The World's Oldest TV :
Time and spacetime in the early work of Nam June Paik

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> The sixties are endless. We still live within them. Not only do we live within them as a matter of historical reckoning – grappling with the trauma of the Vietnam War, the afterlife of the Counterculture, or the continued relevance of that decade's liberation movements, but the Sixties also have been endless in staging endlessness as a cultural phenomenon. Of revealing, in the long shadows cast by its technological entropy, a vision of the future ever quickening and repeating…….[(1)]

With these words, Stanford University's Pamela Lee begins the concluding remarks in her watershed book, *Chronophobia*, an exploration of time in the arts of the 1960s. This quality of formal endlessness can be seen in everything from tape and film loops, which visualize endlessness through constant repetition, to static films like Andy Warhol's *Sleep* or *Empire* of 1963-4, which attenuate experience so much that they seem endless since almost nothing happens.

There are, of course, many ways to theorize this quality of endlessness. On the one hand, there is the risk of a dangerous "bad infinity," where the granular details of lived life are washed away by the sweep of infinite time. On the other, this visualized timelessness can be seen as expressing a culturally sensitive "long durée," or slowing down of time through pace or repetition to such a fantastic extent that the instantaneous accumulation of details that make an experience possible become knowable and legible throughout the long duration. Both possibilities, the "bad infinity" and the "long durée" are explored in great depth by

Lee as well as the French philosopher Fernand Braudel, who wrote in 1948 that:

> Among the different kinds of historical time, the longue durée often seems a troublesome character, full of complications, all too frequently lacking any sort of organization…Accepting the longue durée…means becoming used to a slower tempo which sometimes almost borders on the motionless. [2]

Braudel's *longue durée* represented a call to arms for historians of all kinds, demanding that they open themselves up to variety in their conceptualization of historic time. For a new generation of historians, Braudel's *longue durée* suggested an alarming collapse of historic time, of the grand narratives of enlightenment, God, the laws of macroeconomics, and civil society. For artists, novelists and writers who desired the change, this new timelessness took the place of the over-determined cause and effect shape of a teleological organized modernity. Instead of the soldierly straightjacket of a singular historical narrative enforced at the steady clip of historical time, the world was offered its deconstructed fraternal twin, Postmodernism, born of the same theoretical lineages of Adam Smith and Hegel, Marx and Freud, but resulting – through a process of disciplinary comingling and scientific progress – in a world view that would be, as far as historic progress is concerned, outside time.

The world had become, in Lee's words, *chronophobic*. Jean Francois Lyotard, described this shift toward timelessness in terms of historic narrative time in cautionary words: "The narrative function is losing its functions, its great hero, its great dangers, its great voyages, its great goal." [3] He wrote, "Functions of regulation, and therefore of reproduction, are being and will be further withdrawn from administrators and entrusted to machines…" The phobic turn in chronophobia, as described rightly by Lee, occurs because once cause and effect determinism are formally transformed into fragment, repetition or endless duration, all manner of ethical problems arise as to the problem of historic agency as it is normally

understood. How is one group to change its social status, for example, if time is exposed as non-linear, or sufficiently complex that its form is fundamentally unknowable? To ask the question another way, how is knowledge created? Is change possible? What is the status of memory? Is there such a thing as a singular historic moment or truth? And, perhaps most pressing for my purposes, what is a historian and what is the function of history writing in such a world? It comes as no surprise, Lee is right to argue, that a phobia would develop around the extremes of both options: both the over-determined linearity of modernist time (as a kind of straightjacket) as well as its postmodern opposite (timelessness) suggest a causally unbounded world.

At first glance, Braudel's *longue durée* suggests a useful mechanism for considering time in Nam June Paik's early works. For example, Paik's *Moon is the Oldest TV* effects a reference to the moon as a changing object, a historic marker of time. Its change as it moves from sliver to sphere formed the organizing structure of ancient calendars. [Image 1. p160] The moon, at least historically, was a celestial clock that set the pace of tides and harvests, human behavior (as in luna-tics) and the days of the week, such as Monday, which derives etymologically from moon-day. Describing the *long duration* as an organizing principle of this early work necessarily causes us to see it in terms of the moon's slow pace of change "which sometimes almost borders on the motionless," to quote Braudel again. Moreover, since *Moon is the Oldest TV* gives us a static image, it could also be seen as sufficiently slowing down the fast medium of television to such an extent that its characteristic electronic buzz and hypnotic, pulsing light could finally be known to the viewer.

Any number of early works by Paik could be described as studies in the *longue durée*, experientially slow paced works that brought one into a very close identification with the new shapes, forms and energy emissions associated with this very new medium of the television. Conversely, even the rapid pace of later work could be explored as acceleration taken to such an extreme that the pulse

of time cannot be tracked, rendering a static experience using very different means.

All of these simple accounts miss the point, however. The transformation of the image over time in *Moon is the oldest TV* is an illusion, since we are actually looking at a series of stills. Unlike film, where visual continuity is effected by the steady pace of rapidly moving stills, with this work the viewer moves monitor to monitor, either physically or by glancing comparatively from one to the next, and at virtually any pace. In neither the physical nor the narrative sense are we looking at the attenuated time associated with the *longue durée*. If we work only with attenuated time there would be no reason for Paik to fuss with multiple monitors. A simple prolonged exposure would do – as it did for Warhol in his *Sleep* and *Empire* films – both works that clearly express the *longue durée* as described by Braudel and laid out as a key component of 1960s art by Lee.

If we bring to Paik the dominant means of structuring our human experience of time in the West since the 18th century, the problem reveals itself in another way. Sir Isaac Newton's *Mathematical Principles* of 1687 inscribed Johannes Kepler's newly conceived solar system in a three-dimensional, unchanging, absolute space. Events would unfold in this enduring space in a strictly determined sequence he called Absolute Time. Newton wrote, "All things are placed in time as to succession; and in space as to order of situation." [(4)] In other words, absolute time determines the sequence of events and absolute space the location of them in Modern Western thought. This modern theory of time imagined an empty, homogeneous, and infinite line, independent of the relative space of individual objects and relationships in the material world. We see this here in the classic space versus time axis that illustrates the movement of an object.

However, between the classical era and the birth of the modern era in the seventeenth century, time and space were relational and non-homogeneous. Aristotle's universe conceived of time in terms of moving bodies, of setting suns and shifting moons, each of whose cycles involved different durations and mate-

rial displacements. He wrote: “Every sensible body is by its nature somewhere… and Time is the numeration of continuous movement.” [5] Extrapolating from this account, the many parts of the universe inhabit different temporal systems determined by movement; biological, astronomical, mechanical and divine orders of time need not necessarily be homogeneous to one another. I would argue that, fundamentally, Paik’s work takes a step back to pre-modern attitudes toward time in order make its giant step forward.

The changing moon, we should remember as we look at this work and think about its title, is an apparition (like the TV image) since its transformation in time is the function of sunlight moving across an object. At the human scale, the moon itself is unchanging. To look at the moon brings together the long duration of its almost unchanging surface with its essentially endless earth circling cycles and our human lifetimes. To put it simply, while historically the moon sets calendar time through its steady transformation, this clock is itself unchanging in human perceptible time even though its pits and pockmarks have been etched in over the course of thousands of millennia in astronomical time. Consideration of these possibilities marks time as non-homogeneous, or at the very least more complex than the homogenizing thrust of human experience would suggest.

Newtonian physics reigned until the twentieth century, when it was challenged by Einstein’s discovery (we could even say rediscovery) of spacetime – another step backward that brought us forward. In this modeling, we see the familiar space and time axes, but the speed of light shown here as a cone, is constant no matter the speed of the person traveling alongside it. This constancy of lightspeed creates wrinkles, irregularities in the rate of time for the object in motion or at rest – we see these irregularities as a wobble in the ‘worldline’ of a given moving object. If lightspeed is constant, in other words, then time must be able to stretch and shrink in adaptation to space if spacetime is to remain a constant number.

Paik understood this fundamental shift away from Newtonian physics as

foundational to the liberating technology of cybernetics. In his famous manifesto "We are in Open Circuits," which was first published by Dick Higgins' Something Else Press in 1966, Paik described the Newtonian universe in terms of power relationships – meaning he understood the relationship between space and time and the shaping of history as logically continuous:

> Newton's physics is the mechanics of power and the non-conciliatory two-party system, in which the strong win over the weak. [6]

The name of the piece is not "Moon is the Oldest Clock" or "Moon is the Oldest Calendar," which would place the work within a strictly durational framework with time exclusively determining the constancy of change. Rather, Paik offered an alternative to the two-party system when he wrote that: "in the 1920s, a German genius put a tiny third-party (grid) between these two mighty poles … It might be a Buddhistic 'third way,' but anyway this German invention led to cybernetics… defined above as the science of pure relations, or relationship itself."

Moon is the Oldest TV invites the audience to look closely at the moon through the modern vehicle of the television, or, rather, to equate the two. "Moon is" suggests an equation – as in this is that or A is B. The title of the work imports the new technology that enables viewing at a distance – using one's eyes to view distances in time – literally 'tele-vision.' Paik's insight suggests that the two, the moon and the TV image, share the formal spatio-temporal characteristic of spacetime, which is characterized as the simultaneity of change and non-change.

Another way to put this is to say that change and non-change are fundamentally linked. This renders the work cybernetic (which Paik argues does not necessarily involve new technology) since "Cybernetics [is] the science of pure relations, or relationship itself." [7] By putting the phases of the moon on separate monitors, Paik creates a spatial/temporal mechanism that embodies both change and non-change – a demonstration of cybernetic relationality in spacetime. Of

course the moon changes as we pass it, but it also does not. The perception of change is a relational feature of spacetime awareness.

Shown here is another diagram of Hermann Minkowski's spacetime. As you can see, it specifies very stable points in spacetime – vis-a-vis an axis where 'real' space necessitates theoretical or imaginary time, and 'real' time theoretical or imaginary space. The stability of either time's flow or space's permanence is an illusion since time is affected by things like mass and gravity, which bend light, of which the very speed is so constant with regard to itself that the passage of time and the nature of space are known to deviate considerably as its speed is approached. Common sense dictates that events in the world can occur elsewhere from where we are (we are familiar with this), however, as a result of this constant speed of light, events may also occur elsewhen, in orders of time that are, for the most part, not available to our sensory frameworks.

When we bring these observations about spacetime back to Paik, what seemed relatively simple as a long duration or slowing down of perception, becomes quite strange indeed. In Minkowski's model, the vertical and horizontal axes of spacetime are coordinated against the speed of light as a constant. As if to make this strange fact perceptible, at least metaphorically since lightspeed is imperceptible to the human body, the *TV Clock* does not rotate as other clocks do. Rather, the movement from horizontal line through diagonal to vertical and around only superficially resembles the arms of a conventional clock. Each individual arm is static, it 'moves' only explicitly as the televisions sets are passed by our body or our eyes. We put them together as a sequence in our own minds. Curator Dieter Ronte has described Paik as producing a 'fleeting effect' that is the result of his work functioning essentially as physical music. [8] The description is apt, but to it should be added the provision that its fleeting quality is the result of our own movement as least as much as it is the result of the flickering light of the machine. Working from the perspective of the spacetime diagrams, the horizontal line of *TV Clock* effects a rupture in the normal timeline since that same line is shown to

rotate into the vertical position or to appear to as we 'connect the dots' with our minds' eyes.

Since the straight line plays a significant role elsewhere in Paik's early work, it makes sense to make a diversion into some of those pieces in order to better understand how spacetime operates in the *TV Clock*. Michael Nyman has written handsomely on the line as an important cue to understanding Paik's music and video art. [9]

By Nyman's account, Paik's friend and fellow Stockhausen student, [10] La Monte Young "seemed to spend the whole of 1961 trying to perfect the art of drawing straight lines." These works would ultimately result in his durational music – one note held for hours or days or months or years. In *Composition 1960 #7*, for example, the work instructs someone to hold a note for an unspecified 'long time.' The notes shown here, in other words, would hold as a constant to the straight lines of the musical stave, an indicator for pitch, extended nearly to infinity. Young's performance score for Robert Morris takes the instruction a step further by including the source of the line itself in the words "draw a straight line," an instruction that effectively translates the durational sound into a manual instruction followed by the simple term "and follow it."

This simple score could be performed any number of ways. Paik performed it by dipping his head in ink and dragging it along the length of a roll of paper. In so doing, Paik pressed the logic of the score to its logical conclusion. His response to the simple term 'and' in "draw a straight line and follow it" essentially folds the second part of the instruction into the first. Clearly, the assumed reading would have the line drawn and then followed, which Paik transforms into simultaneous actions. He draws and follows the line at the same time. Paik's insight is that 'and' is potentially non-sequential, even within an instructional score.

Paik's extensive training in musical composition is well known, from his study of music at the University of Tokyo to his training with Stockhausen in 1958 at the International Summer Course for New Music in Darmstadt – a significant time

during which La Monte Young was also studying there. Describing Paik's experience as a student of music, Michael Nyman offers an important point of access into the multiple orders of time that structure Paik's works in all media, "realizing through his study of German musical aesthetics that there was no fundamental answer to the question 'What is music?' except that music is (most openly) merely a sequence of events in time." [11] As Nyman continues, for Paik music as organized time meant that musicality was not limited to the musical instrument. In the wake of Cage's benchmark work *4'33*" it became clear to ambitious composers like Paik, who had familiarity with Cage both in terms of the music and the man, that non-instrumental sounds as well as actions of all kinds can be conceived as sequenced and sequence-able.

It is useful, however, to extend this logic to spacetime as well. Without over determining the legacy of Cage with regard to Paik, there are aspects of the history of Cage composition that speak very specifically to the work.

With the rise of fascism in Europe in the period leading up to World War II, many of the major figures associated with ambitious culture in science and the arts in Europe, including both Albert Einstein and Marcel Duchamp, immigrated to the United States, along with artists and architects from the German Bauhaus school that closed in 1933. Several figures associated with the Bauhaus converged on a small college named Black Mountain College outside of Asheville, North Carolina, where they conducted a series of artistic experiments during the summer programs between 1948 and 1952 that relate to this history. Most importantly for our purposes, Robert Rauschenberg produced his all-white canvases, John Cage developed the basis for his musical form of "silence," and the engineer and philosopher Buckminster Fuller built his first geodesic dome.

Fuller had met Einstein in 1936 and was sufficiently comfortable with relativity theory to share it with his friends in the art world. Fuller's idea that the "universe of total man experience may not be simultaneously recollected and reconsidered, but may be subdivided into a plurality of locally tunable event foci or

‘points’” is fundamentally consistent with the event interval view of the world theorized by relativity. [12] Rauschenberg’s 1952 white paintings, whose formal content consisted simply of the shadows that fell on it, could be described in similar terms as “a plurality of locally tunable events.” In 1908 Einstein’s teacher and subsequent collaborator, Hermann Minkowski, whose diagrams we’ve seen, unpacked some of the most important implications of Einstein’s special theory in a way that resonates with this painting. “Henceforth space by itself, and time by itself,” he wrote, “are doomed to fade away into mere shadows, and only a kind of union of the two will preserve an independent reality.” [13] Robert Rauschenberg’s white canvas, which at its most reductive could be seen as the closed box of modernist painting, is by this account more real than any image ever made: it makes a display of the “mere shadows” of things in the space of the physical world as shadows, while at the same time allowing for the reality of their constant transformation in spacetime.

Immediately following his experience with these paintings, Cage wrote his famous *4’33*” of silence. In his book Silence, Cage notes a fundamental similarity between the way in which the white paintings provide a context for the flow of shadows produced by their environment and the way in which *4’33*” provides a context for the sonic dimensions of everyday life. It would be a mistake to describe Cage’s piece as pure time or pure sound from the perspective of ‘music as organized time’ for the same reason that it is incorrect to describe the white paintings as pure space. Rather, each work addresses spacetime as a sensory-perceptual experience. As Cage has written, “There is no such thing as an empty space or an empty time. There is always something to see, something to hear. In fact, try as we may to make silence, we cannot. Sounds occur whether intended or not.” [14] If in Rauschenberg we see spacetime as space (a painting), Cage’s piece might be an occasion for hearing spacetime as time (a piece of music). Following Minkowski’s direction, we can say that Rauschenberg’s paintings and Cage’s composition enable experiences in the well-established media of painting

and music of a space-based perception of spacetime and time-based perception of spacetime.

When Cage offered a course in music composition at the New School for Social Research in New York in 1958, some of his students picked up on the implications of spacetime thinking. Among these, a young chemist in attendance, George Brecht, began writing performance scores called, appropriately for a spacetime artform, *Events.* In 1961, when Cage was in Cologne, some of Brecht's *Events* were performed during the Contre Festival, a music festival held in June 1961 to protest the conservative taste of the International Society for New Music (IGNM). These concerts were held in the Bauermeister Atelier, where Paik famously cut Cage's tie.

When we bring this history to bear on Paik's musical works, his interest in 'non-instrumental', simultaneous and even biological (sexual) experiences expands music into spacetime in a manner strikingly similar to Cage. In *Symphony #5*, for example, we see a variety of actions – making love, making sound, and thinking sequenced as a symphony. The elements are laid on the page irregularly, effectively stretching and shrinking the time allotted to the notation such that a few hours may require a half page or a few lines to express, or conversely, many years only a few inches.

"We Are in Open Circuits" is, of course, widely known. However, it is seldom read in partnership with the page adjacent to it in the 1966 Something Else Press *Manifestos* pamphlet where it first appeared. The "Utopian Laser TV Station" attempts to best McLuhan's famous printed doctrine that the medium is the message, by offering programming for twenty-four hours that ranges from the Cybernated Art to the Art for Cybernated Life described the page before. The station program is broken up into conventional hourly segments. Contained in each segment, however, are events that clearly expand beyond the hour long format -- most strikingly Jackson MacLow's "1961 film in which a standing camera focuses on a tree for many hours," the work which Warhol knew and adapted to his own

purposes for *Sleep* and Empire two years later.

The page indicated that the work will be broadcast in absurdly distant time – thirty years later on March 1, 1996. Comparing the piece to the earlier Symphony, we see a shared sense of the elasticity of time as shaped by spacetime. In Paik's words:

> The Buddhists also say
> Karma is samsara
> Relationship is metempsychosis.

Metempsychosis is the movement of a soul from one body to another. Samsara describes the reincarnation cycle of Buddhism, Hinduism, and Jainism. If we extrapolate from these to a theory of relationship in the cybernated life imagined by Paik, then we see time conceived as a series of cycles that nevertheless expresses change and transformation as a relationship.

If we compare Paik's sense of spacetime to On Kawara's famed calendar paintings, which mark a steady temporal pulse across decades, we see an attitude toward time that rejects the steady pulse in favor of something else: its simultaneous passing, changing rates and its circularity articulating a spacetime or at least a sufficiently complex sense of time that it could no longer be described as modern in the historic sense. We could fear it, as Lee suggests, or not. In many ways our response is beside the point since it is true. By way of closing, I would like to quote from Alain Badiou's watershed book *Being and Event*, which offers us a view of elastic spacetime which ends not in phobias or anxiety, but rather describes the human experience as a necessary expression of the fact that these two things are not directly coordinated. Transcendence, experience by my account of Fluxus, of the artwork or musical work, or whatever term we bring to it as a form of attention, lies in attentive awareness to these dis-coordinated, or at least

intuitive, structures.

> every image (visual, sound) is the manifestation of an energy, of an unrecognized power, the discovery of retinal retention, which speaks to us of some kind of unscrolling [a time lag and freeze frame effect]…time that 'does not stand still'; in other words…the intensive time of human perceptiveness. (15)
> "Events are dust" according to Braudel. (16)

(1) Pamela Lee, *Chronophobia: On Time in the Art of the 1960s* (Cambridge, MA:MIT Press, 2004), p. 260.

(2) Lee, 310 quoting from Fernand Braudel, "History and the Social Sciences:The *Longue Durée*," in *On History*, trans. Sarah Matthews(Chicago:University of Chicago Press, 1980), p. 32.

(3) Lee, 262 from Jean Francois Lyotard, *The Postmodern Condition:A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (Minneapolis, University of Minnesota Press, 1984), pp. 68-75

(4) Isaac Newton, *Principia*, trans. Andrew Mott (1687; Amherst, NY:Prometheus Books, 1995), p. 15

(5) Aristotle, *Physics*, Book 3, 205a:10 and Book 4, 223b:1.

(6) "We are in open circuits" Nam June Paik, *Manifestos*, Dick Higgins, ed.(New York City:Something Else Press, 1966) , p. 24.

(7) Ibid.

(8) Dieter Ronte, "Nam June Paik's Early Works in Vienna," in *Nam June Paik*(New York:Whitney Museum of American Art, 1992), p. 74

(9) Michael Nyman, "Nam June Paik:Composer" in *Nam June Paik*(New York:Whitney Museum of American Art, 1992) , p. 80.

(10) Both studied with Stockhausen in Darmstadt during the summer program of 1958.

(11) Nyman, p. 83.

(12) Buckminster Fuller, "'Introduction' to *Omni-Directional Halo*," p. 95.

(13) Quoted in J. B. Kennedy, *Space, Time, and Einstein:An Introduction*(Montreal and Kingston:McGill-Queen's University Press, 2003), p. 50.

(14) John Cage, "Experimental Music," in *Silence:Lectures and Writings by John Cage*(Wesleyan, CONN:Wesleyan University Press, 1961/1973), p. 8.

(15) Paul Virilio, *The Vision Machine*(Bloomington, IN:University of Indiana Press, 1994), p. 75.

(16) Ibid., Lee, p. 303.