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STEVE REICH: MUSIC AS A
GRADUAL PROCESS
PART I

K. Robert Schwarz

It may appear inappropriate to some for musicology to journey into the realm of progressive trends in new music. Such areas of concern have been more traditionally left to the composers and critics to discuss. Yet too many of these commentators approach their subject with pre-determined biases that highly color their reporting, and our subsequent understanding, of the trends being described. It therefore seems imperative that musicology assume the task of objectively assembling, chronicling, and analyzing recent developments in new music, so that scholars of the next generation will have an adequate as well as accurate source basis with which to work. Rather than waiting to view recent trends in retrospect, we might instead function from the alternative position of attempting to explain and catalogue new developments as they occur. The risks involved—those of hasty analysis and inaccurate judgment, caused by the loss of historical perspective—are great, but the benefits gained may prove to far outweigh the dangers.

The young, progressive composers, those that depart most significantly from the mainstream, have been the prime victims of our reluctance to apply to new music the same standards of objectivity and accuracy that we demand of historical scholarly research. Steve Reich, an American composer of so-called “progressive” inclinations, is a fine example of this phenomenon; his work has been unduly neglected by serious American researchers, and consequently by scholarly American journals. It has fallen to the Europeans, particularly the British and the Germans, to write about Reich’s music with the respect it deserves.¹ One cannot help but feel that his output merits similar serious attention by Americans.

Reich’s neglect by American scholars is especially ironic, as he is a rare example of a young composer who has developed a massive public following. The academic and musicological community’s silence in the face of this public acclaim makes it appear that we consider a composer of such popular appeal to be by definition a less than serious figure. Perhaps we assume that such music will be facile and unoriginal, that its composer will have compromised his ideals to gain success. The truth, however, is that a composer need not work in isolation; there is no reason for us to suppose that Reich’s popularity and commercial success brands him as a cult figure unworthy of our attention.

Composers such as Steve Reich, Philip Glass, Terry Riley, and others, are the antithesis of a personality like Milton Babbitt, who wrote that “the composer would do himself and his music an immediate and eventual service by total, resolute, and voluntary withdrawal from this public world into one of private performance and electronic media, with its very real possibility of complete elimination of the public and social aspects of composition.”² Reich, on the other hand, refuses to alienate himself from the public. His works very consciously belong to the domain of the people. Reich has said:

I believe that music does not exist in a vacuum. One mode of feedback I rely on most is the popular, naive reaction. . . . A critic is often politically biased, for or against a composer. . . . so the public's reaction can be a better weathervane of the music's basic health. . . . My work, and that of Glass and Riley, comes as a breath of fresh air to the new music world. . . . This basic feeling is very healthy. It's a feeling of moving back away from a recondite and isolated position, toward a more mainstream approach."³

Without pandering to popular taste, Reich has molded a style of personal integrity. His gradual, methodical process of style change has led him, in a brief sixteen years, to forge a musical language uniquely his own out of the impersonal minimalism of the mid-1960's. Reich's music is worthy of our closest examination, and it is just such a study that will be attempted here.

There is an immense amount of primary and secondary source material concerning Reich at the researcher's disposal. Much of Reich's music is recorded on widely distributed major record labels,⁴ and recently Universal Edition has released the first commercially available publications of his works.⁵ In addition, the researcher rapidly finds him or herself deluged by a massive number of essays, articles, record notes, and interviews written by or conducted with the composer. Few young composers have written so copiously and cogently concerning their own music as has Reich. At each step of his compositional development, Reich has made a conscious effort to explain various aspects of his creative processes in a manner that will bridge the gap between the composer/creator and the listening public. His admirable little volume of collected essays, *Writings About Music* (1974), illustrates these desires; in this book, he succeeds in describing his own music with a clarity and honesty that mirrors the structurally lucid aesthetic he favors in his compositions.

Yet aside from the material that Reich himself has created, very little other serious work concerning his music has appeared in American journals. The general press coverage of Reich's music, however extensive, has for the most part consisted of concert or record reviews, frequently uninformed and therefore often unhelpful to the scholarly researcher.⁶ This study aims to fill the obvious gap: it will attempt to survey Reich's stylistic traits, his life, works, and achievements, and his significance for our time.

Steve Reich is an example of what the recording industry describes as a "crossover phenomenon": his music addresses the tastes of jazz, rock, traditional Classical, as well as new music audiences. He was not only the first living "serious" composer to sell out Carnegie Hall in a program devoted exclusively to his own works (Feb. 19, 1980), but also the first "serious"

composer to sell out the New York rock/jazz nightclub, The Bottom Line. Between 1971 and 1980, Steve Reich and Musicians (the composer's repertory ensemble) gave eleven European and American concert tours, a total of more than two hundred concerts of Reich's music.⁷

What sort of music is this that breeds such public acclaim? Reich's output has alternately been described, by critics and listeners of various persuasions and biases, as minimalistic music, hypnotic music, trance music, pulse music, and phase music. Though Reich has in the past rejected the application of the label "minimalism" to his own music,⁸ the term can viably be applied to aesthetic, at least through the works of 1971. Minimalism, whether in art, music, or theatre, is an aesthetic which deliberately and severely restricts the materials and resources that the artist, composer, or dramatist employs in his conceptions. It is an art which focuses on small details of structure or concept, and then magnifies these to form the basis of an entire work. As Reich has said, "By restricting oneself to a single, uninterrupted process, one's attention can become focused on details that usually slip by."⁹ The resultant art is one in which contrast and change, and even the progression of time itself, can only be appreciated at a much slower rate than that to which we are normally accustomed. For the sake of attempting to make some stylistic generalizations about the music of Reich, we will accept the label of "minimalism" for his work, but with one important qualification: most of the following generalizations concerning minimalism, while applicable to Reich, are only viable in relation to the music he composed up to 1971. Since then, as will be repeatedly underscored here, Reich has turned away from the severely austere minimalist aesthetic, in favor of a new richness of content and texture, a beauty of sound, and a loosening of structure.

Many aspects of Reich's early minimalist period can be viewed as direct rebellions against the various factions of the post-war avant-garde, as reactions against serialism, free atonality, and aleatory. Reich desired an immediate clarity of structure, and he therefore employed musical/compositional processes that precisely governed the entire course of a composition. Just as the ultra-rationality and total control of post-war serialism led to a Cageian reaction involving improvisation, chance, and formlessness, so Reich has rejected the lack of composer-organized structure in aleatoric music in favor of scores that are meticulously worked out in advance, down to the smallest detail. For Reich, the intricacies of serialism were unappealing, as they involved nothing more than convoluted, hidden structural devices which were rarely apparent to anyone beyond the composer and his privileged circle. Reich's aesthetic required that the structural process be clearly perceived by the listener:

John Cage has used processes and has certainly accepted their results, but the processes he used were compositional ones that could not be heard when the piece was performed. The process of using the *I Ching* or imperfections in a sheet of paper to determine musical parameters can't be heard when listening to music composed that way. The compositional process and the sounding music have no audible connection. Similarly in serial music, the series itself is seldom audible. . . . What I'm interested in is a compositional process and a sounding music that are one in the same thing.¹⁰

The above quotation comes from one of Reich's most important essays, "Music as a Gradual Process" (1968). The essay, as well as Reich's chosen process of "phasing," will be discussed in full later in this article. For now, suffice it to say that this primacy of structure, apparent to some extent in all of Reich's music, is the aspect of his work that most gives in an intellectually and analytically challenging character. In Reich, structure cannot be a framework which supports an unrelated facade of sounds; rather, sound and structure must be identical.

An additional aspect of the minimalist rebellion against the "establishment avant-garde" is exemplified by Reich's embracing of an exclusive tonal and/or modal (and chiefly consonant) harmonic vocabulary. Yet Reich's "new tonality", as it has been called,¹¹ is much different from traditional tonality. The tonal/modal gamut of a Reich work is established at the outset, most typically by the insistent repetition of a brief rhythmic/melodic pattern which, while tonal, may or may not be linked to an explicitly stated harmonic structure. In Reich, tonality is therefore only asserted by repetition, as is Stravinsky's tonality, which is a prime influence on the younger composer. There are no dominant/tonic polarities, no hierarchy of harmonies within a key; only infrequently does one find functional chord progression, and even these are rarely the motivating force in the particular work.¹² Neither is there such a concept as modulation: when Reich wishes to shift tonal centers in a work, he does so abruptly, by merely juxtaposing the new tonality alongside the old one. Yet this method implies no functional relationships between the two tonalities involved, nor do any functional polarities exist within either of them.

Along with this new employment of tonality comes Reich's belief in a repeated, steady, driving pulse. The composer himself prophetically predicted in 1970: "The pulse and the concept of clear tonal center will re-emerge as basic sources of new music."¹³ The rhythmic animation of Reich's music

provides an urgency, an accessibility, and a unifying force that always continues unabated throughout a composition. Most importantly, Reich's embracing of steady pulse introduces an entirely new element into contemporary "serious" music,¹⁴ an element that can be viewed as a reaction against the dissolution of regular metrical rhythm that was so typical of the post-war avant-garde. Reich considers a clear rhythmic pulse to be one of the prime elemental forces shared by all world musics—whether African, Indonesian, Indian, jazz, or Western Baroque—and he feels it is an essential element of his musical style.

Other aspects of Reich's compositional style are inherent in the term "minimalism". Reich severely limits his musical material by the reliance on a single dynamic, textural, timbral, harmonic, melodic, or rhythmic level for sections or entire works (though this observation is often invalid after 1971). A single set of musical parameters are established at the outset of a piece which either remain unvaried for the length of the composition, or are altered only in a very gradual and subtle manner. In this way, the premise of the work is clearly apparent at the opening, and thus the element of conflict or dualism is rejected. Clearly related to both the limitation of means and lack of contrast is Reich's use of repetition. Coupled with unvarying rhythmic pulse, repetition satisfies the minimalist ideal of forcing the mind inward on small structural details, while simultaneously becoming the prime unifying force.

Such repetition, however, also has a rather unusual effect on the listener's comprehension of the passage of time. Our experience of music as sound in time is highly subjective and therefore difficult to discuss at all precisely; in addition, the element of alteration of consciousness (so clearly implied by any change in our perception of time) is awkward to deal with objectively. Reich himself strongly denies that his music aims to create a trance-like change in consciousness on the part of the listener: "There's no intent on my part to create anything like a trance. A lulling into unconsciousness would be the worst possible result. What I hope my music summons up in more attention to detail. . . ." ¹⁵ While not disagreeing with Reich's statement, one could argue that the lengthy contemplation of small details is in itself both consciousness-altering as well as time distorting. Despite the constant pulse, a sense of a lack of awareness of the passage of time is experienced by many listeners to Reich's music. How paradoxical it is that "this music, which proceeds so tonally pleasantly, obstructs the "tonal" understanding of time."¹⁶

Related to Reich's desire for an immediate clarity of structure is his dislike of anything improvisational, which could serve only to conceal the basic framework. Reich demands the subjection of the free expression of the individual performer to the common goal of group expression. His musical structures, or "processes" as he refers to them, are rigorously planned in advance. Though some elements of performer choice enter into these scores,

most are carefully determined in rehearsal, so the performance of a given piece is as controlled and precise as clockwork. The only spontaneous element added during the performance situation involves the decision of how many repetitions there will be of a given musical section. In Reich's recent works even this parameter is determined in advance, but in earlier compositions (such as *Drumming*, 1971) the number of repeats was decided in performance via an elaborate system of visual cueing which had the additional advantage of forcing the members of his ensemble to rely on each other for musical direction, thereby enhancing the close-knit feeling of the group.

Closely connected to the subjugation of individual expression and the distrust of improvisation is the question of the impersonality and objectivity of Reich's musical processes. Reich clearly stated in his essay of 1968, "Music is a Gradual Process:" "Though I may have the pleasure of discovering musical processes and composing the musical material to run through them, once the process is set up and loaded it runs by itself."¹⁷ Combined with the fact that Reich's musical ideas are less uniquely personal statements than manifestations of concepts which are common musical property, his music has as a result often been branded as lacking "inspiration", "imagination", and "expression." We must again force ourselves to set aside the nineteenth-century credo of originality being the prime essential in composition, and realize that much Western music, from the cantus firmus and parody masses of the Renaissance through the Baroque and Classical eras, has not always placed originality as the foremost goal of composition. Rather, what was done with the idea was important: the germinal cell itself may have been common property, but the "inventio" of the the work bore the composer's unique stylistic seal. Such is the case with Reich; it is only in the working out of the musical process that the composer's personal statement becomes evident. However, the mechanical efficiency of Reich's performing ensemble tends to lend credence to charges that the composer's musical processes are inexpressive and impersonal. One could therefore say that it is less the musical content itself than the performance situation demanded by the music which is impersonal; this observation is bolstered by Reich's own statements concerning the nature of his ensemble's performances:

The attention that mechanical playing asks for is something we could do with more of, and the "human expressive activity" which is assumed to be innately human is what we could do with less of right now. That ties in with non-Western music—African drumming or the Balinese gamelan—which also have an impersonality to them as the participants accept a given situation and add their individual contributions in the details of the working-out.¹⁸

This brings us to the important question of non-Western influence in the music of Reich. Reich has been profoundly affected by his studies of non-Western techniques and structures, and has undergone vast changes in his personal style as a result. Reich's training in African drumming (Ghana, 1970), Balinese gamelan (Seattle and Berkeley, 1973-4), and Hebrew scriptural cantillation (New York and Jerusalem, 1976-7) has contributed not only to alterations in his musical aesthetic during the last ten years, but also to his use of new constructive procedures. For Reich believes not in imitating the *sound* of non-Western musics ("What I don't want to do is to go and buy a bunch of exotic-looking drums and set up an Afrikanische Musik in New York City."¹⁹), but rather in learning the structural principles which govern the construction of foreign musics, and applying these to one's own personal style. A myriad of Reich's stylistic traits may either be derived from or encouraged by non-Western influences; these include his polyrhythmic structures, constant repetition, driving pulse, use of tonality/modality, absence of modulation, slowness of rate of change and lack of dualism, and penchant for rigorously worked out non-improvisatory structures. All of these aspects of non-Western influence in Reich's style will be discussed more fully in the analysis of his 1971 work *Drumming* (q.v.), along with the more complex question of how the composer chose to emulate non-Western structural principles within his own music.

Popular music, especially jazz, has also influenced Reich. Reich idolized Miles Davis and Charlie Parker in his youth, and was a jazz drummer himself; later he became enamored of John Coltrane and his remarkable expansion of simple two-chord structures. A concentration on percussion (stemming not only from popular influence, but also from his own personal interest as a drummer as well as non-Western studies) and his inclusion of such instruments as small electric organs and saxophones belie popular influence in instrumentation. In addition, Reich's use of amplification via individual microphones for each instrument, and his employment of repetitive rhythms, clear tonality, and driving pulse may all be related superficially to his knowledge of popular music.

In recent years, however, Reich has been turning less towards non-Western and popular musics and more towards the Western Classical heritage for inspiration and guidance. Early in Reich's career, Western influence was restricted to Medieval and Baroque music. In 1971, Reich voiced the opinion that, while he admired Bach, he felt that Perotin and the Notre Dame School were "a kind of high point" in music history.²⁰ Perhaps Reich was drawn to certain aspects of the Perotin generation's style that, in gross historical retrospect, seem almost Reichian: the repeated, ostinato-like rapid rhythmic patterns in the upper voices, the drone-like supporting cantus, the static

modality, and above all the lack of directionality and climax. Fellow minimalist LaMonte Young echoes Reich's love for medieval music when he says, "I feel that in most music peculiar to the Western hemisphere since the thirteenth century, climax and directionality have been among the most important guiding factors, whereas music before that time, from the chants through organum and Machaut, uses stasis as a point of structure a little bit more the way certain Eastern musical systems have."²¹ Reich was also attracted to late Baroque music's unflinching rhythmic propulsion, the same reason he admired jazz—and Stravinsky. Indicative of Reich's recent stylistic maturation, however, has been his re-studying of the remainder of the Western heritage. This renewed interest in the Western tradition has profoundly affected the composer, and will be discussed more completely in relation to three of Reich's newest works, *Octet* (1978), *Music for a Large Ensemble* (1978) and *Variations for Winds, Strings, and Keyboards* (1979).

Reich's relationship to electronic music has been an ambivalent one; he has swayed between wholeheartedly endorsing the use of tape devices, as exemplified by the speech-based tape pieces so typical of the earliest stage of his career, and to an equally wholehearted rejection of every last vestige of electronic means, as he did in 1969. Not content merely to set aside electronic techniques within the context of his own music, he vigorously predicted the disappearance of electronic means within new music in general: "Electronic music as such will gradually die and be absorbed into the ongoing music of people singing and playing instruments,"²² Reich said in 1970. More recently (1977), Reich elaborated about why he disdains not only electronic music, but even the use of electronic instruments within a live ensemble. He stated that, in his opinion, the deadness in character of electronically generated sounds (such as the quality of electric organs) was incompatible with the nature of his music. Reich felt that in compositions such as his, which depend on repetition and steady pulse, the vitality of character gained by using live instrumentally-produced sounds was absolutely essential to avoid monotony of tone quality.²³

Yet Reich's decision to abandon electronic means was apparently not binding. *Variations for Winds, Strings and Keyboards* (1979) again employs electric organs within the live ensemble, for the first time since *Music for Mallet Instruments, Voices and Organ* of 1973. Even more surprisingly, Reich's most recently premiered composition, *My Name Is: Ensemble Portrait* (1980) is a pure tape piece, of the same speech-based type as those that began his career. Reich's earliest significant works, *It's Gonna Rain* (1965) and *Come Out* (1966) were tape compositions utilizing the verbal material of human speech as their subject. *My Name Is* returns to similar methods, as will be demonstrated at the end of this article. The composer is able to accept his earliest tape pieces, as well as to rationalize his recent return to tape devices, by

realizing that in a sense these are not electronic works at all. They are all speech pieces, and are therefore based entirely on actual vocal sounds, not on electronically produced tones. Reich stated recently:

In a nutshell, all the bad things I've had to say about electronic music have to do with electronically generated sounds, have to do with oscillator-based music. . . . I still use electric organs, but they're always mixed with instruments or voices. I have no such ambiguity about [using] the voice.²⁴

Reich's distaste for electronically generated sounds, combined with his love for live performance instilled by interests in jazz and non-Western music, has led to his formation of a permanent repertory ensemble dedicated to the performance of his music. *Steve Reich and Musicians*, as his performing group is called, began in 1966 with three musicians and has grown in numbers over the years depending on the requirements of each new composition; it reached twenty-seven members for *Music for a Large Ensemble* (1978). Significantly, despite his self-acknowledged limitations as a percussionist and keyboard player, Reich decided that in one capacity or another he would perform in all his compositions. "It seemed clear [to me] that a healthy musical situation would only result when the functions of composer and performer were united."²⁵ The result has been an emotional and psychological bond between composer and performers that makes the ensemble's concerts into riveting experiences for participants and listeners alike.

At this juncture, it may be useful to relay some biographical material concerning Steve Reich, along with the telling evidence of diverse compositional influences it provides. Reich's approach to composition and his stylistic maturation has progressed in gradual, purposeful steps over the past sixteen years; consequently, a combined recounting of Reich's life with a detailed discussion of the composer's major works will be attempted here.

Steve Reich was born on October 3, 1936 in New York. His youthful musical training included studies in piano and percussion, the latter under Roland Koloff, now the principal tympanist of the New York Philharmonic. By the time Reich was a teenager, his lifelong musical tastes had begun to form, revealing a distinct predilection for music with an unvarying pulse and a clear tonal center; he was especially enamored of Bach, Stravinsky, Miles Davis, Charlie Parker and Kenny Clarke. From 1953 to 1957, Reich was a student at Cornell University, majoring in philosophy. At Cornell, he enrolled in several courses taught by William Austin, and as a result was exposed to a wider variety of twentieth-century music and jazz, as well as being introduced to non-Western musics. To his credit, Austin repeatedly encouraged his young

student to pursue composition as a career, a goal Reich evidently desired but also feared, feeling he was too old to start studying music on a full-time basis.²⁶

After graduating from Cornell, Reich began private composition lessons in New York with Hall Overton, which lasted from 1957-1958. Reich enrolled at the Juilliard School in 1958 as a composition student, studying with William Bergsma and Vincent Perischetti. His early Juilliard works were in the conventional free atonal idiom of the time. In 1961, Reich left Juilliard to study composition at Mills College in California, where he worked with Luciano Berio and Darius Milhaud. During his studies of serial technique with Berio, conflicts arose between Reich's love for tonality and steady rhythmic pulse on the one hand, and the need to write in the accepted serial idiom on the other. Berio saw that Reich did not transpose, invert, or retrograde his rows, but that he merely repeated them with rhythmic re-groupings. Says Reich: "Berio noticed that I was repeating this particular twelve-tone row over and over and letting it evolve into a static thing, and he said to me one day, 'If you want to write tonal music, why don't you write tonal music?'" Reich continues:

That was a very helpful remark for me, because I saw I was doing what I intuitively wanted to do. As a child, I'd listened to a lot of pop music, and in my teens to a lot of jazz — . . . music that I found extremely attractive but which was obviously and unabashedly tonal. . . . I remember, when I first went to Juilliard, feeling a distinct pull between the kind of music offered me as a model—atonal, whether twelve-tone or freely atonal—and on the other hand, music of let's say John Coltrane, music essentially built up of one or two chords. What moved me emotionally was always music built around one tonal center.²⁷

Twelve-tone technique had taught Reich to respect a "systematic, rigorous approach to composition",²⁸ but when Reich graduated from Mills College with his Master's degree in 1963, he finally knew his skill lay in writing music with a clear tonal center.

Reich's career as a composer began in San Francisco in 1963. His early compositions included several film soundtracks for filmmaker Robert Nelson (*The Plastic Haircut* and *Oh Dem Watermelons*), a work for a production of the San Francisco Mime Troupe (*Ubu Roi*), and tape pieces performed at the San Francisco Tape Music Center. The latter, all based on sounds of the outside world rather than on electronically synthesized materials created in the studio, include a collage-like tape work called *Livelihood*, which utilized street and passenger noises recorded while Reich was driving a taxicab around San Francisco.²⁹

Reich's first two important works were both tape pieces, *It's Gonna Rain* (1965) and *Come Out* (1966). Both were based solely on recorded verbal material, in *It's Gonna Rain* the voice of a Black street preacher warning of the dangers of the impending Flood, in *Come Out* the voice of a Harlem ghetto boy. Early in 1965, Reich discovered that, by making tape loops of these already remarkably melodious voices, he could both heighten the musical quality of the speech, as well as intensifying the meaning of the words. This was manifested in sound, of course, as incessant repetition. It was no accident that Reich came to employ the technique of constant repetition; though he had already been working with tape loops, the final impetus resulted from the assistance he provided Terry Riley in the latter's premiere of *In C* (1964). *In C* is certainly not a Reichian work, due to its use of unstructured improvisatory elements and performer choice, but its employment of a constant unvarying pulse, its prolonged rhythmic/melodic repetitions, and its static tonality must all surely have impressed Reich. But Reich's problem was to find his own way of approaching repetition as a musical technique, without merely imitating Riley's breakthrough. Reich's revelation occurred as follows:

I discovered that the most interesting music of all was made by simply lining the loops up in unison, and letting them slowly shift out of phase with each other. As I listened to this gradual phase shifting process, I began to realize that it was an extraordinary form of musical structure. This process struck me as a way of going through a number of relationships between two identities without ever having any transitions. It was a seamless, continuous, uninterrupted musical process.³⁰

Reich had stumbled across the technique of "phasing", the particular musical process that was to hold his attention to such an extent that every composition written between 1965 and 1971 (except *Four Organs*, 1970) employs the phasing technique in one way or another. In phasing, two or more identical melodic and/or rhythmic patterns very gradually change in their rhythmic relationships to one another during the course of the work. Eventually, as the process progresses, new patterns evolve of their own accord.

In *It's Gonna Rain*, completed January 1965 and based entirely on the words of the black street preacher, Brother Walter, the phasing process is first applied. The preacher's unusually expressive, almost melodic enunciation of the title phrase in itself resembles the musical line of Example 1. Beginning in unison, two tape loops of this same verbal material eventually move one beat apart, then two, and so on as they gradually go "out of synch" with each other. As the process of phasing progresses, new and unexpected polyrhythmic configurations, resulting harmonic combinations, and melodic patterns evolve,

since the two channels of tape constantly change their relationship to one another.

It's Gonna Rain is two parts, the first taking the title phrase from a unison synchronization of two channels through a complete shift of phase, and then back to the original unison again. Part Two is made from a considerably longer tape loop, which begins with two unison channels pronouncing a continuation of the title phrase. But in Part Two, Reich divides the channels into four and finally eight voices as the phase shifts. These multiple lines, all moving in and out of phase with one another, produce a dizzying combination of new resulting harmonic, melodic and rhythmic patterns far more complex than those of Part One, as well as heightening the already present speech elements. By the end of the work we are, in essence, listening to a kaleidoscopic, subtly shifting drone of sound.

Reich's next work, *Come Out* (1966) is essentially a refinement of the same phasing process employed in *It's Gonna Rain*. Composed for a Town Hall benefit given to help six boys arrested in the 1964 Harlem riots gain a retrial, it is based upon the inherently musical vice of Donald Hamm, one of the six involved. As in the case of Brother Walter, Hamm's pronunciation of the phrase "come out to show them" already contains within it a distinctive rhythmic/melodic profile (See Example 2).

Come Out is similar in conception to *It's Gonna Rain*, beginning with two unison channels but soon allowing one of the parts to phase forward. Later, as the phasing process progresses, Reich divides the two channels into four and finally eight voices, all phasing against one another. The myriad of resulting harmonic, melodic, and polyrhythmic combinations, mostly unforeseen by the composer, demonstrates that the musical process of phasing, once set into motion, progresses entirely on its own. "The experience of that musical process is, above all else, impersonal; *it* just goes its [own] way. . . . Once the process has been set up it inexorably works itself out."³¹ *Come Out* has been likened by some critics to the "aural equivalent of op art."³² Just as in op art our eyes perceive visual illusions which are not present in reality, such as reversing cubes, three-dimensional effects, and perspective shifts, so too in *Come Out* our ears psycho-acoustically fixate upon various transitory patterns which arise out of the phasing process. It is the presence of these dazzling, constantly shifting figures that makes the early tape pieces interesting to hear over and over again. Reich calls these "resulting patterns"; and they are of great significance for his later compositional development.

In 1966, Reich composed the last of his early tape pieces, entitled *Melodica*. It uses the same phasing process as *Come Out*, but here, instead of phasing verbal elements, musical pitches are employed. Named after the plastic toy recorder on which the pitches were played, *Melodica*, according to

Reich, at the time “felt like a transition from tape music to instrumental music.”³³ Yet, in 1966, the composer had reached what must have seemed to him an impasse: how could he transfer the electronically discovered phasing process to live musicians?

Nineteen sixty-six was a very depressing year. I began to feel like a mad scientist trapped in a lab: I had discovered the phasing process of *Come Out* and didn't want to turn my back on it, yet I didn't know how to do it live, and I was aching to do some instrumental.³⁴

The solution to the problem came late in 1966. Reich made a tape loop of a brief, repetitive piano pattern, and then attempted to play the same figure on the keyboard against the tape loop. Just as he had done in *Come Out*, he tried to phase gradually ahead of the constant unvarying loop pattern—yet here, the challenge was to see if a live performer could accomplish what had been so easy to do electronically. “I found to my surprise, that while I lacked the perfection of the machine, I could give a fair approximation of it [the phasing process] while enjoying a new and extremely satisfying way of playing”³⁵

The obvious next step was to see if the phasing process could be accomplished without any electronic means whatsoever. Early in 1967, Reich and a friend, sitting at two different pianos, attempted to duplicate the phasing process: one performer remained on a fixed rhythmic pattern while the other performer gradually phased forwards, one beat at a time. The result was the first live phase composition, *Piano Phase* (1967).³⁶ In this work (Example 3), two performers begin in unison playing the identical rhythmic/melodic pattern. As the first performer's pattern remains unvarying, the second pianist increases his tempo very slightly (this gradual phasing process is indicated in Reich's scores by dotted lines between measures) until he is finally one sixteenth note ahead of the unchanged figure of the first pianist. The phasing process pauses at this point, as the newly shifted rhythmic configuration is repeated several times. Soon, however, the second pianist again moves slowly forward of the first, finally ending two sixteenth notes ahead of the original pattern. This sequence of gradual phase shift and repetition is repeated until the two pianists are back in unison; at this juncture the pattern changes and the whole process begins anew.

Finally successful in his transference of phasing to live music, Reich began to see his earlier tape pieces in a different light. He realized that they were indicative of a trend that was to occur several times in his career—the

exchange of ideas from electronic music to live performance. Reich now viewed *It's Gonna Rain*, *Come Out*, and *Melodica* as “realizations of an idea that was indigenous to machines, and on the other hand, the gateway to some instrumental music I would never have come to by listening to any other Western, or for that matter, non-Western music.”³⁷ This cross-fertilization of instrumental music by ideas generated in the electronic studio becomes apparent once more in Reich's *Four Organs* (q.v.) of 1970.

Reich's next live phase composition, *Violin Phase*, was completed in October 1967. Scored for four violins, or one live violin plus three channels of taped violin, *Violin Phase* adds two new refinements to the phasing process: firstly, four voices rather than two are now phasing against each other; secondly, Reich now begins to make conscious use of the entirely unexpected “resulting patterns” that arise out of the phasing procedure. In the manner in which *Violin Phase* is most frequently performed, the live violinist plays against one, two, and finally three pre-recorded tapes of himself. The same twelve-beat rhythmic/melodic figure is recorded on all three tape channels, but in different phase positions (i.e., the same pattern but with three different downbeats): Track One is four beats behind Track Two, while Track Two is eight beats behind Track Three. Besides the different stationary phase positions of the tape, the performer himself carries out a live phasing process by playing the same figure as that of the tapes, but moving slowly ahead of the various channels.

Most significant in *Violin Phase* is Reich's conscious employment of the unexpected resulting patterns. These figures, unforeseen polyrhythmic, melodic, and harmonic combinations that occur as a result of identical material being phased against itself, are constantly in a state of flux. In two sections of the piece the live violinist momentarily doubles some of the pre-existing resulting patterns that have arisen due to the phasing process progressing in the three taped channels. Several of the doubled patterns are actually suggested by the composer, while others are chosen by the performer in rehearsal. The score itself (see Example 4) is notated in such a way that the three tape tracks, besides being indicated on separate staves, are also written on one staff in composite form; the latter version allows the live violinist to see the various possible resulting patterns more clearly. The live violinist's process of “pointing out” the resulting patterns guides the listener's perceptions and opens up the listener's ears to melodic combinations he or she may not have heard: the effect is almost that of bringing a transitory aural illusion into the realm of reality.



Example 1. Steve Reich, *It's Gonna Rain* (1965).
Approximate transcription of title phrase of tape.



Example 2. Steve Reich, *Come Out* (1966).
Approximate transcription of title phrase of tape.

The first pianist starts at 1 and the second joins him in unison at 2. The second pianist increases his tempo very slightly and begins to gradually move ahead of the first until, (say in 20-30 seconds) he is one sixteenth ahead, as shown at 3. The dotted lines indicate this gradual movement of the second pianist and the consequent shift of phase relation between himself and the first pianist.

Example 3. Steve Reich, *Piano Phase* (1967), mm. 1-3.
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①6

The fourth line, "Violins 1+2+3", is simply all 3 violins written out on one staff to enable Violin 4 to see the various possible resulting patterns more easily. A resulting pattern is one formed by the combination of all three violins. Three such patterns are written out above at "A", "B", and "C". Violin 4 should play each of these, and he may add or substitute "D", a resulting pattern of his own choosing.

Example 4. Steve Reich, *Violin Phase* (1967), m. 16.
 Copyright 1967 by Steve Reich.
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NOTES

¹ A representative sampling of some of the more important European articles concerning Reich's music would include the following: Clytus Gottwald, "Signale zwischen Exotik und Industrie: Steve Reich auf der Suche nach einer neuen Identität von Klange und Struktur", *Melos/Neue Zeitschrift für Musik*, (January-February 1975), pp. 3-6; Clytus Gottwald, "Tendenzen der neuen Musik in den USA: György Ligeti im Gespräch mit Clytus Gottwald", *Musik und Bildung*, VIII (February 1976), pp. 57-61; Michael Nyman, Steve Reich: Interview with Michael Nyman", *Musical Times*, CXII (March 1971), pp. 229-231; Michael Nyman, "Steve Reich: Interview with Michael Nynam", *Music and Musicians*, XXV (January 1977), pp. 18-19; Michael Nyman, "SR—Mysteries of the Phase", *Music and Musicians*, XX (February 1972), pp. 20-21.

² Milton Babbitt, "Who Cares if you Listen?", in *Contemporary Composers on Contemporary Music*, ed. Elliott Schwartz and Barney Childs (New Yoirk, 1967), p. 249.

³ David Sterritt, "Tradition Reseen: Composer Steve Reich", *Christian Science Monitor*, 23 October 1980, p. 20.

⁴ The following is a brief discography of recordings of Reich's music available in America, here listed chronologically according to date of release: *Come Out*, in *New Sounds in Electronic Music*, Odyssey, 32-16-0160, 1967; *It's Gonna Rain* and *Violin Phase*, in *Live/Electric*, with Paul Zukofsky for *Violin Phase*, Columbia MS-7265, 1969, since deleted; *Four Organs*, with Michael Tilson Thomas, Ralph Gierson, Roger Kellaway, Steve Reich, Tom Raney, Angel, S-36059, 1973; *Drumming*, *Music for Mallet Instruments*, *Voices and Organ*, *Six Pianos*, with Steve Reich and Musicians, Deutsche Grammophon Gesellschaft, 2740-106, 1974; *Music for Eighteen Musicians*, with Steve Reich and Musicians, ECM Records, ECM-1-1129, 1978; *Octet*, *Music for a Large Ensemble*, *Violin Phase*, Shem Guibbory for *Violin Phase*, Steve Reich and Musicians, ECM Records, ECM-1-1168, 1980.

⁵ Universal Edition published the following Reich works in 1980, here listed chronologically by date of composition: *Piano Phase* (1967), UE 16156; *Violin Phase* (1967), UE 16185, *Pendulum Music* (1968), UE 16155; *Four Organs* (1970), UE 16183; *Phase Patterns* (1970), UE 16184; *Clapping Music* (1972), UE 16182; *Music for Pieces of Wood* (1973), UE 16219.

⁶ Occasionally, one will stumble across a fine article dealing with Reich in the mass media; a selected few are listed here chronologically: Donal Henahan, "Reich? Philharmonic? Paradiddling?", *The New York Times*, 24 October 1971, sec. 2, pp. 13-14; Kenneth Terry, "Steve Reich", *Downbeat*, 11 August 1977, pp. 38-40; Nicolas Kenyon, "Spaced Out", *The New Yorker*, 10 March 1980, pp. 124-127; Gregory Sandow, "Steve Reich: Something New", *The Village Voice*, 10 March 1980, p. 74; Joan LaBarbara, "Three by Reich", *High Fidelity/Musical America*, June 1980, pp. MA 12-13.

⁷ According to promotional material kindly provided by Reich's management, Lynn Garon Management of New York.

⁸ In a letter to Eric Salzman, he chose to characterize his music as being "structural", rather than "minimal".

⁹ Steve Reich, Jacket Notes, *Come Out*, in *New Sounds in Electronic Music*, Odyssey, 32-16-0160, 1967.

¹⁰ Steve Reich, *Writings About Music* (Halifax, N.S. and New York, 1974), p. 10.

¹¹ Tom Johnson, "The New Tonality", *The Village Voice*, 16 October 1978, pp. 115-116.

¹² An exception to this statement would be the chaconne-based composition, *Variations for Winds, Strings and Keyboards* (1979, q.v.)

¹³ Reich, p. 28.

¹⁴ Other composers also played a role in re-introducing "pulse" into contemporary music as an important parameter; Terry Riley's *In C* (1964) was an especially seminal work in this respect.

¹⁵ Sterritt, p.21

¹⁶ Gottwald, "Signale zwischen Exotik und Industrie", p. 6.

¹⁷ Reich, p. 9.

¹⁸ Nyman, "Reich: Interview" (1971), p. 230.

¹⁹ Nyman, p. 230.

²⁰ Henahan, sec. 2, p. 13.

²¹ Richard Kostelanetz, *The Theatre of Mixed Means* (New York, 1968), p. 188. A useful interview with LaMonte Young, conducted by Kostelanetz, is included in pp. 183-218 of this book.

²² Reich, p. 28.

²³ Terry, p. 39.

²⁴ From a personal interview with the composer, conducted by the author on January 2, 1981.

²⁵ Reich, p. 45.

²⁶ This entire biographical summary of Reich's early career is based upon material in Wayne Alpern, "An Interview with Steve Reich", *New York Arts Journal*, XVII (January 1980), p. 15; "Interview: Steve Reich", *EAM Accents* (European-American Music Corporation), Spring-Summer 1980, p. 5; Terry, pp. 38-39; promotional material provided by Lynn Garon Management.

²⁷ Henahan, sec. 2, p. 14.

²⁸ "Interview: Steve Reich," *EAM Accents*, p. 6.

²⁹ Catherine O'Neill, "A Modern Composer Whose Rhythms Ride the Ages", *The Chronical Review*, 13 November 1978, p. 21.

³⁰ Reich, p. 50.

³¹ Reich, p. 50.

³² Myron Bennett, "Music as Furniture", *High Fidelity*, February 1972, p. 64.

³³ Reich, p. 51.

³⁴ Nyman, "Reich: Interview" (1971), p. 230.

³⁵ Reich, p. 51.

³⁶ For a description of the origin and structure of *Piano Phase*, see Reich, pp. 51-52.

³⁷ Reich, p. 53.

[To Be Continued]