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Acoustic Projection and the Politics of Sound

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Preface to the working paper

This working paper presents material taken from the second chapter of my dissertation, *Loudspeaker: Acoustic Display as Aesthetic Material.*

My dissertation interrogates the complex status of the loudspeaker as a model for thinking about the nature of acoustic amplification in media technologies. In the vast majority of its applications, the loudspeaker is a component within other media – the telephone, radio, television, video, computer, and public address systems – and although there is a rich critical and historical literature treating each of these host media, the loudspeaker itself is often subsumed without reference under more abstracted treatments of sound generally. Thus, though the loudspeaker is variously discussed in art history, musicology, and media theory, it has never had a proper written history. Drawing on texts from critical theory, art and architectural history, and musical aesthetics, my thesis attempts to (re)situate the technology of the loudspeaker within existing media and aesthetic discourse. I aim to construct a media-critical history of the loudspeaker as a device by observing parallels between its use as a mass-market content delivery apparatus and its deployment by musicians and artists working in a range of media – art, architecture, music, performance, and installation – since the turn of the century.

In my dissertation, I develop a preliminary theory of component media with the belief that acknowledging the loudspeaker as a component integral to a range of media technologies might counter the tendency of historians and theorists to over-compartmentalize, to isolate for convenience, elements of our studies that are better understood within their working environment and contributing to a technological whole. By understanding component technologies that are shared by multiple media, the artificial boundaries between disciplines as intensely interrelated as music and art history, cinema studies and science and technology studies, and media, cultural, and policy studies more broadly begin to dissolve.

The form of the dissertation follows a basic alternating pattern, interspersing modest-length chapters properly-so-called that treat the concrete historical and theoretical development of the loudspeaker with more abstract, provisional interludes that apply of some of the concerns of these chapters to the analysis of sound practice in music and the visual arts. These shorter vignettes that appear between chapters are exploratory/preliminary attempts to transfer/translate the idea of the loudspeaker as a component to the role of sound as an aesthetic component in works by artists and composers.

The instantiation of my second chapter that I present here comprises both a chapter proper and exemplary interlude related to the chapter content.

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> The visible can establish the distance, the nature and the source of the voice, and thus neutralize it. The acousmatic voice is so powerful because it cannot be neutralized with the framework of the visible, and it makes the visible itself redoubled and enigmatic.[1]

The voice of authority no longer requires a body. To exercise authority through the voice is now to master the subtle operations of the acoustic at each point of its intersection with society. When figured with the everyday social landscape, how does the sound qua power function? It is through the loudspeaker that authority can stand at a distance, address but remain un-addressable, and dominate through sheer volume. And while the study of images, the sense of sight, and the act of observation in large part dominate the discourse on the interpenetration of power, ideology, and the senses, scholars have remained largely silent about the role of sound in this engagement. Sound plays a substantial role in how we interact with or have been targeted by systems of power and control. The function of sound within the discourse of power can be heard clearly, and has grown stronger precisely because it has escaped the scholarly gaze.

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[1] Mladen Dolar, *A Voice and Nothing More* (Cambridge: The MIT Press, 2006), 79.

As a part of the technical infrastructure of social listening, the loudspeaker plays a component role in the discourse of power in much the same way it contributes to the media landscape. Prior to the invention of the loudspeaker, acoustically amplified sound also had a role to play, but it is at the intersection of the technical affordances of the loudspeaker and a socially-conceived understanding of sound that a discourse of sound and power emerges. In my research on the loudspeaker, I am interested in power manifested socially in the form of surveillant control through both carceral and public policy, as well as how amplified sound functions within the public sphere. In this paper, a brief analysis of two sets of idiomatic phrases used to express the operations of power through the optical and the acoustic will lead to an exegesis of certain psycho-acoustic effects that can be understood to inform social presence. An investigation of the functional acoustics of the incarceration system in the work of Jeremy Bentham (1748-1832) will attempt to balance the hegemony of the visual that informs much of the Foucauldian discourse of power. Then, by showing a historical example of the politics of public address, the potential exploitation of the power of sound will be explored through the changes and affordances effected by its amplification. Lastly, two works by the artist Carolee Schneeman will be analyzed in the context of the preceding material. These works, through their actions and materials, mobilize sound or sound technologies to engage the discourse of power and control directly.

Speaking Truth to Power

I would like to begin by presenting two facets of everyday human experience that might elucidate the relationship between sound and ideas of control, surveillance, oppression, and self-regulation. By pointing up these linguistic and

psychoacoustic examples, it is not my intention to suggest a focused determinism at work here, but rather to expose a chink in the armor of the sensory system that runs the risk of being exploited.[2] Taken together, the linguistic and the psychoacoustic in the following examples can be understood to form certain basic operating principles that inform a socially-conceived listening.

Certain idiomatic phrases, colloquialisms from everyday English speech, can be understood as examples of language figuring the relationship between sensory affordances and the operation of control. Many common phrases that mobilize sound, when examined closely, betray a less-than-conscious knowledge of the potential power of the auditory as it operates in everyday speech. For example, it is common for one to speak of *over-seeing*, or being *overseen*. This phrase generally suggests the actions of a person in authority in the former or the person under the gaze of that authority in the latter. Here, authority is constructed spatially as a superimposition, hierarchy, or simple difference in height or magnitude. In contrast, when one speaks of *over-hearing* or being *overheard*, there is the implication of an aggressive reception position, one in which information is acquired surreptitiously. In common usage, the spatial implications of being *overheard* are fluid, implying an unseen or unknown listener whose power lies in having gone undetected, unidentified. In this case, the acousmatic ear uses its concealed presence to gather information and is both part of and partner to the voice of authority.

Similar linguistic differentiations are at work in phrases used to articulate the relationship between spatial relationships and sensation, words that indicate

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[2] Psychoacoustics is a branch of psychology that studies the relationship between sound and subjective perception.

proximity or orientation to the subject of perception. The phrases *sight-line* or *in my line of sight* can be read to connote the linearity of sight. The binary opposition of the psychological subject and object, *I am here* and *you are there* 'establishes a distance'[3] through vision. This opposition finds its analogue in the manner in which the functional physiology of the optical apparatus identifies physical subjects and objects: the optical gestalt is separated into figure(s) and ground, an opposition between persons/objects and situated place.[4] *In my line of sight* positions the self in opposition to the Other, isolating the Other from the perceptual field.

To signify the act of listening, the equivalent idiomatic phrase is *earshot*. In direct contrast to the act of looking, *earshot* describes the fundamental polarity inherent to the sense of hearing. In opposition to the linearity of vision, listening is largely polar/spatial: listening happens in the round. The kind of information gathered by the ear is on the order of the environmental gestalt, as the auditory apparatus tends to privilege the whole over the part in the parsing of the auditory scene. Though *sightline* and *earshot* function interchangeably in everyday speech, they are rooted in two very different conceptions about the way we perceive, optical-linear and auditory-polar, conceptions that are crucial when investigating the role of sound in the discourse of power.

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[3] Dolar, *A Voice and Nothing More*, 79.

[4] Vicki Bruce, Mark A. Georgeson, and Patrick R. Green, *Visual Perception: Physiology, Psychology and Ecology*, 4th ed. (East Sussex: Psychology Press, 2003), 287.

The Power of Sense

In the previous language-related examples, it is possible to see how linguistic signs can betray a tacit understanding of the relationship between power and sense. Psychoacoustics, however, by expressing in clear terms how we hear what we hear, provides a concrete example of the ways in which an *a priori* cognitive predisposition might function as a social vulnerability. Through the examination of sensorimotor contingencies[5] related to the functional sense of hearing, the role of listening within the total sensorium serves as a model for thinking about sound within the complex sensory scenes of the overseen and the overheard.

Primary human sensory states, the sensations at work when the senses are not being consciously directed, are functional in operation. These sensations act constantly and consistently in order to assist basic locomotion, navigation, and communication.[6] Primary sensations both build and rely on experience, and these experiences in turn inform our consciously directed actions as well as those that can be considered to be pre-cognitive. Though the particular affordances of these primary sensory states may change from one situation to another, from one community to another, and one environment to another, certain basic functions remain common and immutable.

The human auditory system hears in three dimensions despite only possessing two acoustic sense-receptors (ears). In psychoacoustic understandings of hearing,

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[5] The sensorimotor contingency law implies a direct connection between muscle action and sensory input. For more information see J. Kevin O'Regan and Alva Noë, "A Sensorimotor Account of Vision and Visual Consciousness," *Behavioral and Brain Sciences* 24, no. 05 (2001): 939-973.

[6] Francisco J. Varela, Evan T. Thompson, and Eleanor Rosch, *The Embodied Mind: Cognitive Science and Human Experience*, New edition. (The MIT Press, 1992), 173.

three-dimensional spatial information in the auditory domain (the auditory scene) is constructed by assessing the spectral content of incoming sounds considered in the context of timing, phase, and intensity differences between the arrivals of the sound to each of the ears. In other words, a sound coming from an angle of forty-five degrees off-center to the right side will arrive with a certain acoustic profile at our right ear, and will then arrive at the left ear slightly later and with a markedly different profile.[7]

In the case of a quotidian activity such as walking, the eye and the ear the eye work in tandem to gather information that assists in movement. The eye, which is only able see a small area of space in focus at one time, acquires the layout of the surfaces, the positions of objects, and timing of events in an environment by scanning rapidly, or flitting.[8] The ear, however, is always open, and though it is not immediately obvious, the focusing mechanism at work in the auditory system plays a defining role in our ability to negotiate space.

When walking through the forest or the city – any locale where it is necessary to actively attend in order to traverse the environment safely – the eyes scan the surrounding area, enabling confident steps. If a branch cracks or a car horn blows outside our line of sight, the head snaps toward the location of the sound without conscious directing. In this case, seeing and hearing are able to function together in an effort to identify the sound source and assess whether there is any potential danger. While the eye moves to where the ear detects an acoustic presence, the ear continues to listen to the background while attending to the location of the unexpected sound. Each sense works in tandem, multi-modally; if everything appears

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[7] Stephen Handel, *Listening: An Introduction to the Perception of Auditory Events* (Cambridge: The MIT Press, 1991), 98.

[8] Bruce, Georgeson, and Green, *Visual Perception*, 255.

safe, then each individual sense functions in parallel. The eye and the ear remain in the optimum mode of operation appropriate for the situation, reinforcing and confirming the information gathered by the entire sensorium.

In this example, even though the senses are all functioning synchronously, a break or bump in the flow of information can cause one sense to become dominant. Here, listening directs the gaze to assist and confirm the surroundings, providing confirmation and gathering ear-specific information.[9] This sensory direction is immediate and pre-cognitive: it is action before conscious direction to act. The examples that follow show the working environment in which the information gathered by the senses operates in the context of iconic displays of authority. By considering spoken language as the informational content of acoustic projection, and the sense of hearing as a model for the attention of those in power, the technologies of amplification and dissemination of sound are revealed as components in the manner in which authority operates.

The power of acoustic information

Linguistic anthropologist Walter Ong has observed that, with the fixing of the Homeric Epic poems as written texts around 700 BCE, the shift from orality to literacy in Western civilization reflects the conception of spoken and written text as information.[10] Likewise, Marshall McLuhan has noted that the shift from hand-writing to type-setting at the beginning of the print revolution enabling the spread of the

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[9] James J. Gibson, *The Senses Considered as Perceptual Systems*, 1st ed. (Greenwood Press Reprint, 1983), 35.

[10] Walter J. Ong, *Orality and Literacy*, 2nd ed. (London: Routledge, 2002), 24.

bible throughout Europe expanded the fixed narrative of the written word into a form of information that can be mass-disseminated.[11] The role of the loudspeaker in this cultural-historic continuum of information delivery affords something markedly different but intimately related to the observations of McLuhan and Ong. The introduction of the loudspeaker at the third quarter of the nineteenth century enabled a return to orality that extended language into space in the same way that literacy helped extend writing over time. In this way, the ability to disseminate the same message to many made possible by printing was now achievable through the loudspeaker with the emphemeral immediacy of speech. With the loudspeaker, a single person could speak to hundreds of thousands at a single time, allowing Cicero's rhetoric to be amplified: the power and intimacy of orality in an efficient form of mass delivery.

The amplified voice in the moment of public address fundamentally changed the nature of 'the voice of authority.' Hitler, in a 1937 German Radio Manual, said 'without the loudspeaker we couldn't have conquered Germany.'[12] The loudspeaker can yield similar effects though less overt, more implicit means than such megaphonic strong-arming, however. In a sense, the voice of authority is itself a component, a part of the coercive mechanism available to those seeking to exert their will over others. But the voice is remarkable insofar as it has just as much power when a person remembers it of their own accord as when they cannot but for the sheer volume escape the message.

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[11] Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1966), 12.

[12] Jacques Attali, *Noise: The Political Economy of Music*, 1st ed. (Minneapolis: University Of Minnesota Press, 1985), 87.

I. Pan-Audicon

How can loud speaking last in the silence? How might this interior voice of authority function? One archetypal model for the way in which control functions in contemporary society is centered on the carceral state typified by the Panopticon prison:

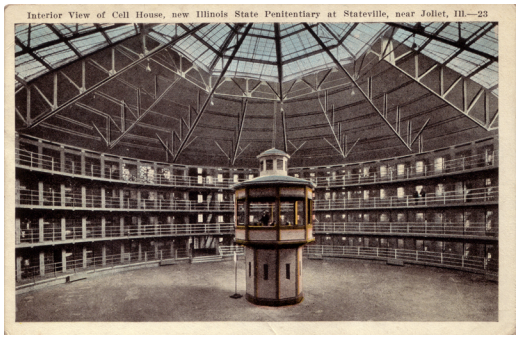

Figure 1, Panopticon Prison

The Panopticon, designed by the eighteenth-century English utilitarian philosopher Jeremy Bentham, is a circular structure containing a courtyard with a guard house located in the center of the courtyard in a round tower. From the position of the central tower, a single guard is able to monitor all the inmates; more importantly for Bentham, all of the inmates are consciously aware of the location of the guard at all times. The guard post was also designed in such a way that the tower's lighting betrays only the barest shadow of the guard to the prisoners at any time - It was Bentham's desire that the prisoner should never be absolutely positive that they can, in fact, see the guard. The motivation for Bentham's design was to achieve a maximum amount of control with a minimum use of corporal punishment, so the Panopticon was devised to encourage inmates to monitor themselves, relying on the fact that they believed that they could be the subject of the gaze of the guard at

any time.[13]

For Bentham, and later, for Michel Foucault in his analysis of Panopticism in 'Discipline and Punish' (1975), the strength of this carceral model relies on the fact that the physical presence of the guard is not actually necessary for self-regulation; it is the mere idea of being watched that encourages an auto-surveillance.[14] Foucault's reading of Bentham is an analysis of power at work primarily in the visual domain. Though the Panopticon itself has fallen out of use, Foucault's analysis describes how those in power have employed the effect of the design, allowing the general concept of panopticism to take root as a common method of controlling the public actions of society. Traces of panopticism can be seen in the lighted sign along the highway that makes a driver aware of their speed. The street sign has the ability to slow traffic precisely because of the asymmetric unconfirmability of the presence of an actual authority that could be reading the collected data. Likewise, the increasing presence of surveillance cameras on the top of most stoplights encourage auto-surveillant compliance with the law because a driver cannot be sure whether they are being observed or not.

Surveillance cameras are a known deterrent to crime whether or not they are operational, illustrating the clear effectiveness of power figured by vision. How then would an equivalent form of aural self-monitoring function? In his analysis of Bentham, Foucault makes no attempt to theorize the role of listening in the rhetoric of auto-surveillent control, save a telling footnote where Foucault dismisses Bentham's proscription for the potential of listening in his carceral architecture, Foucault writes

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[13] Jeremy Bentham, *Panopticon Writings* (London: Verso, 1995), 21.

[14] Michel Foucault, *Discipline & Punish: The Birth of the Prison* (New York: Vintage, 1995).

> In his first version of the Panopticon, Bentham had also imagined an acoustic surveillance, operated by means of pipes leading from the cells to the central tower. In the Postscript he [Bentham] abandoned the idea, perhaps because he could not introduce into it the principle of dissymmetry and prevent the prisoners from hearing the inspector as well as the inspector hearing them.[15]

Foulcault's reading of Bentham here is not entirely accurate: the acoustic pipes in Bentham's original plan are only abandoned for only one of the ways in which they are used – that is to say, for listening. The principle of dissymmetry, that one can hear but not be heard, is a crucial component of the phenomenon of auto-surveillance. To hear the guard through the pipe would be to know the presence of the guard, and more importantly for Foucault, not hearing the guard confirms their absence. The pipes however, remain present in Bentham's design for the practicalities of running the actually built prison: they are present for the barking of orders.

> The…set of conversation-tubes is to enable an inspector in the lodge to hold converse in his own person…with a prisoner in any of the cell. To an inspector in the lodge, it is not indeed in every part of every cell that a prison with whom he may have occasion to hold converse will be already visible. But to render him so, there needs but an order summoning him to the grating.'[16]

The absence of dissymmetry in Bentham's design for acoustic surveillance that is lamented by Foucault ceases to be problematic with the introduction of the loudspeaker. One of the most important technical affordances of the loudspeaker is that it introduces a discourse of 'speaking at a distance.' By delivering unidirectional sound, the asymmetry introduced by the loudspeaker presents a previously unexplored dynamic of acoustic power. The technological affordances of the

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[15] Foucault, *Discipline & Punish*, 317.

[16] Bentham, *Panopticon Writings*, 111-112.

loudspeaker give voice to an authority that will be listened to when and only when it chooses to speak.

The ear of a tyrant

No one disputes the power of the watchful eye, but how might we understand the 'voice of authority' in the context of the paranoid ear? It is important to note that in Bentham's plan, the two-way nature of the acoustic tube for speaking as well as listening, establishes another important affordance of the loudspeaker that resonates with the previous example from psycho-acoustics: allowing listening to direct the gaze. By exploiting the ever-open ear to listen in order to know when to attend to the individual, those in power are able to avoid insurrection by arresting the plans of those who would wish to rebel against them.

Bentham was not the first to imagine an acoustic prison. An example of acoustic early warning writ large can be seen in a proto-acoustic surveillance prison located in Syracusa, Sicily:

Figure 2, Ear of Dionysus

Discovered in the fifth century BCE, the Ear of Dionysus (Orecchio di Dionisio) was a prison built into a cave; unique for its 20-second reverberation it has become a well-traveled modern-day tourist landmark. The myth of the cave's history charts the paranoia of the fourth-century BCE Greek tyrant Dionysus who turned the grotto into a prison to acoustically monitor his captured enemies by exploiting the acoustical

resonance of the cave. Tourists from all over the world now frequent this space; they are encouraged to sing, yell, clap, and most interestingly, eavesdrop on other tourists. The result, however, much like nearly all systems of incarceration, is that the (sound) architecture of the cave encourages auto-surveillance and self-regulation. Tourists speak quietly within the *Ear of Dionysus*, perhaps for fear of being heard. In this space, and others like it, such self-policing is likely based on a fear of reprisal, an anxiety about the trace of the voice echoing and betraying the intentions of the speaker. Whether in the resonant space of a concert hall or cathedral, or library or hospital waiting room, the effect of reverence and/or deterance produced by acoustics is coupled to the power inherent in acoustics to encourage the monitoring of speech.

II. The loudspeaker in the public sphere

Similar displays of acoustic control and manipulation can be observed in the role of the loudspeaker in public address. As the sound component of a multimedia spectacle (a political rally, protest, or concert), the loudspeaker makes it possible to present sound to a different, separate location by allowing acoustic information to be geographically displaced. It enables speaking from a safe distance, but unlike simple amplification the loudspeaker also affords the possibility to be physically absent while remaining present in voice. It makes it possible for a sound that is not local to be presented at a site separate from that which is presently sounding. This has the direct effect of generating what McLuhan referred to as 'the global village,'[17] in other words,

[17] Marshall McLuhan and Bruce R. Powers, *The Global Village: Transformations in World Life and Media in the 21st Century* (New York: Oxford University Press, 1992), 91.

the effect of a technology to shrink the dimension of the space that separates us. This affordance can bring people together who are not spatially proximate, or also allow people to maintain the safety and anonymity of bodily separation.[18]

The loudspeaker also enables amplification of a sound for projection over a large local distance. Prior to the invention of the loudspeaker, the amplification of sound was the domain of architectural and instrumental acoustics. Increases in the volume (amplitude) of sound had to be the direct result of the characteristics of physical structures and the exertion of human physiology. The loudspeaker not only allows speech to leave the confines of interior space and interior voice, but, in the context of public address, it enables the presentation of music to the masses in the form of radio, concert venues, clubs and home stereos.[19] In the loudspeaker's ability to 'present a single source to many,' it has the power to cross both physical and social borders, enabling sound as well as music to be mobilized towards political ends.

Lastly, the loudspeaker affords the presentation and magnification of private sound for detailed analysis and decoding. Coupled with a microphone, and exaggerated further by recording technology, the loudspeaker makes possible the intense magnification of certain sounds that would otherwise go unnoticed. This can range from phone calls that are monitored under the aegis of the Patriot act to the

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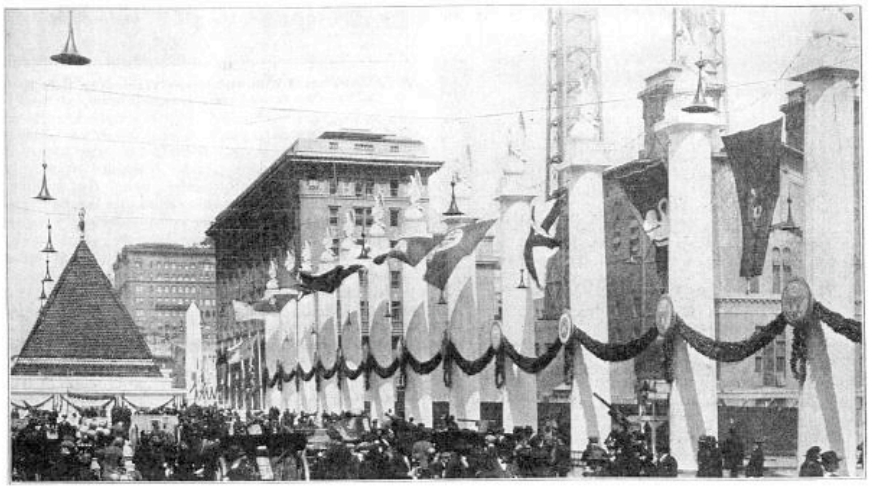
[18] This facet of the loudspeaker as communication technology has important resonances with early internet studies about chat rooms and identity that point out how people feel empowered to say things they might not say otherwise because they are protected by the mediation of the device. See Mark Poster, "Postmodern Virtualities," in Meenakshi Gigi Durham and Douglas Kellner, *Media and Cultural Studies: Keyworks*, 2nd ed. (London: Wiley-Blackwell, 2005), 533.

[19] For an interesting study of the role of the loudspeaker in portable media devices See Michael Bull, *Sound Moves: iPod Culture and Urban Experience* (London: Routledge, 2008).

echo-cardiogram that saves a life: like the branch in the woods whose crack causes us to listen for danger, these monitoring systems listen, monitor, and amplify allowing the audible trace to be the subject of close listening.



General View of Victory Way, New York City, Showing Loud-Speaking Telephone Receivers Suspended Over The Crowd.

Figure 3, Park Avenue

The first use of a large-scale sound system for public address in the USA was in 1919, during the Victory Liberty Loan Rally that took place on Park Avenue in New York City, dubbed 'Victory Way' for the event. Along the length of the avenue, Western Electric installed one-hundred and twelve loudspeakers intended to play music and amplify speeches to encourage the citizenry to purchase Victory Liberty Loans. A host of high-profile speakers, ranging from the wives of US cabinet members to Brigadier General Cole, proclaimed the importance of purchasing bonds to pay for the recently-ended war to a crowd of more than ten thousand. Up until this time, the audience at the Victory Liberty Loan Rally was the largest crowd that had ever been addressed from a single voice through amplification. Some of these speakers were present at the podium, while others, including President Roosevelt and

the French Foreign Secretary, delivered speeches over a radio-telephone from Washington, D.C..

The rally concluded with a pilot flying high above the crowd who spoke to the audience from the cockpit of his plane. His voice addressed the audience by radio-telephone broadcasted over the loudspeakers on Park Avenue. The event was documented in an anonymous staff article in the May 1920 issue of the *Electrical Review*:

> The demonstration of the speech from a flying plane about a thousand feet above the street seemed the more difficult because the whirring of the propellers would seem to drive out any other sound. In spite of this handicap, which made the hearing of nearby voices difficult, the observer in the seaplane addressed the crowd through his wireless equipment, the radio message being received by the antennas over the concourse and transmitted to the crowd through the loud-speaking receivers. Not only could the crowd understand the flier's appeal to "Buy Bonds," but anyone who knew him could even recognize his voice, and when he announced that he would drop a shower of circulars, the crowd waited expectantly until the promised shower appeared. The flier did not leave for his headquarters until the officials had assured him that his message had been received and understood by the assembled multitude."[20]

At the Victory Liberty Loan Rally, loudspeakers afforded the first opportunity for persuasive rhetoric to reach such a large crowd by speakers present on the scene. By allowing displaced politicians to speak from Washington via radio but be present by voice in New York, the loudspeaker also enabled the radio to speak their message from a distance. Finally, by announcing the pilot, the loudspeaker directed the gaze of the crowd upwards, to where both the message and the speaker were traveling at speed through the air above.

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[20] "Speeches Through Radiotelephone Inspire New York Crowds," *Electrical Review*, May 31, 1919.

The powerful molecules that surround us

Contemporary philosopher Peter Sloterdijk has theorized the political occupation of the air, a seizure of the air as a territory, began on April 22, 1915, when a German regiment dropped chlorine gas on French-Canadian troops in Ypres Salient.[21] Sloterdijk argues that this moment – which he posits is the actual beginning of the twentieth century – marks a paradigm shift in warfare, ushering in contemporary society: rather than the destruction of property and the acquisition of territory, the act of war is now waged on the individuals of a given society by assaulting the very air that surrounds them. Sloterdijk calls this phenomenon 'atmoterrorism,' contending that modern society is defined by a break from the idea of country and individual as the target of war, and that the environment that surrounds and defines the body is the contemporary field of battle.

In engaging the body politics of weaponized chemicals and the shift from property to the environment-centered body of the individual as the subject of war, Sloterdijk acknowledges that it is the medium of the air that surrounds us that offers the psychological dichotomy between body and environment, between citizen as property-owner and citizen as an individual representation of a culture. While Sloterdijk makes no reference to sound as such, the implications for contemporary practices of acoustic warfare and a politics of the sonic are unavoidable. The effects of atmoterrorism can be seen in the use of Top-40 music by the CIA to encourage Manuel Noriega out of hiding in the safe haven of the Apostolic Nunciature in Panama in January 1990; in Janet Reno's use of Tibetan chant and Metallica to destabilize the

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[21] Peter Sloterdijk, *Terror from the Air* (Cambridge: Semiotext(e), 2009), 17.

Branch Davidians in the 1993 Waco Texas incident; and most recently in the use of the LRAD or (long range acoustic devices) for crowd control at the 2009 G20 Summit in Pittsburgh. Each of these examples shows that the air-occupation of projected sound can not only dissolve the traditional boundaries of property ownership but also influence the mind.

Figure 4, Marines outside Manuel Noriega's Residence

Carolee Schneeman, sound works

A substantial acoustic thread runs through the work of visual and performance artist Carolee Schneeman (1939-). Not known for her sound work, Schneeman's varied and complex oeuvre begins with a painting practice in the late 1950s that is rooted in her own interpretation and critique of Abstract Expressionism. In the early 1960s, Schneeman began her performance practice as a founding member of the Judson Dance Group in New York, and went on to create performance, mixed-media, and kinetic sculptural works throughout the 1970s and early 80s. Schneeman's work in each of these areas often engages tropes of flesh-as-material and the body in performance.[22] In these pieces, sexuality and feminism are interwoven with themes of time, history, power, and work-as-labor. Schneeman routinely confronts the problematics of a male dominated (art) world while pushing accepted conceptions of the body-in-society and the limits of the act of making.

Carolee Schneeman's investigation of the politics of sound, reception, body, and place can be explored through the juxtaposition of two radically different works that bookend two decades of her artistic output. Her earliest-acknowledged performance piece, *Glass Environment for Sound and Motion* (May, 1962) and her kinetic sculptural installation *War Mop* (1983) both mobilize materials and themes that can be traced through much of her intervening works. Of the two works, only *War Mop* uses audio-visual technology explicitly in its construction; however, the use of sound as a component in *Glass Environment for Sound and Motion* exposes a conceptual link that reinforces her awareness of the power of sound to both convey

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[22] Hal Foster et al., *Art Since 1900: Modernism, Antimodernism, Postmodernism* (London: Thames & Hudson, 2005), 566.

and reinforce artistic intent.

Glass Environment for Sound and Motion

Glass Environment for Sound and Motion, was a large scale performance action that took place as part of a Judson Dance Group performance at Judson Church in Manhattan, NY in May 1962. At the invitation of Dick Higgins and Philip Corner, Schneeman created a work for a program that included multiple performances of composer LaMonte Young's conceptual work *Poem for Chairs, Tables, Benches*[23] Higgins' *Two Generous Women*, and a lecture by the composer Philip Krumm entitled *Where to Go from Here*. The evening took place only two months prior to 'Concert for Dance #1,' which is considered to be the first official Judson Dance Group performance, and foreshadowed many of the events, techniques, and aesthetic markers that would come to define the work of the Judson group in the years to follow. [24]

Glass Environment was a loosely structured instruction-based performance work consisting of four dancers, two 'wandering musicians,' and a lighting designer. The stage was

> collaged…with broken glass: mirror glass, safety glass, fused lumps of glass drilled and hung in clusters in varying planes[….]Shards and clusters of glass, some shrouded, some visible, were set so performers would produce sounds by striking against them as they moved. Large broken mirrors were positioned

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[23] LaMonte Young's piece consisted of instructions for moving the furniture around the space.

[24] Sally Banes, *Democracy's Body: Judson Dance Theatre, 1962–1964* (Durham: Duke University Press, 1993), xi.

to reflect and refract portions of the performers' bodies.[25]

Suggestions for 'basic movements' and 'characteristic sounds' were given to the performers in place of explicitly-articulated and immutable choreography in an effort to display 'the particularities and contrasts between types [of movement vocabularies or characters]; each seen as vivid, distinctive.'[26] In addition to the acoustic condition set forth by the interaction between the performers and the glass on the set, a discrete sound piece called *Soft Materials* was integrated in collaboration with composer Philip Corner. *Glass Environment* progressed through a number of pre-defined formal sections whose narrative construction was articulated by the performers having written out their possible actions and gestures prior to the performance. These actions were then subject to repetition and variations and could be freely copied by the other performers within a given section. In these formal divisions - Soft materials, Display, Mirror I, Mirror II - the performers engage in various legible everyday actions such as push ups, sitting, sticking a tongue out at a mirror, hammering nails, pushing a baby carriage, and coughing. These more common actions were juxtaposed against a movement vocabulary that was comparably raw, almost ecstatic: the flapping of arms, shuffling, spinning, and shrieking. The general lighting, designed by Billy Name, consisted of a few spots and floods. This lighting was complimented by Schneeman, who used flashlights to illuminate the dancers and reflect light back into the seating area from her position in the audience.

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[25] Carolee Schneemann and Bruce R. McPherson, *More Than Meat Joy: Complete Performance Works & Selected Writings*, 1st ed. (New York: Mcpherson & Co, 1979), 21.

[26] Schneemann and McPherson, *More Than Meat Joy*, 22.

War Mop

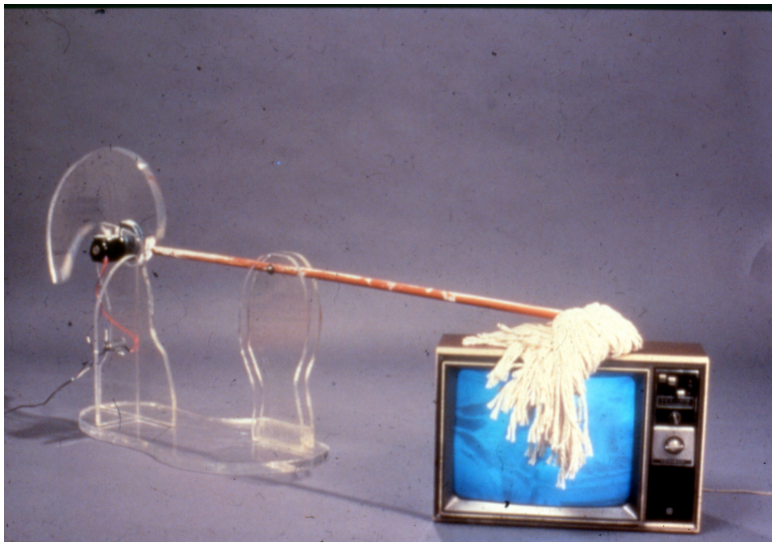

Figure 5, War Mop (1983)

War Mop is a part of a series of works by Schneeman entitled the 'Lebanon Series.' It is a 'kinetic sculpture in which a mechanized mop on a plexiglass fulcrum flails [a] TV monitor in relentless rotations.'[27] Presented as found objects, the television and mop are not prepared or altered, evoking objects that might be found in any (every) home and suggesting themes of women's work and television as a form of media consumption. Within the installation condition, the television presents video newsreel footage depicting the bombed-out wreckage of the town of Damour in Lebanon after the 1982 Isreali invasion. The camera shot pans between this footage of wreckage and a female Palestinian refugee, screaming at the camera, in the shell of her now destroyed home. This ongoing live-action video loop is periodically intercut with still images of pre-invasion Beirut that were obtained by Schneeman from the

[27] Carolee Schneemann, *Imaging Her Erotics: Essays, Interviews, Projects* (Cambridge: The MIT Press, 2003), 187.

Lebanese tourist bureau prior to its closure in 1981.

War Mop draws its conceptual force from the dialectic at work between its constituent parts. Plexiglass, television, and mop create a dynamic oscillation between the physical action of the continual flogging of the television by the mop and the intentional confrontation of the narrative contained with in the sound/image vocabulary of the television frame. As in a number of other Schneeman installations [*Meat Joy* (1964), *Venus Vectors* (1987), *Vespers Pool* (1999), and the installed artifact from her seminal work *interior scroll* (1975)], the plexiglass, mediating mop and television, comes to embody transparency, a form of material nudity, or exposure.[28] Plexiglass also becomes iconic of display itself, both protective (archival) but also a form of power: the unseen support that orients the gaze. The mop is also a reoccurring fixture of Schneeman's work, serving as both paintbrush and prop in works as diverse as her early sixties paintings and her 1990 installation work *Scroll Painting with Exploded TV* (also a part of the Lebanon series).[29]

Conclusion

Both *War Mop* and *Glass Environment* engage issues of work, dismantlement, and the relationship between movement and sound. The shattered glass shared by both works – in the architectural scene of *Glass Environment* and the glass-riddled wreckage of the Beirut video footage in *War Mop* – offers a complex take on the relationship between the self, sound, and structural architecture. This idea of structure as extension of the self that is prevalent in much of Schneeman's work is exemplified

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[28] Schneemann, *Imaging Her Erotics*, 187.

[29] Schneemann, *Imaging Her Erotics*, 189.

and strengthened by the struggle for identity that is the plight of the displaced Palestinians in *War Mop* and the stage set of *Glass Environment*.

In the imagery of the video footage, the 'rubble' of the Palestinian Woman's destroyed house, 'is exquisite…It's like a stage set. It takes you a little while to realize that the house is only half there, there is no front and there is no side. Everything is surrealistic, almost normal, but half-destroyed.'[30] The sound playing from the loudspeaker of the television, is not documentary but accidental, consisting primarily of handling noise made by the camera and its operator. The camera-microphone is not subject to the same spatial limitations as the linear gaze of the camera-video. The microphone listens spatially, hearing both in front of the camera and behind coding the footage as having been gathered by a human operator. The sound of the mop hitting the television is complicated by this coded footage, suggesting that it is the person holding the camera who is subject to the violence of the mop.

The stage set of *Glass Environment*, on the other hand, though still rubble, still destroyed, points to a different relationship at the nexus of sound, architecture, and power. In Schneeman's conception, 'Every element contributes to the image. The active qualities of any one element (body, light, sound, paper, cloth, glass) find its necessary relation to all other elements and through conjunction and juxtaposition the kinetic energy is released.'[31] Similarly to the handling noise betrayed by the television loudspeaker in *War Mop*, the movement of the dancers on stage is betrayed by the sound of their actions within the *Glass Environment*. In conventional choreography, on a set not treated in this manner, the movement of the dancers

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[30] Schneemann, *Imaging Her Erotics*, 203.

[31] Schneemann and McPherson, *More Than Meat Joy*, 11.

would be substantially soundless, potentially silent. As *War Mop* draws on the traditionally silent camera handling of electronic news-gathering, *Glass Environment*, erases the anonymity of traditional architecture-as-functional-structure and draws a communal line between performers who occupy broken space and an audience that inhabits a version of the real world.[32] This dichotomy is made all the more clear by Schneeman's use of flashlights which she directs from her place in the audience against the mirrors and glass of the stage only to shine into the faces of the audience members at the close of the piece. Where sound serves as a trace of movement and an affirmation of embodied action, light exposes the status of visual observation to contrast the stark difference between the subject and object of the gaze.

In Schneeman's work, the potential for sound to code the final received meaning of the work is always carefully considered as a contributing component. "Manifest in space," says Schneeman, "any particular gesture acts on the eye as a unit of time. Performers or glass, fabric, wood… all are potent variable gesture units: light and sound will contrast or enforce the quality of a particular gesture's area of action and it's emotional texture."[33] In the 'found wooden forms covered with cut and smashed amber mirror glass' of *Music Box Music* (1964) and the 'bodies completely costumed in sound making debris' of *Noise Bodies* (1965), a deep performative engagement with the politics of sound and the body are explored through the unavoidable change that occurs in the space of contact.[34] Sound itself, as well as the

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[32] In the context of the Happenings of the same period in which the incorporation of the audience into the action, erasing the boundary between spectacle/spectator, Schneeman puts pressure on this division.

[33] Schneemann and McPherson, *More Than Meat Joy*, 10.

[34] Schneemann and McPherson, *More Than Meat Joy*, 93.

media technologies that produce it and the space that it defines, becomes an ephemeral trace of the body. In both *War Mop* and *Glass Environment*, Schneeman uses sound to encourage the audience to identify with the action taking place, to position their own bodies in the space of the work. Sound functions in Schneeman's oeuvre not only as a byproduct of action, or of work, but also a marker of the inescapable, surrounding, and immersive air that is shared by both subject and object.