



HAL
open science

A genetic theory of the videofilmic monstration distributed in the space and in the time

Marcin Sobieszczanski

► **To cite this version:**

Marcin Sobieszczanski. A genetic theory of the videofilmic monstration distributed in the space and in the time. Du split-screen au multi-screen. La narration vidéo-filmique spatialement distribuée, From split-screen to multi-screen subtitle: Spatially distributed video-cinematic narration, 2010. hal-01662637

HAL Id: hal-01662637

<https://hal.science/hal-01662637v1>

Submitted on 13 Dec 2017

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Marcin Sobieszczanski

A genetic theory of the videofilmic monstration distributed in the space and in the time

Table des matières

Introduction	1
The multi and split-screen contemporary devices, attempt at a genetic theory	2
Videofilmic language and empathy.....	3
Spectatorial practices since the show-rooms of demonstration from the late nineteenth century to the heyday of the single-screen cinema in the 1970s.....	6
Distributed projections and viewings.....	7

Introduction

How to think the internal division of the space of projection or of the viewing, in the cinema and in the video? Is it a simple game of reduction, a stylization, either is it a full-fledged narrative means? And if this last interpretation had to prevail, what new the internal division and the multiplication would bring to the cinematic or videographic language? Can we conceive them in the continuity of developments of the technical means, such as the increase of the photosensitivity of the cameras, the elongation of shots, the dolby, the high definition or the stabilization of the image, etc.? It is necessary to see in this «fashion» which breaks out for ten or fifteen years on the exhibitions of the contemporary art, a new category of the video-installation, either is it necessary to look at the projections multiple and shared by the pathway of their roots in the history of the cinema, since the mythical display of ten synchronized film projections, according to the process of Raoul Grimoin-Sanson, in the World Fair in 1900, or still at the assemblies precursors in shared screen and the triple synchronous projection of André Debris and Abel Gance in 1926? The work presented here attacks all these questions simultaneously, by leaving as well a diachronic vision, marked out by listed historic facts, as by trying to give conceptual keys opening new theoretical perspectives on all the visual arts of the recording, the projection and the screening.

It is not by accident that the camera of the Lumière brothers was a reversible device. Aside from that these inventors tried to resolve the technical constraints in a very simple way. The bi-feature of reversibility reflects certain conceptual symmetry, however, in the cinema, in the television and on the video, the projection and the stake on screen are the hillsides of the same artistic and cultural phenomenon, to which the recording is a complementary side. Both of them concern the inscription of an «agent» in the ambient space, the physical and physiological perceptive categories which constitute the space of shooting and the space of projection or viewing. In it, they oppose substantially to the technical instance of the mechanism and the support of the recording. But if the technical skills in the field of the recording put rhythm into the history of the cinematic and videographic genre, so much that they are at the origin of the wealth of their founding aesthetic concepts, the progress of the projection and the stake in screen are considered secondary, bound more to the comfort of the spectator than to the essential aesthetic notions. We can make the same remark for the domain of the sound.

However, after the introduction of stabilization standards, of the scrolling speed of the film and electronic scanning of the screen, after setting some standards on size and aspect ratio of screening, 35 mm, 16 mm, 8 mm, 70 mm, after some processing of sound systems: live, mono, stereo, dolby, quadraphonic, surround sound, after some adjustments to the projection room and the home video space, we are now witnessing the proliferation of projection modes, multiple viewing or split screens, which put the viewer in a situation strongly perceived as novel. How far will this evolve? What is their interpretation? The first hypothesis of this work will depend precisely on our attitude to the conceptual symmetry of film and video. If only the slope of the shooting is responsible for the dynamics of the aesthetics of the genre, the viewer, submitted to the sharing and the proliferation of space of «spectation», will have to choose between two alternatives: either he will adapt to these new rules of the show, and they will become for him «transparent» and secondary, every time he will enter the fiction and narration, or rather, it will eventually impose barriers to these developments, barriers which restrict and which are related to its perceptual ergonomics. If, however, we interpret the spectator's side as being essential in videofilmic

¹ art, the viewer himself will be the cause of observed changes. In this perspective, it is the capacity for monitoring and absorption of the moving image by the viewer, requiring creators to move forward down the path of complexity and increasing ability of visual narrative. This path is prepared not by artistic experiments but by the addiction of urban populations to immersion in the dynamic illustrations by constantly multiplying the source of transmission of pictorial information, for advertising and billboard, by interactive practices such as audio-visual zapping, web-browsing, mobile telephony imagery, as well as recent forms of media-imagery of driving vehicles and machinery. These new ways of consuming the image and sound are encouraging the new multi-media creations and will soon eradicate the projection in the dark room and the unique single-screen devices. And if we look at the artistic experiments that herald the advent of these new media narrative, then it is because they are imbued with the idea of conceptual symmetry of videofilmic phenomenon, and particularly because they conceive the relationship of the spectator space as a starting material for their creations and that they also design this report immediately as progressive, individually and socially.

The multi and split-screen contemporary devices, attempt at a genetic theory

According to the usual definition, the visual arts are aesthetic creations which speak the visual language, art whose medium is the visible object, and eyesight is the vector or the sense. In the *Principles of Art History* (1915) Heinrich Wölfflin clearly establishes another tradition, less medial and more cognitive. The formal distinctions within the body of visual art would be due to different visions that have different periods as a practice and teaching of visual seizure of the visible world. Thus the pictorial styles of the sixteenth and seventeenth centuries differ by the particular treatment they administer to the scenes selected by visual artists. Linearity, flatness, closure, multiplicity, clarity, are all categories that painting shares with the visual culture of their time, culture which by the artistic fact, is embodied socially and incorporated in the physiology of the respective body function, first as learning patterns, and then as ability which is transmitted culturally and perhaps genetically. And if Wölfflin's concept of vision can be understood metaphorically yet, the unity of the sciences themselves, from the second half of the nineteenth century, argues for their instantiation. The physiology of the central nervous system and psychology have become scientific disciplines, sucking up art with them.

The physiology of the optic nerve and cortical processing of conscious visual information, discovered, among others, by Louis Pierre Gratiolet redo the same theoretical cohesion, which, following the speculative premonitions and vague experiences of Hobbes or Descartes, was the one of the sensualist Condillac, and

in the field of aesthetics in the eighteenth century, the one of Baumgarten. Nonetheless, in the history of art, this unit is constantly dissolved in the additional and contrastive history of forms of representation. Art, as dialectical form, occurs when the world is already given to a subject and presented to his conscience. The ingenuity of the artist is to make this existence internalized through his own shapes, reflecting the individual uniqueness of the creative treatment of percepts by the personal subject. However, the error of this approach to representation is both philosophical and literal. First, because «to represent» something, a part of the world, presupposes that there already exists a cognitive «presentation» which should be reconvened for the artistic use. To think this false evidence of percept, which predates the cognitive act, is equivalent to thinking the world without the need to sense it. If the world is won by force to carry out on it a cognitive action, art can only be a process of revival of this world, not a display, stylistically characterized, of any objective presentation of the world. In other words, in this inchoate conception, which constitutes art and such exemplification, necessarily has its source in a perceptual act, or even more, the art itself is an act of perception. Art does not take advantage of the physiological processes of perception, but works with them, or even to a larger scale, works on them.

Needless to say, this is particularly evident in all of the technical innovations in the traditional arts and in all new artistic inventions.

Videofilmic language and empathy

How the spectator builds for himself his representation of the attributes of the topography and the event's dynamics of the scene represented cinematically? He looks at the representation which is given to him by the film-director and he deduces spatiotemporal characteristics from it. In this simplistic vision we make the confusion between a «real» visual scene, which nevertheless is never real but to which the cinematic work refers back, as to the artistic *denotatum*, and the artificial decoration in which the cinematic scene was shot. In the case of the usage of a real decoration, «a plein-air», the discernment is even less obvious: the scenery is never much more than a selection «shown» of a set of material things and a certain way of filming this selection. What the Spectator will have as a result – it is Operator's vision of the representation of the perceptive result constructed of Operator's imaginary experience, built over the *denotatum* and of his experience of the decoration, which is supposed to represent this *denotatum*. From the moment when the creator of the film introduces a cognitive agent into the cinematic scene, the Spectator adds the feel of the cognitive action of the Actor to the feel of the cognition of the Operator. Our hypothesis is that the construction of spatiotemporal attributes of the scene is done through a mental simulation of the cognitive actions of the Actor and of the Operator. This simulation starts from the behaviors and emotional expression of the Actor as well as from the traces of the behaviors and feelings of the Operator, which remain in the cinematic material, in the way which Operator films the real or artificial decoration. The topographic map and the register of the events in the mind of the Spectator do not stem from the experience of the reality but from an experience of the experience that others have of the reality. In both cases the underlying cognitive processes are not the same, although they have to maintain functional relations between themselves, which allow their interoperability and, finally, the nearness of their respective existential efficiencies.

Generally, we defined the narration as techniques of presentation of the cognitive subject in position of active tertiary reception, the secondary perceptive substrates maintain, in the intention of communicator, the bi-univocal relationship with their own primary percepts of a fragment or an aspect of perceptible reality. This definition necessarily involves some problems, which it is advisable to decipher from the beginning:

The respective positions of the transmitter and of the receiver in art are neither equal nor substantially heterogeneous. They appear qualitatively different in the dogmatic vision of the aesthetics coming from the Kantian lineage leaning on the difference of status between genius-creator and vulgar spectator. However, it is not the statute allotted by the institutions, which incarnates the authority of taste judgment, forged since the XVIIth century in Occident, which can make a substantial difference between the protagonists in the communication act, which is art.

It could happen that, in Western art, for the long period of the duration of the system of fine arts of Charles Batteux, which lasted between ca. 1747 and 1968, but only under an express condition of clarifying the cerebral mechanisms inculcated through the social exercise of this system². Point of sight of cognition, direct perception and the creation of the secondary substrates maintaining intentionally the referential relationship with the primary ones, are both generic cognitive processes, verifiable in last authority by the existential efficiency of our species, being with certain stages of processual and Darwinian becoming of the living being. The primary percepts concern rather the qualitative treatment of the sensory events, but they are structured by the centrifugal control of its afferent sensory information, arriving at the CNS (central nervous system)³, control of which implies emotional reactions in which internalized axiology of the endogenous significances (emic⁴) take part, structured on the three levels, innate, antenatal and ontogenetic⁵. The production of the substrates of the secondary percepts draws exactly from this same reservoir of the significances, overlapping and to a certain extent coinciding, with the hedonist valences. Then, the positions of the creator and of the spectator differ not by their statutes – their degree of active initiative or sovereignty – but by the fact that the spectator of the secondary substrates must simulate the primary perception, in order to compare it with the results of his direct tertiary perception of the substrate of the secondary perceptions. In other words, starting from the material offered by the artistic production of others, the spectator must produce an empathy with regard to the primitive cognition of the artist and the emotions which accompanied it, and not, as it was long was believed, with regard to the alleged «aesthetic emotions» of the artist, consigned in his work. The process of comparison between first cognition and tertiary perception of the secondary substrates, and the process of comparison between the first simulated cognition and the tertiary perception of the secondary substrates meet together, because the mental mechanism of the empathy, according to the theory of the mirror neurons, consists of the identification of the spectator and of the creator⁶. This moment is currently in prey to a contradictory debate⁷, since it is not completely clear, if the same neural mechanisms intervene at the subject looking at others who are testing something or at a subject, who is exposed to a picturesque narration of the feeling and cognition of the other. It is even less certain that these mechanisms start when the narration just reveals indirect traces of the experiment lived by the artist, as it is the case when one shows a recording, since the point of view of a protagonist of the action, or still in works whose aim is the print of the action of the artist himself, the results showing certain characteristics of this action and of associated lived experiences. At the end of this chain we have works which are pure substitutes of lived experiences of the artist, as in abstracted painting, or in the case of the conceptual art, which in the 70s has just offered instructions evoking the conditions of a possible experiment, perhaps imagined by the artist. Since the 90s, present-day art has already played simultaneously on all these registers and it proposes innumerable hybrids of the canonical cases of it, as well as others, where the distance between first lived experience of the artist and the situation of its spectator is even harder to encircle. These demonstrations ask on behalf of the spectator for a more and more holistic vision, with regard to traces and increasingly distant substitutes distributed on an enlarging variety of substrates. Since the memories of Mesguich who thought in only one narrative project, his visit of the falls of the Niagara, his film-recording and his projections in the news, at the time, in the New York cinematographic rooms, until the appearance of the art of planetary videographic network or of the experiments with synchronized mobile telephones, we have there a beautiful dialectical showing, which can be the same fundamental moment of artistic expression and communication. If the mirror neurons are for something in this mutation and this extension of art, it is then probable that they take part in a more general principle of mediation. In

this principle the production of the identity pole and of its distinguishable affects, like their simulation, are staged phases of the same cognitive mechanism, which hides behind it the same tendency or the same law of the progressive evolution. This principle and this physiological mechanism bring us back to the genesis of the symbolic sphere of René Thom⁸. The spectrum of this mediation of simulation and substitution would be declined as follows:

- The direct test of an identifiable ego, where the Subject has the conscience that he is identified with the subject of the assignment produced by a fact being itself an identifiable fact.
- The participation as an immediate witness in the scene which causes empathy.
- The spectatorial participation in fact-representing conscience.
- The participation in the reading of the traces and of the substitutes of the fact.

The theory of the participation of the mirror neurons in the aesthetic answer implies that the algorithmic aptitudes of the SNC concerned with the processes of direct perception and the processes of mediated perception must be embodied either in the same neural substrate or in the nearby neural groupings or at least in strongly connected and correlated neurons⁹. This adaptability and this connectivity can be responsible for the fact that lived experiences and their simulation have similar consequences. Following lived reality, they either involve a driving decision or start a procedure of mental treatment of a symbolic system, while in simulation they involve a show of lived experiences. The latter cause emotions which correspond to lived truth and can even sometimes become efficient, in particular at the time of the introduction of the new narrative techniques, as it was the case in the evacuations of the show-rooms by the public during the first use of the Lumière's cinematograph. The physiological process of activation of the mirror neurons brings to life with the spectator, under the subjective mode, a real cognitive experiment of a simulated space. The characteristic of the treatment by this type of neurons is that the subject saw the sensory stimuli of which he knows perfectly that they do not come from his own experiment. At least since the Paleolithic superior, it is the case that in the societies, which exploit the culture of entertainment as an aesthetic show, the spectator can compare his simulated perception of the real space of the creator with his own perception of the secondary substrates that the creator proposes to him as his own vision. The two protagonists agree on the variation of two intuitions and constitute them as a tool of representation of reality by a narrative technique. The perceptive narration or means to represent original perception become intersubjective insofar as the two actors make the experiment of their spaces, one of real space and the other of the simulated space of the first, being carried out mentally under the real conditions of the sensory experiment of materialization of the image in the device of spectation. Without lived experiences built on the percept of reality, without the simulation of lived and of the percept of the device, the narration would be a language free of the communication exercise¹⁰. But once the communication of the experiment has occurred, the protagonists enter an economy of emotions which differs from that which follows the lived existential or non-aesthetic feelings. In the real experiment, the emotions reach just the threshold of release of the actions or of the vitally essential reasoning, while in the simulated experiment the emotions are not important enough, and it is then said that the work is unsuccessful, that is to say that they exceed the threshold of the vital reaction and that they exult well beyond the usual existential reactions.

Since the assumption of Vittorio Gallese and David Freedberg¹¹ it is admitted that the spectator is identified with cognition and feelings of the actors. The spectatorial behavior at the time of the scenes of violence, or the erotic scenes, are such concrete cases. We think that, in the same gesture, the ocular participant of the filmed scenes also devotes himself to a kind of empathy with the cognitive task of the Operator, the two actions being able to cohabit on the same cerebral substrate, in the cerebral surfaces concealing the mirror neurons¹². It is on this set of various empathies that the clean evolution of the cinematographic and videographic art and is indexed.

Spectatorial practices since the show-rooms of demonstration from the late nineteenth century to the heyday of the single-screen cinema in the 1970s

The phenomenon of film and video is therefore a movie performance, which consists there to send to the landscape of the spectation environment, through a media: film, videotape, magnetic or digital memory, coupled to a device for image-generating, a perceptual categorization of a visual scene, by the means of the specific language of a film director. The performative aspect of this exercise is that the viewer goes out of his environment, mentally recreates the spatial map of the visual scene of which he becomes a perceptive organizer, and compares the effectiveness of the narration which we propose to him, with his own cognitive quasi-behaviors that run through ad hoc percepts embodied in neurophysiology.

To interpret the specificity of videofilmic language distributed on several viewing areas, one must first realize the complexity of spatio-temporal reality sensed and made conscious. The scene filmed or visually represented by a special effects construction or a 3D model, is categorized, as we said before, by spatial or topological reports of its physical elements and by categorizations and constraints of corresponding sensory intuition and by his mental treatment by the subject. It is as complex a reality, in terms of space, as a visual scene, which comes to the consciousness of the direct viewer and the viewer of the iconographic mediation. But the complexity in consciousness is nothing else than the plural unit, the weaving of emotional content on a multiple frame with the variety of entangled filaments of event reporting. First, the temporal unit, that of the intentional protention and retention, is the cement of this extended present, supported by a substrate made of mental persistence of psycho-objectal structures in the reality, lived as «banal». The spatial unit, then, that of the potential of a «motor project»¹³ of the subject that can sweep across various items enumerated in different shots of sensory scene, is an overhanging perspective, covering everything with a single sighting¹⁴. Both the Operator and the Spectator can play the union of this multitude and of this unity, a union that allows both operability praxis of everyday life and the diversified manipulation of language of expression and representation. The reality as sensory scene is a subject to the operation and handling. Several interpenetrated and complementary sensory spaces fall on the same unit and on the same entity of consciousness, augmented by the awareness of the inferences, concerning the effective and supposed causal connections. The focused attention selects items, conscious objects, but the unity of the consciousness proposes a large number which is exchangeable. So the reality, as the real thick stuff appears as potentiality of aspects and objectal genres. The everyday life makes of its actor a support of the unity of consciousness. The representation makes necessary cuttings into the tissue of the psychic content of its protagonists. However, the cut of the reality proposed in the practices of the cinema of the first period was immediately presented as a «plethoric unity».

It could not be there otherwise because of the cognitive shock provoked by the effect of cinema. This time of the primitive naivety having elapsed, the directors would continually work on the diversification and on the enrichment of the cinematic language. The multiplication of the projections was already proposed in 1897 and the division of the screen in 1927. The sound system and the colour also go in the same direction.

But the power of the effect of the film is so strong that the standard technique of the single-screen projection, which gave birth to the film itself, becomes the standard of the cognitive ergonomics, forcing filmmakers to produce a new unit of filmic consciousness on the basis of the single-screen, designed as a receptacle of canonical enrichment. This post-naivety unit culminates with the decisive breakthroughs of the great masters of the 1970s, such as Bergman, Fassbinder, Antonioni and Pasolini¹⁵. Respectively, the final stage of *Professione: Reporter* and the stage of tortures in *Salò o le 120 giornate di Sodoma*, are peaks of the single-screen unity where we already clearly perceive the virtual stratification of the spatiotemporal reports, which are ready to go out of the contextual unity of the historic support carried to its apogee, to distribute on the contingent multitude of the spatiotemporal characters of the spaces of projection and viewing. When Antonioni, by the artifice of breeze of decorations performed the «take out» of the subjective

camera to make it return to the place of its departure as a mean of objective narration, Pasolini creates a spatial duality of the tortures and the observation of the tortures by two soldiers, by the game of presence and disappearance of the ambient sound, according to the characteristic distance for the average hearing. Both unitarian «grips» show the lines of the future exfoliation of the videofilmic entertainment.

Distributed projections and viewings

The cinema which after 1970s tries to make innovations in the cinematic language, while saving the physical unity of the spectation, has to show the enrichment of the plot by means of increasing the truthfulness of the special effects and deepening of the quality of the image. Contrary to this approach of spectacular performance, supported as a majority in the commercial cinema of these last years, twenty five years after *Professione: Reporter*, the same union of the multitude and unity is obtained by Eija-Liisa Ahtila and Melik Ohanian by the spatial distribution of the multiple projections, to which the spatiotemporal connections in the spectation correspond, according to the «algorithms» appropriate for every artist, for the spatiotemporal reports in the filmed scene. If Ahtila decided to represent, in *House* (2000) reality within the living space, combined with the reality from the adjoining garden, and several prospects in this space, it shows the different parts of the real scene on other billboards of the multiple projection, arranged and distanced by an equivalence with the real relations, equivalence, the rules of which are created by the artist and themed as a management of spectatorial behaviours. If Melik Ohanian decides to represent in *Seven minutes before* (2004) the unit of present or unit of temporal, causal and non-immediate relationships, it is in the order of occurrence of events in the consciousness of the spectator who undergoes various storage spaces and reversals of the temporality of causal processes.

The characteristic of these narratives is to create a space -temporal organization of the projection and viewing that plays with the attentional effects and capabilities of integration and monitoring of the Spectator. The assimilation of spatial relationships, dynamics and causality by the Spectator, is no longer based on the distanced simulation, but on his own activities in relation to cognitive performance reified in space and time. The spectator's empathy towards the Actors in the scene and with the Operator is not only made by the cinematic effect, but at the same time by the effect of spectator's own spatiotemporal experience, to whom the entertainment reveals itself as the result of his own action of sensory orientation. To use Francisco Varela's terminology, the «*enaction*» of the Spectator are accompanied here by «*enaction*» of the Actors and Operator. The Spectator acts by an embodied cognitive action, that is, by engaging completely in the management of his own sensor-motor means in the acquisition of the access to the experience of the Actors and of the Operator of the videofilmic tale. Operator abandons his role of a boatman or diffuser and then becomes a central protagonist of the reified entertainment by subjecting it to the Spectator, as an object to be known and to be interacted with, following the example of objects «in» the entertainment, of which the Actors acquire conscience and measure. With the rules of the Operator, the Spectator organizes his own relationship to the plans of the estrangement and to the vector of time and, through them, he clears himself his own path into the original reality.

Therefore, quadruple founding correlation of the cinema undergoes a characterized movement, with the advent of the video-cinematic practices of reproduction of the monstrative space, where it becomes one quadruple relation. This relation is mastered by all the protagonists of the circuit of creation and reception of the image in movement between the cognitive spaces: of the Actors, of the Actors by Operator, of the Actors through the video-film media by the Spectator, and of the cognitive space of the Operator's media, by the Spectator.

-
- ¹ «I define videofilmic as relating to or resembling motion pictures just like cinematic or filmic» – Onuzulike, U., Human Communication. A Publication of the Pacific and Asian Communication Association. Vol. 10, No. 3, pp. 231 – 242.
- ² We've been working on this problem during our master course at the UNS since 2006.
- ³ Karli, P., 1992, «De la perception à l'action: le rôle médiateur et structurant des états affectifs et des émotions», in Barreau, H., *Le Cerveau et l'Esprit*, éd. du CNRS, Paris.
- ⁴ Pike, Lee, K., 1967, *Language in relation to a unified theory of structure of human behavior*, 2nd ed., The Hague: Mouton.
- ⁵ Soussignan, R., Schaal, B., 2001/3, «Les systèmes émotionnels chez le nouveau-né humain: invariance et malléabilité des réponses aux odeurs» in *Enfance*, volume 53, Presses Universitaires de France, pp. 236-246.
- ⁶ Gallese, V., Goldman, A., 1998, «Mirror neurons and the simulation theory of mind-reading», in *Trends Cogn Sci* 12, pp. 493-501.
- ⁷ Gallese, V., Freedberg, D., 2007, «Motion, emotion and empathy in esthetic experience» in *Trends Cogn. Sci.* 11, pp. 197-203.
- Gallese, V., Freedberg, D., 2007, «Mirror and canonical neurons are crucial elements in esthetic response», in *Trends in Cognitive Sciences*, 11, p. 411. Casati, R., Pignocchi, A., 2007, «Mirror and canonical neurons are not constitutive of aesthetic response» in *Trends in Cognitive Sciences*, 11, p. 410.
- ⁸ See in Petitot-Cocorda, J., 1992, *Physique du Sens. De la théorie des singularités aux structures sémio-narratives*, Éditions du CNRS, Paris.
- ⁹ The theoretical aspects, the new tendencies of research and the admissible hypothesis, in this field, are treated in Berthoz, A., Jorland, G., 2004, *L'empathie*, Odile Jacob, Paris and in Berthoz, A., Petit, J., L., 2006, *Phénoménologie et physiologie de l'action*, Odile Jacob, Paris.
- ¹⁰ Art as a communication, to see: Moles, A., 1971, *Art et ordinateur*, Paris, Casterman, 1971, et Moles, A., 1973, *Théorie de l'information et perception esthétique*, Paris, Denoël.
- ¹¹ Gallese, V., Freedberg, D., 2007, «Mirror and canonical neurons are crucial elements in esthetic response», in *Trends in Cognitive Sciences*, 11, p. 411.
- ¹² On the mirrors neurons to see: Rizzolatti, G., 2005, «The mirror neuron system and its function in humans» in *Anatomy and Embryology*, Vol. 210, Iss. 5-6, New York, p. 419. Engel, A., Burke, M., Fiehler, K., Bien, S., Rösler, F., 2008, «What activates the human mirror neuron system during observation of artificial movements: Bottom-up visual features or top-down intentions?» in *Neuropsychologia*, 2008;46(7):2033-42. Freedberg, D., Gallese, V., 2007, «Motion, emotion and empathy in esthetic experience» in *TRENDS in Cognitive Sciences* Vol.11 No.5, pp. 197-203.
- ¹³ Merleau-Ponty, M., 2006, *La structure du comportement*, PUF. After Saint Aubert (de), E., 2005, *Le scénario cartésien. Recherches sur la formation et la cohérence de l'intention philosophique de Merleau-Ponty*, Vrin, Merleau-Ponty creates the concept of «motor project» based on the texts of a Dutch anthropologist Frederik Jacobus Johannes Buytendijk.
- ¹⁴ Noland, C., 2007, «Motor Intentionality: Gestural Meaning in Bill Viola and Merleau-Ponty», in *Postmodern Culture & the Johns Hopkins University Press*, Volume 17, Number 3.
- ¹⁵ Spatial relationships in the works of classical directors are analysed in: Bordwell, D., 2005, *Figures Traced in Light: On Cinematic Staging*, Berkeley, University of California Press.