

VARIATIONS FOR WORLDS BELOW

BOBBY GE

Alto saxophone, percussion, and piano

Score in C

2022

FOR PERUSAL USE ONLY

Instrumentation

Alto saxophone

Percussion:

Crotales
Glockenspiel
Vibraphone

Piano

Performance Notes

General:

Hairpins

- Hairpins should be played smoothly and should last for the notated duration. Notes are tied together solely to indicate hairpin duration, and should not be rearticulated. Similarly, glissandi should not be rearticulated across note values, unless otherwise indicated.

—○ - Hairpins with circles at the end indicate diminuendi to silence.

Articulations



Staccati indicate short and detached yet still substantial notes.

Accents indicate that notes should be given special emphasis.

Staccatissimi indicate extremely brief, punchy, and emphatic notes.

Marcati indicate very loud, heavily emphasized notes.

Coordination and Cues

- During passages that are not rigorously measured, it is of the utmost importance for musicians to note that events need not be precisely coordinated. Lines should be allowed to proceed according to individual musicians' inspiration.
- At times, specific instruments will lose the barline while the others keep going in time; in these passages, musicians should continue to push forward through their material in soloistic fashion, not giving too much regard to what the others are playing.
- Unmeasured sections rely almost entirely on emphatic cues to signify when to move from one part of the piece into the next. Instructions for cues are written in the score; they should be made as obvious as possible, with a strong nod or upbeat.

Performance Notes (cont.)

Feathered Beaming



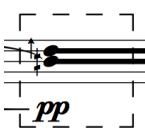
Feathered beams indicate an unmeasured increase in rhythmic value. Exact number of notes is unimportant.

Repeats, Cues, and Communication

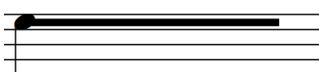


- Repeats indicate that the player should repeat an enclosed gesture in their own time, not attempting to coordinate with others.

cue others



- Dashed boxes are given as an indication to the player to cue other musicians, typically listed in the instructions. Musicians have in their parts instructions on when to proceed and when to expect cues from others.



- A lengthy beam extending from a pitch indicates that the player should hold this pitch until cued.

Saxophone:

Notation and Special Techniques

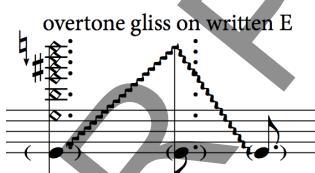
- All fingerings for multiphonics are given in the part. It is highly recommended saxophonists attempting to perform the piece get familiar with them and feel comfortable playing these multiphonics at the dynamics asked for, as their part largely consists of these multiphonics.
- Multiphonics are predominantly of the beating variety (save for some spectral multiphonics detailed below). Beating multiphonics should be just out of tune with the vibraphone and piano to give a kind of shimmer to the sound; do not attempt to tune to them.



- All notes with tremolandi should be 'growled' or alternatively played flutter-tongue; to growl, the saxophonist should sing the approximate pitch they play.



- All x-noteheads indicate the note should be played with the 'slap tongue' technique, resulting in a pizzicato-like sound with a quick attack.



- Toward the end of the piece, the saxophonist is instructed to play overtone glissandi based on particular fundamentals. The fundamental is always written in parentheses, while the possible overtones are written above using diamond noteheads. Saxophonists should strive to bring out the lower overtones over particularly high ones. The wavy glissando lines indicate the approximate rhythms and contour of the gesture.

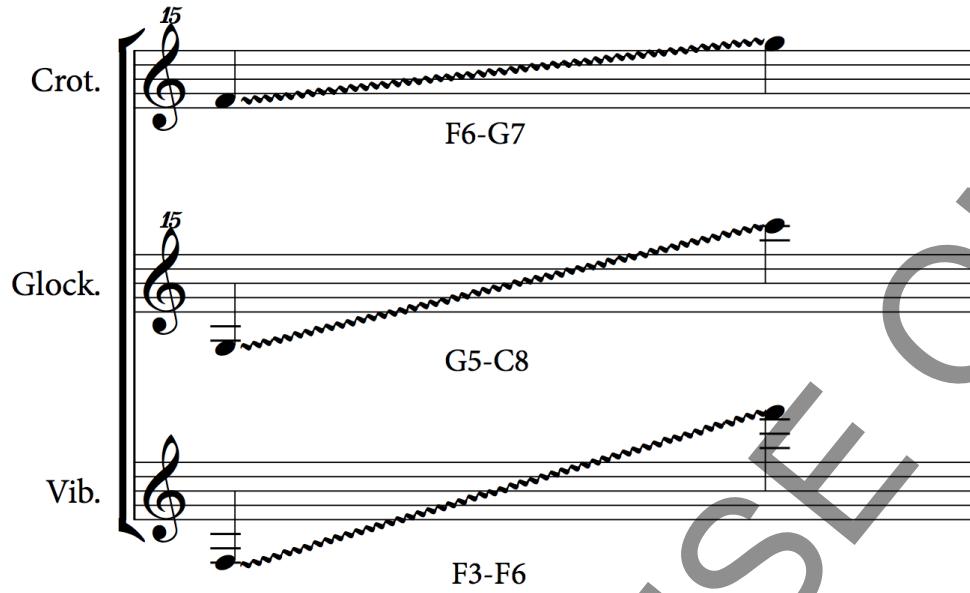
Percussion:

Accessories and Setup

Mallets required:

- Hard mallets (must have audible percussive attack; plastic recommended)
- Soft mallets (must not have audible attack; yarn recommended)
- Double bass bow

Percussion (cont.):



The percussionist should set up the crotales and glockenspiel such that they are able to play them with one hand while simultaneously bowing vibraphone notes with the other.

Piano:

Notation and Special Techniques

- Notes with a + above them indicate they should be muted on the string with the L.H. while being played with the R.H. It is essential that the pedal is held down during these passages.
- Pedaling in general may be handled very loosely by the pianist, with a general focus on bringing out key areas.

Program Notes

Coral reefs have fascinated me since my childhood, when I first learned about them watching Pixar's iconic Finding Nemo. I remember being entranced in theaters by the animated reef's resplendent colors, hypnotic variety of life, and stunning textural complexity. When I had the chance to work with the Smithsonian Environmental Research Center to create a new work, coral reefs instantly came to mind as an obvious point of inspiration.

I knew that in creating a work based on the remarkable vibrance of coral reefs that I would want to evoke, first and foremost, their almost contradictory capacity to be as alien as they were beautiful. Much research has been done to better understand coral, an academic field aging back millennia with luminaries like Pliny the Elder struggling to classify them. To capture their eerie allure, I decided to use saxophone multiphonics to ground the entire piece. These sounds could be raucous, violent, and unexpected, but also shockingly beautiful. The resulting piece, *Variations for Worlds Below*, is an essentially cyclic piece, consisting of four variations on a simple progression of chords built around a number of these saxophone multiphonics.

The piece begins meditatively, establishing a broadly peaceable yet unpredictable atmosphere imitating the swaying motion of anemones and polyp tentacles. The next variation moves through songful rumination against a bed of sparkling aleatory in order to suggest the glimmering of sunlight through water. From there, the music deepens in unease to consider the alien worlds of deepwater coral and culminates in a rumbling, overpowering climax. Finally, the soundworld drifts apart into pieces, as we return to the surface.

Special thanks to Karen McDonald, Christine Buckley, Kristen Goodhue, and the rest of the Smithsonian Environmental Research Center's Folklife team for the indispensable support they provided in realizing this piece.

Written in collaboration with the Smithsonian Environmental Research Center

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Completed 02/21/2022

Duration: c. 11'

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VARIATIONS FOR WORLDS BELOW

Bobby Ge

Gentle, swaying, $\text{♩} = 84$

Alto Saxophone

Vibrphone: motor off, arco (two bows), Ped. sempre

Piano: muted, but full, p (may be louder as needed), Ped. sempre

Alto Saxophone: multiphonics should always produce beating

Alto Sax.

Vib.

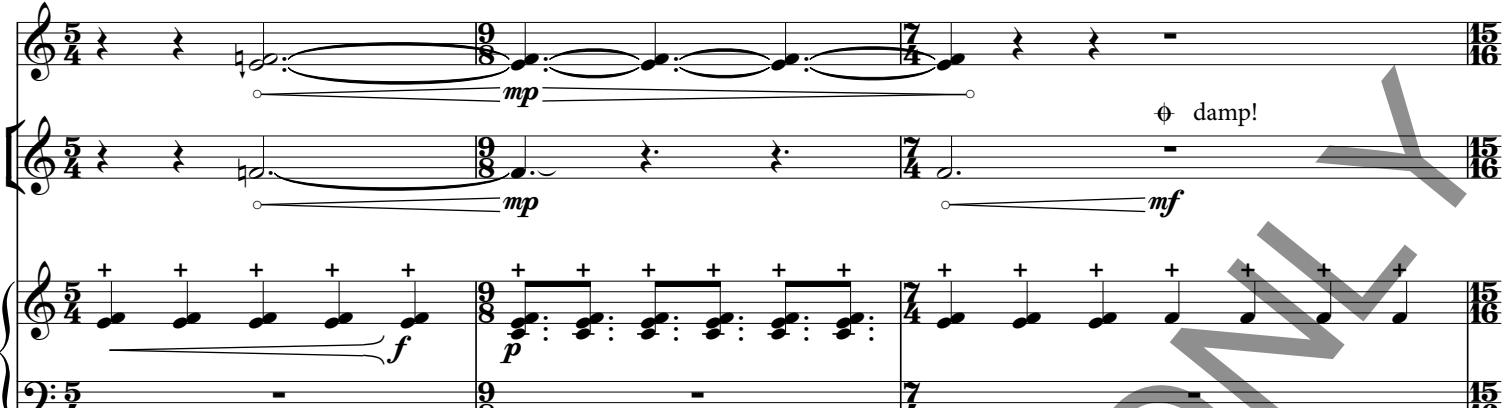
Pno.

Alto Sax.: (same fingering)

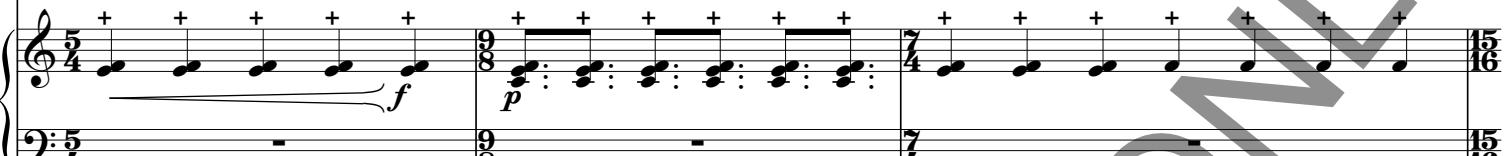
Vib.

Pno.

11

Alto Sax. 

Vib. 

Pno. 

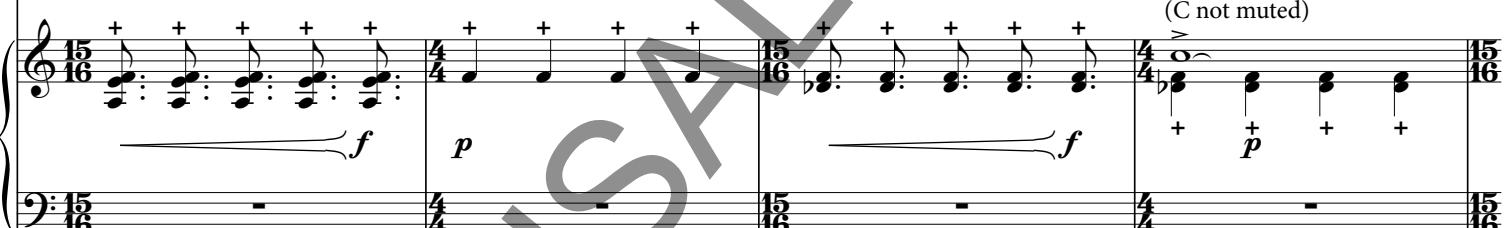
==

14

gradually evolve into multiphonic

Alto Sax. 

Vib. 

Pno. 

(R.H. takes soft mallets; L.H. bow)

(C not muted)

==

18

19 Emerging

Alto Sax. 

mallets

Vib. bow



22

Alto Sax.

mallets

Vib.
bow

Pno.

26

Alto Sax.

mallets

Vib.
bow

Pno.

30

Alto Sax.

mallets

Vib.
bow

Pno.

33

Alto Sax.

mallets

Vib.
bow

Pno.

=

38

Alto Sax.

mallets

Vib.
bow

Pno.

=

42

Alto Sax.

mallets

Vib.
bow

Pno.

45

Alto Sax. *p* to Glock. and Crot.

mallets

Vib. bow *f*

Pno. { *f*

49 Unmeasured, very open, $\text{♩} \approx 80$

10-12" 10-12" total

Alto Sax. *p*

Crot. once sax has faded to almost nothing, cue piano
always l.v. vary tempo and accents freely*

Glock. always l.v.

Pno. play evenly; exact number of notes unimportant *ppp ff* *ff* *mp*
8va vary tempo and accents freely*

50 4-5" evolve into multiphonic 6-9" total

Alto Sax. *p*

Crot. *mp*

Glock.

Pno. *mp*

*Aim to create a bright, resonant, and seemingly random texture; avoid exact repetition and do not coordinate with other musicians.

51

cue Pno. as fading out 3-4"

Alto Sax.

Crot.

Glock.

Pno.

watch Sax.

f

52

growl songlike ord. growl

Alto Sax.

Crot.

Glock.

Pno.

mp

53

ord. cue others growl 3-5"

change to new patterns with Pno.

watch Sax.

(mp)

(mp)

change to new pattern with Perc.

8va

watch Sax.

(mp)

f

Alto Sax.

Crot.

Glock.

Pno.

54 ord.

Alto Sax.

Crot.

Glock.

Pno.

55 cue others

with Pno.

7-9"

watch Sax.

(mp)

with Perc.

8va

(mp)

watch Sax.

f

Alto Sax.

Crot.

Glock.

Pno.

56 3-4"

growl

ord.

mp

Alto Sax.

Crot.

Glock.

Pno.

57

ord. — cue others

5-7"

Alto Sax.

Crot.

Glock.

Pno.

B *f*

58

ord.

mp

pp

Alto Sax.

Crot.

Glock.

Pno.

59

cue

7-9"

4-5"

p

mp

mp

mp

f

Alto Sax.

Crot.

Glock.

Pno.

A *f*

60

Alto Sax. growl
ord.

Crot.
15 mp pp

Glock.
15

Pno.

61

Alto Sax. cue growl ord.
mp p pp

Crot. begin gradual dim. and rit. in own time

Glock. begin gradual dim. and rit. in own time

Pno.

62 Swaying once more, $\text{♩} = 84$

Alto Sax. 6 mp 15 - 7 6 mp

Glock. 15 p

Vib. 6 p

Pno. 6 + + + + + 15 + + + + + 7 + + + + + 6

continue, out of time; do not attempt to coordinate rhythms with Pno. watch Sax.

rhythms always very free!

65

cue Perc.

Alto Sax. $\begin{cases} \text{6} \\ \text{4} \end{cases}$ $\begin{cases} 5 \\ 16 \end{cases}$ $\begin{cases} 15 \\ 16 \end{cases}$ $\begin{cases} 4 \\ 9 \end{cases}$ $\begin{cases} 16 \\ 9 \end{cases}$

Glock. $\begin{cases} 15 \\ 4 \end{cases}$

Vib. $\begin{cases} \text{6} \\ \text{4} \end{cases}$ $\begin{cases} 5 \\ 4 \end{cases}$ $\begin{cases} 15 \\ 16 \end{cases}$ $\begin{cases} 4 \\ 4 \end{cases}$ $\begin{cases} 9 \\ 16 \end{cases}$

Pno. $\begin{cases} \text{6} \\ \text{4} \end{cases}$ $\begin{cases} 5 \\ 4 \end{cases}$ $\begin{cases} 15 \\ 16 \end{cases}$ $\begin{cases} 4 \\ 4 \end{cases}$ $\begin{cases} 9 \\ 16 \end{cases}$

=

(it is okay if higher partials begin to speak)

72 **Slightly uneasy**

69

Alto Sax. $\begin{cases} 9 \\ 16 \end{cases}$ $\begin{cases} 6 \\ 8 \end{cases}$ $\begin{cases} 4 \\ 4 \end{math>$

Glock. $\begin{cases} 15 \\ 4 \end{math>$

Vib. $\begin{cases} \text{6} \\ \text{4} \end{math>$

Pno. $\begin{cases} \text{9} \\ \text{16} \end{math>$

watch Pno. $\begin{cases} \text{6} \\ \text{8} \end{math>$

change to new patterns after piano bass note $\begin{cases} \text{4} \\ \text{15} \end{math>$

$\begin{cases} \text{p} \\ \text{mp} \end{math}$

$\begin{cases} \text{p} \\ \text{cue Perc.} \end{math}$

$\begin{cases} \text{mf} \\ \text{mf} \end{math}$

=

73

Alto Sax. $\begin{cases} 15 \\ 16 \end{math>$

Glock. $\begin{cases} 15 \\ 4 \end{math>$

Vib. $\begin{cases} \text{6} \\ \text{4} \end{math>$

Pno. $\begin{cases} \text{15} \\ \text{16} \end{math>$

$\begin{cases} \text{4} \\ \text{4} \end{math>$

$\begin{cases} \text{9} \\ \text{16} \end{math>$

$\begin{cases} \text{5} \\ \text{4} \end{math>$

$\begin{cases} \text{6} \\ \text{8} \end{math>$

$\begin{cases} \text{mp} \\ \text{mf} \end{math>$

$\begin{cases} \text{p} \\ \text{p} \end{math>$

$\begin{cases} \text{mf} \\ \text{mf} \end{math}$

77

Alto Sax. $\begin{array}{c} \text{6} \\ \text{8\#} \end{array}$ $\begin{array}{c} \text{6} \\ \text{4} \end{array}$ - $\begin{array}{c} \text{9\#} \\ \text{8\#} \end{array}$ $\begin{array}{c} \text{4} \\ \text{4} \end{array}$ - $\begin{array}{c} \text{21} \\ \text{16} \end{array}$

Glock. $\begin{array}{c} \text{15} \\ \text{8} \end{array}$ - $\begin{array}{c} \text{21} \\ \text{16} \end{array}$

Vib. $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{4} \\ \text{4} \end{array}$ - $\begin{array}{c} \text{21} \\ \text{16} \end{array}$

Pno. $\begin{array}{c} \text{6} \\ \text{8} \end{array}$ $\begin{array}{c} \text{6} \\ \text{4} \end{array}$ - $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{4} \\ \text{4} \end{array}$ - $\begin{array}{c} \text{21} \\ \text{16} \end{array}$

mf *p* *mf* *p*

cue Perc. 11

watch Sax. to Crot.

81 Rumbling, but mostly peaceable

Alto Sax. $\begin{array}{c} \text{21} \\ \text{16} \end{array}$ - $\begin{array}{c} \text{4} \\ \text{8} \end{array}$ $\begin{array}{c} \text{15} \\ \text{16} \end{array}$ $\begin{array}{c} \text{21} \\ \text{16} \end{array}$ $\begin{array}{c} \text{3} \\ \text{8} \end{array}$

Crot. $\begin{array}{c} \text{15} \\ \text{8} \end{array}$ $\begin{array}{c} \text{21} \\ \text{16} \end{array}$

Vib. $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{4} \\ \text{4} \end{array}$ - $\begin{array}{c} \text{21} \\ \text{16} \end{array}$ $\begin{array}{c} \text{3} \\ \text{8} \end{array}$

Pno. $\begin{array}{c} \text{21} \\ \text{16} \end{array}$ $\begin{array}{c} \text{4} \\ \text{8} \end{array}$ $\begin{array}{c} \text{15} \\ \text{16} \end{array}$ $\begin{array}{c} \text{3} \\ \text{8} \end{array}$

f *p* *mf* *p*

85

Alto Sax. $\begin{array}{c} \text{8\#} \\ \text{7} \end{array}$ - $\begin{array}{c} \text{9\#} \\ \text{16} \end{array}$ $\begin{array}{c} \text{2} \\ \text{4} \end{array}$ $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{5} \\ \text{4} \end{array}$

Crot. $\begin{array}{c} \text{15} \\ \text{8} \end{array}$ - $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{2} \\ \text{4} \end{array}$ $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{5} \\ \text{4} \end{array}$

Vib. $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{2} \\ \text{4} \end{array}$ $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{5} \\ \text{4} \end{array}$

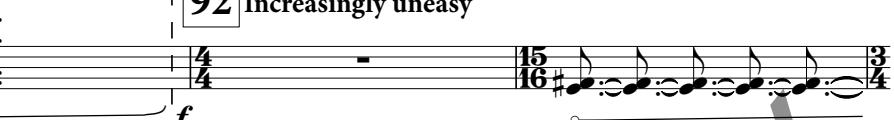
Pno. $\begin{array}{c} \text{3} \\ \text{8} \end{array}$ $\begin{array}{c} \text{7} \\ \text{4} \end{array}$ $\begin{array}{c} \text{9\#} \\ \text{16} \end{array}$ $\begin{array}{c} \text{2} \\ \text{4} \end{array}$ $\begin{array}{c} \text{9\#} \\ \text{8} \end{array}$ $\begin{array}{c} \text{5} \\ \text{4} \end{array}$

mf *p* *mf*

cue Perc.

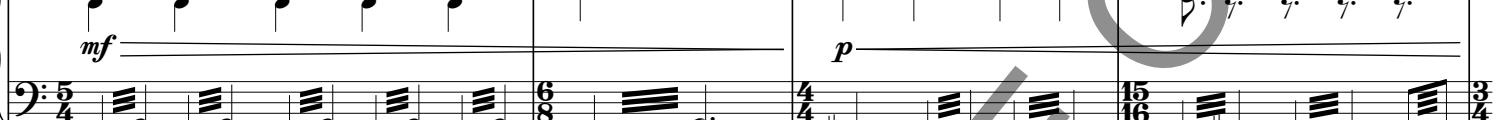
92 Increasingly uneasy

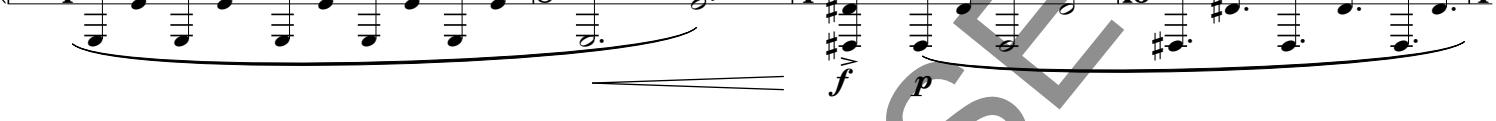
Alto Sax. 90 

Crot. 15 watch Sax 

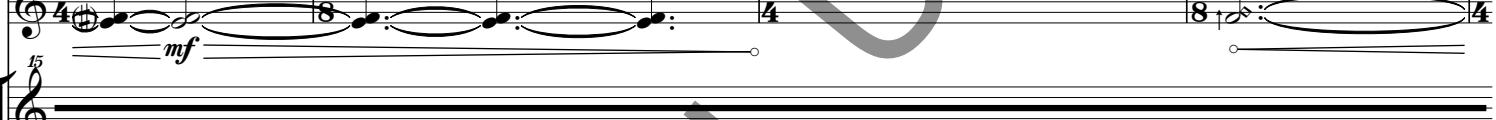
Vib. 

Pno. 4 

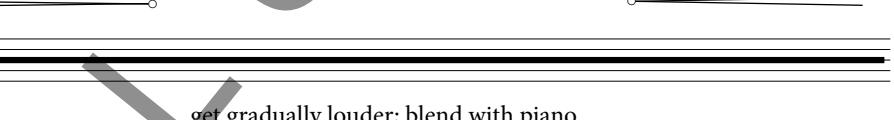
Pno. 6 

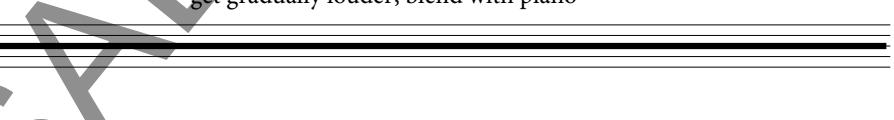
Pno. 15 

Pno. 16 

Pno. 3 

Alto Sax. 94 

Crot. 15 

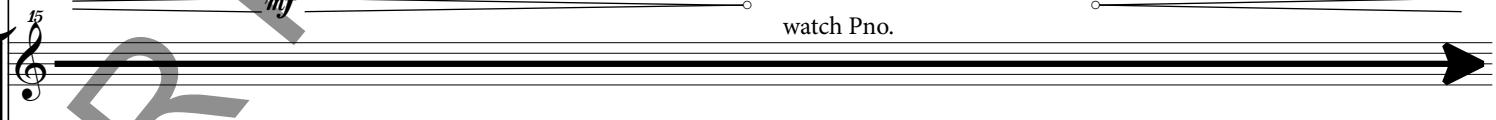
Vib. 

Pno. 3 

Pno. 9 

Pno. 5 

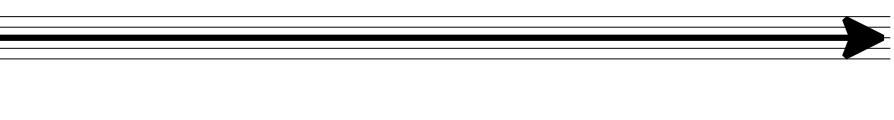
Pno. 6 

(p) 

get gradually louder; blend with piano

Alto Sax. 98 

Crot. 15 

Vib. 

Pno. 4 

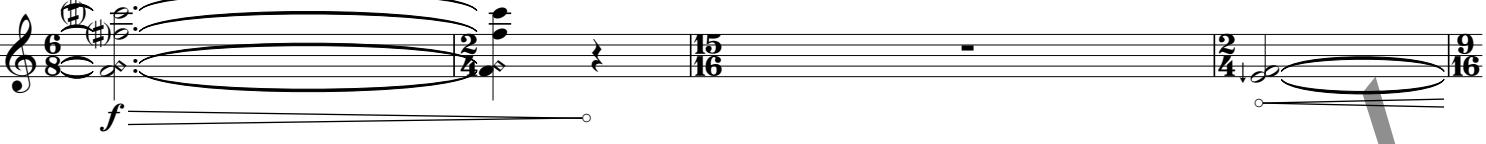
Pno. 16 

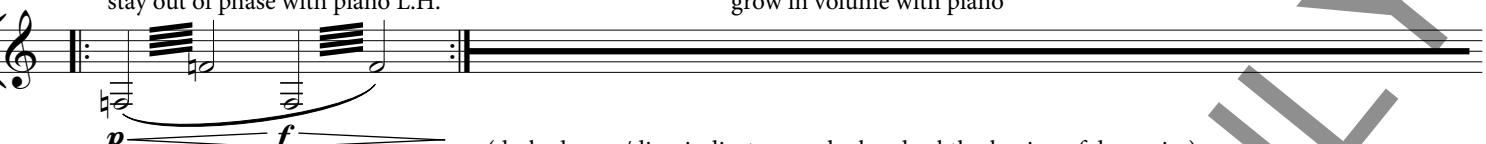
7 

f 

p 

101 Swelling threateningly

Alto Sax. 

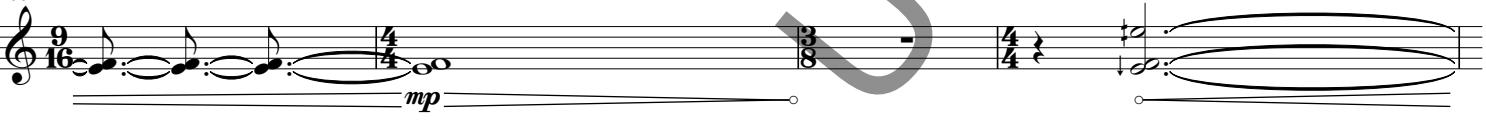
Vib. 

Pno. 

(dashed cresc/dim. indicate a gradual and subtle shaping of dynamics)

cue Perc.

105

Alto Sax. 

Vib. 

Pno. 

111 Cataclysmic

Alto Sax. 

Vib. 

Pno. 

(R.H., L.H. follow same dynamics)

113

Alto Sax.

Vib.

Pno.

120 Ponderous, intense

slap tongue

117 play 3x play 4x

Alto Sax.

Vib.

Pno.

overtone gliss on written Bb; concentrate on lower overtones

overtone gliss on written C#

121

Alto Sax.

Vib.

Pno.

124 *slap tongue*

Alto Sax.

Vib.

Pno.

127 overtone gliss on written E overtone gliss on written D#

Alto Sax.

Vib.

Pno.

130 overtone gliss on written Bb;
concentrate on lower overtones

Alto Sax.

Vib.

Pno.

16

133

Alto Sax.

Vib.

Pno.

2

Musical score for Alto Saxophone, Vibraphone, and Piano, page 137. The score consists of three staves. The Alto Saxophone staff starts with a 15/16 time signature, followed by a 5/4 measure, then a 15/16 measure, and ends with a 5/4 measure. The Vibraphone staff starts with a 15/16 time signature, followed by a 5/4 measure, then a 15/16 measure, and ends with a 5/4 measure. The Piano staff starts with a 15/16 time signature, followed by a 5/4 measure, then a 15/16 measure, and ends with a 5/4 measure. All measures are marked with a dynamic of p .

2

141

142 Meditative

Alto Sax. $\begin{smallmatrix} 15 \\ 16 \end{smallmatrix}$ -

Vib. $\begin{smallmatrix} 15 \\ 16 \end{smallmatrix}$ $\gamma \gamma \gamma \gamma$ $\begin{smallmatrix} 7 \\ 4 \end{smallmatrix}$ L.H. takes bow $\begin{smallmatrix} 21 \\ 16 \end{smallmatrix}$ p $\begin{smallmatrix} 7 \\ 4 \end{smallmatrix}$

Pno. $\begin{smallmatrix} 15 \\ 16 \end{smallmatrix}$ gentle $\begin{smallmatrix} 7 \\ 4 \end{smallmatrix}$ $\begin{smallmatrix} 21 \\ 16 \end{smallmatrix}$ $\begin{smallmatrix} 7 \\ 4 \end{smallmatrix}$

144

Alto Sax.

mallet

Vib. arco *p*

bow

Pno.

147

Alto Sax.

mallet

Vib. bow

Pno.

150 Drifting apart into pieces...
in own time

2-3"

Alto Sax.

mallet

Vib. bow

Pno.

153

Alto Sax.

mallet

Vib. bow

Pno.

in own time, but not fast

pp bright, glittering

4-6"

=

156

Alto Sax.

Glock.

mallet

Vib. bow

Pno.

=

159

Alto Sax.

Glock.

Vib.

Pno.

to Crot.

162

Alto Sax.

Crot. *p*

Vib.

Pno.

Completed Feb 22, 2022
Baltimore, MD

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