The biopolitics of vibratory resonance

ABSTRACT

This paper shows how contemporary philosophers use concepts of sound, vibration, and resonance to create quantitative versions of the neoliberal episteme's shift from juridical to calculative rationality.[1] Reading literature in sound studies alongside Mary Beth Mader's genealogy of the kind of statistics used in biopolitical normalization, I show that contemporary acoustics appeals to the same basic mathematical relationship that ground the probabilistic statistics used to model biopolitical populations and neoliberal markets. This makes philosophical models grounded in acoustic resonance, such as Jane Bennett's vibratory materialism and Karen Barad's diffractive ontology, easy to exploit for unjust ends. For example, these resonant theories reproduce, in philosophy, the same inequities neoliberalism and biopolitics produce in society.

In first few decades of the 21st century, the desire to leave tired old European modernity and its correlationism, anthropocentrism, representationalism, identitarianism, and whatever else behind in favor of new methods has become an increasingly common refrain across continental philosophy. There's OOO, nonphilosophy, critical realism, new materialism...the list goes on.[2] One variation on this refrain frames the difference between old and new philosophical methods as the difference between philosophy's traditional verbal or visual representationalism and vibratory resonance. For example, there are Deleuzian projects like Elizabeth Grosz's "musical" ontology[3] and Steve Goodman's "ontology of vibrational force,"[4] and there are more science-inspired "new materialisms" such as Jane Bennett's vibrational materialism[5] and Karen Barad's theory of diffraction.[6] All of these theorists argue that replacing philosophy's conventional methods of abstraction with ones modeled on vibratory resonance fixes all the conceptual and political problems we've inherited from European (post)modern philosophy, like identity-based social exclusion, anthropocentrism, etc.

---

[1] See Winnubst, Way Too Cool.
[2] On this "turn" see Thompson, Marie. "Whiteness and the Ontological Turn in Sound Studies" in Parallax Vol 23 2017: Pages 266-282
[3] Grosz, Elizabeth. Chaos, Territory, Art.
[4] Goodman, Steve. Sonic Warfare. MIT Press TKTK.
[5] Bennett, Jane. Vibrant Matter.
[6] Barad, Karen. Meeting the Universe Halfway. Durham: Duke UP 2007.

As theorists from Michel Foucault to Laura Mulvey have shown us, verbal and visual representationalism were appealing because they naturalized the ontological and metaphysical foundations of the power relations that structured European Modernity, such as the subject/object distinction or the view from nowhere.[7] In this paper, I argue that these theories of vibratory resonance naturalize the ontological and metaphysical foundations of the power relations that structure many facets of 21st century Western society: biopolitical statistics and neoliberal concepts of the market.

Though there are many varieties of both biopolitics and neoliberalism, there are versions of each that employ the same basic mathematical tools. I am interested in the neoliberalisms and biopolitics that reduce everything to probabilities (e.g., cost/benefit calculus) and normalized distributions (like Gaussian models). This neoliberalism-biopolitics conjunction is different from the neoliberal biopolitics that Melinda Cooper studies in *Life as Surplus*, in part because those neoliberalisms & biopolitics use slightly different though still mutually overlapping math (e.g., tranching instead of Gaussian distributions of risk).[8] Examples of the neoliberalisms & biopolitics I address here include the Chicago School theories of human capital and what Cooper actually calls “state biopolitics.” Though older than the neoliberal biopolitics Cooper studies, these are still commonly practiced varieties. For example, Michelle Murphy has shown that over the course of the late 20th and early 21st centuries, the very concept of “population” has been remade in primarily economic terms--first national GDP, then human capital. Modeling population on human capital, this type of neoliberalism-biopolitics uses the same probabilistic models to imagine life and the market (human capital is the microcosm of the macrocosmic market). And this math provides neoliberalism’s/biopolitics’ ontological and metaphysical foundations. That foundation is a specific kind of mathematical relationship: the frequency ratio.

---

[7] Foucault, Michel. The Order of Things and The History of Sexuality vol.1. Mulvey, Laura. “Visual Pleasure in Narrative Cinema” TKTK.

[8] In *Life as Surplus*, Cooper distinguishes between a “state biopolitics [which] speaks the language of Gaussian curves and normalizable risk” and neoliberalism-biopolitics, which is “more likely to be interested in the non-normalizable accident and the fractal curve” (Cooper 10). To avoid confusion among our objects of study I use the term “neoliberalism-biopolitics” to identify what I study in this project. My neoliberalism-biopolitics departs from Cooper’s neoliberal biopolitics primarily because we focus on different varieties of each: Cooper studies neoliberalisms that begin after those Foucault studies in *The Birth of Biopolitics*, whereas I am primarily focused on the Chicago-school-influenced neoliberalism he addresses toward the end of the book, and the French neoliberalisms that Attali was referring to in his work from the late 70s and early 80s.

Both these vibratory ontologies and neoliberalism-biopolitics think the frequency ratio is the basic structure of reality.

Frequency ratios are also the basic components of acoustic resonance. The vibratory ontologies I study here use acoustically resonant sound to create qualitative versions of the same basic structures and relationships that neoliberalism and biopolitics craft as they voraciously quantify everything. Shannon Winnubst argues that "neoliberalism repeats the themes of liberalism in a different voice"[9] because it articulates liberalism's basic commitments--such as individualism and white supremacy--in terms that are "calculative" rather than "juridical."[10] The vibratory ontologies I study here perform this same rearticulation, repeating liberalism's basic commitments in terms that are resonant rather than representational. Thus, though these vibratory ontologies may present themselves as revolutionizing Western philosophy, it is more accurate to understand them as upgrading philosophy's methods of abstraction for greater compatibility with the technologies corporations and the state use to maintain evolving relations of white supremacist cisheteropatriarchal domination.

The first section of the paper reads literature in sound studies alongside Mary Beth Mader's genealogy of the kind of statistics used in biopolitical normalization in order to establish the relationship between vibratory resonance and the ontological and metaphysical foundations of neoliberalism-biopolitics: the quantitative models of sound waves in contemporary acoustics appeal to the same basic mathematical relationship that ground the probabilistic statistics used to model biopolitical populations and neoliberal markets. Acoustic resonance can thus translate the math behind neoliberalism-biopolitics into non-quantitative terms. The second section studies two related uses of this translation: Jane Bennett's vibratory materialism and Karen Barad's diffractive materialism. I will show that their concepts of vibration and diffraction are varieties of acoustic resonance, and argue that their vibratory and diffractive methods of abstraction update philosophy so that it uses a non-quantitative version of the same basic abstraction that's behind biopolitical normalization and neoliberal markets. I will then show that this commonality is both dangerous and bad.[11]

---

[9] Winnubst WTC 32
[10] Winnubst WTC 34
[11] On the dangerous/bad distinction see: https://i.imgur.com/DYCr9mO.jpg

I. Acoustic Resonance & Statistics

In his 1977 book *Noise* (which is a foundational text in sound studies and critical musicology), French economist and social theorist Jacques Attali argues 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".[12] In a 2014 speech at Harvard, Attali clarified his claim: these "laws of acoustics" are "predictive" in the way statistical forecasts and predictive analytics (i.e., big data) are.[13] As I have argued earlier, Attali's economic machines are the same statistics that lie at the heart of Foucault's account of biopolitical normalization: "Just as 'the mechanisms introduced by biopolitics include forecasts, statistical estimates, and overall measures', [neoliberal] political economy is a 'macrostatistical and global, aleatory view, in terms of probabilities and statistical groups'."[14] Attali's comparison between acoustically resonant sound and the statistical forecasts that neoliberal economists use to model the market may sound odd, but it works. Both appeal to the same underlying mathematical relationship--the frequency ratio--and take this kind of ratio as the fundamental unit of reality. To explain this connection, I will first define what I mean by "acoustic resonance" and then compare it to Mary Beth Mader's account of the role of statistics in biopolitical normalization, which shares this same "aleatory view in terms of probabilities and statistical groups."

1. What is "acoustic resonance"?

The classic definition of resonance is the one Hermann Helmholtz offers in *On The Sensations of Tone*: "vibratory motion."[15] Helmholtz thought vibrating bodies transferred their vibratory motion to their surrounding environment, thus generating what he called sympathetic resonances. Whereas sympathetic resonance refers to patterns of vibratory back-and-forth

---

[12] Attali, Jacques. Noise: The Political Economy of Music. Trans. Brian Massumi. Minneapolis: University of Minnesota Press, 1984. P. 113. For more on the relationship between Attali's concept of "repetition" & Foucault's concept of neoliberalism, see my "Neoliberal Noise" article from Culture, Theory, and Critique 52 (2):138-158 (2014).
[13] Attali, Jacques. "Music As Predictive Science" https://www.youtube.com/watch?v=_evJY-GZ7yc There's evidence Attali is correct. For example, neoliberal economists like Milton Friedman think the deregulated, entrepreneurial market is "a system of proportional representation" (*Capitalism & Freedom*, 15) that expresses human behavior in statistically-calculated ratios such as probabilities and cost:benefit calculus. These ratios are also the basic mathematical tool we commonly use to measure sound waves (e.g., pitch is a ratio of cycles per second, decibels are ratios that compare the intensity of a particular sound to what is generally agreed to be the maximum intensity average human ears can perceive). But unlike the ancient Greeks, who measured sounds in terms of geometric proportion--the geometric proportions of a string (unfretted, fretted at midpoint, fretted at the ⅓ point, etc.), neoliberals measure things/markets as statistical proportions (i.e., probabilities). Friedman's proportions are ratios that express the average or normal frequency of a variable, and these ratios display the same characteristics 21st century scientists and musicians use to measure the physical properties of sound.
[14] James, Robin. "Neoliberal Noise" in Culture, Theory, & Critique. 2014. P. 140.
[15] Helmholz, Hermann. *On The Sensations of Tone*. 2013 Dover Books. P. 3.

motion, acoustic resonance refers to patterns of high and low pressure, intensity, or energy. From the perspective of acoustics, “a sound wave consist[s] of a condensation or high-pressure pulse followed by rarefaction or low-pressure pulse.”[16] This pattern of higher and lower intensity is generally visualized as a waveform, with the upper peak describing that highest intensity and the lower valley describing the lowest intensity. This visualization commonly misleads people into thinking sound waves work like vibrating strings, moving up and down or back and forth; but that’s incorrect: sound waves are alternating patterns of pressure, intensity, or energy.[17] For example, Steve Goodman explains that “a nonrepresentational ontology of vibrational force”[18] prioritizes “the texturyhthms of matter, the patterned physicality of a musical beat or pulse.”[19] These patterns are described as ratios: for example, mHz for pitch or frequency is the ratio of cycles per second. In contemporary physics, acoustic resonance refers to interaction of these kinds of patterns: resonance occurs when frequency patterns align and amplify one another rather than clash and dampen or mask one another.[20]

When these patterns interact, their various periods (a complete oscillatory cycle, e.g., from condensation to rarefaction or from peak to valley) form phase relationships. When patterns are in phase, they align at regular intervals; an example of this would be a song sung in “in the round.” Composer Steve Reich describes these type of phase relationships as “rational”: they align at intervals we are habituated to recognizing.[21] Patterns that do not align at regular intervals are “irrational” and out of phase. For example, in European music theory, overtones that are integer (whole-number) multiples of the fundamental frequency are called “harmonics,” whereas overtones that are non-integer (i.e., fraction) multiples of the fundamental frequency are called “inharmonics”.[22] In this sense, “rational” relationships among patterns are “rational” when they are proportional and thus expressible as ratios; such relationships are “irrational”

---

[16] Olson 4

[17] As the website the Physics Classroom explains, “The representation of sound by a sine wave is merely an attempt to illustrate the sinusoidal nature of the pressure-time fluctuations. Do not conclude that sound is a transverse wave that has crests and troughs. Sound waves traveling through air are indeed longitudinal waves with compressions and rarefactions. As sound passes through air (or any fluid medium), the particles of air do not vibrate in a transverse manner. Do not be misled - sound waves traveling through air are longitudinal waves.” http://www.physicsclassroom.com/class/sound/Lesson-1/Sound-is-a-Pressure-Wave

[18] Goodman, Steve. Sonic Warfare. MIT Press 2009. P. xv.

[19] Goodman 83.

[20] The Audiopedia, “Acoustic Resonance” https://www.youtube.com/watch?v=5nhZf13Wq_w

[21] The South Bank Show: Steve Reich: https://www.youtube.com/watch?v=e_pR1sHHeQU

[22] Dissonance or out-of-tune-ness is how we humans perceive out-of-phase sound waves, and consonance is how we perceive sound waves that are in phase. This out-of-phaseness is sometimes described as “roughness” or “beating”; these metaphors imply that dissonance is the perception of clashing, incongruent phase patterns.

when they aren't consistently proportional enough to be expressible as a ratio. Thus, as Julian Henriques argues, "thinking through sound thus evolves into a philosophy of resonance" when it considers "reason...as ratio rather than only representation."[23] Rationality here doesn't mean non-contradiction or logical implication, but consonant phase relationships that are rationally divisible in to one another to form something like a fraction. Modeling reason on ratios rather than clear and distinct representations may appear to liberate us from all the bad stuff European Modernity bequeaths us via "representationalism" (subject/object metaphysics, classically liberal identity politics, etc.), but this particular sort of ratio is also a technology that neoliberalism and biopolitics use to oppress and dominate us in the present.

2. Biopolitics, statistics, and frequency ratios

In general, "biopolitics" refers to a style of governing focused on life: life is the object of governance and site of power's investment (or divestment), and killing off internal threats is a common and justifiable way of fostering that life (e.g., eugenics). When it comes to defining and theorizing biopolitics, two of the most commonly cited philosophers are Foucault and Giorgio Agamben. As Foucault explains, "the phenomena addressed by biopolitics are, essentially, aleatory events that occur within a population that exists over a period of time."[24] It uses statistics to identify patterns among these aleatory events, "effect distributions around the norm,"[25] and thus make them relatively predictable and manageable. Foucault's account foregrounds the role of statistics, probabilities, and Gaussian normal curves; these are not as central to other accounts. My theory of biopolitics appeals to Foucault because this math is the thing that acoustic resonance can be used to model and metaphorize.

This math is also what the kind of biopolitics and the kind of neoliberalism I study here have in common. The definitive feature of all neoliberalisms is the idea that everything, including and especially traditionally non-economic phenomena like emotions--works like a deregulated, financialized market. And it represents that kind of market as a probability or statistical forecast. This is what Attali was referring to in his 1983 claim that then-contemporary macroeconomics (i.e., the economists Foucault reviews in *Birth of Biopolitics*) viewed things "in terms of

[23] Henriques, Julien. Sonic Bodies. Bloomsbury 2011. P. xxx.
[24] SMBD 246
[25] HSv1, 144

probabilities and statistical groups."[26] As Shannon Winnubst explains, "the statistic exemplifies the ratio-calculative normativity that Foucault locates in neoliberal theorists",[27] which in turn treats "the norm as number, and especially as ratio."[28] The quantitative relations in neoliberal cost:benefit calculus, biopolitical population metrics, and other normalized statistical distributions are the social functionality that the theories I discuss below naturalize behind apparently neutral and apolitical concepts of sound and resonance. So, when I talk about neoliberalism-biopolitics, I mean a society governed by and designed to reflect a specific type of mathematical relationship: a normalized statistical distribution.

I get this definition of biopolitics from Mary Beth Mader. Reading Foucault's concept of biopolitical normalization alongside a critical history of statistics, Mader argues that the thing that distinguishes biopolitics from other technologies of government (like disciplinary normation, sovereign law, etc.) is that it operates at a different ontological register.[29] Statistical norms do not govern relations among people, words/laws, or God, but relations among numbers, thus producing the quantitative political ontology they are claimed to merely describe. As Mader puts it,

> when expressed as ratios, the actual social relations between groups of people are masked in these figural expressions that employ the specific features of mathematical objects to characterize people and groups of people...endogenous mathematical traits that are superimposed on the social objects studied, rather than discovered in them.[30]

So, there are two parts to her claim: (1) social relations--both the concrete relations among people and the abstractions about how we do and should relate--are conceived and remade in terms of mathematical relations among numbers, and (2) because statistics are the mathematical instrument used to measure, manage, and enforce those relations, society is made to embody the specific kind of mathematical relationship statistical norms express--a frequency ratio (i.e., ratios expressing the frequency of a given variable in a population). "With the spread of the statistics of population and their role in the constitution of subjects, then, social relations literally become rationalized, or more precisely, *ratio-ized*."[31]

---

[26] ST 11
[27] WTC 102
[28] WTC 101
[29] SoR 56
[30] SoR 65
[31] SoR 45

But Plato's *Republic* also rationalizes social relations: this is what the myth of the metals does. So it's not ratios per se that are definitively biopolitical, but a particular way of calculating ratios. Plato's ratios are geometric; they compare relative size or reality (e.g., the length of segments on the divided line is proportional to the 'reality' of what that line represents). Foucault's biopolitical ratios are frequential: they compare the relative frequency of a phenomenon in a group. For example, the normal curve "is a graphic representation of the distribution of frequencies of values for a given measured property, with the most frequent values being those in the distribution that cluster around a mean or average in a single peak."[32] Normal curves measure a property's pattern of intensity within a given population. Statistical norms are ratios of ratios: they take individual measurements of the rate at which a given property X appears in a population (this is the first set of ratios), and then aggregates these and finds the most common or "normal" rate, the average rate Y at which X rate occurs--again, this is measuring a pattern of intensity. "The ratio" is one of "the basic conceptual components of the notion of the normal curve,"[33] and of normalization as a technique or technology. It is also the same basic conceptual component behind the notion of acoustic resonance. So, though they may express this DNA slightly differently, both acoustic resonance and neoliberalism-biopolitics share a common gene or element: the frequency ratio. It's this element, the frequency ratio, that they have in common with acoustics.

Because acoustics and neoliberalism-biopolitics share the same basic mathematical DNA--the frequency ratio--acoustic resonance can thus be used to translate the mathematical tools biopolitics and neoliberalism use to organize society into non-quantitative terms. 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 the theories I study in the next section, sound isn't just a metaphor for math. Metaphors draw figurative, counterfactual relationships between things that *aren't actually the same*. However, the vibratory ontologies I study here use sound to create *the same structure or relationship* neoliberalism and biopolitics create in quantitative media in qualitative ones. The next section addresses two such instances.

---

[32] SoR, 45
[33] SoR 44

II. Vibration and Diffraction as Philosophical Methods

Jane Bennett and Karen Barad each aim to replace philosophy's conventional methods of abstraction with ones modeled on acoustic resonance.

Bennett thinks vibration is the basic unit of reality, and philosophical concepts ought to be modeled on it. According to Bennett, vibration is "the dynamic force"[34] or "indeterminate wave of energy"[35] like Spinozan "conatus[, which] refers to the effort required to maintain the specific relation of 'movement and rest' that obtains between its parts."[36] These vibratory patterns resemble the pattern of force/pressure that is transmitted by the movement and rest of objects as they displace the ambient air--i.e., as they resonate. She uses ideas of resonance to explain how vibratory patterns interact. When "a chord is struck,"[37] she writes, "'effects' resonate with and against their 'causes'"[38] in rational ("with") and irrational ("against") phase patterns. These patterns form a "complicated web of dissonant connections between bodies"[39] in which "each member-actant maintains an energetic pulse slightly 'off' from that of the assemblage."[40] Dissonance, as Bennett conceives it, is what happens when pulsed or rhythmic patterns interact in not-fully-rational ways. A form of periodic oscillation, patterns of condensing and rarefying intensity, or the emergent pattern of chance occurrences, Bennett's concept of vibration fits the definition of acoustic resonance I outlined above.[41]

---

[34] Vibrant Matter 35

[35] (106)

[36] 22

[37] 120

[38] 52

[39] 4

[40] 24

[41] Though Shelley Trower's *Senses of Vibration* does express some affinities with new materialism in general ("vibration allows me to move beyond the category of the material object and to resist its distinction from the human subject" (SoV 7)) and with Bennett's project in particular, this project neither models vibration on acoustic resonance, nor does it practice ideal theory. First, she studies vibration as people begin to understand it as "moving or quivering rapidly" (SoV 9), not dynamic patterns of pressure or intensity, or frequency ratios, or rhythms of condensation and rarefaction. The kind of movement or quivvering is too general and not specifically patterned oscillations. Second, Trower is not advancing an ontology so much as studying past concepts and practices of vibration. She doesn't abstract away from the texts, practices, and relations she studies, and even calls out 21st century uses of vibration as an idealized model for economic success. Studying the frequent appeals to "vibrancy" in UK universities' marketing copy and British politicians' speeches, Trower finds that "the use of the word 'vibrant' in these and many comparable descriptions seems to belong to the discursive rather than the material, in that there is no actual vibration going on" (Sov 151). What is going on is "economic development" and "the public 'regeneration' of buildings and communities" (SoV 151).

In Barad's work, diffraction patterns are "the fundamental constituents that make up the world."[42] Diffraction is also a metaphor for her philosophical method.[43] In physics, diffraction refers to the way a wave bends as it encounters another thing. When two or more waves interact, they produce "alternating pattern[s] of wave intensity" or "increasing and decreasing intensities,"[44] like ripples in water or alternating light frequencies. For example, when diffracting light waves around a razor blade, "bright spots appear in places where the waves enhance one another-that is, where there is "constructive interference"-and dark spots appear where the waves cancel one another-that is, where there is "destructive interference"".[45] Constructive interference is consonance: the synched patterns amplify one another; destructive interference is dissonance: the out-of-synch patterns mask each other. Both types of interference are varieties of resonance, a rational or irrational phase relationship among frequencies. Barad often uses resonance as a metaphor to translate wave behavior into materialist philosophical methods. For example, she argues that "diffractively read[ing]" philosophical texts means processing "insights through one another for the *patterns of resonance and dissonance* they coproduce."[46] Similarly, she advises her readers to tune into the "dissonant and harmonic resonances"[47] that emerge when they try "diffracting these insights [from an early chapter in her book] through the grating of the entire set of book chapters."[48] Barad uses diffraction to describe patterns of alternating intensity that interact in phase relationships; it's thus a type of acoustic resonance.

Even though Bennett and Barad think they are giving philosophers new and different tools, what they're actually doing is upgrading philosophers' methods of abstraction so they are more compatible with the methods of abstraction used in probabilistic statistics. Because these statistics are the elementary components of neoliberal and biopolitical variations on white supremacist capitalist patriarchy, these philosophies of vibratory resonance may actually assist

---

[42] (MTUH 72)
[43] MTUH 83
[44] 77)
[45] 77. This "constructive" and "destructive" interference is like audio amplification and masking: when frequencies are perfectly in sync (peaks align with peaks, valleys with valleys), they amplify; when frequencies are perfectly out of synch (peaks align with valleys), they cancel each other out (this is how noise-cancelling headphones work).
[46] 195; emphasis mine
[47] 43
[48] 30

new and evolving mechanisms of domination.[49]

III. “I’m not saying everything is bad, I’m saying everything is *dangerous*”[50]

The rise of big data and advances in AI led magazines like *Wired* and *The New Scientist* to speculate about “the end of theory.”[51] What better way to prove philosophy’s continued relevance than to make its methods of abstraction compatible with the statistical and probabilistic abstractions used across elite institutions? That’s what Bennett and Barad’s uses of acoustic resonance do: they translate the kind of mathematical abstraction these algorithms use into non-quantitative terms.

Because they effectively speak a different dialect of the same language of abstraction that neoliberal market logics, biopolitics, and big data use, Bennett’s and Barad’s projects are easy to exploit for those purposes. For example, Bruce Braun argues that environmental philosophers use Bennett’s and Barad’s work as a tool for financializing our concept of nature and environmental policy.[52] Re-imagining the world in the exact terms that hegemonic institutions use to organize and manipulate the world and all its inhabitants, these vibratory ontologies could be little more than philosophical sous chefs for corporations, states, and NGOs like the IMF. This is why the “resonant” or “acoustic” turn in philosophy is dangerous.

What concerns *me* is the way this “acoustic turn” in philosophy can produce, within the discipline of philosophy, the same relations of domination and subordination that neoliberalism-biopolitics produce in society. According to Lester Spence, neoliberalism divides the population into three status groups: those who have already adopted neoliberal market logics, those who haven’t yet but are able to adopt them, and those who are unwilling or incapable of this reform.[53] Though this protocol supposedly measures performance instead of

---

[49] My claim here goes beyond ones made by scholars such as Diana Leong and Zakiyah Jackson that new materialist theorists actively overlook scholarship by people of color. My point is that the theories themselves adopt a non-quantitative version of the same method of abstraction that biopolitical normalization and neoliberal markets use.
[50] http://sociologicalimagination.org/archives/15395
[51] https://www.wired.com/2008/06/pb-theory/
https://www.newscientist.com/article/mg23230971-200-the-irresistible-rise-of-artificial-intelligence/
[52] Braun, Bruce TKTK.
[53] Spence, Stare in Darkeness, 16.

identity, Spence argues that it ends up producing the same old race-based status differences. And we can see these status differences in philosophy. Bennett and Barad describe their resonant ontologies as a surpassing and progressing past regular old philosophy. For example, Barad claims that taking Neils Bohr's quantum physics as a model for philosophical inquiry allows philosophers to "*move* such considerations *beyond* the well-worn debates that pit constructivism against realism, agency against structure, and idealism against materialism" and "*re*thin[k] fundamental concepts that support such binary thinking."[54] Barad's verbs here--move beyond, rethink--describe actions that replace by surpassing. Bennett argues that flexibility--both as the capacity to evolve beyond traditional configurations and the capacity to accommodate difference--distinguishes her vibrational ontologies from conventional modes of philosophical inquiry. For example, arguing that her project is grounded in a "performative contradiction"[55] in which humans "both are and are not"[56] extra-human nature, Bennett presents vibratory ontologies as flexible enough to accommodate the very thing philosophy excludes: the reality of both A and not-A. Both present vibratory ontologies as members of Spence's first group--those who already have reformed and adapted to new ideas of mixing and diversity rather than hierarchy. Because "resonance" brings philosophy in accord with dominant epistemic and political models, intellectual practices that don't ground themselves in resonance or the math it translates appear dissonant and unworthy of further support and investment--Spence's third group. As Diana Leong, Zakkiyah Jackson, and Sarah Ahmed have shown, this group of divested intellectual traditions is primarily scholarship by women of color. This choreography of supercession establishes or "justifies" (to use Kristie Dotson's term)[57] a project *as* philosophy. From this perspective, theoretical practices that do not execute the gesture--such as black feminist approaches to sound (cf. Havis, McKittrick, Sharpe, Crawley) that do not understand themselves as replacing the dominant model of white/Western philosophy--are unfit for inclusion with in "philosophy" because they do not exhibit the behaviors that sync up with large-scale patterns of social privilege and domination. This "acoustic turn" in Western philosophy creates the same relationships among theories that neoliberalism-biopolitics creates among

[54] MTUH 26; emphasis mine
[55] Bennett 120
[56] Bennett 114
[57] Dotson, Kristie. "How Is This Paper Philosophy?" in Comparative Philosophy TKTK.

people--relationships that are white supremacist and patriarchal. This is why the resonant turn is bad.[58]

I'd like to make a brief addendum here about a use of vibratory resonance that isn't really on the radar of continental philosophers the way new materialism is, but that has become a Thing[59] in sound studies. Christoph Cox's "sonic materialism" poses basically the same critique of European modernity that new materialists like Bennett and Barad do, and, like them, offers vibratory resonance as a new model for the "materiality" of sound. Building on Nietzsche (oddly *The Birth of Tragedy*, which Nietzsche explicitly disavows in his later writing on music), Cage, and Deleuze, Cox defines "the sonic as a flow of forces and intensities" (155)--i.e., as acoustic resonance.[60] The Cagean philosophy of sound and composition that grounds Cox's theory of sonic materialism is also the basis of Attali's claim in *Noise* that mid-century compositional practices follow the same rules or principles that neoliberal economists assign to the market.[61] Cox's sonic materialism is dangerous and bad in the same way and for the same reasons that Bennett and Barad's new materialisms are: it's dangerous because it understands reality in the same basic terms that neoliberalism and biopolitics do, and it's bad because it creates the same relations among theories that neoliberalism and biopolitics do among people. As Marie Thompson has shown, Cox, like Bennett and Barad, uses the claim of reforming philosophy to double-down on its traditional in/exclusions (especially with respect to race--but he also cites mainly cis men). Any attempt to theorize with or through sound that lacks a robust analysis of power relations will, like all types of "ideal theory,"[62] re-naturalize those traditional in/exclusions.

Again, to clarify: I am not saying all concepts of vibratory resonance are dangerous and bad when wielded as philosophical tools! I take issue with a specific type of vibratory resonance, one

---

[58] Not all "resonant" theories make the same gesture of supersession that Bennett and Barad do. For example, Steve Goodman and Christoph Cox argue that sound or resonance is ontologically prior to politis. Instead of surpassing Enlightenment liberalism, vibratory ontologies and sonic materialisms "sidestep" (to use Goodman's term) the issue entirely. As Marie Thompson has shown, this is still bad because its claim to be prepolitical just naturalizes the politics of whiteness and white supremacy. In more philosophical terms, we might say that Goodman and Cox's "prepolitical" concept of sound is an idealized model of sound that abstracts away from the historical factors that make more-or-less Deleuzian concepts of sound appear as the "nature" of sound as such.

[59] See Thompson, Marie. "Whiteness and the Ontological Turn in Sound Studies" in Parallax 2017 and Cox, Cristoph. "Sonic Realism and Auditory Culture: A Reply to Marie Thompson and Annie Goh" in Parallax 2018.

[60] Cox, Cristoph. "Beyond Representationalism" in The Journal of Visual Culture TKTK.

[61] See James, *Neoliberal Noise*.

[62] Mills, Charles. "Ideal Theory as Ideology "in Hypatia TKTK.

modeled on the way contemporary physics understands sound, i.e., acoustic resonance. There are other concepts of resonance and sound out there. For example, contemporary black feminist theorists such as Devonya Havis, Christina Sharpe, Katherine McKittrick, and Alexander Weheliye all have various but overlapping concepts of sound and/or resonance. (I talked a bit about these theories in my SPEP paper from 2017, which by the time you hear or read this in October is probably in print in the JSP issue.) Unlike the theorists I discussed in this paper, these thinkers ground their concept of sound/resonance in black vernacular expressive traditions, such as the “boom” of the Roland TR-808. Whereas acoustic resonance masks and naturalizes white supremacist, patriarchal, capitalist power relations, these sonic theories *foreground* those relations. Such foregrounding is key to theorizing with and through sound or resonance without being bad and/or dangerous.