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SEEING IS NOT HEARING

SYNAESTHESIA, ANAESTHESIA AND THE AUDIO-VISUAL

FROM *GESAMTKUNSTWERK* TO SYNAESTHESIA

Human beings are endowed with five senses, five different channels through which we gather information about our ever-changing environment. Communicating between inside and outside, four of these sensory channels originate in particular orifices—eyes, ears, nose and mouth—through which our bodies open out onto the world. The remaining sense, touch, is dispersed across the entire surface of the skin, an enveloping membrane that registers the minutest of stimuli.

The division of the arts largely accords with this sensory distribution and fragmentation, and also with the traditional hierarchy that separates the two "noble senses" (seeing and hearing) from their more vulgar associates (taste, touch and smell). Painting and sculpture address the eyes, music the ears. The former belong in a museum or gallery, the latter in the concert hall. Each has its own history, which only rarely overlaps with the other. And while there are surely mixed arts—theater and cinema, for example—we still unproblematically speak of "the visual arts" and distinguish them from music as apples to oranges.

However, despite this sensory fragmentation, physiological dispersal, and aesthetic hierarchy, we experience the world as a unity. We don't feel ourselves to be constantly coordinating and translating between heterogeneous streams of sensory data. Rather, the world seems to come to us undivided and complete. Acknowledging this mysterious emergence of unity from plurality, Aristotle posited a sort of sixth sense—a *sensus communis* or common sense—whose role was to coordinate the five sensory streams and ensure their agreement with one another.[1] Aristotle's hypothesis profoundly influenced his successors; and variants of it continue to inform current scientific research.[2]

If we experience the world as a sensory unity, shouldn't the arts affirm this union?

On this question, modernism was deeply divided. One of its most powerful and influential theorists, Clement Greenberg, argued that the distinctiveness of the modern consisted precisely in the segregation of the arts from one another and the autonomous development of each. In particular, Greenberg was concerned to purge the visual arts of every extra-visual sensation (tactility, for example) in order to render them "purely optical."[3] Yet, from the outset, prominent modern artists pressed an alternative position, advocating for sensory and esthetic unity. This call was boldly sounded by the composer and dramatist Richard Wagner in his 1849 essay *The Artwork of the Future*, which insisted that only a true synthesis of all the arts—a *Gesamtkunstwerk* or "total work of art"—could realize art's true purpose. Wagner wrote: "Each separate faculty of man is limited by bounds; but his united, agreed, and reciprocally helping faculties—and thus his faculties in *mutual love* of one another—combine to form the self-completing, unbounded, universal faculty of men. Thus too has every *artistic* faculty of man its natural bounds, since man has not *one only Sense* but separate *Senses*; while every faculty springs from its special sense, and therefore each single faculty must find its bounds in the confines of its correlated sense. But the boundaries of the separate senses are also their joint meeting-points, those points at which they melt in one another and each agrees with each: and exactly so do the faculties that are derived from them touch one another and agree. Their confines, therefore, are removed by this agreement; but only those that love each other can agree, and "to love" means: to acknowledge the other, and at like time to know one's self. Thus Knowledge through Love is Freedom; and the freedom of man's faculties is—*All-faculty.*

Only the Art which answers to this "all-faculty" of man is, therefore, *free*; and not the Art-*variety*, which only issues from a single human faculty. The Arts of Dance, of Tone, of Poetry, are each confined within their several bounds; in contact with these bounds each feels herself unfree, be it not that, across their common boundary, she reaches out her hand to her neighboring art in unrestrained acknowledgment of love. The very grasping of this hand lifts her above the barrier; her full embrace, her full absorption in her sister—i.e., her own complete ascension beyond the set-up barrier—casts down the fence itself. And when every barrier has thus fallen, then are there no more *arts* and no more boundaries, but only *Art*, the universal, undivided."[4]

In the decades that followed this proclamation, Wagner's *artistic* call for a union of the senses was bolstered by a burst of *scientific* interest in synaesthesia, the neurological phenomenon in which stimulation of one sensory modality induces sensation in another such that, for example, one sees sounds or hears odors. This phenomenon had fascinated philosophers and scientists for centuries, at least since 1690, when John Locke reported the case of a blind man who claimed to understand the color scarlet as the sound of a trumpet.[5] Yet, in the final decades of the 19th century, synaesthesia became a hot topic for neurological research.

It also sparked the interest of painters, composers and poets, who were drawn to the imaginative possibilities and spiritual resonances of sensory union. In his celebrated poem *Correspondences* (1857), Charles Baudelaire wrote of "odors … sweet as flutes, and green as any grass."[6] Baudelaire's Symbolist compatriot Arthur Rimbaud drew equivalences between vowels, colors, textures and odors: the letter "A" invoked a "black hairy corset of shining flies/Which buzz around cruel stench;" "E," the "whiteness of vapors and tents," and so on.[7] As visual artists began to abandon figuration and approach abstraction, they often looked for inspiration to music, conceived as the highest and least representational of the arts. "All art constantly aspires toward the condition of music," declared the critic Walter Pater in 1877, a remark that would be echoed by many pioneers of pictorial abstraction.[8] Wassily Kandinsky's proto-abstract painting *Impression III (Concert)*, 1911, was directly inspired by the thrill of hearing Arnold Schoenberg's first atonal works at a concert in Munich. Others, such as Paul Klee, Marsden Hartley and František Kupka, took inspiration from Johann Sebastian Bach fugues, attempting a visual counterpoint akin to the fugue's rhythmic structure.

The late 19th-century craze for synaesthetic cross-wirings also caught the fancy of inventors, who set to work constructing machines that could directly connect sound with color. In the late 1860s, the Alsatian chemist and musician Frédéric Kastner developed an instrument he called the Pyrophone [114], in which a small keyboard produced both sound and colored light by igniting gas jets that lit 13 crystal pipes protruding from a console. Two and a half decades later, the British inventor and art professor Alexander Rimington built what he was the first to call a "color organ," an instrument that made no sound but used a standard organ keyboard to illuminate 14 arc lamps that glowed with different shades and intensities of color.

Kastner's and Rimington's inventions sparked widespread fascination with visual music, spurring artists and inventors to construct numerous variants on the color organ. In the first few decades of the 20th century, the artistic avant-garde was drawn to these inventions, not so much as musical instruments but as mechanisms capable of animating abstract forms through a sort of cinematic projection. The Russian Futurist painter Wladimir Baranoff Rossiné developed his optophonic piano (1920–23) [170], a complex keyboard-controlled contraption that produced sound while projecting light through an array of mirrors, filters, lenses and hand-painted discs. At the Weimar Bauhaus, Ludwig Hirschfeld-Mack constructed a machine that translated music into projections of mobile forms and colored light. The Danish-American artist Thomas Wilfred upgraded the color organ with his Clavilux (1922), which employed a bank of dials and sliding keys to rotate bulbs and mirrors that displayed ethereal, flame-like wisps of dancing color.

These live projections of visual music were paralleled by the exploration of musically-inspired abstraction on film. As in the work of Baranoff Rossiné and Hirshfeld-Mack, the "absolute cinema" of Hans Richter and Viking Eggeling aimed to animate the rhythmic and harmonic relationships inherent in non-representational painting, endowing them with the temporal dimension characteristic of music. The pulsing, growing, shrinking and layering rectangles in Richter's *Rhythmus 21* (1921) evoke the musical experience of volume, pitch, harmony and, above all, rhythm. In Eggeling's *Symphonie Diagonale* (1924), a series of comb-like forms alternate and succeed one another like chords, while curved and angled lines are drawn on the screen like silent melodies. Even more direct connections between cinematic sound and image were explored by Oskar Fischinger, who produced a set of visual "ornaments"—sawtooth patterns, stars, dots and waves—that could serve simultaneously as the visual content of a film and also as its soundtrack, given that a film's soundtrack is printed on the celluloid as a visual waveform to be read by an optical device that converts it into an audio signal.

This effort at a direct connection between sound and image has been a recurrent pursuit in modern and contemporary art, a project taken up in the early 1970s by Guy Sherwin's optical sound films, Steina and Woody Vasulka's video experiments, Alvin Lucier's *The Queen of the South* (1972), and again more recently in the work of Carsten Nicolai [350], Billy Roisz, Haroon Mirza [400, 434] and others.

SOUND/IMAGE

With the advent of sound film in the late 1920s, the dream of a synaesthetic art would seem to have been finally realized. Yet this development was not universally celebrated by filmmakers and other artists. In 1928, three of the most prominent representatives of Soviet cinema, Sergei Eisenstein, Vsevolod Pudovkin and Grigori Alexandrov, issued a statement warning that sync sound would surely be used merely to bolster cinematic illusion. "To use sound in this way," they noted, "will destroy the culture of montage." Instead, the trio advocated the non-synchronization of sound and image, a contrapuntal relationship between the two that would resist the subordination of sound to image, encouraging a tension that could thwart the naturalistic illusion.[9]

A few years later, Walter Ruttmann took up this call for a non-synchronous relationship between sound and image, and pushed it to the extreme. An associate of Richter, Eggeling and Fischinger, Ruttmann inverted their experiments in "visual music." His 1930 film *Weekend* consists solely of a soundtrack without images: an 11-minute collage of concrete noises—hammers, cash registers, sirens, voices, incidental music, etc.—that left the viewer to imagine corresponding visuals. The film might be seen as a complement to the silent visual music of *Rhythmus 21* or *Symphonie Diagonale*, yet the prevailing hierarchy of the visual over the sonic prevents this complementarity, insuring that the absence of the visual is experienced not as an invitation to synaesthesia but as a lack and disjuncture between sound and image.

This resistance to the seamless merging of sound and image is as prevalent in modern and contemporary art as is the desire for synaesthetic union. In part, it is based on the suspicion that any convergence of the senses is likely to retain the hierarchy that subordinates all other modalities to the visual. It is equally born of the desire not to eliminate the unique differences between the senses and the rich aesthetic tensions these differences generate.

This attitude has been prevalent throughout the history of 20th- and 21st-century art, from Duchamp's readymades through current practices in sound art. While Kandinsky, Klee, and so many other early modernists pursued the dream of *synaesthesia*, Duchamp instead championed *anaesthesia*. The selection of the readymades, he noted, "was based on a reaction of visual indifference with at the same time a total absence of good or bad taste…in fact a complete anaesthesia."[10] Indeed, throughout his career, Duchamp resisted the notion that art should be primarily "retinal," aiming instead to push it toward the conceptual and the verbal. In several works, this critique of retinal art took recourse to the sonic. Take, for example, *With Hidden Noise* (1916) [164], an "assisted readymade" consisting of a ball of twine sandwiched between two brass plates held together by bolts, with an unknown object inserted into the middle by Duchamp's patron Walter Arensberg. Though the work is in principle a sound-producing object or toy, when elevated to the status of an art object inertly displayed in a museum, it loses this auditory character, the trace of which remains only in the title, its sonic source now "hidden" or "secret."

A whole lineage of Duchamp-inspired art seeks to disjoin sound from image. Joseph Beuys' *The Silence* (1973), for example, is a sculptural object consisting simply of the 5 reels of Ingmar Bergman's 1962 film *The Silence*, the film's celluloid drenched in copper and zinc, and sealed in galvanized canisters. Eliminating both the sound and image of Bergman's film, Beuys' stack of canisters draws attention to film not as "talking pictures" but as mute material. This line of attack is furthered in Christian Marclay's *The Sound of Silence*, a photograph of Simon & Garfunkel's 1964 record *The Sounds of Silence*. Marclay's piece references Beuys and Duchamp but also René Magritte, whose famous 1929 painting *The Treachery of Images* boldly scribbled *Ceci n'est pas une pipe* (This is not a pipe) below a stylized image of a pipe. Magritte's painting highlighted the disjunction between word, image and object. Marclay's photograph extends this disjunction to sound, noting, like Beuys, that this mute image and object capture the silence to which Simon & Garfunkel's song and Bergman's film could only paradoxically allude.

Marclay's photograph is firmly within the lineage of classic conceptual art, which, often inspired by Duchamp, challenged the status of the work of art as both image and object. The search for non-retinal art led many conceptual artists to move toward the pure concept and toward language as its physical manifestation. Yet it led a number of conceptualists —among them Robert Barry, Christine Kozlov, Robert Morris and Bruce Nauman—toward sound as an ephemeral material at once invisible and powerfully physical. A pioneering work of both conceptual art and sound art, Robert Morris' *Box with the Sound of Its Own Making* (1961) [220] is precisely what its title describes: a wooden cube accompanied by a three-hour audio recording that documents the process of its construction. This dull visual object is nothing without its soundtrack, which supplies all the drama of the piece and offers an implicit critique of aesthetic reification: Art is not the result but the process, which is captured more fully through the temporality of audio than by the inert visual thing.

A number of Nauman's works from 1968 and 1969 explore the possibilities of sound to unsettle the visual and the object status of art. In *Six Sound Problems for Konrad Fischer* (1968), the visual element is simply a reel-to-reel tape recorder with a loop of audiotape stretched across the space and wound around a pencil attached to a chair. The 6 loops supplied with the piece register the sounds of simple activities performed by Nauman alone in Konrad Fischer's Düsseldorf gallery: walking, bouncing balls, playing violin, and combinations of these. Nauman had previously recorded several of these activities on video; here he presents them solely as sound—as "sound *problems*," because, once again, audio alone forbids us the documentary veracity of the visual, which more clearly registers the sources and causes of events. This capacity to sever sound from source is a characteristic feature of what the composer Pierre Schaeffer termed "acousmatic" listening, a form of auditory attention made possible by audio recording, which allows us to listen to sounds in the absence of their visual sources.

Schaeffer's *musique concrète*—audio works composed entirely from tape recordings of musical and documentary sound—explored the acousmatic possibilities of recorded sound. Nauman's *Concrete Tape Recorder Piece* (1968) [248] is a Duchampian pun on Schaeffer, homage to *With Hidden Noise*, and a response to *Box with the Sound of Its Own Making*. A 530-pound concrete block with a power cord protruding from it, the piece was described by the artist as a "tape recorder with a tape loop of a scream wrapped in a plastic bag and cast into the center of a block of concrete." Here, too, the noise is hidden, silent—or rather *silenced*, for Nauman's piece is more ominous than Duchamp's or Morris's. Its sound is entombed—repeated infinitely but inaudible, buried by the sculptural form that negates it. As such, the piece is perhaps an analog to Edvard Munch's silent *Scream* (1893) but more confounding, its sonic source denied all expression.

The search for sensory unity and the resistance to this union... These two tendencies (and the tensions between them) have driven modern and contemporary art for more than a century and a half. Since Wagner and Kandinsky, artists have pursued the dream of synaesthesia, a unification of the arts that could overcome their fragmentation and allow esthetic experience to affirm the unity of everyday experience—what Aristotle called the *sensus communis*, Wagner celebrated as the "universal faculty of men," and Brian Massumi has recently called the "amodal experiential confound," the "many-dimensional virtual whole of feeling" that characterizes our ordinary sensory lives.[11] Today, this drive toward sensory and artistic unity draws sustenance from the fact that art has become steadily more multimedia, intermedia, or post-medium, and that digital media facilitate data translation—an image into a sound, for example, or vice versa.

Yet this affirmation of sensory and esthetic fusion has been met by a powerful counter-discourse, articulated most emphatically by Clement Greenberg and Michael Fried, who championed a group of artists whom they saw as pushing in the opposite direction: toward the careful and rigorous exploration of specific media and sensory modalities.[12] Though this modernist camp would seem to have lost the battle against the hybrid and multimedia work that has dominated contemporary art, the prominent critic Rosalind Krauss recently renewed the Greenberg-Fried call for medium-specificity, maintaining that "the abandonment of the specific medium spells the death of serious art."[13] Much of the sound art that has emerged over the past two decades has implicitly aligned itself with these modernist critiques. Without rejecting multimedia and multimodal work, sound art prominently reminds us that seeing is not hearing and aims to thwart the imperial aspirations of the visual. Over the past century and a half, no work of art has fully satisfied either of these tendencies. But some of the most compelling works have responded to the provocation presented by these two poles, resisting both the assimilation and the segregation of the senses, operating in the fraught space between.

1
See Aristotle, *De Anima* III, 1–2.

2
See Richard Cytowic, *Synaesthesia: A Union of the Senses* (Cambridge, MA: The MIT Press, 2002), p. 75.

3
See Clement Greenberg, "Modernist Painting," in John O'Brian (ed.), *Clement Greenberg: The Collected Essays and Criticism, Volume 4: Modernism with a Vengeance, 1957–1969* (Chicago, IL: University of Chicago Press, 1993).

4
Richard Wagner, "The Art-work of Future," in W. Ashton Ellis (trans.), *Richard Wagner's Prose Works*, vol. I (London: Kegan Paul, Trench, Trübner and Co., 1892), pp. 97–98.

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John Locke, Roger Woolhouse (ed.), *An Essay Concerning Human Understanding*, Book IV (London: Penguin, 1997), §11.

6
Charles Baudelaire, "Correspondences," in *Les Fleurs du Mal*, trans. by Richard Howard (Jaffrey, NH: David R. Godine, 1982), p. 15.

7
Arthur Rimbaud, "Vowels," in Wallace Fowlie (ed.), *Rimbaud: Complete Works, Selected Letters* (Chicago, IL: University of Chicago Press, 2005), p. 141.

8
Walter Pater, *The Renaissance* (New York: Modern Library, 1919), p. 111.

9
S.M. Eisenstein, V.I. Pudovkin, G.V. Alexandrov, "Statement [on Sound]," in Gerald Mast, Marshall Cohen, and Leo Braudy (eds.), *Film Theory and Criticism: Introductory Readings*, 4th edition (Oxford, UK: Oxford University Press, 1992), pp. 317–19.

10
Marcel Duchamp, "Apropos of 'Readymades'," in Michael Sanouillet and Elmer Peterson (eds.), *Salt Seller: The Writings of Marcel Duchamp* (Oxford, UK: Oxford University Press, 1973), p. 141.

11
See Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham: Duke University Press, 2002), p. 169, and Id., *Semblance and Event: Activist Philosophy and the Occurrent Arts* (Cambridge, MA: The MIT Press, 2011), p. 88.

12
Greenberg's classic defense of medium specificity is "Modernist Painting," in John O'Brian (ed.), *op. cit.*, pp. 85–93. Fried's influential argument against the mixing of mediums is "Art and Objecthood," in Michael Fried, *Art and Objecthood: Essays and Reviews* (Chicago, IL: University of Chicago Press, 1998), pp. 148–72.

13
Rosalind Krauss, *Perpetual Inventory* (Cambridge, MA: The MIT Press, 2010), xiii.