

*How Much Better if Plymouth Rock
Had Landed on the Pilgrims*

David Rosenboom

(collected notations)

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Introductory Note

How Much Better if Plymouth Rock Had Landed on the Pilgrims is a body of work developed through continuous practice and aural transmission, utilizing particular musical, technical, and active focused listening practices, without relying a great deal on notating structural forms in typical Western style. The documentation of the overall work lies in experiencing these practices and passing them on, in performances, and in an archive of recordings. This collection contains a combination of original manuscripts and some of the subsequent notations used to develop later performances and recordings.

At the time of its origin, *How Much Better if Plymouth Rock Had Landed on the Pilgrims* functioned more like a way of life than a piece, emphasizing individual practice, collaboration, and emergence. It is both strict, asking for discipline, and very free, offering opportunities for creative growth.

The work's nine sections have been given subtitles as follows:

Section I (essential tension to universe)
Section II (symmetrical harmonies in chaotic orbits)
 Section III (world)
 Section IV (life)
 Section V (humanity)
 Section VI (culture)
 Section VII (impression)
 Section VIII (unification)
 Section IX (links)

Many varied realizations have emerged, and a number of them have been recorded and released. Creative musicians are encouraged to contribute to the continued evolution of this practice.

Additional Notes on Sections

Section I (essential tension to universe) — a composition koan to be realized through personal contemplation of infinite possibilities. An example realization for twenty celli is provided.

Section II (symmetrical harmonies in chaotic orbits) — to date, this has been realized with voltage-controlled, chaotic frequency dividers, additional electronics, and other instruments. Other possibilities are limitless.

Section III (world) — find an inspiring acoustic environment and follow the score prompt. An example of frequencies selected for a realization in a large subterranean space are shown.

Section IV (life) — examples from a realization tuned for Central Park, New York are provided. A performance could be outdoors. Another possibility is to make field recordings with which musicians may interact in other spaces, treating sounds as their scores.

Section V (humanity) — the original manuscript's pattern materials are provided along with parts prepared later for instruments in various keys. Realizations for electronic systems and instrumentalists from around the world have been made and are encouraged.

Section VI (culture) — both original and rewritten scores are provided for convenience. Realizations for varied ensembles, including dual progressive rock bands, have been made.

Section VII (impression) — the original manuscript shows an open-form, gradual process piece. Materials are also provided showing how a piano was tuned to match instruments in a Balinese gamelan. An altered score for that version is provided, in which the written notes are altered to show the piano keys that must be played on the retuned piano. Instruments from around the world may be used.

Section VIII (unification) — the original manuscript, which invokes a human delay chain, is provided along with materials that were made later for realizations involving multiple trumpets and accompanying keyboard(s). Other instruments may be used, and versions employing electronic delay systems may be made as well.

Section IX (links) — this is a gradual process piece for fast, continuous permutations and combinations of short, three-note patterns. The original score was also known as *Piano Etude I*. That version is provided along with a condensed, one-page score showing the pattern modules with guidelines.

David Rosenboom

May 1, 2021

Valencia, California

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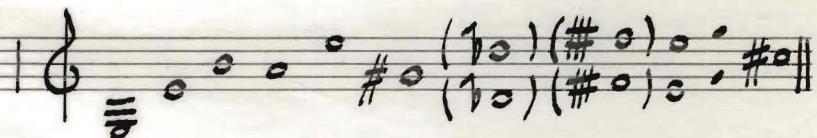
How Much Better If Plymouth Rock Had Landed On The Pilgrims

David Rosenboom
New York / Toronto / ...

1969-1972-...

I. Start with one tone. Proceed to the next tone when you know what it should be.

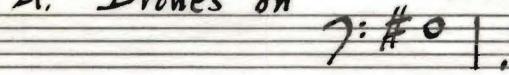
II. A piece using frequency dividers, Pythagorean intervals and improvisations on tones that enter in the following order:



III. Tune the pieces to the ecological and geographical resonances of the areas in which they are to be played. As you would according to the acoustic or geological resonances of a room or a canyon. Birds are good instructors.

IV. A piece tuned for Central Park, (72nd Street, West Side area).

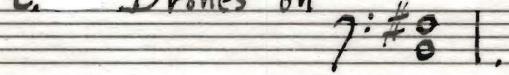
A. Drones on



B. Glissandi



C. Drones on



D. Improvisation mode



E. Subordinate keys



The wildlife of the area have learned this piece and perform it usually around 5:00 AM each day in Spring. Microtonal

intervals are used as tension controlling devices.

5/17/69

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How Much Better If Plymouth Rock Had Landed On The Pilgrims

Realization of Section I

David Rosenboom

for Erika Duke-Kirkpatrick

1969 and 2008

"Start with one tone. Proceed to the next tone when you know what it should be."

essential tension to . . .

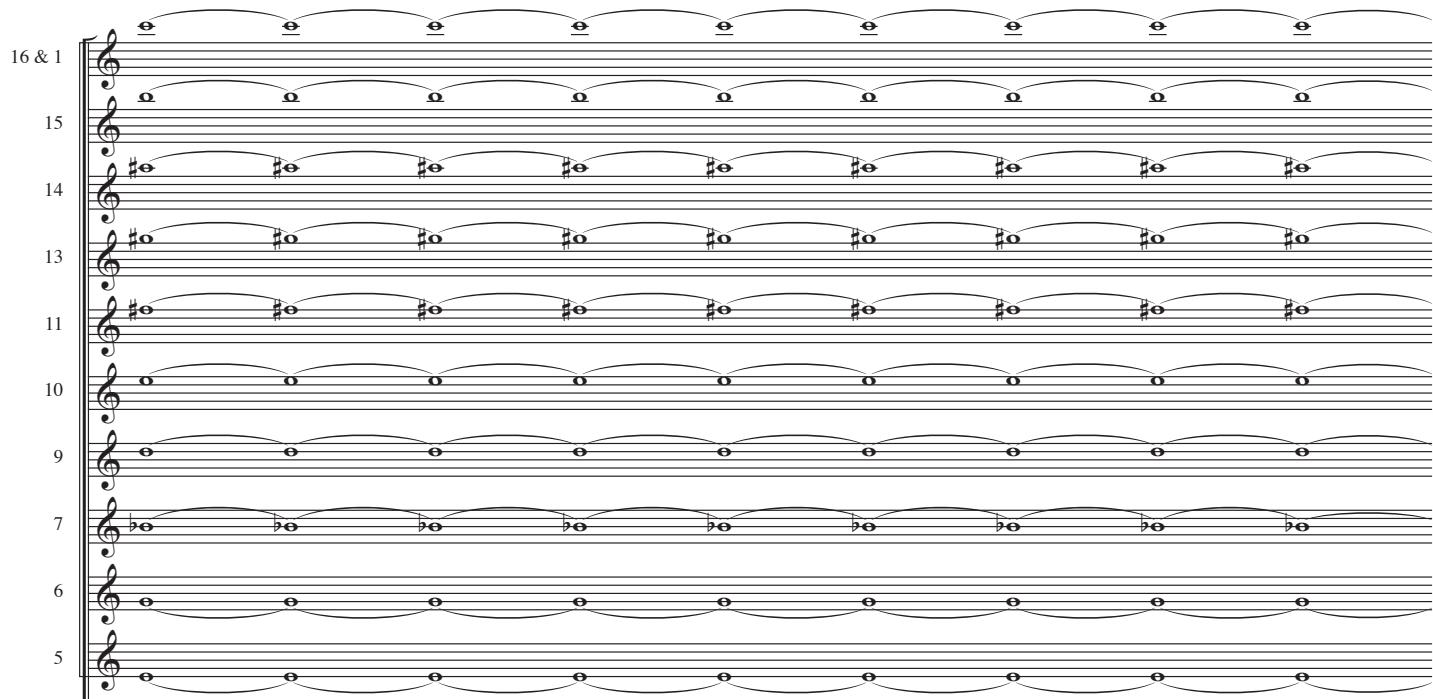
Twenty Celli

Hold for a very long time.

See harmonic and subharmonic ratios and frequencies chart.

... a universe chord

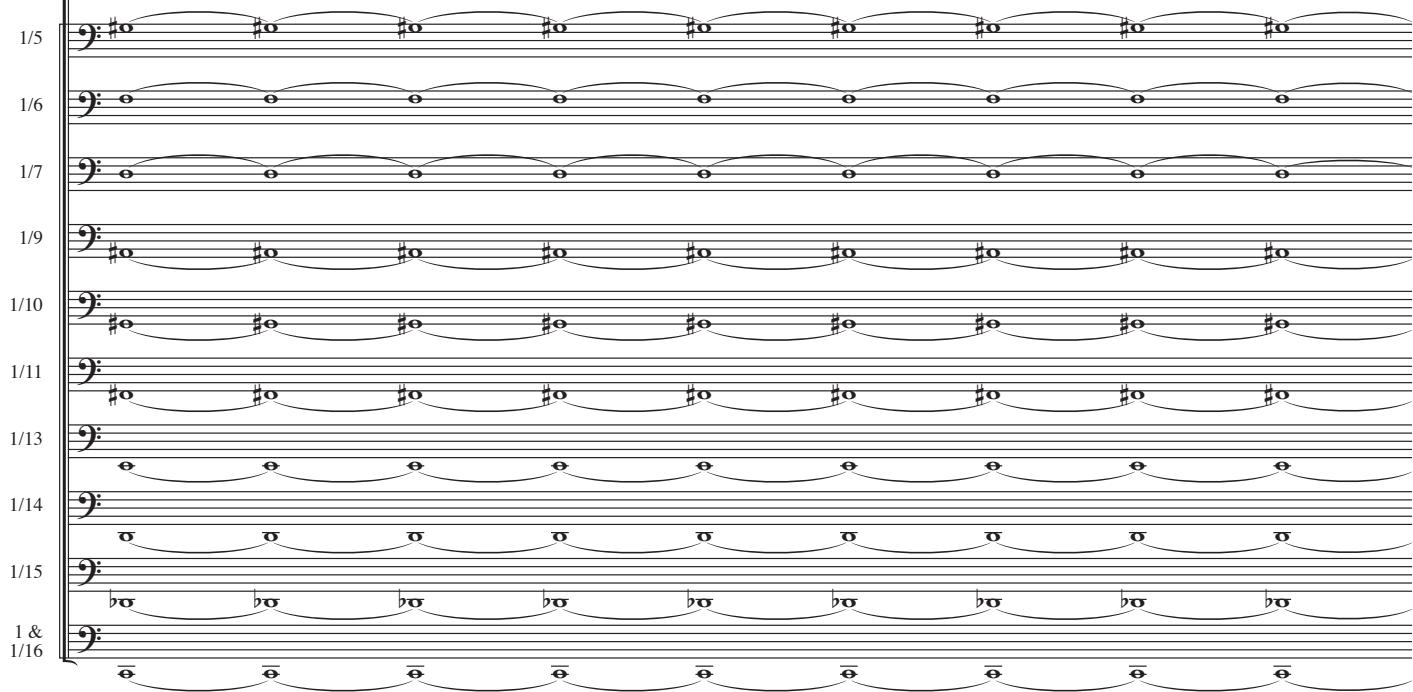
Harmonics



Musical score for harmonics on a treble clef staff. The staff has 16 lines, numbered 16 & 1 at the top down to 1/16 at the bottom. Notes are represented by small circles with stems. The notes are held over multiple measures, creating a sustained harmonic texture.

Continue holding for a very long time.

Subharmonics



Musical score for subharmonics on a bass clef staff. The staff has 16 lines, numbered 1/5 at the top down to 1/16 at the bottom. Notes are represented by small circles with stems. The notes are held over multiple measures, creating a sustained subharmonic texture. A bracket at the bottom spans all 16 lines.

16 & 1

15
14
13
11
10
9
7
6
5

Carefully placed, staggered, very subtle crescendi and diminuendi may be employed occasionally to shift the focus of attention among the internal substructures of the chord complex. Those shown on this page are examples. The quantity and density of these may be varied over a considerable range. Continue as long as desired.

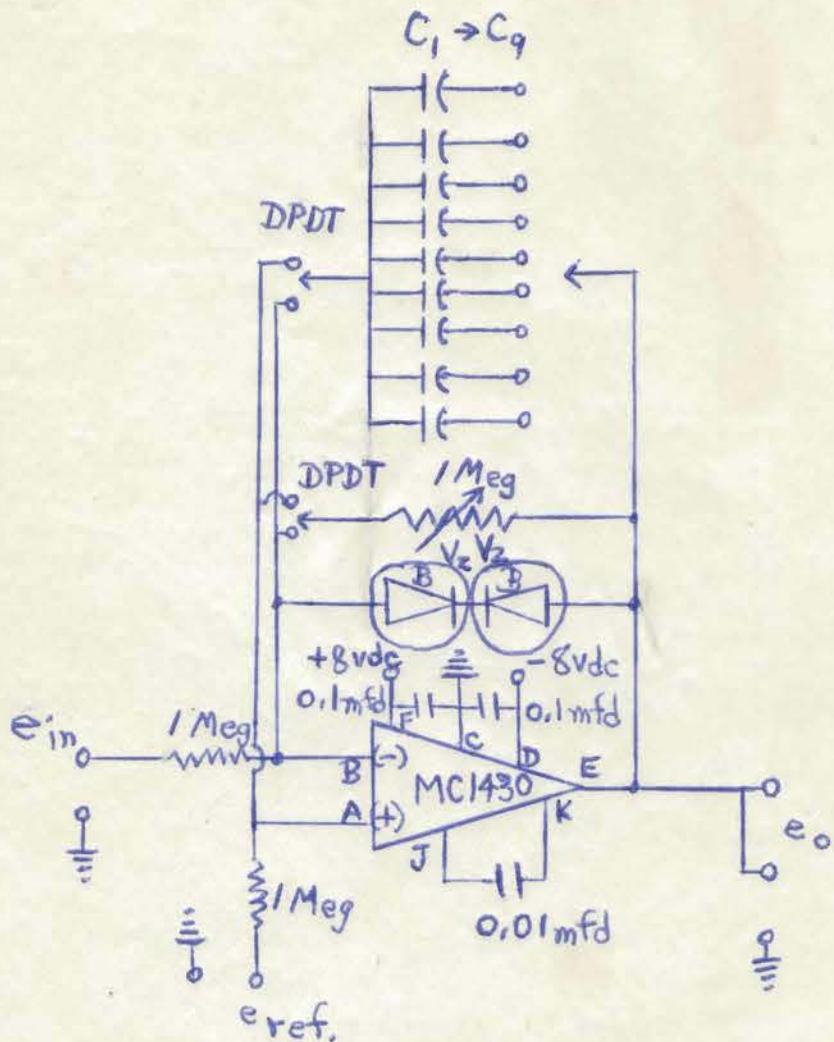
1/5
1/6
1/7
1/9
1/10
1/11
1/13
1/14
1/15
1 & 1/16

Harmonic and subharmonic ratios and frequencies used in “A Universe Chord”

Mult/Div Order	Contiguous Ratios	Harmonic (Mult)			Subharmonic (Div)			Hrm/Sbhrm Diad Ratios
		Nearest Name	Freq Hz if C4=256	Freq Hz if A4=440	Nearest Name	Freq Hz if C4=256	Freq Hz if A4=440	
16	1.067	C6	1024.00	1046.56	C2	64.00	65.41	16/1
15	1.071	B5	960.00	981.15	C#2	68.27	69.77	225/16
14	1.077	A#5	896.00	915.74	D2	73.14	74.75	49/4
13	1.083	G#5	832.00	850.33	E2	78.77	80.50	169/16
12	1.091	G5	768.00	784.92	F2	85.33	87.21	9/1
11	1.100	F#5	704.00	719.51	F#2	93.09	95.14	121/16
10	1.111	E5	640.00	654.10	G#2	102.40	104.66	25/4
9	1.125	D5	576.00	588.69	A#2	113.78	116.28	81/16
8	1.143	C5	512.00	523.28	C3	128.00	130.82	4/1
7	1.167	A#4	448.00	457.87	D3	146.29	149.51	49/16
6	1.200	G4	384.00	392.46	F3	170.67	174.43	9/4
5	1.250	E4	320.00	327.05	G#3	204.80	209.31	25/16
4	1.333	C4	256.00	261.64	C4	256.00	261.64	1/1
3	1.500	G3	192.00	196.23	F4	341.33	348.85	9/16
2	2.000	C3	128.00	130.82	C5	512.00	523.28	1/4
1	1.000	C2	64.00	65.41	C6	1024.00	1046.56	1/16
		Tempo MM=64	Tempo MM=65.41		Tempo MM=64	Tempo MM=65.41		

Performance Circuitry for
HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS
David Rosenboom

DIAGRAM C:

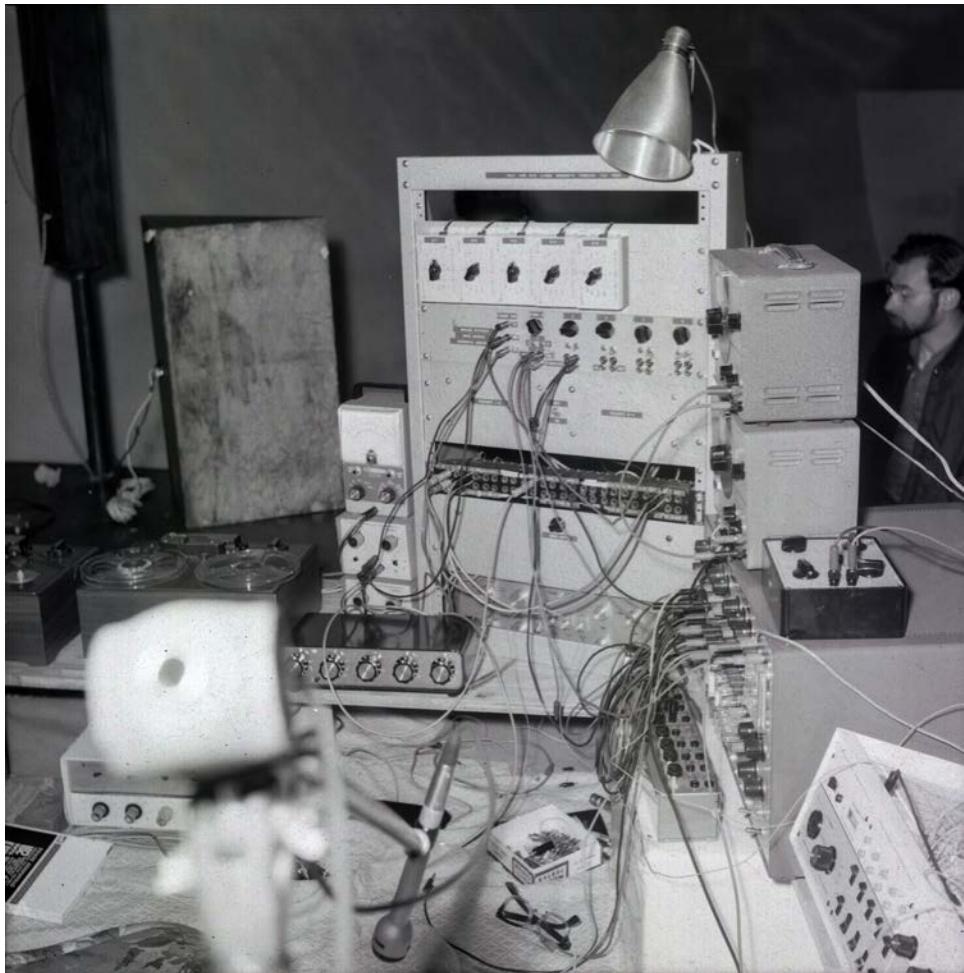


Repeat for modules 2 through 5. Buss all ground and power connections to single banana jacks for +8, -8, and gnd. V_z is 15 volts. C_1 through C_9 are variable capacitance steps from 0.0001 mfd to 0.22 mfd. Operating formula for Schmitt trigger, (feedback pot and capacitors not connected) is:

for e_{in}

$$e_o = +V_z \text{ IF } e_{in} < e_{ref} \quad \text{OR} \quad e_o = -V_z \text{ IF } e_{in} > e_{ref}$$

$$e_o \text{ (waveform)} \quad \text{(A square wave waveform with sharp edges.)}$$



Electronic system setup for a performance of *How Much Better if Plymouth Rock Had Landed on the Pilgrims* at the Electric Circus in New York, NY on May 19, 1969. The voltage-controlled, chaotic frequency dividers are in the second panel down from the top of the rack showing six knobs and wires patched to them.

Frequencies used in a subterranean version of Section III

		Nearest
	Freq Hz	Name
Basic resonance	64.91	C
Final tone	129.82	C
M7th + octave below added, (12th root of 2 * C below)	34.38	C#
Frequency divisions for opening chord		
1/15	69.27	C#
1/13	80.00	E
1/11	94.64	F#
1/10	104.16	G#
1/9	115.78	A#

Sunday approx.

Location recordings

6/17/07 5:40 - 7:05AM

Central Park

birds + other wildlife, general environment

concentrated in tree groves with high

canopies off Central Park West in

vicinity between 72nd and 77th Streets

wooded areas, sometimes passing bicyclists,

roller skaters, joggers, walkers, service vehicles

ambient traffic + city sound grows

gradually -

Marantz PMD 670 solid state recorder

Audio-Technica AT825 stereo condiod

condenser microphone - hand held

6 tracks recorded

✓ n.d. = 66



Bird solo given in grove just above 77th st

on leaving the park - not recorded -

stopped after a few minutes repetition -

may be basis for a ground

Two sets of frequencies used in the “Central Park” version of Section IV

Nearest Name	Freq Hz	Multiplier from lowest frequency
Set 1		
B1	61.74	1.00
B2	123.48	2.00
D#2	154.35	2.50
E2	164.23	2.66
F#2	185.22	3.00
A2	216.09	3.50
Set 2		
C1	65.41	1.00
C2	130.82	2.00
E2	163.53	2.50
F2	173.99	2.66
G2	196.23	3.00
A#2	228.94	3.50

V. Bass pattern

Play in all phases, separately or together, (A+B)

Mode I.

Upper patterns:

Tag



SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

BASS PATTERN

Musical score for Bass Pattern A, C, and B. The score consists of three staves. Staff A (top) shows a continuous eighth-note pattern. Staff C (middle) shows a continuous quarter-note pattern. Staff B (bottom) shows a continuous eighth-note pattern. The key signature is two sharps, and the time signature is common time.

PLAY IN ALL PHASES, SEPARATELY OR TOGETHER, (A & B)

Continuation of the musical score for Bass Pattern A and C. The top staff (A) continues its eighth-note pattern, and the middle staff (C) continues its quarter-note pattern. The key signature remains two sharps.

Continuation of the musical score for Bass Pattern A and C. The top staff (A) continues its eighth-note pattern, and the middle staff (C) continues its quarter-note pattern. The key signature remains two sharps.

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

C MODE I.

UPPER PATTERNS:

USE ALL COMBINATIONS

TAG

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

BASS PATTERN

A

Bb 5:6

B

PLAY IN ALL PHASES, SEPARATELY OR TOGETHER, (A & B)

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

Bb MODE I.

UPPER PATTERNS:

USE ALL COMBINATIONS

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

BASS PATTERN

A

A 5:6

B

PLAY IN ALL PHASES, SEPARATELY OR TOGETHER, (A & B)

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

A MODE I.

UPPER PATTERNS:

USE ALL COMBINATIONS

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

BASS PATTERN

A

Eb 5:6

B

The musical score consists of two staves, A and B, for a bass instrument. Staff A is in treble clef and staff B is in bass clef. Both staves are in a key signature of seven sharps. The time signature is 5:6. The music is divided into measures by vertical bar lines. Staff A has eighth-note patterns: the first measure has a single eighth note, followed by a sixteenth note, then a eighth-note pair, then a eighth-note pair; the second measure has a eighth-note pair, then a eighth-note pair. Staff B has sixteenth-note patterns: the first measure has a eighth-note pair, then a eighth-note pair; the second measure has a eighth-note pair, then a eighth-note pair.

PLAY IN ALL PHASES, SEPARATELY OR TOGETHER, (A & B)

This section shows the continuation of the bass patterns from staves A and B. The patterns are identical to the ones shown above, maintaining the treble and bass clefs, seven sharps key signature, and 5:6 time signature.

This section shows the continuation of the bass patterns from staves A and B. The patterns are identical to the ones shown above, maintaining the treble and bass clefs, seven sharps key signature, and 5:6 time signature.

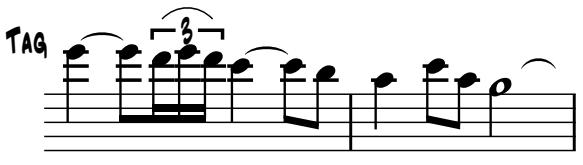
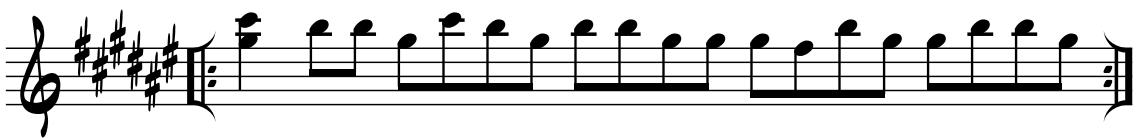
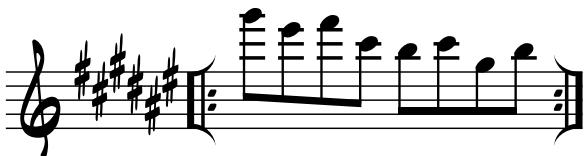
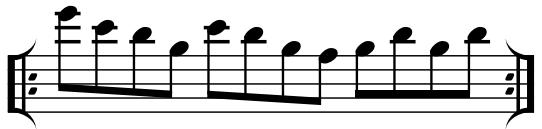
SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)



UPPER PATTERNS:



USE ALL COMBINATIONS

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

BASS PATTERN

A

Eb 8vb 5:6

B

The musical score consists of two staves. Staff A starts with a bass clef, a key signature of five sharps, and a 5:6 time signature. It features a continuous eighth-note pattern. Staff B starts with a bass clef, a key signature of five sharps, and a 5:6 time signature. It features a continuous sixteenth-note pattern. Both staves are divided by vertical bar lines into measures.

PLAY IN ALL PHASES, SEPARATELY OR TOGETHER, (A & B)

Three additional staves of musical notation are shown, continuing the bass patterns established in staff A and staff B. The top staff uses a bass clef, a key signature of five sharps, and a 5:6 time signature. The middle staff uses a bass clef, a key signature of five sharps, and a 5:6 time signature. The bottom staff uses a bass clef, a key signature of five sharps, and a 5:6 time signature.

SECTION V

HOW MUCH BETTER IF PLYMOUTH
ROCK HAD LANDED ON THE PILGRIMS

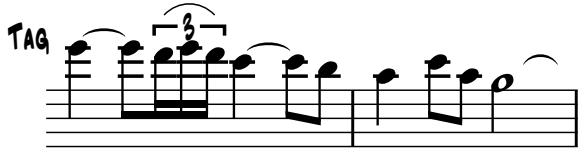
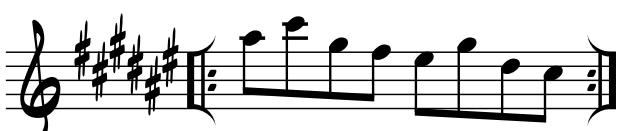
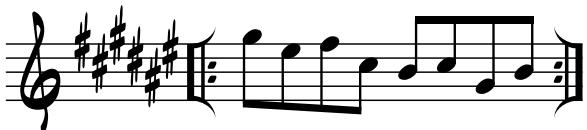
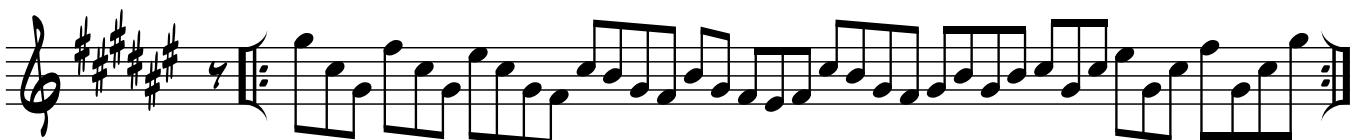
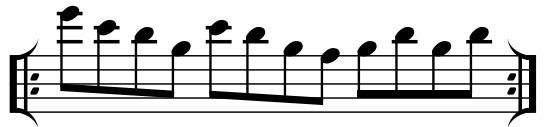
DAVID ROSENBOOM (1969)



UPPER PATTERNS:



(SOME PATTERNS TRANPOSED 8VB FOR EASE OF READING)



USE ALL COMBINATIONS

VI. Traveling music version of II.

$\ddot{\text{D}}$ = traveling

----- etc.

SECTION VI. TRAVELING

MUSIC VERSION OF V.

HOW MUCH BETTER IF PLYMOUTH ROCK
HAD LANDED ON THE PILGRIMS

DAVID ROSENBOOM (1969)

1/8 = TRAVELING

The musical score is divided into two systems. Each system contains four staves, likely for a quartet of instruments or voices. The top staff in each system is a bass clef staff, the second is a treble clef staff, the third is a bass clef staff, and the bottom is another bass clef staff. The time signature for both systems is 8/8. The key signature is A major (no sharps or flats). The music consists of eighth-note patterns and rests. Measure 1 of System 1 begins with a bass note, followed by a treble eighth-note pattern, then a bass eighth-note pattern, and finally another bass eighth-note pattern. Measure 2 of System 1 begins with a bass eighth-note pattern, followed by a treble eighth-note pattern, then a bass eighth-note pattern, and finally another bass eighth-note pattern. Measure 1 of System 2 begins with a bass eighth-note pattern, followed by a treble eighth-note pattern, then a bass eighth-note pattern, and finally another bass eighth-note pattern. Measure 2 of System 2 begins with a bass eighth-note pattern, followed by a treble eighth-note pattern, then a bass eighth-note pattern, and finally another bass eighth-note pattern.

HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS

Musical score for page 2, measures 6-7. The score consists of four staves. The top two staves are soprano voices, the third is a bassoon, and the bottom is a basso continuo staff with a harpsichord. Measure 6 starts with eighth-note patterns in the soprano voices. Measure 7 begins with a bassoon solo consisting of eighth-note chords. The bassoon part ends with a fermata over the first note of measure 8.

Musical score for page 2, measures 7-8. The soprano voices continue their eighth-note patterns. The bassoon reappears with eighth-note chords. The basso continuo staff shows sustained notes and bassoon entries. Measure 8 concludes with a final bassoon chord.

HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS

3

Musical score for measures 9 through 11. The score consists of five staves. The top two staves are soprano voices in common time, both starting with a dynamic of 9. The third staff is a bassoon part in common time, starting with a dynamic of 9. The fourth staff is a bassoon part in common time, starting with a dynamic of 9. The fifth staff is a bassoon part in common time, starting with a dynamic of 9. Measure 9 starts with eighth-note patterns in the soprano voices. Measure 10 continues with eighth-note patterns. Measure 11 begins with a dynamic of 11.

Musical score for measures 12 through 14. The structure is identical to the previous section, with five staves. The top two staves are soprano voices in common time, starting with a dynamic of 11. The third staff is a bassoon part in common time, starting with a dynamic of 11. The fourth staff is a bassoon part in common time, starting with a dynamic of 11. The fifth staff is a bassoon part in common time, starting with a dynamic of 11. Measure 12 starts with eighth-note patterns in the soprano voices. Measure 13 continues with eighth-note patterns. Measure 14 begins with a dynamic of 11.

HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS

Musical score for page 4, measures 13-18. The score consists of five staves. Measures 13 and 14 feature two soprano voices in treble clef. Measures 15 and 16 show a bassoon in bass clef. Measures 17 and 18 include a cello in bass clef. Measure 18 concludes with a bassoon solo.

Musical score for page 4, measures 15-18. The score continues with the same five staves. Measures 15 and 16 show the soprano voices. Measures 17 and 18 show the bassoon. Measure 18 ends with a bassoon solo.

HOW MUCH BETTER IF PLYMOUTH ROCK HAD LANDED ON THE PILGRIMS

5

Musical score for measures 17 through 20. The score consists of four staves. The top two staves are soprano voices in common time, both in G major (indicated by a sharp sign). The third staff is a bassoon in common time, also in G major. The fourth staff is a bass drum in common time, indicated by a double bar line and a bass clef. Measure 17 starts with eighth-note patterns in the soprano voices. Measure 18 continues with eighth-note patterns. Measure 19 begins with a dynamic change, indicated by a small box containing the number 5. Measure 20 concludes the section.

Musical score for measures 19 through 22. The structure remains the same: two soprano voices, bassoon, and bass drum. Measures 19 and 20 continue the eighth-note patterns established in the previous section. Measure 21 begins with a dynamic change, indicated by a small box containing the number 5. Measure 22 concludes the section.

DAVID ROSENBOOM - How Much Better If Plymouth
Rock Had Landed on the Pilgrims

(spontaneous)

SECTION VI - Recording Session 10/20/08

IN C (Preplanned Phrases for Horns)

11 12 13 14 15

(material added by Daniel Rosenboom)

VII. Fast, impressionistic (b. \approx 65)

The musical score is handwritten on five staves of five-line staff paper. The first staff begins with a treble clef, a common time signature, and a key signature of one sharp. It consists of two measures. The second staff begins with a bass clef, a common time signature, and a key signature of one sharp. It also consists of two measures. The third staff begins with a treble clef, a common time signature, and a key signature of one sharp. It consists of five measures. The fourth staff begins with a bass clef, a common time signature, and a key signature of one sharp. It consists of four measures. The fifth staff begins with a treble clef, a common time signature, and a key signature of one sharp. It consists of three measures. The music is divided into measures by vertical bar lines and includes repeat signs with endings.

Piano Tunings for III

Jegog

Calumy

Pernade

How Much Better If Plymouth Rock Had Landed On The Pilgrims

Section VII (Extended)

David Rosenboom

(impression)

Fast, impressionistic $\text{♩} = 65$

The musical score consists of five systems of music, each with two staves (treble and bass). The key signature is A major (no sharps or flats). The tempo is indicated as $\text{♩} = 65$. The score is labeled "Fast, impressionistic". Performance instructions are placed in boxes above the staves:

- System 1: 16Xs
- System 2: 18Xs, 6Xs
- System 4: 24Xs, 8Xs
- System 6: 24Xs, 8Xs
- System 8: 16Xs or 8 12/8 bars, 16Xs or 8 12/8 bars

System 8 includes a measure repeat sign.

How Much Better If Plymouth Rock Had Landed On The Pilgrims

The sheet music consists of six staves of music. The first two staves (measures 12-15) show two pairs of measures, each consisting of four eighth-note chords. Measure 12 starts with a treble clef, a key signature of one sharp, and a common time signature. Measure 13 starts with a bass clef, a key signature of one sharp, and a common time signature. Measures 14 and 15 start with a treble clef, a key signature of one sharp, and a common time signature. The third staff (measures 16-19) shows two pairs of measures, each consisting of four eighth-note chords. Measure 16 starts with a treble clef, a key signature of one sharp, and a common time signature. Measure 17 starts with a bass clef, a key signature of one sharp, and a common time signature. Measures 18 and 19 start with a treble clef, a key signature of one sharp, and a common time signature. The fourth staff (measures 20-23) shows two pairs of measures, each consisting of four eighth-note chords. Measure 20 starts with a bass clef, a key signature of one sharp, and a common time signature. Measure 21 starts with a bass clef, a key signature of one sharp, and a common time signature. Measures 22 and 23 start with a treble clef, a key signature of one sharp, and a common time signature. The fifth staff (measures 24-27) shows two pairs of measures, each consisting of four eighth-note chords. Measure 24 starts with a treble clef, a key signature of one sharp, and a common time signature. Measure 25 starts with a bass clef, a key signature of one sharp, and a common time signature. Measures 26 and 27 start with a treble clef, a key signature of one sharp, and a common time signature. Measure 27 concludes with a fermata over the bass clef staff.

16Xs or 8 12/8 bars 16Xs or 8 12/8 bars

12

12

16Xs or 8 12/8 bars 16Xs or 8 12/8 bars

16

16

48Xs or 24 12/8 bars

20

20

22

16Xs

22

23

16Xs

23

24

8Xs

24

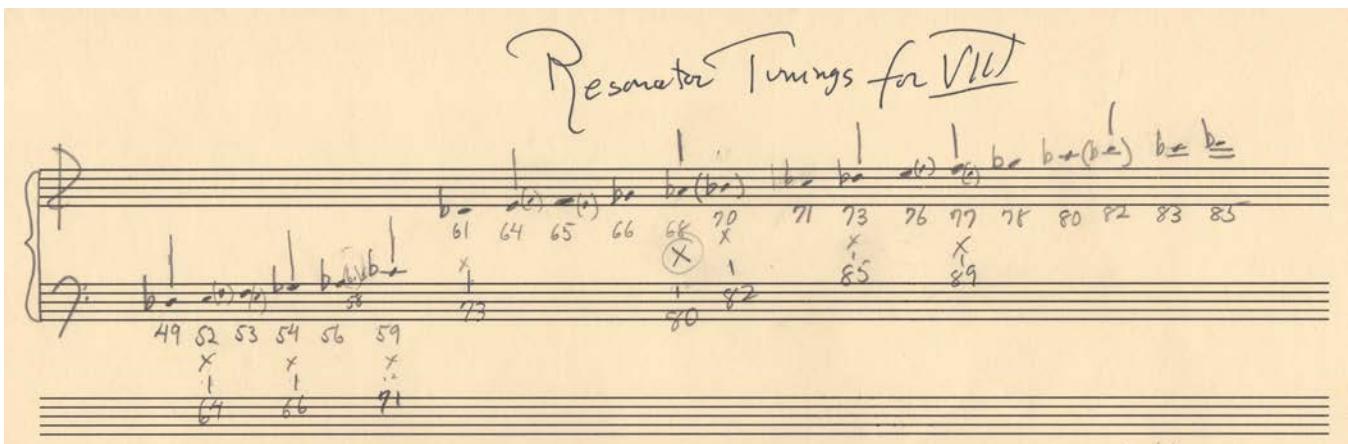
VIII. Follow the leader or raga canons.

Mode. ♪ b...b.b.b.b.b.b.b.b.b.b. (♩) embellishment tone

Human delay chain. Each person follows the person ahead of him, playing exactly what that person did a specified number of beats later.

One person is leader. Left hand follows right hand, thus:

Accompaniment:



In some performances and recordings, electronic resonators were used to provide a subtle electronic augmentation of the instruments performing. This chart shows the notes to which resonators were tuned and their corresponding MIDI numbers.

How Much Better if Plymouth Rock Had Landed on the Pilgrims

Section VIII "Follow the leader or raga canons." (arrangement for multiple trumpets)

David Rosenboom

Trumpets in Bb

1 2 3 4

7 5
Also play #5 in double time.

13 6

18 7 8
 (pedal)

22 the mode (embellishment tone)

Note adapted from original score: Human delay chain. Each person follows the person ahead of them, playing exactly what that person did a specific number of beats later. Chordal accompaniment to be played on keyboard/piano/organ/etc. (Practice lines at approx. MM=92-94.) There can be space for improvisations on "The mode." Each numbered musical unit is to be repeated many times in free canon form.

Accompaniment and Improvisation Material in C

Use with trumpet parts 4, 5, & 6.
Shift in all "phases." Try different octaves.

A musical staff in C minor (two flats) with a treble clef and a bass clef. It consists of four measures. The first measure shows a half note in the treble clef followed by a half note in the bass clef. The second measure shows a half note in the treble clef followed by a half note in the bass clef. The third measure shows a half note in the treble clef followed by a half note in the bass clef. The fourth measure shows a half note in the treble clef followed by a half note in the bass clef. Measures are separated by vertical bar lines.

Use in improvisations.

A musical staff in C minor (two flats) with a treble clef and a bass clef. It consists of two measures. The first measure shows a half note in the treble clef followed by a half note in the bass clef. The second measure shows a half note in the treble clef followed by a half note in the bass clef. Measures are separated by vertical bar lines.

Interval expansions to use in improvisation.

A musical staff in C minor (two flats) with a treble clef and a bass clef. It consists of a melodic line starting at measure 6. The melody consists of eighth notes. The treble clef line starts on A and moves up to B, then down to G, then up to A, then down to G, then up to A, then down to G, then up to A, then down to G. The bass clef line starts on E and moves up to F, then down to D, then up to E, then down to D, then up to E, then down to D, then up to E, then down to D. Measures are separated by vertical bar lines.

A musical staff in C minor (two flats) with a treble clef and a bass clef. It consists of a melodic line starting at measure 10. The melody consists of eighth notes. The treble clef line starts on A and moves up to B, then down to G, then up to A, then down to G, then up to A, then down to G, then up to A, then down to G. The bass clef line starts on E and moves up to F, then down to D, then up to E, then down to D, then up to E, then down to D, then up to E, then down to D. Measures are separated by vertical bar lines.

How Much Better If Plymouth Rock Had Landed On The Pilgrims

Section IX

David Rosenboom

1971

$\text{♩} = 102$

Repeating bass pattern

The musical score consists of three staves of music. The top staff is a bass staff with a repeating eighth-note pattern. The middle staff is a treble staff with patterns A1, A2, and A3. The bottom staff is a treble staff with patterns B1, B2, and B3. The score is numbered 2, 7, and 12 from left to right.

Used as connectors in longer combinations

A single treble staff starting at measure 17, showing a sequence of notes that connects the patterns shown above.

These basic patterns are used in an array of combinations and permutations to construct continuously streaming, fast sequences for a complete realization of Section IX. All pattern sequences, including the bass pattern, are re-combined with the delay of an odd number of 16th-notes in duration. The delayed patterns will begin on the 4th, 6th, 8th, ... 16th-note pulse of each cycle of the bass pattern. The delayed notes of the bass pattern will fit in between the original 8th-notes. The treble patterns are normally begun one 16th note pulse after the first note of the bass pattern. The patterns are also intended to be played by two or more players, who create rapid, interlocking patterns that fit in between each other, as in the techniques of *imbal* or *imbalan* in Javanese music and *kotekan* in Balinese music.

(Note: Keyboard players should use multiple finger techniques for the repeated notes. This was inspired by fast-finger repetitions in *tabla* playing. Also see the hand-written manuscript known as *Piano Etude I*.)

Piano Etude I
 from
*How Much Better If Plymouth Rock
 Had Landed On The Pilgrims*
 to J.B. Floyd David Rosenboom

INTRODUCTORY STATEMENT CONCERNING PIANO ETUDE I

David Rosenboom



In the course of experimentation with biofeedback and the arts in 1971, I became interested in the relationship between strong Alpha brain wave production by a subject and ideas surrounding endurance and execution of complex, repetitive, motor tasks, as one finds in some types of cyclic pattern music for instruments. I decided to attempt to construct a motor task, so complex in its execution and requiring such endurance, as to be impossible to complete, without interrupting the flow, unless one maintains a consistent, non-differentiating state of consciousness, similar to that associated with high Alpha output. Piano Etude I is the task that was constructed as a result of this thinking. It must be performed as if the entire piece were a single, long, smooth, motor gesture, made up of thousands of tiny, precise, vibrations, which must be executed perfectly without devoting selective attention to each one. The piece may be, (and has been), performed by one pianist, or the score may be divided into two parts, one containing the "stems-up" notes and one containing the "stems-down" notes. If this is done, the piece may be played by two pianists, alternating every other sixteenth note with each other at extremely high speed. This complex rhythmic task requires an in-phase, mental state on the parts of both players, which is similar to that often associated with high Alpha output and phasic synchrony between two players. These high speed pulse alternations are similar to those often encountered visually in an installation of Vancouver Piece, (elsewhere in this volume), when phasic synchrony results in rapid alternate superimpositions of one person's facial image over that of his partner.

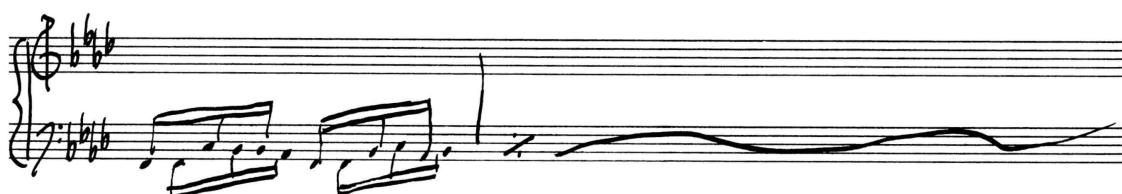
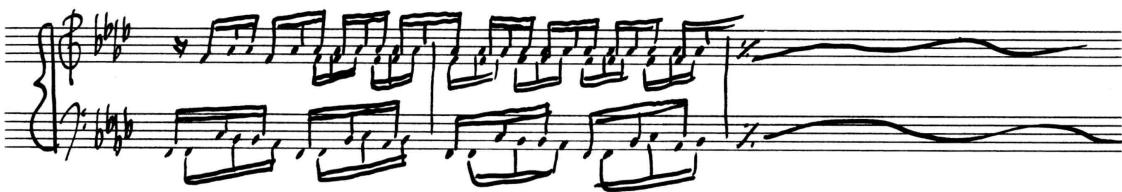
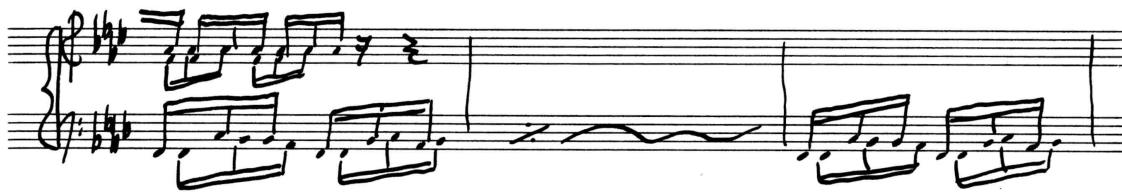
•David Rosenboom
Maple, Ontario, 1974

Fast
d. = 102 Portato

mf

12 16

The musical score consists of six staves of handwritten notation. The first staff begins with a treble clef, a key signature of four flats, and a tempo marking of *d. = 102*. It includes dynamics *Fast*, *Portato*, and *mf*, and rhythmic markings *12* and *16*. The subsequent staves continue the melodic line with various note heads, stems, and wavy lines indicating pitch and performance style. The notation is dense and expressive, typical of a composer's manuscript.

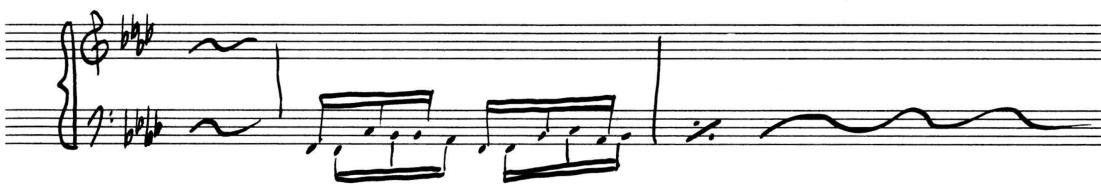
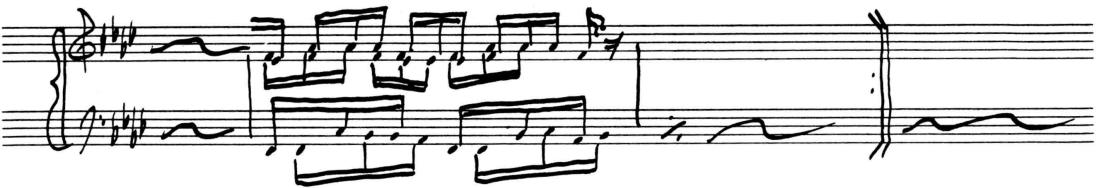


A handwritten musical score for two staves. The top staff begins with a bass clef, followed by a B-flat key signature, and a brace. It consists of a continuous series of eighth-note patterns. The bottom staff begins with a bass clef, followed by a B-flat key signature, and a brace. It also consists of a continuous series of eighth-note patterns.

A handwritten musical score on two staves. The top staff starts with a clef, a key signature of three sharps, and common time (C). It features a sixteenth-note pattern: a bracketed pair of eighth notes followed by a sixteenth note, then a sixteenth note followed by a bracketed pair of eighth notes. The bottom staff starts with a clef, a key signature of one sharp, and 7/16 time. It features a sixteenth-note pattern: a bracketed pair of eighth notes followed by a sixteenth note, then a sixteenth note followed by a bracketed pair of eighth notes.

A handwritten musical score for two voices. The top staff begins with a treble clef, a key signature of one sharp, and a common time signature. It consists of a single measure containing six eighth-note pairs. The bottom staff begins with a bass clef, a key signature of one sharp, and a common time signature. It also contains a single measure with six eighth-note pairs. Both staves end with a vertical bar line and a wavy line indicating the end of the measure.

A musical score for two voices. The top staff is for the soprano voice, starting with a treble clef, two sharps, and a common time signature. The first measure consists of a whole note followed by a fermata over a half note. The second measure starts with a fermata over a quarter note, followed by a eighth note tied to a sixteenth note, a quarter note, and another eighth note tied to a sixteenth note. The bottom staff is for the basso continuo, starting with a bass clef, one sharp, and common time. It features a continuous bass line with eighth-note patterns. Measures 1 and 2 are separated by a vertical bar line.













(~) = Repeat last complete bar indefinitely

(~ (x) ~) = Same for last 2 complete bars

Handwritten signature and date "1971 New York" on a five-line staff. The signature is written in cursive above the date, which is enclosed in a circle.

