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The Sonic Episteme

To use sound as a tool for theorizing and realizing a more just world, we can't merely reform Western modernity; we must do something else entirely

By [ROBIN JAMES](#) OCTOBER 23, 2019



*An edited excerpt from Robin James, The Sonic Episteme:
Acoustic Resonance, Neoliberalism, and Biopolitics.
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Music . . . first connected the senses to the invisible
realm of mathematical theory. . . . Music harmonized
experience with mathematics.

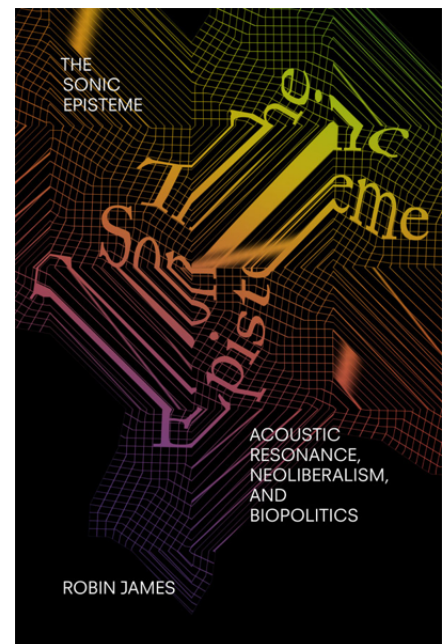
—Peter Pesic, *Music and the Making of Modern Science*

PEOPLE use the term “symphony” to explain and put a positive spin on data analytics so frequently that it’s on the fast track to becoming a cliché. Symphony and Symphony Solutions are software companies focused on digital communication and data analytics. Symphony Health and Symphony Corporation are data-analytics firms serving the health-care industry. Symphony Retail uses artificial intelligence for retail applications like marketing and logistics. Data scientists working at these (and other) companies commonly use ideas of *symphonia* (συμφωνία)—the ancient Greek word for “pleasing harmony”—to describe the nuts and bolts of what they do. On data-science firm dunnhumby’s corporate blog, David Castro-Gavino’s post titled “Creating a symphony from the noise of customer data” uses the idea of symphony to explain how data scientists discover useful, meaningful relationships among individual data points: Patterns in the frequency of consumer behaviors interact to form actionable information just as patterns in the frequency of sound waves interact to form pleasing resonances. Capitalizing on mathematical similarities between the physics of sound and the metaphysics of predictive analytics, this comparison appeals to laypeople’s musical understanding of sound—an understanding of sounds shaped by sociohistorically local conventions—to translate the complex math behind data analytics into familiar and accessible nonquantitative terms.

As the epigraph suggests, Western culture commonly uses music to translate

math into qualitative terms. But in the late 20th and early 21st centuries the neoliberal, biopolitical push to quantify every last bit of reality has elevated a specific kind of math—probabilistic statistics—from a mere tool for describing things to the fundamental structure of reality and knowledge themselves. As philosopher Mary Beth Mader explains in *Sleights of Reason*, the use of probabilistic statistics to study and govern people has led to “a radical shift in ontological register” from the social to the mathematical. Statistics do not describe relations among people but “a relation between numbers or quantities alone.” For example, the [Centers for Disease Control reported](#) that the suicide rate in North Carolina from 2014 to 2016 was 15.3 out of 100,000 people. This figure expresses the frequency of one average number (suicides) in relation to another average number (population); it does not represent a count of actual suicides or living people. In addition to showing how this statistic expresses a relation among numbers rather than people, this example highlights that probabilistic statistics reimagine the world as a specific type of mathematical relationship: a frequency ratio. In the “ontological shift” from people to frequency ratios, the rules and principles behind this math come to be taken as the basic rules and principles behind reality itself. Because sound is commonly understood to be a kind of frequency, it is easy to use people’s practical knowledge and experience of music to translate that math into down-to-earth terms.

These appeals to music and sound don’t just dumb down math for nonexperts; they also capture aspects of reality mathematics cannot. As much as states, corporations, and even artistic and academic practices try to quantify everything, people will continue to experience things in qualitative ways, like with their senses or their emotions. And as processes of quantification surpass the grasp of both nonexperts and individual human brains, these qualitative



[Robin James, *The Sonic Episteme: Acoustic Resonance, Neoliberalism, and Biopolitics*. Duke Press University, 2019. 256 pages.](#)

registers of experience may be the most efficient medium in which to perform the ontological shift from people to frequencies in a way that people can easily understand and adapt to. This is where the old music/math trope comes in handy, except here sound isn't just a metaphor for math.

Metaphors draw figurative, counterfactual relationships between things that aren't actually the same. However, the introductory examples use “symphony” to translate the same structure or relationship from a quantitative medium into a qualitative one. Acoustic resonance (i.e., sound as a frequency or oscillating pattern of variable intensity) and neoliberal, biopolitical statistics are different ways of expressing relationships among frequency ratios: one quantitatively, as a rate; the other qualitatively, as resonant sound. In these cases, acoustically resonant sound and math are two different ways of expressing the same kinds of relationships, two sides of the same coin.

Scholars refer to the quantitative side of this coin as a “neoliberal episteme.” In *Way Too Cool*, philosopher Shannon Winnubst argues that “neoliberalism repeats the themes of liberalism in a different voice” because it articulates liberalism's basic commitments—such as individualism and white supremacy—in terms that are “calculative” rather than “juridical.” Though it preserves classical liberalism's fundamental values, neoliberalism uses different tools and techniques to act on and realize those values—calculative rather than juridical ones. That's why neoliberalism forms a new type or subtype of episteme. “Episteme” is Michel Foucault's term for a group of intellectual, economic, and political practices that are tied together by common behind-the-scenes methods, logics, and values. As he explains in *The Order of Things*, “unknown to themselves,” the practitioners of a particular episteme “employed the same rules to define the objects proper to their own study, to form their concepts, to build their theories.” These “rules” are methods of abstraction, parameters for translating or compressing rich sensory data into words, numbers, images, and other kinds of information. In the neoliberal episteme, probabilistic statistics are the rules used to define objects of knowledge, form concepts, and build theories. That's why Winnubst defines the neoliberal episteme as a calculative rationality.

The Sonic Episteme: Acoustic Resonance, Neoliberalism, and Biopolitics is about the neoliberal episteme's complementary qualitative episteme, which I call the sonic episteme. The sonic episteme creates qualitative versions of the same relationships that the neoliberal episteme crafts quantitatively, bringing nonquantitative phenomena in line with the same upgrades to classical liberalism that the neoliberal episteme performs quantitatively. Like earlier versions of what sound-studies scholar Jonathan Sterne calls "the audiovisual litany," the sonic episteme misrepresents sociohistorically specific concepts of sound and vision as their universal, "natural" character and uses sound's purported difference from vision to mark its departure from what it deems the West's ocular- and text-centric status quo. Whereas earlier versions of the litany claim sound embodies an originary metaphysical immediacy or "presence" that words and images deny, the sonic episteme claims sound embodies material immediacy and the metaphysics of a probabilistic universe, which modernity's commitments to representationalist abstraction and certainty supposedly occlude.

Appealing to assumptions about sound and music's "minoritarian" position in Western culture and sound's inherent wholesomeness, all constituents of the sonic episteme claim their use of sound is both revolutionary (turning Western modernity on its head) and recuperative (recovering what it excluded). In this way, they misrepresent their difference from the Western modern *status quo* as progress past it. Although the sonic episteme presents these upgrades as fixes for modernity's bugs, especially bugs related to identity-based inequality, it actually repeats these bugs in a voice that makes those bugs sound and feel like features. Thus, though the sonic episteme's appeal to sound may appear revolutionary because it frees us from the conceptual and political baggage we've inherited from Western modernity, it just remakes and renaturalizes all that political baggage in forms more compatible with 21st century technologies and ideologies—which is exactly what the neoliberal episteme does with its calculative rationality.

Sometimes individual constituents of the sonic episteme appeal to acoustic resonance explicitly, and sometimes their appeal is implicit but easy to infer.

Jacques Attali's claim in *Noise* that "the laws of acoustics . . . displa[y] all of the characteristics of the technocracy managing the great machines of the repetitive [i.e., neoliberal] economy" is one example of an explicit appeal that directly mentions acoustics. Implicit appeals mention features of acoustic resonance without directly calling them that, such as when neoliberal economist Milton Friedman implicitly makes the same claim Attali does, arguing in *Capitalism and Freedom* that the deregulated, entrepreneurial market is "a system of proportional representation" that expresses human behavior in statistically calculated ratios such as probabilities and cost-benefit calculus. Friedman's proportions are ratios that express the average or normal frequency of a variable, and they are grounded in the same basic mathematical principle we use to measure sound waves: frequency ratios. This same system of proportional representation—in particular, the proportional representation of public opinion proffered by polling and, more contemporarily, big data—is the foundation of the "postdemocratic" political ontology philosopher Jacques Rancière critiques in his book *Disagreement*. That's why he calls postdemocracy "the perfect realization of the empty virtue Plato called *sôphrosunê*" and explicitly—at least for the expert reader—uses sound to translate statistics into nonquantitative terms (in this case, ethics). Plato models *sôphrosunê* (generally translated as "moderation") on contemporary-to-him understandings of musical harmony as geometric proportion. Rancière uses *sôphrosunê* to describe a society organized by statistically calculated frequency ratios, probabilities, and forecasts, updating Plato's original idea of *sôphrosunê* with 20th and 21st century math, which brings us back to Attali's claim that the laws of acoustics look a lot like the principles of neoliberal social order and political ontology.

This same concept of *sôphrosunê* appears in pop culture as an ethical ideal for individuals, corporations, and the state, often implicitly as narratives about personal responsibility. Comparing quantum strings to the strings on a musical instrument, popular science writing about string theory figures such as Brian Greene and Stephon Alexander likewise uses the slippage between ancient Greek concepts of musical harmony and acoustic resonance to translate the math behind its probabilistic models of the universe into terms

laypeople can understand. In *Meeting the Universe Halfway*, new-materialist theorist Karen Barad uses the basic principles of quantum physics as a model for philosophical abstraction and frequently appeals to concepts of “resonance” and “dissonance” to translate the physicists’ mathematical models into philosophical concepts and methods. Similarly, Elizabeth Grosz’s Deleuzo-Darwinian ontology treats “vibrations, waves, oscillations, resonances” as the fundamental elements of existence.

From neoliberalism to new materialism and beyond, acoustically resonant sound is the “rule” these otherwise divergent practices use, as Foucault puts it in *The Order of Things*, “to define the objects proper to their own study, to form their concepts, to build their theories.” Because this rule is the qualitative version of the quantitative rules neoliberal market logics and biopolitical statistics use to organize society, the sonic episteme is, in the terms of the well-known Adorno/Foucault meme, possibly bad and definitely dangerous.

The sonic episteme is dangerous, but thankfully it’s not the only way to think with and through sound—i.e., to use sound to define concepts and other objects of knowledge, build theories, and abstract from sensory reality to human expressions. Sound, and even resonance, can be a productive model for theorizing if and only if it models intellectual and social practices that are designed to avoid and/or oppose the systemic relations of domination that classical liberalism and neoliberalism create. This is easy to do if we look to the way people oppressed by those systems of domination think about and use sound. Looking to both theories of sound and resonance in black studies and musical practices by black women artists, I show that it’s possible to use sound to think about political ontology, vibratory resonance, subjectivity, and even math without appealing to the sonic episteme and the neoliberalism and biopolitics that come with it. Building on Alexander Weheliye’s use of the term, I call these practices “phonographies.” Phonographies study patterns of living that model what Weheliye calls “habeas viscus,” Devonya Havis calls “sounding,” Katherine McKittrick calls “demonic calculus,” Ashon Crawley calls “choreosonics,” and Christina Sharpe calls “wake.” These all refer to phenomena that behave like acoustic resonance (e.g., they’re rhythmic,

oscillatory patterns) and/or the math it models, but they are calibrated to the epistemic, ontological, aesthetic, and political practices black people have used to build alternative realities amid white-supremacist patriarchal domination.

The sonic episteme upgrades qualitative phenomena to work more efficiently under neoliberalism and biopolitics, and phonographies do the opposite of that. Whereas the sonic episteme takes what Western modernity traditionally disposes of—resonance—and uses it to reinvest and revive white Western culture so it can succeed in neoliberal, biopolitical institutions, phonographies do not reappropriate that discarded material. Phonographies articulate ideas, aesthetics, and relationships that exist in the frequencies perceptually coded out of the sonic episteme's spectrum because the cost of laboring to domesticate them into something that contributes to elite status isn't worth the benefit. To use Tricia Rose's term from *Black Noise*, phonographies work "in the red." Rose coins this phrase to describe the ways "rap producers . . . pus[h] on established boundaries of music engineering" to create sounds that align with "Afrodiasporic musical priorities." These established boundaries reflected white Western aesthetic priorities (e.g., about pitch or the correct level of bass), which are coded into music technologies like mixers and speakers. Because Afrodiasporic sonic priorities were coded out of these technologies, hip-hop artists had to misuse them and break the boundaries coded into them to achieve the sounds they wanted. "In the red" refers to the way music technologies represent one such broken boundary: the threshold at which increasing a mix's volume or gain distorts the frequencies in the mix. The gain or volume meter on mixing equipment uses green lights to indicate when the mix is below that threshold and red lights to indicate when that threshold is crossed. In-the-red frequencies are outside the spectrum of frequencies that accurately reproduce and transmit white aesthetic values. Focusing our attention on dimensions of verbal, visual, and musical practices that conventional methods of abstraction dispose of, phonographies are what Weheliye might call "nondisciplinary" or what Sharpe might call "undisciplined" practices that avoid reinvesting in white-supremacist patriarchal models for transmitting knowledge, privilege, personhood, and

property, such as the academic discipline. To use sound as a tool for theorizing and realizing a more just world, we can't just reform Western (post)modernity, but must do something else entirely.



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