

# Minimalism

No other single aspect of twentieth-century music seems so central as the celebrated and oft-trotted-out “gap between composer and audience.” If the name hadn’t already been appropriated by a popular clothing store chain, one might expect that future music historians will refer to this century simply as The Gap. It is our defining neurosis. We pretend to lament its existence, but actually, we have become so proud of it that, when music doesn’t put up barriers to the audience’s comprehension or patience, we accuse it of not being authentically twentieth-century. There’s something tough and puritan about living with The Gap, like doing without running water or television.

How else to explain the controversy surrounding minimalism, the first musical movement in a hundred years that has threatened to close The Gap? Why has there been so much head-shaking over a repertoire of music that has brought audiences scurrying back into record stores and opera houses by the thousands?

Actually, if we take a larger perspective on music history, minimalism appears to be the latest instance of a recurring phenomenon. The theorist Leonard Meyer has pointed out that “styles have generally moved in the direction of reduced redundancy.”<sup>1</sup> In his scenario, each historic style period—Renaissance, Baroque, Classical, and so on—has moved through three identifiable phases:

- Preclassic: the beginning of the style, in which the musical language is extremely redundant, repetitive in its formulas and devices (or at least more so than the music that preceded it historically), and the music provides little compositional information; i.e., it is quite simple, and may “often appear to later generations to be somewhat naive and even tedious”;
- Classic: the mature period of a style, in which the language has evolved to a point of optimum balance between compositional redundancy and information, so that the “audience must be experienced, but prodigious feats of integrative memory are not required” for comprehension; and

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- Mannerist: the decadent or moribund phase of a style, in which the rate of compositional information is greatly accelerated and redundancy very low; "Schemata are elliptically suggested rather than explicitly presented. . . . Sensitive, accurate appreciation demands considerable experience and training."<sup>2</sup>

During each period, Meyer claims, the level of perceived information remains pretty much constant, since at the birth of a new style the information, though not dense, is new and unknown, while at the end, it is extremely familiar but highly dense.

Seen through this grid, one can look at minimalism as the latest in a series of preclassic phases, with predecessors that include the opera of the Florentine Camerata (Baroque) and the early symphonies of Sammartini and the Mannheim school (Classical). In each case, the pre-classic phase followed an era of complex polyphony, so saturated with musical meaning that further developments or elaboration seemed impossible:

- Palestrina polyphony gave way to the Florentine Camerata
- Bach polyphony gave way to the early symphony
- Babbitt serialism gave way to minimalism

In each case, the academic masters of the older style went into an uproar. The new style always seems—and is, actually—so simpleminded, so redundant, so naïve, whereas the old style was so elaborate, so evolved, so dense, so perfect. But new composers come along, and just as Monteverdi could not have written more perfect masses than Palestrina, and C. P. E. Bach could not have written more elegant fugues than J. S., the minimalists could not have surpassed Babbitt in elegance and complexity. They had to do something else.

This is an *a posteriori* explanation. No one was thinking along these lines in 1964. Although only Babbitt is mentioned above to simplify the parallel, the early sixties were awash in complex, austere music that denied personal choice and subjectivity, whether from Babbitt's and Boulez's viewpoint of twelve-tone technique, Stockhausen's of global structure, or Cage's of rigorous chance processes. In the welter of structures, methods, and mandates, there was no room to use one's God-given musicality, no allowance made for putting a phrase down merely because one liked it. Even conceptualism was pretty dry territory, little whirlpools in the ocean notwithstanding, but at least it offered a sense of humor, an unpretentiousness, and a way out. Minimalism grew quietly from the premises of conceptualism: it wasn't very far from verbal instructions like "make a sound until you no longer want to change it" to "play a tape loop of a sound over and over."



So Terry Riley started playing with tape loops and repetition, Steve Reich applied the effect to live pianists, and poof! a new aesthetic existed. It was several years, however before anyone realized a new movement had started, many more before a new historical tendency seemed imminent. Given the unpredictable direction of modern culture under the influence of electronic technology and the increasing confluence of diverse ethnicities, there may never be a classic phase to follow minimalism (though I believe that postminimalism and totalism represent the stirrings of such a classic phase). But the impulse to start over with the simplest materials after a period of complexity and confusion seems a recurring one, and the outcry against minimalism among academic composers and classical music mavens seems based in an ignorance of history.

There has even been a disproportionate amount of controversy about the term minimalism, which was coined around 1968 or 1971 by either, depending on whom you believe, Tom Johnson, a composer and music critic for the *Village Voice* in New York, or the British composer Michael Nyman, who wrote a groundbreaking book called *Experimental Music*. Other terms have been advanced with less staying power: "trance music," "hypnotic music," "process music" (which has a slightly different connotation discussed below), "modular music," and, more pejoratively, "wallpaper music" and "going-nowhere music." "Minimalism" has won out, however, even though quintessential minimalists Steve Reich and Philip Glass both impatiently disavow the term (just as Debussy disavowed "impressionism").

How, critics argue, can you apply the term "minimal" to works like those of Steve Reich or Philip Glass that last from one to four hours with thousands of notes going by? Well, easily, if you're comparing the quasi-geometric linearity and predictability of those notes with the geometric lines and simple optical illusions of the visual art style that had been known as minimalism since the early sixties. One visual-art definition of the word refers to art that is "barren of merely decorative detail, in which geometry is emphasized and expressive technique avoided."<sup>3</sup> It's hard to imagine minimalist music described more precisely. It's true that hours of arpeggios by Philip Glass seem far more involved than a pairing of red and black panels by Ellsworth Kelly, but since music is extended in time, it generally requires a continuous influx of energy and thus a large number of notes. Since Philip Glass produced some of his early concerts in collaboration with the minimalist painter Sol LeWitt and the minimalist sculptor Richard Serra, and since everyone with much cultural literacy by now knows that minimalism in music refers to the work of Young, Glass, Reich, and Riley, it seems pedantic to deny the term's appropriateness at this late date.

Likewise, minimalism's simple-mindedness has been overstated by its opponents. Only a few of the earliest minimalist pieces can be considered simpler or lower in information than your average Haydn minuet.

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By 1974, in works such as Reich's *Drumming* and Glass's *Music in 12 Parts*, the information level of minimalism was already such as to require—and, more so than most twelve-tone music had, to repay—fairly intense listening. In fact, thousands of people uninvolved in the quarrels of the professional music world have found in minimalist music a reason to start listening to new “classical” (or “post-classical,” as it's being called on the internet) music again. Four of the five major composers discussed in this chapter—Riley, Reich, Glass, and Monk—are among the best-loved figures in American music.

One of the more controversial aspects of minimalism, however, is pretty easy to sort out: historical precedence. La Monte Young wrote the seminal works from which the aesthetics of minimalism began to grow in the late 1950s. Terry Riley has always graciously given Young credit for his precedence in the ideas that led to Riley's *In C* of 1964. Steve Reich was one of the performers in the premiere of *In C* and made his own first minimalist work, *It's Gonna Rain*, in 1965. And Philip Glass, in turn, played with Reich's earliest ensemble, taking a minimalist turn in his own music in 1967 with *Strung Out*. The seeds of minimalism were sown, then, between 1958 and 1968. The movement emerged as a mass audience phenomenon in 1974 with the release of Reich's Deutsche Grammophon recordings and in 1976 with the historic premiere of Glass's *Einstein on the Beach* at the Metropolitan Opera House. The death of minimalism, meanwhile, has been authoritatively announced every year from 1977 to the present.

## La Monte Young

La Monte Young is the purist's minimalist, the originator, the visionary. For decades, his name was famous, his work unknown, and the situation has not completely changed even yet. Young enjoys a vague intellectual reputation in rock circles for his influence on the rock group The Velvet Underground, but for decades the stringent conditions he imposed on his performances made it impossible for all but a few to hear his music. Since 1960 he has performed most of his own music himself (sometimes with ensemble), and while he has toured Europe a few times, most of his concerts have taken place in his personal performance spaces in New York. Only in the late 1980s, after his funding from the Dia Art Foundation began to disappear, did he begin to put out recordings under commercial pressure. Yet if Cage gave American composers the permission they needed to ignore expectations nurtured by the European tradition, it was Young, perhaps more than any of Cage's other followers, who planted the seeds of a totally American aesthetic.

Born in a log cabin in a tiny Idaho town in 1935, Young loves to recount his earliest memories, of the wind blowing through a chink in the





Marian Zazeela and La Monte Young. Photo by Sabine Matthes.

cabin and the hum of a power line outside: two sounds that would help mold his conception of music. As a teenager he became a virtuoso jazz saxophonist, and, once at Los Angeles City College, beat the later-famed reed player Eric Dolphy for first chair in a band. In his early compositions, however, Young accepted the twelve-tone technique commonly taught at the time. In the mid fifties he visited the composers' seminar at Darmstadt, where he discovered the work of Cage and Stockhausen. Immediately, a change appeared in Young's musical thinking. His early twelve-tone pieces (such as *Five Small Pieces for String Quartet: On Remembering a Naiad*, 1956) had been aphoristically brief, in the manner of Anton Webern, who at that time dominated European musical thought. In Young's *Trio for Strings* of 1958, however, he took the unprecedented step of writing in notes that were to be held, motionless, for up to several minutes at a time.

Later, Young's long durations would blossom into a passion for tuning—getting chords and intervals perfectly in tune—but first he took a detour through conceptualism. Moving to New York in 1960, Young soon found (or made) himself the star of the scene that gelled into the Fluxus movement. Three of the conceptual works Young produced in this milieu could be called the first minimalist works as well. One is *Composition 1960 #9*, the score of which is simply a card with a straight, horizontal line on it. Another is *arabic numeral (any integer) for Henry Flynt* (1960), in which a sound is supposed to be repeated some number of times and the title of a performance is intended to be that number.

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Traditionally, this piece has been played as a massive cluster on the piano or as the beating of a gong or cooking utensil. The most significant, though, in view of Young's later interest in tuning, is *Composition 1960 #7*, which notates two pitches, B and F#, with the motto, "to be held for a long time."

Though Young provided the original impetus, early minimalism grew from the inspirations of several individuals, only two of whom—Young and Terry Riley—survived as major figures. Several didn't survive at all. The first person to follow Young into composition with long tones was Terry Jennings (1940–1981), a child prodigy on sax and clarinet. In 1960 Jennings wrote a *Piano Piece* of slow, soft, sustained tones similar to Morton Feldman's early music, and a String Quartet twenty-eight minutes long containing only forty-three notes. Jennings's development was squelched by a debilitating drug problem, and he was murdered at forty-one in California in a drug transaction turned sour.

Even more promising was Dennis Johnson, who in 1959 wrote a piece, *The Second Machine*, employing only four pitches drawn from Young's Trio. More significantly, in the same year Johnson produced a six-hour piano piece titled *November*—quiet, sustained, tonal, and delicately beautiful—that anticipated the length, tonality, and meditateness (though neither the tuning nor complexity) of Young's later magnum opus, *The Well-Tuned Piano*. Despite his talent, Johnson had more brains for math than stomach for the music business, and he detoured into a career in computer science. The composer who introduced diatonic tonality and repetitive phrases into minimalism, though, was Young's friend from Berkeley Terry Riley. In 1960 Riley wrote a String Quartet similar to Young's Trio, but in pure, uninflected C major. The insistent phrase repetition that is minimalism's most recognizable trademark first appeared as tape-delay echoes in pieces Riley made in 1963, *Mescaline Mix* and a theater score called *The Gift*.

Listening to tones sustained for a minute or more, one begins to notice overtones, and eventually the subtle influences of tuning. It was Tony Conrad (b. 1940), a filmmaker trained in mathematics and also a violinist, who showed Young that perfect consonances were related as ratios of whole numbers in the overtone series. Young's first composition notated as harmonic numbers (instead of conventionally notated pitches) was a rule-based melodic improvisation later retroactively titled *The Pre-Tortoise Dream Music*, following a repetitive sequence of harmonics. Such pieces were performed by Young's group, The Theater of Eternal Music: Young and his wife Marian Zazeela on vocals, Conrad on violin, hand-drummer Angus MacLise, John Cale on viola, sometimes Jennings on sax, and Riley singing or playing violin.

The Theater of Eternal Music's performances would take place over a deafening drone audible outside the concert hall, with geometric lighting designed by Zazeela, a visual artist in her own right whose work

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with different colored lights parallels Young's work with sustained tunings. Listening to tapes of those performances, it is extraordinary how well one can hear the relationships between what look like a complex set of overtones: the 63rd harmonic as a whole step above the 7th (56th), the 42nd as a perfect fourth below the 56th, and so on.

Conrad, while still involved with Young and Zazeela, produced some minimalist music on his own, including *Outside the Dream Syndicate* and the several-hour-long *Four Violins* of 1964. After breaking with Young, he veered into the field of filmmaking and video, creating a film called *The Flicker* which remains a seminal work of the structuralist film movement. Later, in the 1980s, he returned to composition and attempted to recreate what he considered the essential aspects of the Theater of Eternal Music's work in *Early Minimalism* (a series of works made between 1985 and 1995) and *Slapping Pythagoras* (1995). Meanwhile Cale, while still working with Young, began a proto-punk rock group called The Velvet Underground and became part of rock history. In "The Black Angel's Death Song" from *The Velvet Underground and Nico*, the famous Verve disc with Andy Warhol's banana painting on the cover, the viola drone and static texture are legacies of Young's influence.

In June of 1964, Young tuned a piano to six pitches of *The Pre-Tortoise Dream Music*, tuning the six other pitches of the scale consonantly to fill out the octave. On this he performed a forty-five-minute improvisation on various chords separated by silences. This would grow into *The Well-Tuned Piano*, an improvisatory piano solo based on more than fifty complexly interrelated themes and chordal areas and lasting, in recent performances, over six hours. The piece (further discussed below) is probably the most innovative and influential American piano work since Ives's *Concord Sonata*.

Concurrent with the Theater of Eternal Music, Young and Zazeela began an ongoing project called Dream House, in which they played pure sine tones in perfectly-tuned ratios to observe the effect (if any) on the human nervous system and spirit. Through the seventies and most of the eighties, they were supported by the Dia Foundation, which allowed them to work full-time on installations and environments without the pressures to put music out commercially that most composers face. Young's early sine-tone assemblages, called *Drift Studies*, started out with relatively simple ratio patterns often including prime numbers. Young was particularly interested in 31:32, or 63:64, or 7:16:18. Around 1980 Young obtained a super-accurate Rayna synthesizer, reliable to within one beat a year, and began moving into the higher reaches of the overtone series.

His most complex such sine-tone sculpture to date (1994) is titled *The Base 9:7:4 Symmetry in Prime Time When Centered Above and Below the Lowest Term Primes in the Range 288 to 224 with the Addition of 279 and 261 in Which the Half of The Symmetric Division Mapped Above and Including 288*

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1096	118	$(137 \times 2^3)$ octave of twin prime
1072	79	$(67 \times 2^4)$ octave of prime
568	180	$(71 \times 2^3)$ octave of Young prime ( $P_{yII}$ )
544	105	$(17 \times 2^5)$ octave of Young prime ( $P_{yII}$ )
288	204	$(9 \times 2^5)$ octave of 9
283	174	twin and Young prime ( $P_{yI}$ )
281	161	twin prime
279	149	$(9 \times 31)$
277	136	prime
271	99	twin and Young prime ( $P_{yI}$ )
269	86	twin prime
263	47	prime
261	33	$(9 \times 29)$
257	7	prime
256	0	$(2^8)$ octave of fundamental
254	1186	$(127 \times 2)$ octave of prime
252	1173	$(9 \times 7 \times 2^2)$ octave of 63
251	1166	Young prime ( $P_{yII}$ )
241	1095	Young prime ( $P_{yII}$ )
239	1081	prime
233	1037	prime
229	1007	twin prime
227	992	twin prime
224	969	$(7 \times 2^5)$ octave of 7
119	1074	$(17 \times 7)$
113	984	prime
61	1117	twin and Young prime ( $P_{yI}$ )
59	1059	twin prime
31	1145	twin and Young prime ( $P_{yI}$ )
29	1030	twin prime
9	204	region boundary
7	969	region boundary
4	0	$(2^2)$ octave of fundamental

EXAMPLE 8.1 La Monte Young, *The Base 9:7:4 Symmetry in Prime Time When Centered Above and Below the Lowest Term Primes in the Range 288 to 224 with Addition of 279 and 261 . . .*

*Consists of the Powers of 2 Multiplied by the Primes Within the Ranges of 144 to 128, 72 to 64, and 36 to 32 Which Are Symmetrical to Those Primes in Lowest Terms in the Half of the Symmetric Division Mapped Below and Including 224 within the Ranges 126 to 112, 63 to 56, and 31.5 to 28 with the Addition of 119. This breathtaking title is a literal description of the entire piece,*



whose frequency ratios are given in example 8.1. I wrote, for the *Village Voice*, the following description of the piece while listening to it:

Walk into The Base 9:7:4 Symmetry and you'll hear a whirlwind of pitches swirl around you. Stand still, and the tones suddenly freeze in place. Within the room, every pitch finds its own little niche where it resonates, and with all those close-but-no-cigar intervals competing in one space (not to mention their elegantly calculated sum- and difference-tones), you can alter the harmony you perceive simply by pulling on your earlobe. . . . Moving your head makes those tones leap from high to low and back, while that cluster in the seventh octave, with its wild prime ratios like 269:271, fizzes in and out. . . .<sup>4</sup>

Young's music offers images of infinity, its drones (either instrumental or electronic) sustained in a stasis that seems extracted from a potential eternity.

**Listening Example: The Well-Tuned Piano (1964–1973–1981–present)**

*The Well-Tuned Piano* is La Monte Young's masterpiece to date, an improvisatory but intricately structured piano solo whose most recent performances have exceeded six hours. The work uses one of the most unusual scales in the history of music, remarkable for the smallness of some of its pitch steps. The scale, in ratios and cents (rounded off to the nearest whole cent) measured from the fundamental E-flat, is as follows:

NOTES	RATIOS	CENTS ABOVE E♭
E♭	1:1	0
E	567:512	177
F	9:8	204
G♭	147:128	240
G	21:16	471
G♯	1323:1024	444
A	189:128	675
B♭	3:2	702
B	49:32	738
C	7:4	969
C♯	441:256	942
D	63:32	1173

Notice from the cents column that the scale does not uniformly ascend; G♯ is *lower* than G, and C♯ lower than C. This is to keep all perfect fifths (3:2 ratios) spelled as such on the keyboard. The tuning allows for great subtlety in adjacent pitches within certain melodies, while allowing a maximum of transposability to various keys.

There are two primary contrasting features to *The Well-Tuned Piano*. One is the themes that thread through the work in a glorious complex-

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ity of anticipations and reminiscences. These themes have fantastically imaginative names such as "The Goddess of the Caverns under the Pool," "The Theme of the Lyre of Orpheus," "Young's Brontosaurus Boogie in E $\flat$ ," and—the most important theme—"The Theme of the Dawn of Eternal Time." (This last-named theme, which opens the work, is given in example 8.2.) The remainder of the piece consists of "clouds," indistinct chords of quickly repeated notes whose resonance in this pure tuning builds up tremendous continuums of tones, including sum- and difference-tones which are perceived without being played. The clouds are made up of notes from the various chords, including the Opening Chord (E-flat, B-flat, C, and F), the Magic Chord (E, F-sharp, A, and B in the left hand, D, E, G, and A in the right), the Romantic Chord, the Harmonic Rainforest Chord, and so on. Between them the Opening and Magic Chords divide up the ten pitches most used in the piece, which swings slowly back and forth between the two pitch areas.

Except for an additively built-up melody here and there, *The Well-Tuned Piano* really has little in common with most minimalist music. It uses plenty of dissonance, some of it quite sharp because of the tiny intervals involved, as well as pure consonance; there is rarely a steady beat for any length of time, nor any repetition to speak of; and the form is completely organic, ebbing and swelling under the force of spontaneous inspiration. Whether you listen to the clouds as a kind of ambient experience or follow the intricate network of themes, the work provides one of the most complex and well worked-out large-scale forms since Wagner's operas.



EXAMPLE 8.2 La Monte Young, *The Well-Tuned Piano*. Theme of the Dawn of Eternal Time. All the pitches in this example are exact overtones of E-flat. Thus the D-flat (actually played on C on Young's keyboard) is about 31 cents flatter than usual. The rhythmic notation here is Young's own, approximated from his improvisation.



## Terry Riley

La Monte Young and Terry Riley have enjoyed one of the more remarkable friendships in the history of music, devoid of the jealous rivalry that has marked so many pairs of originators. The relationship could have been difficult, because for most of their careers Riley has enjoyed more public success. This situation began in 1968, when Columbia Records attempted to produce records by both Riley and Young. The Riley disc was the premiere recording of his groundbreaking 1964 masterwork *In C*. Young's recording was to have been of him and Zazeela singing in pure tunings with the ocean in the background. Something went wrong with the recording of the ocean, and Columbia wanted to rerecord the ocean and overdub it with the voices. Young objected vehemently, feeling that the singing was in response to the ocean and that an overdubbing would amount to artistic dishonesty. On financial grounds, Columbia refused to rerecord. Riley's disc appeared, Young's didn't, and Riley's reputation soared. What keeps the peace is that Riley has always generously given Young credit for the innovations that led to minimalism.

While Riley does not possess Young's adherence to generative theoretical principles, he has been equally original in less extreme ways. Born in rural Colfax, California in 1935 (a few months before Young), he was the son of a railroad man in the Sierra Nevada Mountains. Playing violin, piano, and later saxophone, Riley became fascinated with bebop. He attended San Francisco State University, where, studying with Robert Erickson, he wrote in a rather neoclassic and always tonal style. In the late fifties he supported his wife and child by playing ragtime piano in San Francisco's racy Gold Street Saloon. In 1958, however, he began taking courses at Berkeley and fell under the sway of this ambitious Young man who had scandalized the music department by writing a fifty-one-minute String Trio with only eighty-three notes.

Young and Riley began giving concerts together in performances which included playing catch, mowing the lawn, sleeping in sleeping bags, and dragging trash cans around the perimeter of the concert hall.<sup>5</sup> Where Young had found his aesthetic in sustained tones, Riley was fascinated by repetition and that same year wrote his first work using tape loops, *Mescaline Mix*, for the dancer Anne Halprin. As he later noted,

I think I was noticing that things didn't sound the same when you heard them more than once. And the more you heard them, the more different they did sound. . . . In those days the first psychedelic experiences were starting to happen in America, and that was changing our concept of how time passes. . . .<sup>6</sup>

Restless, Riley headed for Europe with his family. In France, at a studio of the French National Radio, he wrote his first piece using a technique he would make famous, tape-delay. It was *Music for the Gift* (1963),



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Terry Riley. Photo by Sabine Matthes.

accompaniment for a theater piece, and for the first time it used a tape playing in one tape player, being simultaneously recorded in another and then played back for an echo effect caused by the distance between the record and play heads on the second tape machine.

Returning to San Francisco in 1964, Riley gave a concert at the San Francisco Tape Center. The premiere on the program was modestly called *In C*, and the performers included, besides Riley, composers Steve Reich, Pauline Oliveros, Jon Gibson, Morton Subotnick, Phil Winsor, and Ramon Sender, to mention the more famous names. The score to *In C* (excerpts given in example 8.3) consists merely of fifty-three melodic fragments which each performer is to play in order, repeating each one



The image displays ten musical staves, each representing a different melody from Terry Riley's *In C*. The staves are numbered 1, 2, 6, 12, 14, 20, 25, 32, 35, and 49. Each staff is written in treble clef and contains a single melodic line. The notation is minimalist, using simple notes and rests to create a hypnotic effect. The melodies are short and repetitive, characteristic of Riley's style.

EXAMPLE 8.3 Terry Riley, *In C*, selected melodies.

any number of times and moving on to the next whenever he or she wishes. At rehearsals, it was difficult to keep the ensemble pulse together, so at Reich's suggestion, Riley added a relentless pulse on the top two Cs of the piano. The echoing of brief melodies from player to player provides a nonelectronic semblance of the tape-delay effect, while the swirling of motives around the pulse elicits a hypnotic, almost trance-like state from the listener. One of the most widely performed pieces of twentieth-century music (partly due to its unspecified instrumentation), *In C* has enjoyed unbroken popularity from the evening of its premiere to the present day.

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Following *In C*, most of Riley's subsequent recordings, such as *Rainbow in Curved Air* (1968) and *Poppy Nogood and the Phantom Band* (1967), were solos either on the saxophone or the electric organ with tape delay, or on the piano. More than any other music of the sixties, his early music has the smooth, modal, groove-oriented feel associated with the psychedelic drug culture. In 1970, he and Young both began studying Indian raga singing with Pandit Pran Nath, and Riley dropped from public view for awhile. He reemerged with a disc of highly intricate counterpoint for just-intonation organ with tape delay, *Shri Camel* (1980), a series of tapestries over propulsive ostinatos. And when the Kronos String Quartet approached Riley for some chamber music in the early eighties, he responded with two beautiful multimovement cycles, *Cadenza on the Night Plain* (1984) and *Salomé Dances for Peace* (1985–1986).

Riley's most recent works are eclectic and resist characterization. He usually employs pure, just-intonation tunings, at least in his piano and string quartet music, though he does not adopt Young's extreme purist position or go to the extent of a special notation like Ben Johnston. He frequently makes use of rhythmically complex ostinatos that provide a Middle-Eastern flavor (the *Mythic Birds Waltz* for string quartet is an example). His *The Heaven Ladder* (1995) is a multimovement piece of ambitious, super-Beethovenian proportions full of ragtime fugues and lullabies, while other works, like *Chanting the Light of Foresight* (1987) for the Rova Saxophone Quartet, draw on the mythology of his Irish heritage. This tendency to never remain satisfied with a particular vein may have decreased the popularity his early reputation promised, but Riley is a superb and devout musician whose compositions are never superficial.

## Steve Reich

For many fans, Steve Reich is the only minimalist who counts; Young's music is too inaccessible and austere, Riley's too inconsistent, and Glass's too repetitious and simplistic. Reich's music does have an elegant veneer of intricate surface detail that gives it a classical sense of polish, and its bouncy rhythms within a serene stasis of diatonic, white-note tonality enchant jazz and classical fans alike. Also, Reich quickly surpassed Young and Riley in visibility when his Deutsche Grammophon recording of *Drumming* appeared in 1974, and his earlier "process" works, *Come Out* and *Piano Phase*, have had tremendous impact on younger composers. As the minimalist who communicates to mainstream classical listeners, Reich is something of an Aaron Copland for the late twentieth century, a status confirmed in 1980 when he became the first composer in decades whose music attracted a sell-out crowd to Carnegie Hall.

The East Coast, urban upbringings of Reich and Philip Glass contrast markedly with Young's and Riley's rural, frontier origins. Born in



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New York in 1936, Reich was the son of a lawyer and a lyricist-singer who divorced when he was a year old. Train trips between his parents in Los Angeles and New York, on which he was accompanied only by his governess, later influenced one of his most popular works, *Different Trains* for string quartet and recorded voice samples. At sixteen he entered Cornell to major in philosophy, eventually writing a thesis on Ludwig Wittgenstein. Like Young and Riley, he kept up a jazz band on the side, one that tried to sound, he says, somewhere "between George Shearing and Miles Davis."<sup>7</sup>

After graduation, Reich headed back into music, studying with William Bergsma and Vincent Persichetti at Juilliard, but cut his studies there short to head with the hippies to a hipper location, San Francisco. At Juilliard he had already written his first twelve-tone piece, and when he found that the celebrated Italian serialist Luciano Berio would be teaching at Mills College, he enrolled. Reich's approach to twelve-tone writing was unusual, however, and pointed to future tendencies: he used the row at the same pitch level over and over, without transposing. Finally, a frustrated Berio asked, "If you want to write tonal music, why don't you write tonal music?" Reich took the suggestion.

His first experiments in rebuilding tonality used tape loops, like Riley's. Having recorded a sermon by a San Francisco street preacher, he played two simultaneous loops of a shouted phrase, and found that fascinating aural phenomena resulted when the tape loops went slowly out of sync because of differences in tape player speed. The piece based on these loops became *It's Gonna Rain* (1965), and the next piece, produced back in New York, was *Come Out* (1966). *Come Out* was drawn from an interview with a victim of a police beating, who told Reich, "I had to, like, let some of the bruise blood come out to show them." (The victim couldn't be taken to the hospital unless he was bleeding.) In Reich's loop process, the phrase "Come out to show them" repeated increasingly out of phase with itself, begins to sound melodic once the verbal content is effaced by the blurring of nonsynchronous loops.

What Reich realized in listening to *It's Gonna Rain* and *Come Out* was that listening to a gradual musical process could be highly engaging, especially in contrast to the abstract music of Cage and the serialists, who hid their processes behind opaque walls of complexity. Audible process—"process music"—became Reich's touchstone for the next several years, up through *Drumming* of 1973. However, Reich was not satisfied to make music only to play on tapes, and he returned to live performance with *Piano Phase* (1967), in which he and another pianist performed the same phasing process heard in *Come Out* on two pianos with a simple twelve-note melody in B minor. (See example 8.4.)

When Reich gave a concert in 1967, Philip Glass, his old schoolmate at Juilliard, came up afterward to talk. Together with Jon Gibson on flute and saxophone and a few other musicians, they put together an



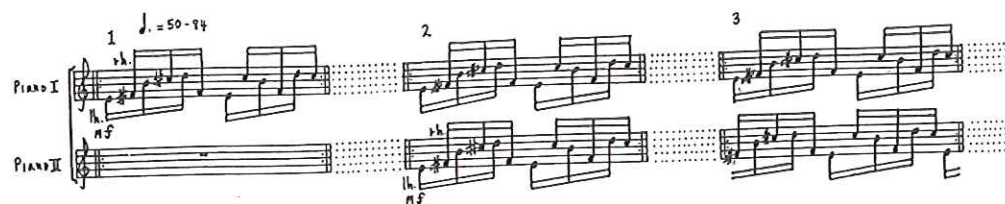
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EXAMPLE 8.4 Steve Reich, *Piano Phase*. Reich's directions read: "The first pianist starts at 1 and the second joins him in unison at 2. The second pianist increases his tempo very slightly and begins to gradually move ahead of the first until, (say 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."

ensemble to play their music, starting a downtown Manhattan tradition of composer-led ensembles. Forming one's own ensemble obviated the problem of working with orchestras and more conventional ensembles, whose habits and union rules prevented a composer from ever getting nearly the rehearsal time he or she needed for a sterling performance. Also, the attitude of orchestra players toward new music has been notoriously bad for decades, and with hand-picked players, one could count on sympathetic interpreters who would put their heart and soul into the music. The result was that, all through the seventies, the separate ensembles of Reich and Glass (who split up on acrimonious terms in 1971) gave the most exquisitely well-rehearsed new-music performances around.

In fact, no innovation by the minimalists has had more profound or lasting consequences than the Reich-Glass ensemble concept. Under serialist influence, classical chamber music had emphasized soloistic playing and individual virtuosity. Reich and Glass, writing music centered on simple processes and working with musicians who were not necessarily virtuosos, introduced ensemble playing in which players doubled each other's lines exactly, or at least in rhythmic unison. The result, amplified by the use of synthesizers and microphones (in Glass's music especially), wasn't chamber music in the conventional sense but a new kind of symphonic genre designed to focus the new materials to an audience in clear-cut lines. Just as Romantic orchestral music used entire brass or strings choirs playing the same melody, minimalist orchestration achieved similar effects with only five to eight players. This, as much as the tonal simplicity and rhythmic interest, was a key to minimalism's appeal.

As Young and Riley had found inspiration in Indian and Arabic music, Reich took a new impetus for his music from the study of African drumming. In the summer of 1970 he enrolled at the University of Ghana at Accra and spent five weeks (his stay curtailed by malaria) studying Ewe drumming. He found the phasing processes of Ewe rhythmic impulses akin to his own tape-loop processes, and upon his return



worked at figuring out how to reconfigure African drumming techniques to fit into a Western performance tradition. The result was *Drumming* (1971), perhaps minimalism's first real public success. The seventy-odd-minute piece is divided, without pause, into four sections: the first for tuned bongos, the second for marimbas, the third for glockenspiels and piccolo, and the fourth for all those forces combined. Using only a few pitches in serene F# major modality, the piece uses beat-shifting and phase-shifting repetitions to create a shimmering surface of mellow mallet percussion.

With *Music for 18 Musicians* (1976), Reich began to move away from audible process, though this pulsing continuum, modulating as it does through one ambiguous key area after another, is nevertheless one of his most popular works. In the 1980s he began to receive orchestra commissions, which pulled him into a realm not entirely congenial to his musical personality; the results, such as *Desert Music* (1984) and *The Four Sections* (1987), blunt his music's delightful rhythmic edge. More fruitful are his continuing explorations of speech-melody, which took a new turn in *Different Trains* (1988) for string quartet and tape. In this, phrases spoken about train trips—both Reich's own as a child and the very different train trips that Jews in Europe were taking to the death camps—are spun into a synchronized counterpoint whose melodic contours are generated by the speech phrases. Similarly, the speech contours of Jews and Arabs discussing their common heritage are woven into *The Cave* (1993), a multimedia extravaganza made in collaboration with Reich's wife, the video artist Beryl Korot. *The Cave* is the largest and most exciting expression so far of Reich's renewed interest in his Jewish roots, which began in the late 1970s.

### *Listening Example: Eight Lines (1979)*

One of the audible processes that Reich grew enamored of early, and has remained faithful to, is the gradual elongation of a brief phrase. As precedent, Reich points to church organum of the twelfth century, in which composers like Perotin greatly lengthened notes of a chant to add more and more notes in the counterpoint above. Reich's version of this process first appears in his *Four Organs* (1970), which takes twenty minutes to turn a phrase of two staccato organ chords into a thick continuum. The process continued in *Music for Mallet Instruments, Voices, and Organ* (1973) and reached a kind of climax of elegance in his *Octet* (1979), also called *Eight Lines* when played with fuller and more practical instrumentation.

Throughout its eighteen-minute duration, *Eight Lines* rocks gently in a pleasantly asymmetric 5/4 meter. The instrumentation uses more than eight instruments, but never more than eight at a time: flute, piccolo, clarinet, bass clarinet, two pianos, two violins, viola, and cello (the string quartet can be doubled to relieve the difficulty of all the sustained

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tones). The piano parts are fiendishly difficult, a perpetual motion of parallel fifths leaping across the keyboard. When the texture is thickest, the pianos are echoing each other from one to four beats apart within the 5/4 rhythm; this intricate echoing against the meter accounts for much of the piece's aural liveliness. Each of the five continuous sections is diatonic, using a seven-note scale without accidentals. Overall, however, the key changes almost unnoticeably from a signature of five sharps to six sharps to five flats.

The piece's structure is defined by the repeating chord patterns in the strings, which are built up additively, phrase by phrase, in minimalist tradition. In the first section, the phrases are first two measures long, then expand to eight and then ten. The second section opens with a return to two-measure phrases, which are then expanded to four, and so on according to the following pattern:

SECTION	PHRASE LENGTHS IN MEASURES					KEY SIGNATURE
1	2	8	10			five sharps
2	2	4				six sharps
3	2	8	10			five flats
4	2	4				five flats
5	2	4	8	10		five flats

(Continued)

EXAMPLE 8.5 Steve Reich, *Eight Lines*.



The musical score for Example 8.5 (continued) shows a full orchestral arrangement. The top staves are for Flute 1, Bass Clarinet 1, Piano 1, and Piano 2. The bottom staves are for Violin 1, Violin 2, Viola, and Cello. The music is in 4/4 time and features a repeating melodic pattern in the flute and piano parts, with the lower strings playing chords.

EXAMPLE 8.5 (continued)

Each phrase pattern is repeated from two to twelve times (fully notated in the score, not left to the performer's discretion as in much minimalist music). Another method of sectional articulation is that the lower strings play chords with the violins in sections 2, 4, and 5, and in 1 and 3 play fast-note patterns similar to those of the pianos.

The flute melody that enters near the beginning of *Eight Lines* (seen in example 8.5) marks one of minimalism's first returns to a freely intuitive composing technique after years of strict objectivism. The tendency of the woodwinds in this piece to pick out patterns from the piano parts goes back to Reich's *Drumming*, in which the piccolo was asked to pick out and reinforce melodies resulting from the counterpoint of percussion lines. The physicality of *Eight Lines*'s swinging rhythm, plus the intricacy of its echoing patterns, demonstrate why Reich has become one of the best-loved of American composers.

## Philip Glass

Philip Glass is the minimalist whose style is best known to the general public. This is partly due to the sheer bulk of his work—thirteen operas as of this writing—and his involvement with theater, a medium that never fails to generate more press than instrumental music. It is also due to the extreme clarity and recognizability of his style, occasionally amounting to a lamentable tendency toward self-repetition. His trade-

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mark, the repeating four- to six-note arpeggio used to articulate chromatically related triads, instantly identifies the music as his. Consequently, he has achieved a dubious reputation as the "lowbrow" minimalist, a reputation that does not do justice to the considerable tonal and rhythmic complexity of his best music. Glass did study at Juilliard and with the formidable Nadia Boulanger, and his easily caricatured idiom sometimes conceals structures of elegant sophistication.

Born in Baltimore in 1937, Glass took up violin, flute, and piano, and later studied at Juilliard, fascinated by the music of Webern. At the University of Chicago, he majored in philosophy (like Reich) and mathematics, then continued at Juilliard as a classmate of Reich's, likewise studying with Persichetti, Bergsma, and (at Aspen) Milhaud. Quite predictably given this training, Glass wrote many pieces in a Francophile, Coplandesque idiom. What's more intriguing is that more than twenty of these pieces were published. While Glass has disowned them, and they bear no relationship to his mature style, one can still find them floating around music libraries.

In 1964 Glass took the equally conventional career step of going to Paris to study with the seventy-seven-year-old Boulanger. Reduced to a childlike level of starting over by Boulanger's stern discipline, he nevertheless credited some part of his future success to the technique she instilled in him. The Paris music scene, however, was dominated (and would be for over another thirty years) by Pierre Boulez, who had turned it into (in Glass's words) "a wasteland, dominated by these maniacs, these creeps, who were trying to make everyone write this crazy, creepy music"<sup>8</sup>—i.e., serialist music. Despite Glass's early enthusiasm for Webern, he had long ago lost interest in strict atonality, considering it—as many composers did before European serialism renewed interest in it—an old-fashioned, prewar idiom.

Just as with Young, Riley, and Reich, Glass was turned in a new direction by exposure to non-Western music. In 1965, still in Paris, he was asked to transcribe some music by the Indian sitar player Ravi Shankar that was intended for use in a film. Working for months with Shankar and his tabla player, Glass learned the principles of Indian rhythmic structure, or *tala*, in which rhythmic cycles are built up by addition of different numbers of a small rhythmic unit. Under this influence, Glass began working in a new style using repetitions of tiny rhythmic patterns and very few pitches, a style that first appeared in his 1965 music for Samuel Beckett's *Play* (produced by the company that would later, in New York, become Mabou Mines). Perhaps the archetype of this phase of Glass's music is the simple piece *1 + 1* (1968), consisting merely of two rhythmic units—an eighth note, and two sixteenths followed by an eighth—tapped in any order and combination on any amplified surface.

Glass's ensemble, following the breakup with Reich, included Richard Landry, Jon Gibson, Richard Peck (all saxophonists, though



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Philip Glass. Photo © Jack Mitchell.

Gibson often played flute), sound mixer Kurt Munkacsi, and at various times James Tenney, Frederic Rzewski, Joan LaBarbara, Barbara Benary, Richard Teitelbaum, and singers Iris Hiskey and Dora Ohrenstein. For this ensemble of lightning-quick reflexes Glass wrote a series of groundbreaking works: *Two Pages* (1969), *Music in Fifths* (1969), *Music in Contrary Motion* (1969), *Music in Similar Motion* (1969), *Music with Changing Parts* (1970), and finally, the magnum opus of his early years, the mammoth *Music in Twelve Parts* (1974). These mesmerizing monuments of melody, each less austere than its predecessor, were characterized by long but quick chant-like lines played in unison by the entire ensemble, or at least in rhythmic unison. Often the lines were built up by additive processes: 1, 1-2, 1-2-3, 1-2-3-4, and so on. Such processes often resulted in a bracing level of rhythmic complexity quite simply achieved, as repeated notes would build up complex accent patterns (see example 8.6 from *Music in Fifths*).

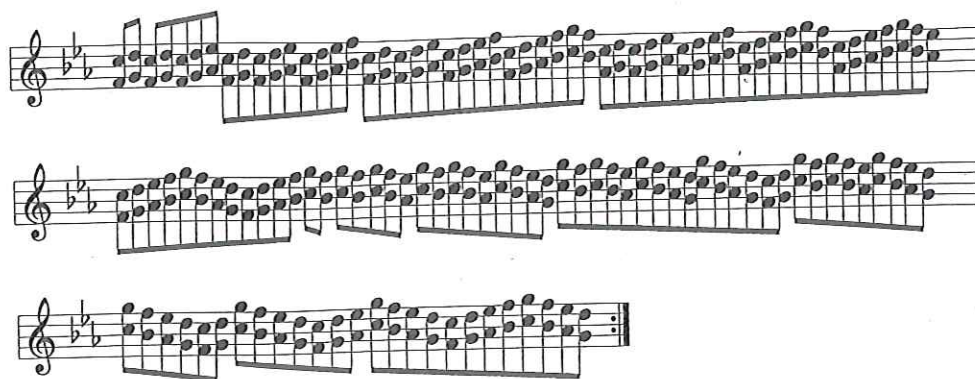
Glass's breakthrough to the public came in his opera *Einstein on the Beach*, which premiered November 21, 1976. The opera revolves around the figure of a madly sawing violinist dressed as Einstein, and the title refers vaguely to Einstein's responsibility for having paved the way for the production of the atomic bomb. *Einstein* was a collaboration with theater director Robert Wilson, already known by then for slow-moving theater works lasting many hours, in which visual logic and geometric



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EXAMPLE 8.6 Philip Glass, excerpt from *Music in Fifths*.

patterns replaced narrative. At this point in his life, Glass was still driving a cab; one story is that a couple of his passengers described having just attended *Einstein on the Beach*. When Glass claimed to be the composer, they didn't believe him.

Glass's music for his own electronic ensemble is quite different from the music he has written for orchestras: his own exquisitely-rehearsed ensemble achieves a sparkling precision no conventional orchestra could match. In 1979, however, Glass was invited by the Netherlands Opera to write his first more conventional opera: *Satyagraha*, based on the life of Mahatma Gandhi. This was followed by a third opera in a trilogy about famous men, this one on the Egyptian monotheistic ruler *Akhnaten* (1984). Example 8.7, from *Akhnaten*'s funeral scene, shows how much more supple Glass's music became during the eighties. He has nurtured a technique of gradually built-up polytonality, suggesting two or three keys at once but introducing each one so slowly that the ear hardly notices the resulting dissonances. Here, over an invigorating and never-quite-predictable drumbeat, a basically A-major texture alternates over and over with a harmony on D#. At first the D# enters only as a neighbor note, but eventually it is introduced in the tubas, even against the orchestra playing in A, until it begins to sound like a separate tonic.

By this writing Glass has over a dozen written operas. The ones after *Akhnaten* include *The Juniper Tree* (1984), *The Making of the Representative for Planet 8* (1986), *The Fall of the House of Usher* (1988), *The Voyage* (1992), *Orphée* (1993), *La Belle et la Bête* (1994), *White Raven* (1995), and *Les Enfants Terribles* (1996). Some of these are based in unusual formats. *Orphée*, for example, is an operatic reworking of a film by Jean Cocteau, and *La Belle et la Bête* is an accompaniment to another Cocteau film, to be performed while showing the film. In addition, Glass has written a Violin Concerto (1987), a *Low Symphony* (based on themes from the *Low* album by Brian Eno and David Bowie), and several film scores including *Koyaanisqatsi* (1982) and *Mishima* (1984).



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EXAMPLE 8.7 Philip Glass: *Aknaten*, Funeral Scene.

Glass has often churned out pieces quickly, in an easily recognizable idiom of doodling arpeggios, and some of the operas and smaller orchestral pieces come close to self-parody. Consequently, much of Glass's best music has been underrated by disappointed former fans who have ceased to listen closely. In particular, *The Voyage*, *La Belle et la Bête*, and the *Low Symphony* contain some surprising polytonal complexities, long, subtle rhythmic cycles, and harmonic progressions that stick in the mind for positive reasons. Glass may well be the Rossini of his century, a composer whose works had an electric impact on the masses but only a portion of whose music seemed worthy of study by intellectuals.

### Listening "Bed" an

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**Listening Example: Einstein on the Beach,  
"Bed" and "Spaceship" scenes (1976)**

*Einstein on the Beach* has no real libretto, only chanted numbers and solfège syllables, a few repetitive spoken texts, and a visual unity created by the parallels and repetitions of Robert Wilson's staging. The work reveals both of Glass's most basic compositional strategies—additive rhythmic development and chromatically polytonal harmony—and shows him at the height of his inventiveness. In the "Bed" scene, the bed present in the preceding "Trial" scene now dominates the stage. Glass builds an ever-lengthening rhythmic structure around a progression of four chords: F minor, E-flat major, C major, and D major. It's easy to see

The musical score for the "Bed" scene from *Einstein on the Beach* is presented in three systems. Each system features a Voice staff and an Organ staff. The Voice part is written in a single melodic line with a key signature of one flat (B-flat). The Organ part is written in a single melodic line with a key signature of one flat (B-flat). The music is characterized by repetitive rhythmic patterns and chromatic harmony. The first system shows the beginning of the scene, with the Voice part starting on a whole note and the Organ part starting on a half note. The second system continues the rhythmic development, with the Voice part starting on a whole note and the Organ part starting on a half note. The third system shows the end of the scene, with the Voice part starting on a whole note and the Organ part starting on a half note.

EXAMPLE 8.8 Philip Glass, "Bed" Scene from *Einstein on the Beach*.



in example 8.8 how with each new phrase the rhythm lengthens, from 7 + 4 to 9 + 4 to 9 + 7, until at last the wordless soprano is singing very long notes indeed. Glass makes the most of his chromaticism in the melody, drawing lovely connections between chords in this slowly rotating kaleidoscope.

The following "spaceship" scene is the opera's climax. The chord progression in example 8.9 spins by with lightning speed as the chorus chants numbers to keep the rhythm: "one-two-three-four one-two-three one-two-three-four one-two-three one-two-three-four." The rhythm of this progression goes through additive and subtractive processes similar to that of the "bed" scene. Meanwhile, the long, horizontal white bar that crept onstage earlier in the opera slowly rises over a six-minute period, finally lifting off into space. Partly because Glass and Wilson disdained operatic conventions, *Einstein on the Beach* was one of the twentieth century's most innovative and inspiring works, suggesting new directions for musical theater.



Example 8.9 Philip Glass, chord pattern from "Spaceship" scene, *Einstein on the Beach*.

## Meredith Monk

Since the explosion in the number of women composers in the 1970s, a new genre of music has been added to the cultural scene. A handful or fewer of men work in this genre, but the practitioners are overwhelmingly women. Women composers are far more likely than men to use their own voices and bodies as material for their music; the singing of unusual and virtuosic vocal techniques, or the musical structuring of body movements, involves a vulnerability, a publicly emotive expressiveness, that men in our society are perhaps too inhibited to indulge. One can name a few men who make music from their own extended vocal techniques, notably Toby Twining and David Moss. There are dozens of such women: Diamanda Galàs, Laurie Anderson, Eve Beglarian, Elise Kermani, Joan LaBarbara, Shelley Hirsch, Pamela Z, Brenda Hutchinson, Maria de Alvear (Spanish), Bonnie Barnett, Christine Baczewska, Lynn Book, and on and on. To distinguish these composers from the usual kind who work in a more abstract way, writing notes or

playing instruments, their role as composers is diminished.

Olivera, a female-identifying person, She is neither a woman nor a man who has most of the characteristics of Meredith Monk. She has been creatively expressive (often) written music, yet, she has a strong sense of musical theater or performance.

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Monk is one of the Tennessee Penitents and Earrings (1970) and music: a soundtrack



playing instruments, they are often called performance artists, but their role as composers of essentially musical structures should not thereby be diminished.

Oliveros might be considered the first example of this new, mostly female-identified genre, for she uses her voice in her sonic meditations. She is neither a trained vocalist nor a dancer, however, and the woman who has most epitomized the composer who employs her voice and body is Meredith Monk. Dancer, filmmaker, singer, and composer, Monk has been creative in so many media that she is as frequently (if not more often) written about by dance and theater critics as by music critics. And yet, she has said, "I call myself a composer. Even if I'm working with musical theater or with images, . . . I'm always thinking in musical terms. . . ."<sup>9</sup>

What she definitely does not consider herself is a minimalist. As she's put it:

I come from a folk music tradition. I was a folk singer with a guitar. The repetition in my music I think of as being like folk music: you have your chorus and verse. I'm more interested in how the voice digs down into emotional reality. It's like the freedom of a jazz singer, it's not a patterning impulse. The minimalist thing is about reduction. Vocally, I always thought about magnification, expansion. The repetitions are just a layer for the voice to take off from and go somewhere, and also to land on again.<sup>10</sup>

All the same, Monk's music does concern itself with minimalist issues such as repetition and static tonality, and to call her a postminimalist would imply that she followed the minimalists in a subsequent generation, building on their work. In fact, she and Reich began their public careers at virtually the same time, for Monk's breakthrough piece, a film called *16-Millimeter Earrings*, appeared in 1966. Suffice it to say the Monk's music expresses an infectious emotionality that contrasts strongly with the clean, objective lines of Reich and Glass.

Monk was born in New York in 1942 and grew up in Queens. (She once told an interviewer she was born in Lima, Peru, a bit of false information that has spread into reference books.) The daughter of a professional singer who did radio commercials for CBS in the days before commercials were taped,<sup>11</sup> she studied theater, dance, and music in her teens, and attended Sarah Lawrence College. From the very beginning, she was accustomed to make no separation between the arts in her way of working.

Monk spent the sixties in New York in the invigorating atmosphere of the Tenney-Corner-Goldstein-Feldman crowd and around the happenings and performance art of the Judson Theater. In *16-Millimeter Earrings* (1966) she found a way to combine dance, theater, visual images, and music: she filmed herself dancing and made her own experimental soundtrack with three tape loops running at once. Her first large theater



works, *Juice* (1969) and *Vessel: An Opera Epic* (1971, loosely based on Joan of Arc), each took place over three nonconsecutive nights in different spaces, in a bold attempt to break through concert conventions. In its first night, at the Guggenheim Museum, *Juice* used eighty-five singers with Jew's harps surrounding the audience for huge spatial effects.

In the early seventies, though, Monk withdrew into mostly solo work. Her training as a dancer made her realize that the voice could be approached with the same range and flexibility as the body, and she began building a repertoire of vocal sounds and techniques, many of which she later found out were akin to those used in Balkan singing, Tibetan chanting, and other non-Western vocal traditions. Monk's vocal techniques include glottal stops, warbly American-Indian-style vibrato, nasal singing, nonsense syllables, and many of the strange voice tones children use in games. Some pieces will contain only a word or two of text, such as "Oh, I'm scared" (*Scared Song*) or "Vacation" (*Double Fiesta*), spun out playfully over and over. Her *Lullaby #4* from *Songs from the Hill* (1976) took the sound "me-ow" as its complete phonic material, and Monk has said that the lullaby is one of her primary paradigms.

In 1978 Monk formed her own vocal ensemble and began to write for it, beginning with *Dolmen Music* (1979), a darkly mysterious theater piece of evocative chants. Many of her works have evoked themes of totalitarianism and holocaust. *Quarry: An Opera* (1976) contained a film shot in a rock quarry with singers dressed in white, and later bodies floating in black water. Centered on Monk as a little girl sick in bed, the piece depicted the rise of a malign dictatorship. Though Monk has called many of her works operas, her output climaxed in 1991 with her first work that looked like a conventional opera: *Atlas*.

### *Listening Example: Atlas (1991)*

One of the most beautiful operas of the late twentieth century, *Atlas* is a nonnarrative opera whose three acts depict a spiritual as well as geographical journey. The work was inspired by the life of Alexandra David-Neel, a scientist and the first Western woman to travel in Tibet; however, she is renamed Alexandra Daniels in the opera, which does not portray her life literally.

Typical of Monk's music, several scenes from the opera are based on ostinatos, bass lines or chordal progressions that repeat over and over. Monk often trains her singers via vocal transmission and imitation rather than through notation, and sometimes the vocal lines over the ostinatos are worked out in rehearsal rather than composed in advance. Three of the operas' ostinatos are given in examples 8.10 through 8.12: the ones for Act I, scene 2 ("Travel Dream Song"), Act I, scene 5 ("Rite of Passage"), and Act II, scene 3 ("Agricultural Community"). These notations give little idea of the music's richness, for in *Travel Dream Song* singer Dina Emerson (as the young Alexandra) trills with Monk's



EXAMPLE



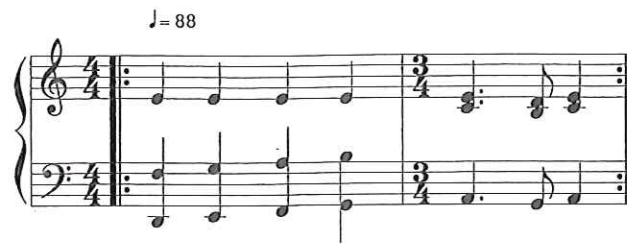
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EXAMPLE 8.10 Meredith Monk, *Atlas* ostinato from "Travel Dream Song."EXAMPLE 8.11 Meredith Monk, *Atlas* ostinato from "Rite of Passage."EXAMPLE 8.12 Meredith Monk, *Atlas* ostinato for "Agricultural Community."

repeated-note techniques, and in "Agricultural Community" the singers sing a wild, wordless melody that accentuates the 5/4 meter like some whirling, Middle-Eastern dance.

The story of *Atlas* takes the heroine on a quest through an agricultural community, a rainforest, the Arctic, and the desert. "Choosing Companions" (Act I, scene 6) is delightful; Alexandra in effect selects her companions by having them sing the same athletically graceful melody she sings, and one of them fails with comic results. The "Ice Demons" scene of Act II is a trio of shrill sopranos singing high staccato notes and spine-tingling glissandos. The end of Act II contains perhaps the darkest music in Monk's output so far, full of nervous rhythms and unresolved dissonance. Act III, however, follows with an other-worldly calm. In "Other Worlds Revealed," Monk's ensemble uses a technique of each singer in a circle singing a note as soon as the previous person started it, for an amazing canonic effect of a slowly blurring, echoing melody (see example 8.13). These group vocal games have a calming, spiritual effect, and the opera ends with the elderly Alexandra alone, drinking coffee.





EXAMPLE 8.13 Meredith Monk, *Atlas* vocal canon from "Other Worlds Revealed."

## Other Minimalists

Few minimalists have deserved the title more than Harold Budd did early in his career. One of his works, *The Candy-Apple Revision* of 1970, consists of only a D-flat major triad to be interpreted in any manner on any instruments. Budd, born 1936 in Los Angeles, exemplifies more than anyone else the mellow school of California minimalism (even Riley looks uptight by comparison), and he has also had a level of success in the pop-music world that other minimalists can only envy. Though he taught at California Institute of the Arts from 1970 to 1976, no other American figure seems so far from academia, so radically intuitive and uninterested in structures or explanations. His music feels like aural incense, almost ambient, characterized by silky, arpeggiated seventh chords played on electric pianos, harps, and vibraphones, modified by delays and harmonizers, in a lazy atmosphere. For example, "Rosetti Noise" from *Madrigals of the Rose Angel* (1972) consists of only fourteen leisurely chords arpeggiated beneath a soprano voice singing soft tones around which the chords pivot.

Around 1979 Budd began working with the British avant-garde-ambient rock star Brian Eno and learned from Eno how to use the recording studio as a medium. Such discs as *The Pearl* (with Eno, 1984), *Lovely Thunder* (1986), and *The White Arcades* (1988) are heavily processed in the

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studio, full of resonant atmosphere and often sensuously mournful. Budd's rock career hit a peak in 1986 when he released a disc (*The Moon and the Melodies*) with the post-punk group Cocteau Twins.

On the other hand, "an electronic swarm of bees" is how one musician aptly described his impression of Phill Niblock's music, the New York antipode to Budd's sweet consonance. A filmmaker with little musical training, Niblock has nevertheless been a strong influence on Manhattan's downtown scene. Niblock is the master and extreme example of the out-of-tune approach to tuning which seeks the complexity of sum and difference tones among pitches very close together. Most of his pieces consist of masses of closely tuned pitches; though rich in acoustic phenomena, his music is perhaps the most austere minimalism of all. His usual performance strategy is to prerecord most of the drones on the same or similar instruments on multitrack tape, with the performer tuning to a sine tone heard over headphones. For example, *A Trombone Piece* (1977; Niblock makes a fetish of flatly unimaginative titles) employs only the following frequencies, appearing in all combinations (cycles per second): 55, 57, 59, and 61 in one octave, 110, 113, 116, 119, and 121 in the next, and 220, 224, 228, and 232 in the highest octave. More developmental, *Five More String Quartets* (1992–1994), a work for string quartet overdubbed five times to create a moving drone of twenty pitches, begins with the following sets of frequencies:

STRING QUARTET NO.	FREQUENCY				
1	370	298	208	196	
2	392	370	196	92	
3	392	185	208	98	
4	415	392	185	208	
5	208	392	185	196	

Over a period of twenty-five minutes, the music expands and contracts with imperceptible gradualness, finally resolving to octave Gs at 98, 196, and 392 cycles per second. In a typical live performance, as the tape plays at high volume, musicians move among the audience, playing the same pitches and traveling so slowly that the live and recorded sounds become confused in the ear. In addition, Niblock frequently superimposes his music over structureless silent films made on his Third-World travels, such as scenes of people involved in repetitive agricultural work.

In the late sixties, Charlemagne Palestine was considered as important a minimalist as La Monte Young. Born in New York in 1945, Palestine gave performances on the carillon and on the Bösendorfer grand piano that were astonishing in their relentless energy. In his mammoth *Strumming Music* (1970–1975) he employed a technique of strum-



ming or drumming on the keys in such a way that overtones would build up and cause aural illusions. He blended sustained tones in electronic works such as *Two Fifths* (1973), and he gave three- to four-hour performances on church organs in a series called the *Spectral Continuum Drones*; he was searching, he said, for "the Golden Sonority,"<sup>12</sup> like an alchemist. A true downtown Manhattan eccentric, Palestine would dress flamboyantly for performances, crowd his piano with stuffed animals, and drink Napoleon Cognac as he played. By the mid-seventies, however, Palestine had turned to visual art, and he remains in the history of minimalism as a dim, not-very-well-documented legend.

Perhaps the only composer to frankly call himself a minimalist, Tom Johnson (b. 1939 in Denver, Colorado), has led a double career, as composer of operas and keyboard music and as critic from 1971 to 1982 for the *Village Voice* newspaper in New York (the only American periodical to run a regular column on experimental music). As a critic, he had a tremendous impact on how the music of the seventies was perceived and is remembered today. A student of Morton Feldman, he has lived in Paris since leaving the *Voice*. As a purveyor of both words and notes, Johnson is fascinated by musical logic and paradox and has developed a radically objectivist philosophy based on an attempt to *find* the music, not compose it.

Thus some of Johnson's compositions are strict workings out of logical sequences, such as *Nine Bells*, in which he paces around the room striking bells in a mathematically logical order—the visual results, however, remaining entertainingly theatrical. His *Chord Catalogue* is a succession of the 8,178 possible chords within one twelve-note octave, yet it achieves a meditative restfulness while testing the relativity of perception. Outside the avant-garde circuit, Johnson is best known for his chamber operas, which deconstruct the genre's conventions in clever ways. His famous *Four-Note Opera* (1972), using only the pitches D, E, A, and B, has a self-referential libretto, each singer announcing in each aria when a cadenza is coming, what scene we're in, where the highest note is, and so on. Even when more intuitively written, however, Johnson's pieces such as *An Hour for Piano* (1971) can be flat, repetitive, wandering, clocklike as a gamelan, but strikingly beautiful.

Daniel Goode has become one of the leading postminimalists, though by generation (he was born in New York in 1936) he is closer to the minimalists. He studied with Cowell and Luening at Columbia University and since 1971 has taught at Rutgers, though he is also known for his participation in Gamelan Son of Lion. His early works, such as *Circular Thoughts* (1974) and *Clarinet Songs* (1979, both for that instrument because he is a clarinetist), revel in strict, algorithmic processes, such as accenting every fourth note in a seven-note pattern. In later works, however, he uses minimalist patterns only as a back-

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ground for other effects, sometimes with political intent as in his *Wind Symphony*, where the patterns are interrupted by musicians who come in from offstage holding cards which read "ALL," "IS," "NOT," and "WELL." Goode's best work is probably *Tunnel-Funnel* for chamber orchestra (1984), in which the quasi-minimalist patterns wind down an endless harmonic spiral, changing keys moodily and with compelling inevitability.

An associate of Goode's and an early minimalist composer of lovely, gentle works, Barbara Benary (born 1946 in Bay Shore, New York) has never received due acknowledgement partly because of her self-effacing personality. More consistently than Goode, she has always shown a fondness for geometric patterns and permutational processes within timbral fabrics of diatonic melody, beginning with her fifteen *System Pieces for a Droning Group* of 1971, a book of verbal instructions and diagrams. A violinist who learned South Indian violin technique in Madras, India, she also trained as an ethnomusicologist at Wesleyan and in 1974 helped found the ensemble Gamelan Son of Lion in New York; most of her works have been written for this Javanese-style gamelan orchestra. (The name Benary means Son of Lion in Hebrew.) Several of her gamelan works incorporate the patterns of English change-ringing, including *Sleeping Braid* (1979) and *Hot Rolled Steel* (1984-1985), this last a *perpetuum mobile* of interlocking contrapuntal ostinatos. Her most ambitious recent work has been *Karna* (1994), a shadow-puppet opera based on an elaborate Indian myth with comic overtones.

Jon Gibson (born 1940 in Los Angeles) holds the distinction of being the only person to have performed in the ensembles of all four leading minimalists: Young, Riley, Reich, and Glass. An early free improviser who graduated from San Francisco State University, he used change-ringing patterns in his early music, *Call* for alto flute, 1978, and *Melody IV* Part 1 for nine players, 1975, and he tends toward simple, linear structures. His solo pieces for flute or saxophone (such as *Untitled*, 1974) tend to grow from simple motives into longer melodic curves within closely circumscribed limits. However, he often employs improvisation or solo melody over thick, even lush, atmospheric backgrounds of electronic and environmental sounds or shimmering percussion, tending toward ambient, as in his *Extensions II* for saxophone and tape (1981 and 1992) and *Rainforest* (1982, part of a larger theater work about Darwin). Some of Gibson's works resort to extreme simplicity or repetition for the sake of either parody or Satie-esque naïveté.

One of the most talented minimalists was nearly lost to history, much like Johanna Beyer. Julius Eastman (1940-1990) was a phenomenal African-American presence on the New York Kitchen music scene in the 1970s who disappeared in the eighties and mysteriously died alone in 1990 in a hospital in Buffalo of causes that were never exactly deter-



mined. Born in New York, he graduated from the Curtis Institute in composition and was discovered by Lukas Foss, who conducted his music, including *Stay On It* (1973), one of the first works to introduce pop tonal progressions and free improvisation in an art context. Eastman was much in demand as a singer, with a sepulchral bass and an amazingly agile falsetto, both put to excellent use in *Eight Songs for a Mad King* by the British avant-gardist Peter Maxwell Davies. He was also a member of Meredith Monk's ensemble. Uneasy with success, however, he torpedoed his own career with his unreasonable demands and fell into heavy drug and alcohol use after 1983.

Applying minimalism's additive process to the building of sections, he developed a composing technique he called "organic music," a cumulatively overlapping process in which each section of a work contains, simultaneously, all the sections which preceded it. The pieces he wrote in this style often had intentionally provocative titles intended to reinterpret the minorities Eastman belonged to in a positive light: for example, *Evil Nigger*, *Crazy Nigger*, and *Gay Guerilla* (all circa 1980). These three pieces, all scored for multiple pianos, build up immense emotive power through the incessant repetition of rhythmic figures. Attempts being made to salvage Eastman's output for future performance face considerable challenges; at one point, his possessions, scores and recordings included, were thrown out on the streets of New York by the sheriff when Eastman was evicted from an apartment. For some time afterward he lived in Tompkins Square Park.

It's curious, the number of minimalists who made important contributions before disappearing without having fulfilled their potential. Like Charlemagne Palestine, Tony Conrad, Richard Maxfield, Dennis Johnson, and Terry Jennings, Eastman was an inventive minimalist whose untimely removal from the scene is all too regrettable.

## Notes

1. Leonard Meyer, *Music, the Arts, and Ideas* (Chicago: University of Chicago Press, 1967), p. 118.
2. *Ibid.*, pp. 118–19.
3. Kenneth Baker, *Minimalism* (New York: Abbeville Press, 1988), p. 9.
4. Kyle Gann, "The Tingle of  $p \times m^n - 1$ ," *Village Voice*, October 4, 1994, vol. XXXIX No. 40, p. 84.
5. K. Robert Schwarz, *Minimalists* (London: Phaidon Press, 1996), p. 30.
6. *Ibid.*, p. 35.
7. Quoted in *ibid.*, p. 53.
8. Quoted in *ibid.*, p. 114.

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9. Quoted in William Duckworth, *Talking Music: Conversations with John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers* (New York: Schirmer Books, 1995), p. 346.
10. Interview with the author, September 21, 1996.
11. William Duckworth, *Talking Music: Conversations with John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers*, p. 347.
12. Quoted in Walter Zimmermann, *Desert Plants* (Vancouver: A.R.C. Publications, 1976), p. 265.

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