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*Music Theory Southeast*

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# Abstracts

## Session 1: Popular Music

"Textual Norms and Deformations in Beatles' Bridge Sections 1963–7"

*David Heetderks (Oberlin College Conservatory)*
*Aleksander Ferlazzo (Fort Myers, FL)*

When identifying the key characteristics of verses, choruses, and bridges, scholars of form in rock identify musical elements such as sectional layout, harmony, hypermeter, melodic/harmonic divorce, and so forth. By contrast, little attention has been paid to textual features of these sections, such as scansion and rhyme frequency. Our presentation shows that recurring types of textual contrast occur in verse and bridge sections in songs of the Beatles from 1963 to 1967. Verse sections are more likely to have irregular scansion, more frequent rhyme, and internal hypermetric elisions, while bridge sections are more likely to have regular scansion, less frequent rhyme, and regular hypermeter. These contrasting features form a robust norm in the Beatles' music, providing a vivid context for songs that thwart expectations for expressive purposes. "Doctor Robert," for example, sets itself up as a regular bridge in its scansion and hypermeter, but then thwarts expectations through texture, harmony, and its text in order to create an expectation for a completion that is never explicitly realized. The bridge of "Yes It Is" departs from its expected pattern of rhyme, scansion, and hypermeter at the same moment that the lead singer turns away from discussion of future happiness to his discussion of present obsession, highlighting his complex psychological state. Our study shows that, in Beatles music, textual patterns of scansion and rhyme play a significant role in defining formal functions of different sections and constructing songs' vocal personae.

"Defining Phrases in Popular Music"

*Jeremy M. Robins (Florida State University)*

Phrases in common-practice music are traditionally defined by harmonic processes, particularly goal-directed progressions to tonic. In popular music, however, harmonic motion toward a tonic is not always present, making traditional approaches to phrase segmentation problematic. This paper presents a methodology for phrase identification using melodic activity that can be applied to a broad spectrum of popular music.

Inconsistency in methodology between scholars highlights the analytical challenge of phrase segmentation in popular music. Applying the three primary criteria cited by scholars–unified melodic activity, goal-directed motion, and vocal breath/rest–can result in conflicting segmentations for the same musical excerpt. My methodology delineates phrases by melodic

activity, specifically repetition and contrast between short subphrases, and is modeled after phrase-structure research by Caplin (1998), Callahan (2013), and Richards (2016). Resulting common phrase paradigms include various sentence types, repeated subphrases, and rotated subphrases. Composite structures include periods, double periods, repeated phrases, modified repeated phrases, and rotated phrases.

The primary goal of this research is to provide a systematic method that lacks ambiguity or ad hoc parameters for phrase segmentation. This approach provides consistent results, and is particularly useful for addressing the interaction of melodic and lyrical closure, particularly when closure is ambiguous in either element. Additionally, this approach allows for a detailed consideration of phrase structures across the variety of popular music styles, and opens the door to research into the interaction of phrase structure and larger formal units.

### "Reinterpretation as Cultural Practice: Defining the Cover Song Continuum"

*Evan Ware (Georgia State University)*

The website SecondHandSongs counts nearly 300,000 covers from any linguistic or cultural origin. By their own admission, this is likely a vast underestimation. If this points to anything, it is that cover songs are an unquestionably important medium of cultural expression in popular music around the globe. Yet, outside of analyses focused on individual original-cover pairings, scholarship has paid little attention to the overall cultural practice of covering.
In this paper, I suggest a possible way forward by advancing a theory that sees originals as "strategies," or institutional forces, which artists use, adapt, and resist through the individual creative decisions—or tactics—made in the creation new versions. These decisions can be thought to lie on a continuum where similarity (isomorphism) and difference (metamorphism) are plotted against each other. Thus, they are construed as co-productive aspects of interpretation; a tactic will always result in both likeness and contrast, albeit in differing proportions. By understanding these proportions in each tactic across the whole cover, specific observations about how the artist's interpretation of the song can be advanced. The Eagles of Death Metal's version of "Save A Prayer" (2015), originally by Duran Duran (1982), serves as a case study. By examining pronunciation, production, lyrics, performance, genre, register, harmony, counterpoint, and timbre, I argue that the cover band's interpretation is deliberately resistant to the original in order to create new meanings more more in line with their identity.

## Session 2: Complementary Ideas

### "A New Approach to the Analysis of Timbre"

*Megan Lavengood (The Graduate Center, CUNY)*

I establish a methodology for timbre analysis that integrates close examination of spectrograms with perceptualization and culture studies. I identify several acoustical attributes that contribute to our perception of particular timbres and demonstrate how they are recognized in a spectrogram. I then augment this analysis through socio-cultural analysis of the same timbres.

I present my methodology through a case study, wherein I illuminate the relationship between timbre and instrumentation Analyzing many 1980s singles—such as "Do They Know It's

Christmas?" by Band Aid, "What's Love Got to Do with It?" by Tina Turner, and "Axel F" (Beverly Hills Cop theme) by Harold Faltermeyer—I categorize instruments used in a given track as either a) core sounds, which articulate structural aspects of pitch and rhythm of the song, b) novelty sounds, used primarily for coloristic effects, or c) melody sounds, which function as a voice does. Next, I establish timbral norms associated with each of these instrumentational categories, idiomatic to 1980s popular music. I extrapolate certain timbral attributes that allow a sound to function as core or novelty in 1980s pop. Outside of mainstream pop, notably in heterodox genres like hip hop, or in sci-fi soundtracks, the norms of core vs. novelty can be flipped. I proceed from a technical analysis of timbre, but above all, I advocate merging perceptualization and acoustics to approach a fuller understanding of timbre.

"Sounds of the Cosmos: A Transformational Approach to Gesture in Shō Performance"
*Toru Momii (Columbia University)*

This paper incorporates the physical gestures of performing the shō—a free-reed mouth organ—into an analysis of its aitakē—five- to six-note pitch clusters played by the shō—to explore the relationship between performance practice and modal theory in gagaku. I demonstrate that the idiosyncratic arrangement of the pipes on the shō is closely related to the pitch structure and tonal function of the aitakē.

My analysis synthesizes two approaches. First, I adopt David Lewin's transformational attitude (1987) to focus on the processes of motion enacted by the tē-utsuri— standardized finger movements for shifting between two aitakē—rather than conceptualize the aitakē as static harmonic entities. Second, I treat the aitakē as sonic byproducts of a performer's instrumental gestures to examine how each of the aitakē are related to one another kinesthetically, and whether these relationships correlate with the pitch structures of the aitakē.

Relatedness between aitakē is determined by the parsimony of the tē-utsuri. I demonstrate that the most parsimonious movements can be enacted between four aitakē: bō, kotsu, ichi and otsu. These aitakē are identical to the clusters that accompany the fundamental tones of five of the six modes: Ichikotsu-chō, Hyōjō, Taishiki-chō, Ōshiki-chō and Banshiki-chō. These findings demonstrate that the pipes of the shō, while seemingly arranged in no discernable order, prioritize parsimonious tē-utsuri between each of the aitakē accompanying the fundamental modal degrees. An analysis of the pitch structure of aitakē through tē-utsuri reveals a striking correlation between gestural parsimony and tonal function.

"Expanding CUP-Space: Combinatorial Extensions of the Complement Union Property"
*Pete Smucker (Stetson University)*

This paper develops analytical extensions of the Complement Union Property (CUP) based on expanded considerations of pitch-class set and set-class (SC) combinations. Robert Morris (1990) develops the property of a SC as having CUP when two disjoint SCs combine, and the union of these two disjoint SCs will always produce the initial SC. Recent scholarship applies CUP to analytical contexts often referred to as "CUP-

Space," Many of which focus on the music of Elliott Carter (Childs 2006; Capuzzo 1999, 2004, 2012; Roeder 2009; Jenkins 2010; and Smucker 2015). After an initial analytical example, I define SCs having the CUP property within the context of a larger family of set combinations. An examination of various subsets of SCs with CUP reveals that two main families of combinations emerge. I call the primary CUP combinations alpha-combinations ($CUP^{\alpha}$) and secondary combinations beta-combinations ($CUP^{\beta}$).

I further demonstrate three aspects of these SC combinations. The first divides combinations into permeable sets (with at least one $CUP^{\beta}$), and impermeable sets (those without $CUP^{\beta}$). The second aspect examines the property that only one SC subset of the primary $CUP^{\alpha}$ combination can provide $CUP^{\beta}$ combinations, while the third aspect involves sets with more than one $CUP^{\beta}$ possibility. My primary focus for analysis involves $CUP^{\beta}$ combinations, which are sometimes overlooked in favor of primary $CUP^{\alpha}$ combinations. I conclude the paper by considering analytical applications of $CUP^{\beta}$ combinations in two musical excerpts of recent compositions: Elliott Carter's Duettino (2008) and String Trio (2011).

## Session 3: Form

### "Forms of Dialogue in the First Movement of Mahler's Tenth Symphony"

*Eric Hogrefe (University of Louisville)*

This paper offers a model for viewing form in Mahler's Tenth Symphony that combines Hepokoski and Darcy's dialogic perspective with the four master tropes: metaphor, metonymy, synecdoche, and irony. Steven Vande Moortele, Julian Horton, and others have considered the ways that dialogic form might operate after the eighteenth-century. To this I add the theory of tropes as a way of clarifying what kinds of dialogue are possible. Specifically, I combine the four tropes with three types of dialogue for Romantic form (after Vande Moortele): a given piece can dialogue with (1) codified eighteenth-century formal categories, (2) a nineteenth-century seconda practtica, or (3) a precedent from the composer's own practice. Combining tropes with these dialogic possibilities creates twelve possible kinds of formal dialogue. I show how Mahler's movement is better seen as acting out a conflict between irony and metaphor, than as an amalgam of various dialogic precedents.

### "The Generative Contradiction of Interruption and its Effect on Recapitulations"

*Nathan Pell (The Graduate Center, CUNY)*

The sensations produced by recapitulations are of a very particular kind. Here, with the development's watershed events fresh in the mind, the piece both regroups and redoubles its efforts towards the goal—a static repetition and an energizing impulse. I propose that these compositional elements are best explained by an almost unexplored feature of Schenkerian interruption.

Despite its cornerstone status in Schenker's theory, interruption has proved puzzling, even for Schenkerians, because it contains a fundamental structural problem: namely, a prolongational conflict between $\hat{2}$ and $\hat{3}$. I call this the Generative Contradiction of Interruption. Schenker emphasizes that the first $^{2}_{V}$ represents the structural dominant of V the Ursatz. But he also claims that "the first $\hat{3}$, which is the Kopfton of the total Urlinie $\hat{3}$-$\hat{1}$...is taken up again by the second $\hat{3}$, as Kopfton of the resumed linear progression...." The combination of these two principles amounts to a prolongational impossibility: the Kopfton cannot be both retained and subordinated.

And yet, quite remarkably, for several key musical—and Schenkerian—principles to hold true (which I explore in detail), such a contradiction must exist. Thus, in my view the Kopfton is prolonged through the interruption, even after the structural $\hat{2}$ has sounded! This is the Generative Contradiction of Interruption. Schenker was well aware of this contradiction, calling it "an invaluable source of compositional technique." Indeed, I show how this "technique" finds potent application in recapitulations, where it imparts a unique quality: that of returning us to the beginning, even as we approach the end.

## Session 4: Meter

"Meter Without Levels"
*Peter Selinsky (Yale University)*

Hierarchical theories of non-isochronous meter have consistently required that metric levels be categorically distinct (i.e. that a given operant metric span appears at precisely one level). Although justified on both structural and psychological grounds, this requirement creates a variety of analytical challenges, which artificially eliminate many otherwise-valid metric interpretations. As metric cycles increase in size, these challenges compound and routinely force non-intuitive analyses. Recent authors have begun to address local confusions of non-isochronous levels, but their theoretical remedies offer only case-specific exceptions rather than generalizable solutions. In this paper, I build on their work by problematizing the requirement for categorical levels in a broad range of non-isochronous musical settings, and then I critique a common procedure for generating non-isochronous hierarchies.

To overcome the analytical insensitivities of previous formalizations, I propose a graph theoretically delimited "span-adjacency" method for generating non-isochronous hierarchical structure, which removes the requirement for metric levels. To do so, I build a set of span-to-span edge relations and show that levels can be formally defined as special cycles of these edge relations. Contextualized in this way, levels are a common result of, rather than requirement for, hierarchical structure. In support, I offer analyses of the Mahavishnu Orchestra's "Birds of Fire" and Dave Brubeck's "Blue Rondo à la Turk."

"Redirecting Temporal Flow: Brief Meter Changes in German Lieder"
*Wing Lau (University of Arkansas)*

A brief change of meter, usually spanning less than six measures, is a commonly used compositional technique in the nineteenth-century German lieder. My paper provides three

archetypes of such brief meter changes in the lieder by Schubert, Schumann, and Brahms. I investigate each composer's approach to brief meter changes and show how the insertion of new time signature redirects the temporal flow, relates to the text-meaning, and yields flexibility in performance.

The three archetypes of meter changes produce distinct effects: (1) Recitative- like metric fluctuation. Schubert and Brahms often explore this effect but in very different ways. (2) End-lengthening, which can generate rhetorical pauses or paint a textual tension. This effect is most common in Brahms's lieder, although few examples are found in Schumann's lieder. (3) Change of perceived tempo at a coda or transition, usually enhanced by other surface events such as key changes and text repetitions. This effect is often used by Schumann and Brahms.

Building on Lau's classification of meter changes, Krebs's metric dissonances, and Malin's declamatory schema, my study shows that Brahms explores more of the different facets of brief meter changes among the three composers, possibly building on Schubert and Schumann's experiments. By tracing the different approaches and providing an analytical framework for brief meter changes of these three composers, my study provides tools for further investigation of brief meter changes in other genres.

## Session 5: Empirical Methods

### "A Machine Learning Approach to Modality and Genre in Early Music"

*Daniel C. Tompkins (Florida State University)*

This paper presents a corpus study that identifies the number of statistically dis:nct modes used in sacred and secular genres from 1400-1750. Corpora used for the study include Masses, motets, and secular songs from the Franco-Flemish School, works by Palestrina, secular Italian songs with alfabeto guitar tablature from the early seventeenth century, and works by J.S. Bach. K-means clustering of key profiles are used to determine the number of distinguishable modes in each corpus. The results of this study show that the number of modes present in a corpus depends not only on date of publication but also on the genre of a composition. Secular genres are more likely to cluster into two modes while sacred genres cluster into several modes. This paper also explores the differences between systems of notation and musical practice and suggests other ways in which machine learning techniques can be in dialogue with the study of harmonic practice in early music.

### "Specific Correlations Between Abilities in Mathematics and Music Theory"

*Nancy Rogers (Florida State University, College of Music)*
*Jane Clendinning (Florida State University, College of Music)*
*Colleen Ganley (Florida State University, Department of Psychology)*
*Sara Hart (Florida State University, Department of Psychology)*

Music theory teachers often observe that students who report great difficulty learning mathematics also find music theory especially challenging. This is not surprising: positive correlations between mathematical and musical abilities have been widely documented, although most research compares musicians with non-musicians, and the musical focus tends to be on performance. The notable exceptions are Bahna-James

(1991), Harrison (1990a, 1990b, 1996), and Rogers & Clendinning (2015), all of whom demonstrated correlations between students' mathematical abilities and their performance in music theory courses.

The precise nature of a math/music link is unclear, but evidence indicates that the association is probably not causal. Rather, shared etiological factors may underlie success in both fields. Two main sources have recently been highlighted: cognitive processing factors (e.g., spatial reasoning) and affective factors (e.g., anxiety). Rather than relying solely on broad measures such as standardized exams, our study investigates specific abilities that may contribute to success in both mathematics and music. We administered a battery of specific tests to trained musicians during the initial week of a first-semester music theory course, assessing basic numeracy, spatial skills, pattern recognition, and anxiety and confidence. We observed numerous positive correlations between mathematical/spatial skills and music theory performance. There were also significant positive correlations between confidence in both fields and performance in music theory classes, and corresponding negative correlations between anxiety in both fields and performance in music theory classes. We believe our results clarify some components of the oft-cited connection between mathematics and music.

## Session 6: Contemporary Music

### "Pitch, Form, and Time in Two Works by Henri Dutilleux"

*Robert A. Baker (The Catholic University of America)*

Henri Dutilleux described his croissance progressive (progressive growth) technique as a process in which "thematic elements" undergo gradual development such that by the end of the work, they "reach their definitive form" (Potter, 1997, 60/64). But this directional quality is thrown into question by some works whose main element from the beginning also appears at the end, suggesting, as Dutilleux stated, "a notion of time as circular" (Nichols, 1994, 89). In this paper, I consider the string quartet, Ainsi la nuit (1976), and Mystère de l'instant for cimbalom, percussion and strings (1989), to show a broader conceptualization of the progressive growth technique in two ways. First, tendencies toward pitch and harmonic development are shown within and between these two compositions, reflecting Dutilleux's interest in writings by Proust and Jankélévitch. Second, temporally proportional analyses of selected movements suggest a striking connection to the Boulezian conceptions of smooth and striated musical time, in a highly idiosyncratic way: goal-oriented formal locations are consistently signified by a disruption or negation of metered subdivision and coordination between parts. To more fully realize the implications of this Boulezian connection, I suggest a new way of conceptualizing Dutilleux's forms in relation to Deleuzian theories on Chronos versus Aion, the undivided extended present versus a durationless instant separating past and future. In conclusion, I argue that the progressive growth technique can be understood to operate beyond conventional pitch and rhythm relationships, carrying deeper connections on levels of musical time and form.

## “Strategic Functions of Gesture in the Music of Sciarrino and Gubaidulina”

*Sara Everson (Florida State University)*

The music of Sofia Gubaidulina, Salvatore Sciarrino, and other members of the post-serial avant-garde is poorly served by existing analytical methodologies because of the high degree of repetition, the subtlety of formal schemes, the intermixture of aleatoric and through-composed elements, and the use of tonal structures without tonal roots. Elements such as timbre, dynamics, and texture are the primary vehicles by which this music undergoes change. Using extensions of Hatten’s theory of gesture (2004), and elements of phenomenological and associative analysis drawn from Lochhead (1992, 2015), Hanninen (2010), and Margulis (2014), this paper shows how the interaction between expressive gestures shapes the larger-scale organization in post-serial avant-garde works.

I demonstrate gesture-based analyses of Sciarrino’s String Quartet No. 7 (1999–2000) and Sofia Gubaidulina’s Duo Sonata for Two Bassoons (1978), two pieces that feature a high degree of repetition. I employ the gesture types as described by Hatten: dialogical, rhetorical, and thematic, and show how gestures operate as expressive agents in order to effect the musical discourse throughout a work. By prioritizing the expressive elements, extending Hatten’s theory of gesture, and drawing from phenomenology and associative analysis, I show how these works are defined by their constituent gestures and how literal repetitions of pitch, motivic material, and silence acquire new meaning.

## “Power Relations in Adès’s Asyla”

*Richard Lee (Florida State University)*

I interpret Thomas Adès’s Asyla as an ironic tragedy that emerges through the interaction of fictional composer agencies, defined by Monahan (2013) as “the person postulated by the analyst as the controlling, intending author of the musical text.” In Asyla, fictional Adès struggles for control, yet loses his compositional voice by the conclusion because of interference from other fictional composers. To supplement this interpretation, Foucault’s conceptualizations of power and panopticism assist the analyst in understanding this power struggle between fictional composers.

A pastoral setting in movement I contains a horn theme that outlines a chromatic trichord 3–1 that is articulated at strategic moments, rendering a dysphoric pastoral topic that sets Asyla’s tragedy in motion. Movement II’s theme composes out 3–1 in a lamenting ricercar that saturates the texture with pianto topics to the point of dysphoric plenitude. Movement III, “Ecstasio,” marks electronic dance music against the unmarked context of orchestral music, and that markedness correlates with additional interpretations of fictional Adès’s power. Other “power plays” involve the increased frequency of “irrational meters” (a signifier for fictional Adès) and the splintering of the ensemble during the work’s climax. In movement IV (the final movement), intertextual references to other composers tragically cause fictional Adès to lose his compositional voice in his own musical discourse in this ironic struggle for a Foucauldian panoptic power—a struggle that has implications beyond the power relations implicit in the title, Asyla.

## Session 7: Topics and Narrative

### "Untangling Multi-Stranded Musical Narratives"
*Judith Ofcarcik (Fort Hays State University)*

Musical multi-narratives present an intriguing possibility for analysts. Soldofsky's concept "bifurcated narrative," developed to analyze modernist poetry, refers to narratives with two strands; one of the strands is primary and one is secondary. In this presentation, I will provide a reading of Alfred Schnittke's Concerto Grosso no. 1 as a bifurcated narrative. This multi-stranded analysis of Schnittke's Concerto Grosso no. 1 is an early yet important step towards a comprehensive theory of musical multi-narratives, as it raises essential questions about these narrative types. For instance, in multi-narratives in literature and film, narrative strands are typically distinguished by characters. Are characters necessary in musical multi-narratives, and if so, how are musical characters created? Also, are all two-stranded narratives either aggregate or bifurcated, or is there a separate category that includes narratives with sub-plots that do not appear to relate to the primary narrative? Addressing these questions will deepen our understanding of musical multi-narratives, as well as musical narrativity in general, and open up exciting new areas for future exploration.

### "Musical Topics in American Musical Theatre: Two Interpretive Models"
*Gregory Decker (Bowling Green State University)*

### "Beethoven's Middle Earth: Hearing Film Music Topics in Music of the Long Eighteenth Century"
*Janet Bourne (Bates College)*

While some scholars assume modern listeners recognize eighteenth-century topics, others remain skeptical. Film music provides a context where modern listeners hear topics similar to those in 18th-century/early-19th-century Western music—like the pastoral topic in Lord of the
Rings resembles Beethoven's Pastoral. I argue that certain 21st-century listeners unconsciously use associations learned from film music topics to create narratives when listening to Western common-practice repertoire (despite anachronistic "inappropriateness"). I demonstrate that listeners, as active agents, perceive these associations by making analogies from film-versions to common-practice-versions of the same topic. This paper presents a cognitively-informed framework of analogy that I use, along with topics and form, to create different narrative analyses of Beethoven's op. 26/iii, which depend on listener experience. Building on research in topic theory (Monelle 2006) and meaning in multimedia (Tagg and Clarida 2003), I analyze two topics in both film and Western common-practice music: pastoral and march. Based on 19-22 examples from films between 1970-2013, I analyze how these topics function in film as well as common associations based on imagery, character emotions, and narrative contexts. Then, I analyze how features of film music topics compare to past 18th-century versions (e.g. how "film" pastoral compares to "common-practice" pastoral). Using associations determined by the corpus and drawing on analogy research (Gentner 1983), I describe narrative implications for listeners analogizing to film music. This interdisciplinary project recognizes listeners as active agents and

how past musical experience alters perception; when concert halls cannot escape movie theaters.

## Keynote Address

“On the Science of the Sublime: How Music Takes Your Breath Away.”
*David Huron (The Ohio State University)*

Abstract: Most music listening is enjoyable. However, on occasion, the experience of listening to music evokes transcendent feelings: the music may give you goosebumps, bring tears to your eyes, make you feel “choked up,” or “take your breath away.” These experiences are so familiar that we don’t recognize their peculiarity. Instead of giving us goosebumps, why doesn’t music make us blush? Instead of holding our breath, why don’t we clench our teeth? Instead of causing a constriction in your throat, why don’t we constrict our nostrils? Rather than bringing tears to our eyes, why doesn’t music make us drool instead? In short, why goosebumps, breath-holding, constricted pharynx and watery eyes, instead of blushing, clenched teeth, pinched nostrils, drooling — or hundreds of other possibilities? In this presentation I describe a comprehensive theory that aims to account for such peculiar physiological responses. I review pertinent physiological, neurological, behavioral, and music-analytic research, and offer an account that explains why these unusual responses can be so enjoyable