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SOME PRACTICAL ISSUES IN THE AESTHETIC ANALYSIS OF POPULAR MUSIC

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The Analytical Object

Granting that aesthetic analysis can cast its light on a variety of musical phenomena—individual performances, recordings, and so on—I take its chief object of concern to be the musical *work*. Whatever a work exactly is, it surely is something more abstract than a performance or a recording, even in the case of indeterminate scores or purely electronic efforts.¹ Nevertheless, music analysts working in the 21st century must confront the plain fact that music now comes to us predominantly via digital media. While singers still sing, and instrumentalists still hit and pluck and bow and blow, the vast majority of Western music consumed these days, whether popular or classical (or any other type),² comes to us encoded as zeros and ones transmitted through earphones or loudspeakers. And yet, there is a significant difference in the way digital media relate to our commonplace (if cloudy) conceptions of popular versus classical works. The typical classical composer today—even the spectralist—still writes scores to be performed (preferably repeatedly, and always with some noticeable variation in sound), while the popular songwriter and producer and performer (indeed, we really need to credit all these roles) concentrate on making recordings. Popular works, by and large, are inseparable from the medium of recording, whereas classical works are more often independent of it. This distinction holds less true for popular music before the advent of multitracking in the mid-1950s, but of course there was far less popular music created before this historical point than has been created since.

That a popular work should not simply be *equated* with a recording can be best argued by way of example. Take the classic 1958 R&B track “(Night Time Is) The Right Time” by Ray Charles and the Raelettes. The name of the song itself differs depending on the exact source: some releases include parentheses and others do not, some releases put parentheses around the title’s first half and others put them around its second half, some releases do not feature the words “Night Time Is” at all. More problematic are the *musical* differences an analyst may encounter when engaging, for instance, the digitally remastered mono mix faithful to the original Atlantic Records 45rpm record, versus the digitally remastered stereo version first released on the 1994 CD *The Best of Ray Charles: The Atlantic Years* (which drops

“(Night Time Is)” from the title). In the earlier mono version, Raelette Margie Hendricks sings backup until the song’s middle section (around 1:30), at which point she bursts into a lead-vocal solo (with her repeated screams of “baby!”) supported by Charles and the remaining Raelettes. In the later stereo version, Hendricks’s solo is pushed back in the mix, while Charles’s vocal accompaniment and electric piano are bumped up; gendered stereo separation also contributes to the change in sound, as the ladies are panned far left while Charles is hard right. (Listening on earphones exacerbates this divide.) These two releases derive from the same source material, and are ostensibly the same “recording,” yet the middle section in the stereo remix is not really a solo. In the latter version, Charles’ persona shines through—his vocals no longer function merely as part of the accompaniment but rather create a call-and-response lovers’ duet between him (with the other Raelettes) and Margie (a mistress of Charles at the time).

As regards musical texture, then, the mono and stereo versions of “The Right Time” feature middle sections that are categorically different. The actual content of the music can thus depend on which specific release we have in front of us: the exact mix, the exact edit, the exact remastering (and oftentimes these different versions are released simultaneously, so we cannot simply chalk up differences to historical variation of preexisting material).³ Yet in a typical analytical setting, there is no advantage in recognizing two distinct musical works based solely on variations in mixing, editing, remastering, and the like; rather, these differences can easily be enumerated in relation to a single “open work” that accommodates the variations, much like the concept of the open work is used to describe classical works by John Cage, Karlheinz Stockhausen, and other experimental composers working with indeterminacy and chance procedures.⁴ Such accommodation is all but required if we are to consider both mixes to be versions of the work written and originally recorded by Nappy Brown in 1957 entitled simply “The Right Time,” as presumably any and every analyst would. At a certain point, however, differences between comparable recordings could be so extreme that they must be considered indicators of separate works, as would doubtless be the case when assessing Brown’s and Charles’s recordings against the 1937 track “Night Time Is the Right Time” by The Honey Dripper (Roosevelt Sykes), despite the resemblance in their titles and the common 12-bar blues structure. (Their melodic and lyrical profiles are utterly unlike.)

And yet, to accept the popular-music work as open to a certain degree of acoustic variation is not to extinguish all potential difficulties in defining the analytical object. One important consequence of such an acceptance, for instance, is that any given remastered mix might not be representative of a musical work as a whole. Analysts wishing to make claims about works, then, must exercise due diligence in researching all available versions if their assertions are to stand up to informed scrutiny. In many cases, problematic lines will still need to be drawn between what is and is not the work, as one’s analytical purview reaches bootlegs and various sorts of official and unofficial remixes.

Sound versus Score

The fundamental technological divide between popular and classical works reflects not only a general difference in compositional method and ontological status but also a logistical dissimilarity in their aesthetic analysis, namely the engagement of sound versus score. Although popular-music analysis is made easier by the repertory’s propensity for

repetition, it simultaneously is complicated by the medium of sound itself, with new difficulties in the form of psychoacoustical effects and densely layered multitrack mixes. Visualization can help the analytical process, just as recordings can play a supporting role in the analysis of classical works; but in most cases scores for popular music must be created ad hoc by the analysts themselves, and depending on how seriously one takes the activity of transcription, it can easily become the most difficult part of the analysis. In an article investigating the song “A Hard Day’s Night” (1964), mathematician Jason Brown runs a computer algorithm called a Fourier Transform to reveal the pitch structure of The Beatles’ famous opening chord, studying all 29,375 frequencies sounded over a one-second sample.⁵ Through a process of elimination, Brown makes an informed interpretation as to which notes of the chord were fingered, based on their relative amplitudes and on what was possible on John Lennon’s six-string and George Harrison’s 12-string guitars—assuming standard tunings, and assuming there were no overdubs (but including Paul McCartney’s bass and George Martin’s piano). See Figure 1.1. While Brown’s analysis is unconventional in certain ways, it echoes some essential truths about analyzing musical sound in general: that transcription is a part of—not prior to—analysis, and that the more specific an analyst wishes to be in a transcription, the more she must rely on assumptions and guesswork. (Think of how terrifically more complicated Brown’s analysis would become were he to sample frequencies that do not simply resonate but rather change over time.)

Every sonic parameter—pitch, rhythm, timbre, loudness—presents basic problems for the transcriber. Loudness is the least offensive in its own right; its obstacles arrive mainly in the form of auditory masking (the ear’s inability to decipher objectively frequencies in certain combinations) and the relegation of some sonic elements to the back of the mix (making them harder to identify). Timbre is difficult to even define, let alone analyze; it is by far the hardest parameter to say something meaningful about, because theorists have yet to develop and adopt a reasonably comprehensive analytical language to describe it.⁶ Pitch and rhythm are both plagued by false notational choices and other biases imported from the analysis of classical music; in the context of this essay collection, these issues demand the closest attention. But before proceeding, it should be made clear these issues are not confined to transcription in the strict sense; rather, they are unavoidable challenges in the description of sonic elements in general—they are inherent to the activity of aesthetically analyzing popular music.



Figure 1.1 Reduction of Brown’s Transcription of the “A Hard Day’s Night” Chord

Brian Ferneyhough and other New Complexity composers all but impossible to read.¹⁴ Complexity arises equally from freedom and conformity.

The second kind of problem in rhythmic transcription is metric interpretation, which can be further broken up into three often-overlapping concerns: beat-tempo; on-beat versus off-beat; and beat-grouping. Since the advent of rhythm'n'blues and rock'n'roll in the 1950s, popular music has tended to feature a clear backbeat, a regular emphasis often played on a snare drum that is typically interpreted by experienced listeners as beats 2 and 4 within a group of four. This practice has major consequences for how listeners decide which rhythmic level the beat occupies; however, there is also experimental evidence to suggest that listeners tend to associate beats with the rhythmic level closest to 120bpm.¹⁵ A song like “Sikamikanico” by Red Hot Chili Peppers (1992) clarifies what is at stake in beat-tempo decisions; see Figure 1.3. Chad Smith’s snare drumming is initially clear (Figure 1.3a), presenting an unambiguous backbeat and beat-tempo of roughly 130bpm (although this fluctuates), but this pattern soon becomes more complicated when the voice enters for the first verse (Figure 1.3b). (This second pattern actually varies subtly over time.) Different complications arrive in the ensuing transitional section that sees the return of the initial instrumental material (Figure 1.3c). Despite all these complications, the backbeat remains relatively stable until the pre-chorus (Figure 1.3d), where the snare quickens its pace, doubling the speed of the previous backbeat. The chorus then takes that doubled backbeat and fills in the remaining double beats (1, 2, 3, and 4) with snare attacks (Figure 1.3e). An eventual bridge section changes the pattern in the opposite direction, slowing down to a pace half that of the intro (Figure 1.3f). The song’s outro features snare attacks at double the rate of the previously fastest pattern in the chorus (Figure 1.3g). Although this song is



Figure 1.3a Snare Drum Patterns in “Sikamikanico” Transcribed in One Tempo, Intro



Figure 1.3b From Verse



Figure 1.3c From Transition



Figure 1.3d Pre-Chorus

The image displays a musical score for the song "Autumn" from measures 12 to 19. It features two staves: a vocal line and a piano left hand line. The key signature is three flats (B-flat major/D minor) and the time signature is 4/4. The lyrics are: "She turns her face for the sun to smile up on and ra_diant_ly, ra_ smiles and brings the Peace". The piano accompaniment includes dynamic markings such as *f*, *cresc.*, *p*, and *adagio*, along with a *slowly* marking at measure 18. The score is divided into two systems, with an ellipsis indicating a continuation between measures 16 and 17.

Figure 1.4 Displacement and Alignment in “Autumn,” mm. 12–19

The last problematic component of metric interpretation is beat-grouping. Is the Charleston-esque 3+3+2 groove heard in Coldplay’s “Clocks” (2002) and Radiohead’s “Lotus Flower” (2011), or the clave/hambone 3+3+4+2+4 groove used in Bo Diddley’s “Bo Diddley” (1955) and Johnny Otis’s “Willie and the Hand Jive” (1958), better expressed with changing meters or with cross-rhythmic accents against a steady meter?¹⁸ Should an analyst notate the riff of Pink Floyd’s “Money” (1973) as a straightforward 7/4 (occasionally giving way to 4/4 or 8/4), or do the competing layers of 3+4 in the electric bass and 4+3 in the snare drum demand a polymetric description? More mundanely, should we notate The Beatles’ “Baby’s in Black” (1964) and the verses of “I Me Mine” (1970) in (shuffle) 3/4, even though a backbeat is articulated on the downbeat of every other bar, or should they be understood as a larger 12/8 with the triplet-level consigned to subdivisions? What about “Norwegian Wood (This Bird Has Flown)” (1965) and the verses and pre-choruses of “Lucy in the Sky with Diamonds” (1967), which are similarly 3/4 or 12/8 but lack a clearly articulated backbeat? Such questions arise out of the vagueness—or flexibility—of classical metric notation itself. This is not just an academic, literary concern. Experimental studies have suggested that metric identity is aurally linked to pitch identity, in that a series of notes and durations understood in two different metrical contexts oftentimes goes unrecognized by listeners as being the same series at all.¹⁹ Whatever the dangers of unrecognized (and granted that they are low in the case of a short 3/4 versus a long 12/8), there is no denying that rhythm very much matters in this music, and should thus be taken seriously in transcription—i.e., analysis.

What’s in a Numeral?

Further problems await the analyst of popular music in the form of inherited but ill-fitting analytical standards. These are especially acute in the realm of pitch, probably because pitch has been, more than any other musical parameter, the subject of intense theorization over several centuries. Consider how we might describe Steve Jones’s guitar riff from The Sex Pistols’ “Submission” (1976).²⁰ Among the most basic elements of the riff that we



Figure 1.5 Pentatonicism in “Submission”

presumably would want to identify are the chords, which include C5, Eb5, F5, and Bb5 with a tonal center of C. If we wish to assign roman numerals to these chords, we must decide how to address the Eb5 and Bb5: are they bIII5 and bVII5, or III5 and VII5, or some combination of the two? While there are a variety of conventional approaches to roman numerals, none were designed with this sort of harmonic palette in mind, that palette being based in minor pentatonicism: C, Eb, F, G, Bb. See Figure 1.5.

Yet the challenge posed by pentatonicism is actually far deeper than merely deciding whether to assign accidentals to numerals. Indeed, the initial designation of the Pistols’ chords as C5, Eb5, F5, and Bb5, while allowed within our conventional diatonic system, suggests that there are two gaps: there is no version of D or A, just as there is no version of $\hat{2}$ or $\hat{6}$, or II or VI. The staff notation likewise suggests two vacancies. The notes of the chords add up precisely to a complete C minor pentatonic scale, yet the diatonic numbers, letters, and staff we would assign to describe these pitches insinuate a specific shortfall. The mismatch between seven-note analytical infrastructure and non-seven-note music creates the potential danger of a false standard: for example, it would be a mistake to assume diatonic incompleteness in a melody or harmonic progression simply because it is based on a pentatonic scale.²¹ *A priori*, pentatonicism is not incomplete diatonicism, any more than diatonicism is incomplete chromaticism. This is not tantamount to saying that a particular pentatonic melody could not possibly sound diatonically incomplete in some specific instance; the claim here regards the *inherent* relationship between pentatonicism and diatonicism represented respectively by the music and the analytical method. Whole-tone music suffers from a similar problem. On the other side of the seven-note standard are octatonic, highly chromatic, and microtonal works, which strain diatonic infrastructure through their inclusion of too *many* tones—as the accidental-laden scores of classical composers from Richard Strauss to Harry Partch confirm. While any non-seven-note-based music suffers similar problems, the likelihood of employing an analytical false standard is far greater in the case of popular-music pentatonicism specifically, due to the fact that the (black-key) major and minor pentatonic scales ubiquitous in popular music can be made to fit entirely within the (white-key) major and natural minor diatonic scales, although always in three different rotations: e.g., C–Eb–F–G–Bb–C fits into C dorian, C aeolian, and C phrygian.

The potential for a false, or at least arbitrary, standard also commonly arises with regard to chord type. Are the power chords of “Submission” incomplete triads because they do not supply a chordal third, or are they merely differently defined sonorities? Do the fifth harmonic partials sounding from Steve Jones’s amplifier count as chordal thirds? Should the triad (and third-stacked harmonies more generally) dictate how we analyze chord tones versus non-chord tones? Are “sus” chords (e.g., Csus4=CFG) independent sonorities or are

they to be understood as awaiting resolution to a triad as the “suspension” notation itself implies?²² These issues, and to a lesser extent polychords and quartal harmony, are routine problems the analyst must confront in popular music, whether regarding mainstream styles like punk or electronic dance music, or in fringe substyles like drone metal or post-rock. They can all be summed up by the following question: what is the nature of the tonality in this repertory—is it a throwback, an ironic revision, a new language altogether, or an incoherent bricolage of otherwise familiar tropes? This is a concern familiar to analysts of Post-Romanticism, Neo-Classicism, Minimalism, Neo-Romanticism, and every other kind of contemporary classical “ism” that reminds us of the pitch structures of previous centuries.²³ We can apply the old standards, develop altogether new standards, or deploy some combination of the two; in any case, it is advisable to apply one’s analytical standards consciously and conscientiously, and not allow them simply to be uncritically dictated by inherited conventions.

Song

The bulk of popular-music works are songs. This fact carries with it two further broad implications for aesthetic analysis, the final two to be posed in this essay. The first is that the musical scope of popular works tends not to mirror that of much classical music, because the typical popular song is rather brief compared with the expansive designs favored by so many classical composers (and analysts). In this light, Theodor Adorno’s infamously unfavorable assessment of Tin Pan Alley songs as measured against symphony and sonata movements by his beloved Beethoven—rather than against Beethoven’s own songs—is comically inapt: apples to oranges, as the saying goes.²⁴ While popular songs can sometimes be analyzed in the context of entire albums or old-fashioned LP sides (as in the celebrated case of The Beatles’ 1970 *Abbey Road* medley),²⁵ longer-range musical connections in general are more fruitfully pursued within the context of genre and style. This is to say, popular-music analysis benefits from an intertextual perspective. Nowhere is this point more obvious than in hip hop, where sampling is a fundamental component of compositional practice; if one is to understand a given sample-laden song, one must understand the relationship between it and the preexisting material drawn upon. But an intertextual approach is no less revealing of non-sampling songs. Just as in classical music, genres and styles are inescapable guiding forces with which any and every popular work, regardless of length, creates a dialogue. The analyst looking for long-range motivic connections, on the other hand, is not likely to get much satisfaction.

The other implication is that analysts must come to terms with how to engage text, on its own and in relation to the rest of the music.²⁶ This is perhaps the most significant aesthetic concern in all of popular-music analysis, because the sheer presence of lyrics so naturally allows—indeed, encourages—the facile attribution of extra-musical meaning to these works. The acquisition and articulation of meaning, most assuredly, is the primary motivation for pursuing music and musical analysis at all; but lyrics are often not lucid, and tones by themselves as signifiers are ambiguous at best. (Recall Igor Stravinsky’s notorious but shrewd claim: “I consider that music is, by its very nature, essentially powerless to express anything at all.”²⁷) The meanings of songs are not necessarily (or ever) shared among all its listeners, its analysts included, so those of us wanting to tease out the expressive nature of songs must guard against the temptation to treat every conceivable connection between words and tones as objective evidence of some grand intelligent design. Confirmation bias

finds a natural ally in unlimited semiotic speculation. Thus, just as analysts have the right to advance any meanings they want, so too do analysts have the right—and sometimes the responsibility—to outright reject them, or at least to cast them in the proper subjective light. Stronger hermeneutic claims, that move us beyond this endless circle dance, demand stronger evidence; assertions about large-scale authorial intentions, for instance, surely require more proof than the ability of an analyst to shove a song or collection of songs into this or that analytical mold. Meaning is too important to be addressed in any but the most serious and cautious of manners.

Lest this most important of topics be muddled, I should conclude by stating unequivocally that aesthetic analysis is by its very nature, in its entirety, an activity in pursuit of meaning. It is meaningful to identify a song as a musical work, to transcribe its pitches and rhythms, to consider its relationship with diatonic conventions, to examine its internal and external relationships tonal and textual alike. As with all meanings, however, the results of aesthetic analysis only truly function as meanings among like-minded individuals. From this perspective, the ultimate job of analysis is to convince those around us that the meanings we find are illuminating, stimulating, and reflective of our underlying passion for the music. If our analyses can accomplish this, then the time and energy we devote to overcoming these abundant practical issues will not be expended in vain.

Notes

- 1 Philosophers disagree about the precise nature of the relationship between popular-musical works and recordings/performances. See, for example, Theodore Gracyk, *Rhythm and Noise: An Aesthetics of Rock* (Durham, NC: Duke University Press, 1996); and John Andrew Fisher, "Rock 'n' Recording: The Ontological Complexity of Rock Music," in *Musical Worlds: New Directions in the Philosophy of Music*, ed. Phil Alperson (University Park, PA: Penn State University Press, 1998), 109–123; and Franklin Bruno, "A Case for Song: Against an (Exclusively) Recording-Centered Ontology of Rock," *The Journal of Aesthetics and Art Criticism* 71, no. 1 (Winter 2013): 65–74.
- 2 This essay's simple binary of popular versus classical music (to the exclusion of any other music) is meant as nothing more than a useful contrivance to engage a readership likely invested in both bodies of music. Many of the issues addressed in this essay apply equally well to jazz, world music, and other repertoires.
- 3 See also Albin J. Zak III, *The Poetics of Rock: Cutting Tracks, Making Records* (Berkeley, Los Angeles, and London: University of California Press, 2001); and Walter Everett, "'If You're Gonna Have a Hit': Intratextual Mixes and Edits of Pop Recordings," *Popular Music* 29, no. 2 (2010): 229–250.
- 4 See Umberto Eco, *The Open Work*, translated by Anna Canogni (Cambridge, MA: Harvard University Press, 1989).
- 5 Jason I. Brown, "Mathematics, Physics and A Hard Day's Night," *CMS Notes* 36, nos. 4–8 (2004).
- 6 For some recent work on timbral analysis, see Brad Osborn, *Everything in Its Right Place: Analyzing Radiohead*, Oxford University Press, chapter 4; David K. Blake, "Timbre as Differentiation in Indie Music," *Music Theory Online* 18, no. 2 (2012); and Kate Heidemann, "A System for Describing Vocal Timbre in Popular Song," *Music Theory Online* 22, no. 1 (2016).
- 7 According to Paul McCartney, Beatles producer George Martin had a terrible time transcribing the melody of "A Hard Day's Night," specifically John Lennon's sung pitch at the end of the word "workin'," which Lennon himself claimed was neither F nor E (Bill Flanagan, "Boy, You're Gonna Carry That Weight," *Musician* 139 [May 1990], 46).
- 8 Scholarly writings on transcription abound. A few places to start include Charles Seeger, "Prescriptive and Descriptive Music-Writing," *Musical Quarterly* 44, no. 2 (April 1985): 184–195; Ter Ellingson, "Transcription," in *Ethnomusicology: An Introduction*, ed. Helen Myers

- (New York: W.W. Norton & Company, 1992), 110–152; and Jason Stanyek, Forum on Transcription, *Twentieth-Century Music* 11 (2014): 101–161.
- 9 David Temperley, “Syncopation in Rock: A Perceptual Perspective,” *Popular Music* 18, no. 1 (January 1999): 19–40. Temperley’s surface-level transcription of “Here Comes the Sun” is close, although not identical, to that of Figure 1.2a. See also David Temperley, *The Cognition of Basic Musical Structures* (Cambridge, MA: MIT Press, 2001), 239–47. Hearing the background structure of a melody requires that we know what counts as structure versus embellishment, and this itself is not always altogether obvious.
 - 10 See Robert O. Gjerdingen, “Shape and Motion in the Microstructure of Song,” *Music Perception* 6, no. 1 (1988): 33–64.
 - 11 See also Anne Danielson, ed., *Musical Rhythm in the Age of Digital Reproduction* (Surrey and Burlington: Ashgate, 2010).
 - 12 See David Brackett, *Interpreting Popular Music* (Berkeley, Los Angeles, and London: University of California Press, 2000[1995]), 137–44.
 - 13 Peter Winkler, “Writing Ghost Notes: The Poetics and Politics of Transcription,” in *Keeping Score: Music, Disciplinarity, Culture*, eds. David, Schwarz, Anahid Kassabian, and Lawrence Siegel (Charlottesville, VA: University Press of Virginia, 1997), 169–203.
 - 14 See also Milton Babbitt, “Twelve-Tone Rhythmic Structures and the Electronic Medium,” *Perspectives of New Music* 1, no. 1 (Autumn 1962): 49–79, especially 73–74.
 - 15 Dirk Moelants and Martin McKinney, “Tempo Perception and Musical Content: What Makes a Piece Fast, Slow, or Temporally Ambiguous?” *Proceedings of the 8th International Conference on Music Perception and Cognition* (2004): 558–562. Trevor de Clercq discusses some of the competing estimates of ideal tempo (Trevor de Clercq, “Measuring a Measure: Absolute Time as a Factor for Determining Bar Lengths and Meter in Pop/Rock Music,” *Music Theory Online* 22, no. 3 [September 2016]: §2.1–2.9). See also Justin London, “Tactus ≠ Tempo: Some Dissociations Between Attentional Focus, Motor Behavior, and Tempo Judgment,” *Empirical Musicology Review* 6, no. 1 (January 2011): 43–55, and Bruno H. Repp, “Comments on ‘Tactus ≠ Tempo: Some Dissociations Between Attentional Focus, Motor Behavior, and Tempo Judgment’ by Justin London,” *Empirical Musicology Review* 6, no. 1 (January 2011): 56–61.
 - 16 Madonna seems to bank on the customary fake-out correction in order to create a surprise in 1986’s “Papa Don’t Preach,” which begins with what seems like a fake-out but that instead follows the beat established by the upper-string accents rather than the (ostensibly beat-defining) lower tones.
 - 17 On the meter of “Bring on the Night,” see Nathan Hesselink, “Rhythmic Play, Compositional Intent, and Communication in Rock Music,” *Popular Music* 33, no. 1 (2014): 69–90. On Armatrading’s music in general, see Ellie Hisama, “Voice, Race, and Sexuality in the Music of Joan Armatrading,” in *Audible Traces: Gender, Identity, and Music*, eds. Elaine Barkin and Lydia Hamessley (Zurich: Carciofolo Verlagshaus, 1999), 115–131.
 - 18 On beat-grouping and other metrical issues in popular music, see Mark J. Butler, “Turning the Beat Around: Reinterpretation, Metrical Dissonance, and Asymmetry in Electronic Dance Music,” *Music Theory Online* 7, no. 6 (December 2001); and Nicole Biamonte, “Formal Functions of Metric Dissonance in Rock Music,” *Music Theory Online* 20, no. 2 (2014).
 - 19 See, for example: Dirk-Jan Povel and Peter Essens, “Perception of Temporal Patterns,” *Music Perception* 2 (Summer 1985): 411–440; and Stephanie Acevedo, David Temperley, and Peter Q. Pfordresher, “Effects of Metrical Encoding on Melody Recognition,” *Music Perception* 31, no. 4 (April 2014): 372–386.
 - 20 Jones’s intentionally clunky riff is most likely modeled on that of The Kinks’ “All Day and All of the Night” (1964).
 - 21 See Mieczyslaw Kolinski, “The Determinants of Tonal Construction in Tribal Music,” *Musical Quarterly* 43, no. 1 (January 1957): 55. Scholar David Lewin makes a similar case about the artificial incompleteness created by analyzing Bach’s D major fugue subject from the Well-Tempered Clavier Book II according to a diatonic system, as opposed to the better-fitting Guidonian hexachord (“The D Major Fugue Subject from WTCII: Spatial Saturation?,” *Music Theory Online* 4, no. 4, 1998]).

- 22 Theorists' long-standing tradition of conflating non-chord tones with dissonances (i.e., "contextual dissonances," as opposed to "acoustical dissonances") further muddies these waters.
- 23 For in-depth discussion of analytical standards for popular-music tonality, see Christopher Doll, *Hearing Harmony: Toward a Tonal Theory for the Rock Era* (Ann Arbor, MI: University of Michigan Press, 2017).
- 24 Theodor W. Adorno, "On Popular Music," in *Essays on Music*, ed. Richard Leppert, translated by Susan H. Gillespie (Berkeley, Los Angeles, and London: University of California Press, 2002 [1941]).
- 25 See Walter Everett, "The Beatles as Composers: The Genesis of *Abbey Road*, Side Two," in *Concert Music, Rock, and Jazz since 1945: Essays and Analytical Studies*, ed. Elizabeth West Marvin and Richard Hermann (Rochester, NY: University of Rochester Press, 1995), 172–228.
- 26 See Dai Griffiths, "From Lyric to Anti-Lyric: Analysing the Words in Popular Song," in *Analysing Popular Music*, ed. Allan F. Moore (Cambridge: Cambridge University Press, 2003), 39–59.
- 27 Igor Stravinsky, *Chronicle of My Life*, translator uncredited (London: Victor Gollancz, 1936), 91.