

"Der freie Klang" Symposium - Linz, Austria      Douglas Kahn    Sept/87  
 Ars Electronica Festival

The Sound of Music

Artistic activity involving sound has intensified recently. This can be attributed to a number of factors, not the least of which is a perception among those artists bent on discovery that the tenured artforms have long exhausted their respective periods of inaugural insight while a corresponding period has just commenced - or is impending - for the arts of sound. While others speak once again of endgame, here it's a season opener.

This phenomenon of a perceived field of artistic possibility within the tradition of the avant-garde appears to contradict the well-rehearsed historical scenario that states that the avant-garde of the first third of the century held the key artistic assumptions and strategies of what was to follow; post-WWII activities being relegated to little more than varieties upon historical repetition. This scenario is, in fact, persuasive in a vast number of cases, and it is not necessarily restricted to art. Postmodernism itself has been described in part as an incursion of the avant-garde into mass culture; the early avant-garde, according to Gregory Ulmer, may even claim Derrida's elaboration of collage.<sup>1</sup> But this scenario is not persuasive when it comes to sound for the simple reason that the arts of sound during the early avant-garde lacked fundamental areas of development: a stunted past resulting from an assortment of inhibitions, both institutional and discursive, both externally-imposed and self-imposed. If we are presently interested in attempts at departure, or at least in attempts at forwarding a compelling complication, we must face the problem that the sources of inhibition are still operative and have, in fact, since been joined by others. ((One thing I will mention without further comment is the fruits, both green and overripe, of the simple historical precedence of computer and electronic sound synthesis and processing over capacities for recording.))

The following will present what I, and other artists with whom I have spoken, understand to be the primary source of inhibition: the equation of an artistic practice of sound with music. We will call this the musical conceit. It's a discursive impediment which has tenaciously bridled artistic possibility, an impediment whose only positive feature is, from our vantage point, totally self-

-serving: the delay of potential discovery to the time at hand. It can be traced theoretically to the reductive features of any act of aural apperception and to the disposition of music to the total range of possible sound. Daniel Charles has mentioned these areas in his essay "Music and Technology Today" while observing various "concealments" in the musical practices of the post-war theoretical composers. He cites the contemporary philosopher Don Ihde who says that, for lack of earlids, prehensile focal lobes, at any one moment we can exert only psychical and not physiological control over the entirety of aural occurrence. This psychical control is "my attention and its selectivity. But this very selectivity is both what reveals something about sounds to me and at the same time conceals other aspects of sound."<sup>2</sup> For Charles, common approaches to music, especially received principles and practices of notation and predominant systems of organizing musical material, moving between the phenomenal and discursive, necessarily repeat this process of revelation and concealment. Furthermore, their insistent privileging of the latter symbolically promotes larger projects of "calculative" control. Reprieve, in this case, is to be found with the ideas and work of John Cage. I agree with these observations; however, they are necessarily restricted to music and thereby echo music's own delimiting efforts exerted upon the expanse of aural occurrence.... I will address more strategic matters.

There exists a concealment not contained by the bounds of musical practice which operates where music borders other possible artistic practices of sound. It is cast in terms of the most pronounced feature of the musical conceit: the demarcation between mimetic and non-mimetic aspects of sound at the material level of artistic practice. The intransigent loyalty to this demarcation seems to be fueled by its total arbitrariness, one which increases as contemporary pressures mount. There are many ways apart from music to conceive of and organize sound; there should be others still which cross any demarcation with impunity. Restrictions on this mobility distort the field of possible artistic practices not only between music and an art of sound, but also across an art(s) of sound itself, because musical imperatives are imposed across sounds which have nothing intrinsically musical about them. It doesn't stop at art; it's a very common practice to extend music as a trope to the totality of sound, and further still as a practice modeling others.

Before proceeding, let me say that the nature of music as being necessarily characterized by this demarcation is merely inherited. There would be nothing to prevent what is considered an extra-musical, artistic use of sound as music. Much, by default perhaps, is. But the persistent rejection and the ingrained silencing involved make it more tactically sensible to take music's self-characterization at face value, and proceed to build elsewhere.

I should also say that this discussion of musical conceit should in no way be confused with a conceit about music. To harbor one would be silly. In terms of phonography, the major terms in which this talk is cast, music is but one part of an aural reality which can be replicated and utilized in an embracive art of sound. Music is not thereby subsumed, but brought into a strategy of proliferation. In fact, what an art of sound which disregards the mimetic/non-mimetic demarcation loses when compared to the mimetic capacities of visual imagery, it picks up in its ability to engage in musical figuration.

#### Russolo and the Music of Noise -

The tradition of the mimetic/non-mimetic demarcation runs deep. There has been, of course, a role played by the real and self-consigned limitations of the capacity of music technology for aural replication and imitation, although plausible techniques for an art of mimetic sound have always existed (as the Russian Jefim Golyscheff hinted at during Berlin Dada). However, rationale for inactivity clearly cannot be sought among such limitations after the late-19th century development of phonography, the technology proper for aural imitation, for mimetic sound, for the repetition of all aural technologies (the voice, musical instruments, phonography itself) and phenomenal sound not uttered within artistic frames. Around the same time, the increasing din of mechanization (the phonograph was basically a sensitive metal lathe) and what Henri Lefebvre calls, in his Everyday Life in the Modern World, the "breakdown of referentials" emphasized the selfsame mimetic and social characteristics of sound. Lefebvre pegs the "breakdown of referentials" somewhere around 1905-1910, when, under the influence of science, technology and social changes, "the sense of hearing acquired a greater aptitude for interpreting visual perceptions and the sense of sight for interpreting auditive ones, so that they signify each other reciprocally," and where "objects, in practice,

become signs, and signs objects." The trajectory of aural "mimeticization" culminated during the 1920s, when phonography was boosted by electric recording and amplification and joined by radio and sound film to irretrievably code instances of sound across the whole range of "natural" sounds, noise, speech, and music.

But it didn't matter how widespread intensively mimetic sound became, artistic practices of phonography and mimetic sound refused to materialize during the ambitious explorations of the early avant-garde. When attempts were made, or should have been made, we find a musical silencing at work. It occurs the very instant sound enters the avant-garde: Luigi Russolo's "art of noise". From the way he conceived his artistic raw material at a molecular level to the reception of his work by others, notions of music suppressed a radical art of sound. His inaugural manifesto of 1913, while showing signs of struggle against the microtonal musical concealments of the reigning Italian Futurist composer, Francesco Balilla Pratella, demonstrated a deep-seated tension on the question of whether the art of noise should have artistic independence or whether it should be attached to music. The resolution within the project of a "great renovation of music" created a source of continual difficulty.

One difficulty cropped up immediately. Russolo placed the art of noise at the culmination of the historical trajectory of music. Music, he said, was born in ancient times of a separation from the world of sound, detached throughout the ages from the momentum of life and stagnant while culture progressed. Music attempted to recuperate this separation and the accompanying irrelevance by claiming a fatuous transcendent power, from which heights it directed and policed a "fantasy superimposed on reality." However, the noise from the "growing multiplicity of machines," the sounds of modernism, of the city and warfare, no longer allowed such superimposition but instead, Russolo insisted, mandated the very type of connection with life denied since the origins of music.

Yet, once he embraced these sounds he refused the mimetic aspects which actually connected them in so many ways with daily life. Instead, at its root a noise's signature was to be timbral only....physical, areferential. Instead, the verticality of noise, its indeterminant harmonic complexity, served at once as a representation and surrogate for the accumulated complexity of "life". Therefore, despite his argument for an approach to sound

that, to his mind, had never existed, no supercession or departure took place, no space for an artistic practice with any degree of autonomy was attempted, the culmination of the trajectory of music was to remain musical.

His ideas for an "art of noise" were supported by his idea of art in general. Art was of the emotions and mimesis has no business in the depths of the psyche where those emotions traversed. The artist alone was to be in control of the artistic material. Imitation, though, reminds people of their own encounters with the world and these mnemonic representations stirring above the unconscious, multifarious and transient bits of material that they are, are out of composer's control.

The intonarumori, the instruments Russolo built to play his art of noise, were designed accordingly. For having been produced within an artistic response to modernism's encroachment of motors and metals, their core design drew not from contemporary technology but from the technology of traditional musical instruments: the drum, hurdy-gurdy, lion's roar, etc. Because none survived, what the intonarumori sounded like is a matter of speculation. Ear witness accounts of concerts and demonstrations, however, do repeat the same split on the question of imitation and music. Russolo acknowledged that the intonarumori were quite capable of "misleading," i.e., of producing sounds of an identifiable nature. He consequently sought methods to avoid this from occurring and rationale to allay fears that it might occur. Other individuals who commented on the intonarumori and the art of noise asserted, for the most part, an intractability of imitation. Consequently, they understood the art of noise to be incommensurate with music, or, since music was understood as the sole art of sound, incommensurate with the requisites for any art. It was dismissed as a vulgar case of sound effects or put to work in the degraded task of providing sound effects. Russolo long persevered attacks of this sort. However, after many years he internalized the opinion that the nature of his art was, in fact, imitative. In the 1920s he designed instruments explicitly capable of "misleading", culminating in the Russolophone, a keyboard instrument so capable of imitation it was used to accompany silent films. In this respect, he had arrived at an instrument which served the function occupied already by sound effects organs. And along with the sound effects organ it was rendered obsolete by sound film. It's clear if Russolo's art of noise had been conceived and carried out while taking into account

all aspects of worldly sound, instead forcing sounds into the reductive mold of music, the return of the repressed mimesis would not have taken the trivialized form of sound effects. Neither would his art have been so easily savaged by the new technology of sound film. If he had integrated mimesis into the very material of his art, the art of noise would have been an art.

### The Intervening Years -

Another significant state of affairs was encountered with cubism, especially in the difference between analytic and synthetic cubism. Analytic cubism's dissolution of representation was performed under the sign of music, very much along the lines of Walter Pater's axiom that all arts aspire toward the conditions of music. Music provided a model for aspirations toward nonreferentiality and as a system of relationality per se - simultaneity, for instance, was child's play for music. If there would have been a practice of sound based upon analytic cubism, in other words, it would have been indiscernable from music. Synthetic cubism was a different matter altogether. Its incorporation of actual objects would have led to a practice of sound substantially different than music, one which may have been inaugurated with the ballet Parade, had the proposed use of mimetic sound not been excluded and diminished. We may ask, in fact, with each instance of collage in painting, sculpture, photography and literature during the early avant-garde, where was the corresponding practice of sound? Remembering that what was, and is, fancied as musical collage is basically quodlibetical, i.e., an organization of other musical material, whereas the collage of Synthetic Cubism, in addition to its representational machinations, implies artifacts foreign to the conventionalized substratum.

The 1920s were the time that the full range of sound - speech, music, sound/noise, and the quotidian sound of the media encompassing them all - finally became socially audible. The spread of radio, electrical advances in phonography, and optical sound film in the 1920s and 1930s encouraged a rash of speculative activity mostly directed toward music, e.g., Antheil's plans in Mr. Bloom and the Cyclops (1925), Hindemith, Toch, Varèse, Stowkowski, Moholy-Nagy, Fischinger, Respighi and his nightingale in the Pines of Rome, even Raymond Roussel a number of years earlier had phonographic inventions lurking in Locus Solus, or Henri Martin-Barzun's with his

proposed use for phonographs in performing simultaneous poetry. There was more reprieve from music during the Weimar Republic when Iwan Goll and Erwin Piscator introduced phonography into theatrical stage machinery, when Weill, Brecht and Arnheim argued for radio's artistic prospects. The same was true for Vertov, Khlebnikov and others for radio in the Soviet Union, and in Italy in 1933 Pino Masnata and F. T. Marinetti penned their "La Radia" manifesto. Ventures in avant-garde film sound maintained the musical conceit inherited from the "visual music" of earlier films and from the residual 19th C. synaesthesia of colored light organs of the Bauhaus and elsewhere, or Raoul Hausmann's optophone. In the late-30s some individuals imagined a music cast from sound effects files and libraries of optical sound film; archives being instruments-in-repose. But, as Carlos Chavez observed in 1937, "No musical creations taking advantage of the wealth of the film's sound resources have yet appeared." -- an observation with some lasting power.<sup>3</sup>

The irrepressible incursion of societal sound after the war, especially sound of television - ((we must remember that eventually people in the U.S. would come to hear the bulk of their music on television, where it cannot escape explicit codifications)) - and the burgeoning capitalist spectacle, required that musical theoreticians and theoretical musicians make explicit arguments for what did and what did not constitute raw material for music. It is in the period writings of such people as Milton Babbitt and Pierre Boulez that one finds, as one would expect, the most disciplinary of proclamations, an aristocratic scientism set awkwardly against surmounting social and artistic pressures. However, they never made pretense for dealing with anything else but received notions of music, they never laid claim to dealing with sound in an extensive manner; they instead dealt with the select epochal sounds of "civilization."

However, pretense was made with musique concrète. Pierre Schaeffer's "acousmatics", i.e., his introduction of phonographic sound only to rid it of its associative traits, coupled with his general conformance to received musical modes of organization, has consequently had a more stifling influence than the one arising from more venerated quarters. Like the others, Schaeffer wanted nothing more but to make music, yet his original formulations have enticed individuals to this day to glibly subsume artistic uses of phonographic material under musique concrète. The nature of the

influence carries on from the same conservative impulse which compelled him, for instance, to design his solfeggio-like structures and other musically derived technicisms. Here a musical concealment is indulged long before questions of sound, and thus musical conceit, arise.

### Sound as Cagean Music -

The most influential maintenance of the musical conceit during the post-war period is to be found in the aesthetic program of John Cage. Despite his work being the most serious and sustained challenge to musical thinking of recent times, not to mention artistic areas outside the bounds of musical practice, when it comes to an art of sound Cage's thought has had a limiting effect. It would not be that major of a concern had he not professed, as he has done consistently, to be dealing with sound per se. It is primarily through this claim that the conceit has survived and the basis of critique resides, a faithfulness to the tradition that turns back to haunt some of his own central precepts.

It is an irony of Cage, whose name shares the same breath, in the Western context, as postmodernism, that the principle practiced to maintain the demarcation between mimetic and non-mimetic sound is more characteristic of modernism. He bridges modernism and postmodernism, in this respect, as his career has bridged the war years, from its beginnings during the mid-30s to its manifest influence beginning in the early-50s. In a 1942 statement, presaging Schaeffer, he sought to deny the character of the sounds made available by phonography and optical sound film by keeping "their expressive rather than representational qualities in mind..."<sup>4</sup> He put this into action in 1952 with Imaginary Landscape No. 5 and Williams Mix. The former employs the sound of any 42 phonograph records and was, according to Cage, "the first piece of music for magnetic tape made in this country."<sup>5</sup> Williams Mix was composed as part of Louis and Bebe Barrons' "Music for Magnetic Tape" project in New York, to which Earle Brown, Morton Feldman, David Tudor and Christian Wolff also contributed. Williams Mix was a dense agglomeration of minute sound fragments from very divergent sources.



The score is written for tape traveling at 15 inches per second. Each page last 1-1/3 seconds, and the whole score (192 pages) lasts a fraction over 4-1/4 minutes. The materials employed fall into six categories [A (city sounds), B (country sounds), C (electronic sounds), D (manually-produced sounds, including the literature of music), E (wind-produced sounds, including songs) and F (small sounds requiring amplification to be heard with the others)]. Some 500-600 sounds were recorded by Louis and Bebe Barron; the eight tapes were assembled over a 9-month period by Earle Brown, David Tudor and myself.<sup>6</sup>

For the listener equipped with the framing discourse, the collapse of such a web of sound will barter, like much other music, in representation in and of itself; it may even represent "music" just as the prized ineffability of music will, at the very least, represent ineffability. In this respect, Williams Mix is to representation what 4'33" is to proximal acoustic experience. However, any associations of the sounds - perhaps with their source - were displaced to a play a sole role of noise. Like Russolo, noise was at once Cage's ticket to the world and his foil against musical convention. For both, noise was the elastic separation needed to realize a renovation of music. ("Noise" has no ultimate meaning short of physical pain and damage. But what is stunning?) Once Cage claimed that any sound, any noise, was to be accepted for delectation or deliberation - "as is" - especially as it occurred in situ, outside a musical venue, its prior transgressive function was sapped: noise had become instrumental. Its prior function was simply replaced by another inhibition, one which had existed before but was even less thinkable than noise, that of the mimetic demarcation. For Cage, reference is the new noise.

Cage understands silence to be inextricable with the world of sound. 4'33", although it is known as the "silent piece," concerned an explicit reversal along these lines, but not in the globalized, quotidian sense of all silence and all sound. Instead, he silenced the music to musicalize sound.<sup>7</sup>

((He's also willing to musicalize language, a practical consequence of adhering to the musical conceit. The demarcation of mimetic and non-mimetic sounds results in a notably prescriptive schism between what are considered proper sites for artistic and discursive activity (a schism

reminiscent of the one in Ad Reinhardt between his black endgame paintings and cartoon critiques - the main difference being that Reinhardt was a self-described creature of art institutions whereas Cage breaks into daily life). The musicalization of language passes across this schism in one direction only; there is no reciprocation. There's also the related schism between the naive content of Cage's "electrical utopia" and the sophisticated method of his "systemic approach" - as reported by Kathleen Woodward in her essay "Art and Technics." My comments here note that a certain lack of sophistication exists as well in his systemic approach.))

A piece like Williams Mix makes all sounds available for musical utterance whereas 4'33" extends musical apperception to any sound whether it was uttered musically or not. Such a performance can take place outside an institutional venue and occur anytime, anyplace. It's simply a matter of attunement.<sup>8</sup> "If you want to know the truth of the matter, the music I prefer, even to my own or anybody else's, is what we are hearing if we are just quiet."<sup>9</sup> But the character of this attunement, even after the institutional skin has been shed, requires that sounds be stripped of their semantic content, at the minimum, simply because it is enacted within the extant discursive terms of musical reception. Although sounds may, as a last resort, be left unhampered to stand as periodic affirmation of indeterminacy, this signals no departure: apart from a reduced tactical role, mere invocation partakes in a selection that never remains innocent; also, the ever-present, implicit directive to maintain an attunement against the incursion of reference narrows an individual's relationship to the sonic/semiotic object. In attempting to neutralize the object by making it musical or to make it musical, individual listeners are, as a consequence, also compromised through being asked to jettison their social positionings, ape-ing wolf children as it were, resulting in a rather despairing vision of human subjectivity, let alone the potential for radical subjectivity.

In the same moment the authorship of an indeterminate composition by Cage can be problematized, we can also only hope that, when a person, under the suggestion of Cage, listens "omniattentively" with "happy new ears" to aural reality separate from a discrete composition, no residual authorship associated with Cage himself remains. The question of his authorship, however, is secondary. Any attunement under the sign of music will necessarily aestheti -

cize, enculturate, and generally barter in aspects contributing to the social constitution of subjectivity to which authorship belongs, a degree of anthropomorphism very much counter to Cage's stated desires. To argue that it does not impose a socio-cultural figure, to argue that any representation of nature is not historical, to appeal to the fancied naturalization of all sound by music, is to exacerbate what is denied by making it surreptitious. The way this contributes to symbolically legitimate normative and imperial attitudes runs counter to ecology and social ecology, despite the fact, or perhaps central to the fact, that Cage equates music and ecology: "Music, as I conceive it, is ecological. You could go further and say that it IS ecology."<sup>10</sup> [original emphasis] Any practice in representing nature, the nature in humans, the social representations of natures, is necessarily ecological. But there are distinctions within ecological practice itself. I am thinking of ecology here as both a figure and practice of subject-object relations containing older ideational notions of human-to-nature relations in aesthetics and the more recent functional and ethical relations found in ecology, which must integrate politics in its core project or eventually, perhaps immediately, become oppressive. Cage's happens to be the ecology of an aesthete; the accommodations he makes for socio-political aspects are distant from both his programmatic corpus and his artistic practice. He shares with many others this willingness to cast very far the web of music. R. Murray Schafer, for instance, has stated rather baldly in The Tuning of the World, derived perhaps, along with Cage himself, from the normative sweep in McLuhan: "Today all sounds belong to a continuous field of possibilities lying within the comprehensive dominion of music."<sup>11</sup> (original emphasis) There seems to be no willingness to recognize the symbolic violence committed. When, after all, was the last time you heard the word "dominion."<sup>12</sup>

#### Instrumental reasoning -

Well outside the influence of Cage, or any theoretical composer for that matter, the musical conceit is strongest in the realm of recent developments of digital sampling instruments. It's a commonplace notion that discourse is structured into any technology, but here, away from the theoretical and marginal arts, it is exacerbated as it falls into lockstep with the economic imperatives of the music of mass culture. Over the last several years, the technological fruits of industry can be witnessed at a

glance in trade and popular magazines. As their subtext, and in intermittent articles and comments, these fruits have been equated with an opening up of artistic possibility. But what has occurred may be better described as an implosive outpouring, a concentration of what already exists.

This is most evident when it comes to the very idea of instrument. Sampling keyboards and other interactive configurations may condense a number of instruments to one location, expedite the utterance of certain sounds, deploy whole families of sound not previously available for interaction, etc., but this is done almost entirely for the replication of existing musical instruments, within accepted musical vocabularies, including noise, while the basis of sampling in the properties of phonography suggests a new non-musical conception of instrument. The locus of sounds in a conventional musical instrument, say, a violin, is congruent with the physical locus of the instrument itself, very much, by the way, along the lines of speech, overall, of the metaphysics of presence, a site of unbridled subjectivity in contact with a pure physicality of materials. When a violin is played sound originates at the physical site, at the site of wood, metal, fiber, at the site of the performer's rooted interaction with physicality. Phonographic sound originates elsewhere and lacks a significant congruence with the technology itself. The instrument instead can be conceived as some type of configuration, a locus, selected through a theoretically unlimited mobility throughout the giddy seas of signification, infinitely varied concatenations separated out from the full range of sound. An instrument's locus - i.e., in the most compelling way, the instrument itself - would no longer be physical, present, but semiotic.

The displacement phonography makes possible makes possible an explicit shift in instruments from sonics to semiotics, a shift where recording can exhaust a congruence with performance. Instead of material physically conceived, organized in this way or that, an instrument would work from and within fields of existing meanings to repeat them and generate others, and those others may very well be negations of those repeated. The locus/loci of meanings must be initially determined, creating the discreteness required of any instrument, putting them at the end of at least one immediate decisionistic process, but they stand as a source and vehicle, not a destination. Nevertheless, the destination, i.e., the performance of the instrument, may in turn serve as the source of another

instrument, or a destination may be arrived at through the performances of several instruments, and so on.

In musical instruments there are two labors which are easily divorced. One in which the source may be wood, metal, fiber, skin, even electronic ((where "any composer working at a synthesizer is, in effect, an instrument-builder as well." Elliott Schwartz Electronic Music)), etc., configured labors which do indeed have meanings built in, but meanings distant from those generated from the labors of performance. In new instruments, the fact that both material and organization, organization and product, share the same substratum, creates a complex where, for instance, supple demonstrations are possible in which what would otherwise be considered a performance could serve in the same moment as an instrument or component of an instrument. Thus, a negotiated ever-shifting mobility which could potentially achieve the transparency of a Klein bottle - the resonance of a Klein bottle - something of a wind instrument (at least in the vision of a glassblower who sucks) - would be in reach. In the process the type of schism found in Cage between sites of discourse and performance could seek repair.

From a more institutional perspective, this can be understood as completing a simple reversal in the way the position of phonography is generally conceived and practiced. Instead of a means of replication and repetition geared toward dissemination through media markets, no matter how subaltern, an instrument may partake in centripetal processes. That this centripetal movement has been restricted to the sonorities of the studio and not opened up to the entire aural world demonstrates just how stagnant the socio-aesthetic pools remain.

Although it will be the purpose of another essay to develop one basis for composition with this new idea of instrument, it can be said that an important element will be the development of capacities for aural writing (along the lines writing music has always been writing with recording). With sound fragments retaining aspects of worldly meaning or mimicking them, thus satisfying the minimum requirement to invoke the ilk trafficked in poetry, literature, cinema, theater, reportage, etc., i.e., as they would occur in a perceptual mode of what Rudolf Arnheim called "blind hearing," there would be the potential to migrate freely among all these meanings and to migrate among all other sounds as well, music included, instead of keyed specifically to reproducing of existing

aural cultural forms, to perhaps reproducing all these forms at once, migrating among conventions to break them open, collapsing into the general aural environment.

Phonography has a tension between writing and music historically built into it. From the time of its commercial release, Edison didn't think of phonography primarily as a means to mass reproduce music; he later had to contend with the fact that this was how the phonograph was being implemented. In 1913 he awkwardly promised improvements in his phonograph to make it "the greatest musical instrument in the world." Phonography as an activity in Edison's formulation comes from the act of inscription involved in writing: "phono-graphy" itself literally means voice writing. The Gramophone Company's trademark was an angel, quill in hand, perhaps plucked from its own wing, writing upon a disc, much in the same way photography was called "the pencil of nature." Edison would in fact talk of this sound or that to be phonographed, captured in dents much like light was locked into chemicals (in the 1930s, similar correspondences existed between phonography and photography with the "sound photography" and "sound camera" of optical film sound). From the pencil or phonographic needle of nature to the typewriter, the same VDT can today display digital sound editing, photographic manipulation and word processing. Digital has not merely made Edison's phonograph into a musical instrument but an instrument for any cultural practice of sound. Digital has the potential to resolve Edison's tension between writing and music by repeating signification at a social level, and dispersing and recollecting it at a molecular level.

There are many other areas of development, both technological, performative and compositional, such that the whole project to take advantage of the new artistic possibilities is a rather ambitious and protracted one. It has to be stated outright that adequate technology already exists, is in the process of proliferating, and that the main work now is compositional, artistic and conceptual. However, possibilities carry the threat of profound disruption and can create a situation to be avoided, in this case, by those who gravitate to digital technology for reasons of technological fascination, mathemusic, psycho-acoustics, in other words, nearly all those who supervise, institutionally and discursively, the equipment. An aural cultural practice along a greater gamut of signification -- everything polyphonic and polysemic, an artistic practice open to all those who write, for instance, not just those

who solder, one which could break down the restricted access which still plagues us and begin, from one angle at least, to democratize the technology -- will subsequently be avoided. Nevertheless, we will undoubtedly soon enjoy centers which explore the unique compositional possibilities presented by these instruments, in the way electronic and computer music studios cropped up two and three decades ago, so that the work can get underway. They may eventually become integral to poetics programs.

### The Exception: Vertov -

It is true that in the pre-WWII avant-garde neither an art of mimetic sound nor a phonographically-based art of sound was developed, and that those who were in the best position to do so (as well as the general discursive milieu) suffered from a (dia-)chronic musical conceit. This does not mean that a fairly clear intent was left undeveloped, nor that no one escaped music: we can find this, to my knowledge, we can only find this in the activities of the Russian Dziga Vertov, best known as a revolutionary filmmaker in the company of Eisenstein, Shub, Pudovkin, Kuleshov, and others. As a matter of fact, he did not set out to become a filmmaker but, instead, attempted around 1916, after gaining background in writing and music, what would now be called audio art. As a boy Vertov wrote energetically in many genres and when he reached age 16 he entered conservatory for three years to study violin, piano and music theory. In 1916, while attending the Psychoneurological Institute in Petrograd, he was introduced to some of the major players of the Russian avant-garde, including Brik, Rodchenko and Mayakovsky. The combination of a background of writing and music, amidst the adventurous imperatives of the avant-garde -

...turned into an enthusiasm for editing shorthand records [stenographs] and gramophone recordings. Into a special interest in the possibility of documentary sound recording. Into experiments in recording, with words and letters, the noise of a waterfall, the sounds of a lumbermill, etc., a "Laboratory of Hearing."<sup>13</sup>

Toward the end of 1916, Vertov attempted to realize his Laboratory with a 1900 or 1910 model Pathéphone wax disc recorder.

I had the original idea of the need to enlarge our ability to organize sound, to listen not only to singing or violins, the usual repertoire of gramophone disks, but to transcend the limits of ordinary music. I decided that the concept of sound included all the audible world. As part of my experiments, I set out to record a sawmill.<sup>14</sup>

It's assumed he became frustrated with the poor sound quality. Indeed, he spoke of his transition to film in terms of an inadequacy of phonographic technology. In his recollection, upon...

...returning from a train station, there lingered in my ears the signs and rumble of the departing train...someone's swearing... a kiss... someone's exclamation... laughter, a whistle, voices, the ringing of the stations bell, the puffing of the locomotive... whispers, cries, farewells... And thoughts while walking: I must get a piece of equipment that won't describe, but will record, photograph these sounds. Otherwise, it's impossible to organize, edit them. They rush past, like time. But the movie camera perhaps? Record the visible... Organize not the audible, but the visible world. Perhaps that's the way out?<sup>15</sup>

In this respect, the famed Kino-Eye, the fetish of much post-WWII avant-garde film, seems to have been the result of a frustrated ear. An inability to "phonograph sounds", in Edison's words, resulted in a "desire to "photograph these sounds." The deficiency of the technology cannot be equated with poor sound quality. Since the creation of phonography, determinations of sound quality have largely been creatures of the moment. Whatever shortcomings in resolution may have been perceived need not have been suffered. Just the opposite, they could have been valorized through the avant-garde's preference for ragged surfaces and raucous environs. For instance, Tristan Tzara understood Dada capable of an "elegant and unprejudiced leap from a harmony to the other sphere; trajectory of a word tossed like a screeching phonograph record..."<sup>16</sup> The deficiency instead comes about in relation to Vertov's desired montage organization of the recorded material. Without the electrical recording and amplification that was to become available in the 1920s, he would have been unable to re-record without serious generational loss.



He did not wait until proper sound film technology to begin realizing his ideas of sound. From the moment he began filmmaking until Enthusiasm (1931), his first sound film, he engaged in virtual sound, to prepare for the inevitable advent of sound in Russian film (he did this, by the way, before sound had come to American film). He introduced "implied sound" into his films, argued theoretically concerning sound, championed an expanded concept of radio, and argued against the dogma inhibiting relationships between sound and image set forth by Eisenstein ("A Statement") and others. He also argued against the "theory of caterwauling." In 1929, while Vertov embarked upon Enthusiasm, the film critic Ippolit Sokolov wrote in "On the Possibilities of Sound Cinema" that the natural world of sound was not conducive to recording.<sup>17</sup> The outdoors and the remote, the sounds of work, industry, celebration, public gatherings, etc., i.e., a large part of the domain of documentary, was not "audiogenic."

Agitational and scientific films will be produced not in the lap of nature, not in the noise of the streets, but within the soundproof walls of the film studio, where no outside sound can penetrate. The sound movie camera will least of all film 'life caught unawares.' The unorganized and accidental sounds of our streets and buildings would become a genuine cacophony, a literally caterwauling concert.<sup>18</sup>

Vertov understood Sokolov's "theory of caterwauling" to be "anti-newsreel," i.e., very much within the mold of formalist critics who preferred only actors and acting upon the screen - in the venacular: played films. Vertov also understood it as symptomatic of an exclusivist conceit derived from music.

...everything which is not "sharp" or "flat," in a word, everything which does not "doremifasolize" was unconditionally labeled "cacaphony."<sup>19</sup> [cacaphony being a synonym for caterwauling]

Vertov considered the true refutation of Sokolov's "theory of caterwauling" to be Enthusiasm itself. There was nothing do-re-mi in the "setting of din and clanging, amidst fire and iron, among factory workshops vibrating from the sound."<sup>20</sup> Vertov "penetrated into mines deep beneath the earth," much like Nadar in the catacombs, and rode atop "the roofs of speeding trains" lugging

twenty-seven hundred pounds of recording equipment, developed specifically for the film, and...

...for the first time in history recorded, in documentary fashion, the basic sounds of an industrial region (the sound of mines, factories, trains, etc).<sup>21</sup>

Vertov may have rejected Sokolov's music-like exclusivity but he didn't reject music, nor could he with his background and approach. He often referred to his role in filmmaking, not as director, but as composer.<sup>22</sup> He called Enthusiasm a "symphony of noises" and the film's second name, under which it was known in Russia, is "Symphony of the Donbas." "Symphony" as a figure is, in one of the many aurally reflexive moments of the film, extended to signal the "harmonic" organization of the activities of the 5-Year Plan in the Don Basin Region, and its parallel in the structure and process of the film itself. In a note sent to Vertov from London (Nov. 1931), Charlie Chaplin wrote:

Never had I known that these mechanical sounds could be arranged to sound so beautiful. I regard it as one of the most exhilarating symphonies I have heard. Mr. Dziga Vertov is a musician....<sup>23</sup>

Vertov invoked musical metaphor without the reduction, regularization or aestheticization it had come to impose in general cultural discourse, because the metaphor had to interact within a documentary context that Vertov called an "enthusiasm of facts" and a literary process wherein sounds themselves were scripted; with Enthusiasm, the sound was scripted prior to the visuals.<sup>24</sup>

Since his art of sound was to be caught up in relationships with visual images, we can only feebly speculate what a Vertov audio art, an autonomous practice of recorded sound, would have sounded like. Film historian Seth Feldman says it's possible to infer what a Radiopravda production would have sounded like by sonically animating the titles and implied sounds in Kinopravda No. 23. But what about a pre-Revolutionary work, still caught in the Cubo-Futurist exuberance of the twenty-year old in St. Petersburg? And how might this have developed after October, through the 1920s, or past the Stalinist anti-formalism of the 1930s? The legacy that we have received from him is the way he approached the new artistic

possibilities of sound in a nondogmatic, pan-disciplinary way, away from the full weight of the musical conceit, along "the line of maximum resistance" as he called it. He asked of his audience that any of the difficulties they might encounter be perceived in the proper context, not as "a shortcoming, but as a serious, long-range experiment."<sup>25</sup> If we take his experiment in the terms in which he cast it in his youth, i.e., in a practice of "blind-hearing", then we realize that the long-range experiment - to work where sound signs - is still before us.

1 "...given that the collage in general is the most characteristic mode of composition in the modernist arts and that Derrida is the first to develop fully a theory (epithymics) that conceptualizes this mode, it is fair to say that Derrida's grammatology is to the collage what Aristotle's poetics to Greek tragedy." Gregory L. Ulmer, Applied Grammatology. Baltimore: The Johns Hopkins University Press, 1985. p. 59.

2 Don Ihde, Existential Technics. Albany, NY: SUNY Press, 1983. Cited in Daniel Charles, "Music and Technology Today" in René Berger and Lloyd Eby, eds., Art and Technology. New York: Paragon House Publishers, 1986.

3 Carlos Chavez, Toward a New Music. New York: W. W. Norton, 1937.

4 John Cage, "For More New Sounds" (May-June 1942) in Richard Kostelanetz, ed., John Cage. New York: Praeger, 1970. p. 66.

5 John Cage, "[On Earlier Pieces]" in Kostelanetz, p. 130.

6 John Cage, "[Williams Mix]" in Kostelanetz, p. 109-11.

7 Kathleen Woodward, "Art and Technics" in Kathleen Woodward, ed., The Myths of Information: Technology and Postindustrial Culture. Milwaukee: University of Wisconsin, 1980.

8 Music through attunement is one step back from Russolo's intervention proposed in his first manifesto: "...We shall amuse ourselves by orchestrating in our minds the noise of the metal shutters of store windows, the slamming of doors..." etc.

9 "Conversation with John Cage" in Kostelanetz, p.12.

10 John Cage in conversation with Daniel Charles, For the Birds. Boston: Marion Boyars, 1981. p. 229.

11 R. Murray Schafer, The Tuning of the World. Philadelphia: University of Pennsylvania, 1977. p. 5.

12 One example of an art of sound conceived under a Cagean musical conceit is that of the well publicized work of Bill Fontana, in particular, the recent coordinated radiophonic project Satellite Soundbridge between San Francisco and Köln linking the sound sculptures Sound Sculptures Through the Golden Gate and Metropolis Köln. I'll say at the outset that the celebration these works have received appears to be attributable to a displaced admiration of a formidable technological apparatus mobilized for the goal of artistic purposes, not attributable to artistic purposes themselves. They would have run less a risk of being mundane and might have been better equipoised with the technology had he not abided by the imposition of musical ideas on the aural environments.

Fontana promotes the typical musical trope: "We are surrounded by music." Per his activities in Köln: "It was my intention to temporarily turn the urban landscape of Köln into a musical sculpture." In his work the associative characteristics of sounds are invoked and then led to labor under the sign of (Cagean) music. The application of music to a "portrait" of a city has a history and, like Fontana's Köln, it is a German city: Walter Ruttmann's 1927 cross-section film, Berlin, The Symphony of a Great City. Ruttmann's film disregarded things left untouched by the surface inspection of the camera. It opted instead for "optical music", formally submerging the social workings of the city through, for example, its use of "rhythmic montage". As Siegfried Kracauer wrote in 1928, "This symphony fails to point out anything, because it does not uncover a single significant context." There was actually a greater depopulation of Fontana's Köln than there was of Ruttmann's Berlin. Social sounds were aestheticized and the discursive sounds which did exist were diminished, e.g., the sounds of pedestrians in Köln were miked from beneath a manhole cover, in the same manner the cars crossing the Golden Gate bridge were miked from below. It was accompanied, in the San Francisco area as well,

with a pervasively uncritical sense of the social factors involved in representations of nature.

(( The sounds were gathered from the surrounding areas, dominated by "natural" sounds from physical (e.g., river water) and animal (e.g., zoo, offshore wildlife) sources, mechanical sounds (e.g., expansion joints in bridge) and non-discursive human sounds (pedestrian sounds). These were presented, under a Duchamp-inspired ploy of "found objects", without very much alteration and were organized along simple lines of simultaneity. In the iconography of the work, the Köln Cathedral and the Golden Gate Bridge functioned, in their respective areas, as architectural loci, symbolic antennae, around and within which sounds were gathered and distributed. They also functioned as fixed sites, monuments and monumental scale, sculptural solidity in the absence of any provided by the displaced aurality. Other reductive operations at work, besides the musical conceit proper, include: the stasis of "sculpture" applied to communicative and social processes, the naturalization of urban realities through the figure of "landscape," the artworld rhetorical currency of "found object" without the institutional and discursive critiques originally attendant upon Duchamp's usage, exhuming the cubist/orphic notion of "simultaneity" to dignify basically mundane contemporary experiences of telephonic or radiophonic displacement or "relocation", the modernist media arts idea of a technology's proper perceptual object, psycho-acoustics as the scientific surrogate for the socio-cultural aspects of sound, etc.))

13 Dziga Vertov, Kino-Eye: The Writings of Dziga Vertov . Annette Michelson, ed. Berkeley: University of California, 1984. p. 40

14 Dziga Vertov, "Speech of 5 April 1935," cited in Seth Feldman, Evolution of Style in the Early Work of Dziga Vertov . New York: Arno Press, 1977. p. 13. For a astute comparison to Russolo's work, a source which influenced Vertov, refer to Feldman's comments pp. 12-15.

15 Feldman, p. 40. my emphasis.

- 16 Tristan Tzara, "Dada Manifesto 1918" in Robert Motherwell, ed., The Dada Painters and Poets . New York: Wittenborn, 1951. p. 81.
- 17 Vertov, p. 112 ftn.
- 18 Quoted in Herbert Marshall, Masters of Soviet Cinema . Boston: Routledge & Kegan Paul, 1983. p. 81.
- 19 "First Steps." Vertov, p. 114.
- 20 "Let's Discuss Ukrainfilm's First Sound Film: Symphony of the Donbas." Vertov, p. 109.
- 21 Vertov, p. 109, original emphasis.
- 22 Jay Leyda, Kino: A History of the Russian and Soviet Film . New York: Collier Books, 1960. p. 177.
- 23 "From Notebooks, Diaries." Vertov, p. 170.
- 24 Cf. "Sound March," Vertov, pp. 289-293, and Michelson's comments on p. 327.
- 25 Vertov, p. 112. For a valuable analysis see Lucy Fischer, "Enthusiasm: From Kino-Eye to Radio-Eye," in Elisabeth Weis and John Belton, ed., Film Sound: Theory and Practice . New York: Columbia University Press, 1984. pp. 247-264.