

SONIC WARFARE

Sound, Affect, and the Ecology of Fear

Steve Goodman

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Introduction

It's night. You're asleep, peacefully dreaming. Suddenly the ground begins to tremble. Slowly, the shaking escalates until you are thrown off balance, clinging desperately to any fixture to stay standing. The vibration moves up through your body, constricting your internal organs until it hits your chest and throat, making it impossible to breathe. At exactly the point of suffocation, the floor rips open beneath you, yawning into a gaping dark abyss. Screaming silently, you stumble and fall, skydiving into what looks like a bottomless pit. Then, without warning, your descent is curtailed by a hard surface. At the painful moment of impact, as if in anticipation, you awaken. But there is no relief, because at that precise split second, you experience an intense sound that shocks you to your very core. You look around but see no damage. Jumping out of bed, you run outside. Again you see no damage. What happened? The only thing that is clear is that you won't be able to get back to sleep because you are still resonating with the encounter.

In November 2005, a number of international newspapers reported that the Israeli air force was using sonic booms under the cover of darkness as “sound bombs” in the Gaza Strip. A sonic boom is the high-volume, deep-frequency effect of low-flying jets traveling faster than the speed of sound. Its victims likened its effect to the wall of air pressure generated by a massive explosion. They reported broken windows, ear pain, nosebleeds, anxiety attacks, sleeplessness, hypertension, and being left “shaking inside.” Despite complaints from both Palestinians and Israelis, the government protested that sound bombs were “preferable

to real ones.¹ What is the aim of such attacks on civilian populations, and what new modes of power do such not-so-new methods exemplify? As with the U.S. Army's adoption of "shock-and-awe" tactics and anticipative strikes in Iraq,² and the screeching of diving bombers during the blitzkriegs of World War II, the objective was to weaken the morale of a civilian population by creating a climate of fear through a threat that was preferably nonlethal yet possibly as unsettling as an actual attack. Fear induced purely by sound effects, or at least in the undecidability between an actual or sonic attack, is a virtualized fear. The threat becomes autonomous from the need to back it up. And yet the sonically induced fear is no less real. The same dread of an unwanted, possible future is activated, perhaps all the more powerful for its spectral presence. Despite the rhetoric, such deployments do not necessarily attempt to deter enemy action, to ward off an undesirable future, but are as likely to prove provocative, to increase the likelihood of conflict, to precipitate that future.

Sonic Warfare: Sound, Affect, and the Ecology of Fear explores the rippling shockwaves of these kinds of deployments of sound and their impacts on the way populations feel—not just their individualized, subjective, personal emotions, but more their collective moods or affects. Specifically, a concern will be shown for environments, or ecologies,³ in which sound contributes to an immersive atmosphere or ambience of fear and dread—where sound helps produce a *bad vibe*. This dimension of an encounter will be referred to as its *affective tone*, a term that has an obvious, but rarely explored, affinity to thinking through the way in which sound can modulate mood. Yet in the scenario above, the sonic weapon does more than merely produce anxiety. The intense vibration literally threatens not just the traumatized emotional disposition and physiology of the population, but also the very structure of the built environment.⁴ So the term *affect* will be taken in this broadest possible sense to mean the potential of an entity or event to affect or be affected by another entity or event.⁵ From vibes to vibrations, this is a definition that traverses mind and body, subject and object, the living and the nonliving. One way or another, it is vibration, after all, that connects every separate entity in the cosmos, organic or nonorganic.

Sonic Warfare outlines the acoustic violence of vibration and the trembling of temperaments. It sketches a map of forces with each step, constructing concepts to investigate the deployment of sound systems in the modulation of affect. The argument is based on the contention that, to date, most theoretical discussions of the resonances of sound and music cultures with relations of power, in their amnesia of vibration, have a missing dimension. This missing dimension,

and the ethico-aesthetic paradigm it beckons, will be termed the *politics of frequency*.⁶ In order to map this black hole, a specifically tuned transdisciplinary methodology is required that draws from philosophy, science, fiction, aesthetics, and popular culture against the backdrop of a creeping military urbanism. By constructing this method as a nonrepresentational ontology of vibrational force, and thus the rhythmic nexus of body, technology, and sonic process, some latent affective tendencies of contemporary urban cultures in the early-twenty-first century can be made manifest. A (dis)continuum of vibrational force, a vast, disjointed, shivering surface, will be constructed that traverses police and military research into acoustic means of crowd control, the corporate deployment of sonic branding, through to the intense sonic encounters of strains of sound art and music culture.

The book is neither merely an evolutionary or historical analysis of acoustic weaponry, nor primarily a critical-aesthetic statement on the use of sonic warfare as a metaphor within contemporary music culture. Along the way, various schemes will be indicated, including experiments with infrasonic weapons, the surreal “psycho-acoustic correction” waged by both the U.S. Army in Panama City and the FBI during the Waco siege, and the Maroons whose use of the abeng horn served as a fear inducer in their guerrilla tactics against the British colonialists in Jamaica. But this list is not a comprehensive historical survey. Similarly, a total story will not be told, or a critique waged against, the militarized (and usually macho) posturing that often takes place, from rock to hip-hop, within pockets of both white and black popular music. No doubt interesting things could be said about the amplified walls of sonic intensity and feedback deployed in rock, from Hendrix, to metal through to bands like Sonic Youth and My Bloody Valentine. But this is not a book about white noise—or guitars. Equally, while some attention will be devoted to the key, inventive, sonic processes of the African diaspora, a detailed analysis of the innovative politics of black noise and militarized stance of Public Enemy and the martial arts mythologies of the Wu Tang clan are sidestepped here, despite the fact that both could fit snugly into the following pages. Moreover, more conventional representational or economic problems in the politics of black music will be detoured in favor of an engagement with the speculative aesthetic politics suggested by Afrofuturism. Ultimately, *Sonic Warfare* is concerned with the production, transmission, and mutation of affective tonality.

Similarly, this book does not aim to be an all-encompassing survey of contemporary developments in military scientific research into sound. En route,

sonic booms over the Gaza Strip, long-range acoustic devices, and musical torture in Iraq and Guantanamo Bay, directional ultrasound in supermarkets and high-frequency rat repellents deployed on teenagers will be listened out for.⁷ But this is not a catalogue of these objectionable deployments.

More disclaimers. Given that the themes of the book revolve around potential sensations of sonic intensity and the moods they provoke, both controlling and creative, it may strike some readers as strange that the topic of drugs has been omitted. From ganja to hashish, from cocaine to MDMA, from LSD to ketamin to amphetamine, the nexus of drugs and sonic sensation, the narcosonic, acts as an intensifier of acoustic sensations and serves as both a sensory and informational technology of experimentation, deployed by artists, musicians, producers, dancers, and listeners to magnify, enhance, and mutate the perception of vibration.⁸ The narcosonic can also function as a means to economic mobilization, with the lure of these intense experiences used as attractors to consumption within the sprawling network that now constitutes the global clubbing industry. Moreover, like the sonic, the narcotic forms part of the occulted backdrop of the military-entertainment complex, in which the modulation of affect becomes an invisible protocol of control and addiction a means to distract whole populations.⁹ Yet again, to do this topic justice in both its affective and geostrategic dimensions merits a more focused project—one that would be sensitive to both the dangers and empowerments of intoxication.

The focus here will always remain slightly oblique to these research themes. While drawing from such primarily empirical projects, *Sonic Warfare* instead assumes a speculative stance. It starts from the Spinozan-influenced premise that “we don’t yet know what a sonic body can do.” By adopting a speculative stance, *Sonic Warfare* does not intend to be predictive, but instead investigates some real, yet often virtual, trends already active within the extended and blurred field of sonic culture. What follows therefore attempts to invent some concepts that can stay open to these unpredictable tendencies, to the potential invention of new, collective modes of sensation, perception, and movement.

By turning up the amplifier on sound’s bad vibes, the evangelism of the recent sonic renaissance within the academy is countered.¹⁰ By zooming into vibration, the boundaries of the auditory are problematized. This is a necessary starting point for a vigilant investigation of the creeping colonization of the not yet audible and the infra- and ultrasonic dimensions of unsound. While it will be suggested that the borders and interstices of sonic perception have always been under mutation, both within and without the bandwidth of human audibility, a

stronger claim will be made that the ubiquitous media of contemporary techno-affective ecologies are currently undergoing an intensification that requires an analysis that connects the sonic to other modes of military urbanism's "full-spectrum dominance."¹¹ *Sonic Warfare* therefore concentrates on constructing some initial concepts for a politics of frequency by interrogating the underlying vibrations, rhythms, and codes that animate this complex and invisible battlefield—a zone in which commercial, military, scientific, artistic, and popular musical interests are increasingly invested. In this way, the book maps the modes in which sonic potentials that are still very much up for grabs are captured, probed, engineered, and nurtured.

The flow of the book intentionally oscillates between dense theorization, the clarification of positions and differentiation of concepts, on the one hand, and descriptive, exemplary episodes drawn from fact and fiction, on the other. I hope this rhythm will not be too disorienting. The intention has been to present a text that opens onto its outside from several angles. The text is composed of an array of relatively short sections that can be read in sequence, from start to finish as linearly connected blocks. Each section is dated, marking the singularity of a vibrational, conceptual, musical, military, social, or technological event. In addition, these sections can as productively be accessed randomly, with each chunk potentially functioning as an autonomous module. A glossary has been provided to aid with this line of attack.

To help with navigation, here is a quick tour of the book's thematic drift. The main argument of the book is found in the tension between two critical tendencies tagged the *politics of noise* and *the politics of silence* insofar as they constitute the typical limits to a politicized discussion of the sonic. Admittedly oversimplifying a multitude of divergent positions, both of these tendencies locate the potential of sonic culture, its virtual future, in the physiologically or culturally inaudible. Again being somewhat crude, at either extreme, they often cash out pragmatically, on the one hand, in the moralized, reactionary policing of the polluted soundscape or, on the other, its supposed enhancement by all manner of cacophony. *Sonic Warfare* refuses both of these options, of acoustic ecology and a crude futurism, as arbitrary fetishizations and instead reconstructs the field along different lines.

The book opens with a discussion of the origins, parameters, and context of the concept of sonic warfare. It will be defined to encompass the physicality of vibrational force, the modulation of affective tonality, and its use in techniques of dissimulation such as camouflage and deception. The key theorists

of media technology and war, Friedrich Kittler, Paul Virilio, and, in relation to sonic media, Jacques Attali, will be outlined and extended, forcing them toward a more direct, affective confrontation with the problematics of the military-entertainment complex.¹²

A discontinuum of sonic force will be constructed, connecting examples of the modulation of affective tonality within popular and avant-garde music, cinematic sound design, and military and police deployments of acoustic tactics. Futurism responded to this discontinuum through its *art of war in the art of noise*. This artistic response has been revised, mutated, and updated by Afro-futurism, signaling how at the beginning of the twenty-first century, “futurist” approaches must adapt to the mutated temporality of contemporary modes of control, often referred to as *preemptive power*¹³ or *science fiction capital*.¹⁴

In recent theories of sonic experience, an attempt is made to bridge the duality of concepts of the “soundscape” and “sound object” from acoustic ecology and the phenomenology of sound, respectively, through a conception of the “sonic effect.” It will, however, be argued that this does not go far enough: the phenomenology of sonic effects will be transformed into the less anthropocentric *environmentality* or *ecology of vibrational affects*. This impetus is continued into questions of affective tonality in the sonic dimension of the ecology of fear. How do sonically provoked, physiological, and autonomic reactions of the body to fear in the fight, flight, and startle responses scale up into collective, mediatic mood networks? The anticipation of threat will be approached through the dynamics of sonic anticipation and surprise as models of the *activity of the future in the present*, and therefore a portal into the operative logic of fear within the emergent paradigm of preemptive power.

Drawing from philosophies of vibration and rhythm, *Sonic Warfare* then detours beneath sonic perception to construct an ontology of vibrational force as a basis for approaching the *not yet audible*. Here vibration is understood as micro-rhythmic oscillation. The conceptual equipment for this discussion is found in *rhythmanalysis*, an undercurrent of twentieth-century thought stretching from Brazilian philosopher Pinheiros dos Santos, via Gaston Bachelard to Henri Lefebvre. An examination of rhythmanalysis reveals conceptual tensions with influential philosophies of duration such as that of Henri Bergson. The “speculative materialism” developed by Alfred North Whitehead, it will be argued, offers a route through the deadlock between Bachelard’s emphasis on the instant and Bergsonian continuity, making possible a philosophy of vibrational force based around Whitehead’s concept of a nexus of experience—his aesthetic ontology

and the importance of his notion of “throbs of experience.” These vibrations, and the emergence of rhythm out of noise, will be tracked from molecular to social populations via Elias Canetti’s notion of the “throbbing crowd.” This philosophical analysis of vibrational force will be contrasted to Gilles Deleuze and Félix Guattari’s theory of the refrain, and the rhythmic analyses implicit in physical theories of turbulence. The front line of sonic warfare takes place in the sensations and resonances of the texture of vibration. An ontology of vibrational force must therefore be able to account for the plexus of analog and digitally modulated vibration, of matter and information, without the arbitrary fetishization of either. The relation between continuous analog waves and discrete digital grains is reformulated in the light of the above. Sonic warfare therefore becomes a sensual mathematics, equally an ecology of code and of vibration.

On this philosophical foundation, the affectively contagious radiation of sonic events through the networks of cybernetic capitalism will then be examined. This audio virology maps the propagational vectors of vibrational events. This involves a critical discussion of the dominant approach to cultural viruses, memetics, and the relation between sonic matter and memory. Sonic strategies of mood modulation are followed from the military-industrial origins of Muzak, the emergence of musical advertising through jingles into contemporary corporate sonic branding strategy, and the psychology of earworms and cognitive itches. The aim is to extend the ontology of vibrational force into the tactical and mnemonic context of viral capitalism. Some speculations will be made regarding the acoustic design of ubiquitous, responsive, predatory, branding environments using digitally modeled, contagious, and mutating sonic phenomena in the programming of autonomous ambiances of consumption. This forces the domains of sound art, generative music, and the sonic aesthetics of artificial life into the context of a politics of frequency.

Whereas predatory branding captures and redeploys virosonic tactics to induce generic consumption, the tactical elaboration of sonic warfare in the fictions of some strains of Black Atlantic sonic futurism take the concept of the “audio virus” beyond the limitations of memetics and digital sound theory. Here, audioviruses are deployed in affective mobilization via the diasporic proliferation of sonic processes, swept along by the carrier waves of rhythm and bass science and a machinic orality. Illustrating the dissemination and abuse of military technologies into popular culture, and developing the concept of the audio virus through a discussion of the voice, the military origins of the vocoder will be tracked from a speech encryption device during World War II to

the spread of the vocodered voice into popular music. This contagious nexus of bass, rhythm, and vocal science, and their tactics of affective mobilization, will then be followed into the do-it-yourself pragmatics of sound system cultures within the developing sprawls of what Mike Davis has recently referred to as the “Planet of Slums.” What vibrations are emitted when slum, ghetto, shantytown, favela, project, and housing estate rub up against hypercapital? And what kind of harbinger of urban affect do such cultures constitute within contemporary global capitalism?

The book concludes by bringing together some speculations on the *not yet heard*, or *unsound*, in the twenty-first century, mapping some immanent tendencies of the sonic body within the military-entertainment complex. The concept of unsound relates to both the peripheries of auditory perception and the unactualized nexus of rhythms and frequencies within audible bandwidths. Some suggestions will be made for the further conceptualization of sonic warfare within contemporary societies of control defined by the normalization of military urbanism and the policing of affective tonality. It is contended that, existing understandings of audiosocial power in the politics of silence and the politics of noise must be supplemented by a *politics of frequency*. The prefix “sub” will be appended to this idea of a politics of frequency. The ambivalence of the term “(sub)politics of frequency” is deliberate. To some, this will not be recognized as a politics in any conventional sense, but rather lies underneath at the mutable level of the collective tactics of affective mobilization—so a micropolitics perhaps. While this micropolitics implies a critique of the militarization of perception, such entanglements, for better or worse, are always productive, opening new ways of hearing, if only to then shut them down again. But more concern will be shown for those proactive tactics that grasp sonic processes and technologies of power and steer them elsewhere, exploiting unintended consequences of investments in control. For instance, the bracketed prefix “(sub)” is apposite, as a particular concern will be shown for cultures and practices whose sonic processes seek to intensify low-frequency vibration as a technique of affective mobilization. The production of vibrational environments that facilitate the transduction of the tensions of urban existence, transforming deeply engrained ambiances of fear or dread into other collective dispositions, serve as a model of collectivity that revolves around affective tonality, and precedes ideology.