Music Theory Society of New York State

Annual Meeting

Monroe
Hofstra University
Hempstead, NY 11549

4–5 April 2009

PRELIMINARY PROGRAM

Saturday, 4 April

8:15–9:00 am	Registration — Monroe Lounge
9:00 am–12:00 pm	Post-Tonal Pitch Structures
9:00 am –10:30 am	Topics in American Vernacular Music
10:30 am –12:00 pm	Analysis and Performance
12:00–1:15 pm	Lunch
1:15–2:45 pm	Pedagogical Topics
1:15–2:45 pm	Tonal Traditions in Twentieth-Century Art Music
3:00–5:00 pm	Plenary Session: Music Theory in the Conservatory
5:15–5:30 pm	Business Meeting
5:30–6:30 pm	Reception—New Academic Building 010
8:00 pm	Concert: American Chamber Music Ensemble (Monroe 142)

Sunday, 5 April

9:00–9:30 am	Registration
9:30 am –12:30 pm	Topics in Eighteenth- and Nineteenth-Century Music
9:30 am–11:00 am	Rhythm in Popular Music
10:15 am–11:45 am	Software Demonstration: The Musical Ear

11:00 am–12:30 pm	Music in Eastern Europe
12:30–1:30 pm	MTSNYS Board Meeting

Program Committee: William Rothstein, chair; Norman Carey (*ex officio*, CUNY), Mark Anson-Cartwright (Queens College), Edward Klorman (Juilliard School of Music), Elizabeth West Marvin (Eastman School of Music), and Hedi Siegel (Mannes).

Saturday, 9:00 am–12:00 pm
Monroe 213

Post-Tonal Pitch Structures

Chair: Joseph Straus (CUNY Graduate Center)

- Getting RICH: Chain Transformations, Row Areas, and a Twelve-Tone Space in Webern's op. 22/ii
Brian Moseley (CUNY Graduate Center)
- K-Nets, Inversion, and Gravitational Balance
Christopher Segall (CUNY Graduate Center)
- Aligned Cycles in Thomas Adès's Piano Quintet, op. 20
Philip Stoecker (Hofstra University)
- A Transformational Approach to Harmony and Voice Leading in Elliott Carter's Recent Music
Jason Hooper (CUNY Graduate Center)

Program

Getting RICH: Chain Transformations, Row Areas, and a Twelve-Tone Space in Webern's op. 22/ii

The amorphous qualities of the second movement of Webern's op. 22 Quartet for Violin, Clarinet, Saxophone, and Piano have often been defined in contrast to the more controlled handling of the twelve-tone technique in the first movement. This paper reevaluates the second movement of op. 22, not in an attempt to explain difficult passages as more straightforward than previously thought, but in order to understand a (pre-)compositional environment in which the movement operates. To construct such an environment, the paper begins by considering the properties and byproducts of row elision—one of Webern's favorite compositional techniques. Properties of elided, or chained, rows are used to create row families that are distinguished by chain type, invariance, and inversional potential. Ultimately, this paper constructs a robust, hierarchical "twelve-tone space" structured by these families and their inherent properties. Along the way, the paper shows that while the musical surface betrays little of the order and tidiness associated with the first movement, its substructure is neatly constructed. The twelve-tone space and resulting analysis do not explain away the movement's surface turbulence. They do, however, give some insight into the background structure within which this tumult operates.

Top

K-Nets, Inversion, and Gravitations Balance

Klumpenhouwer networks have recently been the source of controversy. Michael Buchler has voiced concerns about the ability of K-nets to reflect musically pertinent events. This paper proposes a type of situation in which a K-net approach carries musically meaningful implications. Strongly isographic networks can be used in instances involving pairs of sets moving in contrary motion in *pitch space*; the isography highlights the constant axis around which the pairs balance themselves. This paper calls such an axis a *gravitational center*. While gravitational centers can be calculated with mathematical precision, they also reflect the degree to which given passages of music are balanced according to specific pitch-space partitions. Certain non-isographic K-nets can share gravitational centers, and can thereby be meaningfully related. The concept also allows for the comparison of partitioned sets of differing set class and cardinality, differences for which neither traditional K-net theory nor dual transformations can account. Excerpts from works by Messiaen, Bartók, Schoenberg, Harbison, and

Schnittke are discussed with reference to gravitational balance. Ultimately, the paper offers a new perspective on what K-nets are able to model.

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Aligned Cycles in Thomas Adès's Piano Quintet, op. 20

This paper focuses on aligned cycles in Thomas Adès's Piano Quintet. An aligned cycle occurs when two (or more) voices move together in the same direction by different interval cycles in a note-against-note alignment—for example, a rising whole-tone scale (an interval 2-cycle) simultaneously with a rising chromatic scale (an interval 1-cycle). Composed in 2000, Adès's quintet is a single-movement composition that is structured as a sonata form. In addition, three-voice aligned cycles play a significant role in the structural design of the quintet. Every aligned cycle in the piece is a combination of interval cycles 2, 3, and 4, and though Adès does not use any other interval cycles (i.e., 0, 1, 5, and 6) he constantly changes the registral ordering to generate all six permutations: <2,3,4>, <2,4,3>, <3,2,4>, etc. No matter which combination Adès uses, he aligns the three interval cycles so that non-functional major triads, members of set-class [037], are prominently featured. In addition to discussing how the non-functional major triads of the aligned cycles interact with the sonata-form structure of the piece, I explore how Adès varies and transforms his aligned-cycle patterns. This paper concludes that the aligned cycles in Adès's Piano Quintet play a significant role in the structural design of the composition. The non-functional major triads of all the aligned cycles intersect with the form of the piece to create a twenty-first-century commentary on tonality and sonata form.

Top

A Transformational Approach to Harmony and Voice Leading in Elliott Carter's Recent Music

Elliott Carter's recent harmonic practice has often been characterized as an effort to achieve maximum variety within the confines of a limited harmonic vocabulary. In the preface to his *Harmony Book* (2002), Carter remarks that "From about 1990, I have reduced my vocabulary of chords more and more to the 6-note chord no. 35 and the 4-note chords nos. 18 and 23, which encompass all the intervals." The six-note chord no. 35 is better known as the all-trichord hexachord (012478)—a hexachord that embeds all twelve of the trichordal set classes. The four-note chords nos. 18 and 23 are better known as the all-interval tetrachords (0146) and (0137) respectively. Given Carter's use of a relatively limited set-class vocabulary in which the degree of common-tone retention is of particular importance, this paper explores ways that transformational techniques, especially those inspired by neo-Riemannian theory, are able to model the dynamism of Carter's recent harmonic practice. Compositional spaces generated by the complement-union property (CUP) are reconfigured to create *Tonnetze*; contextual transformations are then defined on these spaces. A toroidal geometric space that models transformations among all-interval tetrachords is explored in detail. The paper concludes by suggesting a space to model transformations among all-trichord hexachords. Works to be considered include *Scrivo in Vento* for solo flute (1991), *Figment* for solo cello (1994), *Shard* for solo guitar (1997), and *Two Diversions* for solo piano (1999).

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Program

Saturday, 9:00 am–10:30 am
Monroe 216

Topics in American Vernacular Music

Chair: Robert Wason (Eastman School of Music)

- Five Types of Blues Scheme
Nicholas Stoia (Duke University)
- Bill Evans Plays the Standards: Reharmonization and Reconception
Mark MacFarland (Georgia State University)

Program

Five types of Blues Scheme

Scholars often describe the musical frameworks of blues schemes simply by length in bars and harmonic structure, an approach suggesting that musicians fix upon the same components for every scheme. I propose that the components fixed upon by musicians vary from scheme to scheme, resulting in five types of musical framework, and present five short schemes as representatives of each type.

In blues schemes, the rhythmic structure is usually among the most consistent components, after which either the harmonic or melodic structure may be more consistent, creating two broad categories: those in which the rhythmic and harmonic structures are most consistent and the discant displays more variance and substitution, and those in which the rhythmic and melodic structures are more consistent and the harmony displays more variance and substitution. In both cases, the structure of the more consistent component generally informs the choices for substitution in the less consistent.

Schemes in which the rhythm and harmony are more consistent account for three types of framework: those that support one, two, or several discants.

Schemes in which the rhythm and melody are more consistent account for two more types of framework: those in which the harmonic progression displays considerable variance and substitution, but performers nonetheless fix upon certain general requirements for it; and those in which performers do not fix upon many general requirements for the harmonic structure, but instead take their cues from the melodic structure.

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Bill Evans Plays the Standards: Reharmonizationa and Reconception

Of all the compliments paid to the jazz pianist Bill Evans, perhaps the greatest was by Julian "Cannonball" Adderly, who commented that "Bill Evans has rare originality and taste and the even rarer ability to make his conception of a number seem the definitive way to play it." This study is an attempt to explain this phenomenon by concentrating on Evans's recordings of three standards: Bricusse's "Who Can I Turn To?" and Young's "My Foolish Heart," both recorded on the live 1962 album "Bill Evans at Town Hall"; and Jenkins's "Goodbye," from the 1966 album "Empathy."

Evans's adaptations of these tunes have obvious ramifications for their harmonic structures, especially since his harmonic rhythm is never slower than that of his original and is frequently two to four times as rapid. In spite of these changes, Evans's version of "Who Can I Turn To?" is remarkably faithful to the original. The same cannot be said of "My Foolish Heart" and "Goodbye." Evans's reharmonization is not only radical but also impacts the underlying structure of the shared melody. This is

accomplished through the tight control of harmonic support for the melody, moving frequently from a dissonant harmonization of a given note to a consonant one.

While Evans's renowned gifts as a pianist and improviser, as well as his unique chordal voicings, all play a role in the popularity of his recordings, this study focuses on the process of reharmonization to highlight the changes between Evans's recordings and the originals.

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Program

Saturday, 10:30 am–12:00 pm
Monroe 216

Analysis and Performance

Chair: Jonathan Dunsby (Eastman School of Music)

- Primary Metrical Dissonance in Early Scriabin and What It Means to an Interpreter
Aleksandra Vojcic
- Hypermetric Defiance in the Finale of Beethoven's Concerto, op. 15: Communicating Musical Process through Performance
Richard Bass and Neal Larrabee (University of Connecticut)

Program

Primary Metrical Dissonance in Early Scriabin and What It Means to an Interpreter

Deviations from the metrical implications of a notated time signature are here considered *primary metrical dissonances*. Unlike Krebs's metrical dissonance types, these are not temporary, nor do they arise after a primary metrical consonance (represented by the time signature) is already established. Scriabin's early preludes are replete with Type A metrical dissonances as defined by Krebs, but a number of his preludes are written with quixotic instructions to the performer, instructions that are frequently inaccurate metrically and/or rhythmically. Using Scriabin's piano-roll recordings as an aid, we can infer that the composer is engaging in a form of self-analysis with respect to the notation of two different types of *rubato*. The "expressive anticipation" of a melodic line is carried to an extreme in those preludes in which the left hand is entirely notated out of sync with the right hand (Type A rubato). Displacement of the entire texture (Type B rubato) is present in works like op. 11, no. 21, which is also notated in a unique composite meter of <3/4, 5/4, 3/4, 6/4>. This paper shows how Scriabin's approximate and convenient time-signature notation reflects a performing bias on the part of Scriabin and classifies his preludes according to rubato types and notational idiosyncrasies.

Top

Hypermetric Defiance in the Finale of Beethoven's Concerto, op. 15: Communicating Musical Process through Performance

The opening theme from the finale of Beethoven's Piano Concerto No. 1 exhibits irregular phrase rhythms that present an interpretive dilemma for soloist and conductor. This study, presented jointly by a theorist and a pianist, illustrates how a large-scale formal process revealed through analysis can explain the structure and function of the opening theme within the movement as a whole. It further demonstrates how an understanding of that process can assist in making interpretive decisions that will result in a coherent and effective performance of the movement.

Our interpretation of the piece views the opening theme (the refrain of a rondo form) as an expression of exuberant individuality that struggles against the conventionality of the episode sections. This thematic conflict creates a narrative structure that continues until the movement's conclusion, where the defiant theme appears at one point to have been pacified, but ultimately wins out over the elements of conformity.

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Program

Saturday, 1:15 am–2:45 pm
Monroe 216

Analysis and Performance

Chair: Mary Arlin (Ithaca College)

- Practical Post-Tonal Aural Skills for Practicing Musicians
William Lake (Bowling Green State University)
- Teaching Improvisation: The Creative Application in Performance
Noam Sivan (Mannes College of Music and The Juilliard School)

Program

Practical Post-Tonal Aural Skills for Practicing Musicians

Formal aural-skills study walks a fine line between developing practical skills musicians can actually use and providing reinforcement for concepts learned in so-called written theory. Aural skills for post-tonal music can tend very much toward the latter. For instance, Michael Friedmann's book (1990) devotes a great deal of space to hearing concepts taught under the aegis of pitch-class (pc) set theory. Questions about the perceptibility of pc sets aside, I daresay most practicing musicians have neither the time nor the inclination to become fluent with pc set theory. Friedmann himself recommends the performance, repetition, and memorization of large quantities of twentieth-century music as preliminary "calisthenics." He posits that the student should begin intuitively and "find his or her own path (that is, structuring devices)" before undertaking to perceive music via pc sets.

This paper concerns itself with this so-called intuitive approach. As an alternative to abandoning students to boot-strap themselves, it presents a three-pronged approach to post-tonal aural skills. The three prongs—anchor pitches, pattern recognition, and intervals—have proven useful in performing, listening to, and memorizing post-tonal music. They have the advantages of (1) being less abstract—more immediately accessible—than pc sets and (2) building on skills and habits already acquired through study of tonal music. Thus, they require less intellectualization to employ and are easier to learn and apply than pc sets. While they could be viewed as preliminary to the study of perception through pc sets, in fact they are sufficient unto themselves to produce accurate sight-reading and dictation of post-tonal music.

Top

Teaching Improvisation: The Creative Application of Theory in Performance

In the study of performing or composing music there needs to be a healthy balance between three components: creativity, analysis, and technique, representing respectively the spiritual, intellectual, and physical aspects of music-making. Developing the imagination through improvisation and developing analytical skills through understanding music from a composer's perspective complement one another. My point of departure in connecting improvisation and theory is that *an important part of the study of theory is to understand music from a composer's point of view*, in order to gain a better appreciation of it.

Inspired partly by eighteenth-century pedagogy, in this paper I will introduce several ways of teaching improvisation as complementary to the teaching of theory and analysis: (1) elaborate a typical opening progression; (2) two-part counterpoint with a standard bass line, such as the "rule of the octave"; (3) variation technique; (4) fantasy on a figured bass, following C. P. E. Bach's model; (5) improvisation on the harmonic and voice-leading reduction of an actual piece; (6) creating a *double* to a baroque suite movement; and (7) fugal improvisation on a given bass. Together with the application

of theory, the focus in these exercises is on melodic elaboration, texture, surface rhythm, and pacing—elements that shape the musical surface and create atmosphere but are easily marginalized in structural analysis. I hope that this presentation will encourage theory teachers to consider improvisation an important subject that deserves to be taught and explored more widely.

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Program

Saturday, 1:15 am–2:45 pm
Monroe 213

Tonal Traditions in Twentieth-Century Art Music

Chair: Robert Cuckson (Mannes College, The New School for Music)

- The Harmonic Structure of Schoenberg's First Chamber Symphony
Benjamin Wadsworth (LSU)
- Conflict as a Critical Framework in *Nocturnal for Guitar* by Benjamin Britten
Thomas Becker (University of Kansas)

Program

The Harmonic Structure of Schoenberg's First Chamber Symphony

In his analyses of his own "extended tonal" works in *Structural Functions of Harmony*, Schoenberg tends to analyze cycles built from intervals 2/4, 3, and 5 as altered tonal chords, thereby interpreting interval cycles within a tonal context. Schoenberg's op. 9 *Kammersymphonie* (1906), however, also includes spans in which (1) interval cycles are independent of tonal function and (2) tonal chords and interval-cyclic voice leading are mixed ambiguously. As a result, the work's harmonic language is governed by different principles on local (foreground) and global (middleground and background) levels of structure, a situation that problematizes organic unity.

This paper offers two complementary methods of analysis to explain how unity is suggested, refuted, and affirmed on each level. On the local level, an analytical method called "Harmonic Practices" traces a dialectic between tonality and interval cycles, thereby showing foreground continuity and discontinuity; on more global levels, "tonal pillar analysis" shows a hierarchy of widely separated tonal chords that achieve or postpone tonal closure. By clarifying tonal ambiguity on their respective levels, these two methods offer a critique of organic unity. This stance strikes a balance between the forward-looking and retrospective aspects of Schoenberg's thought, one that is similar to the recent viewpoints of Walter Frisch (2005) and Michael Cherlin (2007).

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Conflict as a Critical Framework in *Nocturnal for Guitar* by Benjamin Britten

Analysts generally agree that Britten's musical language embraces conflict. Descriptions of Britten's music often contain a variety of polarized adjectives such as conflictive, oppositional, antithetic, dualistic, and so on. In fact, we can describe Britten's music as conflicting because of vital compositional mechanisms that inform his style of expression. This paper explores two compositional mechanisms that express conflict in the first movement of *Nocturnal for Guitar* (1963).

Fundamental to *Nocturnal*'s conflicting musical structures are two devices: interval-class 1 pairings and inversionally symmetrical sets. Britten analyst Arnold Whittall calls interval-class 1 pairings a "well tried device" and states that *Nocturnal* develops through "the interaction of notes, chords, and keys a semitone apart." In Philip Rupprecht's approach to Britten, oppositions of chromatically distant pitch classes (interval-class 1 pairings) inform discrete tonal-textural layers. Working here in conjunction with interval-class 1 pairings are inversionally symmetrical sets. Sets such as these may be seen to convey a sense of conflict because they consist of two opposing halves, polarized around an axis of symmetry. Interval-class 1 pairs and inversionally symmetrical sets are repeatedly combined in *Nocturnal* into an integrated whole.

We can designate three interval-class 1 pairs as the most prominent in *Nocturnal*. These three semitones themselves generate a symmetrical structure: a hexatonic collection. The abstraction of the hexatonic collection receives immediate support in the second movement, where it is found in its To transposition.

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Program

Sunday, 9:30 am–12:30 pm
Monroe 216

Topics in Eighteenth- and Nineteenth-Century Music

Chair: Poundie Burstein (Hunter College and The Graduate Center, CUNY)

- Schumann's Fugal Writing: A Modular Approach to Form in the "Sonata Fugatos"
Mark Richards (University of Toronto)
- The Three-Key Trimodular Block in Schubert and Brahms's Sonata Expositions
Graham Hunt (University of Texas-Arlington)
- Hidden Voice Exchanges: Three (Analytical) Fantasies and a Sarabande by J. S. Bach
Timothy Cutler (Cleveland Institute of Music)
- E≤≤≤≤:Tovey's Whimsy
Eric Wen (Mannes College, The New School of Music)

Program

Schumann's Fugal Writing: A Modular Approach to Form in the "Sonata Fugatos"

Recent theoretical research on Schumann has made significant contributions to a wide range of topics within the composer's *oeuvre*. But very little attention has been paid to fugato passages in Schumann's works, an oversight that is especially surprising in light of the composer's lifelong fascination with J. S. Bach's music in general and fugue in particular (Schumann himself described his obsession as a *Fugenpassion*). This paper addresses this lacuna by examining those fugato passages that occur within Schumann's sonata-form or sonata-based movements composed between 1841 and 1845. My focus is on Schumann's preference for large amounts of repetition in these passages and the resulting "modular approach to form," a term recently used by Julie Hedges Brown in reference to the Piano Quartet, op. 47. Such repetition is surprising in these fugato passages, as one would expect the increased attention to linear, contrapuntal devices to preclude this type of repetition. The movements examined in this study are: the first movement of the String Quartet in A Minor, op. 41, no. 1 (1842); and the finales of the Piano Quintet, op. 44 (1842), the Piano Quartet, op. 47 (1842), and the Piano Concerto, op. 54 (finale composed in 1845). I focus mostly on the Piano Quartet and Piano Quintet because they contain the most extensive fugato passages. Schumann's "sonata fugatos" contain a richness and complexity of musical design that renders them worthy of scholarly attention.

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The Three-Key Trimodular Block in Schubert and Brahms's Sonata Expositions

Sonata-form expositions typically articulate two key areas, with the secondary theme, and the second key area, often announced by what Hepokoski and Darcy (1997, 2006) define as a "medial caesura" (MC). A specialized form arises when *two* medial caesuras appear in the middle of the exposition: the "trimodular block" (TMB). More unusual still are expositions in which these two medial caesuras articulate *three* key areas, a form I will call the "three-key trimodular block." Schubert utilized this form in several of his sonata-form expositions, and, as James Webster (1977 and 1978) suggests, appears to have influenced Brahms, who also adopted this unusual phenomenon in some of his early and late compositions. Hepokoski and Darcy's TMB allows us to critically re-appraise this unusual form (previously discussed as the "three-key exposition" in Schachter 1983, Beach 1994, Graybill 1988, and Kessler 2006) by exploring the pieces' interactions with generic conventions—i.e., comparing them to traditional two-key expositions employing trimodular blocks and three-key continuous or single-MC expositions. This paper will explore the three-key TMB in works by Schubert and Brahms, as well as

rare eighteenth-century examples of this form in Mozart, Beethoven, and Cherubini. The tonal structures of the pieces will also be considered in conjunction with the TMB. Hepokoski and Darcy's landmark publication *Elements of Sonata Theory* briefly mentions this formal phenomenon but leaves the subject tantalizingly open to further study, which this paper will undertake.

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Hidden Voice Exchanges: Three (Analytical) Fantasies and a Sarabande by J. S. Bach

When are voice exchanges functional and when are they the musical equivalent of optical illusions? Can a voice exchange be present even when it cannot literally be seen in the score? The hunt for voice exchanges can be an addictive pastime, and a composition will offer far more examples of analytical fool's gold than the real thing. Virtually any piece of tonal music contains numerous instances of hypothetical voice exchanges that are musically irrelevant, dubious, or nonsensical. In these situations a keen ear is more important than a keen eye. In other instances the converse is true: a functional voice exchange may be present even if it is difficult or impossible to see on the page. This presentation addresses these issues in the context of the Sarabande from J. S. Bach's Partita No. 2 in D Minor for Solo Violin (BWV 1004). The legitimacy of a single voice exchange (mm. 21–22) is debated by positing various interpretive hypotheses (analytical fantasies influenced by various pitch swaps) before arriving at conclusions that satisfy the structural contours of the composition rather than an infatuation with interesting, yet dubious, examples of voice exchange. The final interpretation uncovers many interesting features of the Sarabande, including the use of motivic parallelisms, voice exchanges in pairs, and inverted versions of the cadential 6/4 chord. It also answers the question of whether the proposed voice exchange in mm. 21–22 is functional or illusory.

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E≤≤≤≤:Tovey's Whimsy

In his commentary on Beethoven's "Appassionata" Sonata, Donald Francis Tovey fancifully describes a note as representing E≤≤≤≤, instead of CΩ as written. The source of this capricious passage may be found in Tovey's *Companion to the Beethoven Pianoforte Sonatas*, published in 1931 by the Associated Board of the Royal Schools of Music. The Associated Board was, and remains, a uniquely British institution that sets a series of instrumental examinations in eight levels, known as "grades." Although intended to serve practical musicians, primarily students and serious amateurs, many encountering "E≤≤≤≤" would no doubt be perplexed by Tovey's whimsical aside. So is this a truth spake in jest?

This paper will examine the development section of Beethoven's "Appassionata" in light of Tovey's curious enharmonic perspective. Intended to point out the absurdity of interpreting harmonic progressions literally, Tovey's fantastic excursion into the world of multiple sharps and flats reveals a clear understanding of the tonal implications of this passage. In contrast to Tovey's fanciful reading, the well-known analysis by Heinrich Schenker, the "other" leading tonal theorist of the twentieth century, represents a more austere, distant perspective. Schenker's analysis (in *Der Tonwille*) shows how the events in Beethoven's development section relate to the movement's background structure, revealing these motivic connections through detailed voice-leading graphs.

Although the merging of ideas by Tovey and Schenker would appear to be incongruous, the two viewpoints are not mutually exclusive. This paper offers an analytic perspective that differs from both Tovey and Schenker while reconciling their widely different interpretations.

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Program

Sunday, 9:30 am–11:00 am
Monroe 213

Rhythm in Popular Music

Chair: Dave Headlam (Eastman School of Music)

- The Pivot Pulse and Its Application to Changing Meter in Math Rock
Brad Osborn (University of Washington)
- Rhythm Necklace and Hemiola: Hidden Meter in Radiohead and Björk
Stephen Taylor (University of Illinois)

Program

The Pivot Pulse and Its Application to Changing Meter in Math Rock

Math rock's most salient feature is its cyclical repetition of ostinati that feature internally changing and asymmetrical meter. Through this repeated presentation, conventional rock rhythmic structures such as backbeat and steady pulse are deformed in such a way that a listener's sense of metric organization is initially thwarted. Using transcriptions from math rock artists such as Radiohead, The Mars Volta, Meshuggah, and The Chariot, I will demonstrate a new analytical apparatus aimed at making sense of the ways listeners and performers process these changing pulse levels: the *pivot pulse*. The pivot pulse is defined as the slowest temporal level preserved in a given meter change. I suggest that the preservation or disruption of the primary pulse level (that is, the temporal level at which the primary kinesthetic involvement happens, such as dancing or foot-tapping) is of paramount importance. For example, a change from 4/4 to 3/4, which preserves the quarter-note pulse, will be less disruptive to a listener's metric organization than a change from 4/4 to 7/8 or from 7/8 to 15/16, both of which split the primary pulse in half. Through engagement with the recent literature on meter and hypermeter, I hope to efface the distinction between these two arbitrary stopping points on the metric continuum. However, I also hope to demonstrate that my analytical tools do not re-invent the wheel of metric analysis, but merely change some constraints to fit a newer genre of music that few have chosen to engage.

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Rhythm Necklace and Hemiola: Hidden Meter in Radiohead and Björk

Two recent songs, "Pyramid Song" by Radiohead (from *Amnesiac,* 2001) and "Desired Constellation" by Björk (from *Medulla,* 2004), share a striking metrical ambiguity: about halfway through each song, a hidden meter is revealed which dramatically changes how listeners hear the music. The surface rhythms in each song are related in different ways to their underlying meters, raising questions about rhythm and meter which this essay attempts to answer. Using circular, clockface diagrams to represent a repeating duration of time (following London, Demaine, *et al.*), the songs are presented as two contrasting examples of polymeter. Rhythm necklaces—sets of onsets which can be rotated to begin at different "downbeats," analogous to the modal rotations of the diatonic scale—and hemiolas are shown as superimposed polygons on the clockfaces. Through transcriptions—including multiple interpretations of metrically ambiguous excerpts—and re-composition, the harmony, form, and rhythm of each song are considered and compared. Among the topics discussed are Euclidean rhythm; the "Erdös-deep" property of some rhythms and scales; hemiola and figure/ground illusion (such as the familiar face/vase optical illusion); and the tenuous link between pitch and time domains in studies of maximal evenness.

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Sunday, 10:15 am–11:45 am
Monroe 119

Software Demonstration: The Musical Ear

Björn Roslund and Carl-Axel Andersson (Malmö Academy of Music, Sweden)

Musical Earis a new ear-training program connected to the music-editing program Sibelius. It is based on approximately 200 newly written compositions/tunes including the styles of pop, rock, jazz, Latin, folk music, and classical music. Within each style there are many examples at different levels of difficulty. All of the music is available in the program as mp3 files. The program was developed by Björn Roslund and Carl-Axel Andersson, who also composed the music.

A full presentation of the program takes approximately 30 minutes. There will be three presentations.

Program

Sunday, 11:00 am–12:30 pm
Monroe 213

Music in Eastern Europe

Chair: Deborah Rifkin (Ithaca College)

- Orthography in the Music of Nicolai Roslavets
  Inessa Bazayev (Oberlin College Conservatory)
- Asymmetrical Meters in Bulgarian Music: Hypermeter, Combined Metric Groups, Heterometric Rows, and Megameters
  Kalin Kirilov (Universitry of Massachusetts-Amherst)

Program

Orthography in the Music of Nicolai Roslavets

The music of Nicolai Roslavets (1881–1944), long repressed in the Soviet Union, has recently begun to attract the attention of musicologists and theorists. Kholopov 1981, Perle 1991, Ferenc 1993, and Sitsky 1994 are useful accounts of Roslavets's music, but none explains his idiosyncratic orthography. I will show that Roslavets's orthography, which often features such peculiarities as triple sharps, operates on a deeper structure of fifth-relations and helps us to understand his unique compositional system.

Roslavets uses synthetic chords, scale-like groups of notes that recur at various transpositional levels. The transpositions of these chords—for instance, those of the sc(0134578) at the start of "Pianissimo" (1914)—can be represented by means of quint or perfect-fifth distances (Qn), illustrated by means of a line of fifths on which octave equivalence, but not enharmonic equivalence, is assumed. From the resultant transformations emerges a path that not only outlines inversional symmetry but also accounts for the unique spellings of chords. Roslavets's extreme orthography results from this underlying structure in fifths: moving to the right on the line produces sharp-dominated spellings, while moving to the left produces flat-dominated spellings.

I use *Trois Compositions* (1914), "Pianissimo" (1914), and *Cinq Préludes* (1922) to show that Qn relations shape the deeper structure of Roslavets's music in a way that ultimately explains his unique orthography.

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Asymmetrical Meters in Bulgarian Music: Hypermeter, Combined Metric Groups, Hetermetric Rows, and Megameters

The music of Bulgaria is an excellent example of a complex musical tradition which combines Middle Eastern *makams* (modes), regional microtonal structures, pentatonic scales, diatonic modes, and major/minor collections. Asymmetrical meters represent another essential characteristic of Bulgarian music. They exist in immense variety, from 5/8 to 15/8, and occur in various combinations with simple and compound meters. Over the centuries, Bulgarians have explored a huge variety of uneven groupings of twos and threes, combined metric groups (several asymmetrical meters recurring periodically), and heterometric rows (meters that do not follow any particular pattern). This paper traces some of the primary characteristics of asymmetrical meters found in Bulgarian music. It analyzes the perception of hypermeter, syncopations, and accent placement, as well as interactive metric transformations that lead to the creation of polymeter or asymmetrical megameters. The paper summarizes existing Bulgarian terminology and adapts it to the current vocabulary of Western music theory. The concepts addressed in this study provide a foundation for in-depth understanding of

complex asymmetrical meters and may serve as a starting point for future metric and rhythmic analyses of Western and non-Western repertoires involving asymmetrical meters.

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