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Jesse Stewart

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Résumé de l'article

Cet article analyse les structures rythmiques cycliques qui caractérisent plusieurs traditions musicales issues de la diaspora africaine en examinant les « rythmes diatoniques » et ce que Steve Coleman a nommé des « nested looping structures ». Ces structures rythmiques ne sont pas uniquement l'expression d'un patrimoine musical et culturel africain. Elles présentent également un modèle d'interprétation des continuités entre des cultures et des musiques disparates ayant des racines africaines communes qui, par ailleurs, ont été altérées dans le temps par les contacts interculturels et l'hybridité musicale. De surcroît, l'auteur soutient que les rythmes diatoniques et les « nested looping structures » permettent d'articuler des liaisons entre différentes traditions musicales diasporiques, comme le démontre, entre autres, la pratique du compositeur et saxophoniste Steve Coleman au sein du groupe Metrics.

Articulating the African Diaspora through Rhythm

Diatonic Patterns, Nested Looping Structures, and the Music of Steve Coleman

Jesse Stewart

This essay examines rhythmic concepts associated with the African diaspora. The first section provides an overview and general introduction to the concept of cyclical rhythm, focusing in particular on "diatonic patterns" and nested rhythms. I argue that such rhythmic structures can be fruitfully regarded not only as retentions of African musical and cultural heritage, but also as a way of theorizing the threads of continuity that exist between many of the disparate musics and cultures that have shared African roots, but have been radically altered by the passage of time, musical hybridity, and cross-cultural contact. Using the music of composer and saxophonist Steve Coleman as a case study, the second part of this essay examines some ways through which nested looping structures facilitate and articulate intercultural connections between different diasporic musical traditions, offering what might be seen as a creative response to the diasporic condition itself.

The Grooves That Make Us Move: Cyclicity, Time Lines, and Maximal Evenness

As both a researcher and drummer, I have often wondered if certain rhythmic patterns are inherently groove-oriented, encouraging bodily connections and responses to the music (in the form of dancing, toe tapping, head swaying, etc.) more readily than others. Of course, a sense of groove depends a great deal on performance practice as well as on a range of individually and culturally-determined aesthetic factors. But personal experience and a growing body of

musical research suggest that some rhythmic patterns do indeed groove more than others.[1]

Consider the image in Fig. 1 which represents a cyclical eight-pulse framework. Along with cycles of twelve and sixteen pulses, this is one of the most common cyclical rhythmic frameworks in the world.

If we cluster four sounded pulses next to one another within this eight-pulse cycle, we end up with the time cycle represented in Fig. 2.

Beginning in the 12 o'clock position and traveling in a clockwise direction around the diagram, we end up with a rhythm that can be notated as (✓ ∞ ✓ ∞ ≤ ≤). To my ears, this is not particularly groove-oriented—the clustering of the sounded pulses creates a stilted rhythm that does not lead the ear, or the body, through the time cycle. This problem can be alleviated if we spread out the sounded pulses as evenly as possible within the cycle as shown in Fig. 3.

This rhythm, which we can notate as a steady quarter note pulse (± ± ± ±), is maximally even. That is to say, the sounded pulses are spread out as much as possible within the cycle. In addition to yielding a variety of compelling musical time structures, the quality of maximal evenness—spreading out as much as

1. Included among the growing body of academic literature on the notion of groove are John Brownell, *The Changing Same: Asymmetry and Rhythmic Structure in Repetitive Idioms*, Ph.D. dissertation, Toronto, York University, 2002; Mark J. Butler, *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music*, Bloomington, Indiana University Press, 2006; Mark Doffman, "Making It Groove! Entrainment, Participation and Discrepancy in the 'Conversation' of a Jazz Trio," *Language & History*, vol. 52, n° 1, May 2009, p. 130-147; Vijay Iyer, "Embodied Mind, Situated Cognition, and Expressive Microtiming in African-American Music," *Music Perception*, vol. 19, n° 3, Spring 2002, p. 387-414; Vijay Iver, "Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West African and African-American Musics," Ph.D. dissertation, Berkeley, University of California, 1998; Charles Keil, "Motion and Feeling Through Music," *Journal of Aesthetics and Art Criticism*, vol. 24, n° 3, Spring 1966, p. 337-349; Charles Keil, "Participatory Discrepancies and the Power of Music," *Cultural Anthropology*, vol. 2, n° 3, August 1987, p. 275-283; Charles Keil and Steven Feld, *Music Grooves: Essays and Dialogues*, Chicago, University of Chicago Press, 1994; Guy Madison, "Experiencing Groove Induced by Music: Consistency and Phenomenology," *Music Perception*, vol. 24, n° 2, December 2006, p. 201-208; Ingrid Monson, "Riffs, Repetition, and Theories of Globalization," *Ethnomusicology*, vol. 43, n° 1, Winter 1999, p. 31-65; Jeff Pressing, "Black Atlantic Rhythm: Its Computational and Transcultural Foundations," *Music Perception*, vol. 19, n° 3, Spring 2002, p. 285-310; and David Temperley, "Meter and Grouping in African Music: A View from Music Theory," *Ethnomusicology*, vol. 44, n° 1, Winter 2000, p. 65-96.

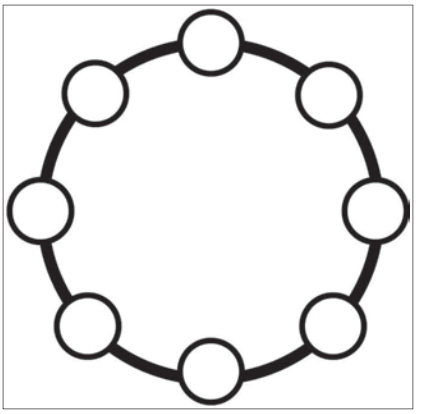

Fig. 1

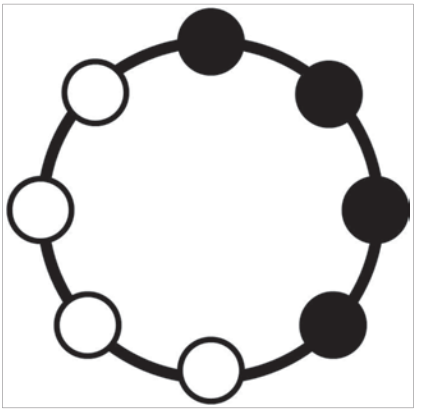

Fig. 2

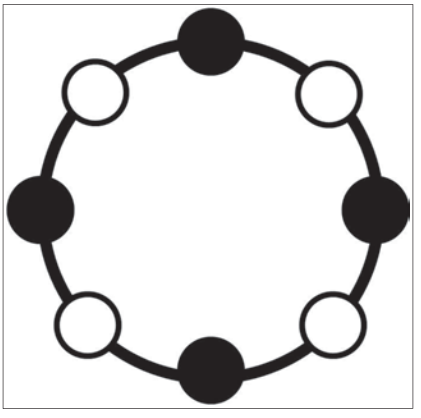

Fig. 3

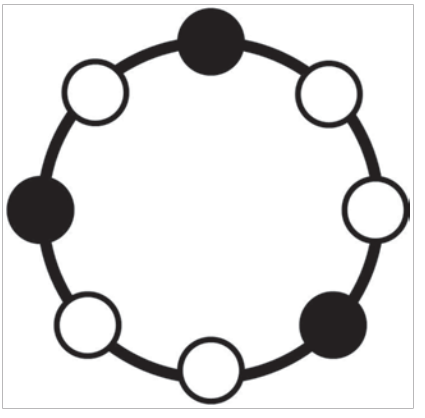

Fig. 4

possible—provides a point of connection with many natural phenomena ranging from the distribution of electrons in atomic shells to the many plant species that distribute their leaves as evenly as possible around a central stalk, thereby maximizing exposure to the sun. In music, maximal evenness in temporal structures, such as the one represented in Fig. 3, contributes to a sense of groove as they are very effective at leading ears and bodies through time cycles as evidenced by the pounding quarter-note bass loops that fill dance floors on a nightly basis all over the world. However, in addition to being maximally even, this particular time cycle is maximally redundant, a function of the fact that four sounded pulses divide evenly into an eight-pulse framework when they are spread out as much as possible.

But what if the sounded pulses did not divide evenly into our eight-pulse framework? In Fig. 4, we have three sounded pulses, spread out as much as possible, within the eight-pulse cycle. Unlike the four-pulse rhythm in Fig. 3, the three sounded pulses are maximally even without being maximally redundant due to the fact that 3 is a prime number and cannot divide evenly into eight; there will always be a rhythmic remainder. This creates a dynamic asymmetry within the cycle, a sense of forward momentum and groove that tends to elicit kinesthetic responses from listeners and dancers in a wide variety of musical and cultural contexts.

Beginning at the 12 o'clock position and reading the cycle in a clockwise direction, we have the following rhythm (±. ±. ±) which we can describe as a 3-3-2 pattern (counted 1-2-3 1-2-3 1-2). This rhythm has a number of interesting properties, not the least of which is the fact that it is probably the most common dance rhythm in the world. It is particularly common among musics of the African diaspora: it forms the bell time line (or a part thereof) of numerous West African musical forms; it is a common bass-drum pattern in the "second line" drumming of New Orleans funeral marches; and we hear it in many styles of Afro-Cuban music where it is known as the *tresillo* rhythm, and forms part of the ubiquitous *son clave*.

The literature on African and African diasporic rhythm is vast, particularly with respect to rhythmic time lines in West African musical traditions. As Kofi Agawu notes, "Practically every scholar writing about West African rhythm during the last half century has taken note of time lines."[2] The term "time line" was coined in 1963 by Kwabena Nketia, who describes it as "a constant point of reference by which the phrase structure of a song as well as the linear metrical organization of phrases are guided."[3] Scholars who have contributed to the study of time lines include Willie Anku, John Miller Chernoff, Gerhard Kubik, David Locke, Jeff Pressing, Jay Rahn, David Temperley, and Godfried Toussaint.[4]

2. Kofi Agawu, "Structural Analysis or Cultural Analysis? Competing Perspectives on the 'Standard Pattern' of West African Rhythm," *Journal of the American Musicological Society*, vol. 59, nº 1, Spring 2006, p. 3.

3. Joseph Hanson Kwabena Nketia, *African Music in Ghana*, Evanston, Northwestern University Press, 1963, p. 78.

4. Willie Anku, "Circles and Time: A Theory of Structural Organization of Rhythm in African Music," *Music Theory Online*, vol. 6, 2000, www.societymusictheory.org/mto/issues/mto.00.6.1/mto.00.6.1.anku.html (last access on January 7, 2011); *Structural Set Analysis of African Music, vol. 1*: Adowa, Legon, Soundstage Production, 1992; and *Structural Set Analysis of African Music, vol. 2*: Bawa, Legon, Soundstage Production,

Agawu notes two contrasting approaches within this body of literature: a qualitative/cultural approach that examines "rhythm as a supremely temporal and complex process [seeking] its patterns in life, language, and forms of embodiment," and a quantitative/structural approach that "assign[s] numbers to elements in order to establish identity, and then exploit a series of operations (adding, dividing, and multiplying) to construct patterns of association among rhythmic elements and groups."[5] The present study draws on both approaches, using a structural analysis to theorize the cultural significance of African diasporic timeline patterns. In so doing, I am in no way trying to minimize the complexities of the African diaspora or suggesting that African diasporic music and culture can be reduced to a series of tidy circular diagrams. Rather, I use these diagrams as a means of discussing both the structural logic and cultural implications of African diasporic rhythmic concepts which have shaped modes of music making the world over.

1993. John Miller Chernoff, *African Rhythm and African Sensibility: Aesthetics and Social Action in African Musical Idioms*, Chicago, University of Chicago Press, 1979. Gerhard Kubik, "Oral Notation of Some West and Central African Time-Line Patterns," *Review of Ethnology*, vol. 3, n° 22, 1972, p. 169-176 and *Theory of African Music, vol. 1*, Wilhelmshaven, F. Noetzel, 1994. David Locke, "Africa: Ewe, Mande, Dagbamba, Shona, BaAka," in Jeff Todd Titon (ed.), *Worlds of Music: An Introduction to the Music of the World's Peoples*, London, Prentice Hall, 1996, p. 78-101 and "Principles of Offbeat Timing and Cross-Rhythm in Southern Ewe Dance Drumming," *Ethnomusicology*, vol. 26, n° 2, 1982, p. 217-246. See Pressing, 2002 and Jeff Pressing, "Cognitive Isomorphisms Between Pitch and Rhythm in World Musics: West Africa, the Balkans and Western Tonality," *Studies in Music*, vol. 17, 1983, p. 38-61. Jay Rahn, "Asymmetrical Ostinatos in Sub-Saharan Music: Time, Pitch, and Cycles Reconsidered," in *Theory Only*, vol. 9, n° 7, 1987, p. 23-28 and "Turning the Analysis Around: Africa-Derived Rhythms and Europe-Derived Music Theory," *Black Music Research Journal*, vol. 16, n° 1, Spring 1996, p. 71-89. Temperley, 2000. Godfried T. Toussaint, "Classification and Phylogenetic Analysis of African Ternary Rhythm Timelines," *Proceedings of BRIDGES: Mathematical Connections in Art, Music, and Science*, University of Granada, Granada, July 23-27 2003, p. 25-36. Extended version at www-cgrl.cs.mcgill.ca/~godfried/publications/ternary.pdf (last access on January 7, 2011) and "A Mathematical Analysis of African, Brazilian, and Cuban *Clave* Rhythms," *Proceedings of BRIDGES: Mathematical Connections in Art, Music and Science*, Townson University, Townson, Maryland, July 27-29, 2002, p. 157-168. Extended version at www-cgrl.cs.mcgill.ca/~godfried/publications/clave.pdf (last access on January 7, 2011).

5. Agawu, 2006, p. 4.

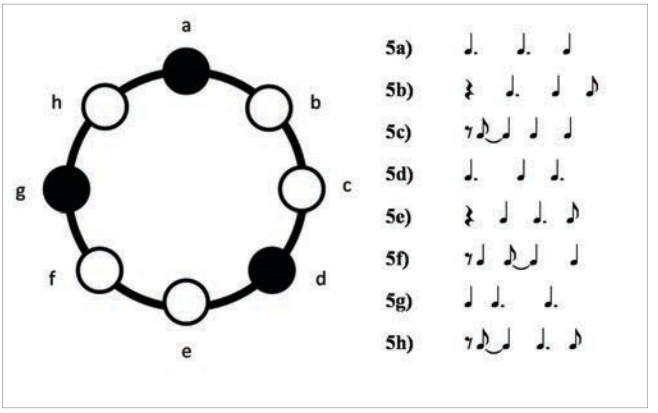

Fig. 5

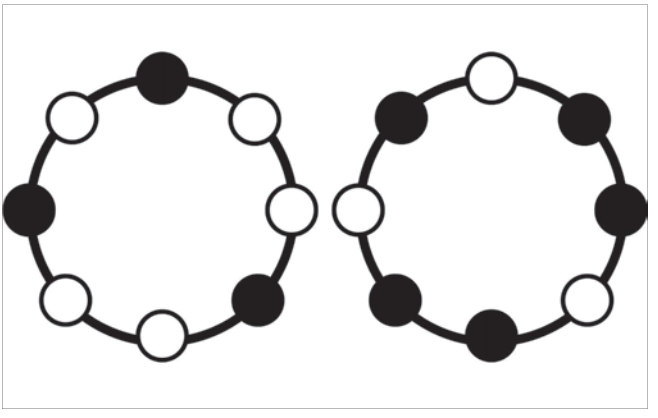

Fig. 6

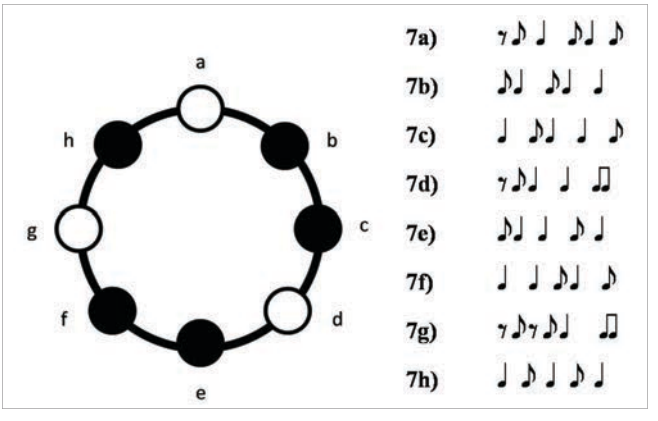

Fig. 7

DIATONIC PATTERNS, RHYTHMIC COMPLEMENTATION, AND NESTED CYCLICAL RHYTHMS

A number of music theorists[6] have applied the term "diatonic" to rhythmic patterns such as the 3-3-2 pattern pictured in Fig. 4. Normally applied to pitch, the term diatonic literally means "through or across the tones."[7] By extension, a diatonic rhythm can be defined—for the purposes of the present essay at least—as a repeating rhythmic pattern in which an odd number of sounded pulses are spread out as much as possible across the tones of an even-numbered time cycle (generally consisting of eight, twelve, or sixteen pulses). Thus, we can refer to the rhythmic pattern represented in Fig. 4 as a "3-in-8" diatonic pattern meaning that three sounded pulses are spaced as evenly as possible within an eight-pulse framework. Other syncopated rhythms are encoded within this cycle as well, as shown in Fig. 5.

Beginning at different time-points within the cycle yields the eight different rhythms labeled 5a) through 5h), all phase transpositions of one another—rotations of the time cycle. Rhythms 5b) through 5h) may not be as common as the 3-3-2 pattern notated in 5a), but these phase transpositions are amply represented in numerous musics with roots in the African diaspora. Jazz drummers, for example, routinely employ these rhythms and variations thereof in "comping" patterns: syncopated rhythms played on the snare drum, bass drum, and/or hi-hat that cut across the flow of time articulated by the ride cymbal rhythm, marking the time and complementing the melodic lines of a soloist.

If the sounded pulses within a time cycle are maximally even, it stands to reason that the non-sounded pulses separating them are also maximally even. This is another interesting feature of the "3-in-8" diatonic rhythm: its rhythmic complement, comprising of the five non-sounded pulses, also forms a diatonic pattern. Fig. 6 shows how the two diagrams complement one another.

The diagram on the right represents a "5-in-8 diatonic pattern." Just as there were multiple rhythms encoded within the "3-in-8" diatonic pattern, there are

6. Brownell, 2002; Rahn 1987 and 1996.

7. In an influential essay, Jeff Pressing discusses what he terms "cognitive isomorphisms" between rhythm and pitch structures, including several diatonic patterns, drawn from various world cultures. Particularly intriguing is his observation that the durational values in the so-called "standard pattern" in many West African musics, a recursive bell time line which can be represented numerically as 2-2-1-2-2-2-1, is equivalent to the relationship between tones and semi-tones in the Western major scale which can similarly be expressed as 2-2-1-2-2-2-1. Both patterns are diatonic, although Pressing does not use this term as I use it here. See Pressing, 1983.

multiple rhythms encoded within this cycle if we begin on different time-points, as shown in Fig. 7.

The rhythms labeled 7a) through 7h) are all phase transpositions of the same underlying diatonic pattern. Once again, these rhythms are amply represented among musics of the African diaspora. For example, the rhythm labeled 7h) (± Ä ± Ä ±) is prominent in Haitian music and in many styles of Afro-Cuban music wherein it is referred to as the *cinquillo* rhythm. Note how this rhythm is related to the *tresillo* rhythm discussed above: *cinquillo* is a phase transposition of the rhythmic complement of *tresillo*.

The relationships between these diatonic patterns are not just theoretical abstractions. These rhythms are fundamentally linked with one another in performance practice as well. For example, drummers routinely juxtapose variations of the "3-in-8" and "5-and-8" diatonic patterns through right and left hand complementation. That is, when one hand plays a "3-in-8" diatonic pattern, the other hand will frequently fill out the rhythm, articulating the complementary "5-in-8" diatonic pattern as shown in Fig. 8.

Furthermore, permutations of the "3-in-8" and "5-in-8" diatonic patterns are often combined with one another with both rhythms starting on the same downbeat, creating what Steve Coleman (whose music is discussed below) describes as a "nested looping structure." For example, the *tresillo* and *cinquillo* rhythms are often played together, as shown in Fig. 9. The two patterns reinforce one another, creating an interlocked groove with a strong sense of forward momentum. The arrow marks the downbeat of the cycle as well as the direction in which the rhythms are played in this and subsequent diagrams.

Nested cyclical rhythmic patterns of this sort are found in a variety of musics rooted in the African diaspora. Fig. 10 shows another example involving the 3-3-2 or *tresillo* rhythm and a different phase transposition of the "5-in-8" diatonic pattern, a combination that is recurrent in New Orleans "second line" drumming.

Different phase transpositions of the "5-in-8" diatonic pattern are often combined with one another to form sixteen-pulse time cycles. For example, the rhythms labeled 7c) and 7f) in Fig. 7 are combined in the two variations of the Cuban *cáscara* rhythm shown in Fig. 11 along with their corresponding *clave* rhythms. The inner cycle represents the *cáscara* rhythm and the outer cycle represents the *son clave*. The dotted line in the diagram represents the division between the two constituent eight-pulse rhythms (represented by the bar-line in the notated version of these rhythms). The only difference between the forward

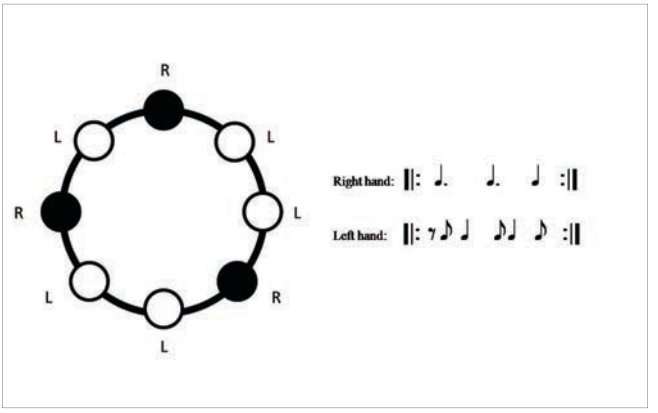

Fig. 8

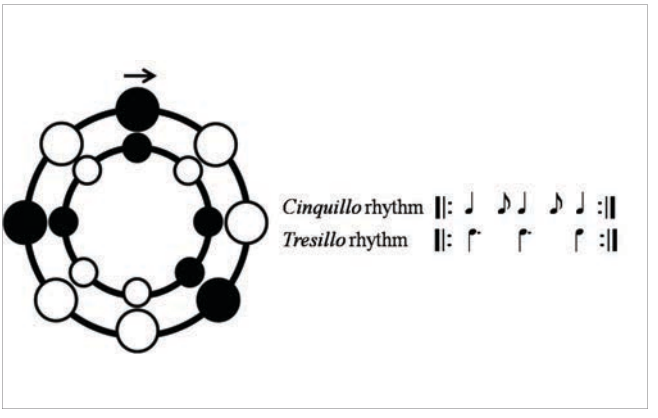

Fig. 9

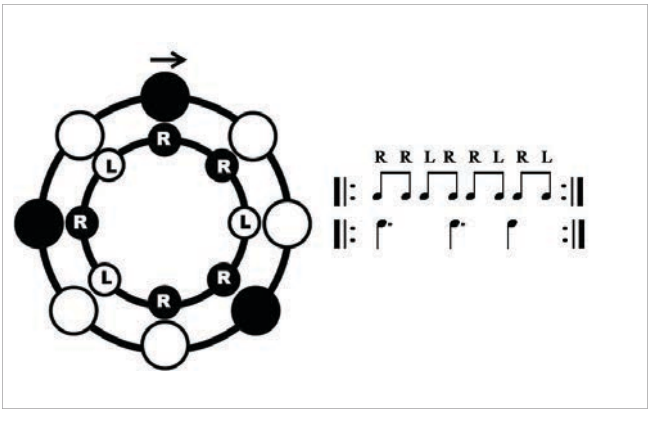

Fig. 10

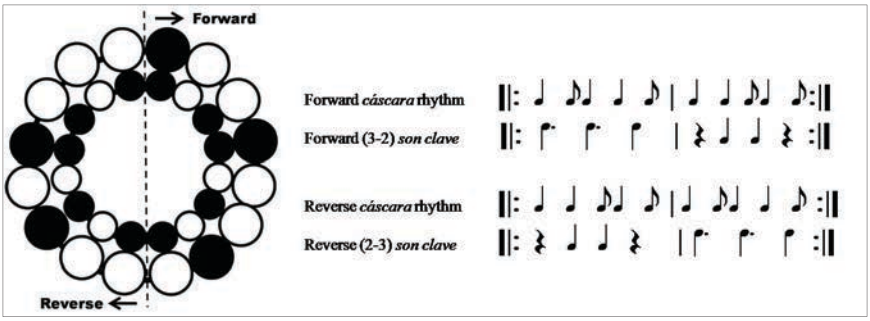

Fig. 11

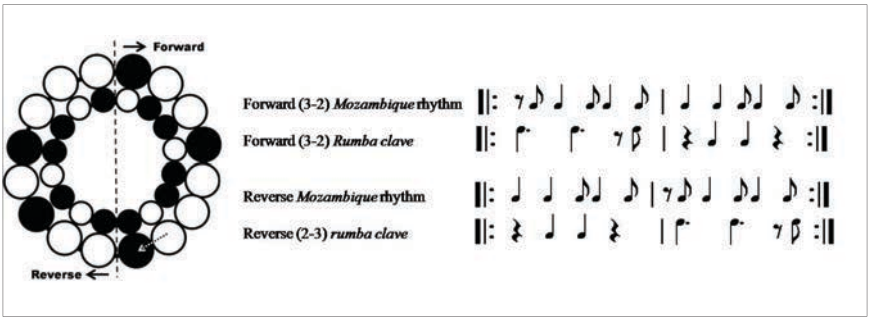

Fig. 12

and reverse versions of these patterns is the starting point within the cycle as indicated by the arrows.

In a similar way, combining the rhythms labeled 7a) and 7f) in Fig. 7 results in the bell time line of another Afro-Cuban style, the so-called *Mozambique* rhythm shown in both its forward and reverse manifestations in Fig. 12. Note that the corresponding clave rhythms in this case are of the *rumba* variety which differs from its *son clave* counterpart by one pulse, a displaced eighth note indicated by the dashed arrow in the diagram below.

What are we to make of the fact that diatonic rhythms are so widespread among musics of the African diaspora? On one hand, these rhythms might be seen as a testament to the power of musical rhythm as a site for musical and cultural memory and transference across time and space. I am inclined to consider diatonic patterns as a fruitful way of thinking about the African diaspora itself. Much like the myriad of communities that constitute the African diaspora, each diatonic rhythm is distinctive and unique. And yet, at a deep structural level, these rhythms, like the communities that produced them, are connected to one another. Extending this line of thinking, we might see the system of musical

logic inherent to diatonic patterns and nested cyclical rhythms as a potential means of articulating connections between diasporic musical traditions. Indeed, the persistence of such cyclical rhythmic structures might be considered as a creative response, even a form of resistance, to the scattering and entropic movements associated with the diasporic condition. With this in mind, I would like to examine the work of saxophonist and composer Steve Coleman.

STEVE COLEMAN AND THE M-BASE PHILOSOPHY

Coleman's creative practice explores continuities and dialogue between a wide variety of diasporic musics and cultures that range across time and space from ancient Egypt to Charlie Parker, from West Africa to Cuba. Among the numerous intercultural initiatives in which Coleman has participated are collaborative projects with the Senegalese drum ensemble SingSing Rhythm as well as work with the Afro-Cuban folkloric group AfroCuba de Matanzas.

Coleman's approach to rhythm and intercultural musical collaboration, are best understood in relation to a musical philosophy and loose collective of musicians known as "M-Base." M-Base was co-founded in 1985 by Coleman, saxophonist Greg Osby, pianist Geri Allen, vocalist Cassandra Wilson, and several other musicians who were then based in New York City. M-Base is an acronym that stands for "Macro-Basic Array of Structured Extemporizations." Coleman describes the M-Base philosophy as follows:

> For us this means expressing our experiences through music that uses improvisation and structure as two of its main ingredients. There is no limitation on the kind of structures or the type of improvisation, or the style of the music. The main goal is to creatively express our experiences as they are today and to try and build common creative musical languages in order to do this on some kind of large collective level (macro, basic, array).[8]

As this quotation makes clear, Coleman is adamant that M-Base is a philosophical approach to music, not a particular musical style or idiom. He also emphasizes the building of "common creative musical languages" on a "large collective level" which implies the development of not only music, but also a sense of community across cultures. In Coleman's case, this has included a variety of intercultural collaborations with musicians in various parts of the African diaspora.

8. Steve Coleman, *M-Base, an Explanation*, www.m-base.com/mbase.html (last access on January 7, 2010).

Coleman describes the relationship between M-Base and the African diaspora as follows:

> The conception of M-Base is in many ways a non-western conception of how to use music to express experience. For example, for me the western concepts of time signatures (including so called "common" and "odd time signatures") largely do not exist and have no place in creating music. These concepts come from European art music and the concepts of M-Base are based primarily on music from Afrika and creative music of the Afrikan Diaspora.[9]

It is important to note that although the M-Base philosophy is firmly rooted in the musics and cultures of the African diaspora, it is flexible enough to embrace extradiasporic musical traditions as well as evidenced, for example, by Coleman's collaborative work with South Indian musicians at the Karnataka College of Percussion in India, and his work with computer music software at Ircam in Paris, France.

The M-Base concept is significant for several reasons. First, its emphasis on musical collectivity positions M-Base in relation to earlier Afrological collectives such as the Union of God's Musicians and Artists Ascension (UGMAA), founded in Los Angeles in 1961 by Horace Tapscott; the relatively short-lived, but nonetheless influential, Black Artists' Group (BAG) in St. Louis; and the Association for the Advancement of Creative Musicians (AACM) in Chicago.[10] The "M-Base" neologism also gives the musicians involved a degree of control over the discourses that surround their music and identities. Coleman assiduously avoids the term "jazz" when describing his own creative practice. In a 1999 interview, Coleman explains: "I grew up in Chicago, Illinois. I never thought about, and I still haven't, thought about playing jazz or not playing jazz. It was just music to me."[11] By insisting that his music is an expression of the M-Base concept, Coleman is able to draw freely on a range of improvisational forms including not only elements of so-called "jazz," but also of blues, soul, funk, and hip hop as well as West African and Afro-Cuban musical concepts, and more. Coleman's approach to intercultural and intradiasporic music making is evident

9. *Ibid*.

10. For a detailed discussion of M-Base in relation to earlier Afrological collectives, see pianist (and former M-Base participant) Vijay Iyer, "Steve Coleman, M-Base, and Musical Collectivism," 1996, www.cnmat.berkeley.edu/~vijay/toc.html (last access on January 7, 2011).

11. Fred Jung, *My Conversation with Steve Coleman*, 1999, m-base.com/coleman_interview_01.html (last access on January 7, 2011).

in his work with Cuban folkloric group AfroCuba de Matanzas—as documented on the recording *The Sign and the Seal* and discussed by Michael Dessen[12] –, and also in his pioneering work with Metrics.

DE-CIPHERING RHYTHM IN THE MUSIC OF METRICS

The Metrics project featured one of Coleman's working groups from early to mid-1990s in collaboration with several freestyle hip hop MCs. Just as Coleman's work needs to be understood in relation to the M-Base concept and his intercultural approach to the musics of the African diaspora, Metrics should also be viewed in relation to roughly contemporaneous developments in the Hip Hop world in the early 1990s, a time when increasing numbers of hip hop musicians were incorporating jazz elements into their music either through the use of jazz samples or through collaborations with jazz musicians. This resulted in the emergence of a stream of hip hop often referred to as "jazz-rap" that included groups such as Stetsasonic, Gang Starr, A Tribe Called Quest, the Jungle Brothers, the early work of the Roots, and many others. Steve Coleman actually recorded on The Roots' 1995 sophomore album *Do You Want More?!!!??!* and Tariq Trotter—better known as Black Thought of the Roots—contributes a freestyle to one track of the Metrics' debut EP, *A Tale of 3 Cities*. However, Coleman is careful to distinguish the music of Metrics from jazz-rap: "This music is *not* simply *Hip Hop* with *Jazz* samples," he states, "but is another form of music in the making!"[13] He goes on to characterize this new form of music as follows:

> Developing original methods of vocal prosody and musical improvisation within unique nested looping structures is the musical foundation upon which the Metrics concept is built. The music of Metrics is an amalgam of futuristic vocal and instrumental improvisations layered over a shifting base of street-style Afrikan based polyrhythms. This concept is the result of a desire to play creative dance music based on the living experiences of Afrikan-American people and the Afrikan Diaspora.[14]

I will come back to Coleman's reference to "nested looping structures," a concept already used in this essay. For now, I'd like to point out that in this last

12. Michael Dessen, "Improvising in a Different Clave: Steve Coleman and Afro-Cuba de Matanzas," in Daniel Fischlin and Ajay Heble (eds.), *The Other Side of Nowhere: Jazz, Improvisation, and Communities in Dialogue*, Middletown, Wesleyan University Press, 2004, p. 173-192.

13. Steve Coleman, *A Tale of 3 Cities*, www.m-base.com/tale.html (last access on January 7, 2011).

14. *Ibid*.

statement, Coleman invokes several loaded signifiers that position Metrics in relation to wider musical and cultural trends. For one thing, Coleman mentions "street-style" musical elements. "The street," in this context as in many others, is figured as a wellspring of Afrological creativity and innovation and serves as a marker of musical authenticity. In his book *Cultural Moves: African Americans and the Politics of Representation*, Herman Gray contrasts the "canonization project[s]" of individuals such as Wynton Marsalis with what he terms the "road-and-street aesthetic" in jazz.[15] Where the former involves the preservation of past musical achievements, the latter, he suggests, involves an emphasis on musical exploration, innovation, openness, and change. I would suggest that Coleman's work with Metrics provides a particularly compelling example of such a "road-and-street aesthetic."

Coleman also situates Metrics in African-American culture, and within the wider context of the African diaspora, emphasizing the group's indebtedness to African musical traditions, the use of African-derived polyrhythms in particular. Metrics is unusual in that it features freestyle MCs from several urban centers within the United States. Coleman notes that the Metrics project is the result of "brain-storming among musicians, producers and rappers based in New York, Philadelphia, Washington DC, Chicago and Oakland. The influence of several distinct regions results in a broad-based mixture with a distinct flavor."[16] The mix of urban backgrounds involved in the Metrics project is evident in the title of the group's EP: *A Tale of 3 Cities*. In a sense, Metrics offers a representation of the African-*American* diaspora, or at least portions thereof. As Mark Anthony Neal persuasively suggests, the widespread patterns of migration among African-American communities during the 20th century resulted in the development of an African-American diaspora within the larger context of the African diaspora. "At the core of this newly defined diasporic construct," writes Neal, "were challenges to maintain community and distribute communal sensibilities across the chasms of distance and dislocation."[17] In many ways, Coleman's work with Metrics, and the M-Base philosophy more generally, is a musical—I would add cultural, social, and spiritual—response to the "chasms of distance and dislocation" within—and between—the African-American diaspora and wider diasporic communities,

15. Herman S. Gray, *Cultural Moves: African Americans and the Politics of Representation*, Berkeley, University of California Press, 2005, p. 48.

16. Steve Coleman, *A Tale of 3 Cities*, www.m-base.com/tale.html (last access on January 7, 2011).

17. Mark Anthony Neal, *What the Music Said: Black Popular Music and Black Public Culture*, New York, Routledge, 1999, p. 12.

using complex cyclical rhythmic structures as well as vocal and instrumental improvisation to articulate relationships between the two.

Coleman's spelling of Africa with a "k" further acknowledges his Afrocentric paradigm. As Don Lee (Haki Madhubuti) notes:

> Most vernacular or traditional languages on the continent spell Afrika with a K; […] We are not certain of the origin of the name Afrika, but we are sure the name spelled with the C came into use when Afrikans were dispersed over the world. Therefore, the K symbolizes our coming back together again.[18]

The Metrics project might also be considered a "coming back together" of African/Afrikan diasporic concepts and cultures.

Like *A Tale of 3 Cities*, Coleman's other commercially available recording with Metrics—*The Way of the Cipher*—showcases the group's "street-style" approach to the African-American and African diasporas. *The Way of the Cipher* is part of a trilogy of live recordings made in Paris at the Hot Brass Club in 1995. The recording features one of Coleman's working groups at the time with Coleman on alto saxophone, Ralph Alessi on trumpet, Andy Milne on piano and keyboards, Reggie Washington on bass, Gene Lake on drums, Josh Jones on percussion, and dancer Laila, along with freestyle hip hop MCs Kokayi, Sub-Zero, and Black Indian. In the liner notes to *The Way of the Cipher*, Coleman states:

> Word in rhythm is a very old art. Freestylin (improvisation) and Ciphers are just as old. These concepts go back at least to ancient civilizations and have been with us ever since. *Metrics* comes out of this long tradition, using all of the information passed down to us by the brothers and sisters before us.[19]

With these words, Coleman equates improvisation and hip hop freestyling and situates both processes within the wider cultural matrix of the African diaspora. He also highlights the importance of improvisation and *ciphers* in processes of cultural transmission and cultural memorialization.

The reference to ciphers in this context, and in the title of the recording, can be read in several ways. On one hand, the concept of the cipher features prominently in hip hop culture wherein the term is generally used to refer to a circular gathering of freestyle MCs, and/or B-Boys and B-Girls who share their

18. Don Lee (Haki Madhubuti), *From Plan to Planet; Life Studies: The Need for African Minds and Institutions*, Chicago, Broadside Press-Institute of Positive Education, 1973, p. 13.

19. Steve Coleman and Metrics, *The Way of the Cipher*, BMG, 1995.

skills with one another in a spirit of competitive play. But the term cipher also refers to secret forms of writing or knowledge that are concealed by symbols or codes. The implication on Coleman's *The Way of the Cipher* is that the Metrics' project itself as a kind of cipher that uses Afrological improvisative musical codes to represent something else, something deeper. I would suggest that the deeper issue at hand is an affirmation of African diasporic community and culture across time and space. One of the ways in which this is articulated is through vocal and instrumental improvisation within "nested looping structures"—cyclical rhythmic structures within larger cyclical rhythmic structures.

The opening track on the *The Way of the Cipher*, "Freestyle," provides several examples of nested rhythms. The track features lyricists Kokayi, Sub-Zero, and Black Indian improvising lyrics over a complex set of interlocking cyclical rhythms supplied by electric bass, drums, piano, and congas. The multiplicity of time cycles in "Freestyle" lies in direct contrast to the historically dominant Western model of rhythm that is based on a linear, divisive system of organization. Recall that Coleman has stated that for him "the western concepts of time signatures (including so called "common" and "odd time signatures") largely do not exist and have no place in creating music."[20] Rather than impose Western linear notational conventions on the decidedly non-linear character of "Freestyle," I would offer the diagram in Fig. 1 as a more appropriate visual representation of the "nested looping structures" in the opening minutes of the work.

Moving from the perimeter of the diagram to the centre, the rings represent the cyclical rhythmic patterns of the bass, piano, bass drum, snare drum, and hi-hat. Shaded areas indicate sounded pulses within each cycle when they are read clockwise. There is some improvisation within these parts, but, the groove is more or less consistent throughout the first few minutes of the performance. Although the diagram implies an even division of the pulsing, the rhythm instruments actually play rounded or "swung" eighth notes, suggesting an underlying rhythmic grid of triplets that signify (and signify on) jazz rhythm.

This form of notation elaborates on the circular diagrammatic representations of diatonic rhythms discussed in the first part of this essay. It is also very similar to the kente cloth inspired "mandala notation" that Paul Austerlitz uses to represent cyclically-based African diasporic musics in his book *Jazz*

20. Steve Coleman, *M-Base, an Explanation*, www.m-base.com/mbase.html (last access on January 7, 2010).

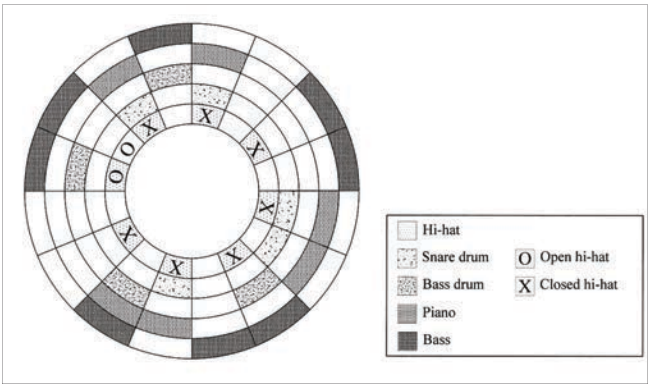

Fig. 13

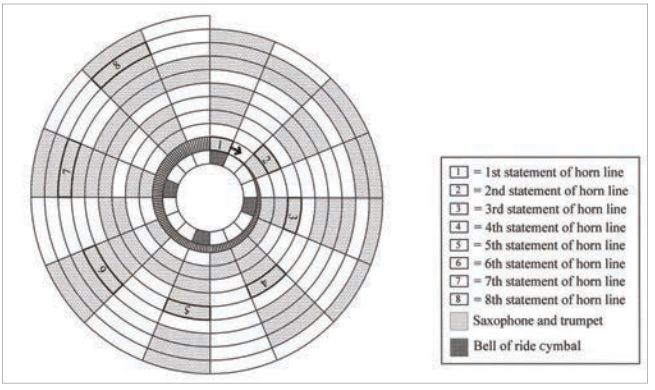

Fig. 14

Consciousness.[21] Interestingly, one of the MCs on this track, Sub-Zero, actually refers to kente cloth during his freestyle, using the cloth as a metaphor for the multiplicity of his approach to the music. "I'm like the kente cloth/many patterned, many faceted," he states. With this reference, Sub-Zero gestures towards the African roots of Metrics' music, a point that he articulates more fully in the film *Elements of One* (Breglia, 2005) which documents several facets of Steve Coleman's creative practice. In the film, Sub-Zero discusses the relationship between MCing and the music of the African diaspora, stating: "I could go back to the Yoruba tricksters. I could go back that far. I'm not saying that I have a

21. Paul Austerlitz, *Jazz Consciousness: Music, Race, and Humanity*, Middletown, Wesleyan University Press, 2005, p. 26-37.

deep understanding of exactly what the Yoruba trickster thing is all about, but in terms of spoken word and words spoken to a drum and stories being told to a drum, I know that came from Africa." I would suggest that in "Freestyle," and in Coleman's music generally, the layering of time cycles provides a compelling rhythmic analogue to the processes of cultural memory and memorialization, that Sub Zero here describes, and to the web of diasporic relations involved in projects such as Metrics.

Towards the end of "Freestyle," the saxophone and trumpet, played by Coleman and Ralph Alessi, re-enter with a repeating 18-beat figure, creating a rhythmic ratio of 18:16 between the horns and rhythm section, thereby complicating further the piece's cyclical rhythmic structure. The juxtaposition of 18 and 16-beat cycles can be summarized in a form of spiral notation that builds on the mandala notation shown above (see Fig. 14).

The shaded portions of the innermost cycle represent the maximally even quarter-note pulse of the ride cymbal. The shaded cell marked "1" represents the beginning of the 18-beat horn line. Traveling in a clockwise direction within this spiral, shaded areas indicate sounded pulses played by saxophone and trumpet. Numbered cells indicate the points at which the 18-beat cycle repeats. In theory, it would take 8 repetitions (or multiples thereof) of the 18-beat horn line to line up with the start of the 16-beat cycle outlined by the drum part as shown in the diagram. However, Coleman and Alessi play the figure roughly 28 and a half times which provides a further indication of Coleman's cyclic conception of time—there is no definitive starting or ending point in the looping structures that Coleman brings into dialogue with one another.

The multiplicity of rhythmic cycles involved in these "nested looping structures" provides a resonant metaphor—perhaps even a cipher–for Coleman's intercultural engagements with musics of the African and African-American diasporas, a model for understanding the group's relationship(s) to African-American and African diasporic musics and identities. I'd like to think that by engaging with—and in effect *de-ciphering*—these nested looping structures, we as researchers, musicians, and listeners, can also participate meaningfully in the process of building communities through music.