Guattari's Sonorous Affect

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Abstract: This essay brings a musicological perspective to bear on a number of recurring musical-sonorous themes in Félix Guattari's writing—rhythm, resonance, polyphony, and of course refrain—and to consider their significance for how Guattari theorizes affect. It investigates some of the ways sonorous and musical terms and concepts are deployed in Guattari's writing, and why they matter. It then engages three relevant musical contexts, the first two of which stem from brief vignettes in Guattari's writing: the implications for composer Claude Debussy of a "pentatonic musical refrain" moving transversally and synchronically through a range of expressive and machinic implications, and music associated with the West African Fon spiritual figure Legba. The third, more prolonged context is the movement "Echoes of the Set Bells" from Chinese composer Chen Yi's 1998 chamber composition *Sound of the Five*, which is engaged to draw out some concrete illustrations of several key concepts, including a redeployment of the pentatonic musical refrain, some Guattarian ideas about tones and timbre, and the relationship between resonance and interaction.
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"In most ancient cosmologies … a release of sound is said to cause the 'precipitation' of the Forms of a spiritual realm … into the objective, perceptible, and measurable materials constituting the foundations of existential entities. Hindu metaphysics … speak of the primordial creative Sound AUM as the power that gives birth to many worlds of existence. In Genesis, Elohim … *said* 'Let there be light: and there was light'. The *saying* refers to the release of a creative power…. The *result* of the divine utterance is light. Sound therefore precedes light." (Rudhyar, 1982, p. 8, emph. in original).

"According to string theory, if you had a supermicroscope and could peer into the heart of an electron, you would see not a point particle but a vibrating string….

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If we were to pluck this string, the vibration would change; the electron might turn into a neutrino. Pluck it again and it might turn into a quark. [If] you plucked it hard enough, it could turn into any of the known subatomic particles. In this way, string theory can effortlessly explain why there are so many subatomic particles. They are nothing but different 'notes' that one can play on a superstring…. Strings … interact by splitting and rejoining, thus creating the interactions we see among electrons and protons in atoms. In this way … we can reproduce all the laws of atomic and nuclear physics. The 'melodies' that can be written on strings correspond to the laws of chemistry. The universe can now be viewed as a vast symphony of strings." (Kaku, 2005, pp. 196–197)

"Every milieu is vibratory, in other words, a block of space-time constituted by the periodic repetition of the component…. Every milieu is coded, a code being defined by periodic repetition; but each code is in a perpetual state of transcoding or transduction. Transcoding or transduction is the manner in which one milieu serves as the basis for another, or conversely is established atop another milieu, dissipates in it or is constituted in it…. The milieus are open to chaos, which threatens them with exhaustion or intrusion. Rhythm is the milieus' answer to chaos." (Deleuze & Guattari, 1987, p. 313)

I ask the reader to keep these three passages—each reflecting what might seem at first as wildly different sets of ontological commitments—in mind as I bring a musicological perspective to bear on a number of recurring musical-sonorous themes in Félix Guattari's writing. These themes include rhythm, resonance, polyphony, and probably most famously refrain or ritornello, and are significant for how Guattari theorizes affect both apart from and in conjunction with Gilles Deleuze's Spinozist conception. [1] Affect—or more precisely, the mechanisms by which affective flows both code and decode the human and non-human agents that participate in setting those very flows in motion—is a foundational concept for Guattari, underpinning many of his more elusive technical concepts. In this process, Guattari's musical evocations function as more than metaphors: they describe in quite precise ways how his operations function, from the resonant vibratory way in which affects do their (de)coding work to the essential polyvocality of any process of subjectification to the "ontological refrain" (Guattari, 1995, p. 53), the iterative unfolding of which defines all manner of Guattari's machinic processes (not to mention the "pathic and cartographic means of reaching" that refrain, which ought then point to a rich form of music-analytic inquiry). Much how, as physicist Michio Kaku suggests, superstring theory posits a sonorous underpinning for all there is (or in composer and mystic Dane Rudhyar's conception, a sonorous incipit that calls all existence into being), for Guattari sonority is

an existential a priori, and as we'll see below, sonority and rhythm are what we might call two modes of the same substance.

This essay will unfold in two parts. In the first, longer part, I will investigate some of the ways sonorous and musical terms and concepts are deployed in Guattari's writing, and why they matter. I will then briefly consider three musical contexts in order to enrich and extend a range of potential musicological connections. The first two of these stem from brief vignettes in Guattari's writing: the implications for French composer Claude Debussy of a "pentatonic musical refrain" that moves transversally and synchronically through a range of expressive and machinic implications, and music associated with the West African Fon spiritual figure Legba, which Guattari approaches via a reading of anthropologist Marc Augé's study of fetishes and the body in traditional societies. The third, more prolonged context is the movement "Echoes of the Set Bells" from Chinese composer Chen Yi's 1998 chamber composition *Sound of the Five*, which I will use to draw out some concrete illustrations of several key concepts, including a redeployment of the pentatonic musical refrain, some ideas about tones and timbre from Guattari's 1979 *The Machinic Unconscious*, and the relationship between resonance and interaction developed in the same volume.

FROM VIBRATION TO REFRAIN

Music's periodicities operate at multiple ongoing temporal levels. At the metric level: 1-2-3-4 1-2-3-4. At the sub-metric level level: 1-& 2-&; 1-e-&-a 2-e-&-a. At what music theorists call the hypermetric level: ONE-2-3-4 TWO-2-3-4 THREE-2-3-4 FOUR-2-3-4. Each cyclic return marks a goal of motion; *movement* therefore is intimately implicated in music's periodic recurrence. Movement is manifold: the agitation of air molecules and activation of the auricle–eardrum–cochlea assemblage that constitutes sound in the first place; the projection of air through a tube, or stimulation of a string by bow or pick, or dynamic impact of hand on drum; the metaphorical movement of a melodic line; the notion of "being moved" by a stirring performance. Periodicity also occurs at the phrase or phrase group level, like the formal repetitions in jazz, 32 measures repeating in an ongoing cycle (itself unfolding a macrotemporal 1-2-3-4 via its eight-measure subdivisions, 8+8+8+8), its participants mapping an existential territoriality through their collective, contextual enunciations (jazz in this sense operates as what Guattari would call the proto-aesthetic of a territorialized assemblage; see Guattari, 1995, pp. 101–102).

There are ever larger periodicities and quasi-periodicities too, including the away-from–back-to movement marked by the musical *ritornello* of the Italian Baroque, invoked frequently by Guattari, with and without Deleuze. And there are smaller ones: pitch and timbre are periodic events, products of co-occurences of discrete isochronous onsets fast enough that we perceive them as continuous. Indeed, if we take a simple rhythmic periodicity—say a regular series of equidistant pitchless clicks—and gradually speed it up, what was perceived as rhythm will eventually transform into a discernible, continuous tone. Likewise, multiple co-occuring periodicities become harmonic intervals when sped up: for example, two periodic rhythmic strata in a 5:4 relationship with one another will transform into two discrete pitches a major third apart when sped up to a frequency within the range of human hearing.[2]

The 5:4 ratio between tones, importantly, represents the relationship between the fifth and fourth elements of the harmonic series. The harmonic series operates as nested strata of virtual periodicities in epimoric ratios with one another: 2:1, 3:2, 4:3, 5:4, and so on. In any given sonorous utterance, these strata become-actual in different ways—what becomes actual and how in any given instance determines what we call *timbre* or the "quality" or "grain" of a sound. Two otherwise identical sustained musical tones—say, the same pitch produced by a bassoon and a trombone—are distinguishable from one another due to (among a small number of other factors) the relative presence or absence of different harmonics, which I am expressing here as relationships with other harmonics by emphasizing frequency ratios between them. What we typically think of as "musical" sounds are comprised of periodic co-occurrences in comparatively simple harmonic relations, while many sounds that we ordinarily do not think of as musical—dog barks, jet engines, glass shattering—are comprised of much more complex ones, including aperiodic expressions.[3]

All of this lies in the background of three provocative statements from Guattari's *Chaosmosis*:

1) "The pathic apprehension of harmonic resonances based on the diatonic scale deploys the 'foundation' of consistency of polyphonic music…" (Guattari, 1995, p. 26)

2) "From acoustics to polyphonic music, there is a divergence of constellations of expressive intensity." (p. 38)

3) "Musical machines establish themselves against a background of sonorous Universes which have been constantly modified since the great polyphonic mutation." (p. 47)

Interestingly, Guattari gets the first directional line backwards: harmonic resonances are not based on the diatonic scale but rather the other way around: the harmonic series has often been used to justify the diatonic scale in its various guises in a kind of appeal to the authority of nature.[4] Theorists from Boethius and Aristonexus to the author(s) of the ancient Hindu *Natyasastra* have labored to make a version of the diatonic scale "fit" with the intervallic affordances of the harmonic series.[5] But what is important here is how Guattari stages the eruption of musical polyphony as a kind of big bang moment ("the great polyphonic mutation"), as a proliferation out from a foundational sonority or chaosmic multiplicity of sonorities. (Elsewhere Guattari [2011, p. 112] describes how "all Western music could be regarded as an immense fugue developed starting from th[e] single empty note" of a black hole.[6]) This is important not because Guattari is especially concerned with the history of polyphonic music (of which fugues are exemplary), but because the very notion of polyphony—of many co-occuring sounds—borrowed in large part from Mikhail Bakhtin, is crucial to Guattari's conception of affect. As Gary Genosko summarizes, polyphony for Guattari is irreducible to a single cause or thematization: "genuine polyphony entails that the plurality at issue remains 'unmerged', independent, coexisting, interacting" (Genosko, 2002, p. 51). This is precisely how musical polyphony as exemplified by, say, Giovanni Perluigi da Palestrina or Johann Sebastian Bach unfolds: as a heterogeneous assemblage of co-occuring voices that cohere into a whole even while each remains clearly recognizable in its distinctness. Genosko illustrates how Guattari's conception of affect is polyphonic in a particular sense extrapolated from psychologist Daniel Stern's figuring of four primary "senses of self" as simultaneous and continuous rather than sequential stages of development, the relations between which are constituted via manifold affective flows between limitations and potentials (see Genosko, 2002, p. 52). Hence the title of this essay—Guattari's sonorous affect—affect is what grounds action, cognition, subjectification, and, well, pretty much everything for both Deleuze and Guattari in their respective ways; affect is fundamentally a polyphonic eventfulness, which for Guattari means a transversal, dialogical exchange of flows. Sonorous resonance ontologically precedes and conditions polyphony: it is the infinitely fast virtual space—mapping, we might say, the nearly infinitesimally small Planck movements of superstrings—from which emerge the slowings-down that actualize spatial coordinates, temporal causalities, relationalities and facticities; functions, constants, and laws.[7] As Guattari tells us, "nothing will work until such an event-advent of primordial slowing-down and selection has happened" (Guattari, 1995, p. 115).

All of this makes good sense. As Dane Rudhyar suggests, not only does sound precede light, but the advent of light marks the advent of dualism: according to Rudhyar, "the most basic and primordial dualism a human being experiences is that of light and darkness" (1982, p. 9). Conversely, Rudhyar suggests that "while light symbolizes the emergence of the objective consciousness it makes possible, Sound refers to the operation of the creative will" (1982, p. 9). This first term, the formation of consciousness as the production of an objective ontology, has to do for Rudhyar with the way we experience light, which is as reflected against or diffracted through material substances, which brings an external world of objects into experience. Sound, to be fair, does not operate substantially differently: any given sound is a complex assemblage of vibrating air molecules in conjunctions with spaces, surfaces, and directionalities—sound is material through and through. But Rudhyar makes a distinction between two different conceptions of sound that hail from ancient India: *ahatta*, or "physically perceptual sound vibrations"—sounds as we generally think of them—and *anahatta*, "the power of the divine will, which sets in motion the proto-matter of chaos …, Genesis's 'dark waters of space', the medieval alchemists' prima material. This creative Sound makes matter spin into vortices of motion" (Rudhyar, 1982, p. 14). This is the plane where alchemy, string theory, and the Deleuze-Guattarian refrain (as sonorous expression, as collective enunciation) come into productive contact.

Sonorities are proliferating now, as are mechanisms for capturing and deploying them. Most important, perhaps, is the relation between Guattari's generalized polyphony and the intermingling of heterogeneous voices, all dialogically or axiologically interwoven with one another while retaining their individual, "unmerged" identities. How might we spell out this relationship in terms of a Deleuze-Guattarian anti-dualism? Guattari offers a schizoanalytic program:

> "Discordance in the ways of keeping time—what I call its *ritornellizations*—is not specific to an abnormal subjectivization. What would characterize the latter, rather, is that one mode of temporalizing … takes precedence over the others, whereas a normal psyche would always be more or less on the point of crossing from one to the other." (Guattari, 1996, p. 161)

This is quite interesting from a musicological perspective, for at least three reasons. First, to think of musical time as described above—as periodic, cyclic, marked by recurrences with clear boundary thresholds—as a form of abnormal subjectivation is not yet an area that musicological disability studies has touched, but its possibilities are intriguing. Second, to convert ritornello into a verb—to *ritornellize*—is to focus on the processes that contribute to its constitution. Elsewhere Lone Bertelsen and Andrew Murphie (2010)

similarly describe a process of "refraining." On the plane of musical rhythm and meter, this has very much to with certain contemporary music theories that construe meter as something constituted psychologically, through experiential contact with sonorous-rhythmic stimuli. The periodic recurrence of meter in these readings is a product of contextualizing these stimuli and *arranging* them in consciousness into entrainable groupings, with predictive implications. (Music theorist Christopher Hasty [1997] is at the forefront of this mode of constituting meter.) And third is Guattari's conflation of ritornellization and discordance: if discord (as the chaos-infinite-virtual plane of Guattari's "initial chaosmic unfolding" (1995, 110)) is what precedes and founds the triple movement—establishing a point, drawing a circle, grafting a breakaway—of the refrain or ritornello (Deleuze & Guattari, 1987, pp. 311–12), and if that discord remains active through its continuous reconstitution in each new event, then we have a compelling model for thinking about what ethnomusicologist Charles Keil (1994) calls "participatory discrepancies," the little micro-timing and micro-pitch pushes, pulls, and other redirections that characterize the lively unfolding of any given musical context.[8]

FROM SOUND TO POLYPHONY

Back to polyphony, though. Guattari borrows the term from Mikhail Bakhtin (Bakhtin, 1990) to describe the relationally diffuse heteroglossia that conditions every process of subjectivation. While Bakhtin focuses on a more literal linguistic polyphony, Guattari elides this emphasis by turning to affect and by insisting on multiple, heterogeneous, ever-proliferating modes of semiotization, of which discursive or linguistic modes would be only a tiny subset.[9] By turning to the non- or least para-discursive modes of a more-than-human, affective collective enunciation, Guattari can describe how "[a]n affect speaks to me, or at the very least it speaks through me" (Guattari, 1996, p. 160). The sonority of affect—its collective-enunciatory "voice"—is key here: if affect moves "faster than the speed of thought" (to borrow a line from Michael James Bennett [2017, p. 232]), then as a kind of sonority-machine it perfectly enacts the *ritardando* that defines the coalescence of infinitely (or at least very) fast vibrational periodicities into the kinds of territorial refrains that can be apprehended. Affect becomes comprehensible through its effects.

An enunciation in this way becomes a "partial enunciation"; the aesthetic, expressive movement of affect becomes a key factor in the partial autonomization of the subject, as a kind of autopoeisis (or, better, as a semiotic rupture that enacts the "detachment of an ethico-aesthetic 'partial object'"; see Guattari, 1995, p. 13). This reverses Rudhyar's claim: rather than creating the conditions for objective consciousness, sound as a primordial

aesthetic paradigm creates the conditions for the enactment of subjective autonomy. This is not *quite* the same as Brian Massumi's (2002) autonomy of affect: affect in this reading functions as a multiplicity of catalyzing forces that enter into machinic couplings with a subject-in-formation. So while affects are autonomous in the sense that they immediately decouple from their expressive sources to be taken up variously in each new constitutive event, they are also autonomizing forces in the way they contribute essentially to new, singular productions of subjectivity.

For both Bakhtin and Guattari, the subject co-creates with the aesthetic utterance. This is a primordial affective relation; indeed, the whole point of Guattari's invocation of polyphony is to ground some of the ways that he wants to thematize affect more broadly. One of these themes draws again on Bakhtin and the role that the receiver—the listener, in music—plays in "consummating" the content of aesthetic expression. This is an important way to think about how expression or meaning is engendered: the receiver maps a diagrammatic path into, through, and around an expression's content, enacting a dialogical process with that content that effectively reterritorializes it and redirects it toward new expressive possibilities. This is a potent way to characterize what I describe as a musical gesture's tendency to become decoupled from even the provisionally fixed meaning of its utterer's intent: once "released into the wild" it is there to be taken up expressively in all number of ways. Guattari refers to this as the "isolation or detachment" of an affective force. He characterizes this process by describing how "an affect's spatio-temporal congruence dissolves and its elucidating procedures threaten to fly off in all directions" (Guattari, 1996, p. 161). There's a precarity to all of this that is crucial for understanding how affect functions for Guattari. The deterritorializing process of spatio-temporal dissolution and comcomitant opening onto all number of possible redeployments is a necessary condition for the reconfiguration of affective forces through each enactment of a new event. In this way sense amounts to a kind of eventful re-coalescence of affect that operates concurrently with its redeployment.

Guattari describes this doubled micro-process:

> As the precarious result of a composition of modules of heterogeneous semiotization, its identity permanently compromised by the proliferating phylums of problematization which work it over, [a sensory affect] is forever seeking to repossess itself. Moreover, it is essentially from this ontological flight 'in retreat', consecutive upon an infinite movement of virtual fractalization, that its existential power of self-affirmation results. (Guattari, 1996, p. 161)

He goes on to describe one facet of this process that seems most closely aligned with how we typically think of sense and the sensory: the phenomenological plane, where the "question of a crossing of a threshold by an affect, with a view toward attaining a sufficient consistency," is raised. Below this plane is that of "pathic time," which Brian Holmes (2009) describes as a heterogeneous matrix that assembles with "material situations and logical problematics" in order to "draw subjectivity out of its chaos, into unfolding social flows and projects." Sensation, then, is the product of the movement of *agencement*—which, tellingly, the translators of "Ritornellos and Existential Affects" render in sonorous terms as "enunciative lay-out" (Guattari, 1996), which of course resonates with the term "arrangement" that some Deleuze and Guattari scholars prefer.

A second way Guattari thematizes affect, which operates in a kind of reverse trajectory to the first, is as "tackiness" or "stickiness," referring to the way it sticks to a subject, producing a textural density that enables the very process of subjective coalesence to take place. This for Guattari is aesthetic in that, again, it proceeds as a process of polyvocal expressive impingements. In a striking essay on Guattari's aesthetic paradigm, Simon O'Sullivan (2010) foregrounds how affective "stickiness" converges on an aspect of Deleuze-Guattarian temporality that had, honestly, eluded me before I read *Chaosmosis*, which is the concept of speed and slowness and how these terms function in *A Thousand Plateaus*. (I hinted at this above in my characterization of the inauguration of a territorial refrain as a ritardando.) Of course Guattari's usage in *Chaosmosis* is far from the whole story, but there are a few ways in which, for one example, the enactment of transmonadic creation involves different modes of speed and slowness that can help us understand the concept more generally. In this reading, infinite speed and finite slowness describe chaos and complexity respectively, and in turn map at least provisionally onto virtual and actual processes. There seems to be an implication of the former (speed) begetting the latter (slowness): complexity emerges from chaos; actuality is formed through seizings and deployments of virtual forces. But of course it's more complicated than that: every territorializing act of concrescence around a complex entity is in the same event grafting a breakaway not back to the forces of chaos but in order to newly re-chaotify and to constitute a range of new virtual forces to be newly taken up in next events. In terms of temporality, then, this amounts to a radical double movement of speeding up and slowing down; as Deleuze and Guattari put it in the opening of *A Thousand Plateaus*, "Comparative rates of flow … produce phenomena of relative slowness and viscosity, or, on the contrary, of acceleration and rupture." (Deleuze & Guattari, 1987, p. 4). We might substitute *and* for *or*. That viscosity is precisely what Guattari refers to as affective stickiness, and results from a context-specific slowing-down of chaotic forces, which "carries out an aggregative

selection onto which limits, constants, and states of things can graft themselves" (Guattari, 1995, p. 115). This is something like the becoming-effective of affect: if affect occurs in the Bergsonian zone of indeterminacy or Deleuzian dark precursor that precedes and conditions action (including cognition and thought), and therefore functions in a way that we might think of as infinite, then its effects—what it *does*—occur in the specific ways in which it slows down, becomes-viscous, attracts those limits and constants and states of things to form new assemblages and new potentialities.

These two ways of construing how affect works are, in an important sense, two perspectives on the same phenomenon. The "stickiness" of affect "disqualifies the enunciative dichotomy between speaker and listener"; it is essentially pre-personal, "installed 'before' the circumscription of identities" (Guattari, 1996, p. 158)—Guattari puts "before" in scare quotes to remind the reader that this is an ontological priority rather than a strictly temporal one. At the same time, the production of affect is fundamentally creative (and therefore ethico-aesthetic), inventing "mutant coordinates," installing "unprecedented, unforeseen, and unthinkable qualities of being" (Guattari, 1995, p. 106) through eventful, polyvocal conjunctions. As Guattari characterizes this productive multivalent movement,

> I find myself tributory to a multi-headed enunciative lay-out [*agencement*]: the individualized subjectivizing which, in me, is authorized to speak in the first person is no more in fact than the fluctuating intersection, and the consciousness 'terminal', of these diverse components of temporalization. (Guattari, 1996, p. 160)

Like many affect theorists, Guattari describes affect's "hazy, atmospheric" nature, but there is also an important sense in which he insists on its specificity. Affect is "perfectly apprehensible to the extent that it is characterized by … threshold effects and reversals in polarity" (Guattari, 1996, p. 158). This position is similar to that recently proposed by Eugenie Brinkema (2014), who insists that we close-read affect in order to get in the middle and work with it in order to understand its functionings and effects rather than continue to characterize it as, metaphysically, always escaping comprehension. The difficulty is that, as Guattari tells us, "the delimitation of an affect is non-discursive" and therefore not well-explained by discursive logics. All this means, as far as Brinkema or Guattari would have it, is that we need to consider new logics. There's an obvious connection here to sound and music, both of which are also often described as overspilling discursive limitations: the "ineffability" of music that Vladimir Jankélévitch (2003) describes.

THREE MUSICAL MACHINES

I'd like to concretize the sonorous implications of these ideas by highlighting two intriguing examples that Guattari offers in *Chaosmosis*, and then conclude with a third potentially illuminating vignette. Guattari (1995, pp. 49–50) finds in French composer Claude Debussy's music a proliferating "pentatonic musical refrain" that connects transversally with a universe coalescing around Richard Wagner's *Parsifal*, a universe of Gregorian chant, the universe of a French musical line that recuperates Jean-Phillipe Rameau and François Couperin and adopts Frédéric Chopin and Franz Liszt as its own, and a Javanese musical universe that extends from the composer's experience at the 1889 Paris Universal Exposition. He does not mention a crucial connection to French folk music, which informs not only Debussy's melodic language but that of many of his contemporaries in France and elsewhere, and could be deployed to further enrich the concept of a pentatonic musical refrain. Quickly, the pentatonic collection in music is a five-element "maximally even" and, from a relational perspective, "maximally individuated" arrangement, in which five tones are spread as evenly as possible along a terrain of twelve nomimally equidistant scale degrees. There are only two adjacent pitch intervals (from one tone of the pentatonic scale to the next), which Western musicians usually refer to as a major second and minor third. The scale can be rotated such that different tones are conceived and heard as "referential," and there are many studies from music psychology and cognition that theorize how we come to hear them as such. Importantly, the pentatonic collection can be generated by concatenating the interval of a perfect fifth four times; the perfect fifth is significant as it is the first discrete pitch-class interval in the harmonic series, representing the harmonic ration 3:2.[10] The pentatonic collection occurs in vernacular musics around the world: from China to India to sub-Saharan Africa to the plains of North America to France and elsewhere across Europe, musics have been invented that use this particular collection of pitches in strikingly similar ways, leading some cognition-studies authors to suggest that it might somehow be hard-wired.[11]

What is important here is that Debussy's pentatonic musical refrain begins with sound. The sound of the pentatonic collection is what opens conduits into these multiple universes, which allows the composer to fold otherwise extraordinarily disparate sonorous signatures—chant's melodic gestures, Rameau's lyricism, Couperin's rhythmic repetitions, Wagner's gnostic interreferentiality, the slightly detuned paired gongs and layered temporal strata of Javanese gamelan—into the enunciative layout of his own compositional logic. From its pentatonic pitch syntax it is easy to draw a transversal line to other aspects of Debussy's musical surface. For example, following the Javanese-music

fold, the composer's use of counterpoint, not as the co-occurrence of multiple melodic strands but as a different sort of polyphony: stratified layers of musical activity that express different co-occuring temporalities (different speeds and slownesses) and, importantly, fold into and condition one another. As musicologist Brent Hugh (1998) describes of the 1903 composition "Pagodes" (no. 1 of the three-part *Estampes* for piano), Debussy's counterpoint "is layered, fragmentary, and ornamental." This is a different kind of polyphony then, which was in turn highly influential for many of the high modernist composers, including Olivier Messiaen, Pierre Boulez, and Luciano Berio, that Deleuze and Guattari draw upon. But for Debussy the counterpoint of his Javanese sources goes nearly infinitely futher. As he writes in a 1913 article for the SIM (Société Internationale de Musique) monthly,

> [t]heir school consists of the eternal rhythm of the sea, the wind in the leaves, and a thousand other tiny noises…. Their traditions are preserved only in ancient songs … to which each individual adds his own contribution century by century. Thus Javanese music obeys laws of counterpoint which make Palestrina seem like child's play. (Lesure, 1977, p. 278)

As this passage suggests, Debussy heard in Javanese gamelan the genealogical residue of a thousand proliferating sonorous conjunctions, some human, some otherwise. Not only is counterpoint—polyphony—composed of innumerable voices, but those voices extend across vast temporal trajectories, reappearing as ever-new semiotizations within the affective-material workings of the gamelan ensemble.

What all this amounts to is what Guattari calls a "multireferential, multidimensional machinic catalysis" (Guattari, 1995, p. 50) which "extracts its consistency by crossing ontological thresholds, non-linear thresholds of irreversibility, […] phylogenetic thresholds, creative thresholds of heterogenesis and autopoiesis." From a diagrammatic perspective, Debussy's pentatonic musical refrain at once activates each of these threshold-crossings: (1) it posits an acoustic (harmonic), sonorous ontological foundation for its transversal and trans-temporal conjunctions, (2) it calls out (like Rudhyar's primordial utterance) across time and space to map ever-new phylogenetic connections, in essence fabulating its own genealogical plane, (3) it co-creates with its sonorous interlocutors in acts of quite radical music-syntactic deterritorialization and disidentification with majoritarian practices. There was nothing quite like Debussy's music at the time, but Guattari's diagrammatic shows how it did not irrupt ex nihilo but rather was produced via those very transversal conjunctions, precarious connections, and disidentificatory disjunctions.

Another brief, provocative evocation in *Chaosmosis* is Guattari's gloss on Marc Augé's (1986) account of Legba, one of the most significant divinities for the Fon people in what is now Benin, West Africa. For his part, Augé focuses on the fetishistic aspects of Legba's material (visual) representation, as does Guattari, who considers the Fon relationship to Legba as "a cartography of [the] multivalence of alterity" (Guattari, 1995, p. 45). Guattari describes some of the registers of the multivalence: "A dimension of destiny; a universe of vital principle; an ancestral filiation; a materialized god…; a fetish at the entrance to the village," and much more. What is missing from Augé's account, which would have been terribly interesting to Guattari, are the sonorous—and, by extension, affective—registers of Legba's relational existence. In ceremonies, songs for Legba occur first and mark an invitation for human and supernatural celebrants to participate. They begin with drums and bells, as the stirring-into an emergent rhythmic consistency of a more generalized, local chaosmos: the onset of repeated interlocking drum patterns establishes a circle, even as the individual players are enacting little breakaways as they expressively inflect and redirect their own parts. The affective implications of this process are crucial, as I have written about elsewhere (Stover, 2018). The goal of this initial activity is the achievement of a sufficient degree of intensity to motivate Legba's arrival.

Furthermore, Legba guards the crossroads, aids in decision-making, helps translate the divine word of the cosmos, but is also the trickster: Legba traffics in the always-ongoing impingements between openings onto chaos and resedimentations into new orders (speeds and slownesses), and one may be sent down the wrong path, or the cosmic word may be misheard, mistranslated, or poorly acted upon. Again, sound underlies all of this: the sonorous word of the cosmos, the song—and the singer—through which Legba's voice materializes; the refoldings of sonic complexity brought about by affixing additional resonating objects to drums and feet; the supple segmentarity of the interlaced multi-drum pattern that hails Legba—as ethnomusicologist Charles Keil suggests in the context of Legba's Yoruba counterparts, "if the microtiming is not right among the batá players, the orishas will not descend" (Keil, 1994, p. 108). These microtimings can be thought of as affective perturbations—Ian Biddle's (2012) "tiny seductions"—which enact a continuous, subtle yet micropolitically crucial destratification of musical periodicity.[12] Deleuze and Guattari are somewhat horrified by the concept of musical meter—"there is nothing less musical than a military march" (Deleuze & Guattari, 1987, p. 313), after all—but the bendings and foldings of microtiming fluctuations enact, perhaps crucially, a becoming-rhythm of meter, and ultimately, a becoming-music of sonority.

All of these Guattarian ideas about sound, affect, machinic multireferentiality, becoming, and more can be heard in Chinese composer Chen Yi's music, which continually

draws resonating lines between Western (post?)modernist music-compositional resources and techniques and timbral, pitch, and rhythmic expressions from traditional Chinese sources. Before proceeding, it is worth recalling the three Guattari quotes emphasized above: "The pathic apprehension of harmonic resonances based on the diatonic scale deploys the 'foundation' of consistency of polyphonic music" (Guattari, 1995, p. 26), "From acoustics to polyphonic music, there is a divergence of constellations of expressive intensity" (p. 38), and "Musical machines establish themselves against a background of sonorous Universes which have been constantly modified since the great polyphonic mutation" (p. 47), all of which coalesce in important ways in Chen's music.

The second movement of Chen Yi's *Sound of the Five*, "Echoes of the Set Bells" (1998), opens with a rich harmonic resonance, a sustained C-sharp–G-sharp cello dyad, alive with internal motion as harmonic spectra compete for salience in their establishment of a sonorous background from which ensuing gestural constellations will emerge.[13] The onset of this opening sonority is simultaneously forcefully plucked by a second cellist, which is significant for at least two reasons: as an explosive incipit that emphatically calls in the sonorous activity that follows (the music's "big bang" moment), and as an early hint that lively multiplicities are everywhere, "already quite a crowd." A five-note melody ensues, delineating a tonal space altogether divergent from the sustained cello drone in terms of pitch content, register, gestural quality, and tone color or timbre. Each sound we have heard thus far is, like the first, a compound sound (so it's not *entirely* divergent): a crisp pizzicato attack simultaneous with the onset of a stark sustained pitch, *sul ponticello* (produced by drawing the bow across the string very near the bridge, which dramatically alters the harmonic content of the produced sound). This gesture repeats with three notable differences; first, a small but significant rhythmic acceleration; second, a transposition to a higher pitch register; and third, beginning with the third of five onsets, the erasure of the crisp pizzicato attack and the blurring of pitches as one sustains into the next, resulting in a dissonant three-note sonority (alongside the still-ongoing cello drone). Melody is transformed into harmony; monody into polyphony.

After an abrupt cut-off the drone resumes and the melody, now transposed to a new pitch level and with the original double sustained/pizzicato articulation reenacted, begins to undergo a series of playful permutations, repeating several times with its pitches reordered in various ways. From this permutating rhythmic dance a remarkable transformation takes place: two starkly disjunctive gestures (an ensemble tremolo followed by a multidirectional glissando to a jarringly dissonant sonority, channeling Bela Bártok) lead to a return to the original melodic gesture, the first two pitches of which are then extracted to initiate a new five-note expression: a violin melody that doubly articulates its

Chinese musical antecedents with a hollow, ethereal timbre as it glides from one note to the next (imitating the *erhu* or Chinese fiddle) and by outlining the pitches of a traditional pentatonic scale. (Please refer to the recording; the "erhu" passage starts at :43.)

The pitch content of this extended passage is important. Each version of Chen's initial five-note collection (the first, repeated melodic utterance and its transposition) is distributed maximally evenly not across the twelve tones of an equal-tempered chromatic octave, but across the reduced span of a half-octave, known in music-theoretical terms as a tritone. This intense intervallic compression co-occurs with a commensurate registral expansion, as individual tones are displaced by one or more octaves to form the zig-zag melodic contour <step-up—big-leap-down—small-leap-up—big-leap-down>. The two big downward leaps are identical in size, inverting the interval of the semitone, the smallest melodic interval in 12-tone equal temperament, unfolding the kind of angular melodic gesture easily associated with high-modernist musical expression. That initial small step up, though, functions as a conduit, its rising pitch contour articulating the same two pitches of the violin's "erhu" melody. There are thus two conduits in one: between pitch syntaxes and between multireferential codes (Western modernist chromaticism and traditional Chinese practices respectively, in multiple modalities in both cases).

What comes next, quickly, is a kind of subtle destratification of the processes that have occurred thus far. Figure and ground (melody and accompaniment) fold into one another such that it becomes increasingly unclear what function any given gesture is playing in relation to the rest. Gestures originally presented sequentially are superimposed, inaugurating new, overt polyphonic relationships. What initially appeared as connecting material takes on thematic relevance. And so on: Chen's music embodies many of the affective and effective resources Guattari needs music to exhibit in order to move from mere "signs of recognition" to "rhythmic schemata of machinic propositions" (Guattari, 2011, p. 109). Throughout Chen's musical redistributions and recodings, and through the very processes of affective exchange that ensue, the overall plurality of the musical texture remains "unmerged"; the "senses of self" of the music's syntactic and multireferential gestures remain discrete; polyphony for the most part remains a dynamic potentiality, always stemming from and ultimately folding back into resonance, which is to say tone and timbre and their complex interminglings. "Abstract machines 'charge' themselves with redundancies of resonance" (2011, p. 47). This leads to a final key theme from Guattari's writings, also active in Debussy's pentatonic refrain and Legba's referential proliferation, which is the contestation of the kinds of normalizing repetitions that characterize what Guattari calls capitalistic refrains. If, as Guattari correctly claims, "Western music has claimed to become a universal model, occasionally absorbent and with some 'folklorish'

condescension" (2011, p. 109), then it becomes imperative to seek out the sonorous textures—the "molecular consistencies" that enable "effects of strong resonance" and "effects of strong interaction" (2011, 48)—that can refigure totalizing claims to universal enunciation through concrete operations at the conjunction of (ethico-aesthetic) desiring-machines and (sonorous) collective enunciations.[14] This turns out, for Guattari, to be the very operation of the abstract machine (and is not the field of superstrings the ultimate such machine?):

> Abstraction can *only* result from machines and assemblages of concrete enunciations. And since there is no general assemblage that overhangs all of them, every time we encounter a universal enunciation, it will be necessary to determine the particular nature of its enunciatory assemblage and analyze the operation of power that leads it to lay claim to such a universality. (Guattari, 2011, p. 12, emph. added)

It is, therefore, the very concreteness of specific musical utterances—the mechanisms of Debussy's deployment of Javanese stratified forces, the transformational operation that opens Chen's pentatonic melody onto a chromatic plane, the precise microrhythmic pushes and pulls of interlocking drummers in a Legba ritual—that demonstrates how intersubjective, multivalent affective flows do the work they do. If nothing else, this amounts to a profound argument for the efficacy of music analysis, still a contentious claim within certain musicological circles. Most important, though, it underscores the foundational role sonority plays in Guattari's theory of affect. Affect is rhythmic, an undulating temporal flux that produces difference with each new repetition. Affect is resonant, flowing in multiple directions, often with no clear source, or else transcending that source as it interacts with bodies and surfaces. And affect is polyphonic, both product and producer of a "vast symphony"; not the abstract notion of a metaphorical symphony but the actual coming-together of specific enunciatory voices in a specific relational constellation.

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[1] Deleuze's concept of affect has been richly theorized and is foundational for many strains of contemporary affect theory. Guattari's own conception has been less broadly influential, but deserves prolonged critical attention on its own terms. See Genosko (2002) and (2009), Bertelsen and Murphie (2010), and Colman (2012) for invaluable engagements with Guattari's affective apparatus.

[2] See Tepfer (2012) for a series of demonstrations of this perceptual phenomenon (there are many demonstrations on Tepfer's site; scroll down for the 5:4 example, but I recommend listening to all of them). There is an intriguing connection here to the ontological weight Deleuze and Guattari (1987) ascribe to speeds and slownesses in this account of how perceptual/conceptual unity (many discrete things becoming one) is achieved via speed.

[3] This is too simple a formulation, of course: much of the history of modernist music has been a process of revealing how any sounds can be deployed as "musical" simply by framing them as such.

[4] Those various guises are legion, from the Greater Perfect System of Greek antiquity to the ragas of "classical" Indian traditions to the major/minor tonal system of the European Enlightenment to African-American composer/theorist George Russell's (2001) "Lydian Chromatic Concept of Tonal Organization," and far beyond.

[5] See Barker (1989) and Muni (1999) for detailed engagements with Greek and Indian sources respectively.

[6] This is part of an extremely important passage that touches on matters of musical imperialism, the normative function of capitalistic refrains, Robert Schumann's madness as deterritorializing force, and more, which I turn to in detail in a forthcoming publication.

[7] To this last point, recall Kaku's characterization of melodies as laws from above.

[8] I discuss this in terms of Deleuze and Guattari's "supple segmentarity" and "protogeometry" (Deleuze & Guattari, 1987, pp. 211–215) in Stover (2021).

[9] In a chapter appropriately titled "Escaping from Language," Guattari asks "what place will we reserve for the non-individuated assemblages of enunciation, for the transitivism of infancy, for modes of semiotization disrupting the dominant coordinates (madness, creation, etc.)?" (Guattari, 2011, p. 35).

[10] This is over-simple but the technical details are not important. The first, trivial interval of the harmonic series is 1:1, the interval of the "fundamental" to itself or the identity operator; the second interval is 2:1, which produces the interval of an octave. In most (but not all) music-cultural systems, octave relations are considered equivalent; e.g. the tone A produced by an oscillation of 440 cycles per second is an octave higher than the tone A produced by an oscillation of 220 cycles per second; that both tones are called "A" speaks to the equivalence relation between them. The next harmonic interval, 3:2, produces a tone a perfect fifth higher than the tone below it; for example an E oscillating at 660 cycles per second in relation to the 440-cps A. E, in this understanding, is the first "discrete" pitch in the series A (220cps) to A (440cps) to E (660cps), and so on.

[11] Dane Rudhyar cites an ancient treatise by Sima Qian (in Rudhyar's transliteration, Su-Ma-Tsien), typical of writings of the time from China and far beyond, in which ethical, pedagogical, and indeed biological functions are given through the actions of musical tones. In particular, when the five tones of the pentatonic collection, *kong, chang, kio, tche*, and *yu* "are correct, men's conduct is correct"; furthermore, the relationship between the tones amounts to a force that "circulates through the life essences and gives to the heart harmony and rectitude" (Rudhyar, 1982, p. 169; citing Chavannes, 1895). From a Guattarian perspective, Sima's account is replete with affective potential in precisely the doubled way outlined above, since music, stemming from this five-tone order, is both

produced by and productive of human social and biological functions, in fact collapsing the distinction between functional regimes.

[12] We might compare these to the "thousand other tiny noises" invoked by Debussy above.

[13] I urge the reader to listen to a recording of the movement before proceeding, which can be found at https://open.spotify.com/album/30L3mWVO1wNt PGwzQrJ1Na?si= Or9iMx TPQgOom5rA-SANdw among other online sources.

[14] See Stover (2020) for more on the musical implications of the "tetravalence" conjunction of the machinic assemblage of desire and collective assemblage of enunciation.