

### *Drumming*

*Drumming* introduces a greater concern with sound as such: with the sheer sonic impact of timbre and texture made possible by contrasting and ultimately combining different groups of instruments as part of the evolving structure of an extended composition. Reich's ensemble was now expanded to include an extensive range of tuned percussion instruments: bongo drums, marimbas and glockenspiels. Though he chose, he writes, 'instruments that are all now commonly available in Western countries',<sup>64</sup> all are redolent of their various – by no means exclusively African – origins.

And not only instruments: he now also added voices to his ensemble for the first time. Though impressed by his African experiences of voices combined with drumming, it was a long-held admiration for the scat singing of Ella Fitzgerald that now inspired Reich to explore the possibilities of using voices wordlessly – 'to become part of the musical ensemble by imitating the exact sound of the instruments'. He has written that '[w]hile first playing the drums during the process of composition, I found myself sometimes singing with them, using my voice to imitate the sounds they made. I began to understand that this might also be possible with the marimbas and glockenspiels'.<sup>65</sup> The score suggests 'using syllables like "tak", "duk", and so forth'; all voices must be amplified. Despite his own vocal efforts, and though both male and female voices are specified at different points in the scores which have up to now been available,<sup>66</sup> Reich favoured the female voice from early in the work's composition and rehearsal. Men's voices were soon abandoned, though perceptive listeners may be able to detect a single male voice – the composer's – on the Deutsche Grammophon recording. Singers and/or players contribute resulting patterns at various stages of the phasing process in each movement.

The decision to use percussion, and to avoid the keyboard instruments which had dominated his instrumental output in the previous few years, suggests, perhaps surprisingly, the retention of a firm focus on rhythm at the expense of Reich's still new interest in harmony. The basic material of *Drumming* was – furthermore, and unusually for Reich – conceived initially as pure rhythm: patterns inspired, in fact, by the mundane act of strumming his fingers on a table while on the telephone. But while it was his first work to begin life in the form of a rhythmic pattern, this was later 'given a great variety of pitches'.

According to his publisher's catalogue, *Drumming* (composed between the autumn of 1970 and the autumn of 1971) may last between fifty-seven and eighty-six minutes.<sup>67</sup> The original 1974 LP recording takes around

eighty minutes: the longest the work ever got, according to Reich himself. The 1987 Nonesuch CD version (the only one currently available, and from which the timings below are taken) takes 56'44". Though all his works to this date from *Piano Phase* onwards permit of some variability in length, owing to the freedom allowed for the repetition of each 'figure', most performances seem to have lasted between about fifteen and twenty minutes, usually closer to the former. *Drumming* thus represents a substantial change of scope. In 1974, Reich gave the work's length as 'about one and a half hours'<sup>68</sup> and wrote that it had 'turned out to be the longest piece I have ever composed'.

The composer does, however, divide *Drumming* into four parts, each lasting the sort of length an earlier whole piece of his would have done. Though these are continuous in a complete performance, each part is also playable separately. The main reason for this division is the opportunity it affords to exploit, contrast and eventually bring together a timbral palette much larger than any he had previously used. Part One is scored for drums (originally plus male voices, as we have seen), Part Two for marimbas and female voices, Part Three for glockenspiels, whistling and piccolo (substitutes for the previous vocal activity, the pitches now being too high to sing); Part Four combines all the musicians required for the previous three to make a highly original kind of 'orchestra'. Transitions to each new timbre are continuous and gradual: while the previous group fades out, the new one fades in, 'the new instruments doubling the exact pattern of the instruments already playing'.<sup>69</sup>

The way in which these forces are deployed is designed to produce a dramatic curve: rising from Part One (17'30") to Part Two (18'10"), then falling for the 'scherzo' of Part Three (11'12"), prior to a further rise for the climactic Part Four (9'44"). Simultaneously with this overall emotional trajectory there runs an even simpler one based on register: rising in steps from the G# – C# (a low version of composer's familiar 'low treble') of Part One through the expansion up to C# two octaves higher of Part Two, to the glockenspiels of Part Three, which rise to A# almost two octaves above that. Part Four then employs almost the full range: from the drums' low G# up to the glockenspiel's high A#. In *Drumming* Reich takes on, for the first time, the challenge of sustaining the listener's attention over a long time-span, putting to good use his experiences of constructing fifteen- to twenty-minute forms of considerable structural sophistication to produce a large-scale work of cumulative complexity and power.

In *Writings*, the composer says that the work 'is the final expansion and refinement of the phasing process, as well as the first use of four new techniques'.<sup>70</sup> In terms of both rhythm and timbre, *Drumming* breaks

important new ground. Of the new techniques, one is the already mentioned use of voices. The second is purely rhythmic: the process Reich calls ‘gradually substituting beats for rests (or rests for beats) within a constantly repeating rhythmic cycle’, or, respectively, ‘rhythmic construction’ and ‘rhythmic reduction’ (the former already explored in *Four Organs*). The third and fourth are, like the first, essentially timbral: ‘the gradual changing of timbre while rhythm and pitch remain constant’; and ‘the simultaneous combination of instruments of different timbre’.

All four parts of *Drumming* are based on a single pattern, once again of twelve quaver beats, given in Example 3.16a. The Basic Unit changes not only its phase position and timbre, but also its pitch configuration; Reich reveals the pattern’s rhythmic origins when he says that ‘all the performers play this pattern, or some part of it, throughout the entire piece’.<sup>71</sup> This typically Reichian construct gives rise to a technical *tour de force* as the potential ambiguities of different downbeats resulting from many subdivisions of twelve into twos, threes, fours and sixes are exploited. Since the crotchet, rather than the quaver, becomes the main building block both compositionally and perceptually, ‘beats’ will from here onwards refer to crotchets, not quavers. Part One of the work will be analysed in some detail to demonstrate how Reich combines already familiar techniques with new ones to create one of his most sophisticated structures while retaining essentially simple means. Shorter discussions of Parts Two, Three and Four will then illustrate a few more of the timbral and modal, as well as rhythmic, ingenuities to be found in the remainder of the work.

### *Analysis of Drumming, Part One*

Part One introduces the drums in a small ensemble of eight small tuned drums, or bongos. The bongos are stand-mounted in pairs, divided into two groups (one for each pair of players), and tuned to four pitches: in ascending order, G#, A#, B and C#. They are played with both hard and soft sticks. Since the two performers in each pair face each other, playing the same four drums, neither pitch order nor use of left and right hands will be the same for each, and the latter is left to the musicians’ choice.

The second ‘new technique’ mentioned above – that of ‘rhythmic construction’ – makes its appearance at the outset, as two drummers assemble the Basic Unit note by note. (The original score suggests ‘two, three or four drummers’, but the revised score adopts the simple pair of players long since used by the composer’s own ensemble.) This process, which takes just over a minute, is later reversed; after Figure 15 (9’36”), the Basic Unit is progressively reduced to a single note, played just once. Within this framework, a series of ‘fuzzy transitions’ carries the phasing process

forward; each of these transitions occupies between about twenty and thirty seconds. There are four such transitions, in which the Basic Unit is twice moved out of phase on a simple crotchet-by-crotchet basis, then subjected to a more complex procedure described below. On three of these stages, resulting patterns are constructed, the patterns entering and leaving in the now familiar crescendo/diminuendo fashion. The score specifies no lengths for these sections; on the 1987 recording, each occupies between about one and three minutes. They provide the main 'meat' of the movement.

When 'rhythmic reduction' has reversed the opening process (10'54"), soft sticks are exchanged for the original hard ones, and a slightly different version of the Basic Unit is now assembled (from Figure 23). A further series of 'fuzzy transitions' of similar length then unfolds. This time, there are five of them, in which the Basic Unit is again twice moved out of phase, then subjected to more complex treatment, once again described below. In this shorter section, though, no resulting patterns are highlighted. Instead (starting at Figure 35), all four players prepare for the timbral change to Part Two by alternating between hard and soft sticks. While Players 1–3 retain the phasing positions they have reached, three marimba players, using soft rubber mallets, fade in with the same patterns (Figure 47), which the drummers now fade out (concluding at 17'30").

Each figure gradually assembling the Basic Unit, at the opening of Part One, is repeated 'at least six or eight' times; when one drummer moves to the next figure, the other may either join him at once or continue with the same figure and join him after a few more repeats. This initial process of rhythmic construction already offers a subtle range of ambiguities both metrical (it can be heard, for instance, in both  $\frac{6}{4}$  and  $\frac{3}{2}$ ) and tonal (G# and B establishing positions of primacy in a pitch gamut reductive even by Reich's standards).

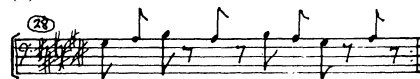
Players 1 and 2 then commence the sequence of 'fixed' and 'moving' patterns of the basic phasing process that follows. The other pair (Players 3 and 4) now participates in the resulting patterns against this continuing 'grid'. The score's range of resulting patterns for 'drummers 3 & 4 and/or male voices' rings the changes on a Basic Unit using only four pitches with considerable resourcefulness; both Reich's previous instrumental compositions with separately articulated resulting patterns had employed five pitch classes for their Basic Units (and, in *Phase Patterns*, a second pattern introducing a sixth one). The distribution of phasing patterns and resulting patterns is the most complex combination of the two which Reich ever devised for a single pattern without pitch extensions. Example 3.16b–d demonstrates the nature of these patterns' evolution through the



Steve Reich

Example 3.16 (cont.)

(e)



(f)

three figures involved; the following notes also make a few observations on what can be heard on the Nonesuch recording.

In Stage One (Figure 10), both resulting patterns notated in the score are four bars in length, each covering four statements of the Basic Unit, itself now written out in two-bar repeating sequences (see Ex. 3.16b). Each resulting pattern outlines a broadly descending sequence in each bar, revolving initially around C# and B, the upper pair of pitches; one pattern obligingly picks up all four available C#s on the first four beats, alternating them with B. More important, however, is the fact that almost every bar articulates the lower pair of pitches, A# and G#, in a kind of extended upbeat to the next bar's main downbeat, implying a ii-i reinforcing G# (sometimes accompanied by its mediant, B) as the central pitch. This is further emphasised by a crotchet-based pattern using all four pitches in a descending sequence from C# to G#. It is this which dominates the early moments of Stage One in the 1987 recording; they can, in fact, be heard for some time in every bar, either as the effect of multiple repetitions of the two notated patterns, or as a consequence of newly invented ones. Later, the focus is on A#G#. The patterns here suggest  $\frac{6}{4}$  rather than the previously dominant  $\frac{3}{2}$ .

In Stage Two (Figure 11), one notated resulting pattern is eight bars long, the other four bars (see Ex. 3.16c, which gives only the composite of this stage of the phasing process). In the composite itself, C# now occurs on the second, fourth and sixth beats, making it suitable for incorporation into a resulting pattern establishing a strong alternative downbeat and a marked contrast to Figure 10. Instead, the eight-bar pattern makes the C# on beat 4 the top of the curve of a short sequence in mid-bar that initially alternates with the other pitches' emphasis on beats 1, 3 and 5, suggesting  $\frac{3}{2}$ . After repeating this in bar 3, though, this pattern abandons C# until the

second beat of its penultimate bar. The four-bar pattern offers just a single C#, on beat 2 of its first bar, being more concerned with stressing the opening G#B quavers of the Basic Unit in its unphased form. On the 1987 recording, the most obvious elements seem to be, first, the G#A# sequences in  $\frac{3}{2}$  and, following these, groups of five quavers on quavers 1–5 and 7–11, which suggest  $\frac{6}{4}$ . Cross-rhythms feature prominently in the deployment of the resulting patterns in this performance of Stage Two.

After this, at Figure 12, a drummer from the second pair (Player 3) enters with the unphased Basic Unit in unison with Player 1, prior to phasing one beat ahead (beat 2), thus occupying a position midway between Player 1 (beat 1) and Player 2 (still on beat 3). The third section of resulting patterns thus has three simultaneous canonic statements of the Basic Unit from which to draw its material, but only one drummer (Player 4) to perform them.

In Stage Three (Figure 13), the score offers four patterns: one of four bars, plus three each of a single bar to be repeated (see Ex. 3.16d, which gives, again, only the composite). A notable feature of the new contrapuntal composite is that B now occurs on every quaver. One of these single repeated bars is accordingly devoted solely to quaver Bs, which are also taken up by beats 5 and 6 of the four-bar pattern. Additionally, all the other bars of the longer pattern place B at their beginning, and in general they offset the potential metric anarchy of continuous quaver Bs by emphasising the main crotchet beats. On the 1987 recording, the main effect is again of descending sequences, moving quite quickly from C# to stress A# and G#.

Following this, at Figure 14, Player 4 moves directly, without phasing, to Stage Four (beat 4). When the consequent four simultaneous statements of the Basic Unit have been held for about a minute, Players 2, 3 and 4 move ahead, without pausing on each 'notch', until all are back in unison with Player 1's 'fixed' version (Figures 15–16). The cycle of phasing has thus been completed in a telescoped manner taking '30–45 seconds', characterised by a tumble of patterns, more chaotic and exciting than usual, moving in 'fuzzy' mode from different positions at slightly different speeds. With the return of all four players to the Basic Unit in unison, 'rhythmic reduction' now proceeds (Figures 16–22) until only a single, unrepeated G# remains: the logical conclusion of the tonal focus that this process has itself highlighted. With the switch to soft sticks (Figure 23), the altered version of the Basic Unit, now constructed by at least two players, leaves out C# entirely for the moment, but preserves not only the rhythms but also the shape and tonal emphasis of the original (see Ex. 3.16e).

As before, Players 1 and 2 begin the phasing sequence, the latter moving progressively to the third 'notch'. While this combination (on beats 1 and

3) is once again frozen, Player 3 this time joins Player 2, then proceeds from this new position a further two ‘notches’, to beat 5. With no separately articulated resulting patterns to be performed this time, on these three phasing positions – on beats 1, 3 and 5, the combination itself suggesting  $\frac{3}{2}$  – Player 4 briefly replaces each of his colleagues in turn to facilitate the change back to hard sticks. This accomplished, and Players 1–3 all remaining in position, Player 1 exchanges the A#s on quavers 5 and 8 in the alternative Basic Unit to C#s, a procedure progressively adopted by Players 2 and 3 (Figures 39–41). Further modification – involving exchange of another A# for a C#, but also the replacement of a G# by A# itself – allows the emergence, though not the players’ own reinforcement, of a resulting pattern of continuous quaver C#s (see Ex. 3.16f). Also audible as a response to the previously reiterated Bs of Stage Three, this nicely complements the C# tonality of the incoming Part Two, allowing the G# of Part One to be interpreted as its dominant: another instance in Reich’s output of accepting the ‘natural forces’ inherent in the repetition of a single pitch, while retaining the modal complexities that come with this. A final change back to soft sticks, again with the aid of Player 4, permits the three main drummers of Part One to blend with the emerging three main marimba players of Part Two.

#### Parts Two, Three *and* Four

Part Two uses only three instruments. But the choice of marimbas and number of performers involved here are crucial: with nine players altogether, the sound is newly rich and strange. To this marimba mini-orchestra are added two female singers (‘two, three, or more female singers’ in the original score), vocalising wordlessly. These supply a further dimension to the woody percussive timbre, exploiting and enhancing the marimbas’ natural tendency to produce a halo of upper partials. Marimbas and voices together provide not only a much fuller texture than any its composer had previously used, but also one in which tonal emphasis can play a particularly well-defined and subtle part in the uncovering of resulting patterns. In the sections for marimbas alone, on the other hand, the nature of these instruments contributes almost as much to the difficulties of hearing the structural details of the basic phasing process as does the increased contrapuntal complexity of that phasing process itself.

Once the marimbas have phase-shifted the drumming pattern of Part One back to unison, they begin to add a sequence of patterns – all derived from the Basic Unit – expanding the register upwards via the gradual addition of new players: first to G# (Figure 51), then to F# (Figure 58) and finally to high C# (Figure 63), adding the pitches on which the glockenspiels of



Part Three can enter, after the marimbas' lower patterns have gradually been faded out. Example 3.17a gives the combined patterns of Part Two demonstrating their differing responses to the shape of the opening one, and the now expanded modality incorporating all seven pitch classes in the six-sharp key signature. With C# occupying a stronger, partly because more regular, position in the pattern than it had in the majority of Part One, Reich is now able to exploit much further the kind of dominant/tonic ambiguities which he favoured earlier. Player 1's left-hand lower voice, for instance – all pitches other than C# – simultaneously forms a iii–ii–i cadence emphasising G# as a tonal centre.

The progressive expansion is based on the now familiar 'stacked' fourths/fifths scheme, allowing different pitches to emerge as it proceeds. The first new pattern to be added, for instance – starting on D#, in parallel fifths with the opening one – reinforces G#, implying an initial modulation from C# to G#. Ambiguities are compounded by the stacking up of patterns itself, eventually producing a complex interaction of multiple tonal centres forming the common pentatonic scale, with G#, C# and F# emerging as the strongest pitches. As the patterns fade out at the end, however, D#, F# and finally A# emerge in turn in a kind of modulatory process which Reich was to explore again in later works.

Meanwhile, the resulting patterns arising from Part Two's cycle of phasing provide further modifications to the modal mix. These resulting patterns are now performed by a separate group, the singers; the score gives them a much wider range of patterns and offers them considerable flexibility in their use, as well as the option of creating new ones. Released from any responsibility to supply resulting patterns, all nine marimba players are free to pile versions of their proliferating phase patterns on top of each other. Like Part One, Part Two evolves in a two-part sequence. Firstly, a two-stage process offers repeating patterns on the first two, and then the first three beats (Figures 49–55, based on the expansion to G#). Secondly, after a return to unison, a three-stage process yields repeating patterns up to a combination of beats 1, 2 and 3 (Figures 56–63). With the arrival of top C#, Player 7's new pattern is immediately supplied, by Players 8 and 9, with 'notches' of its own phasing cycle on beats 2 and 3 without any intervening 'fuzzy transitions'. After the fade-out process described above, it is these three players who are left holding their patterns while three of the erstwhile marimba players transfer to glockenspiels, and Part Three begins.

Part Three, at 11'12", is much shorter. Its move to the high register of three glockenspiels played by four musicians – plus the amplified whistling of resulting patterns by a single performer or a pair of performers, moving

Example 3.17 *Drumming*: (a) Part Two, Figure 63 (Marimbas and composite of resulting patterns only); (b) Part Three, Figure 71; (c) Part Four, Figure 109.

(a)

MARIMBA 2  
PLAYER 1

MARIMBA 2  
PLAYER 2

MARIMBA 2  
PLAYER 3

MARIMBA 2  
PLAYER 4

MARIMBA 2  
PLAYER 7

MARIMBA 1  
PLAYER 5

MARIMBA 1  
PLAYER 8

MARIMBA 3  
PLAYER 6

MARIMBA 3  
PLAYER 9

COMPLETE RESULTING  
PATTERN OF ALL  
MARIMBAS

(b)

Glock. 1  
PLAYER 3

(c)

2 GLOCKS.

2 MARIMBAS

1 DRUMMER

to the piccolo when the register becomes too high to whistle – forms a natural conclusion to the upward registral expansion charted by Parts One and Two. Though it functions as *Drumming's* scherzo, it is structurally the most complex movement yet encountered.

Part Three preserves the broad outlines and tonal approach of Part Two while modifying the relationship between the cycle of phasing, articulation of resulting patterns and registral expansion. After a phase-shifting of the final marimba pattern of Part Two back to unison, following the practice adopted earlier, phasing of its own version of the Basic Unit (see Ex. 3.17b) is carried forward two 'notches', involving all four players (Figures 70–77). Registral expansion to its upper limit, E#, has, though, already occurred with the arrival of Player 2 at Figure 72. And before the expected resulting patterns can occur – on the patterns now formed on the expected beats 1, 2 and 3 of the phasing process – Player 4 modifies his pattern: clarifying the combination then available at Figure 78 for the resulting patterns' Stage One. One dimension of this clarification is the reintroduction of pitches below E#: in particular, A#, which now, providing its median, underpins a clear tonal focus on F#. Player 4's modified version is then adopted in turn by Players 1 and 3, Player 2 retaining his original pattern with the high E#. Stage Two of the resulting patterns, in which the piccolo takes over from the whistling, now takes place (Figure 80).

Stage Three is formed on a further modification of the pattern, which is assembled and phased by three players – to produce patterns on beats 1, 2 and 3 once more – around the previous version, which Player 1 continues alone (Figures 80–87). Lowering the top pitch to D#, this modification also includes B#s for the first time in *Drumming* (Figures 83–90), suggesting a modulation to C# major; the resulting patterns themselves, though, tend to emphasise the high D# itself. One interpretation of the tonal scheme of Part Three – emboldened partly, it would seem, by the appearance of B#s – argues for a symmetrical progression from F# through C# and A# to D#, and back again. The final minutes (Figures 88–101) – in which yet another version of the pattern, revolving around F# itself, takes over – certainly emphasise the return to F#. This is eventually subjected to the substitution of notes by rests, its reduction to a single F# mirroring the close of Part One.

While Part Three's F# tonality fits nicely into what appears to be an evolving scheme of central pitches – G# (Part One), C# (Part Two), F# – itself derived from Reich's favoured 'stacked' fourths/fifths, it should be noted that the high register of the glockenspiels, and their accompanying whistling, makes the detailed pitch content of Part Three quite difficult to discern; the higher glockenspiel patterns, in particular, are heard more as rhythmic articulations, or even as merely a jumble of overlapping pulses, than as pitch sequences, though the resulting patterns suggest pitch content and direction more readily. In Part Four, however, the previous movement's focus on F# contributes to a combination of tonal emphases as rich and complex as are the finale's bringing together of the textural and

rhythmic characteristics of all three earlier movements. Part Four represents *Drumming's* natural, indeed inevitable, culmination, combining the three groups of performers previously deployed separately into a celebratory final ten minutes (9'44" on the 1987 recording). Its relative brevity can be accounted for not only by the psychological requirements of a composition that has already held its audience for nearly three-quarters of an hour before the movement arrives, but also by the amount of information it packs into its contrapuntal space.

At its start, pairs of glockenspiels, marimbas and drums each assemble their own further new version of the Basic Unit by 'rhythmic construction' (Figures 102–9; Ex. 3.17c gives the completed pattern). This starts with, and centres on, the glockenspiels' F#. The more prominent first three pitches of the marimba – D# C# G# – give its beginning a temporary focus on C#, though: simultaneously suggesting the tonalities of Parts One and Two and anticipating Part Four's subsequent tonal development (see below). Phase shifting is then performed on all three patterns, the forward motion of each against its fixed timbral partner being staggered. The marimba is the first to move, followed by drum and glockenspiel (Figures 110–12). This sequence is then repeated, moving each player to beat 3 against his partner (Figures 113–15). At this point, each pair is turned into a trio by the addition of a new player on beat 3, and phasing moves ahead once more, to beat 4 (Figures 116–19) and beat 5 (Figures 120–22). With phasing now established on beats 1, 3 and 5 of each timbral group's independent pattern, a final riot of resulting patterns – which can occupy more than a third of this movement's length – brings the work to its conclusion.

Reich points out that the complexities of both the phase shifting itself and the resulting patterns here are saved from sheer confusion by timbral contrast.<sup>72</sup> The interdependence of the processes involved and their ultimate derivation from a single rhythmic pattern also give Part Four a cohesion amidst its undoubted variety; a cohesion further enhanced by the feeling one gains of the movement as an essentially unitary process, a single unravelling sweep of phasing leading straight into the consequences of its own momentum. That variety is tonal as well as timbral, and again it demonstrates a certain unity. On the one hand, each group's pattern demonstrates the wealth of ambiguities typical of such material, even when, as we saw earlier, one tonal centre may be interpreted as of greater significance than the rest. On the other hand, the progression from G# via C# to F# may now be said to culminate in a gigantic half cadence, implying closure on B $\natural$  (now restored, after the B $\sharp$ s of Part Three, and the next logical pitch in that 'stacked' sequence), but actually coming to rest on its dominant, F# (see Ex. 3.18). As in *Four Organs*, tonic and dominant, tension and

Example 3.18 *Drumming*, Part Four, Figure 122

(122)

Glock. 1

Glock. 2

Glock. 3

MARIMBA 1

MARIMBA 2

MARIMBA 3

DRUMS 1

DRUMS 2

DRUMS 3

COMPLETE RESULTING PATTERN OF ALL GLOCKENSPIELE

COMPLETE RESULTING PATTERN OF ALL MARIMBAS

COMPLETE RESULTING PATTERN OF ALL DRUMS

INDIVIDUAL RESULTING PATTERNS FOR VOICES

INDIVIDUAL RESULTING PATTERNS FOR PICCOLO

resolution, are combined, fused into an entity different from that of conventional Western tonality, yet supplying something of that tonality's strength of purpose to modal certainties that are as old as the hills.

In *Drumming*, Reich extends his practice of using groups of identical instruments to develop a fresh approach to his instrumental forces; the blending, as well as the variety, of timbres found here is new in his output.

His abandonment, for the moment, both of any of the usual instruments of the Western 'classical' orchestra in their conventional groupings and of the keyboards which had been central to his music since 1966, suggested that the emerging Steve Reich and Musicians would focus on the tuned percussion inspired by Reich's trip to Africa. With this new array of timbral possibilities, he proved the continuing viability of a music based ultimately on rhythm, even if the details of that music's structures were now less audible than before. Yet *Drumming* also demonstrates an already quite sophisticated concern with harmony and tonality that would increasingly characterise Reich's output during the decade it helped set in motion.

1972–3

### Clapping Music and Music for Pieces of Wood

In the immediate aftermath of *Drumming*, however, Reich bided his time over its pitch concerns, and wrote a small-scale piece devoted purely to his continuing fascination with rhythm. *Clapping Music* (its score dated April 1972) was written merely for the pairs of hands of two performers. Inspired by experiencing the rhythmic hand-clapping of a Brussels flamenco troupe, this was also a response to the practical complications which accompanied the touring of a work for a van-load of percussion instruments. Since the gradual sliding of phasing's 'fuzzy transitions' would be too difficult in this case, Reich simply subjected a typical twelve-beat Basic Unit (see Ex. 3.19) to a process of jumping directly from 'notch' to 'notch' of an otherwise typical cycle of phasing.

Each 'notch' in the second player's movement away from the fixed position of his partner gives the impression of creating a new pattern: another example of Reich's sleight-of-hand approach to the ambiguities of  $\frac{12}{8}$  metre. The Basic Unit of *Clapping Music* throws not only placement within the metre but metre itself into doubt, by including notes on the fifth, eighth and tenth quavers. The listener can thus hear the complete pattern in a variety of ways; when performed in canon, the choice of downbeats is naturally increased. In addition, it can be difficult to hear that both performers are clapping the same pattern, despite the elementary character of the timbre involved. Even in a simple piece such as this, audibility of process is relegated in favour of its broader rhythmic consequences. Reich's fascination with  $\frac{12}{8}$ , and indeed with this particular pattern, was to be explored further when it became the Basic Unit of many of his later works, including *Music for Eighteen Musicians*.