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Recent Rhythmic Research in North American Music Theory

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As noted in London (2001), much current work in rhythmic theory and analysis can be traced back to Lerdahl and Jackendoff's A Generative Theory of Tonal Music (also known as "GTTM", 1983) and / or Carl Schachter's three important articles on rhythm and meter in The Music Forum (1976, 1980, 1987). While this is still largely true, several new areas of rhythmic interest have emerged. As is so often the case, these new areas follow the broader trends of current music-theoretic research. Thus, we find rhythmic theory and analysis: (a) allied to Neo-Riemannian theory, as well as other formal (i.e., computational) models, (b) directed to the analysis of non-western and popular music, (c) featured in various studies of the "history of theory", and (d) prominent in various analytical studies, especially with respect to the music of Bartók, Stravinsky, and minimalist composers. Lastly, some recent work, most notably Hasty (1997), draws on philosophical discussions of time and temporality in framing its approach to musical rhythm.

It goes without saying that many works occupy more than one category of rhythmic theory or analysis. Thus, for example, Temperly (2001), while grounded on the GTTM model, also examines popular and non-western musics, musical style and musical schemata, and analyzes a broad range of Western art music. Below I will briefly list contributions in each of these areas; readers interested in more details on each may find abstracts readily available, for the most part, in online sources such as RILM and Dissertation Abstracts Online. I have focused on work published in mainstream English-language music theory journals in the last decade; a more comprehensive survey would also include journals in psychology, computer music, new music / composition, ethnomusicology, aesthetics, and so forth. Overviews of earlier research may be found in London (2001, 2002).

Extensions of the *GTTM* Rhythmic Models

First and foremost here is Lerdahl's own Tonal Pitch Space (2001). While mainly interested in aspects of tonal prolongation – the "stability conditions" for tonal relationships – this volume also includes further thoughts on rhythm and meter. Temperly (2001) develops a computational model for various aspects of GTTM's (as well as his own) preference rules, including those for rhythm and meter. Several recent dissertations explore other

aspects of the GTTM project, including Dodson (2002) on hypermetric transformation, Margulis (2003) on melodic expectation, and Ito (2004) on impulse structure. London (2004) is also heavily indebted to the metric well-formedness rules laid out in GTTM.

Rhythm in Schenkerian Theory and Analysis

Schachter himself has not been idle since his last Music Forum publication; his "The Triad as Place and Action" (1995) contains additional observations on rhythm and rhythmic conflict. Likewise many of the discussions of metric "dissonance" noted below have strong affinities with Schenkerian tonal analysis. Willner (1999, 2005) has explored phrase rhythm in Baroque music, especially the music of Händel, while Samarotto (1999a, 1999b) has dealt with rhythmic irregularity and "temporal plasticity", especially in the music of Beethoven, and both theorists work within a broader Schenkerian framework for formal and tonal structure.

Neo-Riemannian Theory, Formal Models

Richard Cohn's work has been at the epicenter of the "Neo-Riemannian School" of music theorists. While Neo-Riemannians have been mainly concerned with harmonic and tonal theory, Cohn (2001) uses "ski hill diagrams" to look at the relationships between metric levels, a temporal analog or "zeitnetz" to the "tonnetz" representations of tonal relationships. Formalized accounts of duration have been posited by Agmon (1997) and Pearsall (1995), while Roeder (1995) proposes a formalized "calculus of accent".

Perception and Cognition

A concern with the psychological aspects of rhythm and meter can be found in many recent studies, as much of work following the GTTM model involves empirical research as a primary or secondary source, as does Hasty (1997). Epstein (1995) is a wide-ranging and highly speculative study of the neurobiological bases for our sense of tempo and tempo preferences. London (2004) explicitly incorporates empirical research in its definitions of metric well-formedness; it also contains many references to recent research in rhythmic perception and cognition.

History of Music Theory

A number of theorists have addressed historical aspects of rhythm and meter, that is, either (a) the theory and analysis of rhythm in pre-tonal music, or (b) the work of theorists who address the rhythm of common-practice period music prior to the 20th century. In the former category, Boone (1999, 2000) has explored mensural time and text-music relationships in Dufay, while Maw (2004) examines meter in Machaut. In the latter

category, Arlin (2000) looks at Fétis's theories of meter and metric change, while Dogantan (1997) considers Lussy's account of musical expression.

Theory and Analysis of Popular and Non-Western Music

One of the most rapidly growing areas of rhythmic theory and analysis involves examination of musical repertoire beyond the canon of Western art music. Agawu (1987, 1995, 2003) has urged for serious consideration of non-western rhythm using all of the analytical tools available, and this has been taken up by McLachlan (2000) and Temperly (2000, 2001), with respect to the metric structure of North African Music, as well as Clayton (2000), with respect to the North Indian Raga. Similarly, Butler (2001, 2003) and Hughes (2003) have given careful scrutiny to the rhythmic and metric structure of electronic dance music and the music of Stevie Wonder, respectively.

Metric Dissonance and other Analytical Projects

Much attention has been paid in recent years to the notion of metric "dissonance," Krebs in his Fantasy Pieces (1999) – an examination of metric conflict and dissonance in Schumann – which is an extension of his seminal paper on metric dissonance (Krebs 1987). Krebs's work has inspired Grave's (1995) exploration of metric dissonance in Haydn, analyses by Leong (1999) and Roeder (2001) of Bartók, Smith (2001) on metrical displacement in Brahms, and Malin's recent (2003) dissertation on metric dissonance in the German lied. Rhythmic aspects of twentieth-century music, especially where there is a highly saturated rhythmic / metric texture, has also received attention, as in Horlacher's studies of Bartók and Stravinsky (2001a, 2001b), Callender (2001) on Nancarrow, and Roeder on Reich and Torke (2003a, 2003b).

Temporal Theory

Hasty's Meter as Rhythm (1997) is a broad ranging study that encompasses the history of rhythmic and metric theory, research in music perception, and post-tonal meter. Its central topic, though, is a theory of meter as temporal process. Antecedents to Hasty's work include Lochhead (1989–90) and Kramer (1988). Morris (2002) is a reply to Hasty.

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