

Dave Brubeck and Polytonal Jazz

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Although Dave Brubeck is universally known as a jazz pianist, he describes himself as “a composer who plays the piano.”¹ This distinction highlights the lesser-known aspects of Brubeck’s career, including his formal training at both the University of the Pacific and Mills College, as well as the numerous “serious” works he has composed. Because of Brubeck’s thorough training in both classical and jazz idioms, he has often been described as the first musician to fuse jazz and classical music successfully.²

The meeting of classical and jazz idioms is pervasive in Brubeck’s output. For instance, he famously introduced asymmetric meter into jazz with his 1959 album *Time Out*, which includes the highly popular tunes “Take Five” (in quintuple meter) and “Blue Rondo à la Turk” (written in 9/8, but with an irregular grouping of beat divisions: 2 + 2 + 2 + 3). Brubeck incorporated an even more radical aspect of twentieth-century music into jazz through his use of polytonality.³

Polytonality is a term that has yet to be defined to the satisfaction of all, and such agreement will likely never happen.⁴ This impasse is due to the inherent contradiction of the term itself and the ambiguity of the musical technique. In its most literal interpretation, polytonality implies the simultaneous unfolding of multiple tonalities.⁵ This is, strictly speaking, an impossibility, which explains why Benjamin Boretz comments that polytonality embodies an indeterminate reference and Pieter van den Toorn more colorfully describes it as “a real horror of the musical imagination.”⁶ Composers who wrote in this style and published articles on this topic in the early part of the twentieth century—most notably (although not exclusively) the French composer Darius

¹ Richard Wang, “Dave Brubeck,” vol. 4, *The New Grove Dictionary of Music and Musicians*, 2nd ed., ed. Stanley Sadie (London: Macmillan, 2001), 452.

² George T. Simon, liner notes to *Dave Brubeck: Greatest Hits*, Columbia 32046, 1967, LP. Brubeck discussed this subject on the radio show *Piano Jazz*. In this broadcast, the show’s host, Marian McPartland, mentioned that she “was interested to hear you [Brubeck] say that you approach jazz from the classics. You know a lot of people who don’t believe that, do they? They think, ‘jazz and classics: never the twain shall meet.’” Brubeck responded “never shall they part,” to which McPartland agreed. *Marian McPartland’s Piano Jazz with Guest Dave Brubeck*, Jazz Alliance 12001, 1993, compact disc.

³ This is a topic that has received little attention despite the fact that Brubeck has mentioned his use of polytonality repeatedly in interviews, including those for television. See, for example, Brubeck’s October 17, 1961, appearance and interview on Ralph Gleason’s *Jazz Casual*, Wea Corporation DVD B00006RJCR, 2003.

⁴ François de Médicis points out that questions over the definition of this term date back to the origins of this technique. See François de Médicis, “Darius Milhaud and the Debate on Polytonality in the French Press of the 1920s,” *Music & Letters* 86 (2005): 576.

⁵ See Allen Forte, *Contemporary Tone Structures* (New York: Teachers College, Columbia University, 1955), 137.

⁶ See Benjamin Boretz, *Meta-Variations: Studies in the Foundations of Musical Thought* (New York: Open Space, 1995), 243, and Pieter van den Toorn, *The Music of Igor Stravinsky* (New Haven: Yale University Press, 1983), 63.

Milhaud—did not define polytonality in the same literal way.⁷ Instead, to them, polytonality was what today would be referred to as a polychord: a verticality made up of distinct chords and partitioned to project this construction. There are problems, however, with even this loose definition. Can any chords heard together create a polychord? And does the perception of a polychord matter in its analysis? For example, the insistence that both chords belong to separate diatonic collections would disallow the opening polychord from Aaron Copland's *Appalachian Spring* (C# – E – A – B – E – G#). Yet if both chords can belong to the same diatonic collection, then any seventh chord could be defined as a polychord—for instance, G – B – D and B – D – F. “Polychords” of this level of simplicity are clearly heard as single chords (i.e., they project a single tonality or root), as are many polychords of much greater complexity. It is no wonder then that a consensus cannot be reached on the definition of polytonality when each musician, based on their own perception and experience, draws a line somewhere in the grey area of polychords, to separate exotic diatonic harmony from polytonality.⁸

The major writings on polytonality from the 1920s mentioned above often implicitly exclude mere seventh chords, while they frequently include polychords made of triads from the same diatonic collection. The equation of polytonality with polychords allowed these authors to trace a rich pre-history of polytonality, one that went back for Milhaud to J. S. Bach⁹ and for the French composer and writer, Charles Koechlin, back to the sixteenth century.¹⁰ It is obvious that the early examples of polychords from these two composers did not evoke multiple tonal centers. The literal definition of the terms *polytonalité* or *polytonie*¹¹ does not therefore seem to have bothered any of the composer/theorists of this era.¹² This paper will use the term polytonality in this same way because this is the specific definition of the term that was used by Milhaud and

⁷ Stravinsky spoke of the second act of *Petrushka* as being written “in two keys.” See Igor Stravinsky and Robert Craft, *Expositions and Developments* (New York: Doubleday, 1962), 162. Ravel provided an analysis of a passage from his *Valses nobles et sentimentales*, demonstrating that polytonality can be formed by unresolved appoggiaturas. See René Lenormand, *A Study of Twentieth-Century Harmony* (London: Joseph Williams, 1915), 62–63. See also Darius Milhaud, “Polytonalité et atonalité,” *La Revue Musicale* 4 (1923): 29–44; Alfredo Casella, “Tone-Problems of To-day,” *Musical Quarterly* 10 (1924): 159–71; and Charles Koechlin, “Évolution de l’harmonie: Période contemporaine depuis Bizet et César Franck jusqu’à nos jours,” vol. 2, *Encyclopédie de la Musique et Dictionnaire du Conservatoire*, edited by Lavignac and La Laurencie (Paris: Delagrave, 1925), 591–760, and *Traité de l’harmonie* (Paris: Eschig, 1927–30).

⁸ All writers on polytonality make a distinction between harmonic and melodic polytonality. The former is the more common version involving polychords, while the latter is composed of a polyphonic texture, with each line written in a distinct tonality.

⁹ Milhaud, “Polytonalité et atonalité,” 30–31.

¹⁰ Koechlin, *Traité de l’harmonie*, 252.

¹¹ For a discussion of how these two terms were used synonymously in the 1920s, see de Médicis, “Darius Milhaud,” 574.

¹² For other recent attempts to define polytonality, see Daniel Harrison, “Bitonality, Pentatonicism, and Diatonicism in a Work by Milhaud,” in *Music Theory in Concept and Practice*, eds. James M. Baker, David W. Beach, and Jonathan W. Bernard (Rochester, NY: University of Rochester Press, 1997), 393–408; Deborah Mawer, “In Pursuit of an Analytical Approach,” in *Darius Milhaud: Modality & Structure in Music of the 1920s* (Aldershot, UK: Ashgate, 1997), 18–56; Peter Kaminsky, “Ravel’s Late Music and the Problem of ‘Polytonality,’” *Music Theory Spectrum* 26 (2004): 237–264; and Barbara Kelly, “Polytonality, Counterpoint and Instrumentation,” in *Tradition and Style in the Works of Darius Milhaud, 1912–1939* (Aldershot, UK: Ashgate, 2003), 142–168.

passed on to Brubeck. In this paper's analyses, however, I have nevertheless remained mindful of the distinction between simple polychords and the true projection of multiple tonalities, since Brubeck masterfully exploits the grey area between these two realms.

This study will further explore the use of polytonality across Brubeck's long career. As such, this sort of survey necessitates a discussion of the changing nature of his polytonal writing. The main goal of this broad examination is to go beyond the mere identification of the various keys that are superimposed—a simplistic analytic goal rightly derided by Daniel Harrison¹³—and explore both the various means used to achieve polytonality and the methods by which polytonality is incorporated into Brubeck's works. The latter objective is an especially important point since the majority of the works analyzed below fuse polytonality with traditional jazz harmony.

The origins of Brubeck's interest in polytonality date back to his introduction to Milhaud, with whom he studied at Mills College. Although it seems inevitable in hindsight that these two men would work together, it was a happy coincidence that they met at all: while Brubeck was raised near the San Francisco Bay Area, Milhaud ended up in Oakland by chance, only learning of his Mills College teaching appointment in the course of his Atlantic crossing.¹⁴ Milhaud was open to jazz; indeed, many of his early compositions incorporated jazz elements, and most famously in his ballet score *La création du monde* (1923). In his Mills College years, Milhaud even went so far as to invite his students to write their homework assignments as jazz compositions, and from this sort of instruction, the Dave Brubeck Octet and many of the compositions of this vibrant young musical circle were born.¹⁵

It was typical of Milhaud's non-dogmatic approach to teaching that he incorporated jazz into his courses in the 1940s, well after he admitted (in 1926) that he had lost interest in this music.¹⁶ He notably included polytonality in his Mills College courses; in fact, Milhaud's graduate composition students began their studies by being given a copy of Milhaud's article on this subject.¹⁷ Milhaud's students would no doubt have already been aware of his compositions, however. One of Milhaud's most popular works, *Scaramouche*, from 1937, was likely such a piece. In fact, this is one of Brubeck's favorite compositions by the French composer for reasons that become quickly apparent after examination (see Example 1). Milhaud establishes C major in both pianos in mm. 1–3, although this key is used by only one of the pianos (see the second piano in m. 4, and then the first piano in m. 5) in the following two measures. The opposite piano (the first piano in m. 4 and the second piano in m. 5) presents a chromatically-related series of triads that do not belong to any single key, but which consistently clash

¹³ Harrison, "Bitonality, Pentatonicism, and Diatonicism," 394.

¹⁴ Darius Milhaud, *My Happy Life: An Autobiography* (London: Marion Boyars Publishers, 1995), 201.

¹⁵ Brubeck's octet included several other performers and composers who would later establish their own significant reputations, including Paul Desmond, Cal Tjader, David van Kriedt (tenor saxophonist and composer of "Fugue on Bop Themes"), and Bill Smith (clarinetist and member of Brubeck's current quartet).

¹⁶ Milhaud, *My Happy Life*, 146.

¹⁷ This was related to the author in a March 2003 conversation with Dr. Katherine Warne, a former student of Milhaud (she is also currently president of the Milhaud Society). Milhaud, "Polytonalité et atonalité," cited above.

Vif

Example 1 Darius Milhaud, *Scaramouche* (1937), mm. 1–5. Copyright © Francis Salabert Editions.

with the diatonic triad with which they are paired. The partitioning of polytonal keys by register is a technique that Brubeck picked up in works like *Scaramouche* and continues to use to this day, with one (or more) keys presented in both his left and right hands.

Brubeck did not need to be given a copy of “Polytonalité et atonalité.” As Brubeck had met Milhaud while still an undergraduate at the University of the Pacific, he sought out this article years before he began his graduate studies with the French composer.¹⁸ The impact of Milhaud’s article was immediately apparent in Brubeck’s playing. Paul Desmond remembered that Brubeck had confounded him on their first meeting by asking to perform the blues in G and then playing with his left hand in G and his right hand in Bb.¹⁹ Brubeck later demonstrated this effect during his appearance on the radio program, *Piano Jazz*, with Marian McPartland (see Example 2).²⁰

¹⁸ This meeting was undoubtedly arranged by Brubeck’s older brother, Howard, who was one of Milhaud’s first teaching assistants. Howard eventually substituted for Milhaud at Mills College during the latter’s semiannual leaves to teach at the Paris Conservatoire.

¹⁹ Even more tellingly, Desmond recalls that by 1949 he sometimes had to ask Brubeck to simplify his playing since Brubeck would often accompany Desmond’s solos in three keys at once. See Marian McPartland, “Perils of Paul,” in *All in Good Time* (New York: Oxford University Press, 1987), 59.

²⁰ *Marian McPartland’s Piano Jazz with Guest Dave Brubeck*. Transcription of the example by the present author.



Example 2

The polytonality of passages in Brubeck like that shown in Example 2—where he superimposes minor-third related keys (a combination that he admits has become as natural to him as playing with both hands in the same key)—present a perfect illustration of how the notation of polytonality can be quite different from its perception.²¹ In this example, if each of the hands is played separately, the left-hand clearly establishes G as its tonic, while the right hand's melody is obviously in Bb. Yet when the two hands are combined, it is difficult to hear both tonal centers clearly projected; instead, due to registral prominence, the key of Bb is heard to be the tonic, while the foreign notes from G major are heard as a set of characteristic dissonances.²² Such an interpretation is echoed by Koechlin, who thought that in all polytonal combinations, one key was generally more strongly projected. This definition of polytonality fits well with Peter Kaminsky's recent identification of primary and secondary tonalities in Ravel.²³ It also helps to clarify the definition of polytonality cited above, one that is not limited to the projection of multiple tonalities. Koechlin did admit that in certain polytonal combinations, it was quite difficult to determine which key was more strongly projected.²⁴ For example, Igor Stravinsky's use of the *Petrushka* chord seems to belong to this category of polytonality.²⁵ Arthur Berger has described tonal deadlock of this sort as polarity, the necessary conditions of which are "the denial of priority to a single pitch-class precisely for the purpose of not deflecting from the priority of the whole *complexe sonore*."²⁶ Koechlin's observation divides polychords into two categories, with a majority that project a single tonality with characteristic dissonances, and a minority that project multiple tonalities (Berger's *complexes sonores*). While the ratio between

²¹ There is a similarity between minor-third related triads/keys and Hindemith's concept of indefinite third relation. The similarities between Hindemith's theory and polytonality are discussed in greater depth below.

²² Specifically, the three notes from G major that are not found in Bb major (F#, B-natural, and E-natural) introduce upper chromatic clashes with the dominant, tonic, and subdominant scale degrees, respectively.

²³ Kaminsky, "Ravel's Late Music," 238–248.

²⁴ "I readily admit, however, that in many of the harmonically polytonal examples cited above, it is quite difficult to determine which is the *primary tonality* in them!" Italics in original. Koechlin, "Évolution de l'harmonie," 723. Koechlin's belief that one key in a polytonal combination was generally more strongly projected (mentioned above) is implied in his comment on the exceptional nature of the excerpts he references here.

²⁵ Stravinsky's ballet *Petrushka* (1911–1912) features a polychord that is associated with the main character. The polychord is composed of both C and F# major triads. These six notes belong to a single octatonic (diminished) scale, which serves as the recurrent, associative harmony for *Petrushka*. For more information on the rich history of Russian harmonic characterization, see Richard Taruskin, "Chernomor to Kashchei: Harmonic Sorcery or Stravinsky's 'Angle,'" *Journal of the American Musicological Society* 38 (1985): 72–142. For more information on Stravinsky's varied use of octatonic harmony throughout his long career, see Pieter van den Toorn, *The Music of Igor Stravinsky* (New Haven, CT: Yale University Press, 1983).

²⁶ Arthur Berger, "Problems of Pitch Organization in Stravinsky," *Perspectives of New Music* 2 (1963): 11–43.

Koechlin's two categories of polytonal combinations may be questioned, his general observation provides compelling evidence as to why the identification of polytonality cannot be linked to the projection of multiple tonalities.

The Dave Brubeck Octet of the 1950s that grew directly from Milhaud's composition class performed a number of compositions that had previously been turned in as the group's homework assignments. One of the earliest of these numbers is Brubeck's *Curtain Music*, so named because it was used both to open and close each of the Octet's shows. *Curtain Music* is a prime example of the type of melodic polytonality that Brubeck frequently used in his works for this ensemble. Melodic polytonality inevitably produces harmonic complexity, and *Curtain Music* is no exception. Indeed, this piece is written in A major, but an unadulterated A major triad appears only once, in the work's final bar (see Example 3).²⁷

Example 3 Dave Brubeck, *Curtain Music* (1946). *Curtain Music* by Dave Brubeck, copyright © 1954 (renewed 1982) Derry Music Company.

²⁷ This example is a piano reduction made by the present author from the performance found on Dave Brubeck, *Dave Brubeck Octet*, Fantasy OJCCD – 1012, 1999, compact disc.

In *Curtain Music*, the tonic function does appear elsewhere beyond the last measure, but only in forms colored by polytonality. For instance, the accented tonic triad that begins the work is heard above the subtonic triad as part of a polychord, and the tonic triad on the second beat of the opening measure is embellished with a lowered ninth in the bass voice. While the tonic/subtonic polychord is used to punctuate downbeats, the tonic chord with a raised ninth serves as the harmonic point of departure and arrival in the opening two bars, despite the fact that it features a semitonal clash between its outer voices. Measures 5–11 build on this idea, for when the two hands arrive at their separate melodic goals, there is frequently a semitonal clash between them. The reason for these clashes is easily discovered: the right hand is written in E major, and only the A# of m. 11 lies outside this scale. The left-hand part contains more chromaticism than the right, but its line begins and ends with the top half of a D# scale (though the last two notes of the final melodic ascent A# – B# – C# – D# in m. 11 are given harmonic support in a different key). Thus, the two established keys relate to one another by semitone.

If it is remembered that tonic functions in jazz often appear as seventh chords rather than simple triads, the semitonal clashes that contribute to the polytonal effect in *Curtain Music* can be explained in another way. Heard in this light, the melodic goals of each hand in mm. 5–11 sound on the one hand polytonal, and on the other hand like tonic seventh chords in the local key of E major. In other words, *Curtain Music* can be heard in a single key, but one sprinkled liberally with “wrong notes.” This description, one that immediately invokes Stravinskian neo-classicism, is chosen quite deliberately, as the first album that Brubeck bought after returning from active duty in World War II was notably a recording of Stravinsky’s *Pulcinella Suite*.²⁸ The music from this ballet immediately inspired several works for the Octet, including *Curtain Music* as well as *Playland at the Beach* and *Rondo*.²⁹ In these numbers, the entire ensemble projects a single key, one that is embellished with dissonances formed by individual performers’ lines written in a separate, though less strongly projected, tonality.

Brubeck’s compositional style changed between the time of his Octet and the formation of his famous quartet in the 1950s. As opposed to the earlier contrapuntal style of the Octet, he began to create polytonality almost exclusively through the superimposition of chords. Due to this change of style, it is necessary first to review a statement that Milhaud once made concerning harmonic polytonality. Milhaud wrote in his autobiography that polytonal chords satisfied his ears “more than the normal ones, for a polytonal chord is more subtly sweet and more violently potent.”³⁰ As evidenced here, he placed polychords on a continuum between consonance and dissonance. This perspective is an important point because it allows for the creation of musical motion

²⁸ This was related to the author by Brubeck in a personal conversation from July 2003. In this same conversation, Brubeck referred to his Stravinskian influence as a “bag” from which he could pull things from when composing and performing. In context, the “things” to which Brubeck referred were the Stravinskian techniques he had learned over his long years of study of this repertoire. Stravinsky’s influence on Brubeck will be more fully documented in the discussion below relating to the latter composer’s late works.

²⁹ A later work to reveal the same influence in both style and name is *History of a Boy Scout*, modeled on Stravinsky’s *L’histoire du soldat*.

³⁰ Milhaud, *My Happy Life*, 65.

Milhaud's Chord Types

Chord Type	Pitch-Class Set Designation	Interval Vector
I	6-Z19	[313431]
II	6-33	[143241]
III	5-32	[113221]
IV	5-21	[202420]
V	5-27	[122230]
VI	6-30	[224223]
VII	5-27	[122230]
VIII	5-21	[202420]
IX	5-32	[113221]
X	6-33	[143241]
XI	6-Z19	[313431]

Pitch-Class Set Designation and Interval Vector

Example 4 Chart reproduced from an example in Darius Milhaud's "Polytonalité et atonalité" (1923), with additional pitch-class set identification and interval vector³¹

as dissonant polychords resolve to consonant ones, just as the resolution of seventh chords to triads create musical motion in tonal music. In order to reveal this aspect of musical organization, it is necessary to find an analytic tool that allows us to judge the relative dissonance of one polychord when compared with another one.

Example 4 reproduces Milhaud's exhaustive survey of polyharmonies built from major triads.³² Beneath each polychord is its pitch-class set identification and interval vector. This information is palindromic, showing that triads juxtaposed by inversionally-related intervals contain the same interval content.³³ It may seem strange to apply pitch-class set theory—an analytic technique developed specifically for atonal music—to polychords. In fact, the concepts of inversional equivalence, Z relations, or any of the other facets of this theory that have been critiqued since its inception, will not be invoked.³⁴ Instead, only one aspect of this theory, the interval vector, will be raised since it provides a quick summary of the number of each interval contained within a polychord. This highly selective appropriation from set

³¹ The theoretical terminology here requires a bit of explanation. A pitch-class set is any possible combination of the 12 semitones within the octave. When pitch duplication as well as transpositional and inversional equivalence between two pitch-class sets are eliminated, there are only 212 distinct sets that contain between 3 and 9 members, and each is named by its cardinality followed by a second numeric label. The Z label for the first and last of the polychords in Example 4, although meaningful, is not important for the purposes of this study. An interval vector represents a tally of all the interval classes contained within a pitch-class set. There are only six entries in an interval vector since interval classes, unlike intervals, are inversionally equivalent (ascending and descending semitones—intervals 1 and 11, respectively—both are represented by interval class 1; ascending and descending whole steps—intervals 2 and 10, respectively—both are represented by interval class 2, etc.)

³² This example is adapted from Figure 2.1 in Mawer, *Darius Milhaud*, 20.

³³ For more information on pitch-class set theory, see: Allen Forte, *The Structure of Atonal Music* (New Haven: Yale University Press, 1973); John Rahn, *Basic Atonal Theory* (New York: Schirmer Books, 1980); and Joseph N. Straus, *Introduction to Post-Tonal Theory*, 2nd ed. (Upper Saddle River, NJ: Prentice Hall, 2000).

³⁴ Among the many articles critical of pitch-class set theory, the most important include: William Benjamin, "Ideas of Order in Motivic Music," *Music Theory Spectrum* 1 (1979), 23–34; George Perle, "Pitch-Class Set Analysis: An Evaluation," *The Journal of Musicology* 8 (1990), 151–172; Richard Taruskin, "Revising Revision," dual review of Kevin Korsyn, "Towards a New Poetics of Musical Influence," and Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition*, in *Journal of the American Musicological Society* 46 (1993), 114–138; and Ethan Haimo "Atonality, Analysis, and the Intentional Fallacy," *Music Theory Spectrum* 18 (1996), 167–199.

theory can therefore serve as the basis of a system to identify a polychord's relative dissonance.

The analytic goal here is similar in intent to Paul Hindemith's theory of harmonic fluctuation.³⁵ This current study's methodology, however, relies exclusively on the number of dissonant intervals contained within a polychord as revealed by its interval vector. Further deviation from Hindemith is found in the classification of intervals, where the minor second is labeled here as the most dissonant interval (rather than the tritone). This divergence from Hindemith stems from an observation by Harrison, who, when commenting on the diatonic nature of Milhaud's melodies and their superimposition, concludes that " T_6 can be used to create harmonic effects that have a 'conservative,' tonal cast to them, while T_1 can create effects of a more 'radical' kind."³⁶ I suggest that the superimposition of chords from various diatonic collections follows this same rule; while the *Petrushka* chord may not have a tonal cast, Milhaud's chord type I/XI demands resolution to a far greater extent. The remaining dissonant interval (interval class 2/10) is the least salient of all. This hierarchy is reflected in the relative weight assigned to these three dissonant interval classes: the dissonance weight for interval class 2/10 is 0.5; for interval class 6 is 2; and for interval class 1/11 is 4.³⁷ The dissonance quotient of any polychord can be easily determined, as it is the sum of the product of multiplying the number of each of the dissonant interval classes contained within a polychord by the dissonance weight of that interval class. Once this quotient has been determined, it can be used to compare the relative dissonance between chords.³⁸

The partitioning of a polychord—as well as the register in which it appears—can affect its perceived dissonance, although only in rare circumstances do these factors play a role in the analytic process. With these caveats in mind, Milhaud's chord types VI and I/XI are found to be the most dissonant with quotients of 15 and 14.5, respectively. Chord types II/X and IV/VIII both have a quotient of 8, while the least dissonant polychords are chord types III/IX and V/VII, with quotients of 6.5 and 5, respectively. Although these dissonance weight values were not determined in a completely

³⁵ Paul Hindemith, *The Craft of Musical Composition*, vol. 1, *Theoretical Part*, trans. Arthur Mendel (New York: Associated Music, 1942), 115 ff.

³⁶ Harrison, "Bitonality," 401. The theoretical terminology here again requires a bit of explanation. Harrison is referring to the transposition of pitch-class sets, and in this case, the pitch content of a Milhaud melody. The letter T refers to the transposition that relates two melodies with the same pitch content together, and the numbers 1 and 6 refer to the number of semitones of this transposition (the semitone and tritone, respectively).

³⁷ Since tritones are self-inverting, their weighting will appear to be twice of that of the other interval classes.

³⁸ A second possible method for calculating relative dissonance involves applying a dissonant weight to each interval class, including the consonant interval classes 3–5. Yet difficulties arise with interval class 5 since the perfect fourth could be either a consonance or a dissonance based on context. Because of this (and other difficulties in the assignment of dissonance weights to consonant intervals), only the dissonant intervals are considered in the method of calculating the dissonant quotient in this study. It is further possible to divide the dissonant quotient of a chord by the number of intervals it contains, thereby using an average of the dissonances rather than their sum. While this averaging method seems mathematically sound, it produces skewed results. For example, Milhaud's chord type IV/VIII would have a dissonant quotient average of 4 and chord type VI an average of 2.1. Such results are possible since chord type IV/VIII has no entries for interval classes 2/10 and 6. Thus, the process of averaging the dissonance quotient incorrectly identifies the former chord type as the most dissonant from Example 4 above.

objective manner, the results seem to make musical sense as chord type VI is seen to be the most dissonant of Milhaud's chord types, with chord types I/XI virtually equal in salience. The least dissonant of the polychords is Milhaud's chord type V/VII, since all the notes of this polychord belong to the same diatonic collection.

With these various points in mind, a good illustrative example can be found in Brubeck's 2003 composition, *Tonalpoly*. While my analysis of *Tonalpoly* breaks the initial chronological survey of Brubeck's works, this recent composition notably limits itself to the polychords listed in the previous example, aside from *Tonalpoly*'s final consonant sonority. *Tonalpoly* also provides a prime example of Brubeck's careful placement of polychords to create a sense of musical motion.

As seen in Example 5, there is a consistent use of two-bar phrasing in *Tonalpoly*, and the majority of phrases end on polychords with a dissonance weight of between 6.5 and 8 (phrases 1–2, 4–7). The first two phrases (mm. 1–2 and 3–4) begin and end with chord type II/X; the motion within these phrases, as well as the others in this work, is shown in the upper level of analytic symbols (an open circle represents relative consonance while a closed circle represents relative dissonance; phrases are generally represented by a single motion although exceptions are made when a single motion would not accurately reflect the overall shape of the phrase). Motion created by changes in dissonances is therefore felt only within each of these phrases, while the uniformity of their cadences sets up larger-scale patterns, to be discussed shortly. The succession of polychords in the first phrase present a great diversity of dissonance weights, although this fluctuation is partially offset by its harmonic rhythm, the most rapid of the entire piece. The second phrase is more uniform in its level of dissonance, although the first appearance of chord type VI raises the level early in this phrase. Once this polychord appears, it is used as the cadential goal in the third phrase (mm. 5–6). The following phrase (mm. 7–8) is required to resolve this dissonance; the cadential formula of chord type VI moving to chord type II/X returns us to the dissonance level of the opening phrases and concludes the opening section of the work. The large-scale motion created by the cadential sonorities is shown in the second-level analysis, which uses the same analytic symbols as described above for the first-level (intraphrase) analysis.³⁹

The dissonance level of the work's middle section (mm. 9–16) fluctuates greatly as in the first phrase, but not for the same reason: the rhythm of the hands frequently creates incomplete polychords which greatly reduces the dissonance level in metrically weak positions of each beat. In addition to this small-scale fluctuation, there is a general decrease in the level of dissonance throughout the first three phrases of this section (mm. 9–10, 11–12, and 13–14). This motion is used to set up the appearance of chord type VI at the end of the fourth and final phrase of this section (mm. 15–16). After a return of the work's opening section, a coda follows that begins with chord type VI and uses it as the penultimate chord as well, making the motion to the final tonic triad all the more satisfying.

³⁹ The motion from relative dissonance to consonance, or vice versa, is similar to Fred Lerdahl's relaxing and tensing branches. While Lerdahl has explored this analytic territory in tonal and post-tonal music, he has avoided the analysis of polytonality. See Fred Lerdahl, *Tonal Pitch Space* (Oxford: Oxford University Press, 2001).

Example 5 Dave Brubeck, *Tonalpoly* (2003). *Tonalpoly* by Dave Brubeck, copyright © 2009 Derry Music Company.

The coda of *Tonalpoly* seamlessly moves from a polychordal to a tonal vocabulary when it introduces a major triad as its final sonority. Brubeck employed much more sophisticated techniques for moving between passages of polytonality and a standard

jazz vocabulary in the works he wrote for his quartet. A review of three compositions, “Strange Meadowlark,” “The Duke,” and “In Your Own Sweet Way,” reveals Brubeck’s most striking successes in this regard, as well as examples of his handling of dissonance levels on a larger scale than that found in *Tonalpoly*.⁴⁰

Brubeck described “Strange Meadowlark” as “the most conventional song” on his famous 1959 album, *Time Out*. Despite this description, “Strange Meadowlark” presents an intricate mixture of polychords and high tertian sonorities that characterize the standard jazz vocabulary.⁴¹ The one polychord that can be heard to project two separate tonal centers appears infrequently in this work, and it is consistently of a single type: a dominant seventh chord with a major triad superimposed above it, their roots related by major second (see the arpeggiated chord in the first two systems of Example 6).⁴² This polychord’s dissonance quotient is equal to Milhaud’s chord type I/XI and its effect in this work is striking for several reasons. First, this polychord is

Example 6 Dave Brubeck, “Strange Meadowlark” (1959), mm. 1–20. “Strange Meadowlark” by Dave Brubeck, copyright © 1960 (renewed 1988) Derry Music Company.

⁴⁰ The Brubeck performances used for the discussion of these works are as follows: “Strange Meadowlark,” from Dave Brubeck Quartet, *Time Out*, Columbia CK 40585, 1990 (orig. rec. 1959), compact disc; and “The Duke” (orig. rec. 1954), from Dave Brubeck, *Dave Brubeck: Greatest Hits*, Columbia 32046, 1994, compact disc; and “In Your Own Sweet Way,” from *Brubeck Plays Brubeck*, Columbia 065772, 1998 (orig. rec. 1956), compact disc. This article’s transcriptions from these works are by the author, with reference to the published transcriptions by Howard Brubeck that appear in *The Dave Brubeck Anthology* (Van Nuys, CA: Alfred Publishing, 2005).

⁴¹ For an attempt to accommodate these high tertian sonorities within a traditional Schenkerian framework, see Steve Larson, “Schenkerian Analysis of Modern Jazz: Questions about Method,” *Music Theory Spectrum* 20 (1998): 209–41.

⁴² This example has been shortened from the published version for reasons of space. Only minor differences between the two versions have been omitted: the final chord of m. 1 is not arpeggiated when repeated; and the first chord of m. 8 is an open fifth rather than octave when repeated.

The musical score is divided into three systems, each with a treble and bass clef staff. The first system (measures 6-16) features a melodic line in the treble staff with a large slur over measures 6-11 and a '8va' marking above measure 11. Chord voicings are indicated by numbers below the bass staff: 0.5, 6.5, 4.5, 6, 3.5, 0, 2.5, 3.5. The second system (measures 9-18) has a first ending bracket over measures 9-11 and a second ending bracket over measures 12-18. Chord voicings are 6 and 6. The third system (measures 19-26) has a second ending bracket over measures 19-21 and a first ending bracket over measures 22-26. Chord voicings are 4, 4, 13, and 0.5.

Example 6 continued.

much more dissonant than the high tertian chords that surround it; second, it appears almost consistently as a harmonic goal, and forms part of a large-scale reduction in dissonance that is felt throughout the first two appearances of the work's main theme. Each of these factors will be explored below (see Example 6).

Because there is overlap between true polychords and standard voicings of more traditional jazz chords, virtually every sonority in this excerpt can be spelled as a polychord.⁴³ However, most of these harmonies are more readily heard simply as high tertian chords. The opening chord, for example, is partitioned as an Eb major seventh chord in the sustained parts with a Bb major triad arpeggiated above; it is heard, however, as a tonic triad embellished with chordal seventh and ninth in the melody. The dual nature of these high tertian chords allows for the application of dissonance

⁴³ Indeed, jazz theory frequently conceptualizes chords as being composed of superimposed elements. For instance, Mark Levine discusses the "sus" chord as a subtonic triad superimposed over the dominant scale degree, and he defines "slash" chords as follows: "the note to the left or above the slash represents a triad and the note to the right or below the slash represents a bass note, or, as in the next example, another triad. This last example shows a B triad over a C triad, usually notated B/C." Mark Levine, *The Jazz Piano Book* (Petaluma: Sher Music, 1989), 23 and 142, respectively.

weight analysis, which reveals Brubeck's large-scale organization of dissonance. The first and second points of repose (m. 1, beat 3, and m. 3, beat 3) are each sustained and end on the polychord mentioned above, whose dissonance quotient of 14.5 is far higher than the preceding chords. The next sustained sonority in m. 5 looks like a polychord, but is actually a dominant ninth chord with lowered fifth. Its quotient of 6 begins a reduction of dissonance in the cadential sonorities: the following phrase ends in m. 7 on another jazz sonority voiced deceptively as a polychord with a quotient of 3.5. The final phrase of the opening material (mm. 8–10) increases the dissonance level much in the manner of a half cadence; a continuous reduction in dissonance levels is heard in the repetition of this material, where the final phrase modulates to G and ends on a sonority—a major triad with added sixth—that has a quotient of only 0.5.

Like “Strange Meadowlark,” polytonality in “The Duke” (originally recorded in 1954) appears within a theme—specifically, the B phrase of the latter work's AAB song form. Yet while the polytonal opening theme of “Strange Meadowlark” dominates the work, the contrast between the traditional jazz harmony of the repeated A phrase of “The Duke” and the polytonality of its contrasting B phrase is striking (see Example 7). It is this contrast in harmonic language that served as Brubeck's initial idea, for his original title was “The Duke Meets Darius Milhaud.” In the opening two two-bar phrases of the “Milhaud” section of this work (mm. 9–12), the two hands move in contrary motion and polychords gradually give way to less dissonant cadential sonorities. The remaining four bars of this theme reverse this process: a sequence based on an embellished $ii^{\circ} - V - i$ progression opens the phrase (in mm. 13–14), followed by contrary motion between the hands and a gradual increase in dissonance until the final polychord is reached. This latter chord (in m. 16) serves as an elegant link back to the traditional language of the opening “Duke Ellington” section. The root of this chord is Db, and it is possible to hear this chord as a Db13 with raised 11. Because the main theme that follows this phrase begins with a tonic C chord, the root harmony of this Db polychord is also the tritone substitution for the dominant function. Brubeck frequently uses this type of “pivot” chord—one that can be heard both functionally and as a polychord—in order to transition from a passage of one harmony to the other.⁴⁴

Another example of this type of pivot polychord is found in “In Your Own Sweet Way.” This is one of the earliest works that Brubeck composed for his quartet, and its original version did not include any polytonal harmony.⁴⁵ The later solo piano version of 1956, however, prominently features polytonality, something that the composer/pianist says was not planned for the recording date, but simply “happened.”⁴⁶ In this version, the work's main theme is initially harmonized in a traditional jazz idiom, aside

⁴⁴ Before leaving this work, the hidden complexity of its first theme must be mentioned since it reveals the extent to which Brubeck was influenced by the Second Viennese composers. This eight-bar passage begins and ends in C major, but easily moves through a number of keys in between, including D, Eb, Db, Bb, and Ab major. In fact, chords with roots on all twelve chromatic pitches appear in the course of this theme. Brubeck did not discover this for himself, but was told by a fan years after he wrote the work. It is for this reason that Brubeck jokingly said that the work should be renamed “The Duke Meets Darius Milhaud and Arnold Schoenberg in the Bass Line.”

⁴⁵ See, for example, the performance of this work on Dave Brubeck, *Time Signatures: A Career Retrospective* (Columbia/Legacy 66047, 2000, compact disc boxed set), that was recorded shortly after its composition.

⁴⁶ This was related by Brubeck to the author in a personal conversation from July 2003.

Musical notation for measures 1-3. The piece is in 4/4 time. Measure 1 is a whole rest. Measure 2 features a complex polychord in the right hand (F#m7b9 over Eb7) and a triplet eighth-note line in the left hand. Measure 3 continues the polychord and triplet line.

Musical notation for measures 4-6. Measure 4 has a polychord (F#m7b9 over Eb7) and a triplet eighth-note line. Measure 5 features a polychord (F#m7b9 over Eb7) and a quarter-note line. Measure 6 has a polychord (F#m7b9 over Eb7) and a quarter-note line.

Musical notation for measures 7-11. Measure 7 is a first ending with a polychord (F#m7b9 over Eb7) and a triplet eighth-note line. Measure 8 is a second ending with a polychord (F#m7b9 over Eb7) and a triplet eighth-note line. Measures 9-11 show a sequence of polychords with figured bass notation: 6-z26, 3-11, 5-z17, 4-26, 4-14, 4-20, 5-27, 4-27, 3-11, 4-26. The bass line includes figures like 11.5 0, 6.5, 8.5, 0.5, 4.5, 4, 5, 2.5, 0, 0.5.

Musical notation for measures 12-16. Measure 12 has a polychord (F#m7b9 over Eb7) and a triplet eighth-note line. Measures 13-16 show a sequence of polychords with figured bass notation: 5-z17, 4-18, 4-27, 4-27, 5-30, 4-26, 4-27, 4-26, 4-26, 3-10, 4-26, 5-27, 6-33. The bass line includes figures like 8.5, 4.5, 2.5, 2.5, 7, 0.5, 2.5, 7, 0.5, 0.5, 2, 0, 0.5, 5, 8, 8.

Example 7 Dave Brubeck, “The Duke” (1955), mm. 1–16. “The Duke” by Dave Brubeck, copyright © 1955 (renewed 1983) Derry Music Company.

from the prominent appearance of chord type VI as the second chord (not shown in Example 8 below). This single polychord motivates a polytonal reharmonization of the main theme on its return (shown in Example 8 below). The first two two-bar phrases (mm. 26–29) present an increase in dissonance, while this motion is reversed in the third

Example 8 Dave Brubeck, “In Your Own Sweet Way” (1956), mm. 26–33. “In Your Own Sweet Way” by Dave Brubeck, copyright © 1955 (renewed 1983) Derry Music Company.

and final four-bar phrase (mm. 30–33). The cadential sonorities of these phrases mirror the motion of the final phrase: dissonant chord type VI that ends the first phrase yields slightly to the cadential chord of the following phrase and completely to the simple triad that ends the excerpt. The pivot from polychords to triads takes place in this final phrase. Immediately following two phrases of polychords, the third phrase’s initial sonority—an F dominant seventh chord with lowered fifth in the left hand, with a Db major triad in the right hand—sounds like a polychord, but it can also be heard as an exotic super-tonic, one that leads to an authentic cadence in the tonic key of Eb (see Example 8).

The end of Brubeck’s classic quartet in 1967 gave the composer/pianist more of an opportunity to write for different musical forces. He did, however, continue to compose for his own ensembles. *Tritonis*, from 1978, fits into both of these categories: it was originally commissioned for flute and guitar and was later transcribed for piano and flute, piano solo, and for jazz quartet. *Tritonis* is written in 5/4, and each bar is divided into three beats followed by two. Throughout much of this work, the first three beats of each measure present the main harmony, while the remaining two beats consistently arpeggiate a tritone-related triad. Thus, despite the fact that harmonic motion in this work moves almost exclusively through the circle of fifths, each bar contains a melodic statement of chord type VI and a harmonic clash on its final two beats. Tritone substitution could be used to explain this melodic organization; however, because this technique is systematically incorporated into the metric organization of this work, tritone substitution seems an insufficient label here. In fact, because of the melodic, harmonic, and metric formulae, polytonality and functional

Example 9 Dave Brubeck, *Tritonis* (1978), mm. 1–41. *Tritonis* by Dave Brubeck, copyright © 1979 Derry Music Company.

tonality in *Tritonis* are held in equilibrium. Only the cadences—the first two formed by a thinning down to a single instrument (in mm. 10 and 21–22), the third by the repeated statements of chord type VI that resolve to a single triad (in mm. 39–41)—provide relief to this tonal/polytonal stasis (see Example 9).⁴⁷

According to Brubeck, *Tritonis* represents “the place I hoped to arrive at when I started playing. The music is both polytonal and polyrhythmic.”⁴⁸ The same ideal is

⁴⁷ The analysis of this work in Example 8 is from the performance on Brubeck’s *Time Signatures* CD anthology. The transcription of this work is by the author.

⁴⁸ Dave Brubeck, liner notes to Brubeck, *Time Signatures*, 24.

The musical score consists of four systems of piano and bass staves. The first system (measures 24-27) is labeled "[Octatonic Collection, 1]". The piano part features a complex, multi-measure rest followed by a dense, chromatic melodic line. The bass part provides a steady accompaniment with eighth-note patterns. The second system (measures 28-31) continues the piano's melodic exploration, including a triplet of eighth notes in measure 31. The third system (measures 32-35) shows the piano part with a multi-measure rest and a complex melodic line. The fourth system (measures 36-39) is labeled "[Octatonic Collection 1]" and features a multi-measure rest in the piano part, with the bass part continuing its accompaniment. The score is written in a key signature with one flat (B-flat) and a 4/4 time signature.

Example 9 continued.

equally seen in his ballet, *Glances* (1983), which was composed only a handful of years later. The four movements of this ballet seemingly exhibit more diversity in their polytonal language than *Tritonis*, as different key signatures between the two hands are a common feature of this work. Despite this fact, Brubeck has most recently unequivocally stated that *Tritonis* is the summit of his polytonal explorations.⁴⁹ An overview of *Glances* reveals a possible reason for Brubeck's assessment: the main themes of both the

⁴⁹ This was related by Brubeck to the author in a personal conversation from July 2003.

The musical score consists of three systems of piano accompaniment. Each system has a treble and bass clef staff. The key signature is two flats (B-flat and E-flat). The time signature is 4/4. The music is characterized by frequent triplets, indicated by a '3' over a bracketed group of notes. The right hand often plays eighth notes, while the left hand plays a mix of eighth and quarter notes, sometimes with rests. The piece concludes with a double bar line at the end of the third system.

Example 10a Dave Brubeck, “Struttin’” from *Glances* (1983), mm. 59–66. “Struttin’” from the ballet *Glances* by Dave Brubeck, copyright © 1976 Derry Music Company.

second (“Struttin’”) and fourth (“Doin’ the Charleston”) movements use the superimposition of keys related by minor third (see Example 10). This design is an idea that, as stated above, dates back to the beginning of Brubeck’s career. Furthermore, this specific polytonal combination is more susceptible to being heard in a single key, unlike the polytonal formula heard in *Tritonis*.⁵⁰ However, while *Glances* represents a step backwards in terms of its polytonal language when compared to *Tritonis*, the former work does contain more rhythmic complexity.

The most striking aspect of the new rhythmic interplay in *Glances* is its source, for like the neo-classical influence on the Octet mentioned above, Brubeck again reveals the influence of Stravinsky, as I shall demonstrate.⁵¹ Changing meter is common in the work’s overture, yet in certain passages, this changing meter actually hides an underlying steady meter. Such a passage first appears in m. 26. Here, the time signature of both hands is determined by the changing meter of the right-hand part, while the left-hand presents a simple duple-meter pattern that runs counter to the notated meter. The changing meter sets key motifs—including the ascending runs of mm. 26 and 28, the descending G major arpeggios of mm. 30 and 32, and the descending Gb

⁵⁰ “Struttin’” was composed earlier than the other movements and was originally entitled “Polly,” which is an allusion to the name of a family friend as well as the polytonal language of the work.

⁵¹ This is not to imply that rhythmic complexity is lacking in any of Brubeck’s jazz influences (including the influences of Cleo Brown, Art Tatum, and Duke Ellington), but only that the rhythmic complexities found in Brubeck’s late works most closely represent those found in Stravinsky’s scores.

Example 10b Dave Brubeck, “Doin’ the Charleston” from *Glances* (1983), mm. 1–16. “Doin the Charleston” from the ballet *Glances* by Dave Brubeck, copyright © 1976 Derry Music Company.

major arpeggiations of mm. 31 and 33—to begin on the downbeat of their respective measures. In relation to the underlying duple meter of the left hand, however, these same events switch metric position from on-the-beat to off-the-beat, or vice versa. These measures are shown in Example 11 as notated and also as rebarred according to the left hand’s regular meter to more clearly reveal the rhythmic displacement that is felt in the right-hand line.

This type of rhythmic play, which is defined by a reversal of metric placement and described by the theorist and Stravinsky scholar Pieter van den Toorn as a “sadistic

As Notated

Rebarred

Example 11 Dave Brubeck, “Overture” from *Glances* (1983), mm. 26–33. “Overture” from the ballet *Glances* by Dave Brubeck, copyright © 1976 Derry Music Company.

twitch,” is a hallmark of Stravinsky’s music.⁵² Indeed, every aspect of the passage described above—the changing meter governed by the melodic line, the underlying stable meter at odds with the notated meter, the rhythmic immobility of motifs in relation to the notated meter, and the change in rhythmic placement in relation to the underlying stable meter—can be found (to cite but one example among many) in an excerpt from Stravinsky’s *L’histoire du soldat*. As seen in Example 12, this excerpt is

⁵² Van den Toorn, “Rhythmic (or Metric) Invention,” in *The Music of Igor Stravinsky*, 204–51.

As Notated

44

47

Rebarred

Example 12 Igor Stravinsky, “Marche du soldat” from *L’histoire du soldat* (1918), mm. 44–50. Music by Igor Stravinsky. Libretto by Charles Ferdinand Ramuz Music copyright © 1924, 1987, 1992 Chester Music Ltd., 14–15 Berners Street, London W1T 3LJ, UK, worldwide rights except the United Kingdom, Ireland, Australia, Canada, South Africa, and all so-called reversionary rights territories where the copyright © 1996 is held jointly by Chester Music Limited and Schott Music GmbH & Co. KG, Mainz, Germany. Libretto copyright © 1924, 1987, 1992 Chester Music Ltd, 14–15 Berners Street, London W1T 3LJ, UK. All rights reserved. International copyright secured. Reprinted by permission.

again presented twice: the first shows this passage in its original notation, while the second is rebarred according to the underlying stable meter.⁵³

Brubeck openly acknowledges Milhaud's influence: he refers to the French composer as his mentor, and he even named one of his sons Darius. More importantly, Brubeck's early lessons with Milhaud prompted his lifelong exploration of polytonality. Brubeck's conception of polytonality—arising primarily through the superimposition of triads—has also notably not changed since his early introduction to Milhaud's article. This sustained interest in Milhaud's ideas is a testament to Brubeck's devotion to his former composition teacher; it is also evidence of theoretical convenience, for this approach to polytonality encompasses both polychords and the high tertian chords that characterize the traditional jazz vocabulary. The analyses in this study show that Brubeck masterfully exploits the overlap between polychords and high tertian chords not only to control the dissonance level within his works, but also to transition from sections devoted to one vocabulary to another. Brubeck's careful control of the dissonance level in his works stems not only from the stylistic necessities of the jazz idiom, but also from the polytonal works of Milhaud, which reveal this same quality.

While Brubeck has been open about the debt he owes to Milhaud, he has admitted in private to being influenced by Stravinsky.⁵⁴ The analyses in this study reveal some of the ideas that Brubeck has used from his “bag of Stravinsky's things” that he has accumulated. Stravinsky's early neo-classical works served as audible models for some of Brubeck's earliest works. Stravinskian ideas are more fully incorporated into Brubeck's late style, as in the rhythmic play used in *Glances* and the conspicuous use of octatonic harmony in *Tritonis*. Jazz harmony has long recognized the “diminished scale”; Brubeck, however, consciously avoided using this scale until late in his career.⁵⁵ The consistent appearance of the scale in *Tritonis*⁵⁶ only years before his adoption of rhythmic displacement makes the link with Stravinsky all the more apparent. While each of these ideas can be readily found individually in jazz harmony, taken together they point instead to a Stravinskian influence. The extent of Brubeck's debt to both Milhaud and Stravinsky has yet to be fully uncovered, yet this study has shown that having fused classical and jazz styles, Dave Brubeck owes as much of a debt to both Milhaud and Stravinsky than he does to the jazz musicians that preceded him.

⁵³ The first two traits mentioned above are clear in this example, while the second two are more difficult to see (although they are obvious to the ear). The rhythmic immobility is seen in the inner voice motive, in which the note A3 is consistently notated as an anacrusis. The change is concerned with rhythmic placement and is heard in the two appearances of this same note, which, when renotated, appears first as an anacrusis and then as a downbeat.

⁵⁴ This was related by Brubeck to the author in a personal conversation from July 2003. In fact, Brubeck remembers stopping dead in his tracks as he was walking across campus as an undergraduate and heard the university orchestra rehearsing Stravinsky's *Symphony of Psalms* (this was this first time he had heard the work). This event happened at approximately the same time as Brubeck first read Milhaud's article on polytonality, so he was introduced to both these composers at roughly the same time in his musical development.

⁵⁵ The standard use of this scale in jazz—as a descending scalar run over a dominant seventh chord—appears prominently in “Eleven Four” from 1962, although this tune was written by Paul Desmond.

⁵⁶ See, for instance, the passages (m. 27 and mm. 39–41) labeled as octatonic in Example 9.

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Abstract

Dave Brubeck has incorporated polytonality into his jazz compositions throughout his long career. Like his composition teacher Darius Milhaud, Brubeck defines polytonality as the combination of distinct triads, and this technique forms the definition of the term as used in this article. This approach avoids the insoluble problems of chord spelling and perception inherent in polytonality; it also allows for a grey area between simple polychords and the projection of multiple tonal centers (and Brubeck exploits both procedures in his compositions).

This article introduces a method to compare the relative dissonance between polychords in order to reveal the logic behind Brubeck's incorporation of polytonality into the standard jazz vocabulary. Brubeck's use of polytonality helps to project a general decrease or increase in relative dissonance, thereby clarifying the formal structure on both the small- and large-scale. The comparison with tonal theory extends to include pivot chords; with Brubeck, such chords simultaneously serve as the final chord in a polychordal passage and as the first and most exotic chord in a tonal passage.

The final goal of this article is to trace Brubeck's influences. Milhaud is the most obvious of these, but certain Stravinskian features are also found in Brubeck's music, including rhythmic practices first identified by the theorist Pieter van den Toorn.