Introduction

Circumstances in life sometimes converge in unexpected ways, and such was the case for me in the spring of 1971. In a serendipitous confluence of events, I met Steve Reich and began to rehearse his iconic minimalist composition *Drumming*, became a member of the percussion group Nexus, and traveled to Ghana to study West African drumming. As a result of these interrelated experiences, I began to look at rhythm differently than I had during my formative years as a percussionist trained in the Western classical music tradition.

I had my first drum lesson when I was eleven years old; my first *Drumming* rehearsal and my first African drumming lesson took place when I was twenty-six. The intervening fifteen years were preparation for my real introduction to the study of rhythm in music. Without the fundamental training through imitation and repetition given to me by my first drum teacher, Alan Abel, and the thoughtful analysis of the musicality of rhythm demonstrated to me by my teacher at The Curtis Institute of Music, Fred D. Hinger, I would not have been capable of understanding the lessons that followed. My teachers of West African drumming, as well as my teachers of Indian and Indonesian music, were all virtuoso performers and rhythmic masterminds. They all approached the study of rhythm from the viewpoint of a performer in their respective cultures' highly developed rhythmic systems. I found that Steve Reich also approached rhythm from the perspective of a performer, and his pulse-based compositions provided a blueprint that enabled me to synthesize non-Western rhythmic theory and performance practice through a Western frame of reference.

My career trajectory had already begun to diverge from a long-held plan to become an orchestral percussionist with my enrollment in the World Music program at Wesleyan University in Middletown, Connecticut, in the fall of 1970. At Wesleyan, I studied North Indian (Hindustani) *tabla* with Sharda Sahai, South Indian (Karnatak) *mrdangam* with Ramnad V. Raghavan, and played in the Javanese gamelan led by Prawotosaputro. However, it was my West African drumming class taught by Abraham Adzenyah, a Fante/Akan master drummer from Ghana, that attracted me the most, and by January of 1971, I decided I wanted to go to Ghana to hear and study the music in its natural environment.

I began looking into the possibility of traveling to Ghana and happened to mention my plan to Richard Teitelbaum, a fellow graduate student and a composer from New York City. Teitelbaum had been involved in the new

music scene in New York for some time. He was co-founder of the pioneering live electronic music group, Musica Elettronica Viva with Frederic Rzewski and Alvin Curran in Rome in 1966, and he brought the first Moog synthesizer to Europe the following year. At Wesleyan, he created the World Band, an intercultural improvisation ensemble made up of master musicians from India, Japan, Korea, Africa, the Middle East, and North America, and a group with which I frequently performed. Teitelbaum was well acquainted with the underground new music scene in New York City and knew that Reich had been to Ghana to study West African drumming in the summer of 1970. He also knew that Reich was in the early stages of composing and rehearsing a piece for percussion and that he was looking for percussionists to play in his ensemble. Teitelbaum suggested that he introduce Reich and me so we could discuss Ghana and Reich's new composition.

We met in New York where Reich told me about his experiences in Ghana: visas; inoculations; malaria; the Ghana National Dance Ensemble; graduate student chalets; and the difficulties of trying to study music in West Africa. He also told me about the piece he was writing called *Drumming* and invited me to come to a rehearsal at his loft the following week (see Figure I.1.). I attended the rehearsal and was intrigued by the music. I had played in ensembles of percussion instruments before and even in chamber ensembles with percussion, voice, and other instruments, but this music was different. There was not a large set-up of percussion instruments, just a few drums sitting in the middle of the room with three marimbas along the side. The instruments were not meant to produce coloristic effects as is often the case in chamber or orchestral settings, but were used to convey the essence of the music. As a result, the rhythms that were played attracted me in much the same way I was drawn to Ghanaian drumming. So I agreed to attend rehearsals and became the first percussionist, other than Reich himself, to play in Steve Reich and Musicians.

The juxtaposition of *Drumming* rehearsals and West African drumming classes was compelling because of the complex rhythms and teaching style used in both, and it stimulated my growing interest in rhythmic ideas and oral traditions. I had a third point of comparison because I was also a percussionist in the New Haven Symphony Orchestra. I often attended a West African drumming rehearsal in the afternoon in which I played constantly and was encouraged to move with the music and engage physically as much as possible with the rhythms. I would then go to a symphony orchestra rehearsal or concert in the evening where I would sit for long periods of time counting rests and occasionally play a passage on snare drum, triangle, or some other percussion instrument, trying to move as little as possible so as not to detract from the overall effect of the music. Or I would drive to New York City for a rehearsal of *Drumming* in the evening and learn my part in the ensemble, not

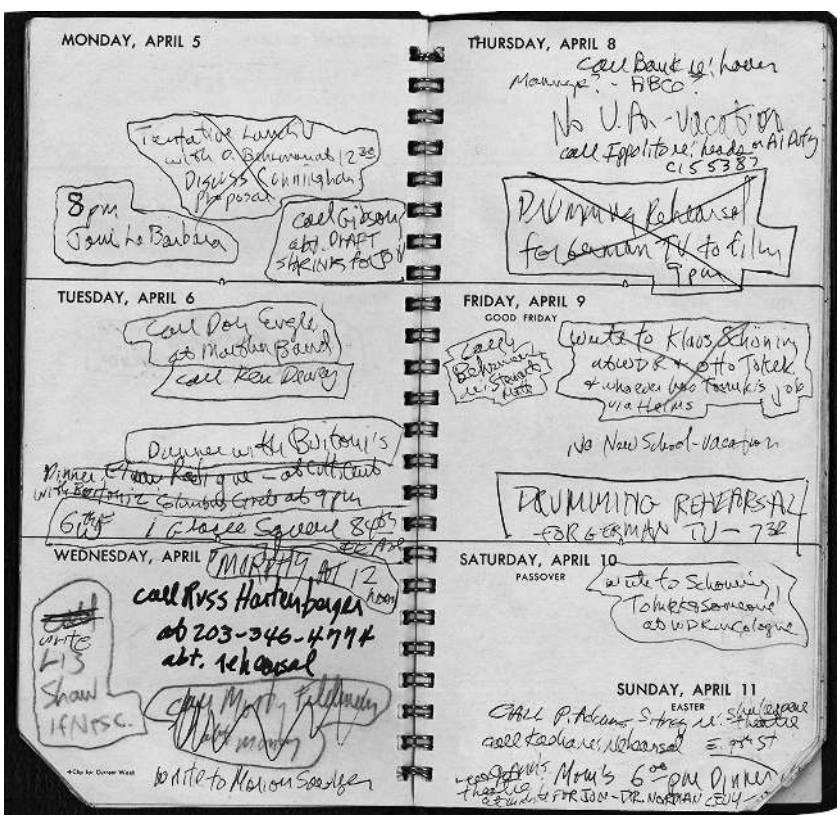

Figure I.1. Steve Reich agenda, April 5–11, 1971 (Steve Reich Collection, PSS, Basel), pp. [32–33].

through notation but by imitating Reich, who demonstrated each part that he had composed that week. The combination of these experiences, as well as my studies of Indian and Indonesian music, made me aware of rhythm and time in ways I had not considered up to that point in my life.

Nexus

In addition to these conjunctures, the percussion group Nexus was forming in an organic way around the same time. Bob Becker, Bill Cahn, Michael Craden, Robin Engelman, John Wyre, and I were the original members of Nexus and knew each other from various musical connections.[1] Five of us had been together at the Marlboro Music Festival in Vermont in 1968,

[1] For a detailed description of the formation of Nexus, see Deborah Waugh, "NEXUS: Integrating Musical Traditions", unpublished PhD dissertation, University of Hong Kong (2006).

although at that time there was no discussion of forming an ensemble. In 1970–1971, Becker and Cahn began to play improvised duo concerts in the Rochester, New York area, billing themselves as Nexus. But the first official Nexus performance was on May 21, 1971, when the four founding members of the group – Becker, Cahn, Engelman, and Wyre – presented a fully improvised concert in Kilbourn Hall at the Eastman School of Music. I was unable to join them because I had already booked my flight to Ghana for the same night as the concert.

I soon began playing concerts with Nexus and reveled in the freedom of improvisation with no preplanning. Each member of Nexus, inspired by Wyre, began collecting percussion instruments from around the world.[2] In the early 1970s, non-Western instruments were not easy to find, so we scoured antique stores and flea markets to find musical treasures. We brought these instruments to performances, set them up alongside our Western percussion instruments, and improvised full concerts. The musical connection we developed with each other through the improvisational process was centered on sound and rhythm. Pitch and harmony were secondary concerns since the instruments we used came from cultures with wildly different tuning systems. Melody emerged from the instruments we played as we listened and reacted to the sounds each player made, thus developing a strong sense of musical communication. Some of the improvisational ideas were generated by the music we were learning from different cultures. By 1972, Becker was also a graduate student at Wesleyan, and he and I began bringing music and instruments from our studies to Nexus. In particular, we used rhythmic ideas and patterns from West African drumming, and some from Indian music, as the basis for compositions and arrangements that eventually became staples in the Nexus repertoire.

During the formative years of Nexus, Wyre and Engelman became friends with Japanese composer Toru Takemitsu, and in 1976, Takemitsu invited Nexus to perform at his Music Today Festival in Tokyo. This was the first of many tours of Japan by Nexus and the beginning of a fruitful musical and personal relationship between Takemitsu and each member of Nexus. Takemitsu provided the perfect foil to my interest in African and Indian rhythms by introducing me to the Japanese concepts of *ma* and *sawari*.[3] I began to understand that not only was there a precise place for attacks in

[2] For an insight into the inspirational approach to music and life of John Wyre, see his book, *Touched by Sound* (Norland, ON: Buka Music, 2002).

[3] See Toru Takemitsu, *Confronting Silence* (Berkeley, CA: Fallen Leaf Press, 1995); "Toru Takemitsu, on *Sawari*," in Y. U. Everett and F. Lau (eds.) *Locating East Asia in Western Art Music* (Middletown, CT: Wesleyan University Press, 2004), pp. 199–207; and Chapter 8 and the "Attack placement" section of Chapter 10.

a rhythmic pattern but that the space between the attacks should be considered, and that there was also an ideal moment to make a sound in the absence of a pulse.

The experiences I had with non-Western music studies, Nexus improvisations, and the music of Steve Reich led me to reexamine my chosen profession of percussion performance. Symphonic music is often exhilarating and the percussion parts, as infrequently as they occur, are fun to play. Orchestral percussion is primarily a study in sound production, and its challenge for the player is to create the appropriate color for the music. I enjoyed this challenge, and I still get a thrill hearing a perfectly shaped bass drum resonance or a timpani sound that precisely fits the character and line of the music. But as conductor Michael Tilson Thomas told me recently, "percussion is the frosting" of the orchestra.[4] I found that I preferred being part of the cake as I was in African drumming, Nexus concerts, and Reich's music.

The teachers I had all through my years of training in secondary school and music schools were wonderful players who prepared me well in the fundamentals of percussion technique and musical interpretation of Western classical music. However, my lessons at Wesleyan introduced me to completely new theoretical and pedagogical approaches to the world of rhythm. As I studied the theory of the music of India and Indonesia and discovered the rhythmic complexity of African drumming, I found that the knowledge I had acquired about rhythm and time in my Western musical training only scratched the surface of these subjects. I also discovered that my ability to execute rhythms with accuracy and a good sense of time was not as well developed as I assumed, and I embarked on a journey to find out more about rhythm and time. My trip to Ghana in the summer of 1971 was a first step in that odyssey.

Ghana

Today there are many opportunities to study drumming in Ghana through university and community programs established by drummers and educators, but in 1971 there were no such programs, and individuals who wanted to learn more about music of the various ethnic groups in Ghana had to fend for themselves. Reich gave me some tips on where to go and what to do, and Adzenyah and Asante Darkwa, a Ghanaian graduate student at Wesleyan, also gave me advice. Nonetheless, I found everything I did in Ghana to be fraught with difficulty, not the least of which was my weekly

[4] Conversation with Michael Tilson Thomas (April 18, 2014).

quinine dose taken in an attempt to avoid malaria. I was keenly aware of the fact that Reich contracted malaria and had to cut short his trip the previous summer, and I did not want to find myself in that situation. The doctors at the medical clinic at Wesleyan, where I received my inoculations for the trip, prescribed a weekly pill containing the current quinine medication that was supposed to be more potent and successful in preventing a bout of malaria. I took this pill every Friday, and every Friday I was practically incapacitated by my reaction to the medication, including suffering from hallucinations. After speaking with other travelers to Ghana, I realized I should have been taking a daily pill of a much smaller dosage to distribute the effects of the quinine more evenly.

Following Reich's advice, I eventually found a place to stay at the incongruously named graduate student chalets near the University of Ghana in Legon, outside the capital city of Accra. My room with private bath and cold running water was comfortable enough and was only about a twenty-minute walk on a snake-infested path through a field to the University. Each evening as darkness gradually descended, I was treated to an intense chorus of croaking frogs and chirping crickets creating a multilayered soundscape. In the mornings, I was awakened by birds singing a four-against-three pattern that dropped the downbeat after one repetition and became a continuous unresolved cycle, tailing off in a Doppler effect *diminuendo*. This was my introduction to the pulsating rhythmic environment of Ghana.

After a breakfast of groundnuts and bananas bought from Ghanaian women carrying large baskets of each on their heads, I attended rehearsals of the Ghana National Dance Ensemble at an outdoor rehearsal space at the University. The Ensemble was a collection of drummers and dancers from all over Ghana brought together to learn and perform traditional music from various ethnic groups. The musicians and dancers were extraordinary; however, their performances were staged for an audience and did not depict the music in its usual setting, so I began looking for a way to have a fuller, more traditional musical experience.

I managed to hitch a ride in a Land Rover with an American botanist, who was researching tropical plants for medicinal purposes, and two British nurses, who were driving to Bawku in the far northeastern part of Ghana where they were to take up residency in a clinic. From there, I traveled to Bolgatanga, Navrongo, and Tamale by *tro-tro*, an open-air truck used for public transportation. I then hitch-hiked with a French-speaking truck driver from Mali down to Kumasi and traveled by *tro-tro* from Kumasi back to Accra. I heard some interesting music on the trip, including a blind drummer serenading the chief of a village on *atumpan* talking drums and a late-night jam session with some young Ghanaians in

a village where, in a break from their traditional drumming pieces, they asked me to teach them to play soul music. I also met a woman who was studying *gyil* xylophone music in northwestern Ghana who claimed that her tapes and videos of the funeral of a venerated *gyil* player were erased by some form of *ju-ju* placed on her by village elders skeptical of her motives. When I returned to Legon, I met a graduate student from the University of California, Los Angeles who was conducting research for his PhD dissertation on spirit mediums in the Ga community of Ghana. I attended several spirit possession ceremonies with him, including one that lasted through the night with singing and dancing accompanied only by two *dawuros*, or large, single-iron bells.

I went to Ghana thinking I would immerse myself in African drumming and develop as much skill and knowledge of the music as possible with the vague hope of becoming an accomplished performer in this genre. However, the realization I had was that my musical identity was that of a percussionist trained in Western classical music and that the study of African drumming, along with the other non-Western music I was learning at Wesleyan, would be more valuable to me as a way to understand rhythm – and how other musicians think about rhythm – in a more comprehensive way.

Steve Reich has often said that his trip to Ghana was confirmation of the ideas he had already begun to formulate in his compositions. For me, my trip to Ghana was also a confirmation of sorts. The trip confirmed that the decision I made to forego a career as an orchestral percussionist and broaden my study of percussion to include non-Western music was correct. But rather than attempting to master the music of a different culture, I realized that the study of non-Western music would help me in my understanding and performance of rhythm in Western music and that the study of the performance techniques of these non-Western instruments would give me insight into the skills necessary to improve my performing abilities on Western percussion instruments. Adzenyah often referred to the "hidden beat" in West African drumming ensemble music, a concept that I will examine more closely in Chapter 15. My exploration of rhythm can be seen as a search for the "hidden" rhythmic elements in *Drumming* and in other kinds of pulse-based music.

For me, the gradual process of learning *Drumming* was also the beginning of the gradual process of learning about rhythm. In a sense, Reich's music represents a nexus of ideas that provides insight into the central questions I have about rhythm: What makes a rhythm interesting? What makes music rhythmically engaging to listen to and to perform? How does one develop the ability to play rhythms accurately and with a good sense of time? What goes on in my mind and body when I play rhythms? And what

should be going on in my mind and body in order to play rhythms accurately and with steady time? In *Performance Practice in the Music of Steve Reich*, I speculate on the answers to these questions by using *Drumming* as a starting point in my quest. My journey began with my visit to Steve Reich's New York City loft in early 1971.

1 *Drumming*, early days

Steve Reich lived in a loft at 423 Broadway, just north of Canal Street in the Soho district of lower Manhattan, when I first began rehearsing *Drumming* with his ensemble in the early spring of 1971. The loft was near Little Italy and Chinatown and was just a few blocks north of the nearly completed World Trade Center. The area housed an active underground art scene with artists' lofts, art galleries, performance spaces, and macrobiotic restaurants. Reich's loft was at the top of a steep flight of stairs and was a large, rectangular open space with a few windows facing Broadway, a kitchen off to the side, and a separate bedroom at the front. At the rear was a slightly raised area with a couch that I eventually used as a bed when I began sleeping over after long evening rehearsals rather than driving late at night back to my home in Middletown, Connecticut. A bookshelf made of bricks and boards held instruments that Reich brought back from his trip to Ghana the summer before: *gankoguis*, the double-iron bells, sometimes called gong-gongs, that provide the timeline ostinato in much Ewe dance-drumming; *atokes,* canoe-shaped iron bells from the Akan region; and an *axatse,* a gourd rattle covered by a netting of beads.[1] On the lower level of the bookshelf was the two-volume set, *Studies in African Music*, by A. M. Jones, which was influential in Reich's study of Ghanaian music.

Hanging on the wall above the bookshelf was a framed drawing by minimalist artist Sol LeWitt, a semigeometric sketch of lines dissolving into irregularity in the lower right-hand corner. Reich later told me that LeWitt considered this drawing to be a mistake and, in fact, called it *Mistake Drawing*. Against one of the painted white walls was a long wooden beam with ten holes drilled in it that I first thought was left over from some construction. I soon discovered it was a work of art by minimalist sculptor Richard Serra, titled *Candle Rack*, which Reich acquired in a trade with Serra for the score to *Pendulum Music*.[2] Reich eventually sold *Candle Rack* but still owns *Mistake Drawing* and recently had it reframed. These works were my introduction to the world of minimalist

[1] Reich provided an example of the Ewe's use of *gankoguis* and *atokes* in his notation of the *hatsyiatsya* bell patterns in Steve Reich, *Writings on Music*, p. 58.

[2] Ibid., p. 95.

Figure 1.1. *Drumming* rehearsal in Steve Reich's Broadway loft, 1971. From left to right – Arthur Murphy, Jon Gibson, Steve Reich, Steve Chambers.
Photo: ©Richard Landry, used by kind permission.

art and the connection of these artists to Reich. Later that year, I would meet other artist friends of Reich's including Michael Snow, who participated in the premiere of *Pendulum Music* and whose film, *Wavelength*, was an influence on Reich.[3]

In the center of the main floor of the loft was a worn, patterned carpet in muted earth tones, and on the carpet were four pairs of bongos on stands positioned in the center of the space (see Figure 1.1). Next to the bongos was a row of three small 3.0-octave marimbas lined up end to end. Three AKG microphones were set up behind the bongos, another next to the bongos, and one more positioned over each marimba.[4] On a table against the side wall was a more substantial bookshelf that held a Dynaco amplifier and

[3] Ibid., pp. 33–34, 36–37, 91–97.

[4] The microphones were AKG model D-202E two-way cardioid dynamic microphones. These two-way dual transducer microphones were high-end live microphones of the day, not studio-level microphones. Email communication with Ray Dillard (2014).