

While much has been written about the music of Steve Reich, very little material has directly addressed the unique performance issues it engenders. This is partly due to the fact that throughout Reich's career he has been reluctant to allow to his work the same performance rights and accessibility which most Western composers aspire.

"The attitude I have toward publishing is that since I work as a performer in my own ensemble, when a piece is new it means a considerable number of performances and possibly recording opportunities, so I'm not anxious to have it published right away and give away half of my copyright royalty. That's my feeling in general."¹

The control Reich exerts over his work and his rigorous rehearsal strategies provide the most poignant clues into the difficulties faced when approaching his work as an outsider.

Until recently very few of Reich's works were in the public domain. The scores, which had been developed for and with his own ensemble² were sketched outlines which were fleshed out and solidified during the rehearsal process.

"I spent a long time with the scores recently published by Universal, not because they're so long – they are very short – but because the original ink manuscripts were written for my players, after a year or two of doing the piece from rough pencil sketch. The scores always came after the world premiere, and still often do. Therefore they were kind of skeletal, particularly the early pieces that need verbal explanation, such as the piano phases: How many repeats do you have for each bar in piano phase? Two hundred or three?"³

This is not to say that any of the musicians were improvising in any way – quite the contrary – although Reich does leave some decisions open to the performer.

¹ Gagne, Cole and Caras, Tracey – Soundpieces, interview with Steve Reich pg 314

² Steve Reich and Musicians – founded 1969

³ Gagne, Cole and Caras, Tracey – Soundpieces, interview with Steve Reich pg 315

Improvisation would infer that an individual was given space to provide creative input to the piece, but in his music the individual is the means through which the pre-existing ideas are executed. In an early work, *Drumming* (1970) and in *Music for 18 Musicians* (1976), the performers decide the pacing of the piece with regard to duration of individual sections, and repetitions of single units. The duration can vary from 60 to 90 minutes in both pieces. Also in *Drumming* performers actually “compose” their own *resultant patterns*. These patterns are sorted from the conglomerate material which is sounding at the time the resultants are required. Within Reich’s own ensemble he worked closely with the musicians in determining these patterns, and even gives suggestions in the score, but as the piece travels independently of Reich the patterns become more individualised. These interpretive responsibilities, however, do not cross into the realm of improvisation.

“Related to Reich’s desire for immediate clarity of structure is his dislike for anything improvisational, which could serve only to conceal the basic framework. Reich demands the subjection of the free expression of the individual performer to the common goal of the group expression. His musical structures, or “processes” as he refers to them, are rigorously planned in advance. Though some elements of performer choice enter into these scores, most are carefully determined in rehearsal, so the performance of a given piece is as controlled and precise as clockwork.”⁴

Rehearsal

Between January and April 1998, a group of 18 musicians at UCSD embarked on learning the work *Music for 18 Musicians*. Over a period of 10 weeks we worked intensively twice a week to understand the work, and then followed up with 6 concentrated rehearsals to finalise performance details and survival methods. We felt that more than 70 hours of rehearsal time with outstanding musicians was necessary to create

⁴ Schwarz, Robert. Steve Reich, pg. 379

a good performance of this work, a number not dissimilar to the first performance of the work with Reich's ensemble; close to one year of preparation time rehearsing once a week. This figure is in sharp contrast to the average orchestra rehearsal period of approximately 15 hours for an entire concert. This disparity denies the majority of ensembles any opportunity to pursue a performance of this piece.

The rehearsal process began with attempted "read throughs" of the work in twenty to thirty minute blocks, listening for paths of possible decision making within the work. It was clear from the beginning that consistency in tempo and style were areas in which to focus our energies. It was also clear that the assembled musicians, while all being extremely talented, had varying degrees of experience in interpreting this kind of music, and varying degrees of patience for the laborious process of democratic decision making between 18 people. Reich notes:

"The difficulties in playing this music, at least the pieces of the 1960's and 1970's, are generally not in the individual parts but in fitting these parts into precise and sometimes unusual rhythmic positions in an overall contrapuntal web. This is often not so easy as a cursory glance at the part itself would suggest. It presents a challenge to the kind of musician who enjoys being part of a finely tuned ensemble where all the details can be heard. This is the kind of musician I seek, and it is in the world of, let us say, "expanded chamber music" that they are to be found."⁵

The negotiation of interpretation without a conductor, and in our case without even a designated leader, slowed down the rehearsal process but greatly increased the individual level of personal responsibility. It is a luxury to learn such a piece without the financial constraints that would force us to revert to more traditional chamber music procedures.

⁵ Reich, Steve. "Some thought on performance" pg 45-6

Score issues

The first score we discovered of *Music for 18 Musicians* was from the Geisel Library UCSD, an anonymous gift with no record of the date received. It was a barely legible *handwritten score* for the first half of the piece only. The score was vague in the following ways:

- The role and path of each performer for the duration of the piece was unclear.
- The number of repeats of musical figures was not mentioned.
- Alignment in the score with regard to dynamics, in particular crescendos and decrescendos was not clear.

At the beginning of our rehearsal phase, news was received that Boosey and Hawkes had published a complete *study score*, which turned out to be a transcription of the one available recording of the work.⁶ The transcription bore no sympathy for individual expressivity because every nuance and interpretative gesture on the recording was transcribed onto the score. Still later a final *modular score* was released, which included parts for the performers, and reintroduced some flexibility into the score within confined parameters. Where the handwritten score had left the number of repeats of any one bar open, this new score set recommendations of between 5 – 9 repeats of a particular bar. This score informs of Reich's ensemble's interpretation of the original sketches, specifically with regard to pacing.

Finding the study score overly pedantic, we chose to base our interpretation on the published *modular score* and the mysterious *handwritten score*. The existence of two substantially different performance scores presented interesting conflicts and resolutions. Where possible the *handwritten score* was used to interpret the material and evolution of

⁶ Steve Reich and Musicians: ECM records 1129, 1978

the piece, and the *modular score* was used as a reference tool to negotiate ambiguities. Because of the more open nature of the *hand-written score*, this instilled a collaborative working method between all players from the start; a situation that I imagine equates to the early learning process within Reich's ensemble. Since the majority of our players performed from memory or with small "cheat sheets" (see appendix 1) it was important to focus on the sequence of events rather than exact numbers of repetitions.

Overview of the piece

Music for 18 Musicians was written between 1974- 76 and is scored for 2 clarinets/bass clarinets, 4 female voices, violin, cello, 6 percussionists and 4 pianists with many players doubling on a second or third instrument. The work lasts for between 55 – 80 minutes without break. In comparison to Reich's earlier minimal works which involve the execution of a single gradual process – such as *Piano Phase* and *Four Organs* - *Music for 18 Musicians* is a plethora of sonic and harmonic material. Harmonically this work is based on eleven chords. They are presented in succession in the introduction and coda, and then each chord is expanded into a five minute "section". (see figure 1 for details)

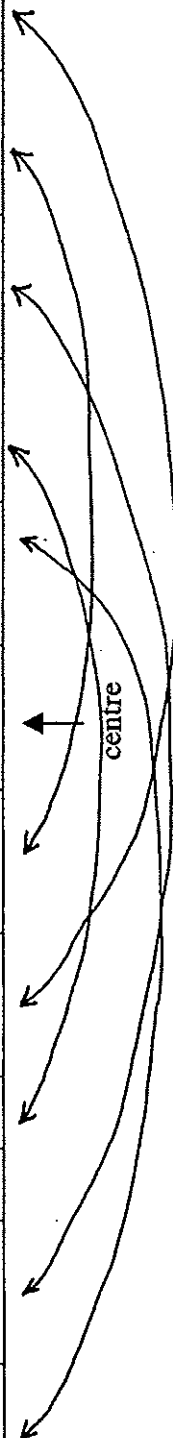
Two important structural ideas in *Music for 18 Musicians* are the palindrome and the build-up (or accruing textures). The entire piece forms a palindrome: the harmonic material differs but the structural and textural content of the sections reflect one another outward from the centre (Section VI). These palindromic forms also operate on a more localised level within sections as can be seen in figure 2. The other predominant formal structure for individual sections, the "build-up" is outlined in figure 3.⁷ Material

⁷A complete list of diagrams illustrating the contour of each section can be found in Appendix 2.

Music for 18 Musicians: material distribution

	I	II	III	III	IV	V	VI	VII	VIII	IX	X	XI
			a	b								
Dominant feature	moving vocals	build-ups	pno groove	xylo pian build	swells tutti	piano build-ups	maracas groove-4	maracas	maracas	xylo piano buildup	swells tutti	vocal line
vibe cues	yes	no	yes	yes	yes	no	yes	yes	yes	no	no	yes
vibe cue to next section	2 bar	2 bar	2 bar	2 bar	no	4 bar	4 bar	4 bar	4 bar	no	2 bar	no
swells	at climax	over xylo buildup	cli max	cli max	climax to end	develop ment to end	at climax	at climax	at climax	over xylo buildup	through out	climax to end
instrument	clarinets	clar/str later xy/p	vo cla	vo cla	clarinet tutti	clar/vo strings	clar/voic	clarinets	voices	clar/str later xy/p	clarinet tutti	clarinet later v/str
Form												

Figure 1



accumulates in the first half of the section, and then remains static with only the movement of the swells articulating the passing of time.

Figure 2 - Section I.

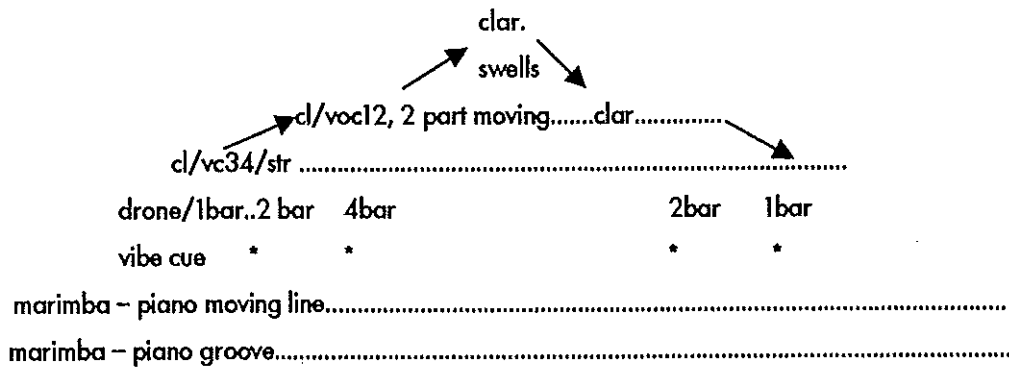
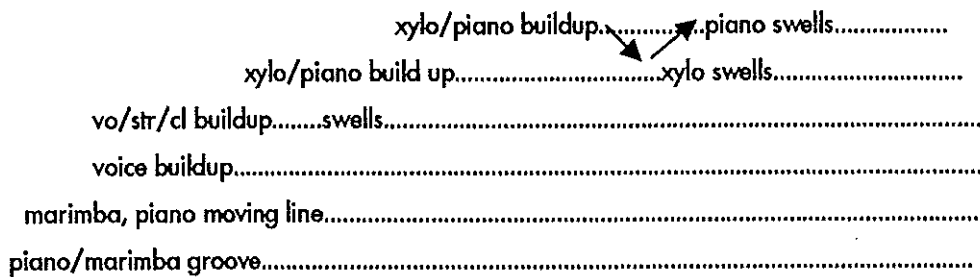


Figure 3 - Section II.



Instrumental roles are well defined throughout the piece. The constant, pulsating line is played by piano, marimba and sometimes xylophone. All of these instruments also operate as solo instruments in certain registers but this is rare. The clarinets, voices and strings are the primary solo instruments and usually play developing material. Their lines fade in and out, building layers on top of the continuous rhythmic ostinatos.

The work is made from four finite musical units redistributed and realigned to form a complex, constantly evolving whole. Two of these units can be observed in the introduction (figure 4). The fundamental line throughout is the *groove line*, consisting of two players on like instruments hocketing in rapid motoric rhythm. Added to this line are

Figure 4
"mysterious score"
Introduction

Introduction

steady groove - hocket

marimba

piano

The musical score is written for a large ensemble. The top system includes Marimba (I, II, III, IV), Piano 1, Piano 2, Violin, Viola, Cello, and Bass. The bottom system includes Marimba, Piano 1, Piano 2, Violin, Viola, Cello, and Bass. The score is divided into two main sections: 'steady groove - hocket' and 'piano'. The 'steady groove - hocket' section features a marimba part with a steady groove and a hocket pattern. The 'piano' section features a piano part with a steady groove and a hocket pattern. The score includes various musical notations such as notes, rests, and dynamic markings. The bottom system includes a section labeled 'SHORE'.

the swells played by the solo instruments, clarinet, voice and strings, consisting of breath length wave like reiterations of notes from the same harmony. ($\langle \rangle$) These swells literally emerge from inside the groove line, peak and then retract. The use of the breath as a durational element is a radical shift for Reich, introducing an organic aspect to the straightforward execution of gradual processes. The introductory material is repeated "verbatim" as the with potential variations of duration, intensity and not least of all, perception.

The other two finite musical units can be observed in figure 5, (page 11) which demonstrates the multiplicity of information accumulating beneath the shimmering surface. The one constant throughout the entire piece, the *steady groove*, which in this instance is performed by marimbas and pianos continues on from the introduction section. Their part will proceed without change for the approx. 5 minute duration of this section before continuing in an identical rhythmic manner but different harmonies in section II. The new layer of repetitive material introduced here is the *moving groove* in the parts of Marimba 3 and Piano 3. Like the steady groove, this line continues steadily throughout the piece regardless of developments in other lines. The entrance of the clarinets, voices and strings in measure 98 (these measure numbers are not literal but merely convenient approximations) provide the final musical unit and the first developing line of the piece. The clarinets have a simple one bar repeating pattern of eighth notes while the voices and strings provide a drone like harmonic line reminiscent of Reich's earlier work *Music for Mallets, Organ and Voices*. These "solo" lines are co-dependent, and always develop as a unit.

An additional colour that Reich uses is the vibraphone, which functions as a marker for the movement of harmonic and developmental lines. As can be seen in measure 100, the vibraphone cue changes the developmental lines from a one bar phrase to a two bar phrase.

Perceptual Phenomena

Over the next few pages I will discuss specific listening strategies we discovered both in the rehearsal process and performances of *Music for 18 Musicians*. By listening strategies I mean the changing roles, perceptions and attitudes between the musicians and the musical material. I hope to elucidate a microsome of intensity that exists within the performing ensemble on both individual and group levels. These strategies cannot hope to be exhaustive, but will hint at the varieties of negotiation being carried out both consciously and sub-consciously during a performance of this work.

Merging

Throughout *Music for 18 Musicians* job functions are continually changing. The hierarchy of the four building blocks is redistributed along with the role of the performer executing the music. The task of the performer is to both lead and follow while performing the same basic musical material. "Merging" exemplifies one such changing role: the steady groove merges with the moving groove.

The steady groove seems to have a well defined contribution to the whole: keep the tempo steady and hocket audibly to *maintain* consistency within the rest of the ensemble. The idea of maintenance conveys a role of fixing/solving to the *groove* that in actuality is nearly impossible to sustain because of the tendency for such a hocket to fall

Figure 5

Sections

I

(3-5x) (3-5x) (3-5x) (26-46x) (4-8x)

93 94 95 96 97 98

Cl. 1 2 B♭ Clarinet *ad*

Vib.

Mar. 1

Mar. 2

Mar. 3

Pno. 1

Pno. 2

Pno. 3

Pno. 4

Voices 1 2

Voices 3

Vln.

Vc.

steady groove

moving groove

tenuto sempre

mf

entrance solo line

non vibrato sempre

crescendo gradually to *mf* within 2-3 repeats

11

1 bar repeated pattern repeat until cue 100 cue begins 101 last repeat 102

Cl. 1 2 *mf*

Vib. *mf* Ped. *l.v.* **Vibraphone cue**

Mar. 1

Mar. 2

Mar. 3

Pno. 1

Pno. 2

Pno. 3

Voices 1 2 *mf* doo

Voices 3 *mf* repeat until cue 100 cue begins 101 last repeat 102 *cc*

1 bar repeated pattern

Vln. *mf* repeat until cue 100 cue begins 101 last repeat 102

Vc. *mf* repeat until cue 100 cue begins 101 last repeat 102

(2-4x)

103 2 bar repeated pattern 104 repeat until cue 105

Cl.

Vln.

Mar. 1

Mar. 2

Mar. 3

Pno. 1

Pno. 2

Pno. 3

Voices 1 2

doo doo doo doo doo doo doo doo doo doo doo doo doo doo doo doo (sim.)

Voices 3

ee (sim.)

Vln.

Vc.

apart. However it is clear that in the introduction and coda this line is responsible for providing momentum as the only stable part. (The high risk of tempo deviation in the other parts will be discussed later.) Therefore it may be advantageous for the function of the *steady groove* to change whilst the material remains identical.

At the beginning of section 1 (figure 5), the groove proceeds unalteringly as other lines are added: first the *moving groove* and then the solo lines. As the moving groove becomes audible the steady groove can recede, merging inside the new texture.

Hocketing players normally concentrate on each other, bouncing visually and sonically off their partners line, but at this transitional moment they shift their attention to the *moving groove*. While the resultant musical outcome is still a neat hocket, there is less individual responsibility. The *moving groove* line is more stable because it has more character embedded within, and a more flexible line because unlike the hocket it is self-reliant. The maintenance of the steady groove is now being syphoned through the moving groove line and is subservient to it.

In hindsight these changing roles appear to be logical, even obvious, but within the rehearsal process it was the ever elusive magic key to a smooth performance. Changes were made to incorporate this new attitude including adding speaker monitors between marimba lines to attain clarity at all times, and to rebalance other sections. It now became possible for the group to agree on who was “holding” the tempo at any given time. Negotiating changing responsibilities while maintaining maximum flexibility became the number one thought process while in the rehearsal phase.

The unsteady pulse

It is clear from the score that the entire piece consists of differing combinations of interlocking eighth notes with no contradictory beat subdivisions.

"The attention that mechanical playing asks for is something we could do with more of, and the "human expressive activity" which is assumed to be innately human is what we could do less with right now. That ties in with the non-western – African drumming or Balinese gamelan- which also have an impersonality to them as the participant accepts a given situation and add their individual contributions in the details of the working out."⁸

While the ideal of mechanical playing seems to be an obvious interpretation of this score, I would like to argue against the composer that this is in fact not possible. The human breath length swells that were mentioned earlier are the most intoxicatingly vibrant sensation within the piece. The warmth of these undulations washes over all other materials. The swells appear to be constructed of the same material as the steady groove – continuously pulsating eighth notes. It is possible on both piano and marimba to hocket at fast speeds with uncanny accuracy, but this technique does not transfer to the "swelling" instruments – clarinets, voices and strings. While much of our rehearsal time was spent attempting to articulate these swells perfectly in sync with the groove line, the truth is that that the task is impossible. Even in the "mechanical playing" of Reich's own ensemble considerable deviation (or phasing) can be heard in within these swells. In the introduction of the piece⁹ at 0'40" there are questionable synchronisations of the two types of pulse. At 06 5'45" and 14 3'10" there are more examples of inconsistencies to name just a few.

⁸ Nyman, Michael. "Steve Reich: Interview with Michael Nyman", *Musical Times*, CXII (March 1971) pp 229 – 231.

⁹ Reich, Steve. *Music for 18 Musicians*, Steve Reich and Musicians, 1998.

I believe the issue here is not about rhythmic precision but about timbral variation. The role of the swells is not to lay down or drive the pulse, but to dance around it. It is the swells that create the constantly shimmering texture which is one of the landmarks of this piece. This conflict between aiming for rhythmic precision but never actually achieving it is one of many remarkable actualities that only be discovered through rehearsing the work.

With regard to performative issues, the dichotomy between notation and actuality is apt to have problematic consequences. In the introduction and coda there are only two elements involved: steady groove and swells. In contrast to the already discussed technique of *merging*, the steady groove in this situation is controlling the momentum 100%. The unavoidable tempo deviations of the swells cannot distract the groovers from maintaining and enforcing the set tempo. This demands a surprising amount of focus and determination from the groove line as the swells tend to accelerate while getting louder, and slow while getting softer. Decisions about when to respond to other musicians and when to remain steadfast constantly fluctuate.

Follow the Leader

Sections IV to V¹⁰ progress seamlessly with the breathing, wave like swells that mask the harmonic markers of each new section. The fade in of the moving piano line (m. 349) and the changing of the guard of the groove (m351 – 53) are all interwoven. How can a group of 18 Musicians negotiate multiple transformations with no single person taking responsibility? In partial answer to this question I will examine the transition between sections IV and V.

The five minute piece that made up section IV transforms into the material for section V. All changes evolve out of pre-existing material, creating an intricate series of cross-fades causing the performers to re-evaluate the hierarchy of sounding elements every few seconds. This sudden acceleration of decision making after half an hour of slowly unfolding and neatly directed material is the issue here.

Section IV develops to a point of maximum density and then sustains this throughout the movement and into Section V. Once the swells begin in section IV, the clarinets play six complete breaths before the other solo lines join for six more complete breaths. Therefore the only movement in this meditative three minute section is the ebb and flow of the swell material. Immediately following is the fast series of changes referred to above at the beginning of section V.

The availability of our two different scores, and their slight differences in emphasis and pacing helped us to navigate such a crisis point. Figures 6 and 7 compare, in a reduced form, the information presented in both scores.

Movement of materials IV – V, Published Score, Figure 6

	Section IV – end, 348, 349	Section V 349.5 – 351	Section V 351	Section V 351 - 353
stable groove	marimba, piano fading	marimba	marimba/xyle cross fade	xyle fades up
moving groove	marimba/piano fading out	piano 3, then piano 1 fades up	pianos	pianos
swells	clarinet/voices/ strings	swells fade out		
build up			piano 2, 4 begin	piano continues

¹⁰ Examples of the score to Section IV to V appear in the appendix. The published score version is appendix 3, and the mysterious score is appendix 4. There are also charts that articulate the sequence of events of the entire section in appendix 2.

Movement of materials IV – V, handwritten score, Figure 7

	Section IV - end	Section V 509 - 513	Section V 514 - 517	Section V 515 - 520
stable groove	marimba, piano fading	marimba	marimba/xylo cross fade	xylo
moving groove	marimba/piano fading	510 – piano 3 511 – piano 1 fade up	pianos	pianos
swells	clarinet/voices/ strings	clarinet/voices/ strings	final fade on last swell	
build-up				piano 2/benji

There are 4 layers involved in this transition: stable groove, moving groove, swells and build-up. Figure 6 shows the swells in column 3 to be fading out as the piano moving groove fades up: the moving groove line is establishing itself while the swells are still playing. Figure 7, on the other hand has the swells fading out completely before the piano build-up begins. The second option works better here for us because actions happen as cause and effect rather than simultaneously.

Another issue in this transition is the cross-fade of the main groove line with the entrance of the build-up in the pianos. Figure 6 shows the cross-fade happening at the same time as the piano build-up entrance, while figure 7 shows that the pianos enter when the cross-fade is complete. It is therefore to our advantage to perform figure 7 once again.

However, the problems here are much greater than "which score will I read from". Firstly we agreed everyone must count the swells on the solo lines in section IV in order to predict the end of the section. We further decided that when the *moving groove* fades

out and we are left with no perception of meter, piano 3 must maintain a sense of the pulse in order to retain the correct metrical orientation with the new moving groove. It is deceptively surprising how the absence of one line will affect the understanding of all others. Losing the moving groove in m.349 creates the most fragile moment in the 70 minute work. It is immediately followed by another treacherous moment as the steadfast marimbas cross-fade to xylophones handing with it the responsibility for consistency and tempo for the next fifteen minutes. Once the weight of this and the moving piano lines are stabilised – here we use “musician’s license” to extend the section slightly - the two piano build-up begins and continues in a soloistic manner for most of the section.

The explanation for this transition may seem rather glorified. The moment in question lasts only 30 seconds and will be perceived as a minuscule twist of the kaleidoscope, yet the discussion and rehearsal surrounding our solution took many weeks. It is this microscopic attention to detail, and painstaking debate over procedure that I believe lifts this work to the point that each individual can feel responsible for not only their individual role, but have an understanding of each individual’s contribution.

Great Expectations

Music for 18 Musicians is definitely an aural sensation, but there exists a theatrical element as well. The stage (see appendix 5) has a fixed set design, but the “characters” do move within the space. At one point (IIIa) a vocalist must move to piano 4, while the pianist moves to marimba 3. Piano 2 changes roles in section VII from playing piano to playing maracas. The vibraphone player moves back and forth between the vibes and piano 3. These are all obvious physical movements between stations, but there is also a more subtle level of physical tension taking place.

From the beginning of the piece until the end of section IV, over a period of approximately twenty five minutes marimba 1 and 2 are required to consistently hocket 4 note chords back and forth. This not only requires an intense level of concentration, but is a physical feat that requires considerable training. The rigour of holding a pulse demands a stroke execution rarely used and highly susceptible to muscle fatigue. One can only imagine the joy that must be felt by these players as they close in on the end of their shift and pass the baton to the next team – in this case xylophones. But while a transition in a relay race incorporates an obvious change in pace, this piece demands that the change of guard be imperceptible.

Furthermore, this transition occurs at the most vulnerable part of the piece thus far. As discussed previously there are multiple transitions happening between section IV and V, not least of which is the absence of a moving groove right at the moment the marimbas are about to rest for the first time in twenty five minutes. With aching arms they must steer the ensemble to safety and then slowly crossfade with the xylophones before they get their five minute break.

The tension of the moment is certainly not lost on the audience who cannot help but share in the pleasure of the marimba players relief as they step away from their instruments and relax. The xylophones on the other hand, must replace the marimbas effortlessly and get “into the zone” immediately to stabilise the coming section.

A similar level of prolonged expectation occupies the maracas players in section VI – VIII. There is a different maracas player for each section: the transitions between them being imperceptible cross-fades. Articulating sharp continuous eighth notes for six

minutes is an extremely taxing feat, and the longing for the end is a reality for all three maracas players.

Hearing the Vibe

The cuing system that Reich designed for *Music for 18 Musicians* is a series of vibraphone statements between 2 and 4 bars in length that indicate a new action is to be taken by certain members of the ensemble. This action may be to vary the length of a phrase, to change the pitch contour, or to move forward into the next section. These statements work well, and with a sensitive player in control of this movement many of the large scale time issues are taken care of.

The vibraphone cue in measure 100 must be heard immediately by the soloists, who have only 2 measures to prepare for the next phase. The physical setup of the players¹¹ does not allow visual communication between everyone, so they must learn to hear the metallic sound above the sometimes raucous groove. If they miss the cue the players will end up one measure out; a situation that is harder to resolve in real time performance than one might think. It is true in any ensemble than a natural selection process takes place, and one performer may take a dominant leadership role – which in this situation would be helpful – but our lengthy rehearsal process was designed to make the entire ensemble interdependent, instilling a level of rigour and responsibility into each member of the ensemble so each could decide for him/herself the best course of attack.

The idea of a non-conducted cuing system came from Reich's study of Balinese music in 1973. In this music it is "the drummer who conducts the orchestra; at the same

¹¹ See page 44.

time however, he must also follow the evolution of the dancers movements.”¹² The drummers cues are audible *solos* mark the pacing of the piece. This is not the only structural/material ideas Reich incorporated into his music of this time. Rapid hocketing and interlocking of parts is the basis of Balinese music, and the technical foundation on which a musicians skill is judged. From a young age, musicians practise in small groups for hours everyday to perfect these techniques and to develop a group dynamic. All music is learnt orally, thus requiring considerable hands-on collaboration with the master (drummer). It is hardly surprising that the transferral of this Balinese way of life into notated Western music carries with it the many interpretative problems discussed in this paper, that would likely be part of everyday music making in Bali.

Tempo Fluctuation

At some point in the rehearsal process an ideal tempo is decided upon, and before the ensemble begins playing through snippets a metronome is consulted. The truth is that no matter how rigorously we adhered to this method of rehearsing, run-throughs of longer sections would reveal variations in tempo “comfort zones” for each section. There is no denying that when playing the piano groove in section IIIa the tempo will move forward, and when playing the more meditative music of Section IX – X (endless meditative swells) the tempo will relax.

The tempo marking in this piece is set at the start at ♩ - 204. On Reich’s recent recording of this piece the tempo varied from ♩ - 208 in the introduction, ♩ - 218 at IIIa, ♩ - 196 in V, ♩ - 216 in section IX to X and finished at ♩ - 208.

¹² Brunet, Jacques. Sebatu – les danses masquées. harmonia mundi, Paris 1982.

As with many revelations within this piece, we tried to ignore the reality for as long as possible, to avoid the ensemble unintentionally enhancing these tempo deviations. Even though each section has an inherent character, letting the tempo fluctuate wildly would result in both discontinuity and performance ensemble problems that we had no idea how to resolve.

In general the *moving groove* line adopted the role of the tempo police, and if one section had relaxed, they would push slightly in the next, and if another was racing there would pull gently back, thus keeping a global perspective on where the tempo was situated at any one time. Natural tendencies within the ensemble were discussed to avoid overt dragging or rushing, and specific escape plans were designed. For instance if the pulse was lagging through section X, it would be the role of the xylophone to reinvigorate the ensemble into section XI: an attempt to avoid an extremely slow and drawn out ending to the piece.

Major and minor Epiphanies

With so much attention on the ensemble as a whole, it is interesting to note that there are still moments of amazing individual achievement. An imperceptible entrance of a low piano groove, perfectly in time is reason to celebrate. The extremities of the high vocal material, grooving hard, in tune, and audible to everyone, or the return of the clarinet swells that so often mark the climax of a section are other satisfying moments. In *Drumming* the length of one player's phase shift or the skewed perspective of a resultant pattern can invigorate the participation of all the musicians. These I would describe as minor epiphany's and they happen in the least expected places both in rehearsal and performance.

A major epiphany belongs in the realm of the ensemble as a whole. Although the material is almost entirely set there are moments when the ensemble gels in such a way that no individual can hear or discern their contribution to the whole. It is as though the piece were playing itself and the individuals on stage had become witnesses, not agents.

The First Tomato

Somewhere around section IIIa I always share a satisfied smile with piano 1, and around section VIII the same happens with the vibraphone player. This is the satisfied smile that a parent might experience when their child not only remembers all their lines on stage but presents them with unimagined passion, or the smile of a music teacher who hears their advise used by the student to attain a whole new level of interpretation.

There are very few musical experiences in which I am overcome with pride. Pride in contributing to a body of 18 musicians achieving an unimaginable feat. One cannot smile too early in this piece for fear of coming crashing back down to earth, but at the moments when the conglomerate sound is overwhelmingly satisfying the smile is irresistible. When everything is working at its peak the ensemble is floating in a heightened state of awareness. To have been part of the nurturing process of such a piece, and to witness the intensity of the results of this is a rare musical privilege.

Large scale movement

One of the most tantalising but least discussed aspects of both *Drumming* and *Music for 18 Musicians* is the non verbal manner in which large scale pacing is addressed. Rarely in any rehearsal were time *targets* discussed. How can a large body of undirected musicians sense the flow of time, while experiencing a trance like state of being?

In *Drumming* the work is divided into 4 clearly defined sections: 1 – drumming, 2 – marimbas, 3 – glockenspiels, 4 – combination of all the above timbres. Each section involves different combinations of performers and finds its own state of balance. The internal pacing of these sections contains enough variables that decisions need to be made with regard to momentum of musical materials. The question posed earlier by Reich – 200 or 300 repeats – has an important place in this discussion. A performance can honestly expand to many hours, days or reduce to minutes within the confines of the score. The only external reference for the length of the work comes from Reich's recording of the piece¹³, and numerous interviews where the work is said to be approximately 70 minutes. However, proportionally it does not make sense to break this down into four equal parts of 17.5 minutes. In the rehearsal process musicians develop a feel for the optimum time frame and for the relationship between sections.

In a recent performance in New York City with red fish blue fish, the performance of this piece needed to be one hour or less to avoid paying the stage crew overtime. This issue was not discussed with the entire ensemble because 13 people simultaneously shortening the piece would result in a fifteen minute performance. Instead a few people knew and proceeded to clip a few edges which were not even noticed by the majority of the ensemble.

In *Music for 18 Musicians* long term pacing was revealed through entire run-throughs and did not exist as a separate point of discussion. Time perceptions shifted radically depending on material type. There are a number of sections with no forward motion that in rehearsals take forever, but in the performance operate in a more reflective

¹³ Reich, Steve. *Drumming*. Steve Reich and Musicians. Elektra/Asylum/Nonesuch Records, NY 1987

manner. This pacing is a result of the ensemble's development into one literally breathing organism with a super brain beyond any one individuals control.

Steve Reich says of his own experience,

"A performance for us is a situation where all the musicians, including myself, attempt to set aside our individual thoughts and feelings at the moment, and try to focus our minds and bodies clearly on the realisation of one continuous musical process. The music is not the expression of the momentary state of mind of the performers, while playing. Rather, the momentary state of mind of the performers while playing is largely determined by the ongoing slowly changing music."¹⁴

The idea of Ramé

In both *Drumming* and *Music for 18 Musicians* there is the aura of a common ritual. Watching 18 musicians articulate this work is akin to the functioning of a ceremonial gathering, with each part in perfect balance with all others. The repetitive nature of the music, and the ritualistic performance creates a trance-like state in both performers and audiences. In the dense, colourful moments of the piece, all sense of duration and structure become irrelevant and one centres on the immediate luxurious sound world, but as the material thins out the structural positioning within the piece is evident and consciousness is once again objective. The flux between these states can best be related to the Balinese music which Reich is so indebted to. "Underlying Balinese cosmology and aesthetics is the concept of *ramé* (literally "crowded"). *Ramé* indicates the heightened excitement one feels when experiencing coincident multiple layers of meaning, sound, colour and events."¹⁵

¹⁴ Reich, Steve. *Some thoughts about performance*

¹⁵ McKee, Jim. *The Fahnestock South Sea expeditions, Music for the Gods*. Library of congress 1994.

This same sensation is also translated as the “when the feeling is right” or the “spiritual element”. Reich is extremely indebted to his experience with Balinese music in the writing of *18 Musicians*. While he readily acknowledges the structural borrowing’s, it is the deep sense of *ramé* that is the foundation of the piece. Our seventy hours of rehearsal was really a journey of discovery to touch this sensation that is part of every Balinese musicians lifestyle. In this case notation provided a realisation of a cultures inner musical soul, but it is only through playing and living that any true understanding of what this means can be attained.

Learning this work has been a humbling experience as a musician. Learning to operate as part of a larger being in perfect harmony was surprisingly lacking in my musical background. Knowing when to direct, when to lead, when to follow and when to co-exist was a revealing process to all involved.

“As a performer what I want is to be told exactly what to do within a musical ensemble, and to find that by doing it well it will help to make beautiful music. This is what I ask for in my own compositions, those of another composer, and that is what I looked for and found in my study of Balinese and African music. The pleasure I get from playing is not the pleasure of expressing myself, but of subjugating myself to the music and experiencing the ecstasy that comes from being a part of it.”¹⁶

¹⁶ Reich, Steve. “*Some thought about Performance*”, Contemporary Music Review, Volume 7, Part 1, 1992. pg 40

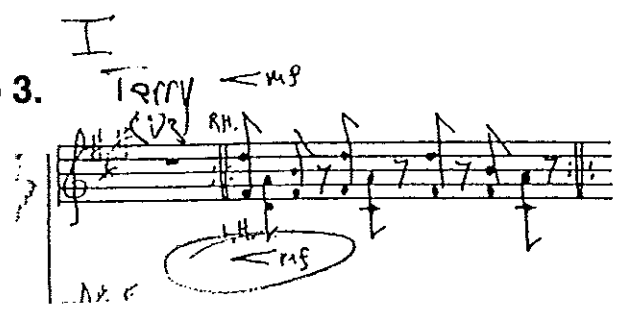
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Appendix 1

"Cheat Sheet", piano 3.

I



3 vib cues
3 vib cues
(2 downbeat) cue
to II

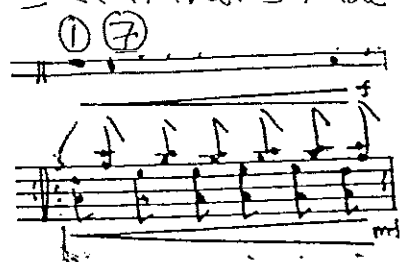
II



(2 downbeat) cue
→ III stop

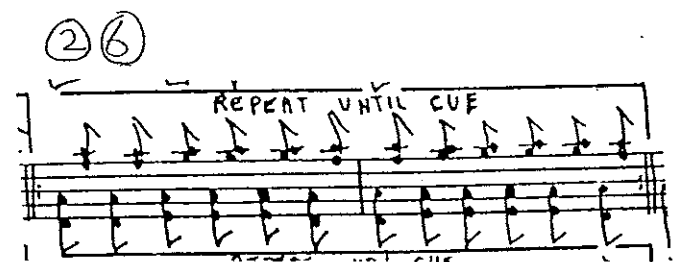
III
- 1 measure rest
- clarinet's fade in

① ⑦



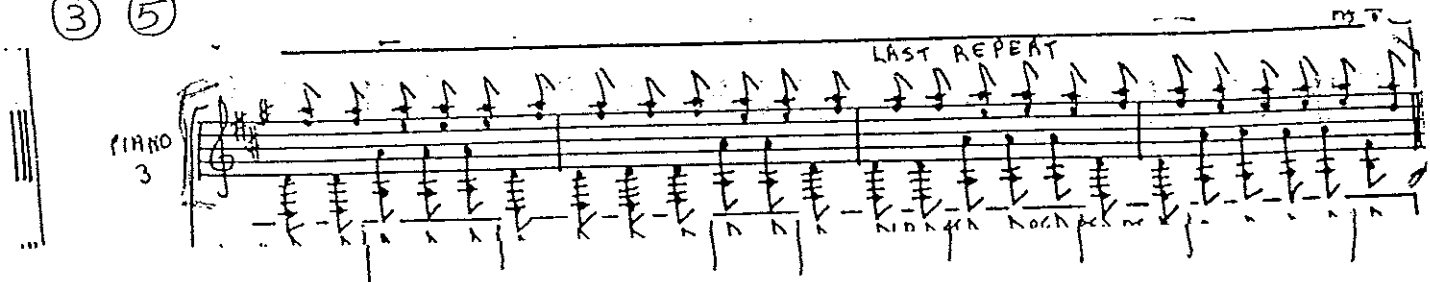
(2 measure repeat length) ⑦ → fade

② ⑥

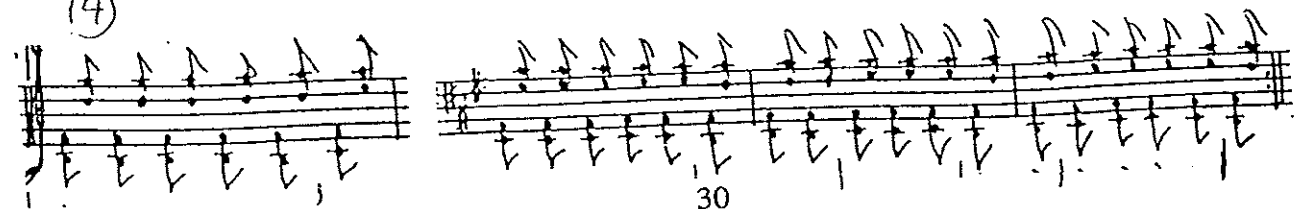


③ ⑤

PIANO 3



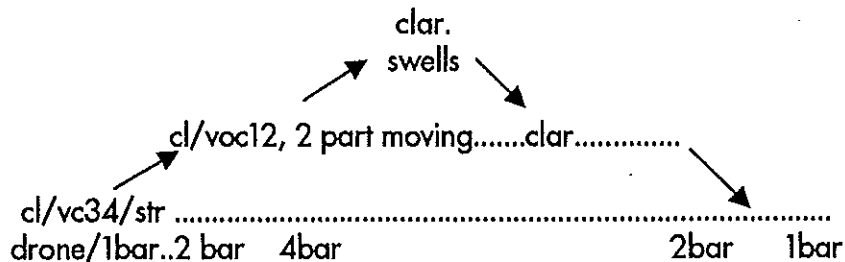
④



Appendix 2

Section Overview

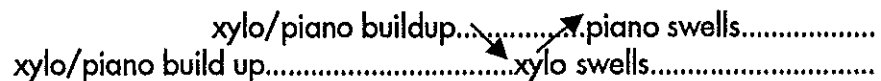
I.



marimba – piano moving line.....

marimba – piano groove.....

II.



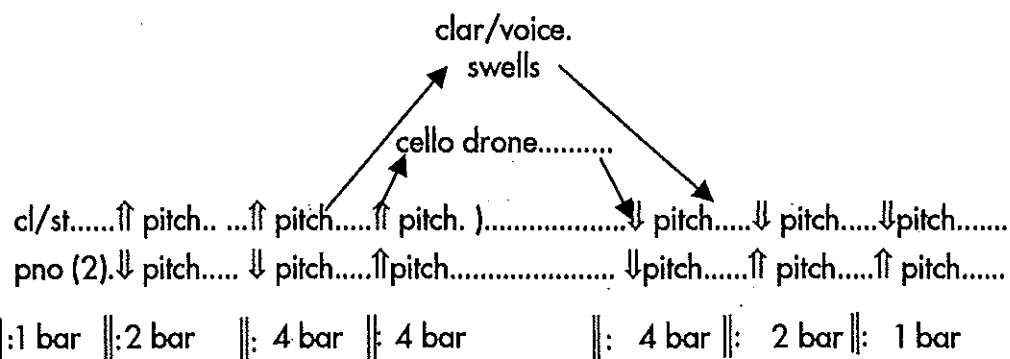
vo/str/cl buildup.....swells.....

voice buildup.....

marimba, piano moving line.....

piano/marimba groove.....

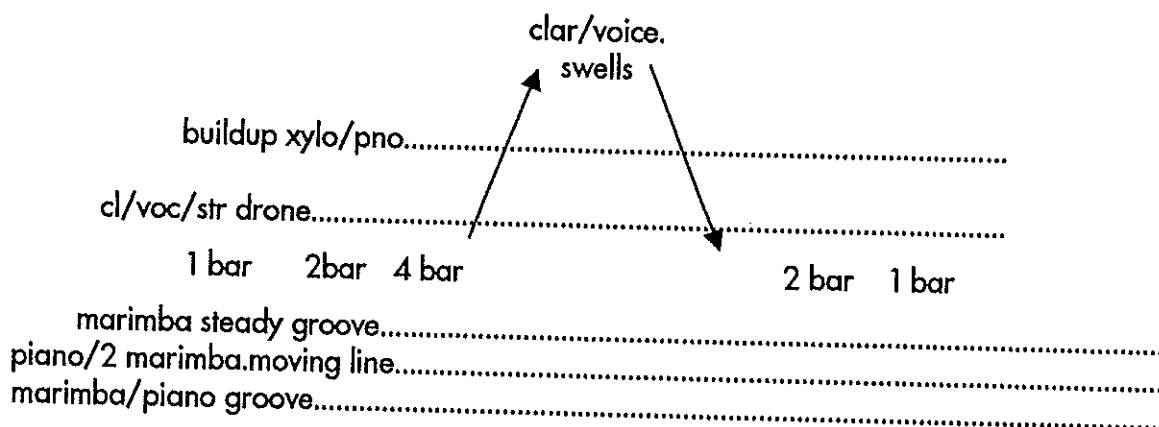
IIIa.



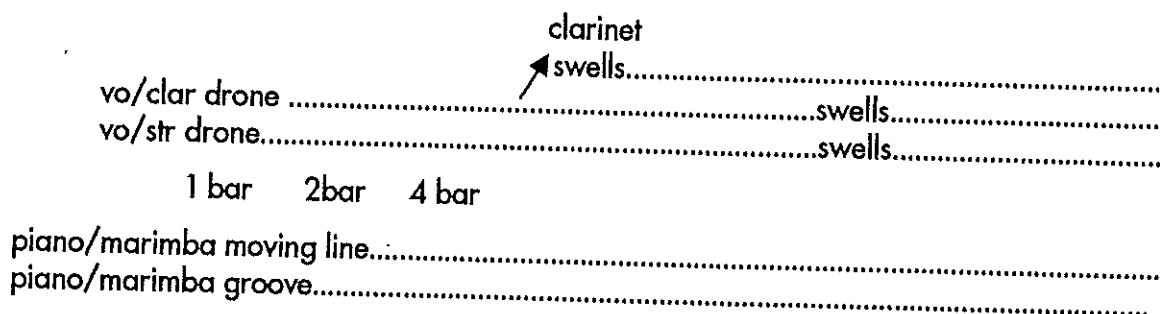
marimba/piano moving groove.....

marimba/xylo groove.....

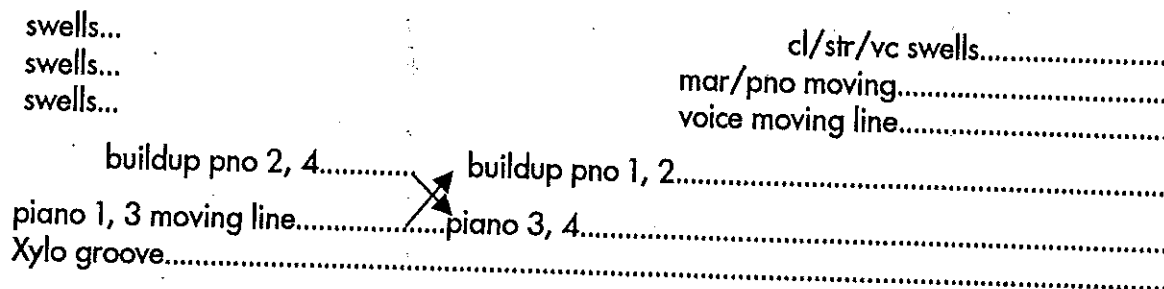
IIIb.



IV.

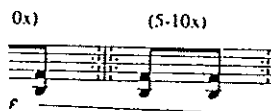


V.

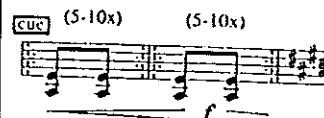


Appendix 3

Published Score, Section IV to V.



349 swells overlap into V



Mar. 1

Mar. 2

Mar. 3

Pno. 1

Pno. 2

Pno. 3

moving groove fades out

moving groove fades out

Section IV

(5-10x) (5-10x) (5-10x)

Voice 1

(5-10x) (5-10x) (5-10x)

Voice 2

(5-10x) (5-10x) (5-10x)

Voices 3 & 4

(5-10x)

swells overlap into V

(5-10x)

(5-10x)

(7-12x) (7-12x) (7-12x)

Vln.

(7-12x) (7-12x) (7-12x)

Vc.

swells overlap into V

(7-12x) (7-12x)

V

350

(5-10x) (5-10x) (5-10x)

Bs. Cl. 1 2

snells continue

Mar. 1

mf

Mar. 2

mf

Pno. 1

r.h. l.h.

Pno. 3

r.h. l.h.

new moving groove fades in

Voice 1

(5-10x) (5-10x) (5-10x)

Voice 2

(5-10x) (5-10x) (5-10x)

Voices 3 4

(5-10x) (5-10x) (5-10x)

snells continue

Vln.

(7-12x) (7-12x) (7-12x)

Vc.

(7-12x) (7-12x) (7-12x)

f

(5-10x)

Bs. Cl. 1 2

Nylo. 1 (3-5x) 351

Nylo. 2

Mar. 1 marimba | xylophone cross fade

Mar. 2

Pno. 1 *f*

Pno. 2

Pno. 3 *f*

Pno. 4

l.h. *ff*

plano build-up begins

l.h. *ff*

(5-10x) *f* (5-10x)

Voice 1

(5-10x) *f* (5-10x)

Voice 2

(5-10x) *f* (5-10x)

Voices 3 4

(7-12x)

Vln.

(7-12x)

Vc.

* piano 2 or 4 begins, other piano following immediately next bar; similarly through 360

352 (3-5x) 353 (3-5x) 354 (3-5x) 355 (3-5x)

Bs. Cl. 1 2

Xylo. 1

Xylo. 2

Mar. 1

Mar. 2

Pno. 1

Pno. 2

Pno. 3

Pno. 4

Voices 1 2

Voices 3 4

Vln.

Vc.

mp

steady groove, xylophones only

piano buildup continues

41