

Concerto for the Universal Algorithm

Paik | Moorman | Youngblood | Flusser

Louis Armand / litteraria@gmail.com

Centre for Critical and Cultural Theory, Philosophy Faculty, Charles University, Prague, CZ

Abstract

This paper examines the "relationship" between sound/image/performance in the collaborative work of Nam June Paik and Charlotte Moorman, within the framework of Paik's "experimental TV," Gene Youngblood's "expanded cinema", and the evolution of the "technical image" envisaged by Vilém Flusser (and augmented by recent developments in "accelerationism").

Keywords

accelerationism, autopoiesis, Charlotte Moorman, cybernetics, Edgar Varèse, expanded cinema, Gene Youngblood, intermedia, John Cage, Karlheinz Stockhausen, Marshall McLuhan, Nam June Paik, posthumanism, synaesthetic video, Vilém Flusser, Wolf Vostell

Handing down his verdict in the case against Charlotte Moorman for “indecent exposure” on May 13, 1967, Judge Milton Shalleck, in finding her guilty, suggested that Spanish cellist and renowned interpreter of Bach, Pablo Casals, would never “have become as great if *he* had performed naked from the waist down.”¹ Reporting on the case, Russell Baker in the *Chicago Tribune* noted that the court had thereby given credence to the theory that the artist must dress in the costume of his trade – an implicit gendering of both “serious music” and the figure of the “artist” characteristic of the times. Moorman’s crime, for which she was dubbed on the front pages of the nation’s tabloid press “The Topless Cellist,” was to have performed the second movement of Nam June Paik’s *Opera Sextronique* on 9 February, 1969, at Jonas Mekas’s Film-Maker’s Cinemateque in New York, topless above a black skirt. The performance was interrupted by police who arrested Moorman on stage.

The police had been present at the Cinemateque owing to a screening there of Jack Smith’s film, *Flaming Creatures*, which had resulted in an obscenity case against Mekas, Kenneth Jacobs and Florence Karpf in 1964, and had taken a continuing interest in the Cinemateque’s programming ever since. The case against Moorman was therefore timely, and by provoking an intensification in the anti-censorship lobby, eventuated in the liberalisation of New York state laws against partial or full nudity in performing art and elsewhere, while bearing out the argument presented by Paik in the programme notes for *Opera Sextronique*, in which he wrote: “*The purge of sex under the excuse of being ‘serious’ exactly undermines the so-called ‘seriousness’ of music as a classical art, ranking with literature and painting.*” Almost ten years after the case of *Naked Lunch*, the continued censorship of the performing arts was not only retrograde but infantilising, yet it nevertheless ensured the relevance of an avant-garde which, post-liberalisation, would resort to increasingly technological rather than social means of “justifying” itself.

Moorman herself was classically trained, having studied at the Juilliard School and was a member of the American Symphony Orchestra. Her entrée to contemporary experimental music came with her graduation performance of John Cage’s *26 Minutes, 1499 Seconds for a String Player*, and until her death (somewhat “ironically” from breast cancer) in 1991 she was a central figure in the New York and international avant-garde. Throughout, and in the face of frequent public ridicule, she maintained a scrupulous “seriousness” in her performances, lending critical weight to Paik’s argument as well as a certain “dignity” to art practices often viewed as buffoonery. Edgar Varèse referred to her, indeed, as the “Jeanne d’Arc of New Music.” In 1963, Moorman had already founded the Annual Avant-Garde Festival of New York, initially as a forum for the experimental music scene linked to Fluxus, but with the broader aim of “making the art of the present important in its time.”² It was through the festival that Moorman first encountered Paik, when – with Allan Kaprow, she proposed restaging Karlheinz Stockhausen and Mary Bauermeister’s *Originale* in 1964. Stockhausen and Bauermeister agreed on condition of Paik’s involvement – for whom the role of the “Action Composer” had been written for

1 BAKER, Russell. Naked Cellist Shivers Theory of Clothing. *Chicago Tribune* (May 14, 1967), p. 8.

2 Quoted in the documentary *Topless Cellist*, directed by Nam June Paik (1991).

the original 1961 performances in Cologne. Thus began a long-term association between Moorman and Paik which had a significant impact on the evolution of experimental performance for the next two-and-a-half decades.

Two of Paik and Moorman's better known collaborations are *TV Bra for Living Sculpture* (1969) and *TV Cello* (1971), both of which – like *Sextronique* – explicitly drew attention to the spectacular nature of musical performance, both vis-à-vis the fetishisation of the body of the performer and in the pervasive televisual mediatising of the genre itself for popular consumption. They also ironised, somewhat, the ostensibly closed circuit of experimental music as *subversive art* free to appropriate elements from, but not access, the mass media economy. As subversive art, they continued in the vein of Duchamp and Cage to sabotage the formal purism at the core of the Greenbergian dogma and the hierarchical relationship of performance to score or text. In his “Afterlude to the Exposition of Experimental Television” (1964), Paik had written: “*Indeterminism and variability are underdeveloped parameters in the optical arts, though they have been the central problem in music for the last two decades. Conversely, the parameter of sex has been underdeveloped in music as opposed to literature and the visual arts.*”³

With *TV Bra for Living Sculpture* (1969) and *TV Cello* (1971), Paik and Moorman not only erased the distinction between performative interpretation and creation, but through the intervention of video feedback transformed the understanding of where or how performance is situated, including how terms like “music,” “image,” “body,” “technology,” etc. are situated, even in the already fluid context of the avant-garde. Paik's own synthesis of music and electronic “image” was first shown to the public in March 1963 at the Wuppertal “Exposition of Music – Electronic Television” (two months before Wolf Vostell's “Television Décollage” in New York) – the exhibition comprising four prepared pianos, mechanical sound objects, several record and tape installations, twelve modified TV sets (their live broadcast images distorted by magnets) and the head of a freshly slaughtered ox, and was duly described as a “total event.” While some historians identify the Wuppertal show as the birth of “video art,” like Vostell's work of the same period these were strictly TV installations: Paik's incorporation of video-recording technology began later in 1963, with his co-development of the Abe-Paik video synthesiser (with engineer Shuya Abe), and in his subsequent collaborations with Moorman.

TV Bra for Living Sculpture, Paik adapted the language of cybernetics to focus on the “human use of technology,” echoing Norbert Wiener's “human use of human machines.” The piece involved Moorman (topless) wearing two miniaturized (three-inch) video monitors mounted in plexiglass cubes on a translucent harness, which displayed a live video feed of her performance: the picture on each monitor was then distorted by oscillations produced by signals transmitted from a pickup on Moorman's cello with. This interactive looping produced a new kind of volatile “synaesthetic image,” integrating the “orchestrative body” into a cybernetic verbo-voco-visual apparatus (to borrow an expression from Joyce), in which instrumentality and subjectivity, sound and image, body and spectacle, become ambiguous, ambivalent, intermedial. As Paik had written in

3 PAIK, Nam June. Afterlude to the Exposition of Experimental Television. Reprinted in *Videa 'n' Videology 1959–1973*. Syracuse: Everson Museum of Art, 1974, p. 6.

1965, in an article entitled “We are in Open Circuits,” *cyberneted art* was coterminous with *cyberneted life*. The implications of the new video art were stark (if not yet fully clear): if cybernetics, “the science of pure relations,” pointed to an expanded field of generalised synaesthesia (the translatability and abstraction of the senses), so too video pointed to an expanded field of *genre*, in which all elements (image, sound, body, etc.) were translatable, so to speak, as *pure relations* emerging out of a constant process of feedback. The logical consequence of this would be New Media and the radical abstraction of digital code. Already, however, Paik envisaged “video” as a dynamic spectrum on which any point could potentially be remodulated by way of any other.

In his 1971 collaboration with Moorman, *TV Cello*, Paik moved from the repurposing of discrete elements in the performance (body, classical instrument, cathode tube), to a more interventional approach, drawing on the idea of the video synthesiser. Moorman’s customary cello was replaced with a stack of three TV screens fitted inside a plexiglass frame, surmounted by a plexiglass neck, with a regular bridge and tailpiece attached at the bottom, and low-tensioned wires strung between with pickups attached. By bowing, fingering and slapping the wires – as part of a composition called “Concerto for TV Cello and Videotapes” – Moorman was able to manipulate the images appearing on the TV stack, as well as those appearing on tiny monitors attached to a pair of “TV Glasses” which she wore during the performance. The metamorphosis of the classical cello into a stack of TVs (later a bomb, a body, a block of ice, syringes) pointed on the one hand to the developing trend of Conceptualism and the arbitrariness and “dematerialisation” of the so-called work of art, but more importantly it pointed to a new logic of the sound-image, of the performative “event,” and of technology, which would go on to inform the approach of such artists as Stelarc, Andre Borges and Francesca Fini.

In his landmark survey of the state of video experimentation, published in 1970 under the title *Expanded Cinema*, Gene Youngblood refers to Paik and Moorman on a number of occasions – though to Paik primarily – in the context of the electronic transformation of graphic images and the advent of “synaesthetic video.” Paik is presented as one of the original orchestrators of the avant-garde’s counter-attack against the global hegemony of TV. He is described as a “cultural terrorist,” and John Cage is quoted as saying “*Paik’s work, performances, and daily doings never cease by turn to amaze, delight, shock, and sometimes terrify me.*” “In recent years,” Youngblood noted, Paik has abandoned his mixed-media environmental Happenings to concentrate exclusively on television as an aesthetic and communicative instrument. Independently, in collaboration with scientists, and in a special research and development program with the State University of New York, he has explored nearly every facet of the medium, paving the way for a new generation of video artists. His work has followed four simultaneous directions: synaesthetic videotapes; videotronic distortions of the received signal; closed-circuit teledynamic environments; and sculptural pieces, usually of a satirical nature.⁴

4 YOUNGBLOOD, Gene. *Expanded Cinema*. New York: Dutton, 1970, p. 302.

Focusing on Paik's technical experimentation, Youngblood goes on to suggest that, "By altering the circuitry of his receivers with resistors, interceptors, oscillators, grids, etc., Paik creates 'prepared televisions' that are equivalent in concept to David Tudor's prepared pianos."⁵ This is more than mere analogy, as it points to the broader "synaesthetic" character of Paik's experimentations in which, as he says, "activities, desires, phenomena, that one cannot explain" are explored through what we might call *instrumental metamorphosis* – an "epistemology" that is trans-medial. Where TV transmits information to a passive receiver in an unacknowledged, ideological encoded way, Paik's "synaesthetic video" is an experimental as well as experiential medium, for producing new forms of "aesthetic" knowledge. Only half-joking, he has said that "My experimental color television has instructional resource value. Kindergarten and elementary school children should be exposed to electronic situations as early as possible. My experimental TV demonstrates various basic facts of physics and electronics empirically, such as amplitude modulation, radar, scanning, cathode rays, shadow mask tubes, oscillography, the ohm principle, overtone, magnetic character, etc. And it's a very pleasant way to learn these things."⁶ But Paik's expanded conception of TV as synaesthetic video goes far beyond its array of technical potentialities: like Youngblood's "expanded cinema" it is concerned foremost with the question of consciousness.

There is in Paik's media-performance work of the late sixties and early seventies something prophetic of the "New Media" art that appeared in the late eighties and nineties, with the development of hypermedia and the invention of the World Wide Web. In 1974, Paik, in tune with the thinking of Marshall McLuhan and Buckminster Fuller, began speaking of video's potential as a prelude to a global telecommunications network or "electronic superhighway" and some critics have mistakenly credited him with coining the term "information superhighway" which became fashionable in the 1990s. In any case, the synaesthetic video performances of Paik and other cybernetic artists, in conjunction with the advent of "multiple projection environments" and "holographic cinema" at around the same time, provided the antecedents for those immersive environments associated from the 1980s with virtual reality. Youngblood duly notes, "In real-time multiple-projection, cinema becomes a performing art: the phenomenon of image-projection itself becomes the 'subject' of the performance and in a very real sense the medium is the message."⁷ The prospect of synthesising all of these potentials into a "New Medium" still represents something of a holy grail, but at the time, perhaps with Kubrick's *2001* stimulating his imagination, Youngblood was sufficiently enthused by the prospect of such a synaesthetic medium to announce that "It is certain that holographic cinema and television will be common by the year 2000."⁸

The important point here, however, isn't about the attainable state of communications technologies and the future status of cinema, television, or video, whether analogue or digital, but about the implications of *synaesthesia* – form the "representation"

5 Ibidem, p. 303.

6 Qtd in YOUNGBLOOD, Gene. *Expanded Cinema*, op. cit., p. 305-6.

7 Ibidem, p. 387.

8 Ibidem, p. 399.

of sound as image, for example, to the generalisation of “sense(s)” as code within a universal semiosphere: incorporating everything from soundwaves to DNA to qubits. As Youngblood stresses in his preface to *Expanded Cinema*, “When we say expanded cinema we actually mean expanded consciousness. Expanded cinema does not mean computer films, video phosphors, atomic light, or spherical projections. Expanded cinema isn’t a movie at all: like life it’s a process of becoming, man’s ongoing historical drive to manifest his consciousness outside of his mind, in front of his eyes. One no longer can specialise in a single discipline and hope truthfully to express a clear picture of its relationship in the environment. This is especially true in the case of the intermedia network of cinema and television, which now functions as nothing less than the nervous system of mankind.”⁹

This expanded view of synaesthetic technologies as constitutive of a consciousness is a regular theme of critical discussion around cybernetics and media and has a long genealogy, but which since Turing, and continuing up to the present debates around the latest -isms, from posthumanism to accelerationism, have incorporated into the question of consciousness the question of general intelligence. That is to say, of an intelligence that transcends the so-called human condition – just as we speak of technology as transcending what may be deemed as “human utility.” All of this may be considered a direct consequence of that process of radical abstraction called the Industrial Revolution, with which the question of the “autonomy of the work of art” is also bound up. And rather than signalling a collapse into a narrow “aestheticism,” this autonomy – as we see in Paik’s and Youngblood’s formulations – implicates itself in the broader picture of what has been called autopoiesis: autonomous, self-modifying, self-perpetuating, and ultimately *discursive* entities. Which is to say, feedback systems that perform, in a manner of speaking, their own ontology. We might call them *artificial intelligences*. What, after all, is the implication of an “intermedia network of cinema and television” which functions as “the nervous system of mankind”? What is, as Vilém Flusser says, “*the prospect of a future society that synthesizes electronic images*”?¹⁰ In which, in other words, our social (but not only “social”) being *is this synthesis*.

Published in Germany in 1985, Flusser’s essay *Into the Universe of Technical Images* theorises the evolution of electronic media towards an image-utopia. Flusser’s “future society,” like Paik’s “electronic superhighway” and Youngblood’s “expanded cinema,” is not, he states at the outset, “*a future floating in the far distance. We are already on its cusp. Many aspects of this fabulous new social and life structure are already visible in our environment and in us. We live in a utopia that is appearing, pushing its way up into our surroundings and into our pores. What is happening around us and in us is fantastic, and all previous utopias, whether they were positive or negative, pale in comparison to it.*”¹¹ As with the relationship of video to TV in Paik’s work, which is fundamentally antagonistic, Flusser’s “future society” will have evolved through the contest of “two divergent

9 Ibidem, p. 41.

10 FLUSSER, Vilém. *Into the Universe of Technical Images [Ins Universum der technischen Bilder (1985)]*, intro. Mark Poster, trans. Nancy Ann Roth. Minneapolis: Minnesota University Press, 2011, p. 3 – emphasis added.

11 Ibidem, p. 3.

trends”: “*One moves toward a centrally programmed, totalitarian society of image receivers and image administrators, the other toward a dialogic, telematic society of image producers and image collectors. From our standpoint, both these social structures are fantastic, even though the first presents a somewhat negative, the second a positive, utopia.*”¹²

This dialectics of an emergent utopia is a product, precisely, of abstraction – and, through abstraction, of a certain formal “equivalence” which permits the constant metamorphosis of the one into the other, the totalitarian into the telematic (and vice-versa), just as in Paik we see the translation of instrumental or egotic identity into an interchangeable, distributed system of feedback. The reason for this is not a failure of political consciousness, for example, but rather the radical *ambivalence* of consciousness as such, informed by the radical ambivalence of what is called an “image.” If the consciousness of Flusser’s future society is produced by or as the synthesis of electronic images, which are in and of themselves *synaesthetic*, then it presents itself to us not as any *thing* but rather as an “image,” so to speak, of the *techne* of possibility. Possibility, that is to say, of – or as – generalised *synaesthesia*. This “technical image” is not, of course, an image in any straightforward sense: not any kind of “visual representation.” Just as Paik’s “Concerto for TV Cello and Videotapes” is not a *picture of something*, even of itself. What we call auditory or visual here are not discrete facts but data transmissions, algorithmic, evanescent ultimately as the signal from a quasar. Likewise for Flusser, what he calls “technical images” are “*not surfaces but mosaics assembled from particles. They are therefore not prehistoric, two-dimensional structures but rather posthistorical, without dimension.*”¹³ Technical images, Flusser argues, are in fact “*completely new media [...] They ‘mean’ in a completely different way from traditional images. In short, they actually constitute a cultural revolution.*”¹⁴

As with Paik’s *synaesthetic* video and Youngblood’s expanded cinema, Flusser’s “technical image” is “technical” insofar as it articulates an innate *technicity* in its broadest ramification. Unlike Paik, however, Flusser doesn’t seek to “humanise” the technological. Needless to say, humanity is already technological, but Flusser’s conception proceeds from the point of abstraction and agency at which Paik’s work (replete with its “purpose” chance operations) leaves off, and this leads Flusser to a more radical hypothesis. “Apparatuses,” he writes, “are intractable; they should not be anthropomorphized, however convincingly they may simulate human thought functions. They have no trouble with particles. They want neither to grasp nor to represent nor to understand them. To an apparatus, particles are no more than a field of possible ways in which to function.” Consequently, Flusser argues, “*The production of technical images occurs in a field of possibilities: in and of themselves, the particles are nothing but possibilities from which something accidentally [arbitrarily] emerges. ‘Possibility’ is, in other words, the stuff of the universe and the consciousness that is emerging.*”¹⁵

12 Ibidem, p. 4.

13 Ibidem, p. 5.

14 Ibidem, p. 7.

15 Ibidem, p. 16.

Like the subversive character of Paik and Moorman's collaborative performances, however, this technical image-apparatus has a paradoxical core – and not simply because it is irreducible to an *image of some thing*, or a *sound*, or an *experience*. It is rather because, in its – let's say – “posthumanism,” it is no longer (simply) required to mirror *human* consciousness, but – in a radical materialist sense, like a Universal Turing Machine – to “comprehend” it. The algorithms of which its “mechanism” are comprised therefore tend not only towards the probable, but the *improbable*. Specifically, for Flusser, “probable” and “improbable” here refer to “concepts from informatics, in which information can be defined as an *improbable* situation: the more improbable, the more informative. The second law of thermodynamics suggests that the emerging particle universe tends toward an increasingly *probable* situation, toward disinformation, that is, to a steadily more even distribution of particles, until form is finally lost altogether.” Like McLuhan's “medium is the message,” the “technical image” produces information in apparent defiance of the law of entropy, and it does so intrinsically, we might almost say ontologically, since – just as with the indeterminacy of Paik's video feedback matrix – the “technical image” is really the instantiation of a generalised metamorphosis. Which is to say, of a generalised *ambivalence* (in which probability and improbability are inversely equivalent; just as *negentropy* is entropy between interacting systems.) All of which leads Flusser to advance what he calls a “fantastic hypothesis”: an hypothesis which casts back to Paik's “electronic superhighway” inflated into a kind of Laplacian phantasmagoria – a universal (*im*) *probability machine* or “artificial intelligence.”¹⁶

This hypothesis is, in fact, what Flusser's “technical image” ideally tends towards: a Fluxus-like hologram of “all the improbable situations that have already appeared, are about to appear, or are yet to appear,” including itself. The difficulty, Flusser suggests, for the *construction* of such an artificial intelligence, “*is not the literally astronomical quantity of possibilities that surround such situations as spiral nebula, living cells, or human brains; rather the difficulty lies in the necessity for the computer to contain not only the big bang program itself but also all the errors in this program. In other words, it would have to be much larger than the universe itself, an example of the abyss into which the new calculating and computing consciousness is about to fall.*”¹⁷ It would be, in other words, the ultimate feedback mechanism. Music of the spheres stuff. But also, paradoxically, a fragment of itself, a metonym, a hologram, from which the organised chaos of the world can always be “reverse engineered” and ritualised. A concerto for the universal algorithm.

16 Ibidem, p. 17 – emphasis added.

17 Ibidem, p. 17–18.

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