

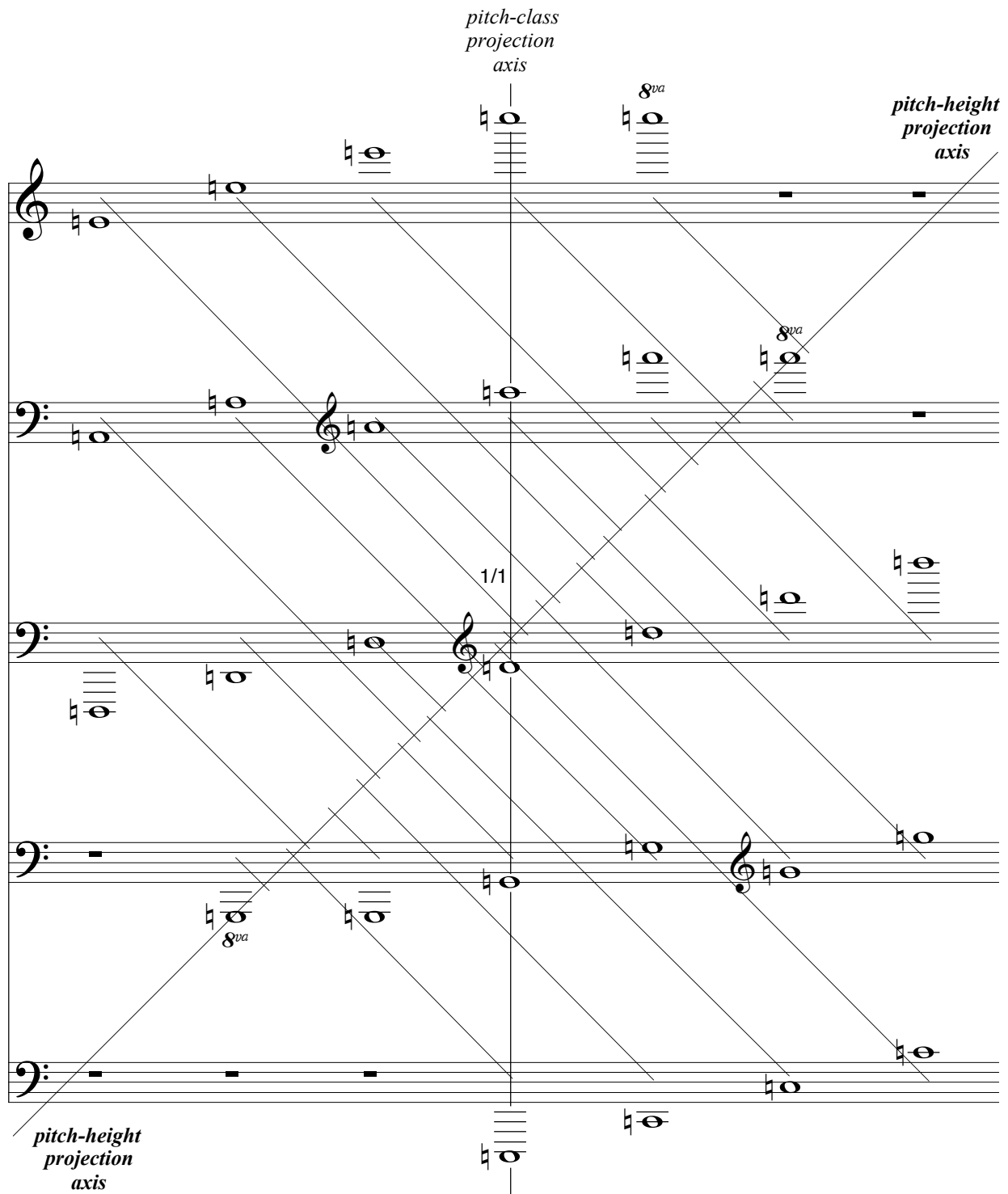
James Tenney

John Cage and the Theory of Harmony

Transcription of Figure 1 and 2

using the Extended Helmholtz-Ellis JI Pitch Notation
designed by Marc Sabat and Wolfgang von Schweinitz

The 2, 3 plane of harmonic space,
showing the pitch-height projection axis
and the pitch-class projection axis



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Transcription of Figure 3

using the Extended Helmholtz-Ellis JI Pitch Notation
designed by Marc Sabat and Wolfgang von Schweinitz

The 3, 5 plane of harmonic space
as a pitch-class projection plane
within 2, 3, 5 space

The image displays a musical score for Figure 3, consisting of five staves. The notation is a form of Extended Helmholtz-Ellis JI Pitch Notation, where notes are represented by circles with stems and flags, often grouped into vertical columns. The notation includes various accidentals (sharps, flats, naturals) and octave markings (8va). The score is organized into five systems, each with a treble clef on the left and a bass clef on the right. The notation is dense and complex, reflecting the theoretical concepts of harmonic space and pitch-class projection.

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Transcription of Figure 4 and 5

using the Extended Helmholtz-Ellis JI Pitch Notation
designed by Marc Sabat and Wolfgang von Schweinitz

Primary harmonic relations
within the chromatic scale
(diatonic major and diatonic minor)

The image displays three staves of musical notation, each representing a different chromatic scale. The notes are represented by whole notes with stems and flags, and are accompanied by Extended Helmholtz-Ellis JI Pitch Notation ratios above them. The first staff shows the diatonic major scale with ratios: 5/3, 5/4, 15/8, and 45/32. The second staff shows the diatonic minor scale with ratios: 4/3, 1/1, 3/2, and 9/8. The third staff shows the chromatic scale with ratios: 16/15, 8/5, 6/5, and 9/5. The notes are positioned on a five-line staff with a treble clef. The first staff has a key signature of one sharp (F#), the second has one sharp (F#), and the third has one flat (Bb). The notes are: Staff 1: F#4, G4, A4, B4; Staff 2: F#4, G4, A4, B4; Staff 3: Bb3, C4, D4, E4.

Scale	Ratio	Note
Diatonic Major	5/3	F#4
	5/4	G4
	15/8	A4
	45/32	B4
Diatonic Minor	4/3	F#4
	1/1	G4
	3/2	A4
	9/8	B4
Chromatic	16/15	Bb3
	8/5	C4
	6/5	D4
	9/5	E4

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Transcription of Figure 6

using the Extended Helmholtz-Ellis JI Pitch Notation
designed by Marc Sabat and Wolfgang von Schweinitz

The harmonic containment "cone" in 2, 3, 5 space

