Repetition & Stasis

by

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Structure

What follows is an explanation of the structure of my composition, which is untitled. The composition creates a series of static states through the use of repetitive and restructuring processes. It relies almost entirely on accumulation and mutation of sound through controlled feedback for its content.

Diagram 1 shows the abstract time structure to be used in the piece. This structure is scaled down to different lengths of time to form the piece’s overall structure (Diagram 2). Red space represents time in which the system is recording. The recorded material gathered in this time is used in the process represented by the colored space that directly follows a red space horizontally. A blue space represents a descending cocoon (Diagram 3.1). A green space represents an ascending cocoon (Diagram 4). A white space represents playback from a quickening delay line (Diagram 5). A yellow space represents a process in which three triangle waves gravitate towards and acquire momentum from each other’s frequencies. These triangle waves begin at the frequencies of 1,000 Hz, 2,000 Hz, and 4,000 Hz. Moment to moment, an acceleration of frequency change is calculated for each triangle wave based on its distance in frequency from the other two (e.g. the initially 2,000 Hz wave would have more of a tendency to move upwards because of its larger distance from the 4,000 Hz wave than from the 1,000 Hz wave). Black space represents no activity.
Diagram 2 shows the overall structure of the piece. The abstract time structure has been scaled from its original 63’ duration into two progressions of durations that run simultaneously. The top half of the diagram displays the progression: 1’, 2’, 4’, 8’, 16’, 32’. The bottom half of the diagram displays the inverse progression: 32’, 16’, 8’, 4’, 2’, 1’.

Diagram 3.1 shows the general structure of a descending cocoon. The descending cocoon transforms a given recording by layering all possible ways of splitting the recording evenly into halves, quarters, and eighths over the original recording. All fragments of the recording layered in this way are played at a rate such that their duration is identical to that of the original recording. In Diagram 2 of the overall piece structure, a red space (recording) followed by a blue space (descending cocoon) actually represents a series of 4 recordings followed by a layering of 4 descending cocoons. Diagram 3.2 shows this process close up. If the largest red space represents a recording for duration D, then the next largest represents a recording for duration 0.5D, the next 0.25D, and the smallest 0.125D. The largest blue space represents a descending cocoon made from the recording of duration D; this cocoon (by definition) also lasts for duration D. Layered over this longest cocoon, cocoons of durations 0.5D, 0.25D, and 0.125D, loop 2 times, 4 times, and 8 times, respectively.

Diagram 4 shows the general structure of an ascending cocoon. Rather than being organized around the entire recording, as in the descending cocoon, the ascending cocoon is organized around the 1/8 units of the recording. These 1/8 units play consecutively at normal speed. During each 1/8 unit, a quarter of the recording, a half of the recording, and the full recording each play at 2x, 4x, and 8x speed,
respectively. In the case of the quarters and halves, which segment to use is
determined by the current position in the cocoon (e.g. for segments 1/8 through 4/8,
the first half of the recording is looped four times, for segments 5/8 through 8/8, the
second half of the recording is looped four times). The entire recording at 8x speed
loops eight times. The time structure for the recording and playback of ascending
cocoons within the piece is identical to the one described in Diagram 3.2.

Diagram 5 shows the time structure of a quickening delay line in a certain
duration. The text in the red spaces represents the portion of the total duration of the
current time cell (e.g. 8’, 16’, 32’, etc.) that is being recorded. The text in the white
spaces represents the rate at which this recording plays back. While the amount of
recording time increases progressively by 1/8D, the amount of playback time remains
the same (also 1/8D), meaning the rate of playback increases to compensate.

Diagram 1
Diagram 2

Diagram 3.1

- Entire recording played at normal speed
- First half of recording played at half speed
- Second half of recording played at half speed
- First quarter of recording played at quarter speed
- Second quarter of recording played at quarter speed
- Third quarter of recording played at quarter speed
- Fourth quarter of recording played at quarter speed
- First eighth of recording played at eighth speed
- Second eighth of recording played at eighth speed
- Third eighth of recording played at eighth speed
- Fourth eighth of recording played at eighth speed
- Fifth eighth of recording played at eighth speed
- Sixth eighth of recording played at eighth speed
- Seventh eighth of recording played at eighth speed
- Eighth eighth of recording played at eighth speed
Diagram 3.2

Diagram 4

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All eight 1/8th segments of the recording play consecutively at normal speed.

The first 1/4 of the recording loops twice at 2x speed. The second 1/4 of the recording loops twice at 2x speed. The third 1/4 of the recording loops twice at 2x speed. The fourth 1/4 of the recording loops twice at 2x speed.

The first 1/2 of the recording loops four times at 4x speed. The second 1/2 of the recording loops four times at 4x speed.

The entire recording loops eight times at 8x speed.
The live sound material in the piece consists of textural sounds produced by two performers. These sounds are produced with pairs of stones, pieces of glass, sticks, pinecones, and leaves (in that order). Each performer does a series of 5 to 20 actions of a certain type within a certain duration for each material. While the order of materials is identical for each performer, the defined durations to be spent with each material differ, mirroring the time structure of the rest of the piece. One performer performs his or her actions in the set of durations: 1’, 2’, 4’, 8’, 16’, 32’, while the other performs them in the reversed set of durations: 32’, 16’, 8’, 4’, 2’, 1’. The performers choose which actions to perform on each material by navigating a branching tree diagram. Starting with a single option (“Perform any set of one type of action with stones”), they branch out to one of two possible choices (“Rub pieces of
glass together” or “Tap pieces of glass together”). Each subsequent choice branches out into two more, resulting in 32 possible endpoints of the tree diagram.

The exact number of times to perform each action is determined for each material randomly in the range of 5 to 20 before the performance. Performers can distribute their actions however they want within each given time frame, but they must perform the exact number instructed, and they cannot perform actions with the next material until the duration for the current material has elapsed. Performers are given the instruction to loosely model their distribution of actions on natural rhythms which follow a general rule but with a degree of chaos, like the sound produced by flowing water. For example, if the performer is to do 20 actions in 4 minutes, then he or she might start with the general rule of producing 5 actions per minute. The performer could then introduce variation in exactly how those 5 actions are distributed within a minute, and some deviation such as producing only 4 actions in one minute and 6 in another. The textures produced are relatively sparse, since the maximum number of 20 actions only results in high density in the shortest durations of 1’ and 2’. Due to the reciprocal sets of durations used by the performers, there is a general transfer of activity from one performer to the other during the course of the piece. The first performer starts with a relatively high density of actions and gradually moves into lower and lower densities. The second performer starts with the lowest density of actions (with a maximum of 20 actions in 32 minutes), and gradually moves into higher and higher densities.

The textural sound material is subjected to a rate-transforming process separate from the rest of the piece (though in its processed form it provides material
for the rest of the piece). This process is based on detecting the onset of an attack from a new sound. The textures are constantly recorded, but this recording is only played back when triggered by an onset. When an onset is detected, the recording begins playing back at that very same point in time (i.e. from the time of the onset), but at a slower rate. This rate is chosen randomly from the set: 0.1, 0.2, 0.3, 0.4, 0.5. Since the rate is slower than real time, the playback of the recording immediately lags behind. When the next onset is detected a new rate is spawned. Simultaneously, the amount of time the playback at the previous rate needs to catch up to the current point in real time is calculated, and the playback at that rate continues until it has reached that point.

Diagram 6 shows the eight channel speaker set-up used in performance. Speaker 1 is the speaker closest to the audience and is used exclusively for sounds produced by the texture performers. Speakers 2, 3, and 4 are used exclusively for the sounds produced by the piece’s process in the set of durations represented in the top half of Diagram 2. Speakers 6, 7, and 8 are used exclusively for the sounds produced by the piece’s process in the set of durations represented in the bottom half of Diagram 2. Speaker 5 is shared between these two sets of durations. This arrangement results in the same type of transfer of activity as in the texture performance from one side of the speaker system (2,3,4) to the other (6, 7, 8) during the course of the piece because shorter durations of the process like 1’, 2’, and 4’ result in a higher rate of change. Descending cocoons are spatialized by having the segment that plays at normal speed in the speaker closest to the audience (2 or 8), the segments that play at half speed in speakers 3 or 7, quarter speed in speakers 4 or 6, and eighth speed in
Ascending cocoons are spatialized by having the segments that play at normal speed in the speaker closest to the audience (2 or 8), the segments that play at double speed in speakers 3 or 7, four times speed in speakers 4 or 6, and eight times speed in speaker 5. The quickening delay line represented in Diagram 5 consists of a series of seven playbacks of sound. Each of these playbacks is located in a speaker different from the one used for the previous one. Depending on the set of durations the quickening delay line is part of it either moves through the speakers in the series 2, 3, 4, 5, 4, 3, 2 or 8, 7, 6, 5, 6, 7, 8. The three triangle waves are distributed one each in either speakers 2, 3, and 4 or speakers 6, 7, and 8.

Diagram 6
II

Significance of the Structure

The cocoon was the germinal idea for the structuring of this composition. The idea of the cocoon originated as a way of dealing with an assignment to create a piece based on a time structure of the ratio 2 to 3. The source material used was a five minute tape recording of crickets, which was divided into a two minute and three minute section based on the ratio. These segments were layered over the original recording. This process was repeated on each of these segments, on the segments that resulted from that, and so on, until the segments were of less than a second long each and had reached a rather unmanageable number. Finally, the rates of the many resultant layers were altered such that they all lasted as long as the original recording. The final product was a continuous swirling pool of cricket sounds that was ultimately non-differentiable from beginning to end on a moment-to-moment basis. The piece was thoroughly circular in that there was an overarching cycle from beginning to end and this cycle was in turn composed of many cycles of diminishing size. In other words, it was completely static.

My own listening has always tended towards the static. There is a certain freedom in listening to a static piece of music that isn’t present in standard, linearly progressive music. Static music invites you to occupy it like a space, while linear music straps you in like on a rollercoaster ride. In considering how to approach composing static music of my own, the first thing that came to mind was the cricket
piece. I reformatted the process used in that piece to be more symmetrical by using a 1 to 1 ratio instead of a 2 to 3 ratio. Thus the whole is divided into two equal halves, the halves into quarters, and the quarters into eighths. This is what became the descending cocoon. To investigate the general effect of this process en masse, I carried a tape recorder with me for about a month, recording the first minute of every waking hour and then transforming these recordings into cocoons. This experiment demonstrated that the cocoon process acquires depth and interest through repetition on changing materials. While the actual material did not make it into the final product, the idea of a regular recording and restructuring of the performance space in time (rather than the use of fixed material) is integral to the piece.

The cocoon gets its name because it wraps a sound around itself. It is an attempt to counteract the natural linear progression of time characteristic of sound. Of course, this attempt is doomed to fail in that the cocoon itself becomes a sound subject to temporal linearity. However, it at least approaches an illusion of absolute stasis. Looking at the cocoon layer by layer, it can be seen that the sound is subjected to higher and higher degrees of collapse (the original sound being in a zero state of collapse, while the layering of its division into eighths over each other being the highest degree of collapse in the cocoon). This collapse creates a degree of omnipresence in the sound which is important to a feeling of stasis. The cocoon approaches a state in which every musical event contained within the original sound is present in some form throughout the cocooned sound. For example, if an eight second sound is cocooned, then the events of each second become present throughout the eight second cocoon through the stretching and layering of the original sound’s
division into eighths. Of course, this effect is not perfect or complete, for it in fact only makes omnipresent groupings of sounds, which themselves progress linearly. For this effect to be complete the division in the making of the cocoon (which only proceeds to eighths) would have to go on infinitely, so that every infinitesimal sonic event becomes stretched to fit the duration of the cocoon. Since this is impossible, the cocoon serves as a model for the asymptotic approach to this omnipresence, modeled by the progression from the stretching of halves to quarters to eighths. This is analogous to the way the piece as a whole attempts to model the asymptotic approach to stasis, since absolute stasis by definition cannot be modeled in time.

I am interested in palindromic structures due to their relationship to an idea of containment that I think is important to the creation of musical stasis. A palindrome with an odd number of elements contains one non-repeated element at its center. This central element is surrounded on either side by a series of borders that radiate outwards from it and contain it. For example, in the series 1234321 the central element 4 is bounded by the pair of 3’s, which are in turn bounded by the pair of 2’s, and the entirety is bounded by the pair of 1’s. The significance of this in relation to music lies in the way time is kept. In the case of a metronome, repeated ticks serve as a way of measuring time. However, time is actually continuous, so any metronome only produces an approximation of timekeeping. Every tick of the metronome is a symbol for the passing of a certain amount of time, but that actual amount, the time in between two ticks, is left unsaid. Thus two ticks of the metronome amounts to a kind of palindrome 121 where 2 signifies the continuous time that slips between the cracks, but is in some way contained and emphasized by the pair of ticks. The
analogy between the metronome and the palindrome lies in their mutual reliance on repeated elements as identifiable boundaries of that which they contain. This is important to the idea of static music as a space in contrast to progressive music as a line. A sound with an identical beginning and end is thereby bounded and becomes a musical space. It can be thought of as a unified entity and thus considered statically. As has been remarked before, this is only an approximation of stasis, but without such boundaries the sound is completely subject to the flowing nature of time and becomes progressive again. The formation of boundaries through repetition or palindromic structure creates an illusory solidification of the thereby contained sound.

The progressive collapse of the cocoon results in approximations of palindromic structures in higher and higher complexity. When the second half of the sound is layered over the first the resulting sound has a semi-identical beginning and end. The second half of the sound starts at the midpoint of the original sound, which is the ending of the first half of the sound. The midpoint of the original sound is present at the beginning of the cocooned sound in virtue of the second half’s beginning with it, and the midpoint is also present at the end of the cocooned sound in virtue of the first half’s ending with it. This phenomenon deepens in complexity in the case of layering all four quarters of the sound over each other. Every proximate pair of quarters (i.e. the 1\textsuperscript{st} and 2\textsuperscript{nd}, the 2\textsuperscript{nd} and 3\textsuperscript{rd}, and the 3\textsuperscript{rd} and 4\textsuperscript{th}) produces this effect when layered over each other. This reaches its maximum with the eighths in which there are seven such pairs.

The stretching used to create the cocoon leads to further suggestions of stasis. The cocoon includes rates of playback as low as eighth speed, which blurs normal
sonic events into a drone, a sound recognizably static through its unchanging fullness. Secondly, stretching the sound leads to a lowering in pitch which is naturally associated with slowness. This lowering in pitch has another, subtler effect in that the lower parts of the original sound in being lowered further become lower than the 20 Hz threshold of hearing for human beings. Thus part of the cocoon begins to pass into silence, which is complementary to drone in that it is recognizably static through its unchanging emptiness. This idea helped spawn the ascending cocoon, in which segments of the sound are sped up rather than slowed down and some elements pass into silence through the opposite end of human hearing, 20 kHz. Because the ascending cocoon is based on speeding up rather than slowing down, a problem occurs in that segments of the sound become even shorter rather than stretching to fit the duration of the original sound. To create a continuous cocoon it becomes necessary to use looping. Thus the ascending cocoon engages with cyclicality in a way that the descending cocoon does not. Cyclicality uses the formation of boundaries through repetition to create a momentary solidification (as discussed previously). However, in cycling this solidification it effectively carries the created musical space through time, leading to a greater static effect.

The overall structure of the piece resulted from considerations related to the cocoon structure. The abstract time structure illustrated in Diagram 1 was first based on the idea to layer several cocoons of varying lengths over each other such that they reflected the division into parts used in creating a cocoon. This required the creation of four cocoons of lengths: 10’00, 5’00, 2’30, and 1’15. This was to mirror the cocoon’s construction from the whole, its halves, quarters, and eighths. If all of these
cocoons came from the same sound material redundancy would result. Therefore, the material for each cocoon is recorded progressively (as demonstrated in Diagram 3.2) resulting in a total record time of 18'45 which is the sum of all of their durations. This recording time is followed by the ten minute playback of the layered descending cocoons, which is then followed by another 18'45 period of record time which provides material for the ascending cocoons. The triangle wave system was conceived as a way of bridging the gap between the descending cocoons and the ascending cocoons, and as a way of cleansing the aural palette. In this system, the frequencies of the triangle waves have a tendency to converge. However, by the time they reach this convergence they have acquired such momentum that they actually overshoot it. Thus the triangle waves provide a good model for the elusive nature of the static. The quickening delay line was designed as a way of demonstrating the encapsulation of increasing amounts of material. With each iteration it fits more and more sonic material into the same amount of space, attempting to encapsulate a longer, more linear succession of sounds into a comparatively pulse-like cell.

The abstract time structure was originally conceived as the structure of the entire piece. However, with cyclicality in mind its timings were instead used as a set of proportions to be scaled to the two sets of durations used in the overall structure of the piece. If the two sets of durations used followed after one another rather than playing simultaneously they would form a palindrome (i.e. 1’, 2’, 4’, 8’, 16’, 32’, 32’, 16’, 8, 4’, 2’ 1’). Therefore the overall structure itself is a collapsed palindrome. In collapsing this palindrome, however, another multi-layered one is formed. In the first half of the piece a 32’ minute duration plays at the same time as the durations 1’, 2’,
4’, 8’ and 16’ play. In the second half another 32’ minute duration plays with those same durations but reversed.

The actual results of the piece’s structure in performance are difficult to describe because, as a feedback system, so much of its character is determined by the nature of the texture performance (which is itself variable) and its proliferation and accumulation within the time structure. However, there are some general features that can be described. The cyclical nature of the piece’s structure is most evident in the recurrent triangle waves. Due to the strong possibility for proliferation of single sounds through the system, there are many other cycles to be traced throughout the piece. Sounds, as they travel through the system, go through a kind of fractal transformation. Many of the sounds produced in the piece are restructurings of restructurings of restructurings… Certain effects can be magnified (e.g. a descending cocoon becomes part of the sound material for another descending cocoon) or neutralized (e.g. a descending cocoon is sped up in a quickening delay line). The effect is of a hallway of distorted mirrors. One interesting effect is that a quickening delay line records its own output, resulting, by the end, in a series of increasingly sped up versions of the same sound. Cocoons taken in by the quickening delay lines can become so compressed that they approach becoming a single pulse, especially when the playback of one quickening delay line is taken in as the material of another.

The system takes a while to gather momentum and so begins quietly. However, as the two sets of durations interact with each other more, in the section from about ten minutes in to thirty minutes in, the density increases dramatically. Because in the abstract time structure the system does not actually make any sound
until an eighth of its duration has passed, this results in a period of relative silence around the midpoint of the piece. Thirty-one minutes in, the first set of durations 1’, 2’, 4’, 8’, 16’ has finished and the 32’ begins, but there won’t be any sound from it until the 35’ mark. Likewise, for the other set of durations, after 32 minutes the first duration has finished and the 16’ duration is beginning, but there won’t be any sound from that until the 34’ mark. Therefore, other than possible sound from the texture performers, there is a period of silence from 32’ to 34’. This provides the piece with a renewal, where it must build up its material as it did in the beginning.

My composition investigates what I discern to be four main types of approaching musical stasis. It involves sparseness approaching silence in the form of the minimal texture performance as well as in the beginning and midpoint of the piece. It involves drone and extension in the form of descending cocoons and the sometimes extremely gradual changes in the triangle waves. It involves cyclicality in its structure and in the way sonic events proliferate through that structure. Finally, in its denser areas the piece employs rapid activity approaching a continuum. These four areas will be expanded upon in the context chapter.
Context

Insofar as a piece of music is regarded as separate from any sound that may precede or follow it and from any other pieces of music, we can say that a piece of music constitutes a single identity. However, as a temporal medium, music relies on the listener for the formation of that identity. The composer’s attempt to establish an identity is akin to an attempt to build a house in a river. Anything the composer writes that he or she considers central to the piece is subject to decay in the memory of the listener. So stabilizing that musical identity, unifying it into a piece of music requires having its parts somehow refer back to the totality of the piece. The most common solution to this problem is to use repetition to tap into and refresh the listener’s memory. This occurs in the re-appearance and permutation of a “theme” in classical music and the more general musical idea of cyclicality that can be found in music ranging from Javanese gamelan to traditional fiddle music. Stasis, however, can only ever be an ideal, for even the most unchanging music is subject to a type of change in its passage in time. Sonic experience can only lie on an asymptotic approach to stasis. My aim is to investigate the various methods by which this approach is achieved. I have identified four methods: cyclicality, extension and drone, rapid motion or repetition, and sparseness.

In his book “Epic Singers and Oral Tradition”, Albert Bates Lord describes oral-traditional literature as being “characterized by repetitions of sounds, and by
parallelisms of structure…which had the function of rendering magic utterances more powerful and hence surely more effective.”¹ In an interesting parallel, as a response to the comment: “They say repetition is the basis of intelligibility”, Christian Wolff derisively stated that it’s “also the basis of spells.”² Wolff’s dislike for (intentional) repetition has to do with his move towards indeterminacy, to get away from the traditional musical urge for self-preservation through repetition, to “let things be”, in a sense. In reference to music’s temporal nature, Wolff writes:

“…music is naturally fragile, though if one includes in its design something of the indefiniteness which must in any case belong to it, then one plays time’s game within the music. The music is like an organism which grows and decays: it has a life which can include rather than fight time.”³

Repetition is a way of fighting time’s natural decay of musical ideas, but Wolff’s point is that time and its decay are defining factors of music, and to fight against them is to swim upstream. In my own composition my aim is to engage with temporality directly, as Wolff suggests, but I wish to do so by engaging with the very futility of “fighting time” by constructing obsessively repetitive structures. To a certain extent my composition is a purposeful demonstration of failure: even a multi-layered and thoroughly repetitive approach to sound fails to establish any real static identity. However, it is my contention that this failure constitutes the essence of music in general i.e. the play between memory and renewal on one side and loss and decay on the other. Sonic identities, like life forms, struggle to preserve themselves in time, but

² Christian Wolff, “…something hazardous with which we may try ourselves,” in *Cues: Writings & Conversations* (Cologne: MusikTexte, 1998), 54
their total identity lies just as much in their decay and death as it does in their birth and life.

Lord’s observations about the empowering nature of repetition, as well the use of a familiar “traditional diction”, inform the prevalent strophic form of storytelling song. Carl T. Sprague’s rendition of “O Bury Me Not On The Lone Prairie” moves through several cycles, all using the same melody, whose returning point is the title of the song, a dying prayer from a young cowboy. As a storytelling song there is naturally forward motion throughout, but there is also a sense of suspension in the continual return to the moment of the dying prayer. More generally, there is a tension between the cyclical, strophic form and the forward-moving narrative. However, the two work together: the purpose of the song is to tell a story, and its cyclical form serves both to unify the story and to maintain the listener’s attention through the continual return to its central motif. The idea of “traditional diction” can be abstracted, as it is in my composition, to a common method for dealing with materials. While my piece is not explicitly repetitive, its series of restructurings is; this gives everything in the piece a common mark of having been shaped by the same hand, and helps tie together the series of semi-static states it produces.

In an analysis of an epic song, “The Wedding of Smalagić Meh” by Avdo Mededović, Lord describes the prevalence of ring-composition in the song.⁴ In ring-composition a certain scene is laid out in a series of descriptions arranged in a palindromic structure. At the center of ring is the central element of the scene, such as the main character. Not only can central ideas be strengthened by repeated

⁴ Lord, Epic Singers and Oral Tradition, 31
reinforcement; a repetitive structure, such as ring-composition, can serve as a container for them. This idea of containment is central to dance music from fiddle traditions to electronic dance music such as techno and house. Dance music is based on repetitive rhythmic cells. Every repeated element serves as an audial fencepost whereby the body or energy of the cell (in this case a call for motion) is bounded and contained. Dance music has a distinct lack of content. It is extremely repetitive and cyclical, yet there is no discernible identity. Instead, it seems that dance music’s repetition serves to contain and maintain a certain energy (dancing energy), and its identity lies in this act of preservation. Dance music’s task is to provoke and maintain motion as well as provide a backdrop to it. Therefore it has no discontinuities and is almost mechanical in nature. Simon Reynolds says of house music: “…house tracks are less like artworks, in the expressive sense, than vehicles, rhythmic engines that take the dancer on a ride.”

Dance-oriented fiddle music is similarly engine-like. Fiddle tunes are typically based on a small amount of melodic material, arranged in the AB form or some variation of it, which is cycled with possibly some variations or embellishments introduced by the fiddler. A common structure for the cycle is AA’BB’, in which A’ and B’ are near replicas of their counterparts, except for an ending phrase that gives a musical conclusion to A and B. In other words, A and B end uncertainly, asking a question, and A’ and B’ answer it. In this way, fiddle music moves in a see-saw motion, similar to the actual motions involved in playing the fiddle. Though different from the form of ring-composition, this question-answer motion brings up the same

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idea of containment, in that it involves two complementary phrases which complete a
circle. The question-answer structure is present in my composition in its use of
reciprocal sets of durations. However, these complementary sets are collapsed on top
of each other, so that the question is both asked and answered simultaneously.

Fiddling is thoroughly circular, in both its general cyclicality and in the
circular nature of its actual cycles. Like electronic dance music, fiddle music is, of
course, not perfectly repetitive. There is an active tension between the cycle and
variation within the cycle. However, since the general structure of the cycle is
continually present, all variation is contained within the cycle. Therefore, the
variation does not introduce so much a feeling of progression as it does one of
viewing a building from multiple angles or of viewing a mobile sculpture. This is
especially evident in the rendition of “Sallie Gooden” by Eck Robertson, a master of
the flashy Texas contest fiddling style, who brings the limited melodic material
through what seems every possible variation. No matter how extreme the variation,
however, it is always coupled with familiar beginning and ending phrases that act as
markers throughout. These marking phrases keep the engine of the cycle running
despite the wanderings of the fiddler, much like the “stomping four-to-the-floor kick
drum”, in tension with house music’s disco-inspired diva vocals, which house DJs
used to “make the experience more hypnotic.”6

While it introduces a degree of variation throughout, dance music for the most
part consists of a single basic musical structure carried through time. The organic
element is left to the dancer, the music serving merely as an empowering reference

6 Reynolds, *Generation Ecstasy*, 26
point for the dancer. It seems paradoxical that a music based on motion can itself be so unchanging. Rather than repetition being a way of stringing together different elements into a single musical identity, repetition in the form of a cycle constitutes the main body of dance music. Overall, this cyclicality, with little to distract from it, induces in the listener a feeling of stasis, of going nowhere. However, within the cycle is contained a great deal of motion; it provides the energy for the dance. The cycle provides a space within which the dancer moves, but the space itself is immobile. The dancer enjoys a limited sense of the eternal. As Yi-Fu Tuan puts it:

“Music can negate a person’s awareness of directional time and space. Rhythmic sound that synchronizes with body movement cancels one’s sense of purposeful action, of moving through historical space and time toward a goal…Each step is no longer just another move along the narrow path to a destination; rather it is striding into open and undifferentiated space. The idea of a precisely located goal loses relevance.”

Gamelan offers another form of stasis in cyclicality. To a certain degree, gamelan has a certain similarity in its cyclicality with fiddle and electronic dance music. Gamelan is organized around a colotomic time cycle, in which the large gong serves simultaneously to mark the end of a cycle and the beginning of a new one. Smaller gongs divide up the cycle into smaller segments. The balungan, or skeletal melody, is played in line with the pulse created by the gongs and drums. José Maceda likens its cycles to a type of drone:

“Drone may be understood to be not only a sustained sound, a continuation of the long vibration of gongs, but also a constantly repeating phrase of one or more pitches played by one or several instruments for the duration of the music. The continuous and repeating sound may be an identifiable pitch or not, a series of pitches making a phrase, or it may form a group of repeating sounds. Moreover, several instruments may each play a repeating sound, and together they constitute a drone. The repetition

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Yi-Fu Tuan, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota, 1977), 128
may form irregular or regular beats, a sound or sounds grouped into one, two or four beats.”

What differs gamelan from the previously discussed dance music is that rather than using its cyclical structure to create a continuous mechanical groove, it stretches and compresses its cycles organically, treating each cycle almost like a single note in a rhythm. This organic approach informs the structure of my composition, which is formed through the variation in the length of its cycle. In the gamelan ensemble, instruments such as the rebab that play denser, more complex parts are positioned towards the front of the ensemble, whereas more instruments with sparser parts are positioned towards the back, with the gong occupying the very rear of the ensemble. The idea of organizing by density was helpful in the spatialization of my piece. I positioned the texture speaker, which has the sparsest sound, at the very front, with more active speakers positioned further back.

In “Flexing the Frame in Javanese Gamelan Music”, Anderson and Vetter investigate the ways in which variation enters the repetitive, almost mathematical structure of a gendhing to transform it into an organic structure in performance. This is done through stretching and condensing of tempo as well as shifts in both instrumental and melodic focus. They describe the “seamless shift” that occurs in a transfer between two irama. For this shift, each instrument must either increase or decrease their density of playing in relation to the conceptual beat. However, each instrument performs this shift “where it is comfortable…for the individual player and

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the idiom of his particular instrument.”¹⁰ Because each instrument shifts its density of playing in a way natural to the instrument, the effect is a non-synchronous organic continuity, like watching a flower grow out of a bud (as opposed to viewing the bud and the flower separately without the transition period). This organic continuity is also contained in the make-up and roles of the parts of the gamelan ensemble. There is a line to be drawn between the relative slavery of the colotomic and balungan instruments to the free-flowing freedom of the pesindhèn, with the gerong part as a kind of midpoint. The gerong part moves relatively in line with the beat of the balungan, and bears a “similar contour” to the melody, departing slightly from it only to return in unison with the melody at the seleh.¹¹ The gerong part serves to slightly blur the central structure, a function which is added to by the pesindhèn, who the authors describe as “softening its edges”.¹² The pesindhèn’s part flows over the beat with little regard for it, arriving at the melody’s note at the seleh slightly late. Sometimes the melody stops altogether to allow for a timeless performance by the pesindhèn. The pesindhèn, as timelessness and freedom, makes a perfect counterpart to the time-based balungan and colotomic structures, completing the spectrum of adherence to and freedom from the beat. Gamelan goes beyond the time-keeping, energy-creating cyclicality of traditional dance music, embracing a spectrum of types of experience of time. The eternal return signaled by the gong coupled with the fluid singing of the pesindhèn brings to mind the image of a river, always the same, always changing.

¹⁰ Ibid, 260
¹¹ Ibid, 266
¹² Ibid, 257
Henri Chopin’s sound poetry has a unique approach to ideas of cycle and repetition. His work is not so much strictly cyclical as it is orbital. Chopin takes a single point of focus and wraps it around itself, such as in “French Lesson”, where he layers recordings of himself chanting “un, deux, trois, quatre, cinq, six, sept, huit, neuf, dix” over and over at different speeds. Another of Chopin’s simpler works is “Rouge”, which begins with different rhythmic groupings of the repeated word “rouge”, and culminates in two versions of the chant layered such that they interlock with each other. By the climax the word is indistinguishable and has become an almost continuous mass of “r”, “g”, and breathing sounds. These pieces use simultaneous repetition in addition to progressive repetition. Simultaneous repetition means the repetition of an idea vertically (through layering) rather than horizontally (through progression in time). This idea informs the cocoons, wherein a sound repeats itself at different rates simultaneously with its own duration.

The spell-casting quality of Chopin’s works is also present in Joseph Beuys’s performance of “Ja Ja Ja Ja Ja, Nee Nee Nee Nee Nee”. Beuys subjects these words to seemingly infinite repetition, making no effort to preserve any similarity in diction (even giggling sometimes), bringing out the organic variation of speech in each repetition. The sounds of the words themselves after a while begin to resemble inhalation and exhalation or the see-sawing motion of fiddle music. Once again the idea of containment returns, in that ja (yes) and nee (no) are the literal bounds of reality. The proliferation of sounds within my piece’s structure results in impure repetition. Sounds are repeated often, but sometimes transformed into something unrecognizable. Beuys’s performance does not go to these extremes, but it does
introduce the idea of the repetition as a natural balance between reproduction and mutation.

Chopin’s works are recorded in such a way that his breathing and other noise sounds associated with speech are accentuated. In pieces like “Vibrespace”, Chopin actively engages with these sounds, using no words at all. In this way Chopin’s sound poetry ideologically orbits itself, as speech and the vocal apparatus dance around each other and sometimes converging. Robert Ashley’s “She Was A Visitor” explores similar territory:

““She Was A Visitor is another form of description, it is intended to be understood as a form of rumor. The chorus is divided into groups, each headed by a leader. A lone speaker repeats the title sentence throughout the entire performance. The separate phonemes of this sentence are picked up freely by the group leaders and are relayed to the group members, who sustain them softly and for the duration of one natural breath. The time lag between the group leaders' phoneme choices and those phonemes being picked up by members of the group produces a staggered, chant-like effect, with the sounds moving outward from the nearest performer to the farthest.”"^{13}

Concrete speech exists alongside its own abstraction and distillation. The title sentence is omnipresent in its absolute cyclicality and omnipresent within the cycle through the proliferation of its phonemes. I am interested in how the “rumor” in Ashley’s piece serves to fill in the gaps between the discrete, spoken sound material. The texture performance in my piece was conceived as a “narration.” It acts as a highly irregular timekeeper and articulator of the piece’s structure. The function of the cocoons and quickening delay lines is, much like Ashley’s rumor chorus, to fill in the wide spaces left by the piece’s narration using the narration as its material. In this way they illustrate the continuity connecting one moment in the texture to the next.

The drone, as a kind of sonic monolith, is the most recognizably static sound. Its relationship to repetition is complex. On the one hand, the drone is without repetition in that the sound never ceases and therefore cannot be repeated. On the other hand, the drone can be thought of as the purest form of repetition; a sound is omnipresent in time without any breaks. In other words, drone is the repetition of sonic infinitesimals to create a continuous line. There are many traditional instruments that employ some kind of drone. The hurdy-gurdy typically has two melody strings and four drone strings, which are played by turning a hand crank that is attached to a wheel that bows the strings. The keyboard of the hurdy-gurdy shortens the melody strings when pressed to change the pitch. The drone strings consist of three types. The mouche string is named because of its “fly-like sound.”\textsuperscript{14} The two bourdon strings are named after bumblebees “because of their continuous droning sound.”\textsuperscript{15} In opposition to these three continuous drone strings is the trompette string, which produces an articulated drone that “makes a peculiar interrupted crackling or buzzing sound…if the player gives the handle rhythmic jerks according to the value of the notes he is playing…”\textsuperscript{16} This particular drone brings the circular motion of playing the instrument into focus.

Due to how particularly ubiquitous it is, and its many morphologies in different cultures, it is difficult to say anything universal about the bagpipe. The most basic form of the bagpipe in antiquity (before the addition of the bag and additional drone pipes) consisted of two pipes to be played simultaneously. One pipe was used

\textsuperscript{14} Susann Palmer with Samuel Palmer, \textit{The Hurdy-Gurdy} (Newton Abbot: David & Charles, 1980), 21
\textsuperscript{15} Ibid, 21
\textsuperscript{16} Ibid, 21
to play the melody while the other played a drone. The drone pipe was produced by stopping “all except one of the fingerholes…with wax…which would result in a continuous drone upon the pitch of the hole thus left unstopped.” With the drone thus rendered hands-free the musician was left free to play a complex melody on the other pipe.

The Hardanger fiddle is used in Norwegian traditional fiddle music known as Hardingfele. The Hardanger fiddle differs from other fiddles in its flat bridge and its use of sympathetic strings. Pandora Hopkins writes of other European string instruments with sympathetic strings that preceded the Hardanger fiddle, such as the viola d’amore, that the purpose of the sympathetic strings was “an increased density of timbre and a continuous tonal backdrop.” The Hardanger fiddle is far from alone in its use of sympathetic strings. Other instruments include the Swedish nyckelharpa, “different versions of the Islamic spike fiddle…certain Asian bowed lutes…both the plucked and bowed lutes of India” and the hurdy-gurdy. The Hardanger fiddle, as well as the bagpipe, hurdy-gurdy, and many other drone-employing instruments, use drones as a backdrop to their melodies, transforming them into an articulated continuity. The notes of a melody, as discrete points in time, are to a degree naked and vulnerable. The drone both contains the melody and draws a line to connect its points into a continuity.

19 Ibid, 119
Giacinto Scelsi’s most famous piece, “Quattro Pezzi su una nota sola” consists of four movements, each based around a single note: F, B, A flat, and A. This piece engages with drone, but not monumentally. Instead, it is broken up into many small drones. This perhaps contradicts the definition of a drone, and maybe it would better to say that the piece moves through a series of frozen states in which collections of instruments gather around their single pitch (with microtonal variation) and then dissipate. There is a distinct lack of forward motion. Instead, the effect is of shifting in and out of focus on the same object (the single pitch). There is also a degree of insistence to the sounds lent by the aggressive sawing of strings on a single pitch. The natural breathing motion of this high intensity convergence and dissipation brings to mind the articulated drone produced by the trompette string of the hurdy-gurdy. Scelsi’s work demonstrates the possibility of intense internal energy in static musical states. Stasis typically brings to mind a lack of life, but Scelsi’s compositions create static states overbrimming with life and energy. They evoke an ecstatic, sun-staring quality through their violent internal vibration.

Phill Niblock’s monumental works of drone provided me with one of the formative experiences for my composition and my ideas about musical stasis. I attended a Winter Solstice performance of Niblock’s work (“A Third Trombone” and other pieces) in 2012 at Roulette in New York. The performance coupled Niblock’s high-volume, almost imperceptibly changing drones with a large projection of footage of Osakans performing rapid, repetitive manual work from processing wood into paper to cutting up fish. Katharine Norman describes Niblock’s work as “larger than life” and she’s correct; the length of the performance was around four hours, the
projection took up an entire wall of the space, and the drones were so loud as to be completely penetrating.\textsuperscript{20} Norman says of her experience of a similar audio-visual work by Niblock entitled “China”: “The overwhelming effect of the music is an obliteration of any possibility of listening to anything other than its presence: there are no gaps, and there is absolutely no escape.”\textsuperscript{21} While for Norman the crux of the experience lay in “the complete opposition between music and film”, I found it to be exactly the opposite.\textsuperscript{22} At first, the sound and the images do seem absolutely opposed to each other: the oneness, largeness, and immobility of the drone oppose the repetitive, small, and rapid motions of the manual tasks. Niblock’s drones seem more suitable to imagery of immense natural features such as oceans and mountains. However, as the experience sinks in, the sound and the imagery begin to converge. The manual tasks acquire a certain perfection in their identicalness from one moment to the next such that they harmonize with the audio in two ways: by seeming to collapse into a single moment (enhancing the stillness of the drone) and by maintaining a constant cyclical energy (enhancing the moment-to-moment fullness of activity of the drone). The repetitive motions of hands make a perfect complement as swirling eddies to Niblock’s ocean of sound. Experiencing this convergence forms a connection between cyclical and motionless music. Like Scelsi’s music, Niblock’s work shows static music as not merely a lack of forward motion. Stasis replaces linear motion with an internal churning, not goal-oriented but rather a being-for-itself.

\textsuperscript{20} Katharine Norman, \textit{Sounding Art: Eight Literary Excursions through Electronic Music} (Aldershot: Ashgate, 2004), 46
\textsuperscript{21} Ibid, 47
\textsuperscript{22} Ibid, 47
The work of La Monte Young also engages heavily with drone. Young’s pieces unfold at a rate so slow as to be wholly separate from the majority of music, like the relationship between the biorhythms of plants and that of animals. For example, performances of “The Well-Tuned Piano”, which consist of semi-improvised “clouds” of sound on a piano tuned to just intonation, never last less than five hours. To a certain extent each performance of “The Well-Tuned Piano” is a continuation rather than a new rendition. Even the preparation for the performance is vastly extended, Young requiring about a month in advance of the performance to prepare the piano and himself. Young had an interest in static, long-form sounds from childhood, as he describes: “…I remember standing by a single telephone pole and listening to it humming. The same with the crickets…later…I used to operate a lathe. I would whistle and sing tones over this lathe…”23 This interest is realized in pieces like “The Second Dream of the High Tension Line Stepdown Transformer from the Four Dreams of China”, which is named for the device in a telephone pole that produces a hum, and is organized around the 12th, 16th, 17th, and 18th harmonics (about what is heard in such a hum).24 This piece simply carries these pitches through time, in varying intersections based on the breathing of the performers. The effect is meditative and time-dilating. Young’s work is a testament to attention and detail. Tony Conrad describes his experience playing in the Theatre of Eternal Music: “‘We lived inside the sound, for years. As our precision increased, almost infinitesimal

24 Ibid, 241
pitch changes would become glaring smears across the surface of the sound…”  
Young’s music is not simply “opium music” as his grandmother derisively referred to his Ali Akbar Kahn recordings. His work postulates that even a single sound constitutes an entire world worth investigation. A single sound is rich enough to allow multiple levels of engagement; it is impossible to take in everything about even the simplest sound at once, so Young’s pieces lay them out in great swaths so that the ear has ample time to wander through them. Young says: “…I felt that my interest in pitch was an interest in vibration on a higher level. Most people…are very involved with rhythmic elements in their music. But I was just interested in these long sustained tones and the pitch relationships between them.” Paradoxically, by extending the moment Young actually calls attention to its immediacy and the inherent power of a tone’s hyper-rhythmic vibration, much like how Niblock’s rapid, repetitive imagery calls attention to the constant activity and liveliness of the drone.

A third, perhaps counter-intuitive way of approaching stasis is through the use of continuous rapid motion. If a musical event is represented by a point, then many musical events enacted in a rapid succession approach the construction of a continuous line. Christian Wolff writes:

“Complexity tends to reach a point of neutralization: continuous change results in a certain sameness. The music has a static character. It goes in no particular direction. There is no necessary concern with time as a measure of distance from a point in the past to a point in the future, with linear continuity alone. It is not a question of

25 Brandon LaBelle, *Background Noise: Perspectives on Sound Art* (New York: Continuum International Publishing Group, 2006), 71
26 Duckworth, “La Monte Young and Marian Zazeela,” 223
27 Ibid, 218
Perhaps the best example of this phenomenon, even in its title, is György Ligeti’s “Continuum” for harpsichord. Heinz-Otto Peitgen likens the effect of this piece to the imagery played by a film projector, in that the number of notes per second, like frames, is such that they blend into a continuous motion, rather than seeming like the discrete entities that they are. The intention of creating this effect is present in Ligeti’s tempo instructions: “Prestissimo = extremely fast, so that the individual tones can hardly be perceived, but rather merge into a continuum.” The piece starts with the hands playing reciprocal alternations (G to B flat and B flat to G). As the piece goes on each hand’s part becomes gradually more complex without changing the articulation (the same number of notes per second) creating a blooming effect.

Another of Ligeti’s works, “Poème symphonique for 100 metronomes” uses the non-synchronous ticking of 100 metronomes to create a continuous texture. The metronome is generally thought of as a symbol of time but, like the ticking of a clock, the way it traces out blocks of time is highly artificial. In using enough metronomes to fill practically every temporal space, Ligeti calls attention to the continual nature of time. “Poème symphonique” is a more dynamic take on the phenomenon investigated in “Continuum”. “Continuum” begins and ends in a constant state as an unbroken block of sound; there is the feeling that it has existed before its actual beginning and continues after its ending, and that the listener only encounters a cross-section of the

30 Ibid, 91
infinite whole. “Poème symphonique” begins with a similarly unbroken block of sound created by the non-synchronous ticking of the metronomes, but as the metronomes cease to tick one by one the listener is treated to an organic decay of this continuity into the ticking of a single metronome at the end. Peitgen writes: “Irregular grid structures…gradually replace this disordered but homogenous blur. In this way, unpredictable patterns grow out of the uniformity of the opening. At the end we have a single metronome left ticking and the uniformity of the beginning is re-established.” Peitgen’s characterization of the single metronome’s ticking at the end of the piece as a return to continuity links the type of continuity through rapid motion at hand back to the previously discussed cyclical continuity.

Conlon Nancarrow’s studies for player piano exploit the mechanical nature of the instrument to realize compositions far outside the capability of any human player due to extreme tempi and general complexity. Nancarrow was interested in creating organic shifts in tempo, similar to irama shifts in gamelan, where a particular part in a piece accelerates or decelerates to a certain tempo, rather than having a discontinuous shift from one tempo to another. He developed two methods for achieving this effect: arithmetical acceleration and geometric acceleration. In arithmetical acceleration the effect is achieved by successively reducing the duration of each next note by a set amount, or in deceleration by adding onto the duration in the same way. In geometric acceleration the effect is achieved by reducing each duration by a set proportion or percentage. Because shifts in tempo are perceived ratiometrically, arithmetical acceleration seems slow at first and very fast at the end, whereas geometric

31 Ibid, 91
acceleration remains constant. Nancarrow’s groupings of accelerations, decelerations, and constant tempi in his pieces stimulate many thoughts about what constitutes stillness and motion in musical time. In terms of constant tempi, one might say that a faster tempo is more active than a slower tempo, but that both are to a degree static in their constancy. One could describe acceleration or deceleration in terms of their consequences: acceleration leads to motion and deceleration leads to stasis. However, they could also be described in terms of their relative speeds at which they reach these consequences. For example, a quick deceleration might be said to be more active than a gradual acceleration. Finally, a geometric acceleration might be characterized as static in relation to an arithmetical one in that its rate of acceleration seems constant, while the arithmetical one seems to exponentially increase.

Nancarrow’s “Study No. 21 – Canon X” provides the clearest demonstration of a relationship between acceleration and deceleration. The study consists of a low and high voice. The low voice starts slowly and accelerates to an extremely fast, flowing tempo by the end. The high voice starts at such a tempo and decelerates to a slow tempo by the end. This structure results in a convergence of the two voices before they pass each other, which is illustrated in the “X” of the study’s title. This study is palindromic in two ways. Looking at the study as a whole, it begins and ends with a coupling of high and low tempi, and has a midpoint of medium tempi. Looking at each part individually, if the two parts were played end-to-end rather than

33 Ibid, 153
simultaneously, the shape would also be a palindrome from low tempo to high back to low. Therefore, the study can also be said to have a collapsed palindromic structure, in that the second half of the palindrome is played simultaneously with the first. This kind of collapsed palindromic structure is prevalent in my own composition. Palindromic structures, like ring-composition, bring up the idea of containment, and “Study No. 21” does act as a kind of container; it is a distillation of an entire spectrum of possible tempo relationships, and in this sense it presents itself as static. All of the study’s motion is internal and non-linear. It begins and ends in analogous places, and every moment in between has an analogue mirrored across the center point of the piece.

Nancarrow’s “Study No. 27” is more complex than “Study No. 21”, travelling through many different groups of accelerations and decelerations, all organized around a part played at constant speed. Nancarrow stated that “the nonaccelerating eight-note line that runs the length of the piece represented ‘the ticking of the ontological clock.’” This nonaccelerating line is played at mid-range, and Kyle Gann asserts that it is “the piece’s horizontal axis of symmetry; everything that happens above it in the treble is eventually reflected (though not by inversion) in the bass, and vice versa.” Gann also believes that Nancarrow’s characterization of the constant line as the “ontological clock” means that “in the midst of the illusions of bending and stretching time, the clock line gives our ears a bit of unambiguous reality to hold on to.” While I agree with Gann that the clock line serves as a “perceptual

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34 Ibid, 159
35 Ibid, 160
36 Ibid, 160
yardstick” for measuring the many types of acceleration and deceleration present in the piece, I disagree that these accelerations and decelerations are “illusions” whereas the clock line constitutes “unambiguous reality”. The clock line, as the “ontological clock”, is not time itself, but rather represents the standardized way of measuring time which is, of necessity, an approximation. In coupling expansions and contractions of pulse with a constant one, Nancarrow calls attention to the ultimate arbitrariness of the clock in relationship to the continual nature of time. One might even say that an accelerated pulse approaches a more exact measurement of time than a slower one. Paradoxically, as an accelerated pulse approaches a better approximation of time’s continuity it also approaches a static drone, which is completely ineffective in measuring time. “Study No. 27” thus explores territory similar to “Poème symphonique”. The piece investigates the infinitely variable ways of tracing out spaces in time.

Robert Ashley’s “In Sara, Mencken, Christ and Beethoven There Were Men and Women” is another piece that achieves stasis through continual motion, or “immobility in motion” as Christian Wolff characterizes the inherent monotony of highly complex music. The piece is based on a reading of a book by John Barton Wolgamot accompanied by electronics that react to the reading based on various analyses of its sound. The listener is subjected to a constant barrage of groups of names, many of historically important men and women, interspersed with verbs and adverbs for about 40 minutes. The electronics in the piece take a back seat, serving mostly to punctuate the continuous flow of words and names. Ashley’s slower

37 Ibid, 160
38 Wolff, “Immobility in Motion,” 36
enunciation of the concluding words of each stanza, “very titanically”, enforces the cyclical nature of the piece, along with the seemingly endless cycles that can be traced among names like “Beethoven” and “Jesus Christ”. Without a very thorough knowledge of the text it would be almost impossible to say at any one moment where in the duration of the piece one currently is. Robert Ashley summarizes the content of the text:

“…a poem of 128 stanzas, each stanza the same sentence with four variables, three of which are names or name groups or name constructions, the fourth the adverb of the active verb. To my mind one of the most unusual and beauty sentences in English.

‘In its very truly great manners of Ludwig van Beethoven very heroically the very cruelly ancestral death of Sara Powell Haardt had very ironically come amongst his very really grand men and women to Rafael Sabatini, George Ade, Margaret Storm Jameson, Ford Madox Heuffer, Jean-Jacques Bernard, Louis Bromfield, Friedrich Wilhelm Nietzsche and Helen Brown Norden very titanically.’”

The “main characters” of the text are 7 male names and 7 female names that recur very frequently. Other names recur a few times and many others only once. According to Ashley, Wolgamot considered each of the text as a “scene” in which the names are interconnected based on a mixture of links and similarities in sound and meaning or significance. In moving from scene to scene, Ashley’s piece moves through a succession of frozen webs of meaning. Though he has been unable to decode the work in full, Ashley’s assumption is that the entire text constitutes an interconnected system analogous to that of each scene. Ashley likens Wolgamot’s obsessive collection of names to the homemade collections/museums he encountered:

“A huge shed, probably formerly a commercial chicken coop, filled with hand-made boxes about 18 inches in each dimension, with a glass front, stacked six feet high,

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39 Robert Ashley, Liner notes, *In Sara, Mencken, Christ And Beethoven There Were Men And Women* (Lovely Music, 4921, CD, 2002)
each box containing every kind of thing the collector had collected in his life –
matchbook folders, safety pins, pieces of broken glass, breathtaking banalities – each
item elaborately labeled and dated. Hundreds of boxes. A history of civilization."40

In other words Wolgamot’s text is an attempt at ultimate distillation (of his own
history, the world’s or both). It is a heroic attempt to somehow be everywhere at
once, to cover everything, and Ashley’s piece mirrors this inclination. As Ashley’s
voice untiringly barrels forwards through the list of names the piece provides the
listener with many levels of engagement, from extreme attention and activation of
memory to a complete surrender to the impenetrability of the words, both of which
evoke the static, “scenic” nature of the piece.

In direct opposition to stasis achieved through rapid activity is stasis achieved
through sparse activity. In the former case, musical events as points in time succeeded
each other so quickly as to crowd out almost all silence and to form a continuous line.
In the present case, musical events serve as small interruptions of silence, and the
silences themselves form the continuous line. As another way of visualize it, if a
piece of music is conceived as a pool of water, and musical events within the piece as
producing ripples within the pool, then a relatively sparse piece results in a relatively
still, undisturbed surface. In the case of indeterminate music, this idea acquires extra
force from the lack of necessity that attaches to certain progressions of sounds. Every
progression of sounds could easy have happened in any other order under
indeterminate circumstances, eliminating a sense of linear time and replacing it with
the navigation of a field of possibilities for which time is, in a sense, a non-factor.

40 Ibid
James Tenney’s “August Harp” is a simple, clear example of stasis achieved through sparseness. It is one of his postal pieces, written on a postcard and mailed to its dedicatee, Susan Allen. By necessity, the score is very simple:

The piece moves along very slowly with ample silence and repetition. The distance between each note gives a feeling of emptiness. Tenney’s stipulation that the notes be played during exhalation and inhalation leads to a calm, natural unfolding. This piece is much more about the space itself than the humanly produced sound. However, the sound serves to make the space a “breathing” space. The space is not absent of life; it is occupied by a living presence enjoying a kind of freedom in nothingness, the way animals may linger in one spot or another without any clear purpose but without boredom as well. This piece communicates a living emptiness articulated by the natural rhythm of relaxed breathing in contrast to a piece like “Continuum” that communicates a sense of inescapable tension that might be characterized by

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hyperventilation. This contrast informs my composition, which attempts to create static states at each of these poles, as well as in the spectrum between them.

A common composition technique of Christian Wolff’s is to pre-determine the time structure of a piece before deciding on certain notes or musical events. In doing so he essentially reverses the traditional compositional process in which notational content determines the time structure and silence is used as punctuation. In Wolff’s work the time structure becomes the actual content, an empty space within which sound can be distributed as articulation and punctuation. Wolff writes of his 1952 piece, “For Piano I”:

“The structure is made of sixteen segments of varying lengths and densities…whose sequence, superposition and recurrence are determined by chance. The choosing of notes (out of a total of nine), durations (total thirteen) and amplitudes (nine), and their disposition within a segment was made by the composer. Only segments of zero density, that is silence, left no choice. These limitations allowed a special freedom to the composing: the restrictions once made, the range of choices, though still immense, become particularly clear. The question of what to do next for how long, depending so much on idiosyncratic feeling, was settled in advance. The larger continuity of the piece formed itself, and its expressive content fell in with it.”

Wolff effectively narrows his role as composer to adding color (in the form of tone, duration and amplitude) to bring out the contour of the chance-determined temporal structure. In this way he “plays time’s game”; instead of creating a piece out of personal preference that struggles to maintain its identity in the face of time’s natural decay, he acknowledges time as the true determining power and starts from there. Wolff’s compositions are like natural processes in that they flow from and along with entropy, rather than like manmade structures (traditional music) that resist entropy.

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43 Wolff, “Immobility in Motion,” 36
Philip Thomas writes that “For Piano I” involves a “commitment to stasis and an obfuscation of narrative.” Part of the stasis results from the minimalism of the piece; there are relatively few disturbances to the piece’s field. The other part of the stasis comes from the lack of narrative. Because the notational content exists as an articulation of a chance-determined temporal structure, there is a certain discontinuity or lack of connection from one musical event to the next. This discontinuity frustrates any attempts to perceive a linear progression. Instead the listener is presented with a series of discrete, static events. The texture performance in my composition is highly informed by Wolff’s idea of a pre-determined time structure. The texture performance limits the scope of the performer’s concerns to mere distribution. The performers have some choice as to what type of actions they perform, but the entire set of actions is already set, as well as the durations and number of actions to be performed within them.

While “For Piano I” is heavily dependent on time for its structure, Wolff’s “For One, Two or Three People” engages with the concept of “zero time” that John Cage attributes to Wolff’s work in an interview with Roger Reynolds:

“…if music is conceived as an object, then it has a beginning, middle, and end, and one can feel rather confident when he makes measurements of the time. But when it is process, those measurements become less meaningful, and the process itself, involving if it happened to, the idea of Zero Time (that it is to say no time at all), becomes mysterious and therefore eminently useful.”

The piece lays out different requirements and possibilities for how the performers react to the actions of each other or their environment. While these responses “can be variously deliberate…or must be quick and sudden” there are otherwise no real durational constraints.\footnote{Wolff, “Program Notes,” 492} The piece itself is a process independent of time even though its realization takes place in time. Every performance of the piece offers a cross-section of the piece’s total possibility or a single possible instantiation of the piece. The piece lays out a conceptual space through which a performance navigates. The static nature of the piece comes from the non-necessity to any one order of navigation through it, as well as the conceptual simultaneity of all of its possibilities. A certain instantiation of the piece’s process in performance at a particular point in time simultaneously implies the possibility of all other instantiations of the piece; it is merely that we have happened into a certain location within the piece’s conceptual space rather than another one. In other words, the field of possibilities represented by the piece remains static in time. It is the performer’s (and listener’s) place and viewpoint within the field that changes.

John Cage’s “Music for Piano” was created by marking imperfections on blank sheets of paper and then laying music staves on transparencies over to produce notation. The result is an extremely sparse and aimless piece of music, producing a static effect similar to Wolff’s pieces. While Wolff created “For Pianist I” by heavily restricting the scope of his personal decisions as composer, Cage relinquishes control almost completely in creating “Music for Piano”. The idea of this complete surrender to chance is informed by Cage’s mission statement: “…I believe that by eliminating
purpose, what I call awareness increases. Therefore my purpose is to remove purpose."\textsuperscript{47} Surely in “Music for Piano” Cage has removed purpose in relinquishing all but the most minimal powers of the composer. Cage’s idea is that having a particular purpose in mind actually restricts our experience of music. All of our attention is directed towards the progression in time towards this particular purpose to the exclusion of all events that do not relate. If we eliminate the semblance of a particular purpose, then attention can embrace the full experience.

This idea can be related to static music as a whole, in that one abstract form of purpose can be an expectation that musical events unfold and gain their definition in the linear progression of time. While this captures a part of the picture, it rules out other types of temporal experience, such as appreciating static, individual music events in isolation from others (as the sounds in “Music for Piano” present themselves). Thus Cage says: “…we not only can go forward in time but we are able to go backwards in time. We must find some way to be able to go in all directions.”\textsuperscript{48} This is a demand for temporal omnipresence that amounts to stasis. Stasis is a way of removing intention from the playing field of musical experience. Cage is often frustrated by the idea that the listener has something done to them while hearing a piece of music. He believes that the act of listening is and should be active, engaging in a free awareness of and connection between musical events, rather than passively waiting for a determinate end to be achieved (which happens in the linear progressive

\textsuperscript{47} Elliot Schwartz and Barney Childs with Jim Fox, eds., “John Cage: Interview with Roger Reynolds,” 340
\textsuperscript{48} Elliot Schwartz and Barney Childs with Jim Fox, eds., “John Cage: Interview with Roger Reynolds,” 340
model of music). The static or otherwise aimless musical field offers the ideal venue within which the listener may navigate and form their own experience.
Bibliography


