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Lord of the Ring Modulator:

An Introduction to Stockhausen's *Mikrophonie II*

Karlheinz Stockhausen (1928-2007) is one of the most influential European composers after 1951. His works explore many diverse areas of new music including serialism, spatial composition, aleatoric music, pure electronic music, and electro-acoustic music. *Mikrophonie II*, composed in 1965, and its predecessor, *Mikrophonie I*, composed in 1964, are both among the earliest examples of electro-acoustic music in history. While *Mikrophonie I* for Tam-tam and electronics is a relatively well known piece in Stockhausen's repertoire, *Mikrophonie II* for 12 vocalists, Hammond Organ, and ring modulators is relatively unknown. This paper discusses the concept of *Mikrophonie*, the specific spatial and electronic setup used in *Mikrophonie II*, and the construction of the first three "moments" of the piece.

The Concept of *Mikrophonie*

The basic concept of *Mikrophonie* is that the microphone functions as a musical instrument. Stockhausen explains this in a 1971 lecture given in London: "'Microphone' is in the title, signifying that the microphone is played as a musical instrument, and the '-phony,' as in symphony: microphony."

¹ He goes on to explain that in *Mikrophonie I* microphones are controlled by two performers, who literally move them around the area of a Tam-tam. The Tam-tam is played by two other performers, using a host of various found items like cardboard boxes and plastic spoons. Two more performers sit in the audience and control the amplitude of the sounds from the two microphones. The signals are routed through a band-pass filter, to a mixer, and then out to the audience. Stockhausen created a graphic score for the work that details what each player should do throughout every "moment" of the piece. ² The piece is quite aleatoric, but Stockhausen's graphic notation allows for the piece to be reproduced to a high degree of consistency.

¹ Maconie, Robin. 1989. *Stockhausen On Music: Lectures and Interviews*. Marion Boyars Publishers, London. pg. 78

² The concept of "moment form" in Stockhausen's music will be discussed with respect to *Mikrophonie II*.

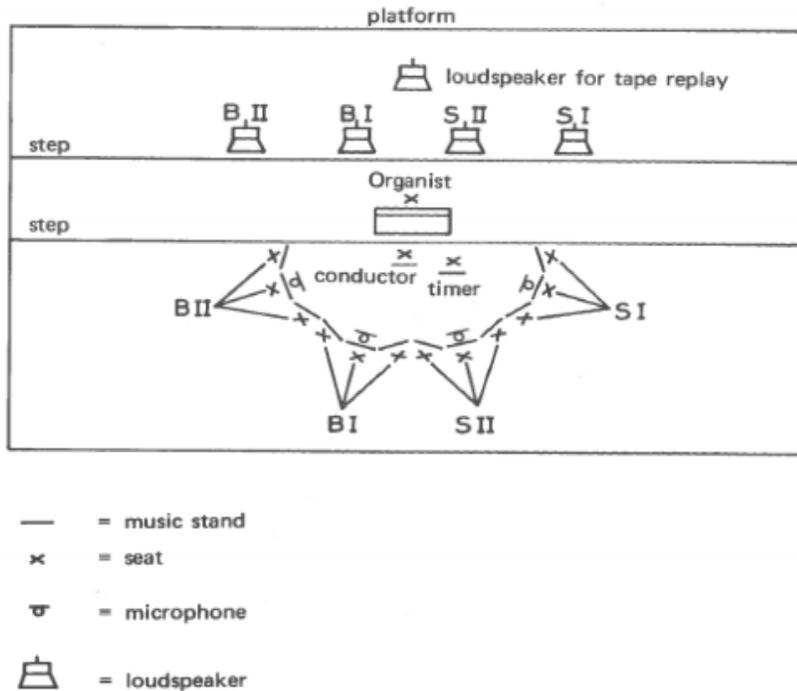
The basic concept of *Mikrophonie II* is the same as *Mikrophonie I*, in that the microphone takes on the role of a musical instrument. The pieces are also similar in that they are both aleatoric, use graphic scores, and are formally broken up into a series of structural “moments.” However, the forces called for in *Mikrophonie II* are different. Stockhausen writes in notes about the work, “In *Mikrophonie II* the very different sounds of choral singers are picked up by microphones and are mixed in multiplication with the electrically generated sounds of a Hammond organ in a specially constructed ring modulator. There arises hereby a closed circle, a so-called feed-back, in which the notes of the Hammond organ and the choral sounds reciprocally modulate each other.”³ Whereas in *Mikrophonie I* all of the players worked collectively around the sound of a single Tam-tam, *Mikrophonie II* is about the interaction between two very different timbres: that of a Hammond organ and that of the human voice. Interestingly, Stockhausen also incorporates additional taped audio from his earlier pieces *Gesang der Jünglinge* (1956), *Carré* (1960) and *Momente* (1964).

Spatial and Electronic Considerations

Stockhausen details the spatial layout for a performance of *Mikrophonie II* in the piece’s score. The 12 singers are broken up into four sections, two sections of three sopranos each (SI and SII) and two sections of three basses each (BI and BII). The chorus is seated on a platform, in a semicircle, and with their backs to the audience. Four microphones are used for the choir; one microphone is placed in front of each section of singers. A conductor and a “timer,” who measures the length of each section with a stopwatch, are placed in front of the choir, facing the audience. The organist is placed on a second “step” of the platform, above the choir, conductor, and timer. The organ’s direct signal is heard from a dedicated loudspeaker on the second “step.” The four loudspeakers for the choir’s ring-modulated signals are placed on a third “step” above the organist. A fifth loudspeaker is placed on the third step as well, from which the taped audio is heard. Figure 1 shows the chart of the setup that Stockhausen provides in the score for the piece.

³ Wörner, Karl H. 1973. *Stockhausen: Life and Work*. University of California Press, Berkeley and Los Angeles. pg. 54-55

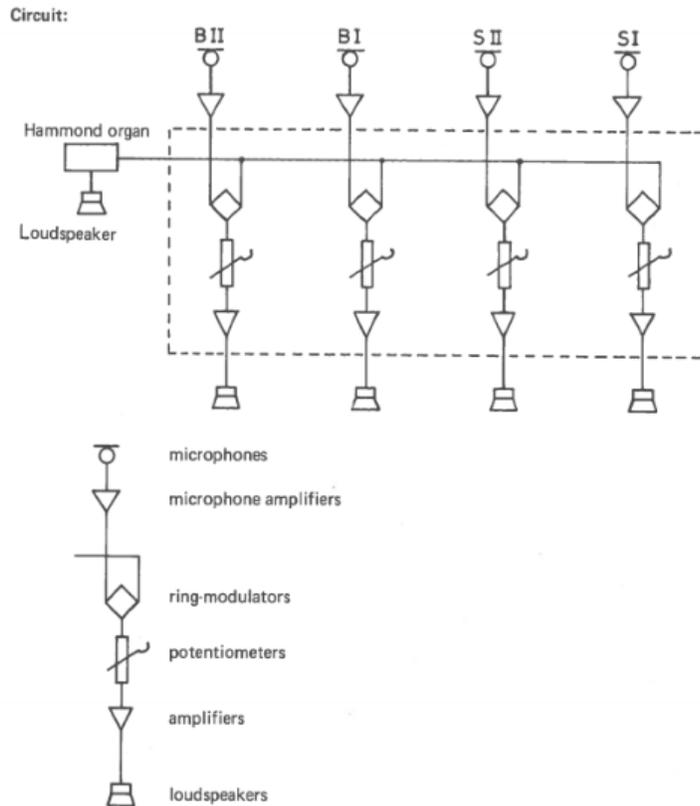
Layout at the first performance:



(Figure 1)⁴

The piece uses four separate ring modulators. The output of each of the four microphones is routed to the **carrier** input of one of the four ring modulators. The organ's signal is routed to the **modulator** input of each of the four ring modulators. Thus, the organ's signal modulates the sound of each section of the chorus separately. Specifically, the ring modulators add and subtract the frequencies produced by the organ from the frequencies of the individual choral sections. These "sum" and "difference" tones create "rings" around the original sound of each section. This means that the timbre of each section can be radically different depending on the type of material they are assigned in each "moment." The ring-modulated sound of each section is then sent to a mixer, where it is mixed with the direct choral sounds. The mixed signals are then sent out through the four loudspeakers on the third "step" of the platform. Figure 2 shows the illustration of the signal flow that Stockhausen provides in the score.

⁴ Stockhausen, Karlheinz. 1965. *Mikrophonie II*. Universal Edition.



(Figure 2)

Deconstructing the Score

The piece is broken up into 33 separate “moments.” “Moment form” is a concept that Stockhausen developed in his music composed during the 1960s, particularly in the piece *Momente* (1964) and the works following it. Stockhausen describes his concept of moment form in one of his 1971 London lectures saying, “when certain characteristics remain constant for a while (...) a moment is going on: these constant characteristics determine the moment.”⁵ For Stockhausen then, the concept of a musical moment is quite different than the everyday one. While the word moment is typically used to describe a mere passing instance, a moment as it relates to *moment form* can be infinitely long if the characteristics of a musical structure remain unchanged. These characteristics include basic musical parameters such as register, timbre, rhythm, and harmony.

⁵ Maconie, Robin. 1989. *Stockhausen On Music: Lectures and Interviews*. Marion Boyars Publishers, London. pg. 63

Jonathan Harvey observes in his book, *The Music of Stockhausen*, that the lengths of moments in *Mikrophonie II* are “proportionally related, by the Fibonacci series.”⁶ The Fibonacci series is an arithmetic series in which each subsequent number of the series is equal to the sum of the two preceding numbers. The series is represented by the following formula: $X_n = X_{n-1} + X_{n-2}$. In *Mikrophonie II*, Stockhausen specifically uses Fibonacci numbers to represent the number of “units” in a given moment. The “units” are measured as being equal to between 1/50 of a minute and 1/72 of a minute. In other words a “unit” can be anywhere between 1.2 seconds (1/50 of a minute) to 0.83333333 seconds (1/72 of a minute). The Fibonacci numbers used in the piece are given below from lowest to highest.

3 5 8 13 21 34 55 89 144⁷

The piece makes use of a text written by the German poet Helmut Heissenbüttel (1921-1996) called *Simple Grammatical Meditations* (1955). A translation of the poem is included as appendix A to this paper.⁸ Harvey argues that Heissenbüttel’s text, “has the advantage of being suggestively meaningful, if ultimately meaningless, and good for repetition, permutation and jumbling. It is a study in how far you can twist grammatical structure and still suggest something.” Harvey is correct in that the nonlinear nature of the poem is well suited for the non-teleological character taken on by *Mikrophonie II*. *Mikrophonie II* does not, like traditional European music, work towards a clear central climax or climaxes, but instead presents a series of moments in which listeners may identify their own climaxes. In Stockhausen’s words, his aim with both *Mikrophonie I* and *Mikrophonie II* was to give the listener, “a new sort of experience of themselves and of their world, and for a moment become – ideally – speechless.”⁹ As a result, Heissenbüttel’s text, which does not attempt to communicate a clear central theme like more traditional poetry, is an apt choice for creating this “new sort of experience.”

6 Harvey, Jonathan. 1975. *The Music of Stockhausen: an Introduction*. University of California Press. Berkeley and Los Angeles. pg. 96

7 The numbers **1** and **2** are not shown because they are not used in the piece.

8 Heissenbüttel, Helmut, translated by Michael Hamburger. 1977. *Texts*. Marion Boyars, London.

9 Wörner, Karl H. 1973. pg. 55

The sound world of the piece is predominately focused on timbre. There are no moments which contain anything resembling a traditional melody. Harmonically, the piece is often aleatoric for both the choir and the organ. For example, the chorus is often given an approximate range within which they may choose a pitch freely. Because of the ring modulation, this results in unpredictable timbres. In addition to these indeterminate harmonic structures, the chorus is often directed to speak. The ring-modulated speech results in inhuman voices, which many listeners may find to have a “frightening” quality. At times, the chorus is asked to snap their fingers or “click” their palates. The organ is given a wide range of graphic notations, which detail the way in which the player is to improvise material in the given moment. Figure 3 shows the explanations for the various notations used in the score.

EXPLANATIONS OF THE SCORE:

All the numbers for durations of sections (e. g. $\boxed{1} \leftarrow 5 \rightarrow$) refer to a standard unit, which can be chosen between 1 = 1/50 minute and 1 = 1/72 minute, and remains constant. The durations of the tape recordings are notated in seconds; however they are sufficiently long for the start and finish to be later and earlier respectively with a unit slower than 1 = 1/60 minute.

- \odot = choose pitches freely around a central note in the range indicated.
- ["Text"] the text can be repeated as required and broken off at any syllable.
- X^{F} = palate and finger clicks freely mixed.

Abbreviations:

- contin. = continuous syll. = syllabic
- const. = constant melism. = melismatic

Various notations are used for the Hammond organ which are to be freely interpreted; for example:

- p. 2  etc. = expand the notated pitch chromatically to a cluster, and then contract again; several times ad lib.
- p. 2  etc. = sustain the notated pitch and play around it polyphonically.
- p. 4  etc. = sustain the notated pitch; add single notes above and below it within the indicated range; each one initially accentuated, with different durations, and partially superimposed.
- p. 5  etc. = sustain the notated pitch; very rapid pitch movements around the central note (not exclusively chromatic, regular and irregular) with increasing and then decreasing range, and within the indicated interval; several times ad lib.

- p. 5  etc. = note-groups (with individual grace-notes) around the notated pitch; vary the number of notes per group, the durations of the individual notes in each group and the number of individual grace notes per group.

- p. 6  etc. = rising intervals around the notated pitch with chromatic groups of grace notes following the second note of each interval.

- p. 6  etc. = hold the notated pitch, begin a trill, expand the trill to a tremolo with increasingly wider intervals, return to the trill and the initial pitch; several times ad lib.

- p. 7  etc. = rapidly repeat the notated pitch, expand it upwards chromatically to a cluster, and then contract again (staccato repetitions); several times ad lib.; vary the maximum cluster width.

- p. 8  etc. = hold the notated pitch, then very rapid downward pitch movements (not exclusively chromatic, regular and irregular), with increasing, then decreasing range and back to the initial pitch; = at various places hold briefly and trill; all this several times ad lib.

-  or  konst. = note or cluster sustained up to the following Moment.
-  = symbol for the potentiometer settings of the ring-modulator output of each group.
-  = normal: the potentiometer is sufficiently open for the modulated loud-speaker sound to be slightly louder than the original sound (at dynamic peaks, on the edge of feedback). Indications such as -5, -10, etc. are potentiometer levels in db below this normal level. +5 or "full on" means that the direct vocal sound is so quiet or so high-pitched at these places that one can exceed the normal setting.
-  = crescendo and decrescendi continuously changing.
-  = isolated crescendo—decrescendo above the db-level indicated.

(Figure 3)

It is now necessary to deconstruct the first three moments of the piece. This deconstruction is intended to give the reader a sense of the amount of detail in the piece, as well as serve as a starting point from which they may deconstruct the rest of the score for themselves. Perhaps most important is the translation of the German text used in the score, which is a barrier to entry for English speakers.¹⁰

Moment 1 lasts for five “units.” The soprano II section is tacet. The soprano I section enters mezzo-forte on A5, with the organ doubling the pitch throughout. The organ is given the indication to play, “with a change of tone color,” (klangfarbenweschel). The soprano I section is directed to chant the text synchronously and quickly in a, “solemnly ‘levite-like’ (priestly) tone,”¹¹ (feierlicher levitenton). Said text translates to, “the shadow that I cast is the shadow that I cast.” The bass I and II sections perform in unison. They are asked to “speak deeply, with different speaking tones” (tief sprechen, verschiedene sprechtöne) and on “short syllables” (kurze Silben). They are given a syllabified version of the word “participial” at a forte volume. Their attacks become gradually closer together, as indicated by the accelerando.

Moment 2 lasts for three units. Just before the beginning of moment 2, the technician is directed to begin the piece’s first audio sample: a brief excerpt from *Gesang der Jünglinge* (1956). This excerpt serves as a bridge between moment 1 and moment 2, and between moment 2 and moment 3. The organ sustains a tone cluster spanning a minor third from F# to A with vibrato and “extremely high (in register).” The entire chorus performs in unison, “in the normal rhythm of speech,” (im normalen Sprechrhythmus). They “whisper” (flüstern) the phrase, “up to the middle of the half,” at a forte volume. In both moments 1 and 2 the technician is instructed to keep the choir’s amplified sounds at the “normal level.”¹²

10 Parentheses are used to show the original German. In cases where the same phrases are used multiple in the piece the original German is generally not provided.

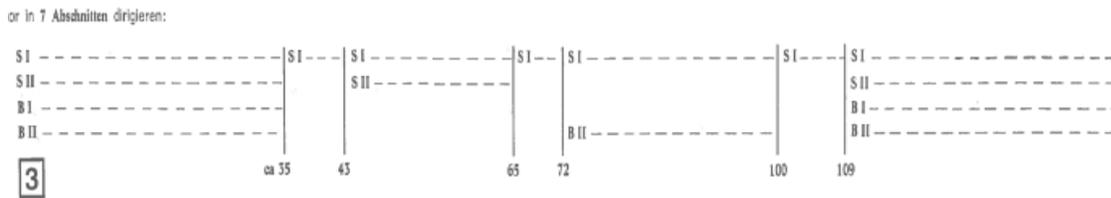
11 Powell, Larson. 2010. *The Modulated Subject: Stockhausen’s Mikrophonie II* in [The Differentiation of Modernism: Postwar German Media Arts](#). Boydell and Brewer, Camdem House. (“Priestly tone” comes from Larson)

12 The “normal level” is defined as having the modulated sound slightly louder than the original sound.

Interestingly, Stockhausen treats Heissenbüttel's already enigmatic text in an even more nonlinear way by reordering the sections. He has so far used the first line of the *a* and *c* stanzas from the poem. This makes it clear that *Mikrophonie II* is not a setting of the text in a traditional sense. The text instead becomes another pool of material that Stockhausen manipulates freely for the purposes of the composition.

The two opening moments occur rapidly and give the piece an exciting beginning. The unison speaking in moment 2 for all four sections of the chorus is particularly declamatory and seems to announce the arrival of moment 3. Furthermore, all of the forces that will be heard in the piece are encountered in the opening: chorus, organ, ring modulators, and taped sound. Moment 3 is curious in that it is the longest moment of the piece at 144 units. Combined, moments 1 and 2 can last between 6.6 seconds and 9.6 seconds, depending on the speed of the units. Likewise, moment 3 can last between 2 minutes and 2 minutes-52.8 seconds depending on the speed of units. This expansion creates the sense of time being slowed down significantly after the much more rapid moments 1 and 2.

As a result of its increased size, moment 3 is much more complex than the two preceding moments. A graph at the top of the page that contains moment 3 tells the conductor which choral sections are to perform in a series of seven "sub-moments." The duration of each sub-moment is defined in units. The organ and the soprano I section play in all seven sub-moments, providing the main unchanging characteristic that defines the large-scale moment. Interestingly, seven is not a fibonacci



number, but the proportions of submoments are related by fibonacci numbers: two use the full chorus, two use two choral sections, and three use only the soprano I section. Figure 4 shows the graph.

(Figure 4)

The seven sub-moments shall be referred to as submoments 1-7 as they are shown from left to right in Figure 4.

During moment 3, the organ is given several contrasting directions regarding pitch and rhythmic content. They are instructed to "mix" two types of harmonies. For the first type, the player begins on C#5 and then expands chromatically to create a cluster above and below the starting pitch. During moment 3, this is to be done, "slowly and with occasional vibrato," (langsam / manchmal vibr.). For the second type, the player begins on D#4, sustaining the given pitch while improvising around it polyphonically. During moment 3, this is to be done, "calmly at first, then increasingly with dynamic change (change of energy)," (zuerst ruhig, dann zunehmend dynamische Wechsel). The harmonic material played on the manual is supplemented by single notes with the pedal. These notes are freely chosen in the range between G#2 and D3. These tones should be played with an, "extremely slow period," (äußerst langsam period) and should, "sometimes be interrupted," (manchmal unterbrochen). Furthermore, they should be mixed between staccato notes and sustained notes.

In addition to the instructions regarding pitch and rhythm, the organist is also given instructions regarding timbre. They are told to sometimes change the tone color, and sometimes remain with a continuous tone color. They are given further instructions with an order of "direction" (Richtung) for the tone colors beginning "dark" (dunkel), then becoming "bright" (hell), and ending, "with the basic tone," (immer grundton). Thus, the player improvises the pitched and rhythmic material for moment 3, providing shaping across time by a gradual shift in timbre.

The soprano I section begins softly and synchronously on C#5, "very slowly," (sehr langsam) "with an ad lib. change in density between three singers of the" (Dichte 3, 2, 1 wechseln ad lib.). Then, "around 105 (units) (they should be) no longer synchronous," (von ca 105 ab NICHT MEHR SYNCHRON). In terms of character the soprano I begins in a, "solemnly, priestly tone," but around 105 units should, "gradually change to a seductive (tone) with little glissandi around C#." (allmählich übergehend in fery, verführeerisch mit kleinen Glissandi um C#). They repeat the text, "the situation

into which I have got is the situation into which I have got,” as necessary to fill the moment. They are the only section to perform throughout the entire moment.

The soprano II section performs in three sub-moments of moment 3: sub-moment 1, sub-moment 3, and sub-moment 7. In all three sub-moments, each member of the section chooses pitches around the note E₄, within the octave of B₃ to B₄, at a mezzo-forte volume. They perform individually (not synchronously) until the end of the third sub-moment. With regards to rhythm and character, however, they are given contrasting instructions for each of the three segments. In sub-moment 1 they perform with a slow, syllabic rhythm and are directed to, “accelerate in three cycles (of text),” (im 3 er-Takt accel.), “as a baby,” (wie ein Baby). In sub-moment 3 they perform quickly with primarily melismatic rhythm, but sometimes syllabically. During sub-moment 3 they perform, “in four cycles,” with the character of a, “happy baroque invention,” (barocker inventionstil, froch). This latter instruction is clarified with the further direction, “singing to each other and exchanging,” (sich gegenseitig zusingend und abtuschend). During sub-moment 7 the rhythmic material becomes slow again with primarily syllabic rhythm, but sometimes melismatic. In sub-moment 7 they perform in four cycles with a character that is, “as in jazz, flow,” (à la jazz, flow) and a “hoarse tone” (etwas heiser). Interestingly, around unit 128 they become, “synchronous, one after another,” (nacheinander im Take SYNCHRON). They repeat the text, “talk intersects talk and there is there is not not.”

The bass I section performs in two sub-moments of moment 3: sub-moment 1, and sub-moment 7. In both sub-moments they perform synchronously. Each member of the section chooses pitches in the range of E₂ to D₃ between a forte and mezzo-forte volume. They are given the further instruction to perform, “individual short chords, with some that are longer to be inserted by a singer. (Perform) slowly, with very irregular (time) intervals, changing pitch between each syllable,” (einzelne kurze Akkorde, einige länger, (ein sänger gibt Einsätze) / langsam, ganz unregelmäßige Abstände / Tonhöhen zwischen (D/E) pro silbe ändern). They are given the character indication of, “like a drunkard, sometimes screaming, with hiccups,” (wie betrunkene, manchmal gröhrend, mit schluckauf).

Stockhausen adds that, “screaming can be in a higher pitch,” (gröhlend kann in der tonhöhe höher sein). They recite a line of text that is split into two halves. During sub-moment 1 they recite the text, “afternoons more cracked.” During sub-moment 7 they recite the text, “and afternoons more cracked.” This essentially bookends the large-scale moment with the same phrase.

The bass II section performs in three sub-moments of moment 3: sub-moment 1, sub-moment 5 and sub-moment 7. They perform quickly and synchronously throughout, choosing pitches around the note G#2 in the range of E2 to D3. They are given the further rhythmic indication to, “alternate with pauses,” (Pusen variieren). They are given the character indication of, “as in jazz, cool – almost like plucked basses (acoustic basses),¹³ gradually changing into an affected snob,” (à la jazz, cool, fast wie zupfbäffe, allmählich übergehend in wie ein affektierter snob). They repeat the text, “or and or or,” according to a syllable “scheme,” which is accompanied by a composed dynamic profile. For example, the first number is seven, so the bass II section will recite the text linearly for seven syllables. “Fermatas always apply to the last note of each group (of syllables),” (Die Fermaten sind auf dem letzten Ton der jeweiligen Gruppe).

The technician is also given instructions during moment 3. These instructions do not change during any of the sub-moments. The amplitude of the soprano I section's ring modulator is to slowly crescendo and then decrescendo. The amplitude of the soprano II section's ring modulator is to aperiodically and unpredictably crescendo and decrescendo. Both the bass I and bass II section's ring modulators maintain a constant volume throughout at -10 dB below the normal level and +5 dB above the normal level respectively.

There is a notable degree of interpolation between moments 3 and 4. The soprano II and bass I s repeat the same text in both moments. Near the end of moment 3 the organ begins to sustain an A#3, which continues throughout moment 4. It is, as Stockhausen explains in his moment forming lecture, a very slow change so that, “the new moment comes into existence while the present moment is still

¹³ Powell, Larson. 2010. (“Acoustic Basses” comes from Larson)

continuing.”¹⁴ This creates an ambiguity as to where moment 3 ends and moment 4 begins. Because moment 4 is only 34 units in comparison to moment 3’s 144, this interpolation mitigates the change of proportion between the two moments. That is to say that maintaining some characteristics of moment 3 during moment 4 prevents the listener from feeling that time has drastically sped up when moment 4 begins despite the change of proportion.

The full score of moments 1, 2 and 3 are provided in appendix B of this paper.

Analytical Conclusions

The deconstruction of moments 1, 2, and 3 in relatively minute detail necessitates a hint of summation and some concluding observations about the piece as a whole. The pitched and rhythmic content of the piece is largely aleatoric. There are some later moments that include more precisely notated rhythms and pitches, but these are the exception and not the rule. Because the signal from the organ is used as the modulation frequency on the four ring modulators for the chorus, the aleatoric material given to both the organ and the chorus inevitably produces ring modulated timbres that inhabit a range of unpredictability. During some moments, as in moment 1, the effect of the organ’s A5 modulating the soprano I section’s A5 should always be the same. However, the speaking given to the bass I and II sections will produce indeterminate timbres because it is impossible for the performer to intone the words with the same precision as sung text. Timbral variation is therefore inherently built into the piece, and is one of its characteristics which most captures the listener’s attention.

The wide range of timbres heard as a result of the ring modulation is augmented by a wide range of character instructions given to the singers. The sheer quantity of unique characters in the first three moments of *Mikrophonie II* alone are impressive, ranging from “drunkenly” to “priestly.” This continues into the other movements with such colorful and bizarre indications as that of a “toothless old woman.”¹⁵ The character instructions serve the purpose of clarifying Heissenbüttel’s text to a degree, which is necessary due to its nonsensical nature. Character instructions add further interest for listeners

¹⁴ Maconie, Robin. 1989. pg. 63-64

¹⁵ Powell, Larson. 2010.

who cannot understand the German text – if one cannot understand the meaning of the words, they can at least hear solemnity or snobbishness and extrapolate some meaning.

Perhaps the most interesting element of *Mikrophonie II* is the underlying aesthetic of time. From moment to moment this functions as a *macro-time structuring*. Moments in *Mikrophonie II* are structured in such a way that the listener's experience of time speeds up, or slows down from one moment to the next. This is not achieved through tempo, or even through strategic rhythmic divisions as in earlier European music. The effect is instead created by maintaining "constant characteristics" for greater or lesser durations. Interpolation occurs between moments, such as when some characteristics of moment 3 are continued in moment 4. This adds further interest to the time aesthetic by introducing a sense of ambiguity.

Within moments there is also a *micro-time structuring*. This is most apparent in the aleatoric rhythmic indications, particularly in the differentiation between relatively clear "synchronous" settings and relatively chaotic "individual" settings of text in separate parts.. This differentiation creates a spectrum between relative chaos and order in the *micro-time* level of rhythm. For all of the timbral and textual fascination of *Mikrophonie II*, it is in the time domain that Stockhausen comes closest to ensuring the listener, "a new sort of experience of themselves and of their world."

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- 4) Stockhausen, Karlheinz. 1965. *Mikrophonie II*. Universal Edition.
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SIMPLE GRAMMATICAL MEDITATIONS

a [tautologies]

the shadow that I cast is the shadow that I cast
 the situation into which I have got is the situation into which I have got
 the situation into which I have got is yes and no
 situation my situation my special situation
 groups of groups move across empty planes
 groups of groups move across pure colours
 groups of groups move across the shadow that I cast
 the shadow that I cast is the shadow that I cast
 groups of groups move across the shadow that I cast and vanish

b

the blackness of the water and the punctuality of the lights
 the blackness of the water and the occasionalness of the reflections
 regions and regions and landscapes
 landscapes that I have coloured and landscapes that I have not
 the occasionalness of the shadows and the chromaticism of bright things
 the blackness of black things and the chromaticism of bright patches
 yellow red yellowish red and red red red
 regions and landscapes and or
 or and or or

c [subjunctive]

up to the middle of the half
 less than too little
 least of all
 as though as though
 probably probably
 took upon himself did not take upon himself
 undecided
 provisionally provisional

d

iron-hatching of mirrorings and reflections and afternoons
 afternoons and afternoons and afternoons
 afternoons are more current than pasts
 afternoons are not more frequent than pasts
 the afternoon by which I denote is more denotable than pasts
 slowly receded afternoons through a cross-hatching of mirrorings
 goings-on that have gone away refer
 cracked mirror surfaces and afternoons more cracked
 afternoons more cracked and afternoons more cracked

e

small black verticals intersect slow black horizontals
 rain-shaped things intersect rain-shaped things
 squads of walls
 small black sad rectangles incessantly roaming
 hesitant diagonals
 finite straight lines intersecting
 in any case in the given case I talk talk
 talk intersects talk and there is there is not not
 talk intersects talk and there is there is no such thing none and never
 never

f [participial]

waiting waiting to have waited
 to be waited
 brought round not brought round to have been brought round
 retracted retractions
 noises stretched across
 noises stretched across from finite points of time
 retracted retractions retractable directed at
 erected directed at an erected direction
 erected directions from infinite points of time

Appendix B

S 80
M 52

MIKROPHONIE II

Karlheinz Stockhausen

SI dirigieren *

Einsätze flüstersilben

1

2

<p>kontin. Klangfarbenwechsel, immer Grundton</p> <p>konst.</p> <p><i>mf</i></p>	<p>kontin. / vibr. / extrem hoch (2')</p> <p>cluster 2 Okt.....</p> <p>konst.</p> <p><i>pp</i></p>
<p>SYNCHRON / schnell</p> <p>feierlicher Levitenton</p> <p><i>mf</i></p> <p>Der Schä - tten den ich wer - fe ist der Scha - tten den ich wer - fe</p>	<p>ALLE SYNCHRON / flüstern</p> <p>im normalen Sprechrhythmus</p>
<p>SYNCHRON / tief sprechen, verschiedene sprechtöne</p> <p>kurze Silben</p> <p>accel. -----</p> <p>Par - ti - zi - pi - al</p> <p><i>f</i></p>	<p>Bis zur Mit - te der Häl - te</p> <p><i>f</i></p>
<p>SYNCHRON / tief sprechen, verschiedene sprechtöne</p> <p>kurze Silben</p> <p>accel. -----</p> <p>Par - ti - zi - pi - al</p> <p><i>f</i></p>	<p>ad lib. Silben ganz verständlich lassen</p>

SI
N

SII

BI+II
N

* diese Angaben stammen aus der Uraufführung; wo nichts angegeben, dirigierte bei SYNCHRON in jeder Gruppe 1 Sänger(in).

Beginn ca 3" vor **2** **Tonband Gesang der Jünglinge** ab 1' 1,5" (← langsam) bis 1' 11,5" (→ schnell) (in Spur V ab: | preiset den Herren, preiset den) noch ca 4" länger

pp

M
1556
S. 86
M52

Chor in 7 Abschnitten dirigieren:



3

etc. langsam / manchmal vibr.

mischen

zuerst ruhig, dann zunehmend dynamische Wechsel

Einzelnote / äußerst langsam period., manchmal unterbrochen

staccato mit langem nachklang und hall

klangfarbenwechsel manchmal / *kontin.* /

Richtung dunkel $\xrightarrow{\text{hell}}$, immer Grundton

p

S I

N
langsam

SYNCHRON / sehr langsam / Dichte 3, 2, 1, wechseln *ad lib.* / von ca 105 ab NICHT MEHR SYNCHRON

feierlicher Levitenton bei ca 105 allmählich übergehend in sexy, verführerisch mit kleinen *Glissandi* um C#

pp [Die Lā - ge in die ich ge - kom - men bin ist die La - ge in die ich ge - kom - men bin]

etwas über folgenden Anfang überklingen

S II

N
aperiod.

langsam / *syll.* bei ca 43 schnell, *melism.* Gruppen (manchmal *syll.*) bei ca 109 langsam *syll.* (manchmal *melism.*)

im 3er-Takt *accel.* im 4rer-Takt im 4rer-Takt

wie ein Baby barocker Inventionsstil, froh à la Jazz, slow

mf sich gegenseitig zusingend und abtauschend etwas heiser

INDIVIDUELL [Re - de ü - ber - quert Re - de, und es gibt es gibt es nicht nicht]

ab 128 nacheinander im Takt SYNCHRON

B I

-10 konst.

SYNCHRON, einzelne kurze Akkorde, einige länger (ein Sänger gibt Einsätze) / langsam, ganz unregelmäßige Abstände / Tonhöhen zwischen $\frac{D}{E}$ pro Silbe ändern

wie Betrunkene, manchmal gröhlend, mit Schluckauf (gröhlend kann in der Tonhöhe höher sein)

f / *mf*

Ge - sprun - ge - ne - re Nach - mit - ta - ge und ge - sprun - ge - ne - re Nach - mit - ta - ge

Fortsetzung in **4**

B II

N/+5

SYNCHRON / schnelle Gruppen um G# / Pausen variieren

à la Jazz, cool, fast - wie Supfbässe allmählich übergehend in wie ein affektierter Snob

[o - der und o - der o - der] Die Fermaten sind auf dem letzten Ton der jeweiligen Gruppe

Gruppen: [V 7 3 2 9 5 6 4 8 1 4 9 7 6 3 8 1 2 5]

bei ca 25 ca 35 ca 72 ca 100 ca 109

p *mf* *pp*