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The body of video games: devices, positions, emotions

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Raymond Bellour's analysis, in his 2009 book *Le Corps du cinéma: Hypnoses, émotions, animalités* of those emotions specific to the film medium ventures into previously uncharted territory. His conception of film-viewing as a corporeal experience is of interest in that it calls attention to the production of a certain psycho-physical state on the part of the viewer. The aim of this article is to consider those features specific to video games and to cinema in terms of this relationship between human bodies and Bellour's conception of audiovisual ones.

The term "the body of cinema" makes for a double remove in regard to the relationship between audience and film. To talk of cinema as possessing a body is, to begin with, to stop talking about text or structure: it is to break with the concept of film as a remote, hermetically sealed object. Cinema does not exist unless it mobilizes in one way or another, depending on unique and variable conditions, the bodies of its viewers. "Go to the movies" means more than simply "see a film": it means, first of all, to accept the fact that one's body will submit to a reduction in its mobility and that one's mind will focus, for the duration, on a given set of visual and auditory stimuli, and all this in the dark confinement of the theater space (Metz, 1977).

But to speak of "the body of cinema" is also to look at films from a new angle. The notion of film as body compels us to consider two other dimensions; first, the materiality of the image-making devices, which defines cinema; second, the materiality of moving images themselves: acceleration and slowdown, chopping and breaking of symmetrical patterns, syncopated rhythms: all the barely perceptible vibrations that seem to vivify the screen, along with the echo effect generated by the rapid passage of a series of connected images.

This view of cinema as the interplay of various bodies – the apparatus, the viewer, the film – resonates with the problems and stakes involved in a theory of play, of the act of playing, to be found in studies devoted to video games. The question of the player's positions and of body gestures during play has been largely overlooked in game studies developed over the course of the past decade. The emergence of research works focused on the processes of subjectivization, the formation of play-related sites and subcultures, and on the impact of these factors on the game-playing experience, opens a new field of study in the world of video-game research (Berry, 2012, Boutet, 2012a, Calleja, 2011, Galbraith, 2011, Genvo, 2008, Jonsson and Verhagen, 2011, Kirkpatrick, 2011, Sicart, 2011, Triclot, 2011).

With the body as point of departure, all sorts of ways of rethinking the relationship between film and video games emerge. Applying the concept of a "body" to film and to video games means reregistering them in a long history of visual-image devices, in which some aspect of the movement on the screen wins over the bodies of the viewers (Williams, 1991). In this sense, it is astonishing that consideration of the corporality of certain cultural practices originates in consideration of cinema and not of games, seeing as how the impact of a game on each participant's body constitutes one of the more obvious elements of the game-playing situation.

On the most abstract level, the video-game situation can be described as a sort of design layout featuring a living body and a strange technical apparatus, a computer linked to a screen, whereby certain affects are produced and maintained. The video game is based on an unusual distribution of movement: a body in which nearly all mobility is concentrated in the hands – akin to certain domestic activities, such as sewing; this nearly motionless body controls, even as it is controlled by, a second body that is not only graceful, agile, and extremely mobile but also indefatigable, launched

in the mission to conquer outdoor spaces located in the space defined by the screen. The video-game player's experience is based on the intersection of several sets of contrasting pairs: mobility versus immobility; whole-body consciousness versus hand-only reactivity, safe home space versus hostile surrounding space, the screen's bright light, with its ability to dazzle the eyes, versus the brightness that results from this scintillation... The physical effects of video-game play on the human body – what with the variation of a given game's possible layouts and its rhythmic modulations – constitute a vast potential source of insights into the activity of play that has yet to be recognized as such, much less tapped by, those laboring in the field of game studies. This primary layer of the video-game experience functions independent of any specific images presented on the screen, without the support of algorithms and rules, indifferent to the symbolic constructions of virtual universes.

Our aim in this article is to decipher the various possible bodies of the video-game medium, assisted by the guidelines of Bellour's analysis of cinema. We will thus examine three elements of the issue of video-game bodies; first, the relationship between the various material aspects of video games, in the light of the history of cinematography; second, the production of the film-watching and video-game-playing state of mind, relative to hypnosis; and third, the primary emotions associated with the video-game setup.

Devices, bodies of vision

Raymond Bellour devotes the first chapter of *Le corps du cinéma* to a history of vision-based technologies. The cinematographic apparatus constitutes the primary body of cinema – taking precedence over that of the viewers and that of the films viewed. It is not so much the strictly technical dimension of the apparatus that is of importance here as it is the place that the apparatus holds in the spectatorial body, the subjective positions that it summons up, the material and spatial layout of the desire to see. A side trip through the history of cinema will allow us to evaluate just what elements of the usage of prior devices the video-game medium salvages and also just what elements it chooses to jettison: to examine the way in which, within this modified and modifying medium new ways of seeing, new methods of engagement with the images, are composed.

Bellour conceives of cinema as the culmination of a group of heterogeneous technical lineages: frontal projection, breakdown of movement, 360°-view devices, wax museums, and other methods of exposition by which the presence of realistic representations became the dominant feature of visual entertainment for the masses. The effect of cinema turns out to be extremely composite, beyond the realistic effect of the projected images. This description of Bellour's opens three routes for reflection in regard not only to what the video-game apparatus owes to cinema but also to where it splits off from cinema, obliged as it is, instead, to reenlist devices of an earlier vintage.

First, the theme of bricolage, the adaptation of diverse and otherwise unrelated vision-based technologies, is characteristic of video games as well, since they arise at the juncture of multiple technological lineages. In fact, they were born of immense amounts of matériel derived from military space-research programs, most notably that of SAGE (Semi-Automatic Ground Environment), the technological core of the Cold War, and the source of all of the technical innovations in regard to automated calculations and man-machine interfaces, without which a program such as Spacewar, one of the first video games, would have been inconceivable (Edwards, 1997, Triclot, 2012b).

It is at this point that an entirely new system of imagery emerges, supported by the two capabilities key to information technology: computation and statistical sequencing. These military devices call for 360° visibility from a central position: the same setup as that of the panopticon and the panorama. The iconic character of the imagery is totally opposed to the logic of an image caught on film, without, however, undermining the viewer's confidence that the image viewed is a faithful

representation of the real thing. The image is converted once again, this time toward abstraction and the mastery of space. This abstraction generates its own ghosts, traces of real objects, enemy planes, which blink their way across the screen, conveyors of death – their own as well as that of the others. This dimension, of conversion or reactivation of prior powers, is even more salient when it comes to the second great technological lineage of video games, that of the technologies of mechanical amusements. Video games are located at the juncture between computer technology and the fairground. They prove to be hugely popular when they emerge from the military-research labs and horn in on the shopping-mall arcades. This encounter produces what one called at the time TV Games, on account of the coupling of a television screen with an electronic device capable of receiving and modifying the video signal.

If the video-game inventions – the scenarios, the screen imagery and action, the rules of the game – developed in the labs are profoundly different from those in the arcades, the reasons are both economic (profit being a function of the duration of the game) and cultural (a matter of the player's feelings about a human-versus-machine game played in a public space). The layout of the playing field, as it were, along with the player's gaze, is turned topsy-turvy. The game space is no longer defined by the military logic of command-and-control but by the ludic logic of the amusement park. The arcade brings back into play, as the speed of video-games action steadily accelerates, the dizzying experience of amusement-park rides, transporting its passengers to the far edge of an orbit, an inch from derailment. Moreover, this second lineage, the offspring of the rather unexpected union of electro-technology and the shopping-mall arcade, reinvents the use of the single-user screen, the arrangement of the rows of machines uncannily akin to that of Edison's Kinetoscopes.

To these two lineages must be added the technoscientific program of virtual reality, especially the work of Ivan Sutherland, which serves as the technological basis for imagery endowing two-dimensional images with the illusion of three-dimensionality, and endowing the player with the power to manipulate them. Virtual reality is a bric-à-brac of more or less successful innovations – three-dimensional-image calculations, stereoscopic vision, illusion of motion, etc. – on the one hand and, on the other, an ideology of looking, by which immersion in the images supplants the old reality illusion of cinema – abolishing the frame, permitting a mobile perspective – as if, by means of the overwhelming force of technological supremacy alone, it were possible to rediscover the properties that belong to natural vision (Triclot, 2013). An apparatus such as Morton Heilig's 1962 Sensorama, a projection cabin for an audience of one, is a transitional phenomenon, between the desire for full-immersion cinema and the arcade terminal.

Thus the body of video games is no less a composite than is that of cinema, certain key elements of which it turns to its own use, all the while mixing into its matrix all sorts of heterogeneous novelties. But one of the distinguishing characteristics of video games is, secondly, that they never achieve a stable position of dominance. If cinema can be likened to a house, the world of video games is "un terrain vague," which can be translated as "a vacant lot" but also as "a wasteland" (Sztulman, 2012). The centrality of the experience of the movie theater is something for which video games have no equivalent. Not only have many different ways of playing, many different game layouts and settings – computer labs, shopping-mall arcades, the recreation room or the bedroom – existed, and for long periods of time, but this multiplicity of forms of practice and styles of play continues today.

Third, Bellour's technological lineages permit consideration of the gap between cinema's body and that of video games, beyond the vast one of interactivity. Certain elements persist. Thus the reconversion of a position at the center of a circular structure in a frontal device undoubtedly constitutes the chief way in which video games perpetuate the logic of cinema. If cinema eliminates the panorama's mobile gaze in the name of frontal projection, even as it reintegrates movement within the film, video games complete the process, permitting the displacement of the player's viewpoint within the illusion of a three-dimensional volume presented on the screen. Video games restore to the image the seemingly random, unpredictable mobility of an individual walking around

in a given space. They reinject into the cinematographic framework a mobile perspective that had been sacrificed to the demands and limitations of the recording and projection circuitry (Boyer, 2012).

What distinguishes the video-game device from that of cinema is perceptual in two respects: an increase not only in the viewer's individualization but also in the fluidity of the temporal dimension. When a player assumes position facing the screen, the setting and the theater disappear, the mass of viewers giving way to a single player (perhaps ringed by a few onlookers). There remains, however, the sensation of being absorbed by one's visual perception, the fascination induced by a brilliant and dazzling expanse of light suddenly engulfing one's field of vision. The video-game screen is individualized, domesticated, to the point of being a portable unit, reducing to a minimum the distance between screen and face, engendering a sort of envelopment or intimacy, not far from the unrealized dream of a cine-book.

But the most obvious rupture between the two media can be seen in the absence from video games of any trace of the photogram, on the one hand, and of the combination of movement and immobility fundamental to film, on the other. This absence raises the question of the realism of the imagery – video games being driven to mimic the hardware of photography, including its defects, but it also implies, deep within the images, a completely different relationship to time. In her 1991 study "Film Bodies: Gender, Genre, and Excess" Linda Williams identifies the three time dimensions that characterize three film genres, melodrama, horror, and pornography: the too-late of melodrama, the too-early of horror, the on-time of pornography. It is precisely melodrama's too-late dimension, this relationship with the past, revealed in the captured image, that video games lack. This lack no doubt accounts for the affinity of the video-game medium with, on the one hand, the horror genre and the sort of tension that it implies in regard to forthcoming events, and, on the other, pornography and its guarantee of ready availability. Video-game designers, floating weightless in the eternal now of the digital universe, operate without reference to the dimension fundamental to melodrama. The phenomenon of subjective memory falls outside the bounds of the medium, which grants little space to reflections regarding one's past selves (Boutet, 2012b).

Cinematic state, ludic state, mini-hypnoses

In Bellour's analysis, the evolution of moviemaking devices touches on the issue of hypnosis. In fact, hypnosis belongs to the genre of popular shows, which evolved in tandem with cinema. But Bellour summons it back in the hope that it can help explain just what is happening to a viewer mesmerized by a film. At this point we shift from an analysis of the apparatus to that of its effects on the viewer's body. The aim of this analysis is to determine the type of connection that the film-watching or game-playing experience triggers: either "the reality effect" or the sense of "immersion."

Is this to say that the effect of watching films or playing video games is akin to a hypnotic state? The differences are as important as the similarities. At best, the two activities seem to induce a slight state of hypnosis, on the order of Erickson's "ordinary trance" (Roustang, p. 72). The hypnosis analogy, while not a perfect fit, is useful in that it highlights those traits shared by spectator and player – immobilization, visual focus, monotony and rhythm, submission to the actions of an apparatus that is indifferent to the viewer's wishes – just how these activities produce a certain paranormal physical and mental state, distinctly different from the ordinary waking state.

An examination of the concept of hypnosis, as presented by Roustang, reinforces this analogy. In his analyses Roustang insists that the active properties of the hypnotic state are all-important beyond the momentary suspension of the subject's "normal," waking, state. The immobilization that is part of the hypnosis procedure is compounded by the emergence of a growing watchfulness. This melange of immobilization, over-vigilance, and proliferating images characterizes to perfection the video-game situation.

Considered individually, each of the elements that compose Roustang's description of the hypnosis process can be correlated with those of the video-game setup even more closely than with that of cinema. The initial moment when the subject suddenly goes under, this altered state – the rupturing of the routine of normal perception – finds an equivalent, of course, in both activities. But one element, the mobility of the eyes and the hands, recalls most directly the physical state of the video-game player, not of the film viewer.

The most problematic issue, the one in which the cinema and video games alike diverge from hypnosis, is that of "confusion or uncertainty." Roustang explains that the mental state induced by hypnosis differs from that induced by watching a film in that it leads the subject to focus on an endogenous as well as imaginary scenario. The images are produced by the subject; the subject is not merely receiving visual and auditory signals transmitted from some outside source. However, the use of (external) images to liberate the (internal) imagination is part and parcel of standard hypnosis techniques. An interesting aspect of this situation is that the confusion engendered by the immobilization and focalization that characterize hypnosis obliterates the border between the self and the world beyond it. This confusion in regard to place and position conjures up, of course, the video-game setup, and more particularly those games that involve the projection of the player into an onscreen alter ego, or "avatar." There is no doubt that this projection engenders a state of disorientation. Recordings of players' verbalizations during avatar games feature the phrases "Hey, where are you?" and "Hey, who are you?" – evidence of considerable doubt as to the player's own whereabouts relative to the scene on the screen (Boutet, Colon de Carjaval, Ter Minassian, Triclot, 2013).

Finally, the crucial point of the process of hypnosis, as described by Roustang, has to do with what he calls "the power to reconfigure the world," a matter of opening up possibilities: in short, of wielding power. Bellour's argument that of all the arts cinema "is the most directly invested in this 'power to reconfigure the world'" makes one wonder about the characteristics specific to video games. Bellour acknowledges elsewhere that "the overture toward modification and action" seems difficult to situate in cinema, "in which one has seen above all else a loosening of the rules, a state of neglect, a degree of inaction worthy of the powerlessness that is cinema's motive force and principle" (Bellour, 2009, p. 115). Bellour next summons forth "the megalomania that goes along with the cinematic setup (found in all sorts of identification systems), and that favors the omnipotence of thoughts" (Bellour, 2009, p.117). Behind the banal business of identifying with the characters, the most important feature of cinema is that this identification floats along in the current of the narrative and passes through all of the film's bodies.

How could one not see here, in the video-game experience, and by way of an entirely different arrangement of images, the extension of this experience of the body, at one and the same time immobile and projected into a variety of super-mobile bodies? This experience of reconfiguring the world by assuming control of the movement of the images, is rooted in the very heart of video games; this opening onto an array of worlds, each offering, in turn, an array of routes, is what defines the character of the medium. Game sessions are made of "successions of interesting decisions," in the words of game designer Sid Meier, which in turn are stepping stones to potential futures. This experience, which Roustang associates with children's games, brings us back to Dewey's observations regarding the *qui vive*, the alertness of the lookout who rediscovers the potentialities of the world around him (Dewey, 1915, p. 54).

The hypnosis analogy thus highlights what exactly becomes of the viewer's (in the case of cinema) or the player's body (in the case of video games), the strange state into which it is plunged. It opens the way to a description of the different modes of engagement of the body in images, be they those of film or of video games.

Primary affects and emotions of the apparatus

Having dealt with the composition of the film apparatus and the ways in which the viewer's body is involved, Bellour turns his attention back to the film's body – to the ways in which the interactions of the cinematographic apparatus, the film, and the viewer's body produce the emotions specific to cinema. To be moved emotionally by the film's body presumes that one is moved by it physically as well, that one is in sync with its speed shifts, is registering the shocks and breaks in the sensorial framework which are associated with the various bodies traversing the film. Thus a close reading of Kenji Mizoguchi's *Miss Oyu* permits Bellour to identify four emotional registers, which by their interpenetration come to constitute the viewer's experience. The first level, that of intensity (in Deleuze's sense, of a spatio-temporal dynamism) is the product of the rhythmic modulation with the shot. This is the emotion of the cinema at its birth: the fluttering of leaves in the background of one of the Lumière brothers' earliest efforts, *Repas de bébé* ("Baby's meal") and the almost equally abstract, crowd-in-motion patterns of *La Sortie des usines Lumière à Lyon* ("Employees leaving the Lumière factory"): "emotion belonging to the world when it is charged with activity, from the moment when it is caught by the camera" (Bellour, 2009, p. 142).

This dimension, which is concerned with movement within the images, is evidently also vital to video games. It plays a fundamental role there, not only because video games tend to favor an action script unmodified by any editing, composed of shots of a relatively extended duration, but also and above all insofar as the breaks within each shot oblige a physical response on the part of the player. This rhythmic dimension of the video-game experience, the necessity of maintaining a sort of dance step with the images, constitutes the very first stratum of the emotions specific to video-game play. Above and beyond all else is this body-to-body connection with the apparatus, by way of which the modulations within the shot create a sort of visual echo in the reflexive, mimicking motion of the player's body.

That here there is a sort of emotion that does not fit into the standard psychological categories can be illustrated by the example of the game *Asteroids* (Atari, 1979), one of the stars (as it were) of the first age of the arcade, distinguished by its use of vectorial graphics. The player pilots a spaceship through a maze of high-speed asteroids. The player can fire on the asteroids, to clear a path, but instead of going up in smoke they burst into fragments, which only further complicate the obstacle course.

Asteroids constitutes a remarkably elegant, design-wise, solution to the problem of the maze as an obstruction hindering the avatar's movement: not only is the maze in motion instead of static but its motion is a function of that of the player. Whereas the video-game space is, as a rule, a comprehensible one – a pure, abstract container – in *Asteroids* it is the expression of the player's bodily gestures. In this unprecedented rapport between player and play space, there is a sort of primal emotion, born of the interplay between screen and body, that has yet to be translated accurately into the language of psychology.

Upon these intense emotions are constructed what Bellour terms "textual emotions" or "system emotions." The latter result from the effects of visual overlap in successive shots, of the memory's activity, be it conscious or unconscious, which the film amasses. It is undoubtedly difficult to derive from a video game the quality of these "system-based" emotions such as those that Bellour finds in Mizoguchi's films. The extended duration of the sequences and the absence of control, on the part of the game's designers, over a given player's moment-by-moment playing of the game weaken the effects of construction within the image-based discourse which they might otherwise be able to achieve. From this point of view, it seems that video games will never achieve the level of sustained discourse that exists in cinema.

This negative conclusion brings us back, once again, to just what distinguishes each of the two genres when it comes to emotions. The role of repetitive practice, necessary to the mastery of key

elements in the motion of onscreen figures is, in fact, central to the video-game experience. If a system-based emotion is at work in video games, it is no doubt more likely to be found in the player's body language than in the game's various visual effects, on the screen. This bifurcation between the experiential constitutions of the two media marks the point at which the narrative power of video games is diminished, but at the same time another way of experiencing images opens up.

The remaining two strata of emotions are not specific to either medium. The "symbolic emotion" takes us back to the cultural order, to the mobilization of figures, to the task of identifying with a story's personae. The "apparatus emotions" are generated by the medium's recalling its formal properties. In his description Bellour emphasizes the way these different emotions fold back upon one another. The system emotions imply the primary, rhythmic work at the heart of the shot. Bellour's analysis permits us to sharpen the definition of what can be deemed specific to the video-game experience, beyond symbolic constructions, the logic of identifications, and to imagine a connection with the image different from that of cinema, a relationship on which are conveyed, more or less securely, the secondary emotions.

The reference to David Stern and to his conceptualization of the newborn is particularly relevant here, in that it clarifies what happens at the juncture between the body of the film and that of the viewer. Stern's conception of "amodal perception" as a defining feature of the first "sense of an emergent self" touches on sensation at its origin, pinpointing there variations in intensity, repetition of temporal patterns, pulsation and rhythms, all of which pass from one sensorial modality to another. Associated with this primary mode of perception are found what Stern calls the "affects of vitality," in order to distinguish them from the standard emotions, or "affects of category" (happiness, sadness, fear, anger, surprise, etc.).

These affects of vitality can be qualified only by means of dynamic terms: "These elusive characters are better rendered by dynamic, kinetic terms, such as 'rise,' 'vanish,' 'fleeting,' 'crescendo,' 'decrescendo,' 'burst,' 'stretch out,' etc." (Stern, 1989, p. 78). Stern alludes to dance to illustrate what is at work in this first register of experience. We are back with Kirkpatrick and his notion of video games as a dance with the joystick (Kirkpatrick, 2011). This dimension corresponds to an idea that Stern develops under the name of "affective attunement," a phenomenon founded on a principle of imitation connecting the affects of vitality of one sensorial modality with those of another. One of the examples that Stern offers is that of a mother who dances before her child and reacts to the child's entreaties: "A nine-month-old becomes very excited by a toy and grabs it. In response, her mother glances at her child, twists her shoulders, and performs a frenzied fox-trot, twisting her torso like a nightclub dancer. These joyous contortions last about as long as the daughter's "Aaaaah." (Stern, 1989, p. 183).

We now arrive at play, the intermediary zone between the mere repetition of a shape and the random variation. This combination of a cyclical movement modified by another one seems to be particularly characteristic of the pattern of the arcade experience, at the heart of video games. The kinetic experience of the arcade is not a simple duel between a flesh-and-blood body and a mechanical one but rather the modulation of each by the other. The dominant mode of the games arcade is, in fact, acceleration, but this great crescendo is alleviated by landings between the levels, where one can catch one's breath; or, better yet, it incorporates breathing spaces, the right touch at the right moment delivering a momentary respite, the wrong touch, on the other hand, driving the game forward toward saturation and the announcement "game over." Beyond those game-theory concepts that are easy to grasp – high score, competition, self-mastery – Stern's affective attachment makes it possible to give form to the one-on-one battle between the player's body and the game's body waged at the center of the action.

To conclude: The concept of the body of video games thus permits access to the fundamental constituents of the game-playing experience, which until now have been largely disregarded by the

games-studies literature; Video games are characterized by many different arrangements of the players' bodies vis-à-vis the onscreen bodies, from which arise the range of specific affects. This primary work of subjectivization, by which a body is fashioned for the apparatus, is the prerequisite of the psychological processes, undoubtedly richer and more complex, that involve the ensemble of the cultural framework, the logic of identifications and of empathy. All the same, beginning as early as these first strata, which we tend to neglect or to regard as a place of sheer repetitions devoid of sense or value, a sort of exposure of one body to the powers of other bodies, a heightening of the imagination, is taking shape, and it possesses a range of intense emotions all its own.

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