DISCO AS OPERATING SYSTEM, PART ONE

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When exactly did the era of the medium dissolve? Like most cultural phe-
nomena, the dissolution of the medium and its attendant auras—painting,
film, music, photography, the novel—is hard to pinpoint. So it's useful to
turn from the PowerPoint lectures of art history, with their virtual-poetic
implications, and look for sensory clues on the dance floor of the seventies,
regarded as an operating system with a mirror ball, two turntables,
Quaaludes, and a mixing board. The ad-hoc setup known as "seventies
dance culture" or the "Disco Era"—beginning roughly in 1973 and ending
in 1979—ushered in a post-medium era for the masses. In disco's particular
case, it led to a host of media formats and musics in the eighties and beyond:
house, ambient, electronica, hip-hop, snap, trip-hop, dub, crunk, garage,
hyphy, and techno. These mutations suggest how varied and unspecific dis-
co as a genre became and how complicated its evolution and mainstreaming
ultimately was. But then genre or medium was never the right way to think
about disco. Asking what disco is is no less difficult than asking, What is
music? But the question might be better rendered as, What sounds *like*
music in an age of the dissolving medium? And one of the answers to this is
"disco," or, to use a more ambient search parameter, "the disco sound."
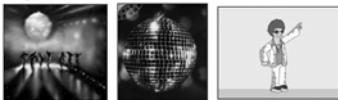
   The post-medium era had numerous precursors both visual and aural.[1]
In his notes to the *1914 Box,* Marcel Duchamp proposed bypassing the
outmoded channel of retinal processing by making a "painting of frequency,"[2]
a project followed up by Duchamp's program for "large sculptures in which
the listener would be at the center. For example, an immense Venus de Milo
made of sounds around the listener."[3] And Andy Warhol regarded his *Shad-
ows,* a sequence of 102 paintings the artist completed in 1978, as disco décor.
At any rate, disco's influence as a post-medium format transcended dance
culture at the Loft, the Paradise Garage, or Studio 54. By the early years of
the century, the disco sound had morphed into not only house music but
into production and distribution practices associated with "social media."
With its divergent music-making techniques (beat-matching, slip-cuing),

Image capture of Google search for "disco."

social venues (dance clubs), low-cost or free distribution models (record-lending pools, nominal club admission), social practices, and changing technologies (mixing board, twelve-inch single, amyl nitrate), disco is not principally a commodity pressed on vinyl and consumed in a rec room, but a cultural format accessed in a communal setting where the line between singing and acting, listening and participating, between a celebrity and what Warhol called a "nobody," and between an individual and a network were being dissolved in an era marked by flexible accumulation and the transformation of culture into a fluid species of capital.[4] It was also a technologically specific medium whose production and mode of accessing can be linked to the development of magnetic core memory systems. But you didn't have to be an economist or a computer expert to note how changes in the market affected stardom in a network where human actions resembled machine-based protocols enabling data to copy itself. As an ambient environment or operating system in which varied practices transpire, disco is the (sound of) data entering (input) and leaving (output) a system, where multiple sources are accessed in a time that is simulated to feel like a real-time operation. Or as Donna Summer remarked: "That was Marilyn Monroe singing, not me. I'm an actress. That's why my songs are diverse."[5]

To paraphrase McLuhan, an era is defined not so much by the mediums it gains as by the mediums it gives up. Summer, a new species of a studio-engineered vocal celebrity, understood the conditions of her fame in relation to métier: anonymity, short shelf life, fungible social network/civilization, and copyright violations. The so-called authenticity of the rock 'n' roll voice, heretofore rendered on a forty-five and given play on Top 40 radio, poses the problem the twelve-inch, five-minute-plus single solves with mixing board and DJ: a mechanism wherein vocals are remixed into a continuous Extended Play machine track, a customized sound that could not not be danced to, something fabulous, martial, transgendered, and homoerotic. The human voice, engineered in the studio, became "lyrical" output, nominal, repetitive, or like harmonic lines, was subtracted from the mix.[6] In his classic six-minute remix of "Hit and Run" (1977), the DJ Walter Gibbons excised strings, horns, and two verses of Loleatta Holloway's intro so that in the final recording, to use the words of Salsoul producer Ken Cayre, "Loleatta wasn't there anymore."[7] The disappearance of the medium conveniently coincided with the submerging of voice into the layers of a remix. Of course, Loleatta and Summer weren't gone; they were there in a different kind of way, like an interface or, to rephrase Duchamp, "a delay in glass as you would say a poem in prose or a spittoon in silver" (Duchamp 22).

The current era is notable because it finally gave up, with hardly a sigh, the idea of cultural production dependent on self-reflection and individual production—but it wasn't just painting, it was film, photography, the novel, rock 'n' roll, and poetry—yes, even poetry—that was transformed into a graphical user interface (GUI) to a database. Long before poetry became a distribution channel for contemporary artists and a defunct or zombie brand for any number of cultural practices, Duchamp noted that "there's a sort of intense sensory lament, or sadness and joy, which corresponds to retinal painting, which I can't stand. . . . I prefer poetry" (Adcock 106). Reversion to an earlier making (*poesis*), using language as a (slow) distribution medium (i.e., print on demand) for the voice, becomes a possibility when the relationship between seller and buyer, artist and audience is marked, as Duchamp noted, by an "indecisive reunion" (Duchamp 26), thereby mandating the implementation of what Duchamp termed "notes." Duchamp published these "notes" in 1914, 1934, and 1967, as the *Box of 1914,* the *Green Box,* and *In the Infinitive,* respectively. These 289 notes, all written in French, are part and parcel of a "sum of experiments," the phrase that Duchamp used to describe the evolving composition of his master work, the *Large Glass* (*The Bridge Stripped Bare by Her Bachelors, Even*) between roughly 1915 and 1923.[8] In these notes, Duchamp acknowledges his debts to, among others, the poet Stéphane Mallarmé, the mathematician Henri Poincaré, and the

writer Raymond Roussel. Of the notes' importance to genesis of the art objects, Anne d'Harnoncourt writes: "Duchamp's individual 'works' are not ends in themselves. The grand metaphysical machinery of the *Large Glass* . . . [is] inextricably rooted in the matrix of Duchamp's notes to himself."[9] Conceived of as a series of delays, one of which was the notes, Duchamp's completed work was not merely a mimetic translation of a content it transmitted (i.e., a function of efficient economic exchange); rather, it was the mechanical transmission itself, a process made visible by delay ("a delay in the most general way" [Duchamp 26]), where delay also connotes a lack of economic incentive in or profit resulting from the redistribution. The glass in *The Bride Stripped Bare by Her Bachelors, Even* is a computational device. It "translates," in a process subject to both medium- and time-delay, a "media object" sandwiched (like a commodity) between photograph and painting. In Duchamp's work, painting becomes visible "even" *as* delay (in glass). The bride is a mathematical function, a skeletal or "stripped" computational engine, a commodity of the infra-thin variety.[10] She functions in the same manner that light could be said to fuel and "draw" equations on photographic emulsions.[11] Such compositions are explicitly temporal. In note 135 Duchamp references Henri Bergson's concept of duration that is consistent with this notion of delay: "no longer . . . the instant present, but a sort of / present of multiple extensions" (MDN 135). Of the mechanical/mathematical subsumed in a photographic process, Duchamp noted: "It's merely a way of succeeding in no longer thinking that the thing in question is a picture" (Duchamp 26).

In this manner Duchamp anticipated what poetry would become sometime post 2005 or so: someone's blog, a listing detail on Facebook, a channel for distribution of any material, a production/dissemination device for whatever. Distribution is the new theater regarded as lifestyle, a mode of delayed and sampled sound modules or distributed practices. Unlike the novel, whose accuracy was a function of photographic realism, disco's pleasure is predicated not on Duchampian decontextualization of what in the end, vis á vis the readymade, was still a sculptural object (albeit "applied" with fake signature or bad math), nor was it predicated on the sundry social/aesthetic practices labeled Relational Aesthetics. Disco's pleasure is anything accessed in a general and random way—that is, generically, or as Duchamp's word "even" demonstrates, as a function of language not yet assigned to adjective or adverb. And the most generic concept and poetic engine of the late seventies was probably disco, a music genre-less enough to be absorbed into culture as a whole, in a host of divergent social practices, musics, poetries, films, TV shows, and, yes, everybody's lifestyles or "everybody's autonomy."

It is probably for this reason that disco was attacked not when it upset hierarchies of the music production and distribution scene of the seventies; when it elevated studio technicians, DJs, sound mixers, arrangers, producers, and session musicians to the status of behind-the-scene and invisible creators; or when it frequently made a lead singer unnecessary to the production of a commercial "hit"—but rather when, as a consequence of its delays, disco *lost* its underground, avant-garde edge, exited the gay club scene of the mid-seventies, and began to enter the mainstream, where it mimicked forms of mass cultural production. Suddenly disco was everywhere, a product without clear origins, broadcast indiscriminately like Tennyson's and Longfellow's trance-inducing poems in the nineteenth century or home décor in the post-Bauhaus era. By the late seventies, Helen Reddy, Barry Manilow, and even the Rolling Stones started cutting disco albums; soon, disco was lambasted for crass commercialism, cultural effeteness, formulaic nature, predictability, shallowness, anonymity, licentiousness, and, above all, lack of content.

It was thus when disco left the underground dance scene and the mid- to late-sixties avant-garde art practices associated with it that its radicality became more apparent—as an affront to music production and distribution systems and to what Tony Conrad called an "authoritarian musical form based on the sanctity of the score."[12] Disco replaced the rock star with a mixing board and session musicians, transforming rock singers into a function of programmers and DJs who "play" them. Top 40 radio DJs and the largely male, white writers at *Rolling Stone* saw in disco a loud affront to musical manners and the individuality and uniqueness tied to Western rock civilization. But disco was also an affront to less mainstream and more explicitly radical art-house musicians. John Holmstrom in *Punk* magazine remarked: "Death to disco shit!" (Lawrence 221). Jello Biafra of the neo-punk band the Dead Kennedys "likened disco to the cabaret culture of Weimar Germany for its apathy towards government policy and its escapism."[13] In a sense, for punk musicians and mainstream culture alike, disco could hardly be thought about.[14] Yet its distastefulness suggests a way of visualizing avant-garde practices dissolving into something generic, something for which the idea of medium, race, and sexual orientation was rendered mostly irrelevant as disco became mainstreamed. Disco is the site where the social protests explicitly linked to street actions and avant-garde happenings of the sixties became an interiorized lullaby, drone, soliloquy, or head trip. And of course disco facilitated that migration, regarded as a species of programmed intoxication.

From the beginning, it was *always better not to think*. As an operating system, disco is not, as is mistakenly thought, an explosion of sound onto the

dance floor but an implosion of pre-programmed dance moves into a head. In the hands of a DJ, cuts and remixes are smoothed over to create an impression of continuity at one with the brain's seamless assimilation of material where the brain becomes the material that has already been stored processed on a mixing board. As Bill Brewster and Frank Broughton note, a DJ like Walter Gibbons "would take two copies of a track, for example 'Erucu,' a Jermaine Jackson production from the *Mahogany* soundtrack, or 'Two Pigs and a Hog' from the *Cooley High* soundtrack, and work the drum breaks so adroitly it was impossible to tell that the music you were hearing hadn't been originally recorded that way."[15] In his history of disco, *Turn the Beat Around,* Peter Shapiro describes a remix:

> Gibbons's astonishing 1978 remix of Bettye LaVette's "Doin' the Best That I Can" is the pinnacle of his (and probably all of disco's) dub experimentation. Slowing the track to an absolute crawl and stripping it like an abandoned car with the remains scattered across eleven minutes, Gibbons some- how made the record funkier and more danceable. . . . [The track] is almost anti-disco in the way that Gibbons palpably heaps scorn on producer Eric Matthews's worst instincts by constantly undercutting the saccharine strings, judiciously using dropout and echo, importing his own rhythms, and essentially reversing the entire arrangement. (47)

In place of listening, the brain is a passive regulator in a feedback loop. The dance floor is a series of mathematically induced aural hallucinations that involve the production and redistribution of music or, to be more accurate, musical effects. Everything else gets methodically filtered or subtracted out. No one really listens to disco, not even the listener; it is passively absorbed by a brain connected to a dancing body. What allowed the brain to enter a feedback loop was a DJ and a mixing board, as well as technological advances: the twelve-inch record and time-delay sound systems.[16] As David Mancuso noted: "You want the music in your brain" (Lawrence 240). Not surprisingly, as a blank sine wave that courses through an empty channel, disco was thought to have zenlike qualities.

   Disco as a medium or a genre—of what? music? lifestyle? home décor? production techniques?—was pretty unthinkable except as an integrated layer of medial practices: poetry, painting, operating systems, software, record lending groups, nightclubs, session musicians, celebrities, strobes, time-delay speakers, controlled vocabularies, mixing boards, and search

engines. Disco is produced within a social network that includes DJs, producers, session musicians, and fronting artists. It is an extremely porous container. It has an MC. It can take place at a wedding, bar mitzvah, or warehouse. It contains letting go, prerecorded artifacts and special effects, social inflections, bodily gyrations, freaky wigs, and elongations of gesture. Ken Emerson remarked that disco was marked by an "untheatrical anonymity" and added that the "lack of personal identity allows unawed dancers to assert their own identities" (Lawrence 177). Emotions—like the songs, like gestures, like weak forms of social networking—are exaggerated forms of sign language and leave taking and thus instantly forgettable. They could be said to have been technically forgotten before they were forgotten. For this reason, disco is the most photographed and least photographic of mediums. Actors (forms of memory akin to old wax cylinders) replace recording stars (digital voice print), and DJs replace actors. Gloria Gaynor's seventeen-minute-long "Never Can Say Goodbye" (1975) outlines the aim of a disco track. Gaynor understood that only by becoming elongated in time via a groove does the voice become more purely expressive and perfectly motionless. The voice is a series of noiseless exhortations, or it flagrantly rips off something from somewhere else, as with the Peech Boys' "Don't Make Me Wait." So the "language" of disco eats itself and the dancers are non-nostalgic. They embody linguistic distraction. They are rendered by voices animated by and drowned out by moans or faders, which are the same. Early disco producers realized that the nicest thing about a groove is that it doesn't *have* to end, and that music, like the social, *is* the continually regulated background. And thus, unlike various avant-garde anti-groove practices that paired difficulty and impersonality with extreme length, disco aimed, via the most artificial means possible, to vapidly and ephemerally solve a kind of existential crisis via machine rhythms, repeated pleasure, mindless sex, synthetic tracks, and extreme length. The year is 1941. Theodor Adorno noted: "The adaptation to machine music necessarily implies a renunciation of one's own human feelings."[17] No better description of the groove probably exists. Except for perhaps: "I Feel Love." Casablanca Records, 1977. Or as Parliament noted: *Fenkentelechy vs. the Placebo Syndrome.*

  Gibbons understood that intoxication was remediated and that the central nervous system was susceptible to programming by a disco-drug cocktail that could trigger sex and euphoria, thus transforming disco into erotica. As Tom Moulton noted, Gibbons was "into drugs and developed weird sounds. . . . He wanted to make music for drugs because he knew it would invoke a better trip" (Lawrence 268–69). Cocaine, a dopamine reuptake inhibitor, heightened euphoria. Inhaling amyl nitrate or "poppers"

(an industrial product found in "air fresheners and tape head cleaners") "re-laxed smooth (i.e., non-striated) muscles throughout the body, including the sphincter muscle of the anus and the vagina," and thus prolonged orgasms. Another enabling club drug, Quaaludes, suspended "motor coordination and turn[ed] one's arms to Jell-O,"[18] an effect rendered graphically under stroboscopic conditions that altered (redistributed) feelings of time via the effect referred to as temporal aliasing. But of course the stagflation years of the seventies were *already* taking place in slow motion, with disco the time-delay packaging and storage medium, one of the ways to attenuate and mollify the temporal discontinuities, interruptions, and ruptures of the period—which it rendered as one seamless, time-stopped, quivering whole, something like a literature without a language, a pure musical pabulum or techno babble cum lullaby, something invested in "minimal signifieds."[19]

A groove is a placebo. In it, the pleasure principle (desire) is scrambled and remixed. Inverting Claude Shannon's theory wherein increased infor-mation generates greater noise,[20] disco would blur the distinction between signal and noise, elevating the percussion (noise) track to a position of total-izing prominence while liquidating its disruptive factor by making it part of a hypnotic remix. The listener experiences disco desiringly, without listening and blindly, as a function of increasing uncertainty *in* the remix, where the listener is the output—that is, a programmed state of mindless-ness (limited processing)—induced by disco. In this sense, disco exposes even as it camouflages desire as a programmable function. Or to put it more simply, in disco, noise is reprocessed against a background of minimal infor-mation or exclusions. This is underscored by the general vacuity of disco lyrics. And so the social world of language production and meaningful utterances is rendered obsolete and automated. Social realism is antithetical to melodrama and its subspecies funk and should be the first category of the social to be dismantled, along with an unbroken social scene: marriage, straight sex, the recession, suburbia, a drug-free world, blue jeans, liquid modes of intoxication, clear vision. In its place: the all-night disco with lit-up dance floors, tight trousers, mirror balls, polyester, faded industrial infra-structure, inner-city blight, an hour hand that throbs, and amyl nitrate.

The elaboration of such pleasure points was not lost on Giorgio Moroder, who in 1975 programmed the remixed, extended sound of a woman having an orgasm, a seventeen-minute sound track that many American radio stations promptly banned. The message from Moroder and Summer was clear: no orgasm can be experienced without a synthesizer. The time of sexual pleasure can be programmed from the outside to bypass heterosexual intervention. Such a song, a series of looped tracks, suggested that the most beautiful orgasms are uninterrupted and subject to infinite storage, that the

orgasm can no longer be regarded as an event but as a series of delays.[21] As anyone on a social networking site can tell you, social effects are groovelike, fully programmed, and hallucinated. But then erotica has always been multiformat, including "literature, photography, film, sculpture and painting."[22] Disco is one of the earliest premodern operating systems to calculate the human voice as an erotic reverb or echo deep inside a percussion track, where the engineered voice is a placebo for pleasure.

Grooves are interchangeable with other grooves. In programmed rigidity lies endless plasticity. Like other epic sound-based groove structures, the most famous literary example being T. S. Eliot's *The Waste Land,* disco is a mutating and fluid parameter defined by self-induced monotonies. As producers, record executives, session musicians, mixers, DJs, and dancers understood, disco is a mood accessed by someone else. It was a "programmed source," generic culture in a configured state (mood). Or as Duchamp noted, a displaced erotics: "it is necessary to *stress* the introduction of the new motor: the bride" (Duchamp 39). In Eliot's case, monotony leads to footnotes. In disco's, it led to Long Island and Tom Moulton's manual razoring and Scotch taping of one tape to another with no break in the beat, a mathematical operation where dance is reduced to a percussive, 4/4 beat. Like his first legendary tape, forty-five minutes of nonstop pre-synthesized dance music, Moulton's practices were grounded in difficulty and noise, which were channeled into a mix marked by seamlessness, pleasure, absorption, and timelessness.

Today, as T. S. Eliot feared, things like voice or personality don't get remembered; they get remixed and accessed. Or in Eliot's famous formulation: "the point of view which I am struggling to attack is perhaps related to the metaphysical theory of the substantial unity of the soul: for my meaning is, that the poet has, not a 'personality' to express, but a particular medium, which is only a medium and not a personality, in which impressions and experiences combine in peculiar and unexpected ways."[23] And what could be a better description of the remixes of a disco track, one long dance medium that outlines the musical tradition as a fluid, amorphous, and, as Eliot noted, "timeless" sonic environment being remixed in a real time impervious to history, the tradition, or the idea of an "original" work. As Eliot noted, "no poet, no artist of any art, has his complete meaning alone" (Eliot 38), and disco facilitates the endless reprogramming and rerecording of "sources," which awakens a mistaken desire to locate disco's "origins" in lectures on experimental practices of the sixties. No disco number is a "complete work," and the footnotes of Eliot's literary programming likewise fail to organize the diverse materials of *The Waste Land,* which remains a transmission mechanism or open channel marked by intolerable

noise. What is required is not a literary solution but a mathematical operation that hinges on the "calculability of the irregular itself."[24]

According to Kittler, "Data processing becomes the process by which temporal order becomes moveable and reversible in the very experience of space" (Kramer 96). What could be a better description of being on a dance floor circa 1974, where all bodily permutations, all "creative actions" witnessed by Tiresias, are read as "software applications," things calculated in advance, in the manner of a social taxonomy. Not only the sexes (Tiresias: "Who is that beside you?") but members of various class strata—from archduke, Highbury denizen, young typist, and down to pub crawler—are presented in crude ensemble, Eastern and Western religions coalesce, and "characters" lack individuation, reduced to the occupational epithets that "identify" them: young man carbuncular, Smyrna merchant, archduke, typist, and so forth. Such a taxonomic or totalizing social and cognitive structure could not be said to open up a space for work or productive labor in the Weberian sense. Such identification exacts a high price: the labels that classify them as members of a specialized labor force render them defunct remnants of a social mechanism, nonproductive and incapable of mobility. Individuals transmute into types. Documentary portraits degenerate into pathological archives. What appears to be a fertile and organic social system is in fact a sterile and mechanical taxonomy designed to diagnose irregularity (i.e., "social" diseases) but containing no operant moral ethos or therapeutics. The sterile and mechanical perfectly imitates the fertile and organic in a set of false literary *correspondences*. What has brought us to this position, which can only be termed untenable?

Footnotes 218 and 360 to *The Waste Land* offer a posthumous explanation, one removed from the realm of Greek tragedy and that era's blindness, and one calculated as a function of new modes of nonparticipatory, spectatorial labor: "Tiresias, although a mere spectator and not indeed a 'character,' is yet the most important personage in the poem, uniting all the rest. Just as the one-eyed merchant, seller of currants, melts into the Phoenician Sailor, and the latter is not wholly distinct from Ferdinand Prince of Naples, so all the women are one woman, and the two sexes meet in Tiresias. What Tiresias *sees,* in fact, is the substance of the poem. The whole passage from Ovid is of great anthropological interest." Tiresias is, from the equalizer's standpoint, attenuated, part of the endless, transgendered, homo/hetero-erotic mix that may or may not include a member of Shackleton's Antarctic party. Hence our first axiom: (mode of) production is the new theatricality. Or to put it more simply: DJ/Tiresias is alive, but the music is dead (Kramer 101).[25] What does disco do? It programs a random-access search for "origins" and incites in the reader a search for sources, which turn out to be hallucinations

or echoes of sources. Such a programming language was once called litera-ture (we have chosen to call it art history), though disco, of course, is not a literature at all; it merely simulates the effects of literature (as empty brand) with the uncanny precision of our era's version of a lullaby: the remix. Disco is a programming language. It simulates the desire to remember when human remembering has become, from a technological standpoint, unnec-essary or impossible. Disco thus proposes a solution to the vast volumes of distributed media (now databased on the Internet) that began in the nine-teenth century and have snowballed of late—in the form of photographs, tape recordings, films, records, CDs, and hard drives. How in this morass of information, most of it noncontinuous (i.e., digitized and subject to random access memory) can anything be located? Disco proposes a radical minimal-ization in the accessing of voices, regarded as discrete and modular data. For as we have seen, disco involved the systematic subtraction of extraneous information "tracks" and elevation of a percussion track into a remix having minimal harmonic or melodic progression, and grounded in repetition. This subtraction would be exploited in the late seventies and early eighties with Eurodisco, Italodisco, minimal ambient house musics; contemporary artist writing/distribution projects; and a host of disco-oriented stylistics and sampling/appropriation-based poetries.[26]

Unlike the other arts that were bracketed by arts of long-term memory (*ars longa, vita brevis*), disco was keyed not to memory but to what human memory became with the advent of computerized data storage and accessing: a mood, understood as the by-product of an obsolescent human memory system. For this reason it is customary to say that one can "have" a memory but not a mood; it is more accurate to say that a mood overtakes one. Moods, which are not inherently subjective and do not differ signifi-cantly from person to person, are a waste product antithetical to precom-puter memory and thus nostalgia. So moods are rightly understood as a mode of accessing data inaccessible to human memory. Before the DJ, moods were harder to come by, let alone produce systematically. This was mainly because moods were amorphous and believed to be subject to a certain "dis-tillation." But with the advent of large-scale computing, things began to change. The verb "to access" was coined in 1962 with respect to "large-capacity memory," which was viewed as a kind of "happening." It took less than seven years for a soft synaesthesia of music, lights, dance, and perfor-mance to congeal into a cultural format that reflected systemic changes in how collective memory gets processed. As Ebbinghaus says, "How does the disappearance of the ability to reproduce, forgetfulness, depend upon the length of time during which no repetitions have taken place?" (Kittler 1990, 207). Disco solved a crisis in the same way that the core memory inventor

An Wang did, whose work in the early fifties on the write-after-read cycle paved the way for developments in magnetic core memory. Wang's invention "solved the puzzle of how to use a storage medium in which the act of reading was also an act of erasure."[27] Disco functions as magnetic core memory does, where every act of reading or accessing material destroys the original source (i.e., clears the address to zero), which necessitates the continual repetition or rewriting (the write-after-read cycle) of data.[28]

Anyone who's ever danced to Booka Shade or listened to Rub-N-Tug on an iPod knows disco isn't dead; it's how we access our present; a "groove" is disco's "description" of data copying itself, ad nauseum. Of course accessing occurs when remembrance is weak, and listening—that is, the brain—is a passive output device. "Introspection is not an accurate methodological approach for Ebbinghaus. Memorizing nonsense material is not much different from memorizing meaningful material."[29] "Death to disco shit." Nothing, properly speaking, can be understood hermeneutically by disco, because disco is not about understanding but about antithetical memory practices (Kittler 1990, 208–12). And so disco sets up its search parameters in the seventies, at a time of massive social upheaval and economic woe, in particular the economic downturn and exodus from urban areas like New York. "Both Nietzsche and Ebbinghaus presupposed forgetfulness, rather than memory and its capacity, in order to place the medium of the soul against a background of emptiness and erosion" (Kittler 1990, 207). The expanse of any given disco track is the empty storage medium of history. To paraphrase Bataille: Disco is parodic and lacks an interpretation. Or: Disco continually jerks off. Anyone who has danced to disco has noted its curious, even paradoxical, powers as a mnemonic storage device: an endless rehearsal of things *in order to* forget them. And in that way, memory could be said to become pleasurable again. For it is well known that rehearsal or repetition is key to remembering and desiring, even if what is remembered is meaningless or the remembering is done outside the head by a machine. As anyone who has gone disco dancing can tell you, disco understands itself—it makes a series of improbable rondos with Tyrolean ski resorts, strobes, the Moroder skit, and eventually, "Son of My Father."

Gloria Gaynor's tearless medley as engineered by Tom Moulton, "Never Can Say Goodbye," is indicative of the reverse technology known as nostalgia. Disco's prolonged tracks ensure never saying good-bye. Seventeen minutes of side one run continuously, as on a dance floor. In this way, disco is a ready-made formatting joke (Top 40 radio, the forty-five) whose subject is the physical contours of memory itself, where the three-minute hit is doomed to a more instant oblivion. However, if disco is eminently forgettable or mindless, as critics claimed, its production ensured that everything

about it would be accessed again, never lost from recuperation, its time forever and always, as disco's resurfacing in eighties and nineties house musics attests. Nostalgia qua nostalgia gets theorized at the historical moment when it is perceived as going out of fashion. How else to explain Linda Hutcheon's remarks that nostalgia, directed at the "irrecoverable nature of the past," seems *démodé,* even quaint, in the era of the database: "[T]hanks to CD ROM technology and, before that, audio and video reproduction, nostalgia no longer has to rely on individual memory or desire: it can be fed forever by quick access to an infinitely recyclable past."[30] Disco could hardly be said to be nostalgic; opposed to a prevailing musical, economic, and sexual climate, yes—nostalgic, no. Moreover, the social liberation proffered by disco requires clarification. Disco, in both avant-garde club and mainstream modes, was not interested in personal liberation; disco's aim was to reveal that memory is programmed by the source in advance and that the freedom is not "about" anything except the rules that gave rise to it. In this sense, disco was not oceanic or deep like the mind-bending formats of sixties psychedelia or acid rock; it remained solely a function of a programmable surface, a set of effects. Mood is the DJ's technologically assisted operating system. Or to put it more simply, disco is an operating system that sits on top of a database (previously recorded musics), which is in turn accessed by a DJ, who serves as a GUI for those on the floor.

For how long have the tradition, historical sense, nostalgia, or the historical avant-garde been programmable functions? In various musics, from techno to electronica, as well as in music videos, the remnants of a historical avant-garde filter up a little at a time in our daily existence circa 2008. "Our avant-garde," as they say, is an evacuated genre, dumb-ass painter, interface, software, or as Eliot noted looking back regressively to poetry, "a feeling." Of course we're not the first to feel that our tradition just got more ambient and dispersed, or dumb, and that we are prone to the most evanescent of moods. T. S. Eliot also lived in an age where the strong sense of a distinct medium (the novel, the poem) was under attack and the only thing to make it cohere, weak as it was, was a "feeling" in an era when all feelings were mechanically reproduced. *The Waste Land*'s model was the canned, remixed sound of the gramophone. Eliot's poem functions as a nostalgic twentieth-century critique of the mixing board and machine technologies used to access the human voice, thus degrading the "feelings" underlying it. Like all beautiful moods, disco came from a database. DJ/Tiresias is a footnote, an incipient GUI to a literary tradition that can only be accessed indiscriminately or randomly.

The avant-garde was always a programmed and programmable mood. At any rate, by 2008 it is clear that however it happened, the dissolution of

the medium has become our primary cultural practice, one that hinges on the idea of medium unspecificity and dissolution of an "art object." And so the conventional fields of painting and sculpture and poetry are engaged today in a desperate attempt to program the contours of their once medium-specific fields. In other words, ambience is today's cultural operating system, filtered through the avant-garde, just as the discrete medium was yester-day's mode of expression, filtered through a bourgeois sensibility. It is no longer useful to speak of a singular art object but of a work in multiple formats, or an ambient work. Thus the contemporary artists Takashi Murakami and Jeff Koons function principally as fabrication operations that program quasi-custom-looking (super flat) artworks within a market system that favors both mass customizability and the dollar cost efficiency of post–mass production—that is, lean production processes. To put it in more end-user-friendly terms, the age of looking at an artwork or reading books or listening to music has the awkward sound of something almost over. Anyone who's listened to music today understands that it's not the music so much as the appliance gateway or iPod that makes the music come alive. Benjamin Disraeli remarked that when he wanted to read a good book, he wrote one. Today, when one wants to "see" or "read" an artwork, one accesses or downloads it. Disco is accessed no differently than a Picasso or a Duchamp or a Warhol, all of which are functioning under new computational systems for the accessing and storage of data in magnetic core memory.

In our era, unlike in Shakespeare's, all plagiarism is part of an operating system. Or to put it in terms immediately comprehensible to this essay: most writing is automated and invisible, an empty form of surface decoration where "writing" is the instantiation of a software code being transferred from one location to another in an act of self-plagiarization. And this is what disco is: technologies of sound mixing and reproduction in an era when the idea of medium-specificity and discrete mediums such as painting, photog-raphy, music, literature, and video are being supplanted by the idea of a more general operating system or generic culture of software whose purpose is to continually redistribute a range of materials across a single platform. In this sense, disco as a cultural practice is not dissimilar from varied products in the cultural field: print on demand, lean production, mass customization, and so forth. What you are now reading, originally produced in Microsoft Word, is invisible because it is built into the software and automates the writing of the text in the same way that disco automates the human.

Disco provides impetus for new modes of being and nonbeing involved in the writing and in particular the nonwriting of poetry and art, where lyricism, subjectivity, and personal expressiveness might be reduced to blips

in an ambient sound track, where historical markers (of cultural products) could be erased, and where nonreading, relaxation, and boredom could be the essential components of a text. Poetry—and here one means all forms of cultural production—should aspire not to the condition of the book but to the condition of variable moods, like relaxation and yoga and disco. The poems (of our era) (are designed to disappear, (and disappear) continually into the stylistic devices that have been sampled and diluted from the merely temporal language) (i.e., duration, historical or otherwise) of the day. As such they might resemble a pattern uninteresting and enervating in its depths but relaxing on its surface.

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NOTES

1. On the relation between the avant-garde and information technologies germane to this article's treatment of disco and popular music, see, in particular, Friedrich Kittler, "England 1975—Pink Floyd, Brain Damage," in K. Lindemann, ed., *Europalyrik 1775-heute: Gedichte und Interpretationen* (Padenborn: Schöningh, 1982), 467–77. Kittler's article is discussed in Geoffrey Winthrop-Young, "Implosion and Intoxication: Kittler, a German Classic, and Pink Floyd," *Theory, Culture, and Society* 23, no. 7–8 (2006): 75–91. On software and remix as they relate to avant-garde practice, see Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001); "Remixability and Modularity," and "The Avant-Garde as Software" at www.manovich. net. On a "post-medium" era and avant-garde and neo-avant-garde practice, see Fredric Jameson, *The Cultural Turn: Selected Writings on the Post-Modern, 1983–1998* (London: Verso, 1998); Rosalind Krauss, "Reinventing the Medium," *Critical Inquiry* 25, no. 2 (1999): 296; *"A Voyage on the North Sea": Art in the Age of the Post-Medium Condition* (London: Thames and Hudson, 1999); and Benjamin Buchloh, *Neo-Avant-Garde and Culture Industry* (New York: October Books, 2003). Disco's connections to experimental work of the '60s in a number of cross-medium platforms—in particular, by Allan Kaprow, Jonas Mekas, Tong Conrad, La Monte Young, Yoko Ono, George Brecht, Robert Morris, and Dick Higgins—has yet to be written. The two principle histories of disco are Peter Shapiro's *Turn the Beat Around: The Secret History of Disco* (New York: Faber & Faber, 2005) and Tim Lawrence's *Love Saves the Day: A History of American Dance Music Culture, 1970–1979* (Durham, NC: Duke University Press, 2003). For disco's context in a larger avant-garde aesthetic, see Shapiro, 3–57. On "New York's interdisciplinary neo-avant-garde" in relation to poetry and language use, see Liz Kotz, *Words to Be Looked At: Language in 1960s Art* (Cambridge: MIT Press, 2007).

2. Marcel Duchamp, *Salt Seller (Marchand du Sel),* ed. Michel Sanouillet and Elmer Peterson (New York: Oxford University Press, 1973), 25. Hereafter cited in text as Duchamp.

3. Cited in Craig Adcock, "Marcel Duchamp's Gap Music: Operations in the Space between Art and Noise," in *Wireless Imagination,* ed. Douglas Kahn and Gregory Whitehead (Boston: MIT Press, 1992), 107. Hereafter cited in text as Adcock. On Duchamp and music, see Gavin Bryar, "Notes on Marcel Duchamp's Music," *Studio International* 192 (November–December 1976): 174–79; Lowell Cross, "Reunion: John Cage, Marcel Duchamp, Electronic Music, and Chess," *Leonardo Music Journal* 9 (1999): 35–42; and Carol P. James, "Duchamp's Silent Noise/Music for the Deaf," *Dada/Surrealism* 16 (1987): 106–26.

4. Fredric Jameson, in *The Cultural Turn: Selected Writings on the Post-Modern, 1983–1998* (London: Verso, 1998), 73, notes that the present is "marked by a dedifferentiation of fields, such that economics has come to overlap with culture: that everything, including commodity production and high and speculative finance, has become cultural; and culture has equally become profoundly economic or commodity oriented."

5. Shapiro, *Turn the Beat Around,* 113.

6. Tom Moulton, who invented the remix, noted: "I'm listening and listening and listening. I said, 'What if I take out the strings, take out this, take out this. God, I gotta take out everything.' Finally, I said, 'Wait a minute, all that's left is the percussion. Maybe I can raise the congas a little bit, then just kind of groove, and then all of a sudden come in with the bass line" (Shapiro, *Turn the Beat Around,* 43–44).

7. Lawrence, *Love Saves the Day,* 264. Hereafter cited in text as Lawrence.

8. *Marcel Duchamp, Notes.* Preface by Anne d'Harnoncourt. Arrangement and translation, Paul Matisse (Boston: G. K. Hall, 1983), unpaginated. Hereafter cited in text and notes as MDN, followed by Duchamp's note number.

9. D'Harnoncourt adds: "It was not in order to reveal solutions to his experiments, but rather to provide an increasingly rich range of data" (MDN vii).

10. Duchamp defines the infra thin as "1. The possible implying / the becoming—the passage from/one to the other takes place/in the infra thin" (MDN 1).

11. Duchamp describes the bride as "a reservoir of love gasoline" (MDN 43).

12. Tony Conrad, "LYssophobia: On Four Violins," in *Audio Culture: Readings in Modern Music,* ed. Christoph Cox and Daniel Warner (New York: Continuum, 2004), 316. Hereafter cited in text as Conrad.

13. "Disco," *Wikipedia,* http://en.wikipedia.org/wiki/Disco.

14. On disco and punk's shared antipathy to rock 'n' roll, see Shapiro, *Turn the Beat Around,* 251–54. James Chance, aka James White, the no-wave and punk musician, noted: "I've always been interested in disco. . . . I mean, disco is *disgusting,* but there's something in it that's always interested me—*monotony.*" It's sort of jungle music but whitened and perverted" (253).

15. Bill Brewster and Frank Broughton, *Last Night a D.J. Saved My Life: The History of the Disc Jockey* (New York: Grove Press, 1999), 159.

16. By the mid-seventies, David Mancuso developed a private party network at the Loft, where he employed an elaborate digital relay system with each speaker firing in a sequence separated by microseconds. The result was a moving sound field or wall that felt alive and spiritual. Such an experience was enhanced by the twelve-inch, whose grooves, because they were spaced farther apart than those on a forty-five, carried more sonic information, thereby creating an all-over sound field more suitable for entering the body and organizing its pleasures.

17. Theodor Adorno, "Notes on Popular Music," in *Essays on Music,* ed. Richard Leppert, trans. Susan H. Gillespie (Berkeley: University of California Press, 2002), 461.

18. "Disco," *Wikipedia*.

19. Friedrich Kittler, *Discourse Networks, 1800/1900* (Stanford, CA: Stanford University Press, 1990), 27–53. Hereafter cited in text as Kittler 1990.

20. Claude Shannon and W. Weaver, *The Mathematical Theory of Communication* (Urbana: University of Illinois Press, 1949). "It is generally true that when there is noise, the received signal exhibits greater information—or better, the received signal is selected out of a more varied set than is the transmitted signal" (19).

21. On disco's connection to Moog and Arp synthesizers, the development of Hi-NRG and Eurodisco, and the more general "implications the machine would have on the human body" in the development of "mechanoeroticism," see Shapiro, *Turn the Beat Around,* 108–14.

22. "Erotica," *Wikipedia,* http://en.wikipedia.org/wiki/Erotica.

23. T. S. Eliot, *Selected Prose of T. S. Eliot,* ed. Frank Kermode (New York: Harcourt, Brace, 1975), 41. Hereafter cited in text as Eliot.

24. Sybille Kramer, "The Cultural Techniques of Time Axis Manipulation: On Friedrich Kittler's Conception of Media," *Theory, Culture & Society* 23, no. 7–8 (2006): 101. Hereafter cited in text as Kramer.

25. Such practices were prevalent in a number of avant-garde music-making practices. In a passage that anticipates the DJ's controlling role in programming music for a live dance floor, Tony Conrad notes his reaction to hearing La Monte Young:

    I heard an abrupt disjunction from the post-Cagean crisis in music composition; here the composer was taking the choice of sounds directly in hand, as a real-time physicalized (and directly specified) process—in short, I saw redefinitions of composition, of the composer, and of the artist's relation to the work and the audience. As a response to the un-choices of the composer Cage, here were composerly choices that were specified to a completeness that included and concluded the performance itself (Conrad 315).

26. For a discussion of various remix technologies at work in contemporary poetry, see my "Beyond noulipo (CMMP as Precursor of New Media Poetry)"; "Materiality, New Media Writing, and CMMP"; and "New Media Writing: Code vs. Database," in *The Noulipean Analects,* ed. Matias Viegener and Christine Wertheim (Los Angeles: Les Figues Press, 2007).

27. "Magnetic Core Memory," *Wikipedia,* http://en.wikipedia.org/wiki/Magnetic_core_memory.

28. Tony Stockhill, in an e-mail correspondence of June 2, 2008, notes:

    A memory core is made of magnetic particles in a ceramic compound similar to the ferrite rod antenna. Consider a complementary system of passing a (direct) current in a wire through the centre of a core. This induces a magnetic field in the core. This is analogous to the motor/generator use of electromagnetism. The magnetic field in this core makes it a "1. " We have to be able to "read" this "1" for it to be any use. This magnetic material is a high hysteresis compound, which is a way of saying it is easily magnetized in one direction, and has high

resistance to being magnetized in the other direction up to a certain current. We pass this current in the opposite direction through the wire. The core will switch direction at a predictable, repeatable point. This is equivalent to a bar magnet switching from N/S to S/N. If we thread a second wire through the core, then, at the time the magnetic field switches, we will induce a current in this wire. This current can be amplified and interpreted as a "1. " Two points can be noted. First, if the core had not initially had its magnetic field switched in the "1" direction, meaning it held a "0," the magnetic field would not switch when the reverse current was applied. No current would be generated in the second (sense) wire and thus the "0" value would be recorded. Second, the act of "reading" the core has set it (and all other cores read at the same time) to a "0" value; in other words we have "cleared" this address. So, in order to retain the data in memory, we must write back the same data we just read out, by using the data we just read, recycling it and writing it into the core: "write after read."

29. Joseph M. Reagle Jr., "Friedrich Kittler: Discourse Networks 1800/1900," http://reagle. org/joseph/2003/seminar/1208-kittler-gabriele.html. Accessed May 31, 2008.

30. Linda Hutcheon, "Irony, Nostalgia, and the Postmodern," January 19, 1998, www.library.utoronto.ca/utel/criticism/hutchinp.html. Accessed May 17, 2008.