), to one of the tourists.

The pattern of only selectively connected but parallel actions, which was characteristic of the film's Siena sequences, is repeated in the Austrian city of Bregenz, where Bond first discovers his adversary Greene during the festival performance of the opera *Tosca* (incidentally, itself an early secret service melodrama!). The movie approaches its expected culmination, a knife murder, when Bond bursts into the secret meeting of Greene and his partners. The following pursuit goes through the opera house's foyer and kitchen, to end in a duel with another agent (which triggers further misunderstandings with Bond's superior, 'M', and makes his task more difficult).

In the same film, an earlier dramatic chase in Bolivia had the

following constellation: An old aircraft (with Bond at the controls) is being pursued by two military planes. Bond and Camille finally save their lives by parachuting out, whereas the fighter planes crash into a mountainside. Overall in the movie, even if the pursuits take place in different locations, sizzling chases remain the dramatic core of the narrative, which is held together by these ritualized patterns.

The movie's final and decisive fight brings a new combination into play: Camille wants to kill the murderer of her family, a Bolivian general who is currently staying at the Las Dunas hotel, where the air conditioning system is powered by hydrogen fuel cells. Bond, for his part, wants to get hold of Greene, who is also at the hotel, negotiating with the general. After Greene has concluded his meeting with the general, both sequences simultaneously erupt into violent conflicts. After Bond's first shot, the fuel cells begin to explode.⁹ Now, three sequences are running in parallel, with the hotel's explosion as an independent process, not controlled by either party. As to the two fights, they are presented in alternating shots: Camille vs. the General and Bond vs. Greene. They come together when Bond hears a shot and Greene utters: "You have lost someone again". In the next scene, Bond leaves Greene in order to search for Camille. The outcome of the Greene fight is displaced to a scene in the desert surrounding the hotel, as Bond leaves his adversary alone in the desert, with a can of motor oil as his only supply.

The fight scenes in the hotel end with the surviving protagonists, Bond and Camille, being reunited somehow, even if their tracks will separate later. This 'quantum of solace' in the inferno takes, at least schematically, the place of the usual closing scenes where Bond and the 'Bond Girl' are peacefully united. For example, at the end of the first James Bond film *Dr. No* (1962), Bond hugs the Bond Girl while sitting in a pleasure boat. In the Jubilee film of 2012, *Skyfall*, Bond holds his dying boss 'M' in his arms at the end of the big fight.



Figure 5: The final scene in *Dr. No* (left) and a corresponding scene in *A Quantum of Solace* (right)

In the dialogue at the beginning of *A Quantum of Solace*, the power supply of the Bolivian hotel Perla de las Dunas was referred to as being unstable, thereby evoking the potential dangerous character of the place. In general, *instability* is a characteristic topos throughout the film. Compare:

- In the quarries of Carrara, the pursuit ends when the pursuing car crashes through the siderails and plunges into a ravine (the road has an unstable design).
- In Siena, Bond shoots his opponent as he hangs upside down from a rope in the bell tower (Bond's position is unstable).
- In Haiti, the boat chase takes place in the harbor among closely adjoining ships (a very risky movement through an assembly of floating objects).
- In Bolivia, the first confrontation takes place first in the mountains, then in the desert. The barely airworthy, unsafe transportation aircraft is a fragile, uncertain space compared to the fighter planes. The arid desert spells death from thirst (for Greene).
- The hotel Las Dunas, with its unstable fuel system, explodes upon the first round of gunfire.

As our detailed analysis of this particular Bond film has shown, 'space' is not just a static background for events and actions. It allows for specific configurations of action, motion patterns and conflicts (accidents due the malfunctioning or bad design of roads, curves, and tunnels; to a collapsing scaffolding, or to a freight elevator with a swinging arm and a loose rope, or even an exploding hotel). Likewise, objects in space may be of central importance for the movement and action of agents. This is clearly the case for the means of transportation: a motorcycle (in Haiti), cars (at Lake Garda), various vehicles used for transportation (in Siena), a speedboat (in Haiti), an aircraft (in Bolivia). In or on these spatial domains, the actions are playing out. But these places are also instrumental, as means for the action to take place, i.e. their own momentum can either be used to promote the action, or hinder it or slow it down. By his control of the space and his mastery of the laws of spatial motion, the hero (Bond) distinguishes himself; they are the reason for his superiority and his (partial) victory at the end of the film.

It is obvious that weaponry, too, plays a central role.¹⁰ On the one side, the gun is a kind of extended hand (see Wildgen 1999); on the other side, it can fall out of the hand holding it, whereupon it moves independently in space and has to be recovered. In addition to the handgun, Bond's characteristic weapon, machine guns, cannons (in the airplane scene), an ax (used by Greene), and other locally available solid objects are used (including a pair of scissors and a broken glass pane). Overall, the hero is characterized by a perfect mastery of his body and its movements and the control of weapons and vehicles (car, boat, and plane). He is an athlete and a technician and thus fits the male ideal of the postwar period.¹¹ In addition, Bond is also the perfect casino-goer (drinker, eater, player), while commanding a swarm of women appears to be his most important side qualification. Whereas in Ian Fleming's Bond novels, this latter aspect receives more emphasis, as compared to the movies, the relationship of Bond with women has been constantly changing in

the course of the Bond film series. In *A Quantum of Solace*, only one bedroom scene (involving a secondary character) occurs. The main female character, Camille, is at the center of a parallel narrative, and thus weakens the narrative dominance of the male protagonist. She brings her fight to an end without male assistance (Bond had even blocked her first attempt at revenge). At the end, Bond comforts Camille, who has carried out her revenge. Here, he takes on the role of a father or comrade (not a lover). Camille is essentially an independent player, proud to distance herself from Bond in order to catch her train at the end of the movie.

The film's initial scenes depict a chase; it ends on a contemplative note, thus giving a moral flavor to the whole event; compare the conversation between Bond and Camille in the car, or that between Bond and the Russian agent Yusef and his partner in Kazan. In the general schema of oral narrative, a story should end with a coda and contain a moral. After the turbulent early scenes and the rhythmically structured actions of pursuit and fight, the final scenes of *A Quantum of Solace* strike a reflective chord. Bond does not shoot his enemy, the agent who (in *Casino Royale*) had recruited Vesper Lynd as a spy/agent for the Quantum organization. When asked by M, Bond admits that he did not succeed in his initial intention to avenge Vesper – the only woman he possibly may ever have loved – and drops the necklace, which reminds him of her and of his failed avenging mission, into the snow.

7. Conclusion

Our analysis has shown that the typical signs in cinema are kinematic and dynamic in their nature, i.e. they refer to motion, locomotion, action (chase, flight, fight). A necessary background to this is death as a possible (and very frequent) result. The basic tools of dynamic systems theory (attractors, vectors, bifurcations, catastrophes, chaos)

allow us to specify an inventory of basic types frequently occurring in many semiotic (and non-semiotic) systems. These tools can complement (if not entirely replace) the purely relational, not to say static, terms of logic which have dominated semiotics ever since Carnap and the Vienna School's Logical Empiricism (cf. their use in Analytic Philosophy and in the Chomskyan paradigm).

Furthermore, the focus on motion and the forces controlling both motion and stable states gives a new relevance to space and its organization in all three dimensions. The linguistic bias, with its preference for two-dimensional concatenation is done away with, and access to a proper treatment of **visual** signs in our real world is made possible

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Notes

- 1 I am considering here the last three films: *Casino Royale*, *A Quantum of Solace*, and *Skyfall*. The present article is a free translation of parts of chapter 7.4 in Wildgen (2013)
- 2 In reality the building was an astronomic observatory in Peru. The destruction was filmed using a model in the production hall.
- 3 The Greek and Judeo-Christian myths of the final, apocalyptic destruction of the world and of the Last Judgement seem to reappear as a central motif in many action-films.
- 4 In Steven Spielberg's film *The Adventures of Tintin: The Secret of the Unicorn* (2011), performance-capture technology is used to create a

- 'skeleton' of the moving actor, which is then covered with the shape of the comic's figures, e.g. Tintin, Captain Haddock etc. Moreover, this technique allows an artificial acceleration of movements and thus produces some effects that are difficult to achieve with real actors (cf. Schickel 2012: 250-255).
- 5 A classical precursor is the discussion in the 18th century in the European Enlightenment about the relation between beauty and truth. Untrue stories or pictures cannot be beautiful.
 - 6 Actually, many theatre directors avoid realistic outfits on stage or in costumes of actors, and thus shun a parallelism to the movies. Instead of "disguised representation" (cf. Dromm 2008: 194f), film makers can call the attention of the public to the status of film as representation. This is the case in the film *Dogville* (2003) by Lars von Trier. Probably all artwork is a field between perceived (imagined, dreamed) reality and controlled illusion (if not fake). Cf. Orson Welles' comments in his film *F for Fake* (*Vérités et mensonges*, "Truths and lies"), his last major film (released in 1974).
 - 7 In 2002, a documentary called "Best ever Bond" showed a selection of the ten 'best' scenes in forty years of Bond films; cf. http://programm.ard.de/TV/daserste/best-ever-bond/eid_281066292338027?list=now. Many of these clips are action and fight scenes.
 - 8 In fairgrounds, complicated multiply rotating machines are special attractions. In this sense, one could say that the action film imitates a fairground attraction.
 - 9 The burning hotel Perla de las Dunas has a parallel in the collapsing scaffolding during the chase scene in Siena.
 - 10 The corresponding dynamic schema has valence four, i.e. four forces interact and shape the interaction type. The corresponding dynamic schema in catastrophe theory is called a 'sending' as in: A sends B a letter (C) through the mails (D); A kills B with a bullet (C) from his gun (D); cf. Wildgen (1982, 1994).
 - 11 The character of Bond has many analogs in the history of fiction and film. Compare: "Four years before Ian Fleming published his first Bond adventure, *Casino Royale*, Hubert Bonisseur de la Bath, otherwise known as OSS 117, was the original prototype for the globe-trotting, devil-may-care secret agent" (Tobias Grey, Special to the *Wall Street Journal*, April 2009 (<http://online.wsj.com/news/articles/SB124051750436349319>)).

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Screen shots are from: http://screenmusings.org/QuantumOfSolace/index_19.htm#2035.