In 1968, Steve Reich defined his musical aesthetic in a dogmatic, tersely worded essay entitled "Music as a Gradual Process." Reich viewed the act of composition as consisting of the gradual unfolding of a predetermined technique or structure. Musical processes are hardly unique to Reich; from the isorhythmic motets of Machaut and the canons of the Goldberg Variations to the row-rotations of the serialists, they have a long history. Yet in the context of the music of the 1960s—which ranged from the inaudible structure of serialism to the chaos of the aleatory—the clarity of Reich's processes was genuinely shocking:

I do not mean the process of composition, but rather pieces of music that are, literally, processes.

The distinctive thing about musical processes is that they determine all the note-to-note . . . details and the overall form simultaneously. (Think of a round or infinite canon.) . . .

I am interested in perceptible processes. I want to be able to hear the process happening throughout the sounding music. . . .

What I'm interested in is a compositional process and a sounding music that are one and the same thing.2

Such ideas are an accurate reflection of Reich's music through 1968. Tape-based works such as Come Out (1966), or instrumental works such as Piano Phase (1967), fulfill Reich's expectations for a musical process.3 Their systematic treatment of the basic material, their refusal to deviate
from the unfolding of the process, and the immediate audibility of their structure all satisfy the essay’s requirements. Moreover, the musical process itself possesses an inherent impersonality:

Though I may have the pleasure of discovering musical processes and composing the material to run through them, once the process is set up and loaded it runs by itself.4

Yet no matter how accurately “Music as a Gradual Process” describes Reich’s early works, by 1968 his aesthetic was beginning to change. With the exception of *Four Organs* (1970), none of Reich’s post-1968 works adheres strictly to the definitions set forth in the essay. By Part IV of *Drumming* (1971) and, especially, *Music for 18 Musicians* (1976), the audibility of the musical process is compromised by the rich timbral blend. “I’m not as concerned that one hears how the music is made as I was in the past,” Reich said in 1977. “On the other hand, although the overall sound of my music has been getting richer, it has done so without abandoning the idea that is has to have structure.”5

Reich began to harbor doubts not only about audibility of process, but about the entire doctrine of impersonality. By 1974, he chose to emphasize intuition rather than process:

The choice of pitch and timbre in my music has always been intuitive. Even the choice of rhythmic structure is finally intuitive. In fact, although there is always a system working itself out in my music, there would be no interest in the music if it were merely systematic. . . . The truth is, musical intuition is at the rock bottom level of everything I’ve ever done.6

This tension between process and intuition continues to characterize Reich’s music. The coloristic variety, harmonic and melodic range, and emotional impact of *The Desert Music* (1984), a work for chorus and orchestra, might seem far removed from the notion of musical process. Yet analysis of *The Desert Music*—and other recent works such as *Sextet* (1985) and *New York Counterpoint* (1985)—reveals that, despite the increased role of intuition, the integrity of the underlying musical process is preserved.7

Although John Adams’s music is often linked with Reich’s, only Adams’s early piano works, *China Gates* (1977) and *Phrygian Gates* (1978), meet Reich’s definition of process music. The legacy of minimalism continues to permeate the surface of Adams’s works written since 1978, but the underlying structures are far freer, and no attempt is made to achieve systematic purity.

What Adams’s career displays is a shift from process to intuition, from an aesthetic that demands rigorous systematization of structure to one that picks and chooses from an eclectic range of historical and
vernacular styles, minimalism being only one. "What sets me apart from Reich and Glass," says Adams, "is that I am not a modernist. They are, in the sense that they still use very pure, single systems. I am not a pure composer; I embrace the whole musical past, and I don't have the kind of refined, systematic language that they have... I rely a lot more on my intuitive sense of balance... I've stopped worrying about whether intuiting a structure is right or not; as far as I can tell, most nineteenth-century composers wrote on intuitive levels."8

Between Reich's generation and Adams's, we can detect a shift in the relative weight of process and intuition. This change reflects a turn from minimalism to postminimalism or even, as we will see later, from the systematization of modernism to the eclecticism of postmodernism. Reich's recent music clings to the ideal of process despite the heightened complexity of its surface, while Adams's music pays homage to minimalism on the surface but rejects the notion of underlying process. A comparison of the recent works of Reich and Adams will clarify this movement away from the rigor and purity of minimalism's first generation.

Because of the systematic nature of Reich's approach to composition, it is preferable to examine his recent works from the viewpoint of process rather than of chronology. Our discussion will focus on large-scale formal structure, harmonic processes, and contrapuntal processes.

Formal Structure

As Reich's harmonic, melodic, and timbral resources have expanded in recent years, so too have his formal structures. He has been particularly interested in symmetrical structures, finding in their inherent balance a perfect formal analogue to the systematic nature of musical process. "ABA really sets it all up," says Reich. "New York Counterpoint, for instance, is fast, then half its own tempo, then back to the original. The five-movement arch form is a kind of elaboration of ABA, by inserting another variable between the A and B on either end. I was introduced to it in Bartók's Fourth and Fifth Quartets, which made an enormous impression on me while I was studying at Juilliard."9

Although New York Counterpoint's three-movement ABA structure might seem distinct from the five-movement ABCBA arch of Sextet and The Desert Music, the three works share similar methods of delineating overall form. Tempo, harmonic cycle, and timbre all contribute to defining the symmetrical structure. Yet it is the cyclic return of pulsing repeated notes that has the most apparent form-delimiting function. Rising and falling in volume like the ebb and flow of the tide, these pulsing eighth notes serve as immediately audible structural markers.10 In The Desert Music, the arch form is defined by the pulses, which
open and close the work and recur to denote the end of the second, third, and fourth movements (see Table 1). The central third movement is itself an arch, the sections of which are separated by brief reminiscences of the pulses.11

Despite the striking timbral effect of these rising and falling pulses, they possess an importance beyond mere coloristic appeal. They serve as the purveyors of each movement’s harmonic cycle—the principal structural underpinning in all of Reich’s recent works. In The Desert Music, the harmonic cycle for each movement is presented as pulsing repeated notes; in Sextet, which has pulses only at its opening, the harmonic cycles of the subsequent movements are presented as a series of bare, unembellished chords.

That each movement be introduced with such a didactic presentation of the harmonic cycle is critical, because the cycle and the arch form are inextricably linked. In the ABCBA arch of The Desert Music and Sextet, the first and fifth movements share harmonic cycles, as do the second and fourth, while the third has its own independent cycle.

Just as the parallel sections of the arch share harmonic cycles, so do they share tempos. “The arch forms recently have been completely clarified by the harmonies and the tempi,” says Reich. Yet, in typically systematic fashion, Reich insists on associating those tempos by means of a mathematical relationship. In The Desert Music, a 3:2 ratio is created, in which the dotted quarter of each movement equals the quarter note of the following; at the center of the arch the relationship reverses (see Table 2).

Reich’s approach to form, involving the working-out of a predetermined set of timbral, harmonic, and tempo relationships, shows that he views large-scale structure itself as a kind of musical process. The links between form and process will become even clearer during our examination of Reich’s harmonic cycles.

**Harmonic Processes**

“The roots of my present compositional process go back to Music for 18 Musicians, when for the first time I consciously started with a series of harmonies [that were] to be the structure of the piece.” Music

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Table 1. Reich, The Desert Music (1984). Outline of arch form.

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for 18 Musicians (1976) presents a pulsing cycle of eleven chords in its introduction; each of the sections of the main body of the work is built over a different one of these chords. Since Music for 18 Musicians, harmony has assumed increasing structural primacy in Reich's work. The three parts of Variations (1979), for example, are no more than a gigantic chaconne, and Tehillim (1981), although conceived around a melodic profile, is underpinned by a recurring harmonic cycle.12

Yet not until The Desert Music did Reich begin to exploit the unifying possibilities of harmonic structure. As we have seen, the arch forms of The Desert Music and Sextet are clarified by recurring harmonic cycles, which are presented in a pure, disembodied form at the opening of each movement and thereafter dictate more subtly the underlying structure. When placed in a historical context, all five movements of The Desert Music and Sextet reveal themselves to be chaconnes, built above slowly-repeating harmonic cycles that need not be directly related to the progress of the musical surface. In The Desert Music, for instance, the repetition of a harmonic cycle does not always coincide with the introduction of a new canonic subject, or the beginning of a line of text.

Reich, however, employs these underlying harmonic cycles in an extremely flexible manner. During their repetition within movements—and during their recurrence in the parallel sections of the arch—Reich preserves the middle register of the harmonic cycles but substitutes new bass notes a tritone away from the original roots. Thus, the harmonic cycle of The Desert Music's third movement, shown in example 1, is altered upon repetition by the systematically applied tritone substitutions indicated on the bottom staff.13 Such liberty in the repetition of the cycles compromises the purity of the harmonic process by diminishing its audibility and heightening its ambiguity. A tension thereby arises between the inexorable working out of a predetermined process and the freedom with which it is treated.

"Questions of harmony have always been totally intuitive," claims Reich. "Harmonic choices are made on no system comparable to 'we're going to have a canon at the unison and we're going to build it up so many notes at a time.' " In one sense, Reich's statement seems straight-

forward: a canonic process, which dictates the course of the counterpoint, has no direct parallel in his selection of harmonic cycles. Yet in another sense Reich’s statement is misleading, for, once he chooses the cycles, what he does with them—the chaconnelike repetition both within and among movements—is no less than the working-out of a musical process. That the purity of the system is undermined by compositional choice, as evidenced by the bass substitutions, indicates the increased role of intuition within the once inviolable realm of musical process.

**Contrapuntal Processes**

Counterpoint, and specifically canon, has permeated Reich’s entire musical output. The earliest phase pieces, whether for tape or live performers, are no more than a personalization of canonic procedure. Phasing itself consists merely of the construction of canons at the unison; the only difference from conventional canonic procedure is the irrational rhythmic transition between phase positions, where one voice gradually moves out of synchronization with another.

Although the musical surface of Reich’s compositions has grown in complexity since the days of the phase pieces, his obsession with canon has persisted unabated. “Contrapuntal thinking is really very neutral vis-à-vis sound,” says Reich. “For me, that’s been one of the satisfactions of working this way, because I’ve found that as things change for me musically, a lot of basic ways of working still hold up. It’s just that they expand.” Reich’s reliance upon the canon as a “basic way of working” is due to the fact that no other Western technique comes as close to meeting his definition of a musical process: canons, to quote again from “Music as a Gradual Process,” “determine all the note-to-note details and the overall form simultaneously.” A canon works itself out in a predetermined, impersonal manner; once the distance between canonic entries is selected, the pitch content “is set up and loaded” and “runs by itself.”

For Reich, contrapuntal processes are the composition; the harmonic and formal structures, although the first to be conceived, are no more
than a skeletal underpinning for the counterpoint. "Linked with the harmonic selection is the choice of how many movements there are, and what their tempos are, and what their relationship is. And that is all, in a sense, precompositional. Once that is all clear, I will begin." Beginning the actual composition, in Reich's understanding, means setting up the interlocking web of counterpoint. "Basically speaking, I'm a contrapuntal composer. I make accommodations to all kinds of harmonic considerations—it's harmonic counterpoint, closer to Bach than to the Middle Ages. But the techniques are actually closer to the Middle Ages. I don't write fugues, which have a certain freedom. I'm basically writing canons at the unison. I'm into the 'art of the stretto'." \(^{14}\)

Canons continue to comprise the surface of Reich's recent works, and usually remain audible even when the underlying harmonic cycles do not. In *The Desert Music*, which superimposes primarily non-canonic vocal lines above the instrumental canons, the audibility of the counterpoint is somewhat compromised. But *Sextet*, scored for percussion and keyboards, focuses on contrapuntal processes, thereby demonstrating how canons have persisted in Reich's music despite its harmonic, melodic, and timbral expansion.

Although Reich occasionally introduces a canonic subject as a fully formed entity, he prefers to build it up slowly by means of a technique that he calls "rhythmic construction." Dating back to *Drumming* (1971),\(^{15}\) rhythmic construction consists of a gradual, systematic assembly of the canonic subject, often one note at a time. In example 2, from the first movement of *Sextet*, each of the answering canonic voices is constructed in three stages, until a three-part canon at the unison, at the distance of one quarter note, results.\(^{16}\)

Although rhythmic construction usually creates a single canon at the unison, Reich also makes use of multiple canons, such as the triple canon in the second movement of *Sextet*. These canons, shown in example 3, are only partially audible: although the canon at the unison of the pianos is readily apparent, the canons of the bowed vibraphones and bass drums are concealed by virtue of their subjects, the proximity of their entries, and their timbral qualities. Such inaudible contrapuntal manipulation reveals Reich's debt to serialism; it also demonstrates how the clarity of his processes has been compromised by the expanded timbral range of his music.

Reich's attitude toward canonic processes has changed over the past two decades, and today he prefers to stress their intuitive rather than impersonal aspects. "When does the second voice come in in a rhythmic process? Does it come in one beat away? That produces a kind of quick shaking, because you've got every note coming in after each other. Or does it come in two or three beats away... You always have some room to breathe, and you can start adjusting notes and creating other

Electronic piano or synthesizer

Marimba I

Marimba II

start of canon

ff

start of canon

ff

(ff) mf
possibilities." Indeed, Reich no longer fashions canons as rigorously as he once did, and he often makes adjustments in the answering voices for the sake of euphony.

Yet a process such as canon, no matter how flexibly applied, allows the composer only a small amount of latitude in his choice of pitches. Where intuition comes to the fore is in the selection of "resulting patterns." These patterns, which Reich first deliberately emphasized in *Violin Phase* (1967), are the "unintended psycho-acoustic by-products of the intended process." As when material is played in canon against itself, unforeseen harmonic and melodic configurations arise. Reich
relishes these patterns because they are entirely independent from the musical process, yet they are created by it. "Intuition lies precisely in the resulting patterns," he says. "What I do is to condense all the [canonic] staffs onto one [line], and then start writing out the various patterns that I see or hear coming out." In *New York Counterpoint*, which is scored for one live clarinet and up to ten taped clarinets, two three-part near-canons, both rhythmically identical, have been built up by rhythmic construction (see ex. 4). Above these constantly repeated canons, the live clarinetist plays a variety of "resulting patterns" that arise from the contrapuntal web; five of these patterns are shown in example 5.

Thus, even Reich's contrapuntal processes—the heart of his compositional method—demonstrate a tension between process and in-

tuition. On the one hand, the strictness of canons makes them ideal musical processes: they "work themselves out" in an impersonal manner predetermined by their pitch material and rhythmic profile. On the other hand, in the actual choice of distance between entries, in the adjustments made for harmonic clarity, and in the prominence of non-canonic resulting patterns, intuition plays an increasingly larger role.

On first hearing, the music of John Adams appears to resemble Reichian minimalism. Repeated patterns play a prominent role in the musical surface; harmonic motion is slow; a constant, reiterated pulse lends the music its rhythmic drive. Yet these aural legacies of minimalism have been divorced from the notion of musical process. What Adams has done is to rob minimalism of its austerity, for his intuitive, highly expressive rhetoric is the product of an eclectic array of musical influences rather than the result of a "pure, single system."

In 1974, Adams first heard Reich's music, and it affected his own musical style profoundly. "I heard Drumming in 1974, and I was quite astonished by its rigor, because that was during a period when we were all doing these messy, free-form aleatoric pieces. A couple of years later, I conducted Music for Mallet Instruments, Voices and Organ. I liked the very long, sustained harmonies and then the quick modulations, and that became the generating idea behind my own Phrygian Gates."

Phrygian Gates (1978) adheres to rigorous, audible, precompositional processes akin to those we observed in Reich's works. Phrygian Gates is organized around a circle of fifths (A, E, B, F-sharp, C-sharp, A-flat, E-flat); within each tonal area, Adams alternates between Lydian and
Phrygian modes. This harmonic process is shaped into a larger four-movement plan, the sections of which flow into one another without a break. With the exception of the modal oscillation between E-flat Lydian and D-sharp Phrygian that occurs in the fourth part of the work, \textit{Phrygian Gates} never deviates from either the circle of fifths or the systematic presentation of Lydian and Phrygian incarnations. The long, static harmonic planes that result, lacking any functional context, are abruptly juxtaposed at each "gate"—the point at which the shift to the next harmonic level occurs.

An unrelenting pulse, primarily a stream of equal eight notes, animates \textit{Phrygian Gates}. Yet the rhythmic groupings of the eighth notes constantly expand and contract, creating asymmetry within unvarying pulse. The effect is akin to the additive and reductive processes of melodic growth found in Philip Glass's early works, such as \textit{Music in Fifths} (1969). Additive growth is a slow process of accretion in which new notes are introduced systematically, often one at a time, into the existing pitch collection. The opposite reductive process consists of the gradual, systematic removal of a note or notes from the existing collection. Adams knew Glass's compositions and admits that—aside from the Reichian idea of "staying on a tonal area for a long time and then suddenly dropping to another level"—the melodic growth of \textit{Phrygian Gates} owes more to Glass's work than to Reich's. In \textit{Phrygian Gates}, Adams constructs not only the shifting melodic patterns in an additive/reductive manner (as indicated by the brackets in example 6), but even the cluster-like harmonic structures (note the gradually increasing harmonic density in example 7).

Precompositional planning comes to the fore in the third movement of \textit{Phrygian Gates}, subtitled "A System of Weights and Measures." This 168-measure section, a prolongation of C-sharp Phrygian, is characterized not only by harmonic but also rhythmic stasis, for it lacks the steady pulse of the first and second movements. The "Weights" of the third movement refer to the relative densities of the chords that are its basis; within a fixed gamut of a seventeenth (C-sharp to e') "the number of pitches ... keeps shifting, so the weight means it's a heavy chord because its got a lot of pitches in it, or it's a light chord because it has only a few pitches in it." Yet these weights do not shift at random; instead, Adams forms his "heavy" or "light" chords into a chaconne that repeats four times during the movement. Although the chaconne (one complete statement of which is shown, in skeletal form, in example 8) consists merely of revoicings of the C-sharp–Phrygian sonority, the harmonic process remains audible because Adams marks the beginning of each cycle with bell-like tolling.

\textit{Phrygian Gates} is similar to Reichian minimalism in its precompositional formal process, in its static, nonmodulatory harmonic process,
and in its steady pulse. Glassian minimalism is evoked in the additive/reductive process of melodic growth. Even more significant, however, are the ways in which Phrygian Gates asserts Adams's own, more intuitive approach to composition. Inherent in the modal alternation is a conflict between, in Adams's colorful description, the Lydian's "light, sensual, resonant personality" and the Phrygian's "volatile, unstable, but often heroic qualities." Not only does Adams exploit this modal conflict to create contrasts in melodic patterns, textural density, rhythmic figuration, and dynamics, but he does so with a directionalized motion that sweeps toward climaxes—a motion far removed from the stasis of minimalism. Such a subjective approach works to loosen the bonds of musical process and heighten the role of intuition. Significantly, when asked in 1987 to discuss the musical process of Phrygian Gates, Adams would say only that it "bores me to tears now." 

The loosening of musical process accelerates in Adams's next composition, the string septet Shaker Loops (1978). On all levels—formal,


melodic, harmonic, and rhythmic—*Shaker Loops* reveals a far less systematic approach to composition than *Phrygian Gates*. The overriding harmonic process of *Phrygian Gates* is absent; instead, the four movements of *Shaker Loops* emphasize contrasts in timbre, texture, dynamics, and figuration. The constant pulse that pervaded all but the third movement of *Phrygian Gates* is lacking; instead, *Shaker Loops* depends upon accelerandos and ritardandos to strengthen climactic points.

*Shaker Loops* provides the first evidence of Adams’s interest in undermining harmonic stability. Instead of the static prolongation of tonal areas that we observed in *Phrygian Gates*, in *Shaker Loops* Adams in-
trouces two disruptive techniques that are to gain in importance in his subsequent works. In one technique, Adams prolongs a triad, but undermines its stability by means of bass or inner-voice oscillations. In the other, Adams modulates by common tones or enharmonicism (rather than the abrupt juxtapositions of Phrygian Gates) and subsequently oscillates between the two tonal areas. Both techniques serve to animate Adams's long harmonic planes and to substitute the directionalized, expressive power of modulation for the block-like, non-directionalized effect of juxtaposition.

In Shaker Loops, Adams's melodic vocabulary expands even more radically than his harmonic language. Although an additive/reductive process continues to control melodic growth, it is now a small-scale technique that occurs only within individual sections—for in Shaker Loops virtually every "module" (to use Adams's term) introduces different melodic patterns. Moreover, Adams now superimposes newly-lyrical, sustained melodies above his repeated patterns, forcing these patterns to recede to an accompanimental function (see ex. 9). In order to create a pulsating accompaniment for the long, intertwining cello lines of the third movement, Adams resurrects the repeated sixteenth-notes of the first movement—yet these patterns, although subjected to an additive/reductive process, now provide no more than an incidental surface shimmer. Thus the expanding and contracting patterns, although derived from minimal process, have been transformed into incidental color, animating the musical surface but no longer functioning in a rigorous, structural manner.

By 1978, with the completion of Shaker Loops, Adams's approach to composition seems to have undergone a decisive change. No longer do precompositional musical processes dictate the course of a work, as they did in Phrygian Gates. Legacies of minimalist process—repeated triadic patterns, additive/reductive techniques—have now been reduced to surface events, enlivening long harmonic planes and providing localized structure but no longer part of a grand, systematic scheme. Intuition has replaced overall process. Reflective of such a basic shift in attitude are comments that Adams was to make in 1987:

I trust my intuitive sense on many different levels, and perhaps other composers find it more beneficial on certain levels of their creative activity to be more rational and procedural. I think that when you have your musical technique so thoroughly ingrained in your whole self..., you can trust your innate sense of balance. ... I once saw a movie of Picasso drawing on a large paper, and he was up so close to the wall that he couldn't possibly see what he was doing. And yet his intuitive sense of form and his innate sense of balance was so perfect that he never had to stand

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Vn. 1
Vn. 2
Vn. 3
Vla.
Vc. 1
Vc. 2
Bass
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back to look at it. That's the kind of control that a good artist should have.ֳ’ֳ’

Even more revealing of Adams's rejection of musical process are remarks that he made in relation to his orchestral work *Harmonielehre* (1985). "I'm not the kind of composer who . . . previsages the entire structure of a piece in advance. I like to feel that each composition is a voyage of discovery. . . . So, in a certain sense, I feel the structure as I'm creating it—as if an architect were building on an empty site without a blueprint." ֳ’ֳ’ Thus the purity of the musical process is compromised by an approach that "feels" the structure rather than allowing the structure to "work itself out."

*Harmonium* (1981), set to poems of John Donne and Emily Dickinson, and scored for large chorus and orchestra, intensifies the personal, more intuitive compositional techniques that we observed in *Shaker Loops*. Perhaps as a result of the expressive demands of the text, in *Harmonium* Adams rejects the rigidity of musical process and turns to increasingly grand Romantic rhetoric.

In its localized melodic growth, however, *Harmonium* shows a debt to the additive/reductive processes of *Phrygian Gates* and *Shaker Loops*. Individual instrumental lines, constantly circling around a few pitches, often expand and contract in range by means of an additive/reductive technique. Yet this process is no longer systematically applied; instead, it merely provides localized rhythmic animation and coloristic shimmer.ֳ’ֳ’

What is new in *Harmonium* is the construction of interlocking quasi-canonic lines, which recirculate the same pitch material in different "phase positions." This Reichian procedure results in layered quasi canons at the unison. Like Reich, Adams sees its source in tape music:

I was playing with a multi-track tape recorder and getting these
wonderful kinds of digital-delay effects by playing repeated arpeggios or figurations that would be an eighth or a quarter note out of phase. I still do that now in my writing; that's one of the few things that has carried on throughout all of my music—that use of having two or three instruments basically recirculating a triad. It gives my music that distinctive kind of shimmer or waviness.28

It is revealing that Adams speaks in terms of "shimmer" rather than structure, for in Harmonium the interlocking counterpoint does not serve a Reichian structural function. Instead of rigorous, audible structure, the effect of the quasi canons is merely one of rhythmic or coloristic pulsation. In example 10, from the first movement of Harmonium, this quasi-phasing effect is particularly apparent: the three flutes and piccolo recirculate the same pitches in different phase positions and at different rhythmic rates; the three oboes manipulate the same triad; the two clarinets exchange the same pitches; and the violins recirculate identical material in no less than four different phase positions. But all these are local, coloristic effects, the aural legacy of musical process without its overriding, systematic structure.

An overriding structure is in fact provided by a harmonic plan, because, like Reich, Adams begins his compositions with a harmonic outline:

Because I compose tonal music . . . I use harmonic relations and modulations as the essential structural guideposts of my work. The harmony really does create the form . . . [My] musical sketch very often looks like a series of chord progressions, because I'm so wedded to the harmonic structure of the music.29

Adams, however, is not referring to the harmonic process that we observed in The Desert Music, Sextet, or the third movement of Phrygian Gates—a chaconne that predetermines overall structure. Instead, Adams's much more intuitive harmonic plan focuses on the two techniques that we first observed in Shaker Loops. On the one hand, he undermines the stability of long harmonic planes by means of oscillations within triads: a $\frac{6}{7}$ may alternate with $\bar{1}$ in the bass, or $\frac{4}{5}$ may alternate with $\bar{3}$ in the middle register. On the other hand, he capitalizes on the dramatic power of modulation—and to a far greater degree than in Shaker Loops, although the modulations are likewise accomplished by means of common tones or enharmonicism.

With Grand Pianola Music (1982), Adams attempted a shocking stylistic synthesis of vernacular and cultivated traditions. In a spirit of mischievous parody, he combined marching-band music, minimalist repetition, and—in the last movement—a saccharine, almost perverse
diatonicism. That spirit of parody seems to extend even to minimal process. Although the two-piano canons and quasi canons of Grand Pianola Music come close to Reichian process, they are employed in a deliberately self-conscious fashion, as a display of one musical technique among many.

Because of Grand Pianola Music's lean orchestration for winds, brass, percussion, and two pianos, and because it lacks the texted choral parts of Harmonium, musical process returns to the forefront. Yet such processes, despite their audibility, are not overriding systems, as in Reich or Glass; instead, they are merely local events whose role is more coloristic and rhythmic than structural. A Glassian additive/reductive process accounts for much of the work's melodic growth; in example 11, the nostalgic, Coplandesque oboe solo of the second movement circles around a few pitches and gradually expands in range by additive means. Reichian and Glassian techniques merge in the piccolo solo of the first movement (ex. 12), where Reich's method of forming lengthy melodic lines by joining together smaller melodic fragments combines with Glass's additive/reductive process.

Most prominent in Grand Pianola Music are Reichian canonic processes, which permeate the interlocking two-piano writing. Occasionally, these processes are literal canons; in example 13, the interlocking canonic arpeggiation, which recirculates triadic material, reminds us of Adams's tape experiments with their "repeated arpeggios or figurations...an eighth or quarter note out of phase." More often, the interlocking piano writing is only quasi-canonic; in example 14, Glassian additive/reductive techniques interfere with the unfolding of what begins as a Reichian canonic process. Thus we see not only Adams's


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Picc. \( \{ J. = 98 \} \)
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synthesis of Glassian and Reichian processes, but further evidence of his nonsystematic approach—the method of a composer who prefers an intuitive combination of techniques to the purity of a single system.

With the orchestral work *Harmonielehre* (1985), these audible legacies of minimalist process have returned decisively to the background. Named after Schoenberg’s 1911 treatise on tonal harmony, *Harmonielehre* pursues the seriousness of purpose and hyper-expressive rhetoric of *Harmonium*; in its anguished intensity and chromatic harmony, however, *Harmonielehre* alludes to the ferment of Viennese Expressionism. Its achievement lies in a reconciliation of post-Romanticism with the static harmonic planes and nondevelopmental repetition of minimalism. Yet its overall structure is far removed from musical process.

Like *Harmonium*, *Harmonielehre* focuses on sustained lyricism; like the third movement of *Shaker Loops*, the repeated musical processes serve a primarily accompanimental function. These localized processes—which combine the additive/reductive and quasi-canonic techniques of *Grand Pianola Music*—provide both a coloristic “shimmer and waviness” and a pulsing backdrop for the long harmonic prolongations. In example 15 the sustained horn and string melody—indebted to additive process for its growth—is underpinned by shimmering clarinets, harps, and celesta, which recirculate triadic material in a quasi-phasing manner.

Both *Grand Pianola Music* and *Harmonielehre* continue to investigate the dramatic possibilities of modulation. When Adams’s long harmonic planes suddenly shift by juxtaposition—or gradually modulate by common tones or enharmonicism—the effect is potent, precisely because of the preceding harmonic stasis. When Adams manipulates a prolonged triad by undermining its root or its middle register, the effect is striking, precisely because these oscillations occur within a static context. Yet, as in *Harmonium*, we are no longer dealing with a systematic harmonic process but with a personal, intuitive stylistic signature.
Over a period of less than ten years, Adams took a path that led him from musical process to personal intuition. In early works such as *Phrygian Gates* and *China Gates*, he engaged in detailed precompositional decisions, creating musical processes that dictated overall form. By *Shaker Loops*, these processes became localized events and, in the third movement, began to serve a subordinate, accompanimental function. *Harmonium*, with its subjective emotional stance, employed musical processes primarily to create rhythmic animation and shimmering color; *Grand Pianola Music*, although returning those processes to the foreground, synthesized Glass’s additive and Reich’s canonic processes.

in a nonsystematic fashion. With *Harmonielehre*, the processes again receded to a pulsating, coloristic, accompanimental function, and an intuitive lyricism occupied center stage.

The course of Adams’s musical development contrasts sharply with Reich’s, and emphasizes the differences in outlook between these representatives of two generations. Unlike Adams, Reich continues to view the act of composition as an outgrowth of musical process. Despite his expansion of harmonic, timbral, formal, and expressive resources, Reich’s music is still guided by rationalistic precompositional decisions and the working out of predetermined processes. The fact that these processes are no longer dogmatically applied indicates both the heightened role
of intuition and a rejection of impersonality. But, despite their recent flexibility, processes persist as the structural backbone of Reich's compositions.

What we can observe in the music of Reich and Adams is a shift from a style that is applied in pure, doctrinal form to a style that retains echoes of doctrine within a far less pure context. Such a shift might be indicative of a turn from minimalism to post-minimalism, in the same sense that we recognize a motion from Romanticism to post-Romanticism. Just as post-Romantics such as Mahler, Strauss, and Schoenberg employed the language of Romanticism but in a context tinged with irony, nostalgia, and loss—a context changed by the circumstances of the fin-de-siècle—so too Adams employs the language of minimalism but in a context more reflective of the eclecticism of the 1980s than of the rationalism of the 1960s.
If modernism is understood to combine a purity and systematization of structure with an unending search for new means of technique and expression, then Reich is a child of modernism. His rationalism and precompositional planning link him with the serialists, but his insistence on clarity and audibility of structure have driven him to a radical simplification of musical means. Although Reich's materials can be commonplace—the arpeggios of Piano Phase, for example—their context and treatment fulfill modernism's emphasis on originality, while the process fulfills its insistence on structural purity.

Adams is of a different generation, one that places a premium on neither originality nor systematization. He speaks of the "burn-out of the avant-garde" and notes that "all of my music has this feeling of déjà vu":

I think the whole issue of vanguardism and process is beginning to pale now toward the end of the century, and a sense of trust in one's innate creative decisions is beginning to come back. It's as if we're approaching the end of the last century. There is a sort of exhaustion of this intense need to run to the barricades, and to forge ahead to the future.  

Adams has moved from the rationalistic modernism of Reich to an eclectic post-modernism, an approach that freely selects and combines the relics of a variety of vernacular and historical traditions. Although attracted to minimalism's accessibility, clarity, and vernacular links, Adams has gradually discarded both its systematization of method and its purity of inspiration. Preferring to absorb a wide array of musical influences, Adams has taken the language of minimalism and, while retaining its surface gestures, shed its doctrines. There is no better demonstration than Adams's music of a move from systematic rigor to all-embracing eclecticism, a move mirrored in the shift from process to intuition.

NOTES

An abridged version of this paper was read at the Annual Meeting of the Sonneck Society at Danville, Kentucky in April 1988, as part of a session, chaired by H. Wiley Hitchcock, entitled "Minimalism and Beyond."

2. Reich, 9–10.
3. For a discussion of Reich's works through 1967, see K. Robert Schwarz, "Steve
Reich: Music as a Gradual Process,” *Perspectives of New Music* 19 (1980–81): 373–92. This journal will hereafter be abbreviated PNM.

4. Reich, 9.


7. Reich, with his conservatory training in serialism, has long respected a rigorous approach to composition. Indeed, despite the mutual antipathy of their practitioners, the serialists and minimalists have in common at least one central tenet—the desire to dictate the outcome of the work as precisely as possible. Both minimalists and serialists achieve their goal by means of precompositional planning: the designing of the musical process in the case of the minimalists, the creation of the pitch and durational rows in the case of the serialists. And both pursue their compositional systems with dogmatic single-mindedness, concerned more with the impersonal working-out of a process than with personal intuition. Strictly serial works, in fact, may be seen as the unfolding of multiple musical processes—yet, unlike minimal processes, serial ones remain inaudible.


9. Interview with Steven Reich, Feb. 27, 1987. Unless otherwise indicated, all subsequent Reich quotations will be taken from this interview, and will not be cited individually.


11. A similar, although less pervasive, use of the pulses occurs in *Sextet*, where they introduce the first movement, and in *New York Counterpoint*, where they open and close the first movement.


13. This focus on the middle register has been characteristic of Reich’s works since *Music for 18 Musicians*, in which the harmonic cycle’s middle register remains intact but its bass is frequently altered.

14. Reich’s tendency toward contrapuntal processes may have been encouraged by his training in twelve-tone technique. Although he later repudiated the inaudibility of serial structure, he learned to respect its systematic approach. “A twelve-tone row is a subject in the contrapuntal sense of that word. And what are inversion, or retrograde, or retrograde-inversion—those are contrapuntal terms! Even though I rejected serialism, the intellectual discipline in having done it was very good exposure, because it suggested a technique for putting music together” (interview with Reich).


16. Similar examples of rhythmic construction may be found at the beginning of the third and fifth movements of both *The Desert Music* and *Sextet*.

17. See Reich, *Writings*, 10. A discussion of “resulting patterns” may be found in Schwarz, “Reich,” PNM 19: 387.


21. From the discussion of *Phrygian Gates* in John Adams, liner notes to *Phrygian Gates* and *Shaker Loops* (1750 Arch Records S-1784, 1980).


23. Divided into four movements—“Shaking and Trembling,” “Hymning Slews,” “Loops and Verses,” and “A Final Shaking”—*Shaker Loops* originally stressed its links to musical process in both its subtitles and its notation. “Loops” and “slews” partake of the jargon of electronic and tape music, just as “gates” did in *Phrygian Gates*. Similarly mechanistic in concept was the original notation, which conceived of each melodic line as a succession of “modules” and “sub-modules,” cells whose exact number of repetitions is to be determined by the conductor. Yet by 1982, when Adams arranged *Shaker Loops* for string orchestra, he de-emphasized the mechanistic, process-like elements, removing the repeated modules and notating the score in a through-composed manner.

24. Similarly, in mm. 32 and 35 of the third movement, Adams borrows the rising and falling pulses of Reich’s *Music for 18 Musicians*, but these, divorced from their Reichian process, now serve only a coloristic purpose.


27. The influence of additive process may also be seen at the opening of the first movement of *Harmonium*, where the pitch material is gradually assembled, one note at a time, beginning with a single D; and in the choral parts of the second movement, which oscillate slowly around a small collection of pitches.


30. As in the flute solo of *Octet* (1979), Section 1/3C. For a discussion of *Octet*, see Schwarz, “Reich,” *PNM* 20: 252–55.


33. Adams himself, when pressed to choose a label for his music, selects “post-modern.” It is worth noting that Adams’s shift from process to intuition—and his post-modern predilection for synthesizing traditions rather than “forging ahead to the future”—has a significance beyond his own compositional career. For his attitude is indicative of a general rejection of pure, systematic approaches to composition that may also be observed in the dissimilar works of David Del Tredici, George Rochberg, Jacob Druckman, John Harbison, Joseph Schwantner, Ellen Taaffe Zwilich, Stephen Paulus, Nicholas Thorne, and a host of younger “neo-Romantic” composers. For a discussion of postmodernism in music, see Eric Salzman, *Twentieth-Century Music: An Introduction*, 3d ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1988), 191–94.