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## Representations of Time in a Time Based Medium:

### The Photograph to the Moving Image

The photographic image, soon after its invention, spawned two branches: the still photograph and cinema. These two mediums, though one is derived from the other, seem to play different roles for man, such that the technical innovation of the animation of still images did not sweep away still images, and, in fact, both have flourished to a large extent in the past century. The obvious difference between the two mediums is difference in time: the essential quality of the photograph is that it is unchanging, for cinema, that it does change in a regulated manner with time. These two mediums resonate differently with the spectator who is, regardless, swept up in the flow of time. To talk about the mediums' different relationships with time, and how they represent time, it is useful to break their relationships into three: Movement, Duration, and Perception. The first two are almost synonymous, and are, perhaps, synthetically separated here; the last deals with the Spectator and the process of viewing which completes each medium. To explore this I'll use two artists as examples, Eadweard Muybridge, and Chris Marker. Muybridge pushed photography towards the regulated

repetition that would become cinema in his *Animal Locomotion* studies, Chris Marker pushed cinema back to the realm of photography in his film, *Le Jetée*, which is almost entirely comprised of still photographs. These two artists and their works emphasize the differences between the mediums—which is, as stated before, a difference in time—through their experimentation with the form.

## MOVEMENT

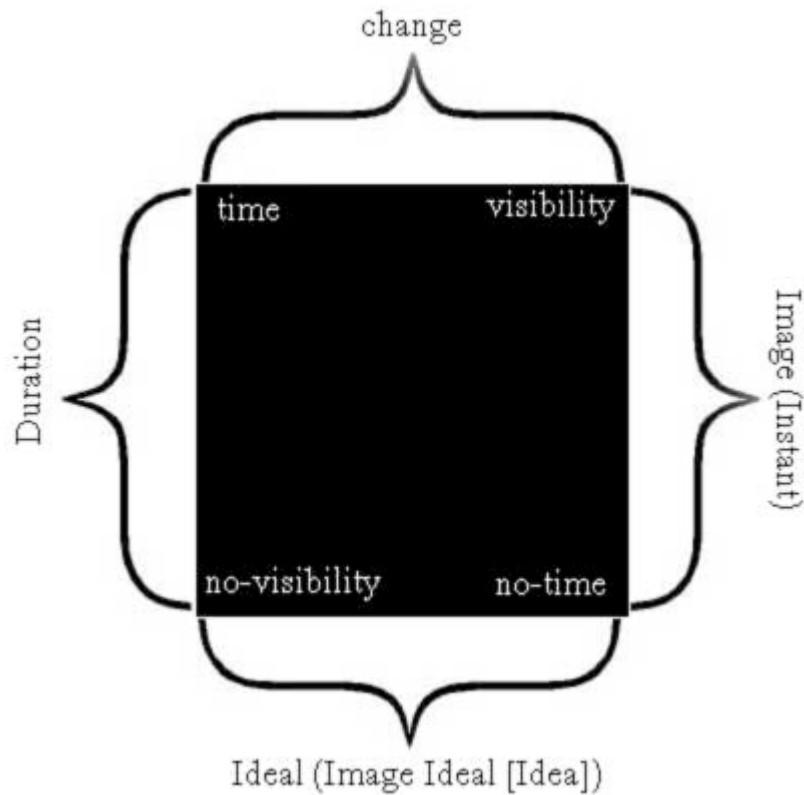
Muybridge created photographs through the development of instantaneous photography and the deliberate manipulation of this to present photographic images in series that portray a concept of time in regular fragments. It is a decomposition of the perception of movement, and a precursor to that re-animation of this decomposition: cinema.

Rodowick, writing on the movement-image, notes of Muybridge's "serial decomposition" (a sinister sounding term) of movement, "time is subordinated to movement... Time serves here as the measure of space and movement; it can only be "seen" through the intermediaries of space and movement." [p9] In fact, Muybridge manipulated his photographic sets to appear more regular in their spacial representation of time. If his 20,000 plates of an ark of animals and humans are a portrait of any one thing, they are a portrait of time. In this sense, his work was an expression of the emergent views of time and its relation to space: time as something that can be expressed in space: linear, and divisible into quantitative units. It is a denial of a classical sensibility of time, broken into critical dramatic instants (such as Birth, Puberty, Manhood, etc.), that are connected by a flowing continuum... Time as a force, similar to wind, or, as Frampton describes it, Time as "*Chronos*, a corrosive universal solvent into

which all things were dumped at the moment of their creation, and then slowly sank, suffering gradual attrition.” [Frampton, p74] The correlative within the Photography medium itself is that moment chosen: the pose.

Bergson relates the pose to the classical conception of time ([Bergson, p330]) and Barthes describes it as the actual duration (aura) of the original: “...looking at a photograph, I inevitably include in my scrutiny the thought of that instant, however brief, in which a real thing happened to be motionless in front of the eye. I project the present photograph’s immobility upon the past shot, and it is this arrest which constitutes the pose.” [Barthes, p78] It is exactly this which Muybridge rebels against. Instead he turns a mechanistic clock onto the subject, imposes quantitative regularity upon the poses, and durations smaller than man’s perception. It was this movement away from the pose towards the clock mechanism which allowed Muybridge to see (and experiment in) the re-animation of this movement, first in the zootrope and the zoopraxiscope, and later in celluloid.

To look at the conceptual spectrum charted by photography and cinema in regard to time, we could design a semiotic square, after Greimas, putting in opposition the semes Time and Visibility:



Here “Change” is that which makes time visible (it is that repetition with difference), and the Image is that which is visible without time (unchanging); opposite are the Virtual and Duration. Muybridge uses his unchanging timeless images to represent change; what is unnatural—the strange quality we receive from his serial photographs—is the regular static nature of these images used to represent a flow. There is something super-mechanical about his representations, opposite from the classical goal of representing the critical/decisive poses. The pose, perhaps, sticks closer to our virtual perception, towards the bottom of the square in the realm of the Ideal Image. Muybridge is on the opposite end of the spectrum, using the mechanical regularity of his images to avoid any idealization of movement, and instead, explore those hidden “instants” in time.

From its roots in the mechanical, regular, photographic decomposition of movement, cinema became dependent upon movement as the communicator of time. Time was communicated and preserved through two synchronized clocks: the camera and the projector. Bergson notes the generation of this movement: “It is true that if we had to do with photographs alone, however much we might look at them, we should never see them animated: with immobility set beside immobility, even endlessly, we could never make movement. In order that the pictures may be animated, there must be movement somewhere. The movement does indeed exist here; it is in the apparatus.” [p305] The critical ingredient to the apparatus in order for it to represent time spatially is movement. But beginning with the first cinemagraphic movements in montage, there were two types of movements presented: that of the subject, captured mechanically, and that from shot to shot.

Rodowick on Deleuze sets forth the basic communicator of time within cinema through the example of the sequence in Buster Keaton’s “Sherlock, Jr.” where Keaton enters the movie screen to be buffeted around by the montage of shots itself—diving from an idyllic beach, he lands in the next shot of a snow drift:

Keaton’s movements from one shot to the next link incommensurable spaces through what modern mathematics terms a “rational” division. The interval dividing any two spatial sections serves simultaneously as the end of the first and the beginning of the second. In Keaton’s film, every division, no matter how unlikely and nonsensical, is mastered by this figure of rationality where the identification of movement with action assures the continuous unfolding of adjacent spaces. [p3]

Time is communicated (regulated) within the film through movement. The consequence of this identification is the subordination of time to movement. Similar to Muybridge’s

serial photographs, time can only be shown through the spatial movement of the subject; this is where we see if it's "in sync" with the sound, or "slow motion". But unlike our human perception, there is no correlating frame of reference—no time or duration of the whole. "But true movement, insists Bergson, is transformation rather than translation. The movement of the tortoise must be taken as an indivisible, qualitatively changing whole, and the same is true of the movement of the hare. Equally important, however, is that through this shift in positions a qualitative change takes place that affects the tortoise, the hare, and the space they have traveled—a change in a whole." [Bogue, p24]

The dual nature of movement, which Bergson describes, the whole of the moving body, and the whole of the total environment, is only retained in half. Cinema retains the movement of the subject in time—in fact it is its source of representation of time—but manipulates the difference and repetition of the surrounding whole, just as in Keaton's experience in the screen. Rodowick continues, "The dynamics of the classical film function like a Newtonian universe where laws of motion function independently of time. This subordination of time to movement has philosophical consequences." [p4] This subordination de-weds the qualitative changes of the parts of the scene in time to the changes of the qualitative whole, like Keaton's character that is stuck in movement-time while the environment around him is free to travel and change. The cuts are 'irrational'—outside forces imposed upon the world of the shots—except as they are connected by the 'rational' force of the moving subject.

Where Muybridge charts the terrain of the semiotic square between Time and Visibility with photographs of an instant, Chris Marker charts that between Visibility with No-Time

with the moving image in repetition. The re-animation of sequential photographs is reversed, or decomposed in Chris Marker's film, *La Jetée*; he returns to a classical, posed version of time, with only those critical instants shown. Truly, it is a deconstructionist concept, to take apart the already deconstructed and reconstructed movements of the cinema and return them to their still photograph intermediaries. The cinema narrative is presented with voice-over and still images, varying in rate—seeming like that “immobility set beside immobility” Bergson describes—from 1 frame every two seconds, to 3 frames a second, with one exception where the picture “animates” into a moving image. What makes this cinematic (besides the audio track moving in time) is the audience's expectation of movement. Rodowick, summing up Deleuze, describes the structural ramifications for the representation of time in stills in *La Jetée* as follows:

‘Movement, drained from the image and divorced from the representation of action, has relinquished its role as the measure of time.’ Time no longer derives from movement; “aberrant” or eccentric movement derives from time.

...With both action and movement absented from the image, there is now only linking through “irrational” divisions. According to the mathematical definition, the interval dividing segmentations of space is now autonomous and irreducible; it no longer forms a part of any segment as the ending of one and the beginning of another. While referring to each other, they nonetheless resist being reconciled into an organic whole. As a result, there is no totalization of space in an organic image of the whole and no subordination of time to movement. [pp4-5]

Time is not represented within the medium itself. It is only represented from outside the medium, “irrationally”, and is thereby left free to a more fluid representation through the oral (the voice-over narrative), and the conceptual (the dramatic). It is not surprising, considering the oral and dramatic nature of the time representation, that this harkens back to a more classical concept of time, which flows between critical “poses” that hold a

higher significance: in this case, significance given by the Director, as opposed to that given by the mechanism of the camera in the standard 24 frames-per-second cinema. In this way Chris Marker's film is left free to explore a narrative about memory and time, without a conflicting temporal reference frame within the film itself.

## THE CUT: REPETITION, DIFFERENCE, AND DURATION

Towards the end of *Camera Lucida*, Barthes' journey in search of essential meaning in the photograph arrives here:

I now know that there exists another punctum (another "stigmatum") than the "detail." This new punctum, which is no longer of form but of intensity, is Time, the lacerating emphasis of the noeme ("that-has-been"), its pure representation.

...By giving me the absolute past of the pose (aorist), the photograph tells me death in the future. What pricks me is the discovery of this equivalence. In front of the photograph of my mother as a child, I tell myself: she is going to die: I shudder, like Winnicott's psychotic patient, over a catastrophe which has already occurred. Whether or not the subject is already dead, every photograph is this catastrophe. [p96]

Photographs are essentially about time. Barthes describes the process of spectating a photograph as that of making closure through time, between the present duration of the spectator, and the past duration represented; he calls cameras "clocks for seeing" [p15]. To put it in Bergsonian terms, the essential quality of the photograph is its unchanging *durée*. A photograph is repetition without difference (not without difference from the "original" object, but without difference from itself a moment ago)—it is part of Bergson's unchanging matter, but an image of life. The death Barthes refers to is not one that includes change: decomposition, transformation... this is an atheist's death, a ceasing of existence, a repetition without difference of a zero.

In Deleuze's Bergsonism, he explains Bergson's *durée* thusly: "Things seem to endure because of some inexpressible reason in them which accounts for our inability to examine them at successive moments of our own duration without observing that they have changed." [Bergsonism, p48] The photo doesn't do this (though that which it stands in for may still do it, if it is alive), so the photo is a contradiction of a "matter" and "living". The unchanging copy or emanation of a living subject presents this contradiction of unchanging *durée*, that for Barthes emotes Death. This characteristic of the photo forces the attention of the Spectator to his or her own *durée*. It is a confrontation between perception and "the past [that] has ceased to act or to be useful. But it has not ceased to be." [Bergsonism p55] If we take Deleuze's description of the time-image: "what is specific to the image... is to make perceptible, to make visible relationships of time which cannot be seen in the represented object and do not allow themselves to be reduced to the present, [The Image Xii (Rodowick p7)]" then the relationship we are able to view in the image in the photograph is that of our own changing present and an unchanging point in the past—a view that without the image would be impossible in the present.

What transforms the photograph to cinema is literally repetition with difference. If we consider a Bergsonian concept of perception—"a cinematographical kind" [Bergson, p306] where the mind takes snapshots and strings them together—then a photograph could be viewed as that which gives perceptual repetition without difference, and cinema its inverse, that is, having the multiplicity of time where "there is other without there being several" [Bergsonism, p42]. In cinema, this repetition constitutes the movement, but the

cut or montage, is made of relatively giant leaps of qualitative difference which the perception of the viewer must string together. Bogue on Deleuze describes the cut as “irrational’, in that, like an irrational number, it separates two entities without belonging to either” [p179]. The shots are separated by a force of decision outside the medium (outside of the represented time); that outside influence is that of the Director or Operator. The closure which the spectator’s perception must perform to comprehend the cut is reminiscent of Bergson’s *élan vital* that performs the process of actualizing the virtual: the viewer achieves closure between these disparate parts through association with memory and an instantaneous act of intuitive combination. The spectator is actually stringing together pieces of duration into a whole, a present, a virtual. This launches the viewer into the film: lured in by his own perception, the viewer becomes a denizen of the *cinemas durée*, forgetting his own.

The process of spectating cinema (unlike that of the photograph) is very close to a Bergsonian perception—except the viewer is passive, instead of preparing for action. This is because there is no time for the move to reflection. Barthes points to this as a fundamental difference between the two forms. The key to this difference is distraction in the cinema: the constant flow of images... repetition with difference: “Do I add to the images in movies? I don’t think so; I don’t have time: in front of the screen, I am not free to shut my eyes; otherwise, opening them again, I would not discover the same image; I am constrained to a continuous voracity; a host of other qualities, but not pensiveness; whence the interest, for me, of the photogram.” [Barthes, p55] It is, as if, the spectator’s perception is forced to exist temporarily within the *durée* of the cinema, like Keaton’s

character trapped in the screen. Deleuze describes this march of durations in the shot—which he calls the “mobile section of a duration” [Rodowick, p11]—thusly: “But, when the frame or the screen functions as instrument panel, pointing or computing table, the image is constantly being cut into another image being painted through a visible mesh, sliding over other images in an ‘incessant stream of messages’, and the shot itself is less like an eye than an overloaded brain endlessly absorbing information” [Cinema 2, p26-7]. Perhaps it is this combination of rational and irrational, space and time, which simulates the experience of perception for the spectator. The sequences of shots—the units of duration—are presented like so many perception packets of which the viewer must make intuitive sense.

## PERCEPTION

“...photographs are signs which don’t take, which turn, as milk does. Whatever it grants to vision and whatever its manner, a photograph is always invisible: it is not it that we see.” [Barthes, p6] This is true as well of its re-animated child, cinema. The engrossed spectator does not perceive representations of reality, but the subjects themselves, such that a photograph or film can only be described through the subject, “a photograph of a horse”. The process of perception of photographic images is like that of perceiving a ghostly copy of reality. It can be compared to Bergson’s description of that creating experience of memory, that “memory of the present” where “our actual existence, as it unfolds in time, is thus doubled by a virtual existence, by a mirror image” [Bogue, p118]. Bergson describes déjà-vu as that sudden insight into this constant process—an experience of observing an “automata” in ourselves: “the sensation stems from the very

real doubling of the present—in perception, which forms part of our ongoing, largely unconscious sensori-motor action (the automaton/actor), and in memory, which is mental, reflective, free from the constraints of action, but also passive (the spectator).” [Bogue, p119] This duality of the perceiver and the passive spectator of perception exists for the cinematic experience, as well. Cinema is often compared to the experience of dreams or memory, where one is conscious of being partly conscious... passive. Similar to memory, cinema brings up the question of passive identification. Christian Metz in The Imaginary Signifier compares the spectation of cinema to a mirror in which the viewer is not present, but only his perception is present: “In other words, the spectator identifies with himself, with himself as a pure act of perception (as wakefulness, alertness), as condition of possibility of the perceived and hence as a kind of transcendental subject, anterior to every there is. ....Very different, because this mirror [the mirror of cinema] returns us everything but ourselves, because we are wholly outside it.” [Metz, p410-413] Like Bergson’s automata of déjà-vu, our perception is split between that which acts and that which observes, but in the case of cinema, the medium has taken on the role of action. We are relegated to a half perception: a passive intuition, not subject to action. This could be returned in Bergsonian terms as a meeting of durations: that of the cinema (the movement) and that of the spectator (passive).

## REPURCUSSIONS

“...we have to struggle not against simple mistakes (false solutions) but against something more profound: an illusion that carries us along, or in which we are immersed, inseparable from our condition.” [Bergsonism, p20] I read this warning out of context

and think of our modern, image-based society. Barthes bemoans the society post-photograph as the end of the oral society: “Perhaps we have an invincible resistance to believing in the past, in History, except in the form of myth. The Photograph, for the first time, puts an end to this resistance: henceforth the past is as certain as the present, what we see on paper is as certain as what we touch. It is the advent of the Photograph—and not, as has been said, of the cinema—which divides the history of the world.” [p87-8] The invention of the photograph marks a change in history—a change in the signs of man’s perception: the beginning of the age of images, when the image begins to take the position and importance of matter. Hollis Frampton notes: “After all, history, like pornography, couldn’t really begin until photography was invented. Before that, every account of events is merely somebody’s panting prose fiction... Nothing is presented to the sense, and so nothing can enter the mind that wasn’t there in the first place.” [p88] Image has become matter: something to be perceived within the special environment; Time becomes fragmented. This can be read as a force with repercussions or an expression of a meta-physical change within society.

Deleuze reads image practices as both influence and product of society:

“The individual consciousness is nurtured on signs, it derives its growth from them; it reflects their logic and laws.” Deleuze similarly appropriates Bergson to argue that thought is quintessentially temporal, a product of movement and change.

...Deleuze depicts image practices as social and technological automata where each era thinks itself by producing its particular image of thought. [Rodowick pp6-7]

This describes image practices as a whole as a map of contemporary perception—especially those signs in movement. Like our perception, these movement-image / time-images of photography and especially cinema are “quintessentially temporal”. This Deleuze describes as not a reflection of thought, but more of an interface, or feedback loop, that describes as much as it proscribes our thought. These physical creations of memory—mechanical documentation—must interact with our concept of memory... of Past.

Barthes calls the photograph the repository for Death in modern society. The photograph has become exactly that which has passed beyond the pale, to a state where it “still exists but no longer acts”—like the physical vessel of the corpse, it is a memory in matter. He states, “For Death must be somewhere in a society; if it is no longer (or less intensely) in religion, it must be elsewhere; perhaps in this image which produces Death while trying to preserve life.” [p92] This, I think, Barthes considers a problematic vessel for memory, because it has no real duration of its own: it repeats without difference... remains the same, as if capturing an instant. The repercussion of this to society, according to Barthes, is impatience. He describes a population unable to deal with the sort of ratio of durations that Bergson describes as that impatience with waiting for the sugar to dissolve—that difference of duration, “...so that everything, today, prepares our race for this impotence: to be no longer able to conceive duration, affectively or symbolically: the age of the Photograph is also the age of revolutions, contestations, assassinations, explosions, in short, of impatiences, of everything which denies ripening.” [Barthes, p93]

And so a descent into spectacle? ...a descent into that cinema which temporarily absorbs us in its own durations, forgetting our own. Frampton theorizes that we seek in film a distension of time, an “ecstatic time”, what Andre Takovsky describes as “time lost or spent or not yet had” [p97]. Certainly society begins to act through images, such that our own durations are translated through that of the moving picture or photograph. Barthes describes an American society where the “images are livelier than the people”, where “we live according to a generalized image-repertoire... only images exist and are produced and are consumed.” [Barthes, p118] These time-images have become the very spatial matter that our perception works on. It is a peculiar condensation of history onto the brink of the future becoming, which remains, un-imagined, undocumented. We can take Chris Marker’s film allegorically: a race that has developed the ability to travel in time, through an ability to enter a memory-image as if it were more real than the present.

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