Ethnomusicology Forum

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/remf20

Feeling the vibe: sound, vibration, and affective attunement in electronic dance music scenes

Luis-Manuel Garcia

To cite this article: Luis-Manuel Garcia (2020) Feeling the vibe: sound, vibration, and affective attunement in electronic dance music scenes, Ethnomusicology Forum, 29:1, 21-39, DOI: 10.1080/17411912.2020.1733434

To link to this article: https://doi.org/10.1080/17411912.2020.1733434

ETHNOMUSICOLOGY FORUM
2020, VOL. 29, NO. 1, 21–39
https://doi.org/10.1080/17411912.2020.1733434

Routledge
Taylor & Francis Group

Feeling the vibe: sound, vibration, and affective attunement in electronic dance music scenes

Luis-Manuel Garcia

Department of Music, University of Birmingham, Birmingham, UK

ABSTRACT

This article explores the conceptual and methodological innovations made possible by the encounter between ethnomusicology and affect theory. It draws on fieldwork among a translocal network of electronic dance music practitioners, many of whom employ sonic metaphors of vibration and resonance to link affect to collective experience. In doing so, these musicians and dancers develop emic notions of vibrational affect that converge with developments in sound studies on vibration and resonance. In addition to giving texture to collective musicking, electronic dance music's tactile sonic-social metaphors lend traction to the task of reconciling affect theory to ethnomusicology. On the one hand, affect theory challenges ethnomusicology to broaden its analytic horizon beyond canonical understandings of culture. On the other hand, ethnomusicology calls affect theory to more clearly trace not only its modes of 'escape' and 'autonomy' but also its re-articulation, entanglement, and capture into the cultural webs of collective life.

KEYWORDS

Affect; electronic dance music; vibration; attunement; resonance

At an electronic music event in Berlin in March of 2017, I saw a friend of mine on the dancefloor, clutching a balloon. The event was organised by 'Room 4 Resistance' a politically engaged electronic music collective (of which I am also a member) that has been active since the beginning of 2016 at '://about blank', a Berliner club that is itself run by a politically minded association.[1] Room 4 Resistance (R4R) defines itself as a 'femme-forward', non-binary, queer crew that puts on 'intersectional queer raves', electronic dance music events featuring performances by femme-identified, queer, trans, gender non-binary, post-migrant, and ethnically/racially underrepresented artists. On that chilly evening in early spring, a diverse programme of DJs ranged musically through disco, hypnotic house music, atmospheric dub techno, dark 'industrial' music and even some high-intensity 'ghettotech'/footwork.

The 'main room' of '://about blank' is normally a dark, minimalist space: an unadorned black rectangular room with a sizeable DJ booth and a raised lighting booth on opposite ends, separated by a row of thick square columns that also separate the main room from a side gallery with seating. For these particular R4R events at the venue, however, the space

CONTACT Luis-Manuel Garcia l.garcia@bham.ac.uk, theluisgarcia@gmail.com Department of Music, University of Birmingham, Bramall Hall, Birmingham B15 2TT, UK

This article has been republished with a minor change. This change does not impact the academic content of the article.

was substantially transformed by Yumeko, the collective's resident decorator (and professional theatrical set/prop-designer), who added warmth and playfulness to each event with a unique combination of artificial foliage, flowers, hanging objects, fluorescent colours, luminescent items (e.g. 'glow-sticks'), and balloons. Balloons were especially important to her decorative aesthetic, and were found hanging from the ceiling and DJ booth, strewn on the floor, and floating cheerfully behind the DJ in the forms of unicorns, rainbows, and other 'queer-able' tropes recalling childhood birthday parties. Combined with the haze of smoke machines and shifting violet-pink lighting, Yumeko's décor that night created an immersive experience where people and objects constantly emerged and receded from one's perceptual sphere. Furthermore, the humidity, heat, smoke, and the sound-system's powerful bass frequencies made the air feel thick on the skin, as if one were caught in a sticky web or immersed in warm fluid.

It was out of this viscous sensory landscape that Yumeko emerged, pushing through the crowd towards me. She held a transparent balloon, cradling it in her arms and holding it to her chest and face. As she approached me, she exclaimed joyfully, 'I can dance with the bass!'. She pressed it to my cheek, and as the balloon vibrated against my skin with the pulsing bass-drum kick that was filling the room she said, 'You can *feel* the music!'. With this gesture, Yumeko invited me to experience the sound of electronic dance music differently, to 'feel the music' through touch as well as hearing. By holding a taut, elastic membrane in that sound-saturated space, she made manifest the materiality of sound while also indicating the continuity between tactile and auditory experiences of vibration. She deployed resonance as a form of 'affective knowledge' (Gershon 2013) – of learning through affecting and being affected – where a buzzing balloon provided a glimpse into sonic affect in action. With a balloon and some bass beats, Yumeko performed a compelling demonstration of sound as a vibrational force that affects bodies through relations of impact and resonance.

Fieldwork encounters such as this highlight the need for an ethnomusicology of sonic affect. Indeed, there are already the traces of an emic 'affect theory' to be found in my ethnographic fields: the electronic dance music scenes of Chicago, Paris, and Berlin (as well as the international online genre-networks through which they are articulated) are already culturally invested in sound as an affectively binding force: the 'beat' or the 'vibe' that is credited with bringing a dancing crowd into synchrony and solidarity. Furthermore, their diverse sonic aesthetics share a preference for sounds that highlight the forcefulness of vibration, such as loud, low-frequency, and percussive sound-samples. The etic affect theory that circulates in scholarly literature, however, poses some challenges to ethnomusicology's approach to the study of music and musical life.

If ethnomusicology is 'the study of music in/as culture', what are we to make of a theoretical approach to feeling that implies a realm of experience beyond culture? Ever since the 'affective turn', one of the most persistent sticking points in the adoption of affect theory within the humanities and social sciences is the challenge affect seems to pose to constructivist notions of cultural specificity. Particularly troublesome to these approaches are the ontological claims made by some theorists (e.g. Massumi 2002) that affect somehow bypasses representation and directly impacts the senses and the body – that it is infra-perceptual, pre-personal, and external to the networks of negotiated meaning and situated perspectives that constitute culture. These claims to the 'autonomy of affect', however, have been critiqued from within affect theory (more on that later); these critiques, in

turn, suggest some strategies for how to bring affect and ethnomusicology into productive resonance.

This article explores the conceptual and methodological innovations made possible by the encounter between ethnomusicology and affect theory. It draws on fieldwork among a translocal network of electronic dance music practitioners, many of whom employ sonic metaphors of vibration and resonance to link affect to collective experience. In doing so, these musicians and dancers develop emic notions of vibrational affect that converge with developments in sound studies on vibration and resonance (Eidsheim 2015; Erlmann 2004, 2010; Galloway 2015; Garcia 2015; Gershon 2013; Kassabian 2013; Novak and Sakakeeny 2015). They also provide a sound-centred account of the emergence of 'affective publics' (Berlant 2008; Papacharissi 2015) and 'sonic bodies' (Henriques 2011), based on 'bass materialism' as an 'ontology of vibrational force' (Goodman 2010). In addition to giving texture to collective musicking, electronic dance music's tactile sonic-social metaphors lend traction to the task of reconciling affect theory to ethnomusicology. On the one hand, affect theory challenges ethnomusicology to broaden its analytic horizon beyond canonical understandings of culture – perhaps in order to better trace the contours of culture as an ethnomusicological concept. On the other hand, ethnomusicology calls affect theory to more clearly trace not only its modes of 'escape' and 'autonomy' (Massumi 1995) but also its re-articulation, entanglement, and capture (Chow 2012) into the cultural webs of collective life.

Affect and ambivalence

Claims to affect's autonomy can raise the understandable concern among ethnomusicologists that affect theory risks smuggling the 'music as universal language' cliché back into music studies in the guise of vitalism (Bennett 2010; Fraser 2005; Fraser, Kember and Lury 2005; Jones 2010). If affect is taken to be an ineffable life-force that drives the universe, it is bound to raise doubts among those who seek cultural specificity and contextual explication.[2] These concerns can be compared to misgivings that some scholars have raised regarding sound studies as it has emerged as a field of study (Cusick 2013; Eidsheim 2015; Kane 2015): if 'sound' is taken to be a range of sensory experience beyond the culturally defined borders of 'music', and yet that cultural boundedness is precisely what gives ethnomusicology its analytic traction, then how should ethnomusicology's disciplinary apparatus engage with sound? Does the turn to sound signify an abandonment of cultural specificity in favour of universalist ontologies? Does affect risk the same turn? This need not be the case, and more recent reflections on affect theory have shown that it is sufficiently flexible to interface productively with ethnomusicology (Hofman 2015; Tomlinson 2016); similarly, earlier work in sensory anthropology provides an example of culturally embedded research into sound and listening, which could be extended to sonic affect (Howes 2005; Ingold 2000; Pink 2009, 2010, 2013). Just as the ethnomusicology of sound has sought to go beyond sound as mere 'sensory input' and instead ground it in concrete cultural practices, the ethnomusicology of affect has the potential to map new points of articulation between sonic experience, feeling, and culturally shaped materiality.

The first challenge one encounters in engaging with affect is that several different definitions are in circulation, not all of which are reconcilable to each other. Although

an exhaustive survey of these definitions is beyond the scope of this article, Nigel Thrift provides a useful overview in his book, *Non-Representational Theory* (2008), by gathering conceptualisations of affect into four streams: (1) the medical-behavioural view of affect as a set of embodied practices that produce empirically observable effects in the body, such as changes in heart-rate, galvanic skin response, eye-flicker, weeping, hyperventilation, and so on; (2) a range of psychological and psychoanalytic models based on drives and desires, where affect is the psychic force that lends a sense of push and urgency to the lived world; (3) a holistic and process-oriented view of the world, associated with the philosophy of Spinoza ([1677] 2000), Bergson ([1896] 1991), and James (1912) as well as theorists such as Deleuze and Guattari ([1980] 1987), Massumi (1995, 2002), Grosz (2005), Grossberg (2010), and many others, which sees affect as the energetic dimension of the encounter between bodies that together make up more complex, emergent phenomena; and (4) a perspective primarily emerging from the life sciences that sees affect as a finite set of organic responses to stimuli rooted in evolutionary adaptations and thus universal within the species-group.

Another challenge that affect theory poses is the notion that affect operates beyond the limits of what can be explained through cultural meaning and social structure. Although this idea appears in several streams of affect theory, the work of Brian Massumi is notable for arguing emphatically for the 'autonomy of affect' (1995). He considers a selection of contemporary empirical studies of affect in neuroscience (mostly working from the aforementioned medical-behavioural paradigm), highlighting their surprising results: there seems to be a gap between the conscious perception of emotional experience and the body's involuntary expression of affective arousal. Furthermore, his interpretation of a cognitivist study of emotional responses to video points to a disconnect between the (semantic) content of the video and its (felt) effects – that is, between conventional meaning and felt intensity. He then brings Spinoza's philosophy of *affectus* (affect) and *affectio* (affection) to bear, arguing that we experience affect (felt intensity, triggering autonomic bodily responses) in a separate and *incommensurate* register from conscious cognition (including language, meaning, and signification). Although incommensurate and operating according to different logics, Massumi does claim that these two registers interact with each other through dynamics of 'resonation or interference, amplification or dampening' (86).

This claim to the autonomy of affect has nonetheless been extensively critiqued from within affect theory, particularly through cultural studies and philosophy. For example, Moira Gatens (2014) argues that Massumi's theorisation of affect is based on a misinterpretation of Spinoza's philosophy, where the 'gap' between affect and cognition reinscribes a mind/body dualism that is incoherent with his monist ontology (25). For Spinoza, each affection (of which affect is one kind) in the body involves a corresponding one in the mind, even if it is non-conscious. In this matter, Spinoza is a thorough monist: 'the mind and the body are the same thing' ([1677] 2000: EIIIP2S), so necessarily any affection will be registered in both the mind and body. Clare Hemmings (2005) critiques both Massumi (2002) and Sedgwick (2003) – as representatives of the two dominant streams of affect theory in cultural studies – for framing affect theory as a panacea to the perceived impasses of contemporary cultural theory by reductively misrepresenting poststructuralism, particularly the contributions of postcolonial and feminist theorists. Notably, she argues that both theorists assert that affect promises freedom and autonomy

from the suffocating matrixes of power and signification, and yet feminist and postcolonialist scholarship offer ample evidence of affect serving to further bind raced and sexed bodies to existing systems of patriarchy, cis-heteronormativity, and white supremacy (Hemmings 2005: 559–61). What remains after these critiques from within affect theory is that 'affect might in fact be valuable precisely to the extent that it is not autonomous' (Hemmings 2005: 565). Although it may still diverge from signification (a notion not at all new to music studies), affect theory can nonetheless contribute to the study of culture by examining how affect is captured and channelled into social relays of meaning and power.

In my own research, I have mostly drawn upon the Spinozan stream of affect theory, along with a sub-set of the psychoanalytic stream anchored in the work of clinical psychologist Silvan Tomkins and queer theorist Eve Kosofsky Sedgwick (Sedgwick 2003; Sedgwick, Frank and Alexander 1995; Tomkins and Demos 1995; Tomkins and Karon 1962). What most of these concepts have in common is the idea that what is commonly discussed as 'emotion' is part of a larger field of experience that involves the intensity, impact, materiality, movement, and fluctuation of felt energies. In the introduction to their seminal *Affect Theory Reader*, Melissa Gregg and Gregory J. Seigworth helpfully define affect as 'an impingement or extrusion' of 'a state of relation *as well as* the passage … of forces or intensities' (2010: 1). This dual definition of affect as both movement and relation provides an opening for understanding affect through sound, which passes between bodies as forceful vibration while also establishing relations of synchrony and resonance.

Thus music and sound, as vibratory phenomena that fill space, pulse through matter, and elicit movement, are rich fields of study that have the potential to intervene productively in affect theory. While the current 'affective turn' in music studies seems to have emerged in conjunction with sound studies, the primary concerns of affect theory are nothing new to ethnomusicology, since 'the conceptualisation of affect has long been a ubiquitous part of ethnomusicological research' (Hofman 2015: 37). In her account of ethnomusicology's encounter with affect theory, Ana Hofman traces a 'long legacy of criticizing discursive and linguistic approaches in music scholarship' (38), from nineteenth-century musicology through early ethnomusicological explorations of 'musical universals' to a more recent turn to neurobiology, physiology, and psychology in music cognition. Although early investigations treated affect and emotion as interchangeable, the distinction between these two terms became an ongoing issue for the study of music and sound, serving to mark the limits of (and to gesture beyond) structuralist-semiotic accounts of felt musical experience.

The distinctions between affect, feeling, and emotion remain a subject of debate, but Eric Shouse provides a useful heuristic by defining them in comparable terms: affect is a 'non-conscious experience of intensity', feeling involves perceiving such sensory intensities and labelling them against previous experience, and emotion entails an externalisation or projection of feeling (Shouse 2005).[3] Correspondingly, these definitions frame affect as non-personal and non-subjective, feeling as personal and biographic, and emotion as performative and social, with only the latter two concepts requiring some notion of anthropomorphic, interiorised subjectivity.[4] As helpful as such distinctions can be in ordering a complex and messy field of experience, we should nonetheless retain a critical awareness of their underlying assumptions. Ruth Leys (2011: 457–8),

for example, warns against creating a 'false dichotomy' between conscious signifying and unconscious affect,[5] while Gary Tomlinson (2016) suggests that a more nuanced approach using Peircean semiotics can integrate non-conscious and non-representational aspects of affective experience into the processes of meaning-making that are of central concern in the cultural study of music.

'The vibe'

As a discipline, ethnomusicology tends to look to fieldwork and ethnographic data to identify and develop new concepts. There is a preference for deriving analytical categories directly from the discourse and practices of consultants in the field. One quintessentially ethnomusicological way to revise affect theory would thus be to ask how participants in musical cultures conceptualise similar phenomena – in other words, a survey of emic affect theories. The notion of 'bass pressure', for example, in the electronic dance music styles that form the so-called 'hardcore continuum' (Fisher 2009; Gilbert 2009) – such as jungle, drum'n'bass, dubstep, and trap – exemplifies how affective experience (as a bundle of sensory and embodied feelings that leak into emotional registers) informs style and aesthetics. Found in the names and promotion materials supporting these scenes' events and recordings, 'bass pressure' serves as a touchstone for the hardcore continuum. Producers, DJs, and dancers all evince a fascination with the lower end of the frequency spectrum, including inaudible-but-tactile 'infrasound' below 20 Hz, where sonic affect becomes haptically manifest as force and movement. In this instance, affect is not completely 'autonomous', but instead bound up with taste, genre, and socio-historical context; the aesthetics of 'sonic pressure' in hardcore dance styles such as dubstep not only harnesses the 'grounding force of the low end' of the frequency spectrum to highlight the materiality of sonic space, but also enacts dubstep's 'hardcore massive' – a term inherited from U.K. pirate radio that describes the genre's sonic-spatial aesthetics as well as its distributed-yet-solidaristic social audience – affectively resonating with the underprivileged and disused urban spaces out of which such styles emerged (D'Errico 2015).

Many other dance music genres emerging out of the circuits of the Black Atlantic (Gilroy 1993) lend a central importance to 'beats', to low-frequency and high-amplitude vibrational impulses that impact flesh and move bodies at levels of intensity that intrude into conscious perception. For example, Julian Henriques (2011) identifies 'sonic dominance' as the foundation of the 'auditory epistemology' of Jamaican dance hall sound systems, assembling together networks of human and non-human actors into a feeling and knowing 'sonic body'. Philosopher and dubstep DJ/producer Steve Goodman (a.k.a. Kode9) argues that the diasporas of Jamaican sound system culture draw upon sound's 'bass materialism': the power of such collectively produced vibrations to congeal populations and foster a sense of emergent, political collectivity (Goodman 2010). These and other 'low-end' musical genres – ones that revel in low-frequency sounds – provide a sonic experience of force and coalescing solidity that both references and responds to the socio-cultural circumstances of their production.

Although 'bass pressure' remains an emic phrase specific to the hardcore continuum, 'the vibe' pervades electronic dance music discourse, frequently deployed to describe the affective dimensions of dancefloor experience. While the term 'affect' rarely surfaced in interviews during my fieldwork in the house and techno scenes of Chicago, Paris, and

Berlin, many of my interlocutors explained the capacities of electronic dance music to generate collective intimacy through the notion of 'vibe', referring to a collectively experienced affective tone that is shaped by sonic experience. For example, during an interview with Nancy, a Parisian pop/rock event-planner in her early thirties with a background in public relations, she drew upon vibration to discuss intimacy and belonging in electronic music environments. Although her working life at the time was primarily dedicated to organising rock and reggae/dub 'roots music' events, she was also an avid listener and dancer of 'techno' and 'electro' styles of electronic dance music. As she was describing her experiences of collective connectedness on the dancefloor in terms of 'communion', she first framed this in terms of shared experience ('You share that same moment'), then in terms of synchronous vibration, 'You vibrate at the same time, for the same thing' (Nancy 2009).[6] When I asked her to expand on her notion of vibration in this context, she provided a narrative of musically articulated excitement, felt and expressed both bodily and socially:

> The build-up [*montée*] that you had been waiting for comes, and so you begin to explode, because you're happy. A vibration, for me, is something that comes from the bottom of the gut, and that you want to discharge [*expulser*] by throwing your hands in the air, yelling, and hugging your friends. (Nancy 2009)[7]

For Nancy, vibration is felt in moments of musical intensity, as an embodied energy that bursts forth in expressive gesture, utterance, and sociability.

Indeed, the use of the terms 'vibe', 'vibration', and their plural forms is widespread across global dance music scenes and nightlife more broadly,[8] and a substantial segment of electronic dance music scholarship has picked up on this vernacular term to describe various aspects of the felt experience of these milieus. In his study of Filipino American mobile DJ crews, Oliver Wang defines 'the vibe' as 'a mix of forces, both tangible and invisible, that can either create a pleasurable, memorable experience or bring down the mood of an entire crowd' (2015: 13). Drawing from music journalist Simon Reynolds's definition of the same term as a mood that 'materially embodies a certain kind of worldview and life stance' (1998: 372), Wang argues that the vibe also 'helps create and reinforce shared group identities and values' by mediating and modulating the emotional qualities of dancefloor experience (2015: 13). The plural form, 'vibes', also appears as an important concept in Jamaican sound system culture, where it is used to assess the 'ambiance, atmosphere, and feelings' generated by a good dancehall session as well as the 'empathetic feelings' participants feel towards each other (Henriques 2011: 25, 229). At psychedelic trance parties (including Goa trance, 'psytrance', and 'neotrance'), 'vibe' functions as an emic term for liminal experience, a 'social aesthetic' of these events as well as a sort of 'sociosonic currency' that partygoers can accumulate through self-deterritorialising experiences (St. John 2013, 2017).

The use of 'vibe' in these contexts is primarily metaphorical, indicating mood, atmosphere, collective feeling, and personal disposition. However, this usage is rooted in a more literal understanding of vibration stemming from the term's origins at the intersection of African and European countercultural legacies (St. John 2013). The term's entry into the countercultural lexicon drew upon vernacular notions of alternative, subversive knowledge that were informed both by theosophical/spiritualist ideas of 'cosmogenic vibration' as well as technological advances in the transduction of sonic vibration into

electromagnetic information (Kahn 2004, St. John 2013). Especially prominent in psychedelic counterculture – itself an important predecessor of electronic dance music culture – vibrations were imagined to be an invisible linking force between participants, promising to forge bonds through sound that would overcome the hierarchies and antagonisms of hegemonic culture. In New York underground dance clubs during the late 1980s and early 1990s, 'the vibe' comes to be understood as 'that form of energy that collapses the boundaries between individual and collective musical experience', arising from DJ-dancer interactions and the dance music's rhythm as a 'synchronising force' (Fikentscher 2000: 80–82). Writing ethnographically on the same scene, Sally Sommer defines 'vibe' as 'an active communal force', one that is driven not only by human participants but by sound, lighting, and a wide range of environmental factors (2001: 73). This holistic and ecological definition of 'vibe' has made its way into cognitive and psychological research into music, exemplified by Maria A. G. Witek's definition of the concept as a 'non-anthropocentric force where subjectivity is not just shared between people but is diffused across a greater, and partially nonhuman whole' (Witek 2019). As collective energy generated by concerted festive action, the 'vibe' thus comes to function as an emic term for 'collective effervescence' (Durkheim 1915) or 'spontaneous communitas' (St. John 2017; Turner 1969).

Vibration, attunement, and resonance

For the musicians and dancers that I interviewed during my own fieldwork, 'vibe' is not only a metaphor for an affective state; vibration is also an integral element of sound as embodied experience. Nancy's definition of vibration (above), already traced links between feeling, sound, and the body, and Nick went further in insisting on vibration as an ontological substratum subtending these realms of experience. A Chicago-based multi-instrumentalist and experimental electronic music composer, Nick emphasised the physicality of music and its relation to felt experience and dancefloor intimacy. 'I think it's music's job to make you feel something', he remarked, 'Its role is to pull people together'. For Nick, music's capacity to provide a socially binding, affective experience was rooted in an ontology of vibration and resonance – particularly at lower bass frequencies. As he expanded on his thoughts, he began to outline a model for the embodied experience of sound that invoked vibration, attunement, and resonance:

> You notice that sound moves in waves, and bass waves are further apart. And high tones are very close together. So, the further-apart waves can move through walls; that's why, when a car goes by, you hear the bass and you don't hear anything else: because it can move through walls, it can move through things, and it can also move through your body that way. It travels *through* things. Higher/faster wavelengths will get blocked and stopped and bounced off, whereas lower/slower wavelengths go through things.
>
> […]
>
> There's something just very physical about sound. And everything vibrates; everything has a pitch that it can tune to. Everything. And so, I think techno does a very good job of hitting those frequencies deep inside you. (Nick 2010)

In describing vibration as transmissible across matter – both living flesh and 'vibrant matter' that exhibits some of the responsiveness and activeness of living things (Bennett

2010) – Nick frames sound in terms similar to affect theory's definition of affect as an impersonal passage of energies between bodies: it may emanate from a body or impact upon a specific body, but once put into motion, sound fills space and strikes all objects as its waves propagate (Tomlinson 2016; Witek 2019).

Vibration has often been used as a metaphor to conceptualise affect as a state of excitation, but few theorists consider physical vibrations as a material vector for affect. Goodman, for example, develops a 'nonrepresentational ontology of vibrational force' (2010: xv) by examining instances where powerful vibrations are used to manipulate what he terms 'affective tone', that is, the sonic dimensions of felt atmosphere. He posits a 'vibrational substratum' (47) to affective experience that is amodal and non-sensory; that is, vibration is not restricted to a particular sensory or perceptual mode *a priori*, but rather registers across the entirety of the body's sensorium before being perceived as 'sound'. This ontology provides a useful account of how sound can transmit affect trans-personally and non-representationally, providing a basis for shared affective experience even when it is emotionally perceived in divergent ways by co-listeners. In other words, Goodman's vibrational substratum lies below the semiotic tangle of representation, language, and communication, thus providing a model for 'subterranean' connections between subjective perceptions of shared affective experience. Thus, when Nick opines that music's role is to 'pull people together', his explanation begins with the experience of vibration, rather than shared meaning or the communication of semantic content.

Vibration, however, is 'always already itself a kind of mediation', since differences in material and physiological circumstances impact how it is received (Friedener and Helmreich 2016: 90). Drawing on Deaf Studies to rethink sonic vibration as a phenomenon that is not predicated on hearing, Michele Friedener and Stefan Helmreich warn against positing vibration as a proto- or infra-sensory force of unity, calling instead for it to be situated culturally and historically. 'Phenomenologies of vibration are not singular', they argue, vibration 'may produce shared experience, but it does not therefore produce identical experience' (2016: 90). They describe a variety of techniques and technologies used by the Deaf to engage with sound through haptic and visual senses – including the use of a balloon to capture sound as tactile vibration. In this sense, Yumeko's vibrating balloon served as a transducing medium for auditory vibration, synaesthetically extending her experience of the music in a manner that she could share with me, although we may have differed in *how* we felt it and *what* we made of it.

Nick's account of embodied sonic experience is remarkable for theorising not only the transmission of affect, but also its relationality in terms of sympathetic vibration: by causing bodies to vibrate, sound creates relations of resonance that fluctuate in intensity. 'Everything has a vibration, has a frequency', he argues, 'And then there's the music of the spheres (in space), you know: "The planet is in tune" And I think that's a part of it; you just hit those frequencies and they hit your body and its in tune' (Nick 2010). After first alluding to sixth-century Roman philospher Boethius's cosmology of celestial harmony – along with its repackaging in 'new age' spirituality as planetary vibrational ecology – Nick quickly turns to sonic vibration as a kinetic phenomenon.

Every body, fleshy or otherwise, has a resonant frequency (or 'natural' frequency) at which it responds to external vibrations (Crocker 2007; Rossing, Moore and Wheeler 2002). When an oscillating force (i.e. a vibration) strikes a body, some of its force is re-transmitted as kinetic energy, but the inefficiency of this conversion entails a loss of

energy, thus dampening the resulting reflections. When this force oscillates at a body's resonant frequency, the energy-loss during conversion approaches zero and the body thus vibrates with increased kinetic energy. When two bodies share the same resonant frequencies, a self-amplifying feedback loop can result, such as when two mechanical metronomes gradually come into synchrony, or when one vibrating tuning fork causes another one nearby to vibrate in sympathy. What this implies for sonic affect is that certain frequencies and patterns of fluctuation have the capacity to excite certain bodies and incite them to move, respond, express, and/or re-transmit this energy.[9] This conversion of vibratory energies may be less culturally determined in some cases – such as the overwhelming force of loud bass frequencies – and yet a dancing crowd's enthusiastic response to familiar tunes or an exciting new track entails a kind of energy-conversion that is relayed through micro-cultural knowledge and socially formed taste. Indeed, electronic dance music's preponderance of sounds that foreground the haptic dimensions of musical experience is itself an affective aesthetic, that is, the result of a culturally situated valorisation of sonic experiences that seem to short-circuit music-as-language signification and engender embodied relationality (Garcia 2015).

As Nick's comments indicate, a logic of sympathetic vibration already subtends the discourse of 'vibe' as collective, contagious affect:

> Have you ever been near a big bell [*strikes large gong from his instrument collection*] and then tried to hum the note? You can feel the sound! If you can hit that note in your chest, you all of a sudden feel in tune to the room or the space. It goes from being inside of you to being … you, right? Yeah, I think that's why people love bass. [*laugh*]. (Nick 2010)

Nick describes the experience of sympathetic vibration as becoming 'in tune'; through sound, he can come to feel in tune with a space or 'a room' (which can also mean 'an audience' in the context of nightclub events). His account of vibratory affectivity reframes electronic dance music events as scenes of social, sonic, and affective *attunement* – that is, of coming into (or falling out of) 'sync' with the 'vibe' of others and/or the surrounding environment.

Although mentioned less frequently than vibration in affect theory, attunement nonetheless figures in studies of affective 'contagion' or 'entrainment'. Anna Gibbs (2010), for example, makes repeated use of the term as she reviews psychological research on mutual affective regulation between mother and infant, highlighting the role that mimesis and synchrony play in this process and incorporating these insights into affect theory. Drawing on a definition of 'emotional contagion' that correlates human behavioural tendencies to mimic and synchronise bodily expressions of affect (e.g. gestures, postures, facial expressions, and vocalisations) with a tendency for emotional 'convergence' between actors (Hatfield, Cacioppo and Rapson 1994: 4–5), Gibbs notes that this dynamic behavioural system enables the mother to both attune to the baby's affective states and modulate, dampen, or amplify them (Gibbs 2010, 197). She identifies a 'musical aspect' to the interactional synchrony that facilitates infant-parent affective attunement, referring to the repetition of rhythmic and melodic patterns that establish a sense of 'shared pulse': 'Rhythm (or "pulse"), like affect, *organises*' (Gibbs 2010: 198, emphasis in original). Joel Krueger proposes a similar notion of 'affective synchrony' as a result of musical entrainment, which he employs in developing his notion of the 'musically extended mind' (2013). Notably, he also draws upon studies of infant responses to

sonic stimuli in order to support his argument that music serves as an emotional 'scaffold', enabling the musically extended mind to offload some of its affect-regulatory processes onto the cues, rhythms, and structures of music.

Admittedly, the comparison of mother–infant studies to dance music scenes requires some caution, but in doing so it also draws attention to some of the risks that affective contagion or entrainment may entail. These contexts are indeed different, in that one involves familial relations and early life cognitive development, whereas the other involves stranger-sociability among adults. At the same time, there is one apparent contrast that serves as a warning: parent–child relations involve substantial asymmetries of power that are sanctioned as contributing to a process of societal reproduction; while relations between partygoers in electronic dance music scenes are far more fluid, loose, and non-normative, this does not mean asymmetries of power are entirely absent from the dancefloor. Although the term 'attunement' helpfully returns some agency to those immersed in sonic-social environments (by evoking scenarios where they can play an active role in the process of becoming 'in tune'), 'contagion' and 'entrainment' serve as reminders that there is a potential for force, coercion, and manipulation as well. One can find echoes of this potential in the common tropes of the DJ as charismatic leader, 'shaman', or puppeteer, but more nuanced accounts acknowledge a more fluid dynamic of power, where the DJ is expected to 'read the crowd' and risks losing their support if the performer 'forces the vibe' in a direction that the dancers do not wish to follow (Butler 2006; Fikentscher 2000; Paulson 2013). Such subcultural norms evince an awareness of the coercive capacities of sonic affect without foreclosing on the possibility of resistance.

Furthermore, the model of sympathetic resonance explicated by Nick – but also implicit in the broader subcultural use of 'vibe' – supposes that bodies respond differently to vibration, according to their own 'resonant frequencies'. If this latter term is understood through 'vibe' to include culturally shaped aesthetic affinities and sensory dispositions, one can imagine how attunement and resonance can play a role in social distinction. Indeed, it is possible to fail to 'feel' the vibe, to fail to resonate with it, to experience it as oppressive and alienating; this framing may emphasise the sensing body's failure to find resonance (to fail to 'fit in' to a sonic-social environment), but we should not overlook the possibility that a 'vibe' may be deliberately fine-tuned to attract and repel certain bodies. As discussed earlier, the 'bass pressure' that is valued in dubstep scenes can be understood as a vibrational aesthetic that targets Afrodiasporic, urban, youthful, and economically deprived life-worlds. In a similar fashion, many queer and femme-centred electronic dance music collectives (including Room 4 Resistance) incorporate references to 'unserious' and 'feminine' dance styles such as disco, 'diva' house, and mainstream dance-pop as a means of deterring the attendance of over-serious 'techno bros': straight, predominantly white men stereotypically assumed to have an exclusive interest in 'harder' substyles of techno.

In any case, connection between rhythm, synchrony, and affective attunement resonates with Fikentscher's characterisation of dance music's rhythms as the 'synchronizing force' that shapes and generates the 'vibe' of the dancefloor (Fikentscher 2000: 80–82). Other scholars have employed 'attunement', 'tuning-in', and similar terms to describe the process of entering into a relation of shared experiential flux (Schutz 1951, 1976), of mutual attention (Schutz 1967), of intensified awareness of and sympathy with one's surrounding sonic environment (Schafer 1993), and of affective alignment with an

atmosphere or 'affective tone' (Goodman 2010). Notably, all of these theorists invoke collective musicking and shared sonic experience to conceptualise the development of relationships to others and to one's environment – not only as an apt metaphor, but also as a privileged domain of investigation, where one can witness affective convergence in action.

In addition to vibration and attunement, Nick's theorisation of sonic experience intersects with affect theory through resonance, usually defined as a complex sonic composite of sympathetic vibration, surface reflections of sound waves, and other forms of reverberation. In sound studies, resonance has garnered interest as a means of redressing the ocular-centric legacy of modern Western philosophy. Veit Erlmann has written extensively on the role that resonance-based theories of hearing played in the development of philosophical models of subjectivity since the Enlightenment, unsettling the Cartesian divide between rational thought and embodied experience (Erlmann 2010, 2011, 2015). Because it highlights the materiality of perception while providing a model of sensuous knowledge and receptivity that is not neatly rational, Erlmann argues that resonance is 'eminently suited to dissolve the binary of the materiality of things and the immateriality of signs' (Erlmann 2011: 13). In this sense, resonance provides a means of understanding perception, thought, and meaning as both co-emergent co-assembled with sense, affect, and the body.

Resonance frequently serves as a metaphor for conceptualising affect's movement through the world, such as Gregg and Seigworth's memorable figuration of affect as 'those resonances that circulate about, between, and sometimes stick to bodies and worlds' (2010: 1). In the introduction to his landmark monograph on affect theory, *Parables for the Virtual* (2002), Massumi makes extensive use of resonance as a metaphor for affect, reimagining the sensuous body as a hollow resonator. He defines affect as the fluctuation of bodily intensities, which in turn emerge out of the complex reverberation of sensations within the body. Like sound waves, sensations enter through and then bounce off of the body's various 'sensory surfaces', forming an 'interference pattern' of self-relation that he qualifies as 'intensity' (14). 'Resonation' thus becomes a critical term for him, denoting a process whereby the distances and durations of affect's movement are folded into patterned intensities. Massumi also uses this vocabulary when conceptualising non-exclusive, non-antagonistic relations between 'incommensurate registers' of experience – such as between unmediated intensity (affect) and emotions mediated through language – which he characterises as involving 'resonation or interference, amplification or dampening' (25).

Nick explains how resonance folds self-relation and other-relation together, as he relates his experience of attunement (see above): vibrations are felt as a sensation located inside the body (i.e. through proprioception), but when the body is 'in tune', this vibratory sensation merges with the sense of the self as such, creating links between sound and subjectivity. In other words, vibrational affect in the form of sound waves fill the surrounding space and reverberate back to the sound-source, affecting the self but also folding the external world into relations of absorption, reflection, and complex interference. His account resembles Gershon's definition of resonance as 'the intersection of a system … with its self and its "not-self"' (2013: 258), although Nick's vibratory encounter with his environment is more fluid and dynamic. Nick's account of the resonant self suggests that experiences of affective resonance can amplify (or dampen) one's sense of

subjectivity and being in the world, thus providing a sound-centred way of imagining how people come to identify with musical styles that do not map neatly onto their socio-cultural identities.

For affect theory, resonance offers a way to account for the intermingling of the conscious and the unconscious (or differently conscious), representational and non-representational, subjective and asubjective, animate and inanimate, cultural and extra-cultural. While sonic affect may never be fully captured as meaning – an argument not at all unfamiliar to scholars of music's ambivalent relation to language, although musical meaning need not be linguistic – it can resonate with meaningful cultural schemas, lending them salience and sensuousness. Culture, in turn, provides a range of practices for organising and modulating affect, thus embedding and enfolding affect (and its putative autonomy) in cultural difference. The notion of 'vibe', for example, serves as a capacious emic framework for discourse around affect in electronic dance music scenes, while concomitant subcultural practices of dancing, performance, architecture, decoration, altered states, sartorial style, and sexual play enable participants to shape and direct affective experience. With regards to musical performance, an obvious example would be the many techniques employed by electronic dance music producers (e.g. the 'build-up', the 'drop', the 'breakdown') and DJs (e.g. EQ manipulation, rhythmic 'cuts' between tracks, 'withholding the beat', 'teasing' a new track) that play with expectation and surprise, based on subculturally specific conventions of form and style (Butler 2006).

Gibbs (2010) offers 'habit' as an alternate model for tracing the articulation between affect, consciousness, and 'automatic' knowledge. Drawing on Tomkins's (1962) model of consciousness as a 'limited channel' that compresses information from the body's many systems, Gibbs suggests that affective, sensory, and cognitive forms of knowledge are condensed into 'procedural memory', which can then be recalled as complex bundles of movement, perception, cognition, and emotion that usually remain below the surface of conscious thought (2010, 200). Habit, however, is cultural as well as personal; much of the implicit knowledge and patterned behaviour that makes up 'culture' is learned through socially guided, repetitive experiences that condense into habit and then merge with our seemingly natural responses to affective experience as *habitus* – our 'regulated improvisation' to being in the world (Bourdieu 1977: 21). As Steven Connor poetically phrases it in his exploration of tactility in hearing, 'Cultures are sense traps that bottle and make sense of sensory responses, but they are also sense multipliers' (2004: 156). The same can be said of affect: culture provides frameworks for capturing affect and assigning meaning, but it also enriches and amplifies affective experience. In this sense, culture can play an important role in how affect resonates through the senses, how subjects come into attunement with shared energies, how vibration comes to matter meaningfully.

Ethnomusicology 'from the outside'

Although vibration, attunement, and resonance all offer conceptual pathways to incorporating ethnomusicology's cultural, semiotic, and ethnographic epistemologies into affect theory, ethnomusicology may also benefit from exploring some of the terrain that affect theory has charted outside the realm of representation, interpretation, and meaning. While ethnomusicology and anthropology have a long history of studying culture and

society through methods that locate and contextualise meaning (e.g. semiotics, linguistics, hermeneutics, and 'thick description'), non-representational theory (Thrift 2008) advocates examining aspects of experience that are not captured by semiotic networks of representation; instead, it focuses on routinised and/or non-conscious processes, as well as materiality as such. To give a sonic example, a non-representational analysis of an electronic dance music recording might reflect on the visceral 'kick' of bass beats or the granular texture of the sound-samples used, rather than (or at least before) pursuing what these samples might represent in terms of concepts, genres, intertextual allusions, identities, place, and so on. This approach may seem counter-intuitive for ethnomusicology, but it draws attention to a wider range of phenomena that provide the phenomenological basis for the symbolic and cultural ordering of musical life. By extension, a non-representative ethnomusicology might take inspiration from sound studies to explore how the realm of sonic experience beyond musical meaning could throw new light on the practices that sustain musical culture. In this sense, this would still be an ethnomusicology of 'music in/as culture', but working 'from the outside inwards'.

In any case, ethnomusicology need not abandon cultural specificity in order to explore phenomena that exceed cultural frameworks. Much like with sound and non-representational theory, affect can be traced back to culture through embodied, material practice. Spinoza's influential formulation of affect in *Ethics* ([1677] 2000) defines it as the fluctuation in the capacity to affect and be affected, but a closer reading reveals that affect is thoroughly relational. For Spinoza, affect arises from the *encounter* between bodies; the flux of affective capacity between these bodies is always already 'social', in the sense that it involves ongoing, evolving relations of impingement. Affect is thus both inherently relational and material, in that it can be understood as the energetic dimension of embodied relationality – much in the way that 'vibe' circulates as an emic term for *communitas* or 'collective effervescence' (Durkheim 1915; Turner 1969), describing the affective dynamics of embodied co-presence on the dancefloor.[10] Furthermore, affect's definition in terms of 'bodily capacity' only makes sense when it is embedded in 'a world in which it can be effective' (Gregg and Seigworth 2010, 12). The phenomenon of affective attunement, such as moments of collective musical transport on the dancefloor, emerges out of not only shared sensory experience, synchronised gesture, and joint attention, but also through 'shared exposure to cultural knowledge in norms, beliefs, and values' (Witek 2019). As a form of relation, affect draws together worlds that are at once material, social, and cultural. From here, one need only look to culturally shaped material practices – such as ritual, performance, musical training, dance, instrument-building, music venues – to find points of articulation between culture and affect. Musical traditions could be reframed as sonic practices geared towards congealing and maintaining 'affective publics' (Berlant 2008, Papacharissi 2015), collectivities where belonging is articulated through shared feeling. Furthermore, the *practice* of harnessing sound's visceral impacts, sensory textures, and vibratory materiality to shape affective experience could be considered an alternate, 'outside-in' definition of musical culture.

Therefore, to acknowledge that there is a realm of experience beyond cultural frameworks is not to give up on culture altogether. Much in the same way that ethnomusicologists are accustomed to thinking about communication beyond the verbal, or aesthetic experience beyond the visual, we should be able to think about sonic experience beyond

culturally defined meaning without losing sight of culture itself. If affect is that aspect of the sensory that escapes capture, then emotion is how consciousness makes sense of affect's escape. Thus, affect theory does not entail discarding emotion as an analytic category or to denigrate it as less real or authentic, but rather to acknowledge that culturally specific accounts of emotion emerge out of something – some sort of sensory substrate that is ordered, named, and explained through culture. This 'something' is affect, and it offers ethnomusicology the opportunity to think through some impasses in the study of music and emotion. Affect theory need not be a return to supra-cultural universals of feeling; instead, it treats emotional experience as a culturally organised assemblage of impersonal, physiological, and material phenomena available to the senses. If affect is the felt intensity of sensory impact and emotion is the consciousness asking itself, 'What just happened? How do I feel about it?', then an affective ethnomusicology would investigate how music *happens* to culturally embedded actors, and how they make sense of sonic happenings.

Notes

1. Since the autumn of 2018, Room 4 Resistance has moved its events to a new venue, Trauma Bar und Kino, a cultural centre and polyvalent performance space.
2. See Hofman (2015) and the introduction to this special issue for an overview of relevant scholarly debates.
3. As noted in their introductory essay, the editors of this special issue also make use of Shouse's heuristic to gain theoretical traction in the realm of affect theory.
4. The fields of cognitive science and psychology tend to employ these terms differently, with emotion referring to the 'basic emotions' and their evolutionary functions, feeling designating subjective and self-reported states, and affect serving as an umbrella term that includes felt phenomena not included in the first two terms (Juslin and Sloboda 2001). Many thanks to Maria Witek for alerting me to this difference in nomenclature (personal communication, September 2017).
5. In a similar vein, Gatens's (2014) aforementioned diagnosis of a lingering mind/body dualism in Massumi's theory of affect can apply as well to Shouse's definitions.
6. 'Tu partages ce moment-là … tu vibres au même moment pour la même chose.'
7. 'Et, arrive la montée, où, effectivement, c'est ce que tu attendais, donc tu commences à exploser, parce que t'es heureux. Et, en fait, c'est une vibration pour moi qui vient du bas du ventre, et que t'as envie de … d'expulser en levant les bras, en criant, en embrassant les amis, en … voilà.'
8. See also Paul Berliner's (1994) ethnographic work on jazz, particularly the chapter entitled, 'Vibes and Venues', where Berliner uses the term 'vibes' to reference both the acoustical properties of a space and the general (affective) atmosphere of the performance environment, thus implying a connection between sound and mood/atmosphere. Electronic dance music culture's use of 'vibe' encompasses these connotations while adding an emphasis on materiality and force that intersects with affect theory.
9. It is difficult to specify a resonant frequency for the human body, as it is composed of differently shaped parts as well as tissues, bone, and fluid with varying resonant frequencies – all of which respond non-linearly to vibration depending on its amplitude (in sonic terms: volume). While models of the resonance frequencies of the body's component parts range from 2 to 100 Hz, empirical studies identify a narrower range of 9–16 Hz for the body as a whole (Randall, Matthews and Stiles 1997).
10. In highlighting the relational aspects of sound, one can find an analogous ethnomusicological approach in Feld's 'acoustemology' (2015), which attends to how sound connects actors (human and otherwise) into sonic ecologies.

Acknowledgements

An earlier version of this paper was read as part of a roundtable on affect at the Society for Ethnomusicology in November 2016; I am especially grateful to the organisers of this roundtable, who went on to edit this special issue. I would also like to thank the anonymous reviewer for their insightful feedback, as well as the editors of this journal for their support and guidance throughout the entire publication process. My most heartfelt thanks go to the friends, fieldwork contacts, and interviewees 'in the field' – and especially to the Room 4 Resistance crew.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The article draws upon fieldwork conducted with support from the Berlin Program for Advanced German and European Studies (Freie Universität, Berlin) as well as the Max Planck Institute for Human Development (Berlin).

Notes on contributor

Luis-Manuel Garcia is a Lecturer in Ethnomusicology and Popular Music Studies at the University of Birmingham, with previous appointments at the Max Planck Institute for Human Development (Berlin) and the University of Groningen (NL). His research focuses on urban electronic dance music scenes, with a particular focus on affect, intimacy, stranger-sociability, embodiment, sexuality, creative industries and musical migration. He is currently conducting research on 'techno tourism' and other forms of musical mobility in Berlin; he has also completed a book manuscript based on earlier research, entitled *Together Somehow: Music, Affect, and Intimacy on the Dancefloor*.

ORCID

Luis-Manuel Garcia http://orcid.org/0000-0001-6122-0515

References

Bennett, Jane. 2010. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press.

Bergson, Henri. (1896) 1991. *Matter and Memory*. New York: Zone Books.

Berlant, Lauren. 2008. *The Female Complaint: The Unfinished Business of Sentimentality in American Culture*. Durham, NC: Duke University Press.

Berliner, Paul. 1994. *Thinking in Jazz: The Infinite Art of Improvisation*. Chicago, IL: University of Chicago Press.

Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

Butler, Mark J. 2006. *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music*. Bloomington, IN: Indiana University Press.

Chow, Rey. 2012. *Entanglements, or Transmedial Thinking About Capture*. Durham, NC: Duke University Press.

Connor, Steven. 2004. 'Edison's Teeth: Touching Hearing'. In *Hearing Cultures: Essays on Sound, Listening, and Modernity*, edited by Veit Erlmann, 153–72. New York: Berg.

Crocker, Malcolm J. 2007. *Handbook of Noise and Vibration Control*. Hoboken, NJ: John Wiley.

Cusick, Suzanne G. 2013. 'Towards an Acoustemology of Detention in the "Global War on Terror"'. In *Music, Sound and Space: Transformations of Public and Private Experience*, edited by Georgina Born, 275–91. Cambridge: Cambridge University Press.
D'Errico, Mike. 2015. 'Electronic Dance Music in the Dubstep Era'. *Oxford Handbooks Online*. doi:10.1093/oxfordhb/9780199935321.013.74.
Deleuze, Gilles and Félix Guattari. (1980) 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. 2 Vols. Vol. 2. Minneapolis: University of Minnesota Press.
Durkheim, Émile. 1915. *The Elementary Forms of Religious Life: A Study in Religious Sociology*. Translated by Joseph Ward Swain. London: G. Allen & Unwin/Macmillan.
Eidsheim, Nina Sun. 2015. *Sensing Sound: Singing and Listening as Vibrational Practice*. Durham, NC: Duke University Press.
Erlmann, Veit, ed. 2004. *Hearing Cultures: Essays on Sound, Listening, and Modernity*. New York: Berg.
Erlmann, Veit, ed. 2010. *Reason and Resonance: A History of Modern Aurality*. New York: Zone Books.
Erlmann, Veit, ed. 2011. 'Descartes's Resonant Subject'. *Differences* 22(2–3): 10–30. doi:10.1215/10407391-1428825.
Erlmann, Veit, David Novak and Matt Sakakeeny, eds. 2015. 'Resonance'. In *Keywords in Sound*, 175–82. Durham, NC: Duke University Press.
Feld, Steven. 2015. 'Acoustemology'. In *Keywords in Sound*, edited by David Novak and Matt Sakakeeny, 12–21. Durham, NC: Duke University Press.
Fikentscher, Kai. 2000. *'You Better Work!': Underground Dance Music in New York City*. Hanover, NH: Wesleyan University Press.
Fisher, Mark. 2009. 'The Abstract Reality of the "Hardcore Continuum"'. *Dancecult: Journal of Electronic Dance Music Culture* 1(1): 123–6.
Fraser, Mariam. 2005. 'Making Music Matter'. *Theory, Culture & Society* 22(1): 173–89. doi:10.1177/0263276405048440.
Fraser, Mariam, Sarah Kember and Celia Lury. 2005. 'Inventive Life: Approaches to the New Vitalism'. *Theory, Culture & Society* 22(1): 1–14. doi:10.1177/0263276405048431.
Friedener, Michele and Stefan Helmreich. 2016. 'Sound Studies Meets Deaf Studies'. In *The Auditory Culture Reader*, edited by Michael Bull and Les Back, 87–97. New York, NY: Bloomsbury.
Galloway, Kate. 2015. 'Materiality and Aural Memory in the Harbour Symphony (St. John's, Newfoundland)'. *Sound Studies* 1(1): 118–43. doi:10.1080/20551940.2015.1079079.
Garcia, Luis-Manuel. 2015. 'Beats, Flesh, and Grain: Sonic Tactility and Affect in Electronic Dance Music'. *Sound Studies* 1(1): 59–76. doi:10.1080/20551940.2015.1079072.
Gatens, Moira. 2014. 'Affective Transitions and Spinoza's Art of Joyful Deliberation'. In *Timing of Affect: Epistemologies, Aesthetics, Politics*, edited by Marie-Luise Angerer, Bernd Bösel and Michaela Ott, 17–33. Zurich: Diaphanes Verlag.
Gershon, Walter S. 2013. 'Vibrational Affect: Sound Theory and Practice in Qualitative Research'. *Cultural Studies ↔ Critical Methodologies* 13(4): 257–62. doi:10.1177/1532708613488067.
Gibbs, Anna. 2010. 'After Affect: Sympathy, Synchrony, and Mimetic Communication'. In *The Affect Theory Reader*, edited by Melissa Gregg and Gregory J. Seigworth, 186–205. Durham, NC: Duke University Press.
Gilbert, Jeremy. 2009. 'The Hardcore Continuum?'. *Dancecult: Journal of Electronic Dance Music Culture* 1(1): 118–22.
Gilroy, Paul. 1993. *The Black Atlantic: Modernity and Double Consciousness*. Cambridge, MA: Harvard University Press.
Goodman, Steve. 2010. *Sonic Warfare: Sound, Affect, and the Ecology of Fear*. Cambridge, MA: MIT Press.
Gregg, Melissa and Gregory J. Seigworth, eds. 2010. *The Affect Theory Reader*. Durham, NC: Duke University Press.

Grossberg, Lawrence. 2010. 'Affect's Future: Rediscovering the Virtual in the Actual – An Interview with Gregory J. Seigworth and Melissa Gregg'. In *The Affect Theory Reader*, edited by Melissa Gregg and Gregory J. Seigworth, 309–38. Durham, NC: Duke University Press.
Grosz, Elizabeth A. 2005. *Time Travels: Feminism, Nature, Power*. Durham, NC: Duke University Press.
Hatfield, Elaine, John T. Cacioppo and Richard L. Rapson. 1994. *Emotional Contagion*. Cambridge: Cambridge University Press.
Hemmings, Clare. 2005. 'Invoking Affect: Cultural Theory and the Ontological Turn'. *Cultural Studies* 19(5): 548–67. doi:10.1080/09502380500365473.
Henriques, Julian. 2011. *Sonic Bodies: Reggae Sound Systems, Performance Techniques, and Ways of Knowing*. New York: Continuum.
Hofman, Ana. 2015. 'The Affective Turn in Ethnomusicology'. *Muzikologija* 18: 35–55. doi:10.2298/MUZ1518035H.
Howes, David, ed. 2005. *Empire of the Senses: The Sensual Culture Reader*. Oxford: Berg.
Ingold, Tim. 2000. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. London: Routledge.
James, William. 1912. *Essays in Radical Empiricism*. New York: Longmans, Green, and Co.
Jones, Donna V. 2010. *The Racial Discourses of Life Philosophy: Négritude, Vitalism, and Modernity*. New York: Columbia University Press.
Juslin, Patrik N. and John A. Sloboda, eds. 2001. *Music and Emotion: Theory and Research*. Oxford: Oxford University Press.
Kahn, Douglas. 2004. 'Ether Ore: Mining Vibrations in American Modernist Music'. In *Hearing Cultures: Essays on Sound, Listening, and Modernity*, edited by Veit Erlmann, 107–30. New York: Berg.
Kane, Brian. 2015. 'Sound Studies Without Auditory Culture: A Critique of the Ontological Turn'. *Sound Studies* 1(1): 2–21. doi:10.1080/20551940.2015.1079063.
Kassabian, Anahid. 2013. *Ubiquitous Listening: Affect, Attention, and Distributed Subjectivity*. Berkeley: University of California Press.
Krueger, Joel. 2013. 'Affordances and the Musically Extended Mind'. *Frontiers in Psychology* 4: 1003. doi:10.3389/fpsyg.2013.01003.
Leys, By Ruth. 2011. 'The Turn to Affect: A Critique'. *Critical Inquiry* 37(3): 434–72. doi:10.1086/659353.
Massumi, Brian. 1995. 'The Autonomy of Affect'. *Cultural Critique* 31: 83–109. doi:10.2307/1354446.
———. 2002. *Parables for the Virtual: Movement, Affect, Sensation*. Durham, NC: Duke University Press.
Nancy. 2009. Interview by Author. Paris, France, 24 June.
Nick. 2010. Interview by Author. Chicago, IL, USA, 3 February.
Novak, David and Matt Sakakeeny, eds. 2015. *Keywords in Sound*. Durham, NC: Duke University Press.
Papacharissi, Zizi. 2015. *Affective Publics: Sentiment, Technology, and Politics*. Oxford: Oxford University Press.
Paulson, Johanna. 2013. 'War on the Dancefloor: Synthscenen's Military Power Games'. In *DJ Culture in the Mix: Power, Technology, and Social Change in Electronic Dance Music*, edited by Bernardo Attias, Anna Gavanas and Hillegonda Rietveld, 269–90. New York: Bloomsbury.
Pink, Sarah. 2009. *Doing Sensory Ethnography*. London: Sage.
———. 2010. 'The Future of Sensory Anthropology/the Anthropology of the Senses'. *Social Anthropology* 18(3): 331–3. doi:10.1111/j.1469-8676.2010.00119_1.x.
———. 2013. 'Engaging the Senses in Ethnographic Practice'. *The Senses and Society* 8(3): 261–7. doi:10.2752/174589313X13712175020433.
Randall, J. M., R. T. Matthews and M. A. Stiles. 1997. 'Resonant Frequencies of Standing Humans'. *Ergonomics* 40(9): 879–86. doi:10.1080/001401397187711.
Reynolds, Simon. 1998. *Energy Flash: A Journey through Rave Music and Dance Culture*. London, UK: Picador.

Rossing, Thomas D., F. Richard Moore and Paul A. Wheeler. 2002. *The Science of Sound*. Third Edition. Reading, MA: Addison-Wesley.
Schafer, R. Murray. 1993. *The Soundscape: Our Sonic Environment and the Tuning of the World*. Rochester, VT: Destiny Books.
Schutz, Alfred. 1951. 'Making Music Together: A Study in Social Relationship'. *Social Research* 18 (1/4): 76–97.
———. 1967. *The Phenomenology of the Social World*. Translated by George Walsh and Frederick Lehnert. Evanston, IL: Northwestern University Press.
———. 1976. 'Fragments on the Phenomenology of Music'. In *In Search of Musical Method*, edited by F. Joseph Smith, 23–71. London: Gordon and Breach.
Sedgwick, Eve Kosofsky. 2003. *Touching Feeling: Affect, Pedagogy, Performativity*. Durham, NC: Duke University Press.
Sedgwick, Eve Kosofsky, Adam Frank and Irving E. Alexander. 1995. *Shame and Its Sisters: A Silvan Tomkins Reader*. Durham, NC: Duke University Press.
Shouse, Eric. 2005. 'Feeling, Emotion, Affect'. *M/C Journal* 8(6): 26.
Sommer, Sally. 2001. 'C'mon to My House: Underground-House Dancing'. *Dance Research Journal* 33(2): 72–86.
Spinoza, Benedictus de. (1677) 2000. *Ethics*. Translated by G. H. R. Parkinson, *Oxford Philosophical Texts*. New York: Oxford University Press.
St. John, Graham. 2013. 'Writing the Vibe: Arts of Representation in Electronic Dance Music Culture'. *Dancecult: Journal of Electronic Dance Music Culture* 5(1). https://dj.dancecult.net/index.php/dancecult/article/view/357/362.
St. John, Graham, ed. 2017. *Weekend Societies: Electronic Dance Music Festivals and Event-Cultures*. New York, NY: Bloomsbury Academic.
Thrift, Nigel. 2008. *Non-Representational Theory: Space, Politics, Affect*. New York: Routledge.
Tomkins, Silvan S. and E. Virginia Demos. 1995. *Exploring Affect: The Selected Writings of Silvan Tomkins*. Cambridge: Cambridge University Press.
Tomkins, Silvan S. and Bertram P. Karon. 1962. *Affect, Imagery, Consciousness*. 4 Vols. New York: Springer Pub. Co.
Tomlinson, Gary. 2016. 'Sign, Affect, and Musicking Before the Human'. *boundary 2* 43 (1): 143–72. doi:10.1215/01903659-3340673.
Turner, Victor Witter. 1969. *The Ritual Process: Structure and Anti-Structure*. Chicago, IL: Aldine.
Wang, Oliver. 2015. *Legions of Boom: Filipino American Mobile DJ Crews in the San Francisco Bay Area, Refiguring American Music*. Durham, NC: Duke University Press.
Witek, Maria A. G. 2019. 'Feeling at One: Socio-Affective Distribution, Vibe and Dance Music Consciousness'. In *Music and Consciousness II*, edited by Eric Clarke, David Clarke and Ruth Herbert, 93–112. Oxford: Oxford University Press.