

THE USE OF GUITAR IN ANTON WEBERN'S OP. 18 AND ITS
INFLUENCE ON HIS LATE WORKS

by

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DISSERTATION ABSTRACT

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Title: The Use of Guitar in Anton Webern's Op. 18 and Its Influence on His Later Works

Anton Webern's Op. 18 stands at nearly the exact center of his published work. Though it was in his Op. 17 that Webern began working with ordered pitches, there are some logistic struggles evident in his diversions from the row throughout that work. It is in Op. 18 that Webern first consistently uses a row in its complete, unchanged form. His increasing mastery of this style of composition is shown throughout Op. 18, a collection of three songs; the first with a single row repeated with no permutations of any kind; in the 2nd song, inversions and retrograde are introduced; and in the final song Webern experiments with simultaneous unique row forms for each instrument.

These songs feature a guitar, E-flat clarinet, and soprano voice, with the first song a setting of a folk text. In this dissertation I argue that Webern's later style—his orchestration, harmonic progressions, and

formal structures—grows out of his choice of guitar as harmonic foundation in Op. 18.

In my analysis I look at row construction and usage, as well as orchestrational considerations, folk implications, text setting, and specific voice-leading properties of Webern's Opp. 18, 25, and 30. In so doing I will uncover a link between Webern's pivotal Op. 18 song cycle, with the guitar playing a central role, and many of his compositional choices in his later works.

My analysis looks at Webern's works through the lens of a guitarist. I will explore the piano accompaniment of Op. 25 as if it were written for guitar, and do the same for his Op. 30 Variations for Orchestra. These analyses will show that his later works, and later style in general, have an underlying idiomatic character of guitar music. I argue that Webern's late works feature, as a result, are his own version of folk music through their simplicity, clarity of form, and overall encapsulation of the sound of the guitar.

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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
II. METHODOLOGY	27
Overview	27
Detailing Joti Rockwell’s Approach	30
Detailing Timothy Koozin’s Approach	32
Notes on Tablature Staff Notation	36
Tonnetz-Based Analytic Models	37
The Post-Tonal Tonnetz	37
Straus’ Contextual Inversion Spaces	40
Hyper-Hexatonic System-Based Analytic Models	43
Set-Class 3-3 Hyper-Hexatonic System	45
Combined 3-3/3-4/3-5 Hyper-Hex(enne)atonic System	48
Tetrachordal Hyper-Hexatonic System	51
Conclusion	60
III. OP. 18 DREI LIEDER	62
Overview	62
Op. 18 Within the Context of Webern’s Complete Works	66
Folk Music and Folk Culture as Relating to Webern	69

Chapter	Page
Op. 18/i “Schatzerl klein”	81
Text Analysis.....	81
Row Count Analysis	91
Harmonic Analysis.....	97
Notes on the Op. 18 Performance Score.....	107
Guitar Part.....	109
Clarinet Part as Guitar Part	114
Voice Part as Guitar Part	118
Op. 18/ii “Erlösung (aus ‘Des Knaben Wunderhorn’)”	121
Text Analysis.....	121
Row Count Analysis	128
Harmonic Analysis.....	138
Guitar Part.....	150
Clarinet Part as Guitar Part	155
Voice Part as Guitar Part	160
Op. 18/iii “Ave Regina Coelorum”	163
Text Analysis.....	163
Row Count Analysis	167
Harmonic Analysis.....	178
Guitar Part.....	188

Chapter	Page
Clarinet Part as Guitar Part	194
Voice Part as Guitar Part	198
Op. 18 Conclusions.....	201
IV. OP. 25 “DREI LIEDER NACH GEDICHTEN VON HILDEGARD JONE”	205
Introduction.....	205
Op. 25/i “Wie bin ich froh!”	205
Text Analysis.....	205
Text Setting	208
Row Analysis	212
Harmonic Analysis.....	219
Piano Part as Guitar Part.....	231
Op. 25/ii “Des Herzens Purpurovogel Fliegt Durch Nacht”.....	243
Text Analysis.....	243
Row Analysis	250
Guitar Considerations	258
Piano Part As Guitar Part	262
Harmonic Analysis.....	277
Op. 25/iii “Sterne, Ihr Silbernen Bienen Der Nacht”	291
Introduction.....	291
Text Analysis.....	291
Row Analysis	297

Chapter	Page
Harmonic Analysis.....	302
Performance Considerations for Op. 25/iii.....	313
V. OP. 30 VARIATIONEN FUR ORCHESTER.....	328
History and Analysis of Op. 30.....	328
Overview.....	328
Formal Organization of the Op. 30 Variations.....	331
Op. 30 Theme.....	334
Row Analysis	334
Voice-leading Analysis.....	345
Op. 30 Theme as Guitar Part.....	351
Op. 30 Variation No. 1	360
Row Analysis	360
Voice-leading Analysis.....	376
Variation No. 1 as Guitar Part.....	382
Op. 30 Variation No. 2	391
Row Analysis	391
Voice-leading Analysis.....	398
Variation No. 2 as Guitar Part.....	404
Op. 30 Variation No. 3	411
Row Analysis	411
Voice-leading Analysis.....	419

Chapter	Page
Variation No. 3 as Guitar Part	424
Op. 30 Variation No. 4	431
Row Analysis	431
Voice-leading Analysis.....	437
Variation No. 4 as Guitar Part.....	441
Op. 30 Variation No. 5	446
Row Analysis	446
Variation No. 5 Voice-leading Analysis	452
Variation No. 5 as Guitar Part.....	453
Op. 30 Variation No. 6	458
Row Analysis	458
Voice-leading Analysis.....	465
Variation No. 6 as Guitar Part.....	470
Conclusions.....	478
VI. CONCLUSION.....	482
APPENDICES	490
A. OP. 18 PERFORMANCE SCORE	490
B. OP. 25 GUITAR ARRANGEMENT PERFORMANCE SCORE.....	498
C. OP. 30 GUITAR ARRANGEMENT PERFORMANCE SCORE.....	509
REFERENCES CITED.....	518

LIST OF FIGURES

Figure	Page
2.1 Set-class consistency and hand-shape compared between piano and guitar.....	29
2.2 3-3 trichords root-6, and root-5. 3-5 trichords root-6 and root-5.....	34
2.3 A section of the 3-3 Tonnetz.	37
2.4 A section of the 3-5 Tonnetz	37
2.5 Cohn’s Tonnetz, with P, L, R, and D transformations illustrated.....	39
2.6 Straus’ Contextual Inversion Space for set-class 3-3.....	41
2.7 Set-class 3-5 based Contextual Inversion Space modeled after Straus’ 3-3 based space.....	42
2.8 Richard Cohn’s hyper-hexatonic System.....	45
2.9 Horizontal alleys of a 3-3 derived Tonnetz contain pitch collections equal to the four members of set-class 6-20.	46
2.10 The 3-3 trichordal Hyper-hexatonic system.....	47
2.11 3-3/3-4/3-5 tri-trichordal hyper-hex(enne)atonic model.....	50
2.12 Op. 30 row showing set-classes of each distinct tetrachord	51
2.13 Set-classes 4-3 and 4-17 appear as a right-pointing parallelogram and a diamond when mapped onto a 3-3 Tonnetz	52
2.14 Set-class 4-7 appearing as a left-pointing parallelogram on a 3-3 Tonnetz	53
2.15 Octatonic generating LP chains run Northwest/Southeast, while hexatonic generating RL chains run East and West	54
2.16 Hexatonic hanger graph generated from Oct _{0,1}	56
2.17 Hexatonic hanger graph generated from Oct _{1,2}	57

Figure	Page
2.18 Hexatonic hanger graph generated from Oct _{2,3}	56
2.19 The tetrachordal hyper-hex(enne)atonic system	59
3.1 A plate from Pablo Minguet Y Irol, which depicts an idealized continuo group...	68
3.2 “Three Musicians” by Theodoor Rombouts	74
3.3 “Three Musicians” by Diego Velazquez	75
3.4 “A Wooded River Landscape with a Shepherd and Shepherdess Making Music” by Jean-Antoine Watteau	77
3.5 Webern’s row for “Schatzerl klein”	92
3.6 Imbricated trichords of Webern’s “Schatzerl klein” row. The left column indicates order number of first pitch of trichord	92
3.7 Set-class 3-5 trichords as they appear in “Schatzerl klein” guitar part.....	98
3.8 Set-class 3-3 and 3-4 trichords as they appear in “Schatzerl klein” guitar part.....	98
3.9 Set-class 4-9, 4-z29, 4-13, 4-6, and 4-8 in “Schatzerl klein” guitar part	98
3.10 The only pentachord in “Schatzerl klein” belongs to set-class 5-14	98
3.11 Op. 18/ii matrix	130
3.12 Imbricated trichords of Webern’s “Erlösung” row.....	131
3.13 Row scheme for “Erlösung”	138
3.14 Op. 18/ii harmonic motion in measure five	141
3.15 Measure 8 and 9 mapped on 3-3 hyper-hexatonic system	145
3.16 Measure 14 and 15 mapped on 3-3 hyper-hexatonic system	148
3.17 Measure 16 mapped on 3-3 hyper-hexatonic system.....	149
3.18 Measures 17-18 mapped on 3-3 hyper-hexatonic system.....	149

Figure	Page
3.19 Tempo scheme for Op. 18.....	166
3.20 Op. 18/iii matrix.....	167
3.21 Imbricated trichords of the Op. 18/iii row	168
3.22 Row pacing in Op. 18/iii.....	177
3.23 Op. 18/iii measures 1-4 graphed onto hyper-hexatonic system.....	181
3.24 Op. 18/iii measures 5-6 graphed onto hyper-hexatonic system.....	183
3.25 Op. 18/iii measure 7 graphed onto hyper-hexatonic system.....	184
3.26 Op. 18/iii measure 21 graphed onto hyper-hexatonic system.....	187
4.1 Imbricated trichord harmonies of Op. 25.....	214
4.2 Op. 25 matrix	214
4.3 Op. 25/i opening measures mapped onto set-class 3-3 hyper-hexatonic system ...	221
4.4 Op. 25/i measure 2 set-class 3-3 mapped onto hyper-hexatonic system	223
4.5 Op. 25/i measures 3-4 set-class 3-3 mapped onto hyper-hexatonic system	225
4.6 Op. 25/i measure 5-6 set-class 3-3 mapped onto hyper-hexatonic system	226
4.7 Op. 25/i measure 7-8 set-class 3-3 mapped onto hyper-hexatonic system	227
4.8 Op. 25/i measure 9-12 set-class 3-3 mapped onto hyper-hexatonic system	229
4.9 Row-forms of Op. 25/ii.....	252
4.10 Adjacent interval classes in each row for Opp. 18 and 25.....	259
4.11 Two ways of positioning semitones on guitar on differing pairs of strings	260
4.12 Op. 25/ii measures 1-4 graphed onto hyper-hexatonic system.....	278
4.13 Op. 25/ii measures 5-8 graphed onto hyper-hexatonic system.....	279

Figure	Page
4.14 Op 25/ii measures 9-12 graphed onto hyper-hexatonic system	281
4.15 Op 25/ii measures 13-16 graphed onto hyper-hexatonic system	282
4.16 Op 25/ii measures 17-20 graphed onto hyper-hexatonic system	283
4.17 Op 25/ii measures 21-24 graphed onto hyper-hexatonic system	284
4.18 Op 25/ii measures 25-28 graphed onto hyper-hexatonic system	285
4.19 Op 25/ii measures 29-32 graphed onto hyper-hexatonic system	286
4.20 Op 25/ii measures 33-35 graphed onto hyper-hexatonic system	287
4.21 Op 25/ii measures 36-39 graphed onto hyper-hexatonic system	288
4.22 Op 25/ii measures 40-42 graphed onto hyper-hexatonic system	289
4.23 Set-class 4-18 to 3-3 subsets from delayed onsets on Tonnetz	305
4.24 Op. 25/iii measures 49-60 graphed onto 3-3 hyper-hexatonic system.....	308
4.25 Op. 25/iii measures 61-66 graphed onto 3-3 hyper-hexatonic system.....	311
4.26 Op. 25/iii measures 67-78 graphed onto 3-3 hyper-hexatonic system.....	312
5.1 Boynton's deconstruction of Webern's Op. 30 into two rhythms and two tetrachords.....	335
5.2 From Reid. Op. 30 row-forms.....	337
5.3 Op. 18/ii and Op. 30 rows with adjacent trichord set-classes labeled	338
5.4 Op. 30 matrix	339
5.5 Op. 30 hexachordal combinatoriality row pairs.....	339
5.6 Op. 30 measures 0-4 motion on hyper-hexatonic system	347
5.7 Op. 30 measures 5-11 motion on hyper-hexatonic system	349

Figure	Page
5.8 Op. 30 measures 12-20 motion on hyper-hexatonic system	350
5.9 Symmetrical rhythm found in measures 21-23	362
5.10 Rhythm “b” with common denominator break-down. Phrase eight reveals same underlying ratios as that of “b.”	374
5.11 Harmonic motion for measures 21-28 on hyper-hexatonic system	378
5.12 Harmonic motion for measures 29-39 on hyper-hexatonic system	380
5.13 Harmonic motion for measures 40-55 on hyper-hexatonic system	380
5.14 “b” rhythm and measures 56-59 melody rhythm	396
5.15 Measures 60-61 and 65-66 showing rhythmic exchange between winds and brass	397
5.16 Measures 56-57 graphed onto hyper-hexatonic system	399
5.17 Op. 30 measures 55-69 tracing strings of closely-related harmonies	404
5.18 Op. 30 measures 74-85 graphed onto hyper-hexatonic system	420
5.19 Op. 30 measures 86-96 graphed onto the hyper-hexatonic system	422
5.20 Op. 30 measures 96-107 graphing harmonies onto hyper-hexatonic system	424
5.21 Op. 30 measures 110-117 graphed onto hyper-hexatonic system.....	438
5.22 Op. 30 measures 112-128 graphed onto hyper-hexatonic system.....	440
5.23 Op. 30 measures 128-134 graphed onto hyper-hexatonic system	440
5.24 Op. 30 measures 135-142 and 143-145 on hyper-hexatonic system	452
5.25 Op. 30 measures 146-153 on hyper-hexatonic system	467
5.26 Op. 30 measures 154-163 on hyper-hexatonic system	467
5.27 Op. 30 measures 164-168 on hyper-hexatonic system	469

Figure	Page
5.28 Op. 30 measures 169-180 on hyper-hexatonic system	470

LIST OF EXAMPLES

Example	Page
3.1 “Schatzerl klein” mm. 2-3. Poetic stresses highlighted	88
3.2 “Schatzerl klein” mm. 3-5. Poetic stresses highlighted	88
3.3 “Schatzerl klein” mm. 5-7. Poetic stresses highlighted.....	89
3.4 “Schatzerl klein” mm. 8-9. Poetic stresses highlighted.....	90
3.5 “Schatzerl klein” mm. 10-11. Poetic stresses highlighted.....	90
3.6 Final two lines of verses 2 and 3.....	91
3.7 First row exposure of “Schatzerl klein”.....	93
3.8 Row exposures of “Schatzerl klein” measures 3-5	94
3.9 Row exposures of “Schatzerl klein” measures 6-9.....	95
3.10 Row exposures of “Schatzerl klein” measures 10-13	96
3.11 Introduction of “Schatzerl klein” showing interlocking 3-5 harmony.....	99
3.12 “Schatzerl klein” measure 2 set-class 3-5 highlighted showing contextual inversion space motion	100
3.13 “Schatzerl klein” measure 3 set-class 3-5 highlighted showing contextual inversion space motion	101
3.14 “Schatzerl klein” measure 4 set-class 3-5 highlighted showing contextual inversion space motion	102
3.15 “Schatzerl klein” measures 5-7 set-class 3-5 highlighted showing contextual inversion space motion	104
3.16 “Schatzerl klein” measures 8-9 set-class 3-5 highlighted showing contextual inversion space motion	105
3.17 “Schatzerl klein” measures 10-11 set-class 3-5 highlighted showing contextual inversion space motion	106

Example	Page
3.18 “Schatzerl klein” measures 12-13 set-class 3-5 highlighted showing contextual inversion space motion	107
3.19 Measures 3, 8 and 9 of “Schatzerl klein” written in non-intuitive manner with contour contrary to sounding gesture.....	108
3.20 “Schatzerl klein” measures 1-2 guitar part with Koozin-shapes	111
3.21 “Schatzerl klein” measures 3-6 guitar part with Koozin-shapes	112
3.22 “Schatzerl klein” measures 7-13 guitar part with Koozin-shapes	113
3.23 “Schatzerl klein” clarinet part measures 1-2 with tablature.....	115
3.24 “Schatzerl klein” clarinet part measures 3-4 with tablature.....	116
3.25 “Schatzerl klein” clarinet part measures 8-13 with tablature.....	117
3.26 “Schatzerl klein” voice part measures 2-4 with Koozin-shapes	119
3.27 “Schatzerl klein” voice part measures 4-8 with Koozin-shapes	120
3.28 “Schatzerl klein” voice part measures 9-13 with Koozin-shapes	120
3.29 “Erlösung” voice part measures 2-5 poetic stress.....	124
3.30 “Erlösung” voice part measures 6-9 poetic stress.....	126
3.31 “Erlösung” voice part measures 10-13 poetic stress.....	126
3.32 “Erlösung” voice part measures 14-18 poetic stress.....	127
3.33 Clarinet’s “wunden” gesture	128
3.34 Order numbers for measures 1-5 of “Erlösung”	133
3.35 Order numbers for measures 6-7 of “Erlösung”	134
3.36 Order numbers for measures 8-10 of “Erlösung”	135
3.37 Order numbers for measures 11-18 of “Erlösung”	137

Example	Page
3.38 Set-class 3-3 in measures 1-2.....	139
3.39 Measure 5 of Op. 18/ii with set-class 3-3 highlighted.....	140
3.40 Op. 18/ii measures 6-7 with set-class 3-3 highlighted.....	142
3.41 Op. 18/ii measures 8-9 with set-class 3-3 highlighted.....	144
3.42 [t12] in guitar part of Op. 18/ii.....	144
3.43 [016] in measures 11, 13, and 17	146
3.44 Measures 14-15 of Op. 18/ii set-class 3-3 highlighted	147
3.45 Measures 16-18 of Op. 18/ii set-class 3-3 highlighted	147
3.46 Op. 18/ii guitar part measures 1-2 with tablature and Koozin-shapes	151
3.47 Op. 18/ii guitar part measures 3-5 with tablature and Koozin-shapes	152
3.48 Op. 18/ii guitar part measures 6-7 with tablature and Koozin-shapes	153
3.49 Op. 18/ii guitar part measures 8-9 with tablature and Koozin-shapes	153
3.50 Op. 18/ii guitar part measures 11-13 with tablature and Koozin-shapes	154
3.51 Op. 18/ii guitar part measures 14-18 with tablature and Koozin-shapes	155
3.52 Op. 18/ii opening clarinet motive with tablature	156
3.53 Op. 18/ii clarinet part measures 1-3 with tablature.....	157
3.54 Op. 18/ii clarinet part measures 4-5 with tablature.....	157
3.55 Op. 18/ii clarinet part measures 6-12 with tablature.....	158
3.56 Op. 18/ii clarinet part measures 15-16 with tablature.....	159
3.57 Op. 18/ii clarinet part closing gesture with tablature	159
3.58 Op. 18/ii voice part showing “wunden” and “alle Stunden” with tablature	161

Example	Page
3.59 Op. 18/ii measures 4, 8, and 11-13	162
3.60 Op. 18/iii measures 1-3 with rows and order numbers	169
3.61 Op. 18/iii measures 4-7 with rows and order numbers	170
3.62 Op. 18/iii measures 8-11 with rows and order numbers	171
3.63 Op. 18/iii measures 12-14 with rows and order numbers	172
3.64 Opening of first and second verses showing similarities in contour and rhythmic structure.....	174
3.65 Op. 18/iii measures 15-17 with rows and order numbers	175
3.66 Op. 18/iii measure 18 row exposure	176
3.67 Op. 18/iii coda with row counts	177
3.68 Op. 18/iii measures 1-3 with harmonies highlighted	180
3.69 Op. 18/iii measures 5-7 with harmonies highlighted	182
3.70 Op. 18/iii measures 9-11 with harmonies highlighted	185
3.71 Op. 18/iii measures 12-18 with harmonies highlighted	186
3.72 Op. 18/iii measure 21 with harmonies highlighted.....	187
3.73 Op. 18/iii guitar part measures 1-3 with tablature and Koozin-shapes.....	189
3.74 Op. 18/iii guitar part measures 5-8 with tablature and Koozin-shapes.....	190
3.75 Op. 18/iii guitar part measures 9-11 with tablature and Koozin-shapes.....	191
3.76 Op. 18/iii guitar part measures 12-15 with tablature and Koozin-shapes.....	192
3.77 Op. 18/iii guitar part measures 16-18 with tablature and Koozin-shapes.....	192
3.78 Op. 18/iii guitar part measures 19-21 with tablature and Koozin-shapes.....	193

Example	Page
3.79 Op. 18/iii clarinet part measures 1-7 with tablature and Koozin-shapes	195
3.80 Op. 18/iii clarinet part measures 8, 11-12 with tablature and Koozin-shapes	196
3.81 Op. 18/iii clarinet part measures 13-15 with tablature and Koozin-shapes	196
3.82 Op. 18/iii clarinet part measures 4-5, and 16-18 with tablature and Koozin-shapes.....	197
3.83 Op. 18/iii clarinet part measures 19-21 with tablature and Koozin-shapes	198
3.84 Op. 18/iii voice part measures 5-8 with tablature and Koozin-shapes	199
3.85 Op. 18/iii voice part measures 9-11 with tablature and Koozin-shapes.....	200
3.86 Op. 18/iii voice part measures 12-14 with tablature and Koozin-shapes	201
4.1 Op. 25/i measures 2-5 with poetic stresses highlighted	210
4.2 Op. 25/i measures 6-8 with poetic stresses highlighted	211
4.3 Op. 25/i measures 9-11 with poetic stresses highlighted	212
4.4 Op. 25/i measures 1-5 with rows and order numbers	216
4.5 Comparison of opening of first verse and closing of second verse of Op. 25/i	217
4.6 Op. 25/i measures 6-10 row counts.....	218
4.7 Op. 25/i measures 11-12 row counts.....	219
4.8 Op. 25/i introduction with set-class 3-3 harmonies highlighted.....	221
4.9 Op. 25/i measure 2 highlighting set-class 3-3 harmonies	223
4.10 Op. 25/i measures 3-4 highlighting set-class 3-3 harmonies	224
4.11 Op. 25/i measures 5-6 highlighting set-class 3-3 harmonies	226
4.12 Op. 25/i measures 7-8 highlighting set-class 3-3 harmonies	227

4.13 Op. 25/i measures 9-12 highlighting set-class 3-3 harmonies	228
Example	Page
4.14 Op. 25/i opening measures as guitar part with tablature and Koozin-shapes	232
4.15 Op. 25/i measures 2-3 as guitar part with tablature and Koozin-shapes.....	233
4.16 4-fret spanning trichords in Op. 25/i.....	234
4.17 5-fret spanning trichords in Op. 25/i.....	234
4.18 3-fret and 2-fret spanning trichords in Op. 25/i	235
4.19 Op. 25/i tetrachords spanning 3 and 4 frets	236
4.20 Op. 25/i 6 and 7-fret spanning tetrachords.....	237
4.21 Op. 25/i opening measures with Koozin-shapes.....	238
4.22 Op. 25/i Koozin-shape for measure 3	239
4.23 Op. 25/i triplet figures with Koozin-shapes in measure 4	239
4.24 Op. 25/i measures 5-6 with Koozin-shapes	240
4.25 Op. 25/i measures 8-9 with Koozin-shapes	240
4.26 Op. 25/i two different options for performing measure 10.....	241
4.27 Op. 25/i measures 11-12 with tablature and Koozin-shapes.....	242
4.28 Op. 25/ii verses 1 and 2 with poetic stresses highlighted	248
4.29 Op. 25/ii verses 3 and 4 with poetic stresses highlighted	249
4.30 Op. 25/ii measures 1-4 with row counts	253
4.31 Op. 25/ii measures 5-8 with row counts	253
4.32 Op. 25/ii measures 9-16 with row counts	255
4.33 Op. 25/ii measures 17-32 with row counts	256

4.34 Op. 25/ii measures 33-42 with row counts	257
Example	Page
4.35 Op. 25/ii measures 1-2 piano part with tablature and Koozin-shape	265
4.36 Op. 25/ii with 3rd measure as written and with pc2 moved up an octave	266
4.37 Op. 25/ii measures 4-5 and 8-9 of piano part as guitar part.....	268
4.38 Op. 25/ii measure 7 piano as guitar part	269
4.39 Op. 25/ii measures 8-10 piano as guitar part	270
4.40 Op. 25/ii measure 27 piano as guitar part	271
4.41 Op. 25/ii measures 31 and 41 piano as guitar part.....	271
4.42 Op. 25/ii recurring gesture as it appears in measure 7	272
4.43 Op. 25/ii measures 15-20 piano as guitar part	274
4.44 Op. 25/ii measures 26 and 37 piano as guitar part.....	275
4.45 Op. 25/ii measures 31-32 piano as guitar part	276
4.46 Op. 25/ii measures 1-4 highlighting set-class 3-3.....	277
4.47 Op. 25/ii measures 5-8 highlighting set-class 3-3.....	279
4.48 Op. 25/ii measures 9-12 highlighting set-class 3-3.....	280
4.49 Op. 25/ii measures 13-16 highlighting set-class 3-3.....	281
4.50 Op. 25/ii measures 17-20 highlighting set-class 3-3.....	282
4.51 Op. 25/ii measures 21-24 highlighting set-class 3-3.....	283
4.52 Op. 25/ii measures 25-28 highlighting set-class 3-3.....	284
4.53 Op. 25/ii measures 29-32 highlighting set-class 3-3.....	285
4.54 Op. 25/ii measures 33-35 highlighting set-class 3-3.....	286

4.55 Op. 25/ii measures 36-39 highlighting set-class 3-3.....	287
Examples	Pages
4.56 Op. 25/ii measures 40-42 highlighting set-class 3-3.....	288
4.57 Op. 25/iii first verse with poetic stresses highlighted.....	295
4.58 Op. 25/iii measures 29-51 with poetic stresses highlighted.....	296
4.59 Op. 25/iii measures 56-76 with poetic stresses highlighted.....	296
4.60 Op. 25/iii measures 1-14 row order numbers.....	298
4.61 Op. 25/iii measures 15-21 row order numbers.....	298
4.62 Op. 25/iii measures 29-42 row order numbers.....	299
4.63 Op. 25/iii measures 43-60 row order numbers.....	300
4.64 Op. 25/iii measures 61-78 row order numbers.....	302
4.65 Set-class 4-18 transforming to set-class 3-3 via delayed pitch onset.....	304
4.66 Chain of interlocking close voice-leading in measures 52-56.....	306
4.67 Op. 25/iii measures 55-66 with set-class 3-3 highlighted.....	311
4.68 Op. 25/iii measures 67-78 with set-class 3-3 highlighted.....	312
4.69 Op. 25/iii 1-2 of piano as guitar part with tablature and Koozin-shapes	315
4.70 Op. 25/iii 3-9 of piano as guitar part with tablature and Koozin-shapes	316
4.71 Op. 25/iii 11-15 of piano as guitar part with tablature and Koozin-shapes	317
4.72 Op. 25/iii 15-17 of piano as guitar part with tablature and Koozin-shapes	319
4.73 Op. 25/iii 18-21 of piano as guitar part with tablature and Koozin-shapes	321
4.74 Op. 25/iii 21-24 of piano as guitar part with tablature and Koozin-shapes	321
4.75 Op. 25/iii 24-29 of piano as guitar part with tablature and Koozin-shapes	322

Example	Page
4.76 Op. 25/iii 30-31 and 45-46 of piano as guitar part with tablature and Koozin-shapes.....	323
4.77 Op. 25/iii 30-31 and 56-62of piano as guitar part with tablature and Koozin-shapes.....	326
5.1 Boynton’s “a” and “b” rhythm.....	336
5.2 First row projections of Op. 30.....	341
5.3 Op. 30 row projections measures 5-11.....	342
5.4 Op. 30 measures 12-20 row projections	345
5.5 Op. 30 measures 0-4 with harmonies labeled	347
5.6 Op. 30 measures 5-11 with harmonies labeled	349
5.7 Op. 30 measures 12-20 with harmonies labeled	350
5.8 Op. 30 opening motive for guitar with tablature and Koozin-shape.....	352
5.9 Op. 30 measure 2 for guitar with tablature and Koozin-shape	354
5.10 Op. 30 measures 3-6 for guitar with tablature and Koozin-shape	355
5.11 Op. 30 measures 10-12 for guitar with tablature and Koozin-shape	358
5.12 Op. 30 measures 13-14 for guitar with tablature and Koozin-shape	358
5.13 Op. 30 measures 15-20 for guitar with tablature and Koozin-shape	360
5.14 Opening motive and melody in measures 21-23.....	362
5.15 Phrase two Op. 30 measures 24-26.....	363
5.16 Boynton’s phrase two, three, and four	365
5.17 Phrase five emerging via invariance between P_0 and P_7	367

Example	Page
5.18 Phrase five measures 34-39	369
5.19 Phrases 6 and 7 measures 40-45	371
5.20 Row exposures for measures 40-45 showing phrase 6 and beginning of phrase 7	372
5.21 Phrase 8, measures 46-51	374
5.22 Op. 30 measures 46-55	375
5.23 Op. 30 measures 21-28 harmonies highlighted.....	377
5.24 Measures 29-39 with each tetrachord highlighted and labeled.....	379
5.25 Op. 30 measures 40-52 with harmonies indicated	381
5.26 Op. 30 measures 21-23 arranged for guitar with tablature and Koozin-shapes...	383
5.27 Op. 30 measures 24-26 arranged for guitar with tablature and Koozin-shapes...	384
5.28 Op. 30 measures 27-29 arranged for guitar with tablature and Koozin-shapes...	385
5.29 Op. 30 measures 30-31 arranged for guitar with tablature and Koozin-shapes...	386
5.30 Op. 30 measures 32-35.1 arranged for guitar with tablature and Koozin-shapes.....	386
5.31 Op. 30 measures 36-39 arranged for guitar with tablature and Koozin-shapes...	387
5.32 Op. 30 measures 40-42 arranged for guitar with tablature and Koozin-shapes...	388
5.33 Op. 30 measures 43-46 arranged for guitar with tablature and Koozin-shapes...	389
5.34 Op. 30 measures 51-55 arranged for guitar with tablature and Koozin-shapes...	389
5.35 Op. 30 measures 56-64 with row exposures labeled.....	393
5.36 Op. 30 measures 65-73 with row exposures labeled.....	395

Examples	Page
5.37 Measures 56-57 showing tetrachords divided between harmonic and melodic parts.....	399
5.38 Op. 30 measures 58-64 with harmonies highlighted	400
5.39 Op. 30 measures 65-73 highlighting harmonies	403
5.40 Op. 30 measures 56-59 arranged for guitar with tablature and Koozin-shapes...	406
5.41 Op. 30 measures 60-61 arranged for guitar with tablature and Koozin-shapes...	408
5.42 Op. 30 measures 62-73 arranged for guitar with tablature and Koozin-shapes...	410
5.43 Op. 30 measures 74-77 showing row exposures.....	413
5.44 Op. 30 measures 74-77 with variants of “a” rhythm in trombone and viola	414
5.45 Op. 30 measures 86-90 showing row exposures.....	415
5.46 Op. 30 measures 91-96 showing row exposures.....	416
5.47 Op. 30 measures 97-103 showing row exposures.....	417
5.48 Op. 30 measures 104-109 showing row exposures.....	418
5.49 Op. 30 measures 75-85 highlighting tetrachords	419
5.50 Op. 30 measures 85-96 highlighting tetrachords	421
5.51 Op. 30 measures 97-109 highlighting tetrachords	423
5.52 Op. 30 measures 74-75 guitar arrangement with tablature	426
5.53 Op. 30 measures 76-77 guitar arrangement with tablature	426
5.54 Op. 30 measures 78-85 guitar arrangement with tablature	427
5.55 Op. 30 measures 87-92 guitar arrangement with tablature	428
5.56 Op. 30 measures 93-99 guitar arrangement with tablature	429

Example	Page
5.57 Op. 30 measures 101-109 guitar arrangement with tablature	430
5.58 Op. 30 measures 110-117 row exposures	432
5.59 Op. 30 measures 118-124 row exposures	434
5.60 Op. 30 measures 125-130 row exposures	435
5.61 Op. 30 measures 131-134 row exposures	436
5.62 Op. 30 measures 110-117 harmonies	437
5.63 Op. 30 measures 118-130 harmonies	438
5.64 Op. 30 measures 131-134 harmonies	439
5.65 Op. 30 measure 112 guitar arrangement with tablature and Koozin-shapes	442
5.66 Op. 30 measures 114-115 guitar arrangement with tablature and Koozin-shapes	443
5.67 Op. 30 measures 116-117 guitar arrangement with tablature and Koozin-shapes	444
5.68 Op. 30 measures 118-120 with unison re-articulations	445
5.69 Op. 30 measure 126 string of 4ths fitting under a compact shape with a barre at the 11th fret	445
5.70 Op. 30 measures 127-133 guitar arrangement with tablature and Koozin-shapes	446
5.71 Op. 30 measures 137-143	448
5.72 Op. 30 measures 135-136 with “a” rhythm in violas	450
5.73 Op. 30 clarinet melody measures 144-145 referencing “a” rhythm	451
5.74 Op. 30 measures 135-145 with harmonies labeled	451

Example	Page
5.75 Op 30 measures 137-140 guitar arrangement with tablature and Koozin-shapes.....	455
5.76 Op. 30 measures 141-143 guitar arrangement with tablature and Koozin-shapes.....	456
5.77 Op. 30 measures 144-145 guitar arrangement with tablature and Koozin-shapes.....	457
5.78 Op. 30 measures 146-147 highlighting opening two tetrachords	459
5.79 Op. 30 measures 148-153 highlighting row exposures.....	460
5.80 Op. 30 measures 154-163 highlighting row exposures.....	462
5.81 Op. 30 measures 164-168 highlighting row exposures.....	463
5.82 Op. 30 measures 169-180 highlighting row exposures.....	465
5.83 Op. 30 measures 146-153 with harmonies highlighted	466
5.84 Op. 30 measures 154-163 with harmonies highlighted	468
5.85 Op. 30 measures 164-174 with harmonies highlighted	468
5.86 Op. 30 measures 175-180 with harmonies highlighted	469
5.87 Op. 30 measures 146-147 guitar arrangement with tablature and Koozin-shapes.....	472
5.88 Op. 30 measures 149-150 guitar arrangement with tablature and Koozin-shapes.....	473
5.89 Op. 30 measures 151-154 guitar arrangement with tablature and Koozin-shapes.....	473
5.90 Op. 30 measures 156-157 guitar arrangement with tablature and Koozin-shapes.....	474
5.91 Op. 30 measures 158-164 guitar arrangement with tablature and Koozin-shapes.....	476

Example	Page
5.92 Op. 30 measures 165-169 guitar arrangement with tablature and Koozin-shapes.....	477
5.93 Op. 30 measures 169-180 guitar arrangement with tablature and Koozin-shapes.....	478

CHAPTER I

INTRODUCTION

In this dissertation I will look at Anton Webern's middle-period work Op. 18 discussing the ways in which the three pieces contained therein had a significant impact on his later mature serial works. The main focus will be to create connections between these works through stylistic characteristics that are developed across his later works, but can ultimately be traced back to these pivotal middle-period pieces. Some of these connections will lie in the subject matter of his chosen text, the overall accompanimental range, voicing of harmonies, and overall sound envelope of the pieces analyzed throughout.

To uncover these connections I will focus on issues of voice leading in Webern's scores using Joseph Straus' "Contextual Inversion Spaces" as a guide. Part of Straus' approach involves the use of a modified Tonnetz for use with pitch sets.¹ In his article Straus looks at various small excerpts from Webern's late period works, whereas my analyses will not only include works not covered by Straus, but will go into more detail by covering pieces in their entirety.

Webern's Op. 17, it has been argued, is the first of the composer's serial pieces. Op. 18, however, finds Webern already becoming more comfortable with this compositional method, showing significant

¹ Joseph Straus, "Contextual Inversion Spaces," *Journal of Music Theory* 55, no. 1 (Spring 2011).

developments across each of its three songs. It was during the composition of Op. 18 that Webern became excited enough about his developments that he wrote a now famous letter to his friend, composer Alban Berg, stating that “twelve tone composition is for me now a completely clear procedure. Naturally these songs are all written in this method and the work at hand gives me pleasure as rarely any before.”² In addition to his letter to Berg, Webern had begun, at this same point in his life, to keep a notebook that was not only full of sketches of compositional ideas but that also detailed many of his excursions into the mountains where he would regularly hike. The notebook was also used to keep an inventory of all the flora he would come across during these expeditions.

Although these two interests, on the surface, may seem to have little to do with one another, when considered in conjunction with Webern’s interest in folk culture—indeed, the original title for his Op. 18 was simply “Volkslied”—we begin to see the many ways in which Webern was becoming interested in integrating his love of Austrian culture, nature, and the new “completely clear procedure” of twelve-tone composition into a cohesive structure in itself.

² Hans Moldenhauer and Rosaleen Moldenhauer, *Anton Webern: A Chronicle of his Life and Work* (New York: Knopf, 1979), 317.

It will be important for my purposes to describe precisely my meaning when I refer to “folk”-music, or “folk”-culture. The word itself has been notoriously difficult to define. According to the International Folk Music Council in 1955: “Folk music is music that has been submitted to the process of oral transmission. It is the product of evolution and is dependent on the circumstances of continuity, variation, and selection.” Their definition continues, focusing on folk music’s evolution as guided by a community through the course of it being handed down in an oral tradition; that it remains uninfluenced by art music is, to the IFMC, another important aspect. Folk music, like the culture that surrounds it, is constantly in flux, being “absorbed into the unwritten, living tradition of a community.”³

Norm Cohen, in his article defining folk music in Oxford Music Online, does concede that due to the “hints of patronization” in the definition presented by the IFMC, there have since been different schools of thought that have cropped up to expand and clarify what the term could come to mean. Accordingly, one perspective focuses on stylistic characteristics, while another considers how the music functions in society.⁴

³ Norm Cohen, “Folk music,” *Grove Music Online; Oxford Music Online*. Oxford University Press, accessed September 16, 2015, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/A2241135>.

⁴ Cohen, “Folk Music.”

Though Webern's music certainly has not been transmitted by means of any oral tradition, that does not separate it from the genre completely. Considering the school of thought that is focused on stylistic and content attributes of folk music, I will show that many such characteristics are present within Webern's music. Being that Webern worked within the realm of art music, and that his music was aimed at performances in recitals and concert halls across Europe and abroad, I argue that a significant portion of his music is *of* the common folk, though not necessarily directed at them or written *for* them specifically.

In his compositions Webern expresses the ethos of the common folk through the connections he makes between, in the case of his texted music, the folk poetry he uses, and the new language to which he sets that poetry. I will show in the chapters that follow the ways in which Webern alludes to a simpler harmonic foundation through his row choices; how he delineates standard forms through these row choices; his traditional treatment of text which focuses on impeccable prosody and, in at least one case, adds a layer of extra-musical meaning depicting traditional Austrian vocal practices. I show, through analyzing Webern's text setting, row counts, and rhythmic analysis, combined with a focus on connecting these elements to the physicality of guitar performance, the ways in which these many separate elements coalesce to form a more complete understanding of Webern's later period works.

My dissertation describes in detail the connections made through Webern's use of guitar in Op. 18; how Webern's texture and use of silence in his later works expresses the solitude of the mountains, which is tied to a larger idea of depicting his heimat; to connect those points I argue that the guitar is a good vehicle for producing these kinds of textures; and finally that the guitar continuo used in Op. 18 leads to harmonic consistency, which might also be understood as a folk-like quality.

This fact speaks to the way in which Webern's music functioned, and continues to function in society. His music was designed to project the elements of the world around him, and to present his much loved Austrian culture to the, perhaps, upper-class individuals that may have not necessarily been as connected to the same aspects of Austrian culture that Webern felt deeply connected to. This connection to his culture was also directly in line with the new language in which he began working during the construction of the pieces discussed herein. Specific folk elements embedded within Webern's middle and late period works will be discussed in my analyses.

Webern stated that "man is only the vessel into which is poured what 'nature in general' wants to express," and that "things treated by

art in general are not 'aesthetic' but are determined by natural laws."⁵ In the lectures given by Webern in 1932 and 1933, seven years after the completion of his Op. 18, he was presenting the ideas that shaped his work.⁶ His firm assertion that nature and music are one and the same are made more clear in his having quoted Goethe thus: "These high works of art were at the same time brought forth as humanity's highest works of nature, according to true and natural laws. Everything arbitrary or illusory falls away: here is necessity, here is God."⁷ Later Webern continues to support his ideas through those previously established by Goethe in saying "Goethe sees art as a product of nature in general, taking the particular form of human nature. That is to say there is no essential contrast between a product of nature and a product of art, but that it is all the same, that what we regard as and call a work of art is basically nothing but a product of nature in general."⁸ This quotation leads to my argument about why Webern uses the guitar in Op. 18: within this context it is continuing a folk tradition, which is itself tied to the nature of hiking in the Alps. Since, as Webern believed via Goethe, music is an outward expression of nature, Webern's inclusion of the

⁵ Anton Webern, *The Path to the New Music*, ed. Willi Reich, trans. Leo Black (Bryn Mawr: Theodor Presser, 1963), 8.

⁶ The three songs of Op. 18 were completed on September 10th, September 27th, and October 28th, 1925, respectively.

⁷ Webern, *Path*, 8.

⁸ Webern, *Path*, 10.

guitar injects actual, physical nature into his high art such that his art now exudes nature from multiple angles. Webern has found a way to make his music more complete while strengthening the structure of his works as art becomes more evolved, and his use of the new language in which he is writing becomes more evolved.

Many of Webern's connections between music and nature have been discussed by Julian Johnson in his book *Webern and the Transformation of Nature*. Tracing Webern's inspiration for inserting these elements of nature into his music, Johnson states that this "was an idea Webern encountered in the music of Mahler, who used the direction 'like a sound of nature' on the opening page of his first symphony."⁹ He also claims that Webern's music "absorbs and transforms conventional musical topics for the representation of nature, and that the relationships these construct throughout his work as a whole amount to something like a musical discourse of nature."¹⁰ In the pages that follow Johnson describes other Webern analyses that inject extramusical sounds into his music. In fact Johnson claims that Webern, despite being "constructed as one of the most abstract [composers] in the history of Western music, hardly ever wrote a piece of music which did not have,

⁹ Julian Johnson, *Webern and the Transformation of Nature* (Cambridge: Cambridge University Press, 1999), 2.

¹⁰ Johnson, *Transformation*, 4.

for him, significant extra-musical associations.”¹¹ Robert Craft, whom Johnson quotes, claims that “bell sounds in clear mountain air are evoked in almost every Webern opus.”¹² In fact, Webern did mention in another letter to Alban Berg, dated October 8, 1925—in the midst of composing Op. 18—the “inscrutable meaning” of the alpine flora. According to Hans Moldenhauer, for Webern “it was the greatest magic.”¹³ Webern continued, saying “I have struggled all my life to reproduce in music what I perceive [while hiking in the Alps]” to which Moldenhauer adds “a *major part* of his musical production could be traced back to that endeavor” (italics my own).¹⁴

Craft’s assertion, however broad it may be, is a good jumping off point. I propose that the “sounds in clear mountain air” signify perhaps something deeper, something more significant. The change of style in Webern’s later works is obvious, and their overall *sound* became Webern’s defining characteristic. The spaciousness of the orchestration, the sharpness of the attacks, a significantly decreased interest in sustained legato lines, and the systematic use of rests become increasingly important parts of the composer’s mature serial style.

¹¹ Johnson, *Transformation*, 186.

¹² Johnson, *Transformation*, 5.

¹³ Hans Moldenhauer and Rosaleen Moldenhauer, *Anton Webern: A Chronicle of his Life and Work* (New York: Knopf, 1979), 317.

¹⁴ *Ibid.*

Of these defining characteristics of Webern's late style, several other composers have made a case for the considerable role of silences in these works, and repeatedly mention the idea of Webern as a "multi-dimensional" composer. Pierre Boulez maintains that "music is not just the art of sound...it must be defined rather as a counterpoint of sound and silence."¹⁵ We could extend this idea of the "counterpoint of sound and silence" to mean that the silences, not only the notes, may be used to represent things. More to the point of Webern as a composer that creates meaning in silences, or the sound between separate note-onsets, Herbert Eimert says that "[Webern's] fundamental structural element is not the note, but the interval...[which] represents itself as the true objective in the development of his working material."¹⁶ These composers are pointing to the fact that Webern's characteristic sound, indeed the music, is created in these various "in-between" spaces. Boulez points to horizontal spaces in between two separate note onsets, i.e. silences, as an important structural component, while Eimert focuses on the vertical in-between spaces created by interval space.

¹⁵ Pierre Boulez, "The Threshold," in *Die Reihe: A periodical devoted to developments in contemporary music*, eds. Herbert Eimert and Karlheinz Stockhausen (Bryn Mawr: Theodore Presser Company, 1958), 40.

¹⁶ Herbert Eimert, "A Change of Focus," in *Die Reihe: A periodical devoted to developments in contemporary music*, eds. Herbert Eimert and Karlheinz Stockhausen (Bryn Mawr: Theodore Presser Company, 1958), 32.

I believe that this can, in actuality, be considered as Webern introducing a new musical topic to his works. The aforementioned stylistic characteristics of his mature style have much in common with the sound characteristics of the guitar. Through using the sound envelope of the guitar, imbuing ensembles with the folkloric qualities inherent in the instrument, Webern has found a way to bring these other instruments up into those mountains. He is not only transforming nature with his music, but his music itself is also being transformed and allowed to realize its full potential, that potential being the complete and total fusion of nature, folk culture, and new music. In short, Webern is creating a new folk music, and the simplicity of his harmonies, whose voice-leading patterns owe much to the design of the guitar which leads to progressions whose motions closely resemble writing for the guitar.

Once again, according to Julian Johnson, “Webern inherited the idea that music could represent nature. He also inherited a repertoire of specific musical devices for such a representation understood by musicians and audience alike.”¹⁷ Inheriting these musical devices gives Webern material that can be developed in conjunction with his evolving musical syntax, adding to the repertoire through abstracting the *sound* of the guitar into later works such that the audience would pick up on

¹⁷ Johnson, *Transformation*, 38.

the folk implications of his orchestrational, instrumental, lyrical and timbral choices.

In a letter to Berg on July 12, 1912 Webern says “I don’t want symbols. I want the things themselves.”¹⁸ Later in the same letter Webern says that Mahler’s symphonies were not symbols for the world that the composer was trying to create, but were in fact the things themselves. Webern’s desire to capture the complete human experience, to him, meant finding ways to actually create his world out of music; throughout the composition of his middle period works, Opp. 17–19, he was searching for ways to not simply give an impression of his world, but to actually create it. Accomplishing this would mean developing his language in such a way that mirrored his involvement and interest in concert music, a forward-looking new and individualistic harmonic language, and his love of Austria, folk culture and the assertion of his *heimat*.¹⁹²⁰

¹⁸ Johnson, *Transformation*, 8.

¹⁹ The word, and concept of, “*heimat*” is German in origin with no true English equivalent. *Heimat* defines one’s relationship to one’s social, and environmental surroundings. The closest we may come in English would be to use the word “homeland.” However, “*heimat*” is more specific describing, as Peter Blicke states in his book *Heimat: A Critical Theory of the German Idea of Homeland*, “ones love and attachment to their homeland.” Blicke also mentions that an attachment to one’s *heimat* may relate to progressive social, and political positions. This relates directly to Webern’s progressive ideas about music, and specifically about his own harmonic language.

²⁰ Peter Blicke, *Heimat: A Critical Theory of the German Idea of Homeland* (Rochester: Camden House, 2002), 4.

Together with Johnson's assertion that Webern was directly influenced by Mahler's works, we should take into account that throughout Webern's successful conducting career he regularly conducted the works of the great Austrian symphonist. Those conducting engagements involved Webern directing the "Workers' Symphony Concerts", which did not consist of professional musicians, but amateur musicians that performed and rehearsed in their spare time. Webern worked with this ensemble, using his, by all accounts, considerable conducting prowess to guide them through works old and new by Berg, Schoenberg, Beethoven, and, of course, Gustav Mahler in addition to some of his own works.²¹ It was with the Workers' Symphony that Webern performed Mahler's 2nd Symphony, as well as his "Klagende Lied." This further confirms Webern's desire to communicate with the common-folk. His guiding non-professional musicians through performances of new works, points toward Webern's implied assertion that his own music was not "high-brow" or meant to be "difficult," but that it was meant to be appreciated and comprehended by all. Webern did not see himself as writing cerebral music for an exclusive crowd, on the contrary, he was writing popular music in a highly personal language. This was to be a music designed by Webern to connect him

²¹ Josef Polnauer notes that of Mahler's symphonies, Webern conducted performances of symphonies number 2, 4, 6, and 8 in addition to the two night music movements of the 7th and the "Klagende Lied."

with his environment, his fellow countrymen, and culture—not distance himself from it.

That Webern's works have been generally misunderstood by audiences as abstract, or esoteric, is unfortunate in light of the ideas that I am proposing. Linking Webern's later, arguably more "difficult" works to folk-music, which aims for universal appeal and understanding, I believe helps us to understand their relative clarity. Webern's sound develops *through* a folk lens, and when stripped to its fundamentals is shown to reflect many of the same considerations as the music Webern emulates in these works. In Webern's mind people would soon be humming his melodies in the street, as he thought his music to be derived from the very same elements that created memorable, singable and familiar songs.

Webern loathed convention, and societal norms. For example, after witnessing a performance of Frank Wedekind's *Hidalla* in the Schauspielhaus during a brief stay in Munich, Webern wrote his thoughts down with the following attack on the bourgeoisie:

How I hate them, these Philistines, who cannot get beyond their cursed conventions and even are conceited about them. In the shortest time, their enthusiasm is over, their inspiration finished. They cease to search and to struggle, they content themselves with something inferior, they marry and suffocate in laziness and become Philistines. These peasants, whose malice stinks like a cadaver! Where is a single one who would sacrifice his life for a good deed? Lazy, immovable, full of dullness, without emotion,

without enthusiasm, without courage, they waste away and do not perceive beauty.²²

Webern had not only a deep affection, and empathy, for the common man, but also placed a great deal of faith in them. He believed that even if his music was not understood in its time that it eventually would be, and that people who truly kept an open mind and were not “lazy, immovable, [and] full of dullness” would uncover his music for what it is. This quote points to Webern’s writing for the future, hoping that the enthusiasm for his music would continue, and that people *would* “search and struggle” for meaning. With my work I hope to shine a light on this path, searching and struggling to find the true musical meaning behind Webern’s compositional choices. My ultimate goal is to bring his music closer to this ideal that he himself hoped they would eventually attain.

Mahler’s creation of nature, and expression of *heimat*, came about through his use of folk dances such as the Ländler, folk tunes, and instrumentation that would create small folk ensembles within the orchestra. Mahler would also include the use of instruments that were not normally part of the orchestra.

An example of Mahler’s unique orchestration is present in his seventh symphony. In that work, Mahler creates a symphony in five movements of which the second and fourth movements are given the title

²² Moldenhauer, *Chronicle*, 80.

of “Nachtmusik,” with the tempo indications “Allegro moderato,” and “Andante Amoroso,” to start the movements, respectively. The second *Nachtmusik* features the guitar in a foundational harmonic role. By design the movement begins in F major with the guitar functioning, in conjunction with the harp, as the harmonic anchor, but eventually the ensemble grows larger, overtaking the delicate plucked strings and makes its way into progressively more distant harmonic territory.²³ Each of these harmonic diversions, in their incrementally increasing durations, eventually returns to a version of the original ensemble, turning harmonic control back over to the guitar. Mahler uses the guitar as harmonic foundation and touchstone, allowing the whole of the orchestra to extrapolate the opening thematic material and carry it to places that the guitar, due to its subdued sound, would not be able to go. In this way the guitar manages to tie the entirety of the movement together.

Both the guitar and mandolin, have closer ties to folk music than they do orchestral music. Using the harp as an extension of the sound of these two instruments brings them into the ensemble, however, through the similarity of their timbres. Webern uses the same technique of extending the guitar’s sound, and therefore its function, through the use

²³ It is important to note the use of F major, one of the so-called “pastoral” keys, in this movement in conjunction with its inclusion of guitar in a central role.

of a complementary instrument in his Op. 19 songs. In that work, the guitar continues to function like a continuo, but with the addition of a celeste to add to the dynamic range. I also view this as Webern clinging to the idea of the guitar as a symbol which is responsible for creating deeper meaning, though he relies on other means for amplifying its sound to be heard over the more considerable forces of the Op. 19 ensemble.

Webern's choice of the guitar on a purely practical level may have its roots in earlier musics too. As the guitar is one of the original instruments used as a continuo, he may have also had those considerations in mind. Speaking to the traditional role within which the guitar developed, Thomas Christensen says that

music played upon the Baroque guitar was strongly chordal in texture, which should probably not surprise us given the ease with which one can finger and strum a chord on this instrument.²⁴

He continues to say that treatises on Baroque guitar triadic practice differed greatly from treatises for keyboardists, which of course means that guitars function in a way that differs significantly from keyboard instruments. According to Christensen,

[for] 17th-century guitarists...chords became independent and autonomous compositional constructs that could be inverted and juxtaposed freely. This chordal mentality allowed them to test and exploit harmonic relationships with far greater license than was

²⁴ Thomas Christensen, "The Spanish Baroque Guitar and Seventeenth-Century Triadic Theory," *Journal of Music Theory*, Vol. 36 no. 1 (Spring 1992): 2.

available to keyboardists, whose practice was heavily constrained by contrapuntal exigencies.²⁵

Although Christensen's article is mainly concerned with the Spanish Baroque treatment of the guitar, there are still many ideas that carry over to Webern's compositional concerns, I think. For example, speaking of the *rasqueado* technique of Spanish guitarists, he says "its theoretical implications were profound. Music was now conceived and taught as consisting of chordal entities that were self-sufficient and combinable in permutations independent of contrapuntal or modal control."²⁶ The implications of this statement are obvious, in that Webern's new language was also now concerned with similar self-sufficient chordal entities.

The changes in harmonic, and therefore of compositional, thinking that it encouraged were not the only things that set the guitar apart from keyboard instruments. "The rich and percussive resonance of the guitar courses allowed a chord's functional sonority to remain essentially constant no matter which particular note happened to be on the bottom."²⁷ So these changes in musical thinking were not only brought on by the possibilities brought about through the construction of the guitar, but also through the timbre of the instrument.

²⁵ Christensen, "Spanish Baroque Guitar," 8.

²⁶ *ibid.*, 8.

²⁷ Christensen, "Spanish Baroque Guitar," 3.

Developments in Webern's musical language, arriving just prior to developments in Webern's orchestrational and timbral language, parallel those that were originally brought about in the Baroque with the introduction of the guitar's chordal orientation. The chordal orientation of Webern's middle and late period works, as I will show, typically focuses around 3-3 and 3-5 trichords, though other chords do appear as well. In his late period Webern was discovering ways to derive rows that had the maximum potential for consistent harmonies, a style that comes directly out of his practice of using the guitar as the continuo in both his Op. 18 and Op. 19 lieder.

Webern mentioned this symphony to Berg in the same letter from July 12, 1912 where he spoke about Mahler not creating symbols, but the things themselves. So, Webern's appreciation for and knowledge of this work can be traced to before his conception of Op. 18, but later in the composer's life Webern's love for Mahler's seventh symphony is made abundantly clear in his having conducted it on many occasions. Interestingly, Webern never conducted the symphony in its entirety, but only the two *Nachtmusik* movements. In a letter to friend, poet, and artist, Hildegard Jone, who would go on to be Webern's sole source of texts after Op. 19, Webern makes many mentions of the Workers' Symphony engagements. On April 21, 1934 Webern writes

I am conducting a Schubert symphony and the two 'Night musics' from Mahler's Seventh Symphony... I must show you these when you come again. The second one especially is indescribably beautiful. What resonates there is surely nothing but love, love, love.²⁸

The second *Nachtmusik*, which Webern finds "indescribably beautiful" of course is the one which centers itself around the sound of the guitar.

We also know that Webern's innovations are heavily indebted to the work of his teacher, Arnold Schoenberg. Webern would often excitedly take ideas directly from his teacher and incorporate them into his own works, much to the chagrin of Schoenberg. Of this particular habit of Webern's, Schoenberg said, "Webern immediately uses everything I do, plan or say, so that—I remember my words—by now I haven't the slightest idea who I am."²⁹

The writings of Schoenberg also provide us with a window into Webern's line of thinking, since one naturally led to the other. Schoenberg's writings collected within *Style and Idea* contain the composer's insights on several different aspects of music composition. The chapter entitled "Folkloristic Symphonies" is particularly prescient. Within that chapter Schoenberg states that "much beauty may be credited to natural folklore. No credit is deserved by those 'man-made'

²⁸ Anton Webern, *Anton Webern: Letters to Hildegard Jone and Josef Humplik*, ed. Josef Polnauer (Bryn Mawr: Theodore Presser Company, 1967), 25.

²⁹ Arnold Schoenberg, *Style and Idea: The Selected Writings of Arnold Schoenberg*, ed. Leonard Stein, trans. Leo Black (Berkeley: University of California Press, 1984), 484.

pseudo-folksongs, whose popularity is acquired through the mass appeal unfortunately exerted by triviality.”³⁰ This statement seems to place Schoenberg in Webern’s “I don’t want symbols. I want the things themselves” camp. Schoenberg further rails against these so-called pseudo-folksongs due to their “...falsified simplicity,” and finally says that “...natural folk music is always perfect, because it stems from improvisation—that is from a lightning flash of inspiration.”³¹ Finally, later Schoenberg sums up by saying that “genuine folk tunes remain within the narrowest compass of a scale and are based on simple harmonic progressions.”³²

In a later chapter taken from Schoenberg discussing Webern’s *Klangfarbenmelodie* in 1951, he says that the technique

would demand a particular organization, which would perhaps show a certain similarity to other musical forms; but they would have to take into account the demands imposed by a new factor, tone colors. Quite different forms had to be produced by homophony and by the art of counterpoint.³³

This comment once again points to concentrating on composition, as many others have stated, as *sound composition*. I take this to mean that there are other elements within Webern’s works that move beyond pitch,

³⁰ Schoenberg, *Style and Idea*, 161.

³¹ *Ibid.*

³² Schoenberg, *Style and Idea*, 164.

³³ Schoenberg, *Style and Idea*, 484.

rhythm, and form in creating his complete conception of a work. Of course, I am speaking of Webern's use of each of these elements, *Klangfarbenmelodie* included, to better emulate the sound of the guitar.

Naturally, this idea ties into comments mentioned earlier regarding Webern being a "multi-dimensional" composer. Despite several composers describing Webern in exactly the same way, as a "multi-dimensional" composer, none of them make explicit what they mean. Eimert comes closest to defining "multi-dimensional," by saying that Webern was reaching beyond the surface level considerations of the row. He goes further still, positioning integral serialism as being the natural next step and a direct result of Webern's work. This brand of total-serialism would develop in works such as Pierre Boulez's *Structures*, and *Le marteau sans maître*, written within a decade of Webern's death and only a few years prior to Eimert's writing. Eimert points to Webern as the forefather of integral serialism by mentioning the composer's treatment of the row and "the variable profile given the notes according to their intensity, dynamics and differentiated accentuation, in works for larger resources, the grouping of timbres..."³⁴

Catherine Nolan, in her analysis of Webern's Op. 27 piano variations, mentions that "the large-scale connections, in Westergaard's view, are determined by non-pitch parameters (dynamics, articulation

³⁴ Eimert, *Change of Focus*, 35.

etc.) that support the recurring pitch complexes.”³⁵ This statement seems to be yet another way of inferring that Webern’s compositional output is pointing toward the practices of the later integral serialists. The large-scale connections being spoken of here are all contained within Op. 27, while the large-scale connections discussed within this dissertation involve similar timbral, textual, and cultural attributes across a number of opera. Though Webern’s works can not in any way be considered totally serial, there is significant evidence, I argue, that an underlying consideration for imitating the guitar’s timbre, with all the cultural baggage it contains, were most certainly of a concern to him. For Webern the underlying implications of his orchestration, harmonies, and voicings, were all in service of projecting the idea of “guitariness.” As we will see in Webern’s Op. 30, his focus upon ic₃ and its registral placement were certainly pointing the way toward total serialism, and his imitating the guitar’s sound, and abilities led to Webern’s arrival at these possibilities.

Although Webern’s Op. 18 may not remain within the “narrowest compass of a scale,” as Schoenberg believes folk music should, it does so for the purpose, in the voice part, of capturing the sound of yodeling. Webern is adding to this idea of what it means to represent folk tunes,

³⁵ Catherine Nolan, “Structural Levels and Twelve-Tone Music: A Revisionist Analysis of the Second Movement of Webern’s *Piano Variations Op. 27*,” *Journal of Music Theory* 39, no. 1 (January 1995): 52.

according to his teacher, in order to create another folkloristic extramusical consideration through not imitating a yodel, but actually composing one directly into the work.

Webern's harmonic progression, however, remains simple. The consistent trichords within each of the three songs are comparable to traditional major and minor harmonies where, for example [014] is the minor counterpart to {034}, both belonging to the same set-class, 3-3. Additionally, Webern's close voice leading, as I will show, becomes more efficient (closer) across the three songs of Op. 18. This close voice-leading can be thought of as the simplest transformations, the most logical links, between 3-3's harmonies as possible.

When completed, the three "Volkslied" of Op. 18 were scored for guitar, Eb (piccolo) clarinet, and soprano, although this was not originally the case. In Webern's first sketchbook he marked as "begun June 1925," a fragment of the song "Erlösung," which would eventually become the second of Op. 18's three songs. This excerpt appeared at the opening of his notebook scored for voice, Bb clarinet, bass clarinet and viola. This ensemble may be equally unorthodox, but lacks references to the folk idiom that the songs would later take on in their final arrangement.

Webern's goal, I argue, was to capture the essence of Austrian folk music through his use of the guitar. His inclusion of guitar in the pivotal

Op. 18 influenced the textures, structures, harmonic thinking, and compositional processes of his music in a variety of ways.

In the chapters that follow my analyses will take into consideration the many ways in which Webern's later style is directly connected to his Op. 18, leading me to argue that this opus number is the most crucial work in the composer's entire output.

Analyses will include the use of neo-Riemannian operations, a technique that has been applied to excerpts of Webern's music, but not to the same extent as my approach, which will investigate in great detail several entire pieces. A voice-leading study, such as the kind afforded through a neo-Riemannian approach, will help to show any specific patterns that reappear in his later works. In forming my main argument, that the sound of the guitar is at the foundation of many of Webern's later works, I will explore the ways in which parsimonious voice-leading within the context of post-tonal harmony, relates to the idiomatic nature of the guitar, and how a unique use, and creation of unique musical topics relates to those considerations.³⁶ In order to accomplish this task I will detail in the following "Methodology" chapter an analytic approach that I have designed specifically to uncover the many connections between pitch content and timbre; an approach that takes Joti

³⁶ In this context the word "parsimony" denotes motion between chords which involves the least amount of change. Any P, L, or R transformation is parsimonious, as two pitches are held while the remaining pitch moves by only half-step. These transformations will be discussed in detail in the Methodology chapter.

Rockwell's ideas of rhythmic transformations as related to banjo performance, and John Blacking's assertion that

[notes] are not sonic objects which can be analyzed without reference to the deep, and often non-musical, structures which generate them. They are signs and symbols of the interaction of human beings and the workings of human minds, and as such they cannot be adequately understood unless they are subjected to context-sensitive, Cultural Analysis.³⁷

These ideas will be applied in tandem with those of Richard Cohn and David Lewin in order to fully uncover the pitch-specific, timbral, and cultural connections between the works analyzed in the chapters that follow. Specifically, I will use Cohn and Lewin's ideas of parsimonious voice-leading, as they relate to the fully-chromatic music of Anton Webern, showing its consistent trichordal and tetrachordal structures. Though Lewin, and then Cohn, sought to explore "chromatic music that is triadic but not altogether tonally unified," such as the musics of Wagner, Liszt, et. al, I adapt their general approach and apply it to the fully-chromatic music of Webern.³⁸ Webern's consistent use of certain set-classes, voiced in consistent ways, I will show, operate in much the same way as the

³⁷ John Blacking, "Deep and Surface Structures in Venda Music," *Yearbook of the International Folk Music Council*, Vol. 3 (1971): 108.

³⁸ Cohn, Richard. "Introduction to Neo-Riemannian Theory: A Survey and a Historical Perspective," *Journal of Music Theory*, Vol. 42, No. 2, Neo-Riemannian Theory (Autumn, 1998): 167.

more traditional triads and seventh chords of the late-Romantic era composers studied by Lewin and Cohn.

My analyses will include an investigation into some of the concepts outlined in Cohn's "Introduction to Neo-Riemannian Theory," namely Webern's trichordal, and tetrachordal transformations, common-tone maximization, and voice-leading parsimony. The relations of Parallel, Relative, and Leading-tone-exchange transformations will be used in describing motion across a modified Tonnetz as they were in Lewin's *Tonnetz*. This will be discussed in greater detail in my methodology chapter.

CHAPTER II

METHODOLOGY

2.1 OVERVIEW

According to the musicologist John Blacking,

Neither musicologists nor ethnomusicologists have yet devised a system of analysis which is sufficiently powerful to explain what we can know intuitively as a result of experience in culture, namely the essential differences between the music of Haydn and Mozart...³⁹

He continues, saying, “I do not know of any system of musical analysis which can explain exactly how and why Beethoven is Beethoven, Mozart is Mozart, and Haydn is Haydn.”⁴⁰

These questions point to one of the analytical problems that I am hoping to solve, or at least propose a solution to, in my dissertation. I am attempting to find the reason that Webern’s music sounds like Webern’s music and how his many cultural and musical influences come together in order to make a unique sound that goes beyond the realm of pitch organization.

As my main argument is that Webern’s later works were written with the *sound* of the guitar in mind, I must use an analytic method that takes into account its very specific performative, timbral, and cultural

³⁹ Blacking, *Venda Music*, 91.

⁴⁰ *Ibid.*

characteristics. To my knowledge, no such analytic system exists, and at the very least, has never been applied to Webern's music.

An approach that takes into consideration only pitch-class sidesteps the larger context of Webern's all-encompassing, or multi-dimensional (as so many of his contemporaries have called it) musical language. Webern, as I detailed in the previous chapter, seeks to bring as much of his own life, culture, and experience into his musical language as possible. Since this is the case, thinking of voice leading "on paper," and therefore out of context, in such an abstract way takes away the meaning of the sound as an actual object. It does not take into account the timbre, for one thing. Therefore if we want to talk about voice leading in Webern's music, should we not devise a system that does take into account these qualities? This would require different ideas of what close voice leading is based upon the sound instrument that I argue the music is modeled after.

For example, the amount of physical motion required to move from an F#-minor triad to a G-minor triad on the piano is quite different from the physical motion required to move between the same two simultaneities on the guitar. Whereas on the piano hand-shape inverts completely between the chords (black key, white key, black key for F#-minor, and white key, black key, white key for G-minor), on the guitar

the hand's shape remains in place, simply shifting up by one fret. This is shown in figure 2.1 below.

The figure illustrates the variance in hand shapes for the set-class 3-11 on the piano keyboard and guitar. The top row shows piano keyboard diagrams for F#m and Gm. The F#m diagram shows fingers 1, 2, and 3 on F#, A, and C# respectively. The Gm diagram shows fingers 1, 2, and 3 on G, Bb, and D respectively. Below these are guitar fretboard diagrams for F#m and Gm. The F#m diagram shows fret 2 on strings 2, 3, and 4. The Gm diagram shows fret 3 on strings 2, 3, and 4. The bottom part shows musical notation for F#m and Gm in 4/4 time. The tablature staff shows fret numbers for strings T, A, and B.

T	4	2	3
A	4	2	3
B	4	2	3

Figure 2.1: Variance in hand shapes that exists between set-class 3-11 on the piano keyboard (top), while hand-shape is related to set-class consistency in guitar hand-shape. Note that in the tablature staff held strings remain consistent while fret number values, r , increase by one.

I will also include analysis of the close voice-leading that exists within the pieces analyzed. Models used to detail such voice-leading have been adapted from previous models by Straus, and Lewin, based on ideas proposed by Richard Cohn. These models will be described in greater detail in a later section of this chapter.

2.2 DETAILING JOTI ROCKWELL'S APPROACH

Joti Rockwell, in his article “Banjo Transformations and Bluegrass Rhythm,” devises an analytic method that combines several performative elements specific to fretted string instruments (in his case the banjo) in order to track, and categorize the physical movement required to play certain musical passages. To Rockwell:

one can model banjo music as a combination of four factors...(1) the fret being pressed down on the instrument's neck, (2) the string being played, (3) the right-hand pick that is plucking the string, and (4) the time at which these actions are occurring.⁴¹

The formula that he uses to describe these motions uses r , s , p , and t , respectively, to determine B , which is “the set of all ordered collections of the form.”⁴²

Relevant to my research, Rockwell points out that

...there can be many combinations of r and s that will produce the same pitch, and it works in contrast to the one-to-one mapping that corresponds to a piano. It is a significant property of banjo music, since repeated pitches can have considerable timbral and rhythmic variety depending on the differing strings and frets producing them.⁴³

This property is, of course, also true for guitar music. The multiplicity of ways in which pitches, and series of pitches, may be executed on the instrument imbue music written for the guitar with a

⁴¹ Joti Rockwell, “Banjo Transformations and Bluegrass Rhythm,” *Journal of Music Theory* Vol. 53, no. 1 (Spring 2009): 139.

⁴² Rockwell, *Banjo*, 140.

⁴³ *Ibid.*

considerable amount of malleability. Save for pitches at the extreme low and high end of the instrument's range, there are at least two locations on the neck where any note may be played.⁴⁴ It should be noted, however, that the placement on a particular string of a pitch will change the timbre and resonance of that pitch. Without changing pitch the tone produced could be described as "brighter" if played on a higher string, and "darker" when played on a lower string due to the natural amplification of upper or lower partials, respectively.⁴⁵

Some adjustment must be made to Rockwell's method due to the differing nature of guitar performance from banjo performance. Where the bluegrass banjoist described by Rockwell uses only three fingers to pluck the strings, a guitarist uses four. In the formula discussed above p is set to represent the plucking finger, where p can be either T, I, or M, standing for thumb, index, and middle fingers, respectively. In order to remain in line with standard classical guitar nomenclature I will use the

⁴⁴ Assuming standard tuning, pitches sounding E2 to G#2 can only be played on the open (unfretted, or $\{r = 0\}$) low E string through the 4th fret; pitches sounding F#5 to B5 can only be played on the high E string frets 14 through 19. All pitches in between are located in multiple locations on the guitar neck via either open strings or fretted positions.

⁴⁵ These properties are related to Mersenne's Law, which relate the fundamental frequency to the linear mass density of the wire (or in this case string), the tension in the wire, and the length of the wire. The frequency of a wire is directly proportional to $1/L$, \sqrt{F} , and $1/\sqrt{W}$ where L = the length of the wire, F = the tension applied to the string, and W = the mass per unit length of the wire. Different thicknesses of the guitar strings, and the fact that the lowest three strings are wrapped in bronze, or silver plating, not only allows for each string to be the same length, but also results in these timbral differences.

letters P, I, M, and A to stand for the thumb, index, middle, and ring fingers, respectively.⁴⁶

2.3 DETAILING TIMOTHY KOOZIN'S APPROACH

Timothy Koozin has a similar, if not complementary, analytic approach that incorporates the idea of close voice-leading and applies those ideas directly to guitar performance practice. While Koozin's approach is mainly concerned with patterns traced by the fretting hand in the performance of rock music, his ideas are easily adaptable to post-tonal styles such as those investigated in this dissertation.

Koozin devises a method for describing hand placements typically seen in tonal music, such as the "A-shape barre chord," and the "E-shape barre chord," which describe the typical major chord voicings used in rock music.⁴⁷ His "fret-interval types" are related to the aforementioned shapes, and function similarly to set-class numbers, where any chord related by fret-interval type is constructed from the same hand-shape. These fret-interval types are described as distances in frets as related to the lowest string. Koozin explains, "the fret-interval type formalizes numerically the derivation of a barre chord or figuration

⁴⁶ The letters for the fingers of the plucking hand are derived from Spanish: pulgar, indice, medular (or medio), and anular. The little finger, C, is not typically used.

⁴⁷ A "barre" (pronounced "bar") chord is a chord fretted such that the index finger of the fretting hand is used to "close" off the entire neck of the guitar at a specific fret, as a temporary, movable capo.

from the open string version on which it is based...”⁴⁸ As such the E-shape barre chord is described by a fret-interval type of <133211>, because relative to the low E string, represented by the left-most number, the fret on which the pitch on the A string is played is two frets further up the neck, then that same fret on the D string, and so on for the G, B, and high E strings.

In my analyses I will not only be interested in the fret-interval types of trichords, but also that fret-interval types are the physical manifestation of those trichords, as the shape of a simultaneity as played on a guitar is directly related to the set-class membership of that simultaneity. Just as the <133211> E-shape, or the <-13331> A-shape are both members of set-class 3-11.⁴⁹ Referring back to figure 2.1 above where a pianist moves between F#-minor and G-minor triads in root position, the “key-interval type,” if we may refer to it in such a manner, might be described as <up-down-up> moving to <down-up-down>, which would show the inversion of hand position. This gives no indication as to the specific distance between the pitches relative to that of the lowest pitch. Despite both movements resulting in L-P-L-R movement on a Tonnetz, the embodiment of this motion is quite different depending

⁴⁸ Timothy Koozin, “Guitar Voicing in Pop-Rock Music: A Performance-Based Analytical Approach,” *Music Theory Online* Vol. 17, No. 3 (October 2011): 2, accessed August 12, 2015, <http://www.mtosmt.org/issues/mto.11.17.3/mto.11.17.3.koozin.html>

⁴⁹ A dash within a Koozin-shape indicates no fretted pitch. For this particular example of the A-shape, there is no pitch fretted on the low-E string.

upon the instrument. I will refer to the fret-interval types for set-classes in a similar manner as Koozin, which indicates the physical distance between members of a simultaneity as related to the lowest sounding string. I will be referring to the fret-interval types, the set of numbers between < > brackets, as Koozin-shapes.

As Koozin has categorized two basic shapes for barre-chords, I will be describing set-classes in the same manner. The 3-3 trichord, for example, appears most frequently in Webern's guitar writing as an augmented fifth with a minor third stacked on top. This voicing results in <142—>, or <-142—> for root-6 and root-5 voicings, respectively.⁵⁰ Similarly, a 3-5 trichord, typically voiced as a perfect fourth with an augmented fourth on top, appears as <112—> or <-112—>. These Koozin-shapes are shown in figure 2.2 below.

The figure displays four musical examples in a two-staff format. The upper staff is in treble clef, showing chords with notes and accidentals. The lower staff shows guitar fretting for strings T (Treble), A (Acoustic), and B (Bass). Below the fretting are Koozin shapes in red text: <142--->, <-142-->, <112--->, and <-112-->.

Figure 2.2: 3-3 trichords root-6 (left), and root-5 (second from left). 3-5 trichords root-6 (second from right), and root-5 (right).

⁵⁰ I will be referring to “root-6,” “root-5,” etc. in order to indicate the string upon which the lowest pitch is played. There are no tonal implications intended, rather I am thinking of the sonorities as “rooted,” or having their foundation built from the string indicated.

One of the issues I will address in my analyses is this discrepancy between close voice-leading as an abstract concept dealing solely with written notes on a page, and that which manifests itself in the physical realm of actual performance. I will apply elements of Rockwell's analytic technique, which is primarily concerned with the plucking hand, with Koozin's primarily fretting-hand based analysis in order to fully detail the physical manifestation of the performance of the pieces analyzed in order to explore Webern's counterpoint, to show ways in which his musical language is closely related to the idiomatic nature of the guitar. This will be done first with Webern's Op. 18, and will be followed by analyses of Webern's later works which do not feature the use of the guitar. These later opera, include a set of three songs originally for voice and piano, Op. 25, and a set of variations for orchestra, Op. 30.

The aim of these combined analyses is to show the ways in which some of Webern's later works relate back to Op. 18, which in itself is supported by the guitar in multiple ways, both musically and extra-musically. Guitar arrangements of instrumental parts for later opera will include a combination of Koozin and Rockwell models, which will help to further solidify the connections between Op. 18 and those later works. To accomplish this, each musical excerpt will contain both a standard musical staff, as well as a tablature staff below it. I will also include

Koozin-shapes below the tablature staff for clarity and to track more closely the voice-leading.

2.4 NOTES ON TABLATURE STAFF NOTATION

A tablature staff, such as the one I will be using, has actually been in existence in one form or another for centuries. Scores would be written with lines depicting each of the strings (or courses, in the case of the lute) and at first letters, such as in *alphabeto* notation, and eventually numbers indicating where a performer was to stop a string.

Tablature lines read from bottom to top, with the lowest sounding string, or sixth string, represented by the bottom line, and the highest sounding string, or first string, represented by the top line with all other strings falling sequentially in between. Fret-numbers are indicated on each line showing the performer in which fret the string is to be stopped. This can be seen in figure 2.2 above where, for example, the F, C#, E, or a root-6 3-3 trichord is played on the sixth, fifth, and fourth strings, on the first, fourth, and second frets, respectively. In Rockwell's notation this same chord placement could be described as existing at $\{r = 1,4,2 \ s = 6,5,4\}$, therefore having a Koozin-shape of <142—>. These three methods together help to provide a more complete picture of the physical placement of the simultaneity on the strings.

2.5 TONNETZ-BASED ANALYTIC MODELS

2.5.1 THE POST-TONAL TONNETZ

In order to address concerns of pitch organization I will make use of modified Tonnetze that show the transformational relationships between the trichords associated with each work. The Tonnetze, derived from set-classes 3-3 and 3-5, are constructed in the same manner and therefore show the closest possible voice-leading between members of the set-class. Sections of the 3-3, and 3-5 Tonnetze are shown in figures 2.3 and 2.4 below.

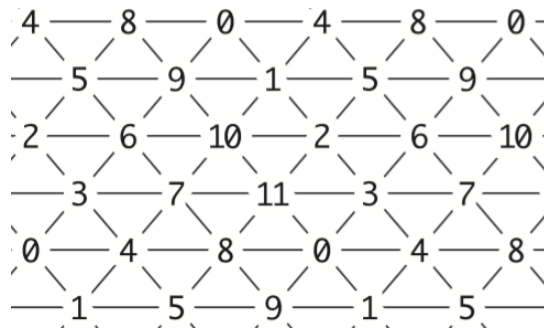


Figure 2.3: A section of the 3-3 Tonnetz.

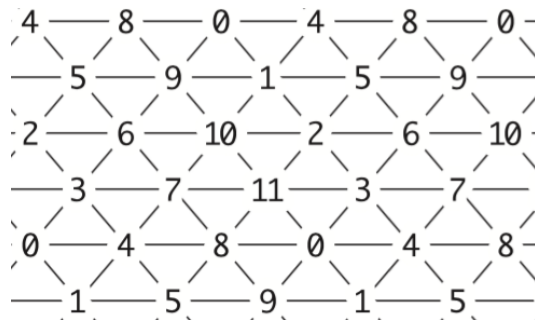


Figure 2.4: A section of the 3-5 Tonnetz

The numbers on each Tonnetz are pitch-class numbers with each pitch of the chromatic scale represented in the traditional manner where pc0 is any pitch “C with each half-step above “C” represented by an increase in one pitch-class number.

The Tonnetz derived from set-class 3-5 provides us with some interesting properties that do not exist on the 3-3 Tonnetz. Because the outside boundary of 3-5 forms a tritone, the horizontals of the Tonnetz show four possible trichords that share any given tritone. For example, pcs 0 and 6 belong to trichords {016}, {056}, {067} or {06e}. This means that there are several P transformations that exist, whereas there is only one P transformation on the 3-3 Tonnetz. On the 3-3 Tonnetz each horizontal pair of pitches only shares two possible simultaneities, or one P transformation. For example, pcs 0 and 4 are only shared between the {014}, and {034} trichords.

Motion on a Tonnetz is described as chord-to-chord relations by Parallel, P; Relative, R; or Leading-tone-exchange, L; or chains of a combination of these motions, for example PLR, or LPLR, etc. Richard Cohn, in his “Introduction to Neo-Riemannian Theory: A Survey and a Historical Perspective,” describes these motions on a tonal, triadic *Tonnetze* as being

P, for Parallel, inverts around a horizontal (perfect fifth) edge, mapping C minor to C major; R, for Relative, inverts around a secondary diagonal (major third) edge, mapping C minor to Eb

major; and L, for Leading-tone-exchange, inverts around a main diagonal (minor third) edge, mapping C minor to Ab major. The fourth transformation, D (for dominant), transposes a triangle to the vertex-adjacent triangle to its left, mapping C minor to F minor.

51

These transformations can be seen in figure 2.5 below. Note that Cohn includes a D transformation, short for “dominant,” which is no longer commonly used. The D transformation would map a triad to which the current triad was the dominant of, meaning the root of one chord is the fifth of the D related chord. This, as Cohn explains, “is redundant, since it is produced by a composition of L followed by R.”⁵²

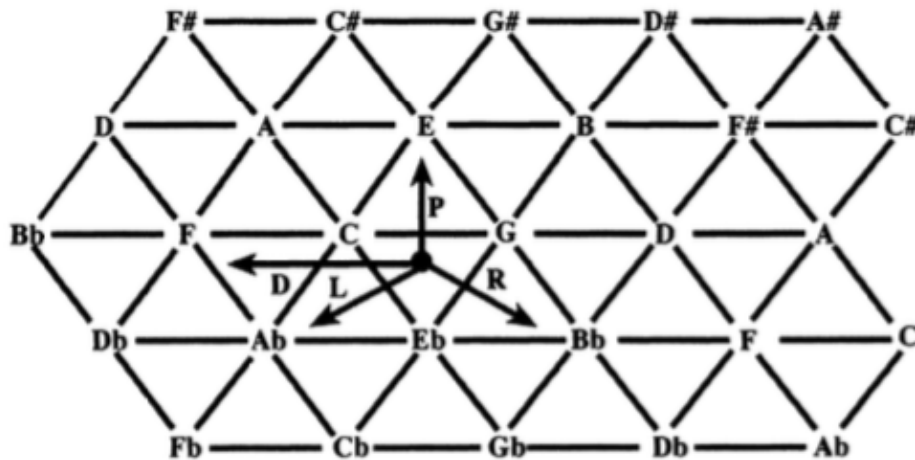


Figure 2.5: Cohn’s Tonnetz, with P, L, R, and D transformations illustrated.

⁵¹ Richard Cohn, “Introduction to Neo-Riemannian Theory: A Survey and a Historical Perspective,” *Journal of Music Theory*, Vol. 42, No. 2, Neo-Riemannian Theory (Autumn, 1998): 172.

⁵² *ibid.*

Adjacent simultaneities on a Tonnetz share the maximum number of pitches. Motion across any horizontal, or diagonal line in Cohn's Tonnetz above only requires one pitch to move one half-step.

Although my 3-3, and 3-5 Tonnetze are modeled after this idea, this exact voice-leading is not possible with their interval structure. A simple P, L, or R motion will still represent the closest possible motion between any two trichords.

Looking to the 3-3 Tonnetz, for example, we see that {014}, and {034} are P-related. These two trichords hold pcs 0 and 4, but pc1 increases by two to become pc3. L motion would move {014} to {901}, and R motion moves {014} to {145}. Note that on Cohn's Tonnetz all minor triads are represented by downward pointing equilateral triangles, while all major triads are represented by upward pointing equilateral triangles. In my post-tonal Tonnetze the "left-packed" trichords are downward pointing, while the "right-packed" trichords point upward.

2.5.2 STRAUS' CONTEXTUAL INVERSION SPACES

Joseph Straus designed what he calls "contextual inversion spaces" to represent collections of trichords which each share at least one common pitch. Each member of a set-class is organized into "lozenges" which consist of trichords encircling a single pitch-class number. That pitch-class number appears in each trichord, while P, L,

and R motion is indicated between from trichord to trichord on a line connecting them. Straus uses these lozenges to map what he calls the “source, path, and goal” of a phrase. I will use these lozenges to show groupings amongst trichords sharing specific pitches. Straus’ original contextual inversion space for set-class 3-3 is shown in figure 2.6. Out of necessity in my analysis of Op. 18/i I have designed a contextual inversion space for set-class 3-5, which can be seen in figure 2.7.

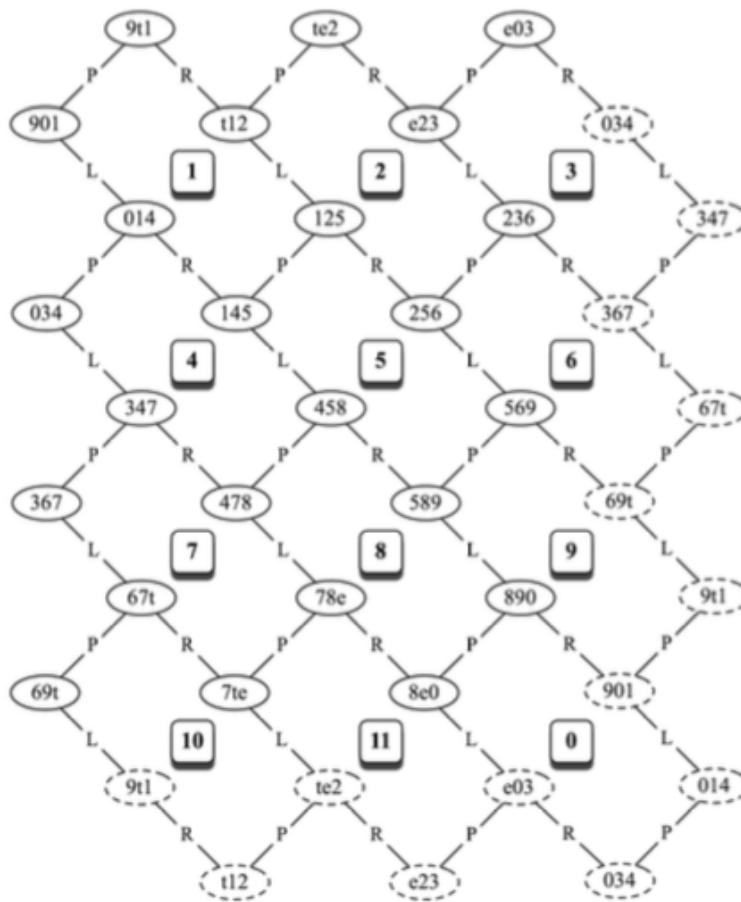


Figure 2.6: Straus’ Contextual Inversion Space for set-class 3-3.

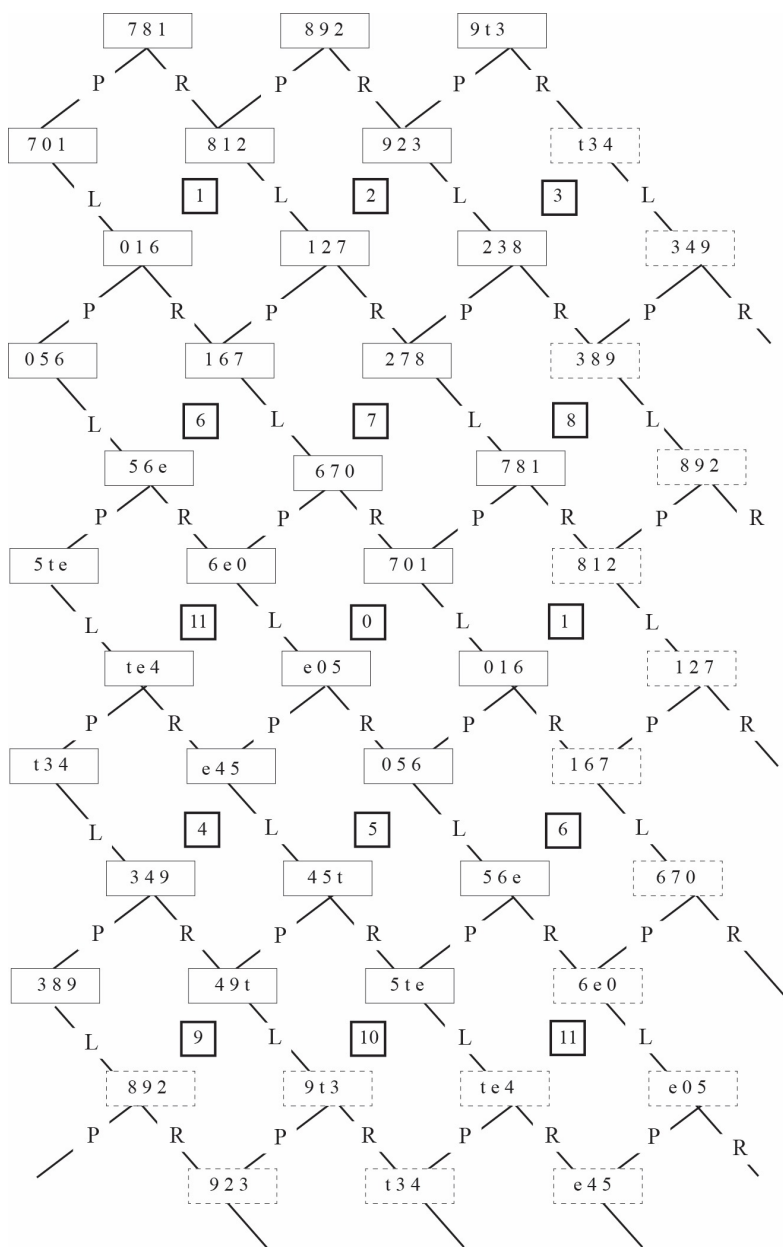


Figure 2.7: Set-class 3-5 based Contextual Inversion Space modeled after Straus' 3-3 based space.

These contextual inversion spaces are, in a sense, a way of showing motions between sets that are similar to motions across a *Tonnetz*. However, motion through dense textures, such as the ones

created by the songs of Op. 18, may be more easily visualized with the aid of these diagrams in tandem with their Tonnetz representations.

2.6 HYPER-HEXATONIC SYSTEM-BASED ANALYTIC MODELS

Another way to approach analyzing close voice-leading within the context of Neo-Riemannian operations is to observe motion between simultaneities as part of the same pitch-collection. Extrapolating from another idea of Cohn's, we can see that the hexatonic scale, set-class 6-20, contains six 3-3 subsets.

First we must look at Cohn's original model, used for the analysis of late-Romantic chromatic music. Cohn organized adjacent moves on the diatonic Tonnetz (figure 2.5 above) in circular poles of six chords each, where each of those triads were subsets of one of the four hexatonic scales.⁵³ Being that each hexatonic scale shares three pitches with two of the other hexatonic scales he then organized these scales such that adjacent poles on a hyper-hexatonic system would share three pitches. Polar-opposites, such as the Eastern and Western systems, share no pitches between their hexatonic collections.

The Northern Hexatonic System contains all the major and minor chords which are subsets of the hexatonic scale which starts on C; the

⁵³ A hexatonic scale is a synthetic scale, or mode of limited transposition, which alternates minor thirds with half-steps.

Western Hexatonic System includes subsets of the same scale beginning with C-sharp; the Southern Hexatonic System includes subsets beginning with D; and the Western Hexatonic System features subsets from the hexatonic scale beginning with E-flat. These are indicated with pc-integers 0, 1, 2, and 3 respectively which he precedes with an H.

Motion between adjacent triads in a system requires only one pitch to be altered by one half-step, similar to an adjacent move on a *Tonnetz*. The moves around each pole in a clockwise direction are represented on the Tonnetz by PL chains. This means that each adjacent triad is one half-step removed from the next, sharing two pitches; while every-other chord shares only one pitch while the remaining two move by half-step; each polar-opposite shares no pitches, with each pitch moving by half-step. Cohn's hyper-hexatonic system is shown in figure 2.8 below. Note that Cohn uses "+" to indicate a major triad, while "-" indicates a minor triad.

I will not be using Cohn's exact hyper-hexatonic system in my analyses, but rather using ones adapted to fit my purposes as his system is based around set-class 3-11. These will be described in the sections that follow. Cohn's hyper-hexatonic system is shown in figure 2.8.

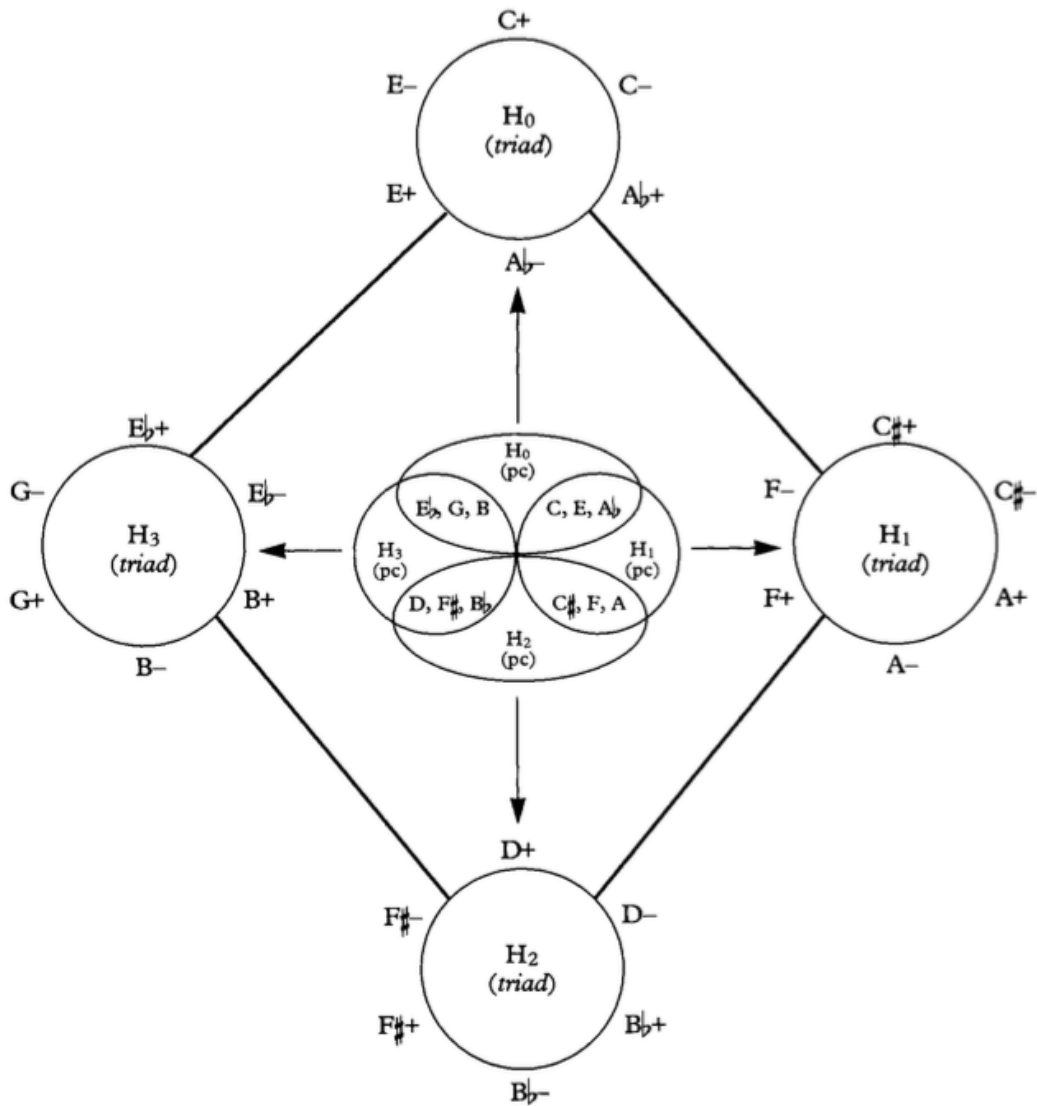


Figure 2.8: Richard Cohn's hyper-hexatonic System.

2.6.1 SET-CLASS 3-3 HYPER-HEXATONIC SYSTEM

Just as Cohn is able to represent motion across a diatonic *Tonnetz* on the hyper-hexatonic system we can visualize motion across a 3-3 derived *Tonnetz*. We can do this without altering Cohn's central thesis of

the hexatonic-based poles, but simply adapting it to pitch-sets that are still subsets of the the hexatonic, 6-20, collection.

As mentioned in a previous section, set-class 3-3 is a subset of superset 6-20. I have mapped parsimonious motion between set-class 3-3 as they relate to superset 6-20 in the same manner as described in the previous section with Cohn’s hyper-hexatonic system. Deriving these trichords began with the aforementioned 3-3 Tonnetz.

Looking to the horizontal alleys, or LR chains, that exist on the 3-3 Tonnetz we will find collections of six pitches. Each alley, we find, contains only pitches from one distinct hexatonic collection. Adjacent alleys on the Tonnetz represent adjacent poles on the hyper-hexatonic system. This differs from Cohn’s model, where adjacent *diagonal* alleys of the *Tonnetz*, or PL chains, contain each hexatonic collection. The set-class 6-20 generating alleys on the 3-3 Tonnetz are shown in figure 2.9.

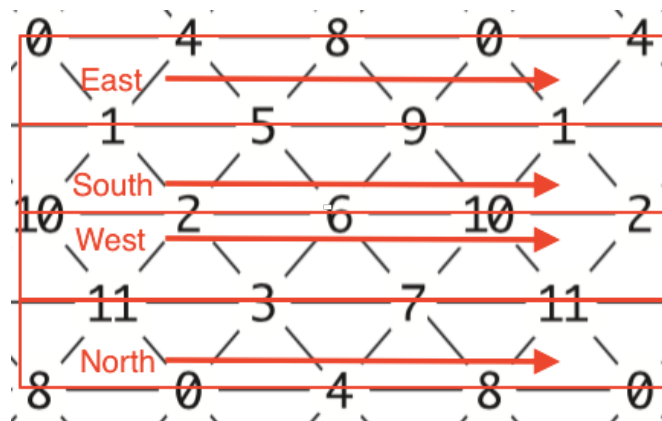


Figure 2.9: Horizontal alleys of a 3-3 derived Tonnetz contain pitch collections equal to the four members of set-class 6-20.

Converting each hexatonic collection to pitch-class integers we may arrange each of these alleys around a hexatonic pole using exactly the same pitches as Cohn. Again, my graph is centered around 3-3 subsets, whereas Cohn's focuses on 3-11 subsets from the same 6-20 superset. My 3-3 based hyper-hexatonic system is shown below in figure 2.10.

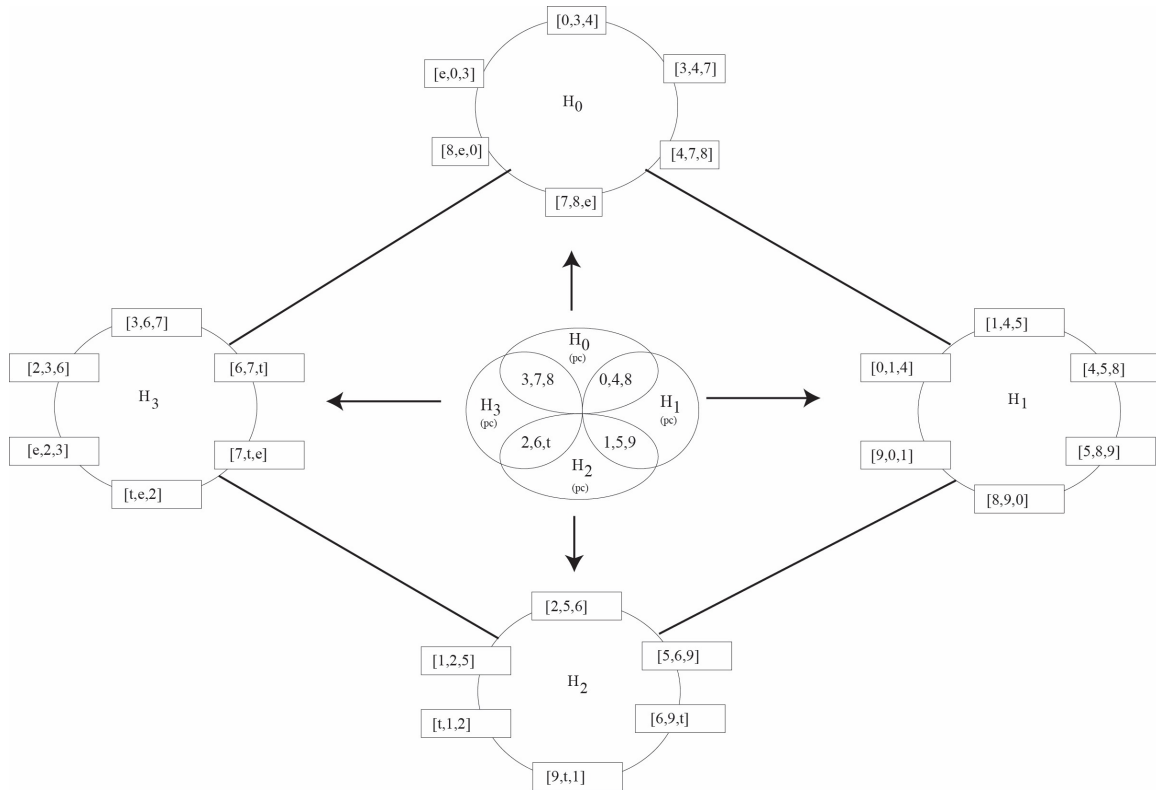


Figure 2.10: The 3-3 trichordal Hyper-hexatonic system

Degrees of parsimony around each pole remains the same with adjacent trichords holding two pitch-classes in common, every other trichord holding only one pitch-class in common, and polar opposites

sharing no pitches. This model operates in the same way as Cohn's in nearly every way. One difference being that the prime form of 3-11 is [037] which is found on his Northern hexatonic pole; the prime form of 3-3 is [014] which is found on the Eastern hexatonic pole of my model. Each trichord in the 3-3 hyper-hexatonic system appears in normal order.

Another difference between Cohn's 3-11 model and my 3-3 model, is that parallel transformations here, for example moving (014) to (034) appear in adjacent hexatonic poles. Set (014) is located on the Eastern hexatonic pole, while (034) is found in the Northern hexatonic pole.

2.6.2 COMBINED 3-3/3-4/3-5 HYPER-HEX(ENNE)ATONIC SYSTEM

Set-classes 3-11 and 3-3 are two of the three trichordal set-class which produce six subsets of the set-class 6-20 superset, the final one being set-class 3-4. This property becomes important when analyzing Webern's Op. 18/iii, which includes instances of set-classes 3-3 and 3-5. We can place 3-4 within the same hexatonic poles as set-class 3-3, allowing for parsimony between the two set-classes. In the model below I have devised a combined 3-3/3-4 hyper-hexatonic system where the same degrees of parsimony that exist between adjacent members of the same set-class also exist between differing set-classes. Though I did not derive my model from a 3-4 tonnetz, but rather placed the trichords in

position next to their appropriate adjacent 3-3 trichord, the poles on a 3-4 hyper-hexatonic system would be derived from LP chains, similar to Cohn's model.

This system will be necessary for the analysis of Op. 18/iii as set-class 3-5 does make several appearances throughout. Although set-class 3-5 is not a subset of set-class 6-20, it can still function within this system.

If we look to a hexatonic collection within one of the poles and also consider half of the next hexatonic collection adjacent to the first we arrive at the enneatonic collection, set-class 9-12, of which there are six 3-5 subsets. This means that we now have an intermediary, bringing the voice-leading closer to the fully parsimonious ideal of Cohn's maximally smooth cycle. My model continues to expand the definition of parsimony, just as Douthett and Steinbach did in their article which expanded upon the ideas of Richard Cohn.⁵⁴⁵⁵

However, motion between hexatonic systems does not necessarily require facilitation from an intervening 3-5 trichord. Just as with Cohn's

⁵⁴ The enneatonic collection appears in Jack Douthett and Peter Steinbach's "Parsimonious Graphs: A Study in Parsimony, Contextual Transformations and Modes of Limited Transposition" as a means of connecting seventh chords into maximally smooth cycles. In their article they describe the four "EnneaCycles" as a pattern which links the dominant-seventh, minor-seventh, and half-diminished seventh chords with those same chords whose roots lie a major-third, and a diminished fifth away, i.e. A-flat, C, and E.

⁵⁵ Jack Douthett and Peter Steinbach, "Parsimonious Graphs: A Study in Parsimony, Contextual Transformations and Modes of Limited Transposition," *Journal of Music Theory*, Vol. 42, No. 2, Neo-Riemannian Theory (Autumn, 1998): 246.

model, there remains a degree of parsimony between a chord and another from an adjacent pole. For example, in Cohn's model (figure 2.8 above) the C+ 3-11 trichord appearing at the top of the Northern hexatonic pole has two pitches in common with the A- 3-11 trichord at the bottom of the Eastern hexatonic pole. Though the remaining pitch, pc7, of C+ must move by two half-steps thus disqualifying it from being maximally-smooth under Cohn's classification, that it holds two pitches in common is also a characteristic of my multi-trichordal model. Figure 2.11 below shows my tri-trichordal hyper-hex(enne)atonic model.

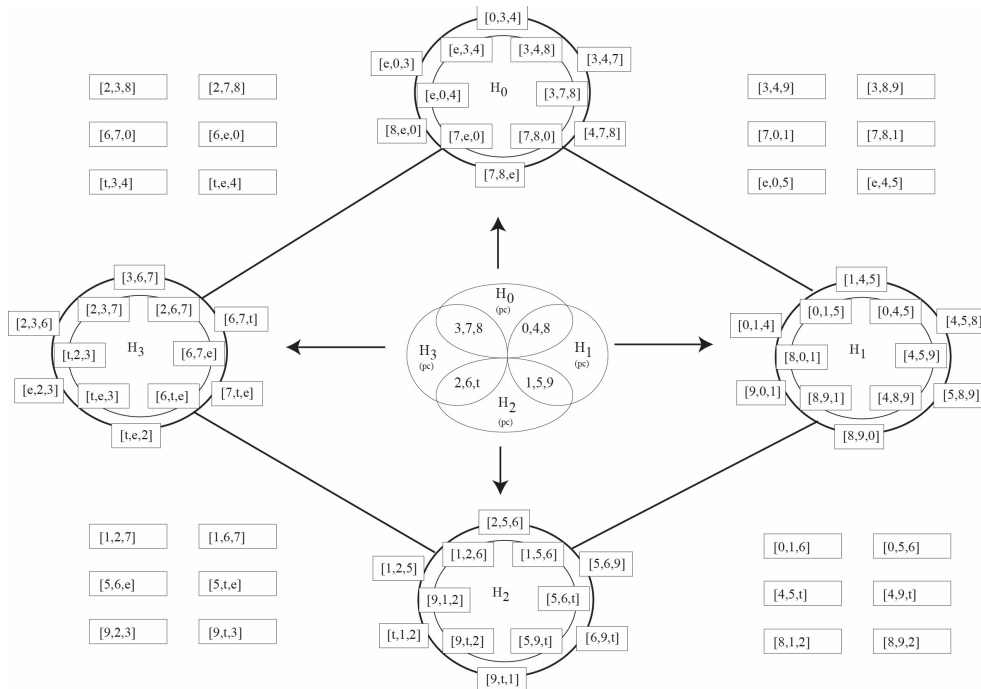


Figure 2.11: 3-3/3-4/3-5 tri-trichordal hyper-hex(enne)atonic model.

Using this diagram enables us to track close voice-leading as it appears in Op. 18/iii, where unlike the first two songs of the set, Webern uses a strictly horizontal consideration of the row, assigning one row to each instrument. As this is the case there is a considerable amount of set-class inconsistency within the guitar part when there do happen to be simultaneities.

2.6.3 TETRACHORDAL HYPER-HEXATONIC SYSTEM

The subject of my fifth chapter is Webern's Op. 30 Variations for Orchestra. As I will discuss in detail in that chapter Webern creates an all-combinatorial row from adjacent set-class 6-1 hexachords. The tetrachordal organization of that row plays an important role throughout the composition, and consists of a central set-class 4-17 tetrachord that is flanked by two 4-3 tetrachords. The Op. 30 row is shown in figure 2.12, with set-classes for each tetrachord labeled.

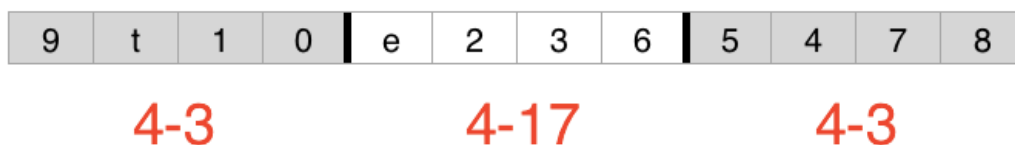


Figure 2.12: Op. 30 row showing set-classes of each distinct tetrachord.

Webern exploits this symmetric set-class arrangement in multiple ways throughout Op. 30. As Webern consistently uses at least two, and

many times more, forms of the row at all times, the groupings of these tetrachords are more crucial to the piece's organization, and orchestration, than simple row-counts would be. Additionally, Webern consistently exposes the row-forms one tetrachord at a time. As such, it would not be appropriate, nor possible, to map this harmonic motion onto a single Tonnetz. However, a 3-3-based Tonnetz does lead us to the connections between two tetrachords.

Any tetrachord will produce a parallelogram of various shapes when mapped onto the 3-3 Tonnetz. Set-class 4-17 generates what I am deeming a “right-pointing” parallelogram, while set-class 4-3 produces a “diamond” shape. These shapes are shown below on the 3-3 Tonnetz in figure 2.13.

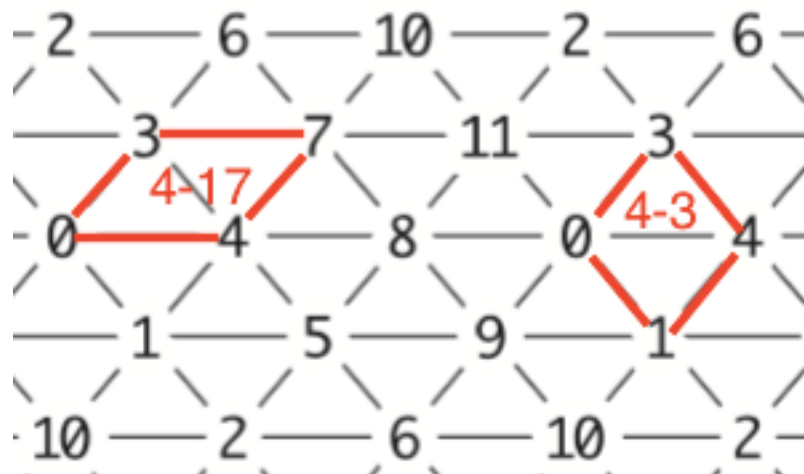


Figure 2.13: Set-classes 4-3 and 4-17 appear as a right-pointing parallelogram and a diamond when mapped onto a 3-3 Tonnetz.

Connecting these tetrachords would result in traveling through an alley in a North-East, or South-West direction; in other words these tetrachords represent LP chains. In the context of a 3-3 Tonnetz-space, an LP chain creates an octatonic collection, or set-class 8-28. Set-class 8-28 is another mode of limited transposition, as there are only three members of set-class 8-28.⁵⁶

Moving between these alleys we find one more parallelogram representing a different tetrachord which forms the connection between adjacent octatonic, LP, alleys. Set-class 4-7 creates a “left-pointing” parallelogram. Set-class 4-7 as it appears on a 3-3 Tonnetz is shown below in figure 2.14.

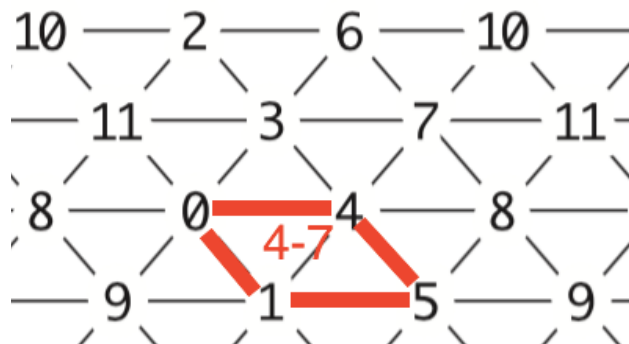


Figure 2.14: Set-class 4-7 appearing as a left-pointing parallelogram on a 3-3 Tonnetz.

From any point on an LP generated alley if we begin to move East or West via RL chains we will find set-class 4-7 alternating with set-class

⁵⁶ The octatonic collection is created through alternating whole-steps with half-steps. Some musicians also refer to this collection as the “diminished scale.”

4-17. For example [1,4,5,8] gives way to [4,5,8,9], followed by [5,8,9,0], etc. These, as before, derive subsets from the hexatonic collection, set-class 6-20. Of course, just as before, there are only four distinct East or West alleys, which generate the alternating tetrachords. We can see in figure 2.15 below how each octatonic (LP) alley generates the four hexatonic (RL) alleys.

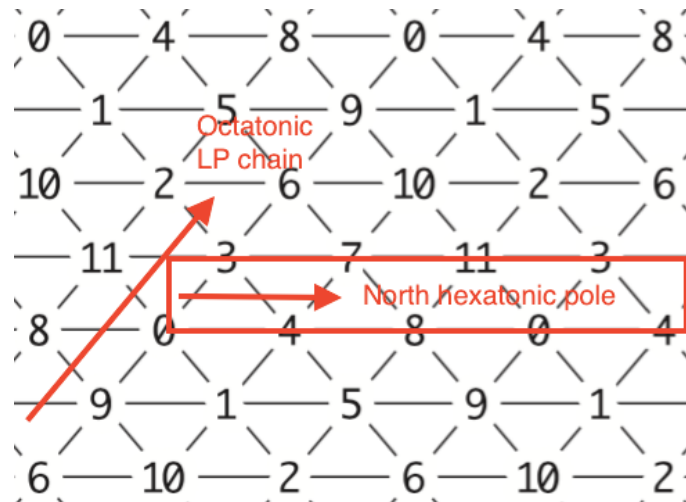


Figure 2.15: Octatonic generating LP chains run Northwest/Southeast, while hexatonic generating RL chains run East and West.

In figure 2.15 above the octatonic collection is produced through the following moves: [8,9,e,0]–[8,e,0,3]–[e,0,2,3]–[e,2,3,6]–[2,3,5,6]–[2,5,6,9]–[5,6,8,9], which alternate between the “diamond” shape of set-class 4-3, and the “right-pointing parallelogram” of set-class 4-17.

We can also see in figure 2.15 above the hexatonic collection produced through the following moves: [0,3,4,7]–[3,4,7,8]–[4,7,8,e]–

[7,8,e,0]–[8,e,0,3]–[e,0,3,4], which alternates between the “right-pointing parallelogram” of set-class 4-17, and the “left-pointing parallelogram” of set-class 4-7.

In the next figures, numbered 2.16, 2.17, and 2.18, one can see the degree of parsimony that exists between each tetrachord where every adjacent tetrachord, regardless of set-class, shares a common trichord. These are connected by a solid line. Non-adjacent tetrachords, connected with a dashed-line share only a dyad. This mapping was generated from the octatonic collection of alternating set-class 4-3 with set-class 4-17 as above. Each appearance of set-class 4-17 across the top begets the set-classes 4-7 and 4-17 generated from a single 6-20 superset. These alternate as one travels clockwise through the orbit which hangs below each 4-17 tetrachord. If we picture this on the 3-3 *Tonnetz* above, it is the equivalent of traveling up or down an LP or Northwest alley and exiting to a RL East or West alley. Each orbit that hangs down, therefore, contains pitches from only one of the hexatonic poles. The three graphs below are generated from one of each of the octatonic collections, and appear in figures 2.16, 2.17, and 2.18 on the pages that follow.

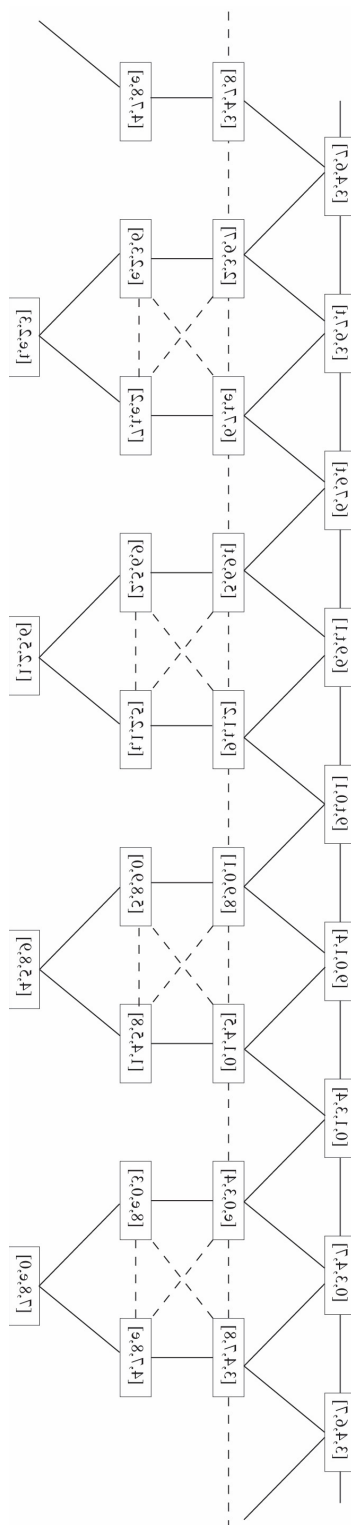


Figure 2.16: Hexatonic hanger graph generated from $\text{Oct}_{0,1}$. From left to right pitches in each orbit hanger consist only of pitches from the North, East, South, and West hexatonic poles.

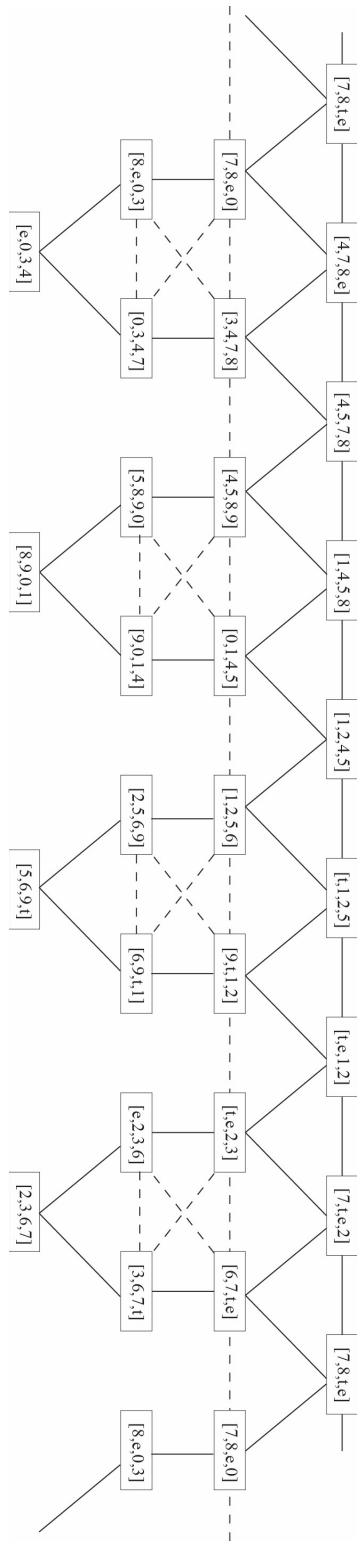


Figure 2.17: Hexatonic hanger graph generated from $\text{Oct}_{1,2}$. From left to right pitches in each orbit hanger consist only of pitches from the North, East, South, and West hexatonic poles.

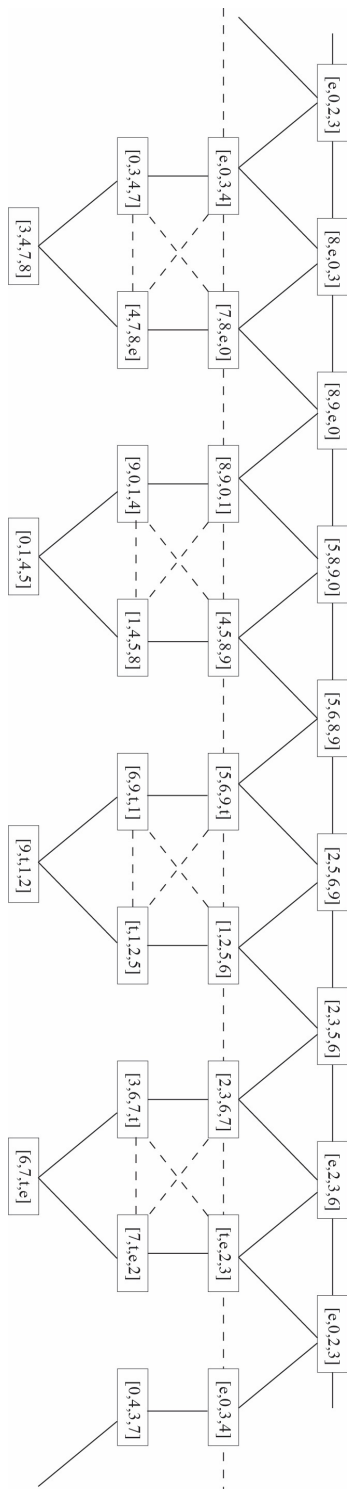


Figure 2.18: Hexatonic hanger graph generated from $\text{Oct}_{2,3}$. From left to right pitches in each orbit hanger consist only of pitches from the North, East, South, and West hexatonic poles.

Placed on the hyper-hexatonic system we find that each pole consists of alternating 4-7 and 4-17 tetrachords as there are only three subsets from each set-class coming from the 6-20 superset.

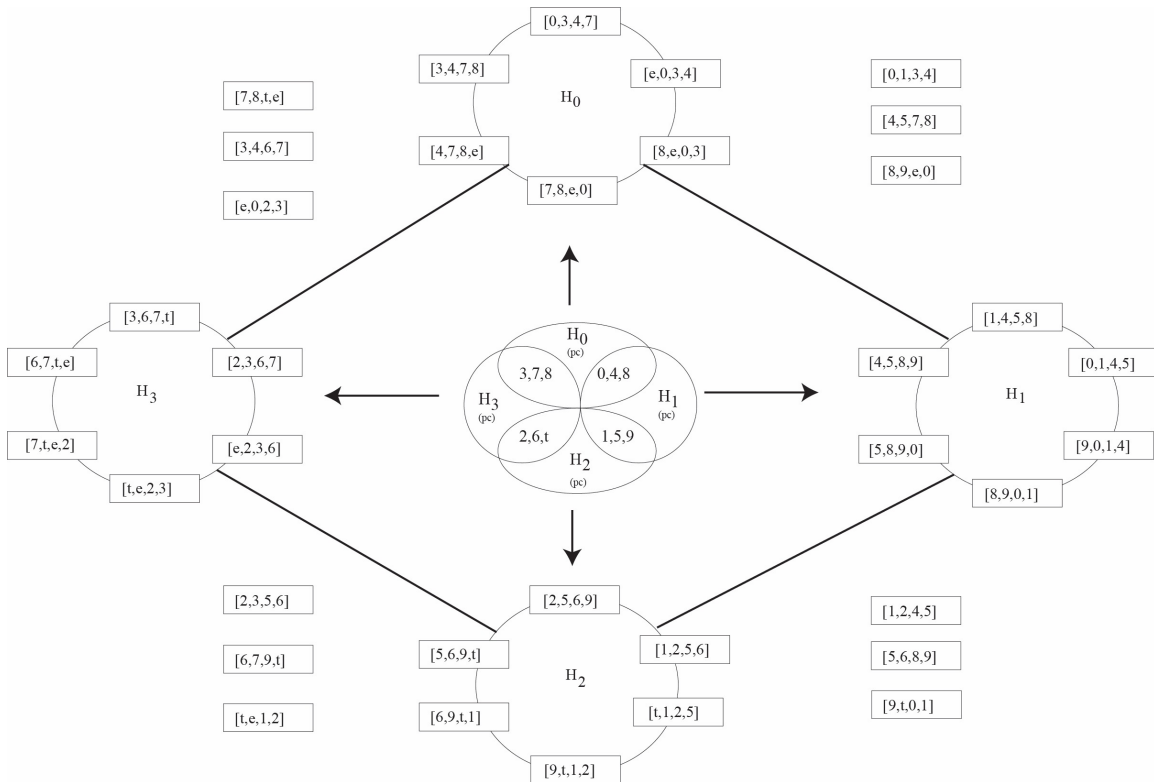


Figure 2.19: The tetrachordal hyper-hex(enne)atonic system.

Set-class 4-3, the tetrachord beginning and ending the Op. 30 row, is not a subset of set-class 6-20. Like set-class 3-5 in the previous section we find a place for set-class 4-3 in the “corners” of the hyper-hexatonic system, once again derived from the enneatonic collection, set-class 9-12. Each polar tetrachord holds a trichord in common with one

“corner” tetrachord from either side. For example, [4,7,8,e] in the Northern pole has a trichord in common with [7,8,t,e] which lies between the Northern and Western poles, while also having a trichord in common with [4,5,7,8] between the Northern and Eastern poles.

Traveling around a pole the degree of parsimony changes slightly from the trichordal models in previous sections. Adjacent tetrachords share a trichord, every-other tetrachord shares a dyad, and polar opposites still share a single pitch. This tetrachordal hyper-hexatonic system which will be featured in chapter five’s analysis of Op. 30, can be seen in figure 2.19 above.

2.7 CONCLUSION

In this chapter I have detailed the methods I will be using throughout the analyses that follow. The language taken from both Koozin (i.e. Koozin-shapes such as <-142—>), and Rockwell (ie { $r = 1,4,2$ $s = 3, 4, 5$ }), will appear throughout, allowing the reader to better follow the physical manifestation of Webern’s voice-leading. This language will also appear in conjunction with guitar tablature notation placed underneath Webern’s standard notation. Webern’s written guitar part throughout Op. 18, as will be explained in the next chapter, has been altered such that it all appears on a sub-octave G-clef as is

customary for guitar music. This is done with the intent of providing a clearer performance score without changing a single pitch or rhythm.

Theoretical models, such as the ones described in the sections above, will be used to uncover connections within Webern's harmonic language where appropriate. Each model was designed for a specific purpose, and will be used in the analysis of the specific pieces they were designed for. These models have been adapted from previous models by Cohn, Lewin, and Straus, for the purposes of uncovering the developing style of Anton Webern as he moves from his middle-period, to his late-period works.

CHAPTER III:

OP. 18 DREI LIEDER

Webern immediately uses everything I do, plan or say, so that...by now I haven't the slightest idea who I am.

Arnold Schoenberg

3.1 OVERVIEW

Webern's early atonal works display a knack for vocal writing, and also include a use of pastoral imagery and text painting more akin to earlier musical styles. As Webern continued to develop his musical language, these old forms were adjusted to fit his own language such that the two fused to create his own unique style.

Often overlooked in his output, I argue that Webern's Op. 18 is a significantly more important work than it has previously been given credit for being. It is in Op. 18 that Webern first consistently uses a row in its complete, unchanging form. His increasing mastery of the serial style of composition is shown throughout the opus, a collection of three songs. The first song features a single row which is repeated with no permutations of any kind; in the 2nd song inversions and retrograde are introduced; and in the 3rd and final song Webern experiments with different row forms for each instrument.

Listening to the three songs that make up Op. 18 may provide the listener with a unique, and perhaps jarring, experience. The intensely active nature of the rhythmic and melodic language sounds like no other music Webern had written up to that point.

Mark Sallmen notes that “the vocal writing in Op. 18 is merely an extension of the increasing dependence on large pitch intervals in the late atonal songs.”⁵⁷ In fact, he calculates that “in Op. 18 fully half of the melodic intervals are a major seventh or larger.”⁵⁸ Vocal writing qualities such as these, I argue, are only made possible due to the harmonic support provided by the guitar. Furthermore, it is the pitch organization and construction of the guitar that makes melodic writing such as that found throughout Op. 18 possible. The performance of these songs are, for the clarinetist and vocalist, incredibly challenging, requiring remarkable feats of virtuosity. We will see, however, that performing these lines on the guitar, is considerably easier.

The ability to easily navigate incredibly wide intervals is, in itself, not unique to the guitar, but to string instruments in general. A violinist, violist, or cellist can just as easily reach over two octaves within a single

⁵⁷ Mark Sallmen, ““Composition with a Single Row Form?” Webern’s “Schatzerl klein,” Op. 18, No. 1,” *Intégral Journal*, Volume 16/17 (2002/2003): 143.

⁵⁸ *ibid.*

position as can a guitarist.⁵⁹ As mentioned before, however, a guitar makes considerably more sense within the context of these songs due to their shared folk-infused history.

Julian Johnson, as quoted earlier, says “music [as] ‘the sound of nature’” was an idea Webern encountered in the music of Mahler, who used the direction ‘like a sound of nature’ on the opening page of his first symphony.”⁶⁰ Building off of Johnson’s assertion, we can find an even more apt example in Mahler’s Seventh Symphony. In that work Mahler makes extensive use of a guitar in the fourth movement, titled “Nachtmusik II,” with the guitar playing a pivotal role in the form of that movement.

The opening of the fourth movement of Mahler’s Seventh Symphony is in F major and features a three-bar string section introduction which presents a transitional motive that recurs throughout the movement. That opening creates a sense of return, so that the music in the following measures is a focal point, punctuated by this opening transitional motive. The guitar’s tonic chords in quarter-notes, augmented by the harp’s eighth note arpeggiation are placed in a clearly

⁵⁹ A guitarist would typically be expected to reach two octaves and a minor third from a single hand position, though significantly larger intervals are just as easily grasped at higher positions on the neck.

⁶⁰ Johnson, *Transformation*, 2.

foundational role while the winds create more rhythmically complex melodic material above.

This movement, scored for forces considerably smaller than typically used by Mahler, has been referred to as “an exquisite exercise in orchestral chamber music.”⁶¹ Its basic formal pattern traces an ebb and flow where the opening, guitar-grounded, material is diverted from at first briefly, and such diversions increase as the movement progresses.

Not only does the temporal distance between the sections with guitar-as-foundation increase, but so too does the tonal distance within these sections. This tonal distance creates a parallel between Mahler’s work and that of Webern’s. Mahler is using the sound of the guitar as a jumping-off point, and simultaneously a point of reference. The ensemble’s more subtle offerings allow the guitar to create a harmonic underpinning, while more spirited material forms as an outgrowth from those subdued sections.

The form of the movement is restricted in these touchstone sections tonally because of the guitar as well. Mahler’s movement gains significance due to its being in the pastoral key of F major, and it is also significant that that key is considerably more guitar-friendly than the B-flat minor reached as the movement progresses to its final tonal

⁶¹ David Hurwitz, *The Mahler Symphonies: An Owner’s Manual* (Pompton Plains: Amadeus Press, 2004), 130.

diversion. A guitar cannot as easily navigate the harmonies necessary to support such a tonal center. Instead Mahler uses the harp, an instrument that at once has a timbral quality akin to that of a guitar due to its mode of attack and the ability to just as easily perform in any key. The movement does not so much periodically abandon the use of the guitar, but rather develops *out of* the sound and capabilities of it.

Demonstrating that each instrument within Webern's Op. 18 ensemble can be played easily on the guitar not only shows the way in which those instruments are actually supported by the guitar, but points to a disparity between the idiomatic nature of the instruments and the melodic lines they are meant to play.

3.1.1 OP. 18 WITHIN THE CONTEXT OF WEBERN'S COMPLETE WORKS

This chapter will expand upon past research by positioning Op. 18 as perhaps *the* most important piece in Webern's output, as it not only shows the composer moving full force into the arena of serial composition, as has already been shown in previous scholarship, but also provides insight into uncovering many of the significant traits of his later style. Webern's later pointillistic orchestration, wide-leaping melodic material, specific consistent voicing of trichords (namely set-class 3-3), his fascination with nature and man's place in nature, and continual references to a basis in folk musics can all be extrapolated from these

three songs. Most importantly, Webern's choice of guitar as the main harmonic driving force within these songs can be seen as the source from where these traits find their root.

Webern's choice of Guitar, E-flat clarinet, and soprano is a curious enough ensemble. Couple this with the fact that he chose to expand upon this ensemble for his next serial experiment in Op. 19, which added a celeste to the harmonic foundation as a way of expanding the guitar as the main harmonic generator over the expanded forces of the work's ensemble. His choice to use the guitar in two successive opera and then never again, in my mind, provides evidence for the importance that the instrument held for Webern.⁶² Not that using the guitar and then abandoning it altogether means that it was important, rather, using it, expanding on it, and then as I will argue, including it within the orchestration and construction of a piece by using other ensembles as a conduit. Webern expands the guitar to the point that it became an orchestra, as we will see in the fifth chapter. The picture below, figure 3.1, is taken from Thomas Christensen's article "The Spanish Baroque Guitar and 17th Century Triadic Theory." The plate from Pablo Minguet Y Irol in figure 3.1, which Christensen uses to depict an idealized

⁶² Webern does include a guitar in the ensemble for his Op. 10 "Five Pieces for Orchestra" from 1911, but only in fifteen measures total, and not appearing at all until the third piece. The guitar in Op. 10 does not appear in a fundamental role of any kind. However, the guitar may be serving as a nod to Mahler, who included the guitar in his 7th symphony; the Mahler connection is also an important one to Op. 18.

continuo group, also nearly perfectly encapsulates Webern's Op. 19 ensemble.



Figure 3.1: From Christensen, a plate from Pablo Minguet Y Irol, which depicts an idealized continuo group, and also nearly perfectly encapsulates Webern's Op. 19 ensemble.

As mentioned in the first chapter, Webern took great pains to express his true self through his music. According to Willi Reich, “[Webern] wanted to show what had at various times over the centuries been “new” in music...that had never been said before.”⁶³ This quote connects with Kathryn Bailey's assertion that Webern's compositions

⁶³ Anton Webern, *The Path to the New Music*, ed. Willi Reich, trans. Leo Black (Bryn Mawr: Theodor Presser, 1963), 8.

present old forms in a new language, highlighting his desire to connect his present (and perhaps the future) with the past.

With the songs of Op. 18 Webern is continuing his train of thought from Op. 17 before it, as Op. 17 consists entirely of “Volkslieder.” The original title for Op. 18’s first song was, simply, “Volkslied,” as it sets a text describing a country scene, which is not credited to a single author. I will detail the specific characteristics of each song throughout this chapter, but first I will clarify exactly what is meant by “volkslied,” or folk-music as it relates to Webern and his time in Austria.

3.1.2 FOLK MUSIC AND FOLK CULTURE AS RELATING TO WEBERN

According to research by Wolfgang Suppan and Eva Borneman, the term “volkslied” was coined by Johann Gottfried Herder in about the year 1775.⁶⁴ Folk music is by its very definition thought to be a strictly oral tradition, and Herder grew concerned that because of a decrease in orally transmitted songs that genuine folk song would be lost forever.

Accordingly he felt that

the death of genuine folk song...would mean not merely the end of an old, laudable, and creditable form of poetry, but also the death of poetry itself, of the roots of poetry, of all honesty and respectability that lie at the heart of the people.⁶⁵

⁶⁴ Wolfgang Suppan and Eva Borneman. “Research on Folk Music in Austria since 1800,” *Yearbook of the International Folk Music Council*, Vol. 8, (1976): 117.

⁶⁵ *Ibid*, 118.

Herder was also responsible for bringing folksong to the attention of Goethe

and was responsible for sponsoring a great rebirth and renovation of German poetry closely connected with nature itself and with those seminal remainders of folklore which had, hitherto, been neglected and despised.⁶⁶

This growing awareness of the folkloristic roots of the common people of Austria was linked to an emergent patriotism. Directly related to Webern's ensemble choice, Suppan and Borneman note that

a result of all this [patriotism] was an upsurge of interest in fashionable folklore during the Biedermeier days, which, in turn, led to numerous piano, guitar, string quartet, and orchestra versions of popular tunes.⁶⁷

Bruno Nettl, in *Folk and Traditional Music of the Western Continents*, expands on this, saying

nowhere is the interrelationship between art and folk music stronger than in the German-speaking nations. The influence of the sophisticated musician on his rural counterpart has sometimes been so great there that the old practices of the German countryside seem to have disappeared and can be traced only through old documents or through the music of Germans whose ancestors emigrated from their homeland centuries ago.⁶⁸

However, the enthusiasm for folk music reached a peak in 1845. After a period of neglect, several editions of Austrian folksongs were collected, and subsequently published between about 1862 and 1899.

⁶⁶ *Ibid*, 118.

⁶⁷ *Ibid*, 119.

⁶⁸ Bruno Nettl. *Folk and Traditional Music of the Western Continents* (New Jersey: Prentice Hall, 1965), 69.

Surely through his training as a musicologist, Webern would have been aware of many, if not all, of these collections made in the decades prior to his birth and into his teenage years. Only a few years later, in 1902, the Minister of Culture and Education in Austria, Wilhelm Ritter von Hartel,

passed a decree which was issued to all provincial governments. It included the following: 'This enterprise seeks to preserve folksongs and to popularize them. It is not only a patriotic endeavor but is also designed as a durable monument to our own native art and Austrian folk tradition. I am of the opinion that the latter should be furthered in every way possible.'⁶⁹

All this is to say that the preservation of Austrian culture through the preservation of its folk musics was considered important enough an enterprise that the government directed some resources toward the endeavor. Unfortunately the First World War stalled their efforts. Due to lack of funds following the war the large-scale collections originally planned were scaled down to small booklets of popular music and songs of various regions of Austria. These regional booklets started to appear in 1925 and continued through 1938, when the project was officially abandoned, dissolved and finally incorporated into the Deutsche Volksliedarchiv in Freiburg, Germany.⁷⁰ As such, these booklets were being published and sold starting the very same year as the publication

⁶⁹ Suppan, *Research on Folk Music*, 121.

⁷⁰ *Ibid*, 122.

of Webern's Op. 18 songs, and continued to nearly the end of his life, or more specifically the publication of his Op. 29.

Folk traditions are of necessity constantly changing, and as such Webern was in the middle of that change. He took it upon himself to create new music within the folk idiom. But, one of the problems with publishing folk music that is collected and then transcribed is that the songs then lose their spontaneity and therefore lose some degree of their authenticity. Songs are, in effect, quantized, in that their pitches are moved to the nearest possible pitch, and rhythms are similarly shifted to the nearest beat or to fit typical rhythmic patterns. The rough edges of the folk music are in effect sanded down and sterilized, until one is left with only the vague impression of what was once a richly textured, finely crafted and unique expression of pitch and rhythm.

Webern's unique use of rhythm, including beaming notes across barlines, cross-rhythms that go against the notated meter, groupings of three against two, and other general obfuscations of the notated meter, can be interpreted as an attempt by Webern to break his music away from that quantization, to try to find a way to re-capture the folk elements of music that are lost in traditional transcriptions of folk music.

There is more evidence that ties Webern's work to the folk tradition of his native Austria. As part of my thesis I assert that Webern straddled the line between popular and serious musics, and in support of my idea

Bruno Nettl discusses the way that art music and folk music have influenced each other throughout Germany and Austria. Some of the practices of singing in parallelisms, for example, may have grown out of the art tradition; or it could go the other way where this was originally a folk characteristic that was then reinforced by art music. One of the two seem likely, but it can't be said for certain which way the influence goes in this case. The fact remains that

the majority of extant German folk songs seem to stem from a later period, from the time—beginning in the seventeenth century—when the German countryside was dotted with minor courts each of which had a sophisticated musical life, with court composers, orchestras, and opera. In this way even the smallest hamlets and the most remote farms began to have contact with art music, and the result seems to have been the assimilation of elements of the art styles into folklore.⁷¹

This means that Webern may have not even been making a concerted effort to bridge a perceived divide between classical and popular styles. This intermingling was a rather significant characteristic of musical culture in Austria at the time.

In order to bring the guitar into the picture, and to connect it with the folk culture and heimat with which Webern associated, we can look at the history of the guitar and its own symbolic implications. The very divide between popular and concert music is firmly established within the guitar's history. That history includes

⁷¹ Nettl, *Folk and Traditional Music*, 70.

the use of the guitar in folk music, accompanying singers and dancers (as in flamenco), and in other popular forms of music [which] lowered further the estimation of the guitar in the eyes of the vast majority of serious musicians and music teachers throughout Europe.⁷²



Figure 3.2: “Three Musicians” by Theodoor Rombouts (1597-1637), from Grunfeld, “they sing to the accompaniment of a guitar strummed [rasqueado] while a lute lies unused on the table, perhaps because it would be too much trouble to tune its eighteen strings.”

⁷² Maurice J. Summerfield. *The Classical Guitar: Its Evolution, Players and Personalities Since 1800*, (Blaydon on Tyne: Ashley Mark Publishing, 2002), 16.

In figure 3.2 above we see “Three Musicians,” a work by Theodoor Rombouts. Of this painting Grunfeld states, “they sing to the accompaniment of a guitar strummed [rasqueado] while a lute lies unused on the table, perhaps because it would be too much trouble to tune its eighteen strings.”⁷³



Figure 3.3: “Three Musicians” by Diego Velázquez. From Grunfeld, “this is one of Velázquez’ early tavern pictures, painted in Seville about 1620.”

⁷³ Frederic V. Grunfeld, *The Art and Times of the Guitar: An Illustrated History of Guitars and Guitarists* (London: Collier Macmillan Publishers, 1969), 100.

This “lowered estimation of the guitar” is repeated often, used to cast a negative light on guitarists, who tainted the instrument further by using it primarily for dances and gatherings, such as those shown in figure 3.2 and 3.3 above. This stands in contrast to the lute, which was thought of as an instrument more suitable for the performance of chamber works and “high” art. As such, Pierre Trichet, all the way back in 1630, found it necessary to put the guitar in its lowly place in order to lift up the lute thus:

The guiterre...is a musical instrument widely used by the French and Italians, but still more among the Spanish, who were the first to make it fashionable, and who know how to play it more madly than any other nation, using it particularly for singing and for playing their sarabands, galliades, espagnolettes, passemezes, passecaglias, pavanés, allemandes, and romanesques with a thousand gestures and body movements which are so grotesque and ridiculous that their playing is bizarre and confused.⁷⁴

Of course there are other, more favorable, associations with the guitar. Depictions of the guitar as an instrument of the common man, such as the one above are plentiful. Artists latched on to not only the overt function of the guitar in society, but also its symbolism. Jean Antoine Watteau included the guitar in a great number of his paintings. One such work, “A wooded river landscape with a shepherd and shepherdess making music” is pictured below in figure 3.4. Frederic Grunfeld says of Watteau’s works that

⁷⁴ Grunfeld, *The Art and Times of the Guitar*, 106.

[the guitar's] presence actually serves a very vital function in Watteau's art: there is so much open air in his pictures, compared to the crowded compositions of his predecessors, and this emptiness, which gives his figures room to play in, Watteau fills with the vibrations of a silent, palpable music.⁷⁵



Figure 3.4: Jean-Antoine Watteau, "A Wooded River Landscape with a Shepherd and Shepherdess Making Music."

He later adds, "[Watteau] was a meticulous observer, and his guitars were lovingly drawn from nature."⁷⁶ The ways in which Grunfeld speaks of Watteau's works connects the guitar to the realm of nature and the natural world. In Watteau's works people, nature, and the guitar become almost inextricably linked. To that end, the human connection can be expanded:

⁷⁵ *Ibid*, 123.

⁷⁶ *Ibid*, 124.

It has been suggested that one reason for the guitar's continuing fascination is that it is the most unmechanical of instruments, and the most human. Guitar and lute are the only instruments in which the fingertips of both hands are in immediate contact with the sounding strings and produce the tone...⁷⁷

Other depictions of guitar, Grunfeld points out, display a link between the sacred and the guitar, as it is often depicted as being played by angels. This may have appealed to Webern's religious side, as his middle and later period works, it has been noted, appeal to a higher authority that is at once more personal and more universal. This is especially true of the Op. 18 songs, where the second and third songs make overt and direct references to matters of religion with the second song depicting a Christ story, while the third takes its lyric directly from a Marian antiphon.

The final, and perhaps strongest, link to the guitar can be found in its history as a compositional tool. Once again Grunfeld, citing the development of the lute, the guitar's ideological grandfather, points out that its technological development of having a fretboard as "open[ing] up a new range of microtonal possibilities, just as later, in medieval Europe, they were to suggest new patterns of harmony."⁷⁸ So, the guitar is shown to have a history of being used for the expansion of harmonic language.

⁷⁷ *Ibid*, 86.

⁷⁸ *Ibid*, 45.

This means that the guitar is the perfect choice for Webern to test out his excursion into a new harmonic language.

Not only has the guitar been linked to the evolution of harmonic language, but Victor Coelho adds:

....[the guitar's] role in Western art-music over some 600 years is but one small chapter of a much larger story concerning the enormous global impact the instrument has had since 1900. By contrast with the piano, whose developments in structure and repertoire were conditioned almost exclusively by the art-music tradition until the early twentieth century, the guitar's development is made up of multiple and overlapping histories. To put it another way, guitar history simultaneously spans popular and classical styles, urban and rural techniques, contemporary and historical practices, written and unwritten traditions, and Western and non-Western cultures, revealing the contributions of both formally and un-formally trained players.⁷⁹

This vital observation further solidifies the guitar's extra-musical function of bridging multiple styles, traditions, and training practices. Webern was searching for a way to capture each of these things in his compositions, and Coelho would argue that he chose the perfect instrument to do so. Also, recall Thomas Christensen's quotation from my introductory chapter.

[for] 17th-century guitarists...chords became independent and autonomous compositional constructs that could be inverted and juxtaposed freely. This chordal mentality allowed them to test and exploit harmonic relationships with far greater license than was

⁷⁹ Victor Anand Coelho. "Picking through cultures: a guitarist's music history," in *The Cambridge Companion to the Guitar*, ed. Victor Anand Coelho (Cambridge: Cambridge University Press, 2003), 3.

available to keyboardists, whose practice was heavily constrained by contrapuntal exigencies.⁸⁰

This is a statement that fortifies Coelho and Grunfeld's assertions of the great impact the guitar has had on the repertoire and the reasons why it has done so, and how.

Guitarists and composers were also influenced by the instrument's aforementioned qualities. Gaspar Sanz, in his works for guitar, often borrowed rhythms from the marketplace, and from popular theater.⁸¹ But the person responsible for introducing the instrument to Austria appears to be the Duchess Amalie of Weimar, who brought it from Italy in around the year 1790. According to August Otto its arrival was "instantly...warmly applauded on all sides."⁸²

About a decade and a half later, the guitarist and composer Mauro Giuliani arrived in Vienna. Upon his arrival "he associated with and became the friend of many other fine musicians in the Austrian capital, including Beethoven, Hummel, Diabelli, Moscheles and Mayseder."⁸³ Giuliani, one of the most important early guitar composer-performers,

⁸⁰ Christensen, *Baroque Guitar*, 8.

⁸¹ Grunfeld, *The Art and Times of the Guitar*, 125.

⁸² *Ibid*, 151.

⁸³ Summerfield, *The Classical Guitar*, 15.

brought his abilities to Vienna, therefore inserting the guitar into the city's musical culture.

These factors all solidly position the guitar as the perfect instrument for Webern to begin moving toward a new compositional approach which forms a strong bond between his deeply held personal and spiritual beliefs, his overarching heimat, and his desire to create a personal music that is new but rooted in tradition, positioned in the realm of concert music while based on the popular. This chapter explores the beginning of that journey.

3.2 OP. 18/I "SCHATZERL KLEIN"

3.2.1 TEXT ANALYSIS

Mark Sallmen, in the conclusion of his article on the row-usage in this song, says "...[Op. 18 no. 1] is a complex, serious composition by an experienced composer written at a critical point in his career—a composition of which the composer was very proud."⁸⁴ Webern's pride in this piece is confirmed by the composer himself, when only two weeks after finishing the song he wrote a famous letter to Berg in which he said

⁸⁴ Mark Sallmen. "Composition with a Single Row Form? Webern's 'Schatzerl klein,' Op. 18, No. 1," *Intégral*, Volume 16/17 (2002/2003), 182.

die 'Zwölftonkomposition' ist mir jetzt eine bereits vollkommen klare Sache. Natürlich sind diese Lieder alle darin geschrieben. Und diese Arbeit bereitet mir Vergnügen wie noch selten zuvor.⁸⁵

Webern went still one step further in expressing his pride for this work, by choosing to include it in an anthology prepared in honor of Emil Hertzka's twenty-fifth anniversary at Universal Edition in 1925, "the public debut of both Webern and Berg in twelve-tone composition."⁸⁶

Webern does not indicate the source of this first song's text on the manuscript, and as such Mark Sallmen believes that this is

likely because [Webern] considered such 'folk poetry' to be common property. This poem appears in Peter Rosegger's *Das Buch der Novellen II*, a series of entertaining stories about rural life, but it is unclear whether 'Schatzerl klein' is actually folk poetry or whether Rosegger composed it to emulate the folk style.⁸⁷

We also learn that this text held a deep personal meaning for

Webern:

When [Webern] wanted to express special affection for [his wife], he would call her 'Minna-mutter-Königin!' Minna (Wilhelmine) was for Webern, to begin with, the 'Schatzerl' (sweetheart). Beyond this she represented the incarnation of motherhood and, symbolically, she reigned as queen over the family. The sequence of songs in the cycle follows these images. While none of Webern's compositions was ever officially dedicated to his wife, the present cycle, more

⁸⁵ "Twelve-tone composition is now already a perfectly clear thing to me. Naturally these songs are all written in it. And this work brings me pleasure like nothing before."

⁸⁶ *Ibid*, 181.

⁸⁷ *Ibid*, 142.

than any other work. would appear to have been created in homage to her.⁸⁸

The aforementioned affectionate name that Webern used for his wife, Johnson argues, may have its direct origin in Goethe's text as mediated through Mahler's Eighth Symphony.⁸⁹

The tripartite form of the poem, according once again to Mark Sallmen, creates an arch form with regard to subject matter. The first verse is about an interpersonal relationship, while the second verse divides its subject matter between that relationship and a discussion of flowers, while the final verse focuses solely on flowers as its subject.

The text is as follows, with stressed syllables in bold. Verses are determined by terminal punctuation, with four lines per verse.

1a) **Schatzerl klein,**

1a) **mußt** ni[ch]t **traurig sein,**⁹⁰

1b) **eh'** das **Jahr vergeht,**

1a) **bist** du **mein.**

2b) **Eh'** das **Jahr vergeht,**

⁸⁸ Julian Johnson, *Webern and the Transformation of Nature* (Cambridge: Cambridge University Press, 1999), 160.

⁸⁹ *Ibid.*

⁹⁰ A typo exists in the score where the first measure of text erroneously omits the "ch" from "nicht," placing "nit" into the score.

2c) **Grünt** das **Rosmarin**,

2d) **Sagt** der **Pfarrer laut**:

2c) **Nehmts** euch **hin**.

3c) **Grünt** der **Rosmarin**,

3e) **grünt** der **Myrtenstrauß**

3f) **und** der **Nagerlstock**⁹¹

3e) **blüht** im **Haus**.

The English translation of the text is transcribed below:

1a) Little sweetheart,

1a) you must not be sad,

1b) before the year has ended,

1a) you will be mine.

2b) Before the year has ended,

2c) the rosemary will turn green,

2d) the priest will say:

2c) take her unto you.

⁹¹ This could be a reference to any number of flowers in the genus *Matthiola*, known commonly as "stocks." This could be any number of common garden flowers, a carnation, or a more strongly scented clove.

3c) The rosemary will turn green,
3e) the myrtle sprigs will turn green,
3f) and the cloves
3e) will bloom in the house.

We can see immediately that Sallmen's assertion regarding the subject-matter of each verse is correct. The entire first verse, as well as the third and fourth lines of the second verse are about a relationship between two people; while the first two lines of the second verse, as well as the entirety of the final verse, are about flowers.

Webern separates the verses musically by placing a quarter-note rest between them. This can be seen in measure five, which divides the first verse from the second, and in measure nine, separating the second verse from the third. We will see in chapter four that Webern creates larger separations between verses in his Op. 25 song cycle.

The text organization reveals an overall trochaic structure. That every line ends and begins with an accent lends a feeling of a silent, unaccented syllable of some kind in between each line. Interpreted in this manner, the poem retains a natural and regular rhythm. The trochaic nature of the poem furthers its pastoral status; this is in addition to, of course, the numerous mentions of various flowers.

A musical element furthering this pastoral assertion, is the fact that Webern leaves the one single row-form untransposed throughout. Julian Johnson claims that “this may be in keeping with their folksong associations [and] inevitably recalls the idea (rather than the sound) of the extensive and very particular use of tonic pedals in the early works.”⁹² To tie this into an older idea, in musical works depicting the pastoral, a piffarari may be used which consists of a prolonged pedal point with improvised tunes placed over top.⁹³ Although this piece doesn’t, and by definition of Webern’s harmonic language here can’t, depict the usual use of a melody in thirds typical of the piffarari, his vocal line does undoubtedly project an air of improvisation.

Of the vocal writing, Ernst Hilmar said:

Diese Lieder sind wahrscheinlich die schwierigsten, die Webern je komponiert hat. Im Dienste einer außerordentlich gesteigerten Expressivität erreichen die Intervallsprünge der Singstimme kaum mehr zu überbietenden Umfang; so wird etwas das Wort “Nagerlstock” im ersten Lied in folgender Weise vertont: e’ - cis” - d” - es’, in Übersteigerung von jodlerartigen Figuren, zu denen

⁹² *Ibid*, 165.

⁹³ Piffarari were Italian itinerant musicians, similar to minstrels, or French troubadours and trouvères, who wandered the Italian countryside—mostly the mountainous region of Calabria—playing before shrines dedicated to the Virgin Mary. These musicians played bagpipes, an instrument whose droning element has been closely tied to the pastoral in music.

Webern durch den betont naiven, volkstümlichen Text angeregt wurde.⁹⁴

That these songs are “probably the most difficult” may be up to debate, but the fact remains that, as Sallmen points out, this song contains the most melodic intervals of a major seventh or more than any other song Webern had written to this point.⁹⁵ The pastoral imagery of the text is brought to life by the imagery imbedded within the vocal-line of a yodel-like melodic construction. In a later section I will discuss the ways in which the harmonic support provided by the guitar aided in the construction of such a vocal line.

Webern presents, in the vocal part, a fairly strict interpretation of the original poetic stresses. Being that the text opens on a stressed syllable, Webern sets the voice part to begin on a downbeat. The first two lines of the text are set to a simple rhythm that avoids syncopation, and remains faithful to a beat-to-beat structure in. Each of the stressed syllables of these first two lines falls directly on a beat with the songs unchanging 3/4 meter. This is shown in example 3.1 below.

⁹⁴ Anton Webern and Ernst Hilmar. *Anton Webern 1883-1983: eine Festschrift zum hundersten Geburtstag* (Wien: Universal Edition, 1983), 100.

Translation: “These songs are probably the most difficult that Webern has ever composed. In the service of an extraordinarily increased expressiveness, the intervals of the voice reach a range that could hardly be more difficult; thus, the word “Nagerlstock” in the first song is set in the following manner: E4-C#6-D5-Eb4, an extreme exaggeration of yodel-like figures, to which Webern was drawn by emphatically folkish texts.”

⁹⁵ Sallmen, “Single Row Form,” 143.

Anton Webern, Op.18

tempo *p*

Schat-zerl klein muß nit

trau- rig sein, eh' das

Example 3.1: “Schatzerl klein” mm. 2-3. Poetic stresses highlighted.

In the final two lines of the first verse Webern does not place the poetically stressed “eh” directly on a beat, but a sixteenth-note after the third beat in measure three. In the next measure “-geht” is the first melismatic syllable. The verse concludes on the downbeat of measure five. This is shown in example 3.2.

rit. - - - -

trau- rig sein, eh' das Jahr ver-geht, bist du

tempo *pp* *p*

mein. Eh' das

Example 3.2: “Schatzerl klein” mm. 3-5. Poetic stresses highlighted.

As the first line of the second verse matches the third line of the first verse, Webern once again sets “eh” on a weaker part of the beat, but this time emphasizes it with a slurred upward leap of a minor ninth. Also matching the line in the first verse, is a melisma once again placed on

“-geht.” Rhythmically, the second verse introduces some more complex divisions of the beat. Webern remains bound to the beat, however, refraining from tying any pitches across beats or barlines.

In the second line of this verse “grünt,” despite its weak rhythmic placement, is accented registrally. In measure seven accented “Ros-“ and “-rin” both fall directly on beats, and are emphasized through melismas. This is shown in example 3.3.



Example 3.3: “Schatzerl klein” mm. 5-7. Poetic stresses highlighted.

Verse three’s first poetically stressed syllable is placed in a rhythmically weak position at the end of measure seven in the service of creating a strong emphasis on “Pfar-,” appearing on the downbeat of the following measure.

Webern creates a space between the emphasized “laut” at the end of the first line, and the emphasized “Nehmts” at the beginning of the next, after the extended quarter-note attack of “laut.” Webern’s placement of “Nehmts euch hin” stands alone at the end of measure eight, closing on the downbeat of the next measure. This places emphasis on what the priest is saying, as well as places a break between the second and third verses. The third and fourth lines of the third voice

part showing their poetic stresses are shown in example 3.4.

Example 3.4: “Schatzerl klein” mm. 8-9. Poetic stresses highlighted.

Verse three opens in the same rhythmic manner as the second, with the first poetically stressed syllable functioning as an anacrusis to the next poetically stressed syllable. The word “Rosmarin” is set similarly as it was in the previous verse, with melismas on both stressed syllables. These stressed syllables also form the registral high and low points, respectively, for the line. Webern repeats this method for the second line of the verse, with “Grünt der” once again serving as anacrusis to the rhythmically stressed, melismatic “Myrtenstrauß.” Just as the stressed syllables of “Rosmarin” form the high and low points of its line, so too do the stressed syllables of “Myrtenstrauß” form the low and high points of its line. This is shown in example 3.5.

Example 3.5: “Schatzerl klein” mm. 10-11. Poetic stresses highlighted.

The final lines of the final verse are set in a nearly identical fashion to the closing line of the previous verse. The comparison of these four lines can be seen below in example 3.6.

The image shows a musical score for two verses. The top line is for verse 2, and the bottom line is for verse 3. Each line consists of a vocal line and a piano accompaniment line. The lyrics are: 'sagt der Pfar - rer laut: Nehmts euch hin.' and 'und der Na - gerl - stock blüht im Haus.' The score includes dynamic markings such as *mf*, *p*, *rit.*, and *pp*, as well as articulation marks like slurs and accents. The piano part features a prominent triplet in the second line of the bottom staff.

Example 3.6: The final two lines of verses 2 (top), and 3 (bottom).

3.2.2 ROW COUNT ANALYSIS

As noted in a previous section Webern never strays from his original row-form throughout this song. I understand this as adding a folk element to this song due to its being based on a simple foundation, and one of the first in Webern's new language. The row begins on pc0, as if to imply that the song is in not only a single key, but the simplest key of all. Webern does not assign the row to any single instrument, running it through a full exposure in one voice repeatedly, instead the row is exposed in an array which takes into account the entire ensemble.

The row for this song is shown below. Since Webern does not use any other row-forms throughout the song I have stopped short of creating a matrix. This row is shown in figure 3.5.

o	e	5	8	t	9	3	4	1	2	7	6
---	---	---	---	---	---	---	---	---	---	---	---

Figure 3.5: Webern's row for "Schatzerl klein"

Webern's Op. 18/i row lacks the thoughtful, symmetrical construction that would become a hallmark of his later works. Adjacent trichords are inconsistent, taken from four different set-classes; namely 3-5, 3-1, 3-2, and 3-4. Adjacent hexachords are also mismatched, as they belong to set-class 6-z36 and 6-z3, respectively. The middle trichords point to a heavier reliance on seconds. Looking at the interval content between each pitch uncovers five adjacent half-steps.

Order #	pcs	prime form
0	0 e 5	[016]
1	e 5 8	[036]
2	5 8 t	[025]
3	8 t 9	[012]
4	t 9 3	[016]
5	9 3 4	[016]
6	3 4 1	[013]
7	4 1 2	[013]
8	1 2 7	[016]
9	2 7 6	[015]
10	7 6 0	[016]
11	6 0 e	[016]

Figure 3.6: Imbricated trichords of Webern's "Schatzerl klein" row. The left column indicates order number of first pitch of trichord.

Despite the variability of set-classes represented by the row, I will show in the next section how Webern organizes his score for maximum consistency of 3-5, perhaps akin to holding the song to the tonic area. The set-class of each imbricated trichord is shown in figure 3.6 above.

The score reveals relative rhythmic simplicity of individual parts creating dense, complex rhythmic counterpoint within the ensemble.; An instrumental introduction of a single measure begins the song, starting with guitar, followed a beat-and-a-half later by the E-flat clarinet. This introduction reveals nearly the first full exposure of the row, with the voice's first two pitches as order numbers **8** and **11**, with the guitar ultimately closing the row with the voice with a double-stop of order numbers **9** and **10**. Pitch-class 1 is repeated in the voice, which when combined with the aforementioned guitar double-stop helps prolong 3-5 harmony. This is shown in example 3.7.

The musical score for 'Schatzerl klein' is presented in three staves: Gesang (Voice), Es-Klarinette (E-flat Clarinet), and Gitarre (Guitar). The tempo is marked 'Sehr ruhig (♩ = ca 54) rit. - - - tempo'. The lyrics are 'Schat - zerl klein, muß nit'. A vertical red line marks the beginning of the next exposure in measure 2. Order numbers 0 through 11 are placed above each note to indicate the pitch class within the row.

Example 3.7: The first row exposure of “Schatzerl klein” shown in measures 1 and 2, with beginning of next exposure in measure 2. Order numbers are placed above each note.

The next row instances, in measures three through five, cover the third and fourth lines of the first verse. Webern does align the ending of the sixth row exposure with the conclusion of the first verse, and beginning of the second. The tenth pitch, pc7, appears in the clarinet part underneath order numbers **8**, **9** and **1** in the voice in a fashion very similar to the opening of the piece. This is shown in example 3.8.

The image displays a musical score for three instruments: Voice (V.), Clarinet (Cl.), and Guitar (Gt.). The score is divided into two systems. The first system covers measures 3, 4, and 5. The second system covers measures 6 and 7. Red numbers are placed above each note to indicate its pitch class order (pc). Vertical red lines connect notes across staves to show row exposures. The lyrics are: "trau - rig sein, eh' das Jahr ver - geht, bist du mein. Eh' das". Dynamics include *p*, *pp*, and *mp*. A "rit." marking is present above the voice staff in measure 5. A "tempo" marking is present above the voice staff in measure 6.

Example 3.8: Row exposures of “Schatzerl klein” measures 3 through 5. Order numbers are placed above each note.

An increased pitch density in the guitar part leads to an increased pacing of row exposures throughout the second verse. One full exposure underpins the first line, while two accompany the second. Webern then thins the texture considerably to further highlight the priest's words "Nehmts euch hin" just past the middle of the song. Once again Webern lines up the conclusion of this verse with the conclusion of his row. This is shown in example 3.9.

The image displays a musical score for measures 6 through 9 of the piece "Schatzerl klein". It features three staves: a vocal line (Soprano), a Klavier (Kl.) line, and a Gitarre (Gt.) line. The vocal line includes the lyrics: "Jahr ver- geht, — grünt der Ros- ma- rin, — sagt der Pfar- rer laut Nehmts euch hin Grünt der". The guitar part is heavily annotated with red vertical lines and red order numbers (0-11) placed above each note, indicating the sequence of the twelve-tone row. The score includes various dynamic markings such as *p*, *mp*, *mf*, *pp*, *f*, *rit.*, and *molto*. The guitar part shows a high density of notes, particularly in the lower register, which corresponds to the increased pacing of row exposures mentioned in the text.

Example 3.9: Row exposures of "Schatzerl klein" measures 6 through 9. Order numbers are placed above each note.

As the third verse begins, and Webern brings the song to its close, the pitch density returns to its previous state. Tetrachords and pentachords in the guitar give way to mostly dyads, trichords, and a limited number of tetrachords.

Another full exposure of the row is used between the second and third verses. In the three full measures of the third verse Webern moves through eighth more exposures of the aggregate. The final measure concludes just as the song opened, with the guitar sounding the final pitches. The final four measures with their row order numbers are shown in example 3.10.

The image displays a musical score for three measures (10, 11, and 13) of the song "Schatzerl klein". The score is arranged in three systems, each containing a vocal line (top), a Klavier (Kl.) part (middle), and a Gitarre (Gt.) part (bottom). The music is in 3/4 time and features a complex harmonic structure with various dynamics and articulations. Red vertical lines are drawn through the score, indicating specific measures or groups of notes. Red numbers are placed above many of the notes, representing the order numbers of the twelve-tone row. The lyrics are: "Ros - ma - rin, grünt der My - ten - strauß und der Na - ger - stock blüht im Haus." The tempo marking "tempo" is at the beginning of measure 10, and "rit." (ritardando) is marked at the start of measure 11. Dynamics include *p*, *mp*, *f*, *pp*, and *mf*.

Example 3.10: Row exposures of “Schatzerl klein” measures 10 through 13. Order numbers are placed above each note.

Throughout this song we can see the ways in which Webern is beginning to control several factors at once. Within his new twelve-tone language Webern is shown here balancing elements such as sensitive prosodic setting of the text, while controlling phrases with his row projections. These considerations are all at a relatively early stage, and we will continue to see them develop across the next sections and chapters.

In the section that follows I will discuss Webern's control of the harmonic basis of the song in which the guitar forms the harmonic foundation that consistently projects set-class 3-5 harmony.

3.2.3 HARMONIC ANALYSIS

Despite Webern's lack of consistent adjacent trichord set-classes in his source row, he has constructed the song in such a manner as to project set-class 3-5 from beginning to end, with every pitch belonging to at least one such harmony. In several cases pitches are members of more than one member of that set-class. Once again, that the first trichord of the row is a member of set-class 3-5 may liken the piece to projecting one simple, stable harmony like a lengthy tonic extension. This is, of course, in addition to the repeated, unaltered version of the row, which carries through the entire song.

There are only a limited number of trichords used throughout this song as simultaneities in the guitar part. Of the ten trichords appearing, eight belong to set-class 3-5, while one is a member of set-class 3-3, and another belongs to set-class 3-4. Of the remaining simultaneities greater than a trichord there are six different tetrachords, and a pentachord. Each of these simultaneities contains as a subset at least a single member of set-class 3-5, while some contain more. These are shown in figures 3.7, 3.8, 3.9, and 3.10.

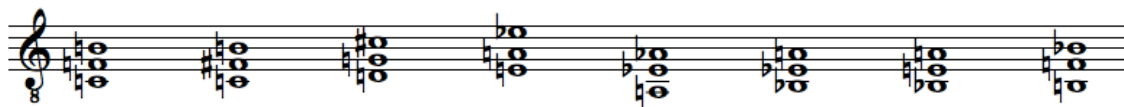


Figure 3.7: Set-class 3-5 trichords as they appear in “Schatzerl klein” guitar part.



Figure 3.8: Set-classes 3-3 (left), and 3-4 (right), as they appear in “Schatzerl klein” guitar part.

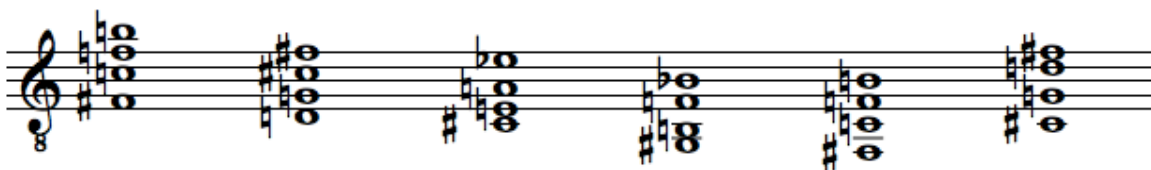


Figure 3.9: From left to right, set-classes 4-9, 4-8, 4-z29, 4-13, 4-6, and 4-8 as they appear in “Schatzerl klein” guitar part.



Figure 3.10: The only pentachord to appear in “Schatzerl klein” belongs to set-class 5-14.

The guitar's introduction, obviously, projects 3-5 from the start being that it is the first trichord of the row. The clarinet's introduction of pc8, sustaining over the guitar's pc9, which then sustains over the next clarinet pc3 becomes the next 3-5. Another 3-5 exists within these pitches as well, but instead taking pc10 from the previous guitar attack for [9t3]. This is shown in example 3.11.

The image shows a musical score for three parts: Gesang (Voice), Es-Klarinette (Soprano Clarinet), and Gitarre (Guitar). The tempo is marked 'Sehr ruhig (♩ = ca 54)' and 'rit.' (ritardando) leading to 'tempo'. The key signature has one sharp (F#) and the time signature is 3/4. The lyrics 'Schat -' are written under the voice line. The guitar part features several chords highlighted with red boxes and labeled with green text: '05e' (first measure), '5te' (second measure), and '349' (third measure). The clarinet part has notes labeled '389' and '2' in green. Dynamics include *p* (piano) and *pp* (pianissimo).

Example 3.11: Instrumental introduction of “Schatzerl klein” showing interlocking set-class 3-5 harmony.

Since within this song, and in the remainder of the songs in Op. 18, the same row is exposed as an array amongst all of the instruments, I will be looking at the way set-class 3-5 is projected using the entire ensemble.

That being said, in the second measure, upon the entry of the voice we begin to see more interaction, with the guitar and voice now combining to form [167] and [127] trichords, which moves seamlessly to

[016]. As the guitar's gesture slurs to pc0, that pitch is used in conjunction with the voice's grace note and pcE on "mußt" to form [6e0].

From the perspective of progression with regard to trichordal inversion spaces, we can track the motion from lozenge to lozenge below. We can notice that chains of harmonies remain relatively close together for small stretches, before being broken to distant harmonies lacking any close voice-leading properties. This is shown in example 3.12 below.

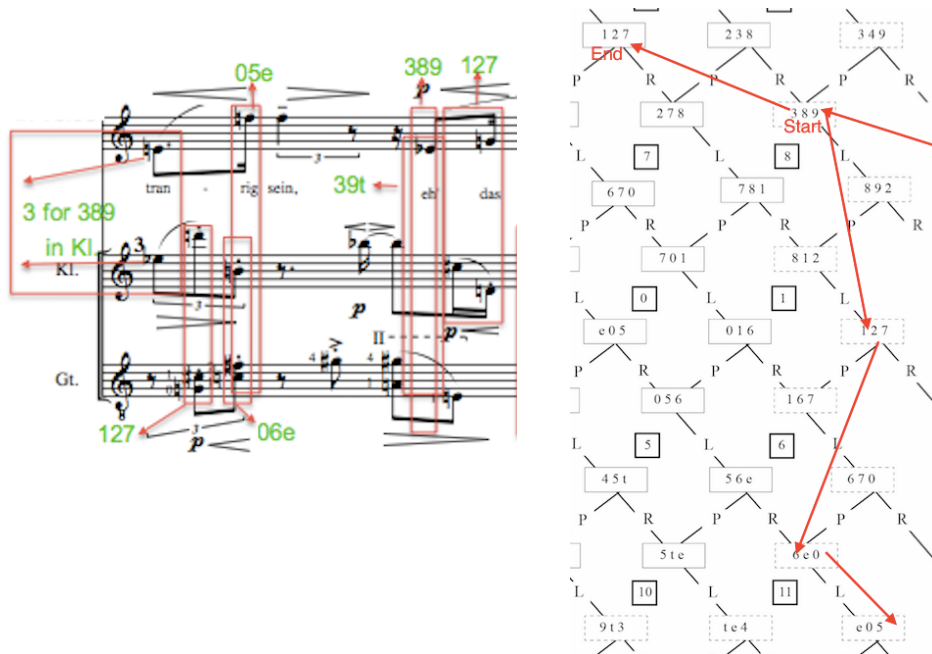
The image contains three parts: a musical score, a trichordal inversion space diagram, and a contextual inversion space diagram.

- Musical Score:** Shows three staves (voice, guitar, and another instrument) for measure 2. The lyrics are "Schat - zerl klein, muß ni". Annotations include "I - tempo", "p", "pp", "p", and "5te". Specific notes are labeled with numbers: 167, 016, 389, 349, and 127. Red boxes and arrows highlight voice-leading connections between notes across staves.
- Trichordal Inversion Space Diagram (Left):** A tree diagram showing relationships between trichordal sets. The root node is 016. It branches into L (1) and R (2). Node 016 also branches into P (5 6) and R (1 6 7). Node 127 branches into P (1 6 7) and R (2 7 8). A red arrow points from 127 to 016, and another red arrow points from 1 6 7 to 127.
- Contextual Inversion Space Diagram (Right):** A tree diagram showing relationships between contextual sets. The root node is 3 4 9. It branches into P (3 8 9) and R (4 5 t). Node 3 4 9 also branches into P (3 8 9) and R (4 9 t). Node 4 5 t branches into P (4 9 t) and R (5 t e). Node 4 9 t branches into L (9) and R (10). A red arrow points from 5 t e to 4 9 t, and another red arrow points from 4 9 t to 3 8 9.

Example 3.12: "Schatzerl klein" measure 2 with set-class 3-5 highlighted (top) and the corresponding contextual inversion space motion (bottom)

Something interesting happens in measure three, where the voice repeats pc5, while an eighth note later the guitar anticipates its

upcoming pc8 attack which will belong to the upper voice of the forthcoming dyad, and the clarinet a sixteenth-note later anticipates its pc10. Together these pitches do not belong to set-class 3-5, but 3-7. Each pitch, however, can be seen in the figure below to belong to harmonies surrounding them. The voice echoes the [e05] from the first beat, while pc8 and pc10 will join with [389] and [9t3] harmonies on the next beat. The harmonies of measure three and its corresponding motion on the contextual inversion space is shown in example 3.13.



Example 3.13: “Schatzerl klein” measure 3 with set-class 3-5 highlighted (left) and the corresponding contextual inversion space motion (right)

One may notice the great distances between some appearances of trichords. The benefit of using Straus’ contextual inversion spaces is to

map what similarities there are between simultaneities. For instance in examples 3.13 and 3.14 we can track motion through adjacent lozenges, focusing therefore on families of related simultaneities. This approach works well for this and the other songs of Op. 18 in particular due to Webern's pitch organization and the vast number of connections formed from each pitch. Despite, for example [389] being distantly related to [016], they do appear in adjacent lozenges, encircling pc8 and pc1, respectively.

The image consists of two parts. On the left is a musical score for measure 4 of 'Schatzerl klein'. It features three staves: voice, clarinet, and guitar. Pitch classes are indicated above notes: 6e0 (voice), 349 (clarinet), 016 (guitar), 05e (voice), 389 (clarinet), and 178 (guitar). Red boxes enclose the first three notes of each staff, and green boxes enclose the last three. On the right is a contextual inversion space diagram. It is a complex network of lozenges representing pitch-class relationships. A red path starts at the lozenge labeled '6e0' (marked 'Start'), moves to '016', then to '389', and finally to '178'. An arrow at the bottom-left points to a lozenge labeled '389', which is connected to the '389' lozenge in the path above.

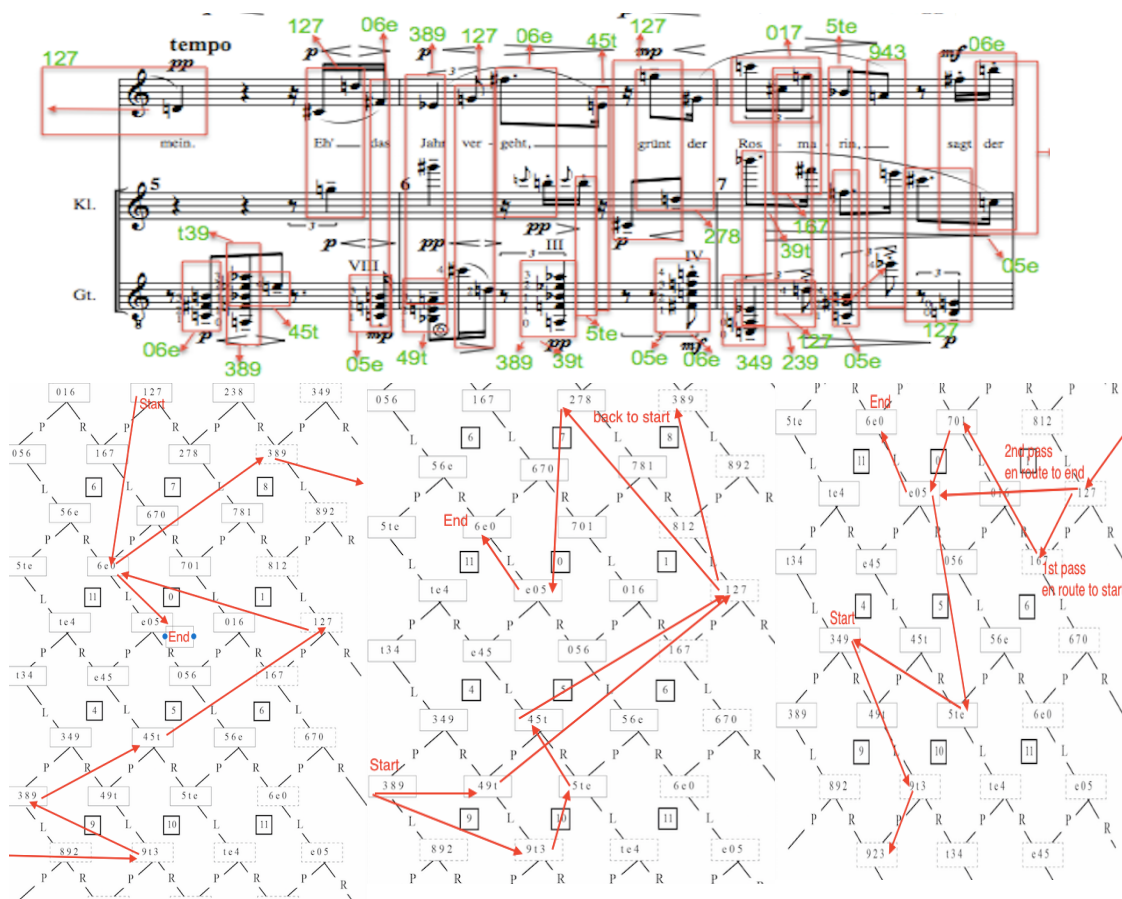
Example 3.14: “Schatzerl klein” measure 4 with set-class 3-5 highlighted (left), and corresponding contextual inversion space (right). Arrow at bottom-left continues from same spot at top-right, first traveling through back to start and tracing same path

The first trichords in the guitar show up in measure four. Webern uses each pitch from the triads in this measure to tie the clarinet and voice pitches to 3-5 harmonies. Another benefit to Webern's use of the guitar for harmonic support, is that the simultaneities allows him more freedom within the melodic lines, while maintaining 3-5 harmony.

Webern's ability for control shows not only in this, but so too do his consistent voicing of those guitar simultaneities. This, again, can be seen in figures 3.7 through 3.9 above. Measure four is shown in example 3.14 above.

As described in the previous section, the pitch density increases significantly in the second verse, and with that the number of overlapping 3-5 simultaneities. The increased overall pitch density, the use of tetrachords and pentachords, and increased rhythmic activity each play a part in Webern's ability to control this texture change, while keeping the underlying 3-5 framework intact. Measures five through seven are shown in example 3.15 below.

Webern closes out the second verse in measures eight and nine, using repeated pitches in the voice, and clarinet, as well as an extended pitch—one of the longest durations in the song—to thin the texture back to its previous state while pivoting through several members of set-class 3-5 with a higher degree of close voice-leading. This elongated pitch in the clarinet becomes a staple of the third verse appearing again in slightly varied forms in measures nine, eleven, and twelve. The close of verse two and the opening of verse three are further linked through the repeated rhythmic material in the clarinet in measures eight and nine. Both of these measures feature immediately repeated pitches in sixteenth notes



Example 3.15: “Schatzerl klein” measures 5-7 highlighting 3.5 harmonies (top) and their contextual inversion space representations (bottom, left to right). Measure 5 moves from [1,2,7] to [3,8,9] before wrapping around at bottom left; measure 6 traces itself back to the start and moves to [9,t,3] before ending on [6,e,0]; measure 7 again traces back the start and on second pass diverts to [7,0,1] before ending on [4,e,0].

followed by an extended pitch tied across a significant portion of the measure. This is shown in example 3.16 below.

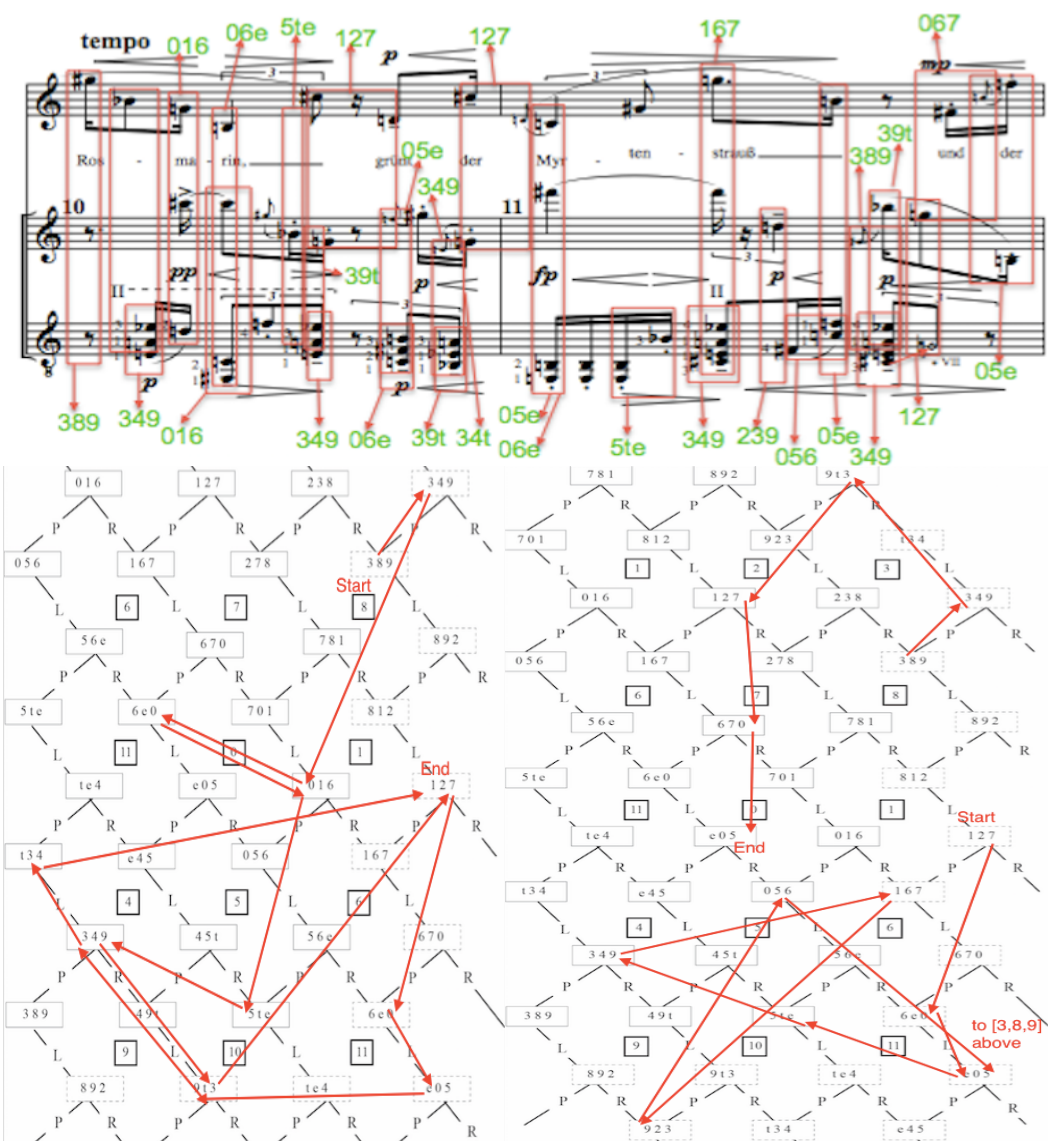
Increased rhythmic activity in both the guitar and clarinet parts permeate the opening two lines of the final verse in measures ten and eleven. Once again the simultaneities in the guitar each function in support of the voice and clarinet above such that the entire ensemble

remains locked into a 3-5 harmonic framework. The final four measures of “Schatzerl klein” are shown below in examples 3.17 and 3.18.

The image displays a musical score for measures 8 and 9 of "Schatzerl klein". The score includes three staves: Voice (top), Klavier (middle), and Gitarre (bottom). The voice part has lyrics: "Pfar - rer laut: Nehmets euch hin. Grünt der". The score is annotated with various set-class labels (e.g., 05e, 389, 178, 128, 016, 39t, 127, 167, 05e, 5te, 349, 067, 127, 05e, 389, 49t, 127, 05e) and dynamic markings (p, mp, mf, f, rit., molto, pp). Below the score are two inversion spaces. The left inversion space shows a network of nodes and paths, with a red path starting at node 0 and ending at node 10. The right inversion space shows a similar network, with a red path starting at node 0 and ending at node 10, and a red arrow pointing to node 10 with the text "to [4,9,t] below" and another red arrow pointing to node 10 with the text "from [e,0,5] below".

Example 3.16: “Schatzerl klein” measures 8 and 9 highlighting set-class 3-5 (top), and in their contextual inversion spaces (bottom).

“Schatzerl klein” is the only song of this opus to project 3-5 harmonies so extensively. Overall the voice-leading contains several large leaps, but does often travel similar paths within a measure. Straus would classify these as creating detours from projected paths which ultimately end with relatively closely related harmony to that which began. The second song, “Erlösung,” changes “key” to set-class 3-3 and will also be shown to display several other significant leaps in both harmonic and melodic control.



Example 3.17: “Schatzerl klein” measures 10 and 11 with set-class 3-5 highlighted (top), and their corresponding contextual inversion space representations.

The image displays a musical score for three instruments: Klavier (Kl.), Gitarre (Gt.), and a vocal line (top staff). The score includes lyrics: "Na - ger! - stock blüht Haus Ste". The score is annotated with various musical notations such as dynamics (*p*, *pp*, *ppp*, *mf*), articulation (*acc.*, *rit.*), and performance directions. Red boxes highlight specific notes in the guitar part, and red arrows connect these notes to corresponding nodes in two inversion space diagrams below. The left diagram shows a complex network of nodes and arrows, with a red path starting at node 913 and ending at node 127. The right diagram shows a similar network, with a red path starting at node 51e and ending at node 167. The nodes in the diagrams are labeled with numbers and letters, representing set-classes and their relationships.

Example 3.18: “Schatzerl klein” measures 12 and 13 with set-class 3-5 highlighted (top), and their corresponding contextual inversion space representations (bottom).

3.2.4 NOTES ON THE OP. 18 PERFORMANCE SCORE

As mentioned in the previous section, only a limited number of different simultaneities exist within the guitar part. I will outline in this section the consistent voicings present within the song, and the mechanics of maneuvering this part as a performer.

Throughout the song the guitar part is largely responsible for not only the harmonic support, but also the pacing of row projections. As Webern increases pitch density in the guitar part he also, naturally,

increases the speed with which he is able to move through the row. Additionally, because the guitar is the only member of the ensemble capable of playing simultaneities it provides Webern with a lot of room to experiment with different melodic configurations above the guitar part. Despite this variability, I will now show how Webern consistently gears the work to project multiple, simultaneous, and overlapping instances of set-class 3-5. I will also show the ways in which the guitar is specifically responsible for allowing both the clarinet and voice lines to be written in such a fashion as they are.

On my score I have simplified the way in which the guitar part was originally written. First I have included the use of only one clef, the sub-octave G-clef which is customary for guitar music. Webern's original score features frequent clef changes, from the standard G-clef to F-clef, as his score is written at sounding pitch. This makes his score, in my opinion, unnecessarily difficult to read as many gestures appear to move in the opposite intended direction. Some examples of this are shown in example 3.19.

Example 3.19: Measure 3 (top), 8 and 9 (bottom) of “Schatzerl klein” written in non-intuitive manner with written contour contrary to sounding gesture.

Roman numerals above some pitches or simultaneities indicate the placement of a barre at that fret. For the purposes of this analysis I have added a tablature staff below the guitar staff for easier visualization of the specific fret placement of each pitch.

No pitches have been altered in any way in my score, my changes are only intended to improve the performability of this unfairly disregarded and underperformed score. Encouraging the increased performance of this piece is one of the main objectives of this dissertation as it stands as one of the very few works with guitar created by any member of the Second Viennese School. As a note, many articulation marks have been left of my analysis score with tablature for easier readability. The performance score included at the end of this dissertation copies Webern's articulations exactly.

3.2.5 GUITAR PART

Webern's writing for the guitar, I will reveal, is quite idiomatic. His extensive knowledge of the mechanics of guitar playing is obvious, and the guitar here fulfills several roles. Not only does it guide the harmony, but it provides support for both the clarinet and voice part in a few different ways. Firstly, the wide intervals of the voice and clarinet parts would be more idiomatic to a stringed instrument, as I will detail in later sections. Secondly, the guitar fulfills the traditional role of an

improvisation-like continuo part. Webern's figures, despite sticking closely to a beat-to-beat design in 3/4, include written in rubato via several eighth- and sixteenth-note triplet figures. With these triplets Webern is able to shake the song free from the normal quantization that occurs when performing from a staid, un-folklike, score.

By and large the guitar part hovers around the low and mid-range of the guitar. In only a relative few places does Webern write pitches extending past the top line of the staff.

The introductory measure in its own way introduces the role of the guitar in that Webern spreads out only a few pitches, order numbers **0**, **1**, **2**, **4**, and **5** fairly wide across nearly two full octaves. As can be seen in the tablature staff, the entirety of the measure is quite easily graspable from a single hand-position, covering only four measures: moving from [e05] to [5te] without lifting the fretting hand from a <-1-244> Koozin-shape, except for a simple move down one fret from {s = 1, r = 6} to {s = 1, r = 5}, resulting in the slightly more compact <-1-243> Koozin-shape.

The second measure's solitary gesture allows one to take advantage of the open third and fourth strings, {s = 3,4 r = 0} using a hammer-on to {s = 2, r = 1}.⁹⁶ However, I feel that controlling the dynamic of open strings to fretted pitch is more difficult than making use of the

⁹⁶ "Hammer-on" is a term used by guitarists to indicate a slur made with fretting-hand only.

available fifth-fret barre here. Additionally, the fifth fret is already going to be directly under the hand for the first measure and would not require a dramatic shift. These first two measures are shown in example 3.20 below.

Example 3.20: “Schatzerl klein” measures 1 and 2 guitar part with Koozin-shapes underneath tablature staff.

In the measures that follow one can see the roman numerals above the guitar staff indicating the barre shifts that guide the performer through the piece. We shall also see that Webern’s consistent voicing of simultaneity allow for nearly unwavering use of consecutive *s* values, and many times consecutive *r* values as well.

Measures three and four move from a barre on the second fret to a barre on the first fret. Measure three’s arching gesture breaks the measure into two, with the first using a simple <—4411> Koozin-shape with consecutive *s* values; and moves to the second half with a <—11-3> Koozin-shape, without requiring a shift. The, essentially, tetrachord on the first beat of the fourth measure requires little effort, requiring only two fingers and benefits from both consecutive *r* and *s* values. Both measures span only four frets.

The one pentachord in this piece appears twice: once in measure five and again in measure six. These simultaneities are only possible because of the way in which they are voiced; as a guitarist only has four available fingers with which to perform, while the thumb is relegated to a guidance role behind the neck. This particular pentachord benefits from several guitaristic factors. Firstly, the lowest pitch, pc9, has an r value of 0. Secondly, the entire chord makes use of consecutive s and r values for the remainder of the chord, spanning only two frets across the upper four strings. Measure five's approach to this simultaneity, and in fact the entire measure, finds its pitches from the same two measures. This results in compact Koozin-shapes. Measures three through six are shown in example 3.21 below.

Example 3.21: “Schatzerl klein” measures 3 through 6 guitar part with Koozin-shapes underneath tablature staff.

Measure seven makes extensive use of 0 *r* values, with the remaining simultaneous attacks requiring spans of no more than two frets. The following measure finds the entirety of its content containing consecutive *r* and *s* values all while under a barre at the fifth fret.

The image displays three systems of musical notation for measures 7 through 13. Each system consists of a treble clef staff with a key signature of one flat (B-flat), a guitar tablature staff below it, and a series of red Koozin-shapes (fingerings) at the bottom. The shapes are sequences of numbers representing fret positions, often with arrows indicating direction.

- Measure 7:** Treble staff shows a melody with triplets. The tablature starts with frets 7, 8, 11, 7, 8. Dynamics include *p* and *f*. Koozin-shapes: <112-->, <-11234>, <122-->, <-341-3>, <-1123>, <-112-->.
- Measure 8:** Treble staff shows a melody with triplets. The tablature starts with frets 7, 7, 6, 5, 8, 7. Dynamics include *p*. Koozin-shapes: <12113>, <-2241>, <-122-->, <-112-->, <12-3-->, <-3113>, <-4-11>, <-3113>.
- Measure 9:** Treble staff shows a melody with triplets. The tablature starts with frets 14, 14, 12, 12, 14, 9, 7, 5, 5. Dynamics include *mf*, *p*, *pp*, and *ppp*. Koozin-shapes: <-112-2>, <3122-->, <-112-->, <-113>, <122-0>, <03-021>.

Example 3.22: “Schatzerl klein” measures 7-13 with Koozin-shapes underneath a tablature staff.

The remainder of the song features almost exclusively consecutive s and r values for all trichords and tetrachords. In instances where this is not the case Webern has included the use of $r = 0$ for one of the pitches. The compact Koozin-shapes for measures seven through thirteen can be seen in the example below.

With regard to barre placement, measures nine and ten move from a barre at the twelfth fret, to the seventh, fifth, and finally second through the first half of measure ten. The final three measures are played in the first position of the guitar, precisely where the piece began in its first range-spanning instrumental introduction. The final seven measures of the “Schatzerl klein” guitar part are shown in example 3.22 above with Koozin-shapes below a tablature staff.

3.2.6 CLARINET PART AS GUITAR PART

In this section I will briefly describe the ways in which both the clarinet and voice parts in, “Schatzerl klein” are supported by the guitar. I will show these other parts as they could be performed as melodies on the instrument, which will uncover the ease with which a guitarist could perform these incredibly difficult melodic lines.

The clarinet line, which I will be discussing first, is being displayed here at the same written pitch as presented in Webern’s score, but as described above, will sound one octave lower on the guitar. Being that my

main argument lies with the overall interval structure of the piece, and that these have not been altered here, I believe my argument still stands. In the chapters that follow, discussing Opp. 25, and 30, I will be arranging the guitar part to perform other instruments at sounding pitch as I will in essence be converting those instruments back to the guitar. Here, however, I am simply using the clarinet and voice lines as models. Webern has of course, in his writing, relegated each instrument to its space in the ensemble with the clarinet and voice ably filling in the middle and high ranges of the ensemble.

The opening two measures of the clarinet would comfortably fit under the hand in the second position, spanning frets two through six. The widest leap, an ascending two-octaves plus a minor second from pc8 to pc9 at the end of measure two only spans one fret. When taken all together, the gesture at the end of measure two also features consecutive *r* values resulting in a <1---32> Koozin-shape. The first two measures of the clarinet part are shown in example 3.23 below.

The image shows a musical score for the clarinet part of 'Schatzerl klein' by Arnold Schoenberg, measures 1 and 2. The score is in 3/4 time and features a tempo marking 'Sehr ruhig (♩ = ca 54)' and dynamics 'rit.', 'tempo', 'p', and 'pp'. The guitar tablature shows fret numbers and includes annotations for fingering and Koozin-shapes: '<--1-33>' and '<1---32>'.

Example 3.23: “Schatzerl klein” clarinet part, measures 1-2 with guitar tablature.

We can see once again Webern's choice of voicing connecting the lines in a performative sense. Both gestures in measure three combined only span four frets, the second of which only using the eleventh fret plus a slur to $\{s = 4, r = 0\}$. In fact, values of $r = 0$ play a role throughout measures three and four. Beats two and three of measure three are similar in design to beats two and three of measure four, where notes on the same fret are used on different strings, and ultimately slurred to an open string resulting in their characteristically incredibly wide leaps. Measures three and four of the clarinet line appear in example 3.24.

Example 3.24: “Schatzerl klein” clarinet part, measures 3-4 with guitar tablature on bottom staff.

The pattern exemplified in these opening measures appears repeatedly, in measure eight where a re-articulated pc8 suddenly leaps to pc3 and octave and a perfect-fifth higher with both pitches found on the same fret. Measure nine's pitches are also found on either the eleventh fret or an open string. The complex, grace-note accented figures

of measure ten are all contained within compact Koozin-shapes encompassing only four frets.

Similar to measure two's wide ranging, but compact, Koozin-shape, is measure eleven's third beat. Even when considering the grace note the nearly double-octave figure spans only three frets, fitting inside a <2-1-31> Koozin-shape. The first half of the measure, residing higher up on the neck, only requires a span of two frets.

These characteristics, of course, are true of the final two measures of the clarinet line. The unilinear material of measure twelve can be performed under a barre at the twelfth fret for the first two beats. The final beat of that measure, with a dramatic ascending leap of two-octaves plus a major second, fit underneath a two-fret span. The same span is true of that high pc10 and the final two pc9 attacks in the final measure. The final measures of the "Schatzerl klein" clarinet part are shown below in example 3.25.

Example 3.25: "Schatzerl klein" clarinet part measures 8-13 with tablature.

As can be seen from my clarinet-cum-guitar analysis, Webern's choices of octave positioning, and overall melodic and rhythmic design, would also be readily performable on a guitar. As such, the clarinet line is able to come into being only as a result of having the guitar's support. This is not to say that the clarinet line is not idiomatic to the clarinet, rather I am asserting that Webern is able to create such a line that is ultimately crafted in unlike what one would expect from a melodic instrument such as the clarinet's accompanying melodic role in this piece. This clarinet line is only able to come into being through the design of the guitar's support.

3.2.7 VOICE PART AS GUITAR PART

In this section I will explore the voice part of Webern's Op. 18/i in exactly the same manner as the previous section's clarinet analysis. As I am using the voice-part in the same fashion as the clarinet part in the previous section, the guitar will be imagined as playing one octave below the written voice pitches. The main objective here is to show the ease with which Webern's melody would be to perform on the guitar from the standpoint of intervallic structure and octave positioning.

Throughout the voice part this considerably difficult, yodel-imitating, vocal melody will be shown to consist of compact Koozin-shapes, often with consecutive *r* and *s* values.

Measures two through four may be performed in their entirety between the sixth and eighth frets, discounting the $r = 0$ value at the end of measure three. If that note is performed at $\{s = 4, r = 5\}$ rather than $\{s = 3, r = 0\}$ then a barre at the fifth fret may be used from the voice entrance through the first beat of measure four. These first three measures of the voice part are shown in example 3.26.

(♩ = ca 54)

tempo
p

Schat-zerl klein, muß nit trau-rig sein, eh' das Jahr ver-geht, bist du

VI VII

<-3122> <12--1-> <314-1->

Example 3.26: “Schatzerl klein” voice part, measures 2-4 with Koozin-shapes below tablature staff.

Beat three of measure four through the second beat of measure eight may be performed entirely within the three-fret span of frets six through eight, discounting any pitches where $r = 0$. Measures four through eight are shown in example 3.27 below.

The majority of the remainder of the song sticks to a four-fret span despite the regular leaps of sevenths, ninths, and larger compound intervals. Many of these gestures include both consecutive s and r values, and can often be played in succession under the same barre. The

final measures of the voice part, with its guitar-tablature equivalent can be found in example 3.28 below.

rit. *p* *pp* *mf* *p* *mp*

4 Jahr vergeht, bist du mein. Eh' das Jahr ver-geht, grünt der

4 VII 3 VI 7

7 7 9 10 0 9 6 0 | 0 7 9 9 | 6 0 7 8 | 7 8 8 7 7 7 | 8 0 10 9

<314-1> <33-1-> <-1-0-2> <-21--3>

7 8 8 8 7 7 7 | 8 0 10 9

<-3133> <-1-11> <1-2-2->

Example 3.27: "Schatzerl klein" voice part, measures 4-8 with Koozin-shapes

rit. *p* *pp* *mp*

9 hin. Grünt der Ros - ma-rin, grünt der Myr-ten-strauß und der

9 VII 10 VIII 11

10 7 8 | 9 8 0 7 6 0 6 | 0 8 6 8 9 9 10 10

<-1-1-3>

12 rit. *p* *pp*

12 Na - gerl-stock blüht im Haus.

12 VI 13

7 7 6 7 0 | 4

Example 3.28: "Schatzerl klein" voice part measures 9-13 with tablature staff.

In the two previous sections I have discussed the ways in which both the clarinet and voice lines of “Schatzerl klein” display many properties of being “guitaristic.” The relatively compact Koozin-shapes, appearance of sequential, or near sequential r values, and range all point to this characteristic. Contributing further to this assertion is the great distance between adjacent pitches in the clarinet and voice parts; Webern is shown through the horizontal aspect of his music to rely heavily on the foundation provided by the guitar.

3.3 OP.18/II “ERLOSUNG (AUS ‘DES KNABEN WUNDERHORN’)”

3.3.1 TEXT ANALYSIS

The second song of Webern’s Op. 18 takes its text from Goethe. The text is divided into three sections, which Webern indicates on his score as being spoken by “Maria,” in measures one through five; “Christus,” from measure six to thirteen; and “Vater,” for the final five measures. The text is as follows:

Maria:

- 1a) Mein **Kind**,
- 1b) sieh **an** die **Brüste mein**,
- 1b) kein **Sünder laß** verloren **sein**.

Christus:

2c) **Mutter,**

2d) sieh **an** die **Wunden,**

2d) die **ich** für dein **Sünd** trag **alle Stunden.**

2c) **Vater,**

2b) laß **dir** die **Wunden mein,**

2b) ein **Opfer für** die **Sünde sein.**

Vater:

3e) **Sohn,**

3b) **lieber Sohn mein,**

3f) **alles was** du **begehrt,**

3b) **das soll sein.**

The English translation of the text is as follows:

Maria:

My child,

look upon my breast,

let no sinner be lost.

Christ:

Mother,
look upon the wounds,
I bear for your sins all the time.
Father,
take my wounds,
as a sacrifice for your sins.

Father:

Son,
my dear son,
all that you desire,
shall be.

As will be described in the next section, Webern uses the changes of perspective within the text as cues to introduce new row-forms.

The text here is noticeably in an arch form with Maria and Vater having three and four lines, respectively, while the middle Christus section contains six. This places the word “Vater” in the second verse at the mid-point of the text.

There does not appear to be a regular rhyme scheme or meter, although most of the lines are organized into iambs, though in varying lengths. The first verse is constructed completely from iambs, while only

the second, fifth, and sixth lines of the second verse, and none of the third verse contains iambs. The second verse is broken up with trochees, at those places where Christ names his addressee. Also within that verse there is a rhythmic modification of iambic meter with “für dein” both being unstressed syllables placed adjacent to one another.

Once again it should be noted: as with the previous song, Webern’s pervasive use of texts with iambic meter, and his thoughtful setting of those texts, link him to a greater folk tradition. As mentioned previously, according to Raymond Monelle iambs are indicative of pastoral settings, and that this song and the previous one feature the use of an iambic, or mostly iambic text, and a folk ensemble, points to them as Webern’s interpretations of a folk settings.

Opening with the Maria section, measures one through five, Webern remains true to the poetic stresses throughout the voice’s melody. Each of the stressed syllables fall on the strongest parts of the measure, with all unstressed syllables relegated to weaker parts of beats, shorter durations or both. These measures appear in example 3.29.

Maria *f*
 Mein Kind, sieh an die
 rit. - - -
 Brü - ste mein, *piu. f* kein Sün - der. laß ver - lo - ren sein.

Example 3.29: “Erlösung” voice part, measures 2-5 with poetic stress emphasized.

After a brief pause Webern begins the second verse, the “Christus” section, in measure six. “Mutter,” is placed on the weak second half of the first beat, though with the first syllable registrally accented. The first three syllables of the second line are also relatively weakened in Webern’s setting. The weakened setting of this verse’s beginning is all in the service of the greatly accented “Wunden.” This final word of the second verse may be the most important word of the entire text, as Christ’s wounds are serving to expiate all the sins of the world. Christ’s wounds are stressed durationally in measure seven, taking nearly the entire measure. The extended upward leap might be text painting used by Webern to describe Christ’s crying out in immense physical pain, while the dramatically rising gesture points towards these wounds as his ultimate path heavenward.

The third line of this section, appearing in measures eight through nine, accents “Sünd” rhythmically and durationally. Of the final four syllables of this line “al-“ is both durationally and registrally accented when compared to the measure previous, while “Stund-” is durationally accented, falling to its weakened second syllable. Measures six through nine are shown in example 3.30.

Example 3.30: “Erlösung” voice part measures 6-9 showing poetic stresses.

Once again, in the fifth line of this Christus section, Webern places significant emphasis on “Wunden,” with another extended ascending gesture. Completing this rhyming couplet, “Sünde sein” matches the setting of “Wunden mein” with its own extended ascending gesture.

The second verse then comes to a close in measure thirteen, separated from the final verse with a fermata. And, like the first verse, this one also features the use of a ritard, with Tempo I returning upon the start of the next verse. The latter half of the second verse is shown in example 3.31.

Example 3.31: “Erlösung” voice part measures 10-13 showing poetic stresses.

Example 3.32: “Erlösung” voice part measures 14-18 showing poetic stresses.

The final verse, shown in example 3.32 above spans the final five measures of the song. Once again Webern sets the text in agreement with regard to meter, much like in the first verse. Webern places special emphasis on “alles,” similar to the way in which “Wunden” was previously set. This is another example of Webern’s text painting, emphasizing in one sweeping gesture that “all you desire is to be.” The final word, “sein,” concludes the voice melody on a strong beat, alone, with the clarinet motive from the beginning entering one sixteenth-note later.

Throughout the second and third verses the clarinet melody noticeably changes its approach. Longer durations, such as those in measures eight, nine, and fifteen are reminiscent of those that express “Wunden” in the voice. Notably, they begin in measure eight, only after Christ utters the word “Wunden” himself. This stresses its importance, and the long-lasting consequences of Christ’s actions as they echo through the remainder of the text. Durationally these motives stand out

from the rest of the texture. The clarinet’s “wunden” motive does not adhere strictly to the ascending motion of the voice. Instead it first remains static, then descends, and finally ascends. The clarinet’s final ascending “wunden” motive in measure fifteen is set underneath an all-encompassing triplet, just as the original statement of the word in measure seven. That final statement supports God the Father as he says “Sohn mein,” connecting Christ, his only son, to the wounds that represent the sins of the world. This “wunden” gesture, or perhaps more accurately a leitmotive, as it appears in the clarinet part are shown in example 3.33 below.



Example 3.33: The clarinet’s “wunden” gesture as it appears in measures 8, 9, and 15

3.3.2 ROW COUNT ANALYSIS

There are several differences between the harmonic organizations of the first and second songs of Op. 18. Firstly, unlike the Op. 25 songs discussed in the next chapter, each song within Op. 18 is built from a different row. And with these different rows Webern finds different ways in which to manipulate the interval structure in order to create set-class

equivalency, while at the same time manipulating gestures such as a key clarinet gesture I will detail in this section. These factors reveal this song to be another evolutionary step for Webern. That he is thinking more about horizontal and vertical interval structure shows a greater focus on the overall form than was present even in the first song.

Comparing the overall texture of the first two songs it becomes immediately apparent that the counterpoint throughout creates a considerably richer fabric, with less overall silence and in general a great deal more pitch-class saturation across its eighteen measures. The concern of this section is tracking Webern's row usage, which includes considerably more iterations than the previous song.

The "Erlösung" row is in some ways significantly different than the "Schatzerl klein" row. We can see the matrix below in figure 3.11, and its adjacent and imbricated trichord content in figure 3.12, projecting a considerable number of set-class 3-3s. This set-class consistency plays an important role in this song's harmonic organization. Where "Schatzerl klein" projected set-class 3-5 throughout, "Erlösung" will be shown to project 3-3 harmony unwaveringly throughout. Lastly, Webern holds consistent the adjacent hexachords in this row, both belong to set-class 6-1. Set-class 6-1 is considered a first-order all-combinatorial set, a property to which Webern will return in Op. 30. Note the chromaticism present with even order numbers.

6	9	5	8	4	7	3	e	2	t	1	0
3	6	2	5	1	4	0	8	e	7	t	9
7	t	6	9	5	8	4	0	3	e	2	1
4	7	3	6	2	5	1	9	0	8	e	t
8	e	7	t	6	9	5	1	4	0	3	2
5	8	4	7	3	6	2	t	1	9	0	e
9	0	8	e	7	t	6	2	5	1	4	3
1	4	0	3	e	2	t	6	9	5	8	7
t	1	9	0	8	e	7	3	6	2	5	4
2	5	1	4	0	3	e	7	t	6	9	8
e	2	t	1	9	0	8	4	7	3	6	5
0	3	e	2	t	1	9	5	8	4	7	6

Figure 3.11: The Op.18/ii matrix with chromaticism of even order numbers, and order number 11, for P and R forms, highlighted.

An ascending flourish in the clarinet serves as an introduction in an anacrusis of one-half measure. Characterized by a descending leap of an octave-plus-major-sixth from pc6 to pc9 the next six pitches ascend in order through their closest octave positions. Webern uses this gesture as a motive throughout “Erlösung” in order to delineate its form. His manipulation of this motive also displays Webern’s growing confidence with his new-found twelve-tone language. The clarinet part at the beginning not only introduces it as an important motive, but also as a harmonic generator. Each pitch of the clarinet’s motive is tied to the two pitches either preceding it, following it, or both, to generate set-class 3-3. Webern uses the clarinet part to introduce the song, its far-reaching

range, divide each section, and uncover the harmonic plan all in a half-measure and seven pitches.

Order #	pcs	Prime Form
0	6 9 5	[014]
1	9 5 8	[014]
2	5 8 4	[014]
3	8 4 7	[014]
4	4 7 3	[014]
5	7 3 e	[048]
6	3 e 2	[014]
7	e 2 t	[014]
8	2 t 1	[014]
9	t 1 0	[013]
10	1 0 6	[016]
11	0 6 9	[036]

Figure 3.12: Imbricated trichords of Webern’s “Erlösung” row. The left column indicates order number of first pitch of trichord.

The first row exposure, P_6 , is completed on the second beat of the first full measure. The concluding tritone dyad effectively ties together the first row exposure to the second, a technique that recurs throughout the first verse, and is only broken for the silence between the “Maria” and “Christus” sections.

As the voice enters on order number **3** Webern continues the row in strict order with the help of precise rhythmic placement, and repeated pc11 attacks in the clarinet. The guitar picks up the next exposure which concludes on the voice’s “-ste” in measure three. Before the end of

measure three another complete exposure is revealed, once again bound to the next by a tritone dyad in the guitar.

The row appears twice more before the close of the voice's melody in the middle of measure five. Once again the clarinet part is alone in the texture as it cycles through order numbers **2** through **5**. Webern inverts the clarinet motive here, exposing the same final five pitches as the introduction, though descending in order. The 3-3 chain is broken as the clarinet's sixteenth notes end, with pc10 appearing in the guitar part, forming its own set-class 3-3 with a [t12] trichord. However, the final three pitches of the clarinet do belong to set-class 3-3. Order numbers for measures one through five are shown in example 3.34 below.

Where the song's first section presents the row in much the same fashion as "Schatzerl klein," the next section finds Webern using, for the first time, a different permutation of the same row.

Beginning in measure six a brief silence separates this section from the previous, and the guitar part begins with pc6, the beginning of the row, separated from any other pitch onset. Upon the voice's entrance on pc4, the guitar provides support in the form of an ic4 dyad. The trichord here does belong to set-class 3-3, but if we look at the original row we may notice that [347] belongs to order numbers **4** through **6**, with order numbers **1** through **3**, [589], appearing one eighth note later. Webern here introduces for the first time an inverted form of the row

following, the inverted form of the clarinet gesture that marked the end of the first section

The image shows a musical score for the piece "Erlösung". It features five staves: Gesang (Vocal), Es-Klarinette (E-flat Clarinet), Gitarre (Guitar), Klavier (Piano), and Geige (Violin). The tempo is marked "Sehr bewegt (♩ = ca 100)". The vocal line includes the lyrics: "Mein Kind, sieh an die Brü - ste mein, kein Sün - der laß ver - lo - ren sein." The Es-Klarinette part has a prominent seven-note ascending gesture in the first measure, which is mirrored in an inverted form later in the piece. Red lines and numbers are overlaid on the score to highlight specific measures and pitches across all staves.

Example 3.34: Order numbers for measures 1-5 of “Erlösung” are shown above each pitch. This section draws pitches exclusively from P_6 .

As a result of Webern’s row construction, ending a tritone from where it began, the inverted form of the row holds the same opening and closing pitches. This feature allows Webern to pivot, shifting pitch-class material without altering his phrase boundaries.

This clarinet motive as boundary and delineator of form is reminiscent of an earlier, pre-serial, work of Webern’s. In the composer’s Op. 5 “Fünf Sätze für Streichquartett,” fourth movement, an ascending seven-note gesture forms the boundaries between the first and second parts, and also closes the piece. In that movement the interval content of

the seven-note motive matches the opening and closing sections, separating it from the contrasting interval structure of the middle section. In Op. 5 the gesture is also similarly separated from the surrounding texture. Webern is shown in Op. 18 to be using his own “old forms in a new language.”

Another full row exposure occurs before the end of measure six, once again hinged at its beginning while hinged to a guitar simultaneity. Order number **11** appears as the first pitch of the voice line on the downbeat of measure seven. The next row is similarly linked to an ic6 dyad supporting the final syllable of “Wunden.” The order numbers for I₆ are shown in example 3.35 below.

The image shows a musical score for three staves: voice (top), piano (middle), and guitar (bottom). The music is in a key with two sharps (D major) and a 3/4 time signature. The tempo is marked 'tempo Christus' and the dynamics are 'f'. The lyrics are 'Mut - ter, sieh an die Win - den,'. Red numbers 0-11 are placed above notes to indicate pitch order. A red diagonal line is drawn across the score from the top left to the bottom right, passing through the number 11 in measure 7.

Example 3.35: Order numbers for measures 6-7 of “Erlösung” are shown above each pitch. This section draws pitches exclusively from I₆.

In measure eight the clarinet’s high pc6, due to the now increased pacing of row projections, serves as the first pitch of two adjacent iterations. Measure eight alone includes three iterations of the row.

Exposures of the row's inverted form continue through to the first beat of measure ten. Row counts for measures eight through ten are shown in example 3.36.

The image shows a musical score for three staves: vocal (top), piano I (middle), and piano II (bottom). The music is in 3/4 time and G major. Red vertical lines separate measures 8, 9, and 10. Above the vocal line, red numbers indicate row counts: 10, 2, 4, 7, 11, 6 for measure 8; 4, 11, 3, 7, 9, 9 for measure 9; and 6, 4, 5 for measure 10. The lyrics are: 'die ich für dein Sünd trag al le Stunden. Va - ter, laß dir die'. Performance markings include 'rit.', 'fp', and 'etwas breiter (♩ = ca. 80)'. The piano accompaniment features complex rhythmic patterns and dynamics like 'f' and 'ff'.

Example 3.36: Order numbers for measures 8-10 of “Erlösung” are shown above each pitch. This section draws pitches exclusively from I_6 until a shift to RI_6 begins in measure 10.

It is at this point that Webern begins to use the retrograde-inversion of the row. Upon completion of the word “Vater” the clarinet melody repeats pc0 from only an eighth-note after the guitar, marking the retrograde-inversion’s introduction. Webern is not indicating a new speaker, as these words are still spoken by Christ, but Christ is now switching from speaking to Maria, to speaking to God the Father. The final row exposure in measure ten reaches its end on the downbeat of measure eleven.

Through Webern’s deliberate switching of row-forms he is accentuating the arch form of the text mentioned by Sallmen. This row-

form change at measure ten highlights the second verse's division, essentially creating four verses from the three perspectives.

Measures eleven and thirteen are designed very similarly with the voice line's first pitch being held and as a result used for two row exposures. Also the same guitar trichord appears on both measures' downbeats, with measure thirteen's trichord being placed one octave lower than measure eleven's. On the downbeat of measure thirteen the pitch-classes of the voice and clarinet are inverted such that pc3, appearing in the clarinet part on the downbeat of measure eleven, appears in the voice while the opposite is true of pc7.

Having arrived at a new section beginning in measure fourteen, spoken from the perspective of God the Father, Webern once again manipulates the row. The final five measures of "Erlösung" use a retrograded version of the original row. Essentially the latter half of the song, measures ten through eighteen, is a retrograde of the first half. The divisions within those halves are also retrograded, which is more clearly explained in figure 3.13.

In the second measure of the "Vater" section Webern, with the clarinet's high pc0 foreshadows ever so slightly the compositional technique that will form the entire basis for the final song of this set. That pitch-class is held over an entire iteration of the row, presented mostly in the guitar, with only pc7 appearing in the voice. The same

pitch-class in the clarinet, continues to pc1 and then moves to the voice in measure 16. This is the largest overlap between rows in this song, and points toward the individual rows of the strictly horizontal “Ave Maria coelorum” which follows as the final song of the set. Example 3.37 below shows the row counts for “Erlösung,” measures eleven through eighteen. Figure 3.13 below shows the overall scheme of “Erlösung” with regard to row-forms used.

The image shows a musical score for the piece "Erlösung" from measures 11 to 18. The score is written for voice and piano. Red vertical lines are drawn through the score, indicating specific pitch classes. Above each note, a red number indicates the order number of that pitch class. The lyrics are: "Wun - den mein, ein Op - fer für die", "Vater piü zar", "Sün de sein, ruhig lie - ber Sohn mein,", "al - les was du be - gehrst, das soll sein." The score includes dynamic markings such as *mf*, *fp*, *mp*, *p*, *pp*, *f*, and *ff*. Performance instructions include *rit.* (ritardando), *tempo I* (♩ = ca 100), and *accel. tempo*. The score is identified as U.E. 8684.

Example 3.37: Order numbers for measures 11-18 of “Erlösung” are shown above each pitch. This section draws pitches from R_6 until measure 14 where the final measures draw from R_6 .

P₆	I₆	RI₆	R₆
mm. 1-5	mm. 6-9	mm. 10-13	mm. 14-18
"Maria"	"Christus" (to Maria)	"Christus" (to Vater)	"Vater"

Figure 3.13: Row scheme for "Erlösung" displaying row-form used, in what measures, and the sections of poetry they are used to represent.

3.3.3 HARMONIC ANALYSIS

Just as the row design and manipulations within this song show Webern taking a step further toward the full realization of his serial style, the harmonic foundation also changes from the first song. Where "Schatzerl klein" consisted of pervasive 3-5 trichords, "Erlösung" creates a fabric of almost exclusively set-class 3-3s.

Upon the entrance of the guitar in the first full measure Webern begins chaining 3-3 harmonies just after the clarinet completes its opening motive. The guitar's figures in this measure, though not projecting set-class 3-3 themselves, combine with the clarinet pitches above to form several 3-3 trichords.

The opening clarinet gesture contains a maximum of close voice-leading with each pitch forming a 3-3 trichord with the two ahead of it. This happens twice more when the same motive returns. Webern shows an increased ability to create closer voice-leading throughout. Much of this has to do with the increased pitch-density, but the "wunden" gesture

in both the voice and clarinet parts, as well as the clarinet's opening motive, also play a key role.

As with “Schatzerl klein” before it, the rhythmic design of this song also plays a large role in its harmonic structure. For example, the voice's repeated pc8 entrance matches up with the final pitch of the guitar's measure one gesture, as well as the downbeat of measure two, to complete two different 3-3 trichords. Of course my interest here lies in the relatively close voice-leading used by Webern to move from one 3-3 to another. The opening three measures of “Erlösung,” with each set-class 3-3 trichord highlighted, is shown in example 3.38.

The image shows a musical score for three parts: Gesang (Voice), Es-Klarinette (E-flat Clarinet), and Gitarre (Guitar). The tempo is marked "Sehr bewegt (♩ = ca 100)". The score includes lyrics: "Maria", "Mein Kind, siehst an die", and "più". The music is annotated with red boxes highlighting specific set-class 3-3 trichords. Green numbers (589, 478, 347, 2te, 12t, 569, 23e, 019, 478, 347, 23e, 569, 478, 458) are placed above or below the notes to identify these trichords. Dynamics such as *f*, *fp*, *p*, and *più* are also indicated.

Example 3.38: Set-class 3-3 as they appear in the introduction and measures 1-2.

The remainder of the first verse, measures three through five, continue to lay out a set-class 3-3 progression with the first trichords to appear in the guitar part occurring at the end of measure four, and throughout measure five. Only one of these trichords, the [016] in

measure five, belong to a set-class other than 3-3. That 3-5 trichord works with pc9 and pc10 in the voice part to create a series of 3-3 trichords. With this cooperation between the guitar and voice parts we find the progression shown below, with the progression leading up to it in measures three and four. Measure five with set-class 3-3 highlighted is shown in example 3.39 below, while its hyper-hexatonic representation is shown in figure 3.14.

The image shows a musical score for three staves. The top staff is the voice part with lyrics '- lo - ren sein'. The middle staff is the guitar part. The bottom staff is another instrument. Red boxes highlight specific chords in measure five across all three staves. Green arrows point to these boxes with labels: '7te' and '19t' point to the voice staff; '69t' and '589' point to the guitar staff; '458478' and '347' point to the bottom staff; '03e' points to the voice staff; '23e' and '019' point to the guitar staff; '2te' points to the bottom staff; and '12t' points to the guitar staff. Other markings include 'rit.', 'mf', 'sf', and 'p'.

Example 3.39: Measure five of Op. 18/ii with set-class 3-3 highlighted.

As the second verse begins, and Webern moves to an inverted form of the original row, the same 3-3 harmonic fabric is held in place. As the guitar's part becomes more reliant on simultaneity we can see that the tetrachord on the end of beat three in measure six, set-class 4-z29, does not contain a single 3-3 subset. Combined with the voice and clarinet

parts this tetrachord forms three 3-3 trichords, namely [e03], [e23], and [367].

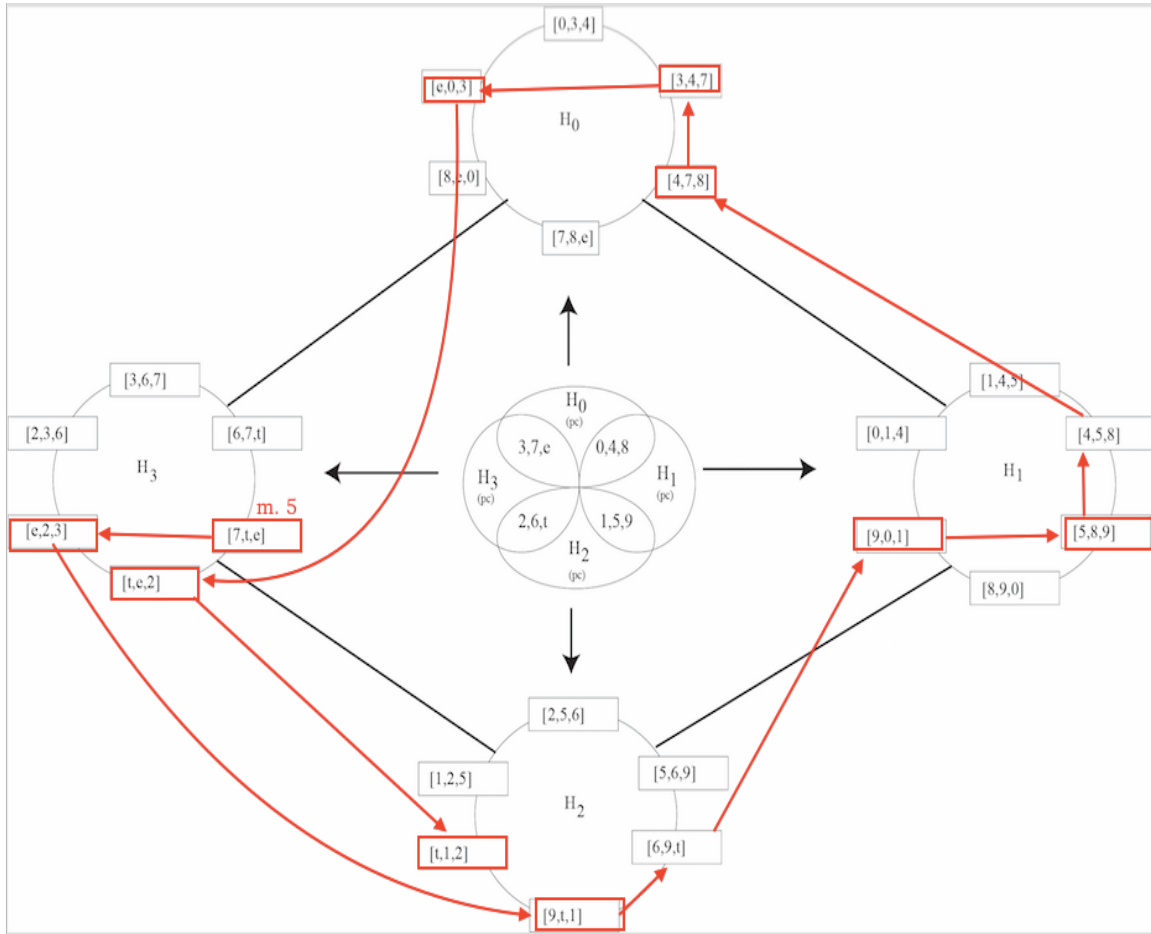


Figure 3.14: Op. 18/ii harmonic motion present in measure five.

The next three simultaneities in the guitar part, in measures six and seven, not only belong to the same set-class, but are the exact same trichord in the exact same voicing and octave position. These measures

appear in example 3.40.

The image shows a musical score for measures 6 and 7 of Op. 18/ii. It features three staves: a vocal line for 'Christus' (with lyrics 'Mutter, sieh an die Wunden'), a keyboard (Kl.) line, and a guitar (Gt.) line. The guitar part is heavily annotated with red boxes and arrows, highlighting specific trichords and their relationships. Green numbers (367, 589, 19t, 03e, 478, 19t 12t, 347, 19t, 367, 2te, 125, 03e, 458, 12t) are placed above and below the notes to identify these set classes. The annotations show how these trichords are repeated and related across the two measures.

Example 3.40: Op. 18/ii measures 6-7 with set-class 3-3 highlighted. Note the number of relationships based off of the guitar's tetrachord on beat three of measure six, and the [9t1] trichord repeated three times across these two measures.

Measures eight and nine close out the first half of the second verse, and therefore the section using the inverted form of the row. Another string of 3-3 trichords is found in these measures, either in the guitar alone or with the cooperation of the rest of the ensemble. Trichords in the guitar in these two measures include those belonging to set-class 3-3, and 3-4. Once again Webern repeats certain trichords exactly, as with the [9t1] trichords above. In measure eight, two identical [te2] chords are used in quick succession. In the next measure a [t12] trichord identical to one used in measure five is present. These simultaneities will be shown to have a great effect on the close voice-leading as relating to guitar performance in the next section of this chapter.

The sole tetrachord in these final measures of verse two's first half appears in measure eight. This [3478] tetrachord belonging to set-class 4-7 contains two 3-3 subsets in addition to two 3-4 subsets. Working in conjunction with the clarinet and voice parts it helps form trichords [145], [347], [478], and [034]. Measures eight and nine can be seen below in example 3.41 with all set-class 3-3s highlighted. The hyper-hexatonic graphic representations are shown in figure 3.15 below.

Once again, in measure ten, Webern uses the same [t12] trichord in the last beat of the measure as has been used several times prior. This trichord will appear three more times before the conclusion of the song. These [t12] trichords are shown in example 3.42. This presents an early instance of Webern using what I will refer to in the next chapter when discussing Op. 25, as harmonic touchstones. These simultaneities may serve as harmonic goals that anchor a phrase with their sharing the exact same pitch material at the same octave in the same voicing.

In measure eleven the guitar uses a 3-5 trichord in the form of [6e0], that forms 3-3 simultaneities with the surrounding melodic lines as we have seen consistently throughout this song. This same trichord, in the same voicing and octave position, appears later in the second verse in measure thirteen. Other 3-5 trichords appear later in measures thirteen, sixteen, and seventeen. These are shown in example 3.43.

Example 3.41 shows the musical score for Op. 18/ii measures 8-9. The score includes parts for Klavier (Kl.), Gitarre (Gt.), and Singstimme (S). The lyrics are: "die ich für kein Sünd trag al - le Stun - den". The guitar part features several instances of the set-class 3-3, which are highlighted with red boxes and labeled with green text: "2te", "367458", "12t", "034", "145", "19t", "019", "478", "589", "19t", "03e", "347", "19t", "2te", "03e", "589", "367", "589", "2te", "478", "347", "2te", "12t", "03e", "589". The score also includes dynamic markings such as *fp* and *f*.

Example 3.41: Op. 18/ii measures 8-9 with set-class 3-3 highlighted.

Example 3.42 shows the musical score for Op. 18/ii measures 10, 14-15, and 16. The score includes parts for Singstimme (S) and Gitarre (Gt.). The lyrics are: "Va - ter, laß dir die Sohn, lie - ber Sohn mein, al - les was du be -". The guitar part features several instances of the set-class [t12], which are highlighted with red boxes. The score also includes dynamic markings such as *ff*, *f*, *p*, *pp*, and *mf*. The tempo markings are "etwas breiter (♩ = ca 80)" and "tempo I (♩ = ca 100)".

Example 3.42: Appearances of [t12] highlighted in the guitar part of Op. 18/ii measures 10 (top left), 14-15 (top right), and 16 (bottom).

Example 3.43: [016] trichords highlighted in measures 11 (top left), 13 (top middle), 16 (top right), and 17 (bottom).

As the retrograded form of the row begins in the third verse Webern's harmonic texture remains consistent. We see in measures fourteen through seventeen several more instances of previous successions of trichords in the guitar, along with a continuous chain of 3-3 trichords created amongst the entire ensemble.

We find trichordal analysis of measures fourteen and fifteen in example 3.44 and figure 3.16 below, while the concluding measures are found in example 3.45, and graphed in figures 3.17 and 3.18.

In this piece Webern manages to remain in complete control of his harmonic language, all the while experimenting with the horizontal

aspect of his music. The rhythmic organization and formal design work together in creating a consistent harmonic foundation while actively serving to interpret the text.

Example 3.44 shows measures 14-15 of Op. 18/ii. The score includes vocal lines for 'Vater, Sohn, lieber Sohn, mein' and piano accompaniment. Red boxes highlight specific set-class 3-3 structures. Green labels indicate pitch classes: 089, 589, 034, 478, 014, 12t, 19t, 458, 016*, 019, 589, 2te, 7te, 347, 569, 12t, 2te, 23e, tempo, 589, 12t, 347, 03e, 569.

Example 3.44: Measures 14-15 of Op. 18/ii with set-class 3-3 highlighted.

Example 3.45 shows measures 16-18 of Op. 18/ii. The score includes piano accompaniment for Klavier (Kl.) and Guitar (Gt.). Red boxes highlight specific set-class 3-3 structures. Green labels indicate pitch classes: 12t (pc1 in Kl), 478, 69t, 19t, 69t, 23e, 03e, 347, 458, 569, 589, 458, 016, 23e, 478, 569, 23e, 12t, 2te, 589, 12t.

Example 3.45: Measures 16-18 of Op. 18/ii with set-class 3-3 highlighted.

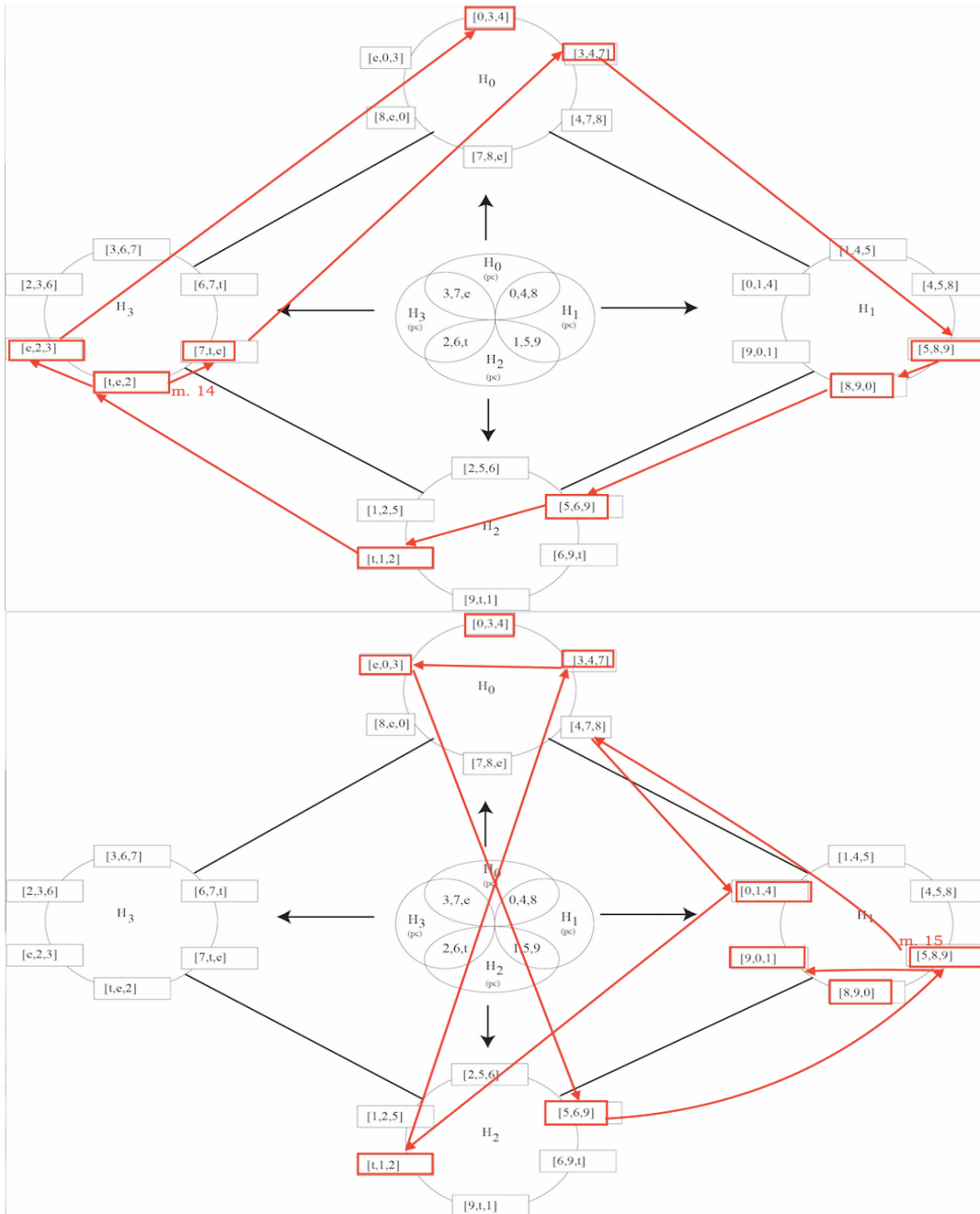


Figure 3.16: Op. 18/ii measure 14 (top) and 15 (bottom) with harmonies mapped onto the 3-3 hyper-hexatonic system.

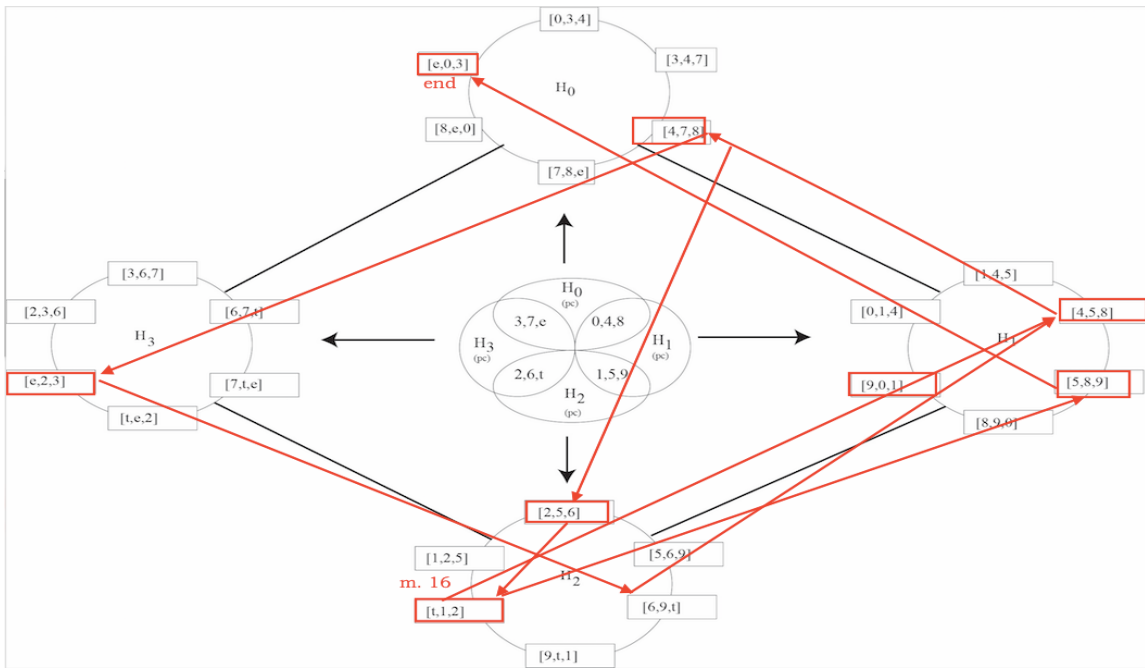


Figure 3.17: Op. 18/ii measure 16 with harmonies mapped onto the 3-3 hyper-hexatonic system.

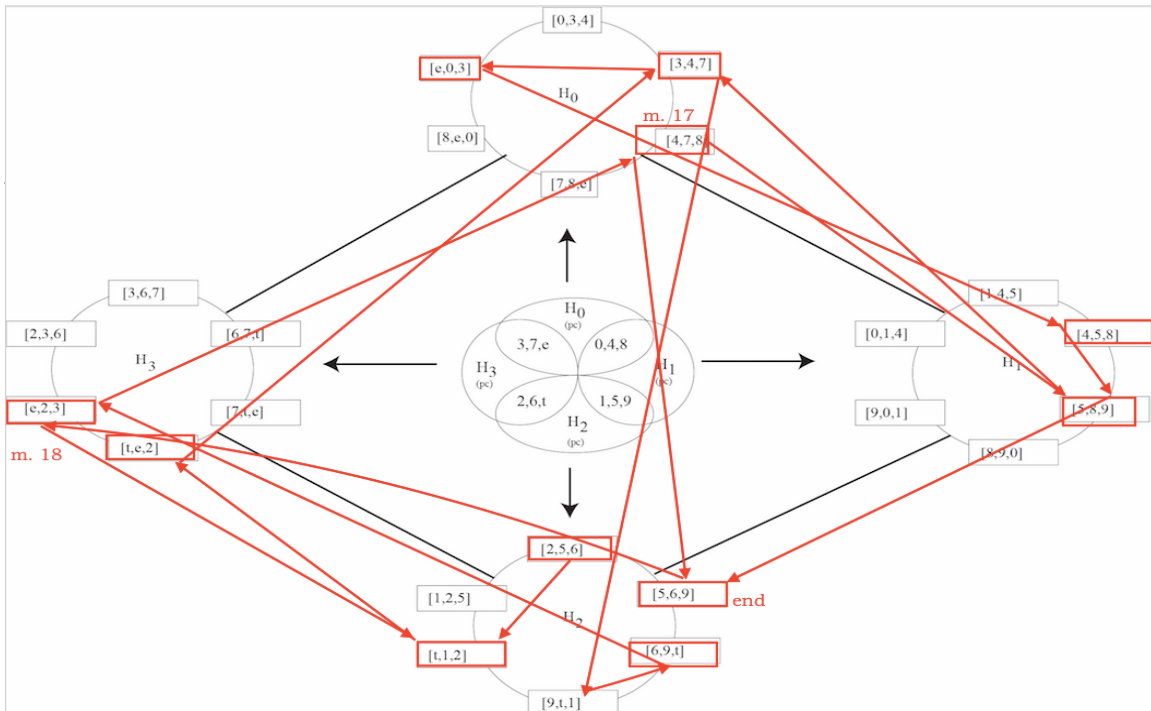


Figure 3.18: Op. 18/ii measures 17-18 with harmonies mapped onto the 3-3 hyper-hexatonic system.

Although these graphs do not reveal any extended, recurring progressions, what we do find are concentrations of particular simultaneities. Take for example [t12] or [347] in figures 3.16 and 3.17 above. In those figures we can see those simultaneities as forming a temporary hub, or touchstone from which surrounding harmonies are transformed.

3.3.4 GUITAR PART

As mentioned in the previous section, throughout the guitar part of “Erlösung” Webern repeatedly makes use of certain trichords in identical voicings, at identical octave positions throughout the work. These trichords become points of reference for the performer. Naturally, these repeated trichords will have identical Koozin-shapes, and will be shown as perfectly adaptable to Webern’s emerging style. Often times, as was the case with the previous song, guitar simultaneities will be shown to have either consecutive *s* values, *r* values, or both. Webern’s guitar part also displays extensive knowledge of the guitar’s design through consistent voicings that make extensive use of open strings. Unlike the first song of this set, Webern makes more extensive use of the full registral capabilities of the instrument throughout “Erlösung.”

The first measure makes use of two wide leaps that only require a fret-span of three and four frets within each beat, respectively. While the

quarter-note-triplet figure of measure two requires a slightly larger reach, each note may be performed on a dedicated string, while the second half of the measure remains in the same position with a fret-span of only three frets. Measures one and two of the guitar part with tablature and Koozin-shapes are shown in example 3.46.

The image shows two staves of music. The top staff is a standard musical staff with a treble clef, showing two measures. The first measure contains a quarter-note triplet of notes on strings 4, 3, and 2, followed by a quarter note on string 2. The second measure contains a quarter note on string 2, followed by a quarter-note triplet of notes on strings 2, 3, and 4. Above the first measure, a red dashed line spans from the 7th fret to the 1st fret, labeled 'VII' and 'I'. Above the second measure, a red 'VI' is above the final note. Blue brackets with the number '3' indicate triplets. The bottom staff is a guitar tablature with six lines. Fret numbers are written on the lines: 7, 6, 4, 3, 1, 2, 7, 8, 10, 7, 7, 9, 8, 8. Red Koozin-shapes are written below the tablature: <31-2--> and <-34--1> under the first measure, and <-314--> and <-2-31--><-1-21-> under the second measure. Blue brackets with the number '3' are also present under the second measure.

Example 3.46: Op. 18/ii guitar part, measures 1-2 with tablature and Koozin-shapes.

Dyads of a major-seventh are separated by single pitches throughout measure three, holding to spans of no more than two frets. The next fretting-hand shift that occurs is aided by an eighth-note rest in measure four. The first trichord of the piece appears within this measure as well. Set-class 3-3 [458] could be played with a <—31-0> Koozin-shape, but the performer would be in better position for the trichord following in measure five if they used a <-42-1-> Koozin-shape. The latter Koozin-shape is similar in its +1,+2 fretting position to that which may

be used for the [e23] trichord of the same set-class, a <-4-21->.⁹⁷ The only difference between these two Koozin-shapes being the finger placement for the middle note. The remaining trichords of measure five are formed from consecutive *s* values with compact voicings requiring spans of no more than a single fret. This is shown in example 3.47.

Example 3.47: Op. 18/ii guitar part, measures 3-5 with tablature and Koozin-shapes.

Opening the second verse in measure six the tetrachord arpeggiation must be grounded at the second fret due to pc6 requiring placement at $\{s = 6, r = 2\}$. Despite its two-octave and a major second span, the Koozin-shape only spans four frets. The simultaneities of this measure are equally, if not more, compact. Both the 4-z29 [e026] tetrachord, as well as the 3-3 [9t1] trichord feature consecutive *s* values, and spans of only two and three frets. This is also true of the 3-3 trichords in measure seven, as they are exact repeats of the [9t1] trichord in measure six. The remainder of the pitches in measure seven also span

⁹⁷ By +1, +2 I am referring to the frets added from the highest sounding string to the lowest. In this case the *r* value of $s = 3$ is 1 more than $s = 2$, while the *r* value of $s = 5$ is 2 more than the *r* value of $s = 3$. The confusion lies in Koozin-shapes reading lowest sounding to highest from left to right, while the same represents a decrease in *s* values.

only a fret, and appear on strings not used for simultaneities. Measures six and seven are shown in example 3.48 below.

Example 3.48: Op. 18/ii guitar part, measures 6-7 with tablature and Koozin-shapes.

Save for the first two pitches of measure eight all other pitches may be played on the second through fourth frets as well as open strings. Each simultaneity in this measure features consecutive s values grounded on the second fret, except for the first which is grounded on the third. Measure nine is very similar in its design. Note the contrary motion between the clarinet’s “wunden” gesture and the rising alternating eighth-notes and trichords in measure nine. This is shown in example 3.49 below.

Example 3.49: Op. 18/ii guitar part, measures 8-9 with tablature and Koozin-shapes.

Dyads of interval-class 1, voiced as major sevenths, in measures ten and eleven each take advantage of open strings. These may also be performed under a barre with a span of only two frets maximum necessary. Horizontal motion of a perfect fourth, as in the second half of the first beat of measure eleven, involves simple motion down one string without changing frets.

Measures twelve and thirteen once again continue to make use of trichords with at least one $\{r = 0\}$, or consecutive s values, or both. Each trichord of measure twelve also share $\{s = 3, 4, 5\}$ played in the first position. Measures eleven through thirteen are shown in example 3.50.

The image shows a musical score for guitar, measures 11-13. It consists of three systems. The first system covers measures 11 and 12. Measure 11 has a treble clef, a key signature of two sharps (F# and C#), and a 7/8 time signature. It features a complex rhythmic pattern with triplets and slurs. The tablature below shows fret numbers: 7, 5, 0, 0, 17, 18, 0, 2. Measure 12 has a 6/8 time signature and a key signature of one sharp (F#). Its tablature shows: 2, 4, 4, 15, 12, 8, 10, 0. The second system covers measure 13. The treble clef and key signature remain. The tablature shows: 6, 6, 1, 0, 0, 1. Below the tablature are Koozin-shapes: <-122-4>, <-32-01>, <-21-0>, and <-44-1>. The first system also includes Koozin-shapes: <---133>, <-102-4>, <-102--><-031-->, and <--1-30>. Blue brackets with the number '3' indicate triplets in the notation. Red arrows and brackets indicate the Koozin-shapes.

Example 3.50: Op. 18/ii guitar part, measures 11-13 with tablature and Koozin-shapes.

The third verse continues to follow the same pattern as described: compact Koozin-shapes, usage of consecutive s values, r values of 0, and

measures requiring spans of relatively few frets. Noticeably different from the guitar part of “Schatzerl klein” is that the “Erlösung” guitar part does not enable the performer to make as much use of barres throughout. Instead, the vast majority of simultaneities within “Erlösung” are played in lower positions on the neck, as I have shown here. The final four measures of the “Erlösung” guitar part are shown in example 3.51 below.

The image displays a musical score for guitar, specifically measures 14 through 18 of Op. 18/ii. It consists of two systems. The first system covers measures 14, 15, and 16. The second system covers measures 17 and 18. Each system includes a standard musical staff with a treble clef and a guitar tablature staff below it. The tablature staff uses numbers 0-7 to represent frets. Red text below the strings indicates Koozin-shapes (fingerings), such as <--103->, <--42-1>, <--021->, <-031->, <-021->, <311-3->, <--42-1>, <021--->, <---123>, and <--021->. Blue brackets with the number '3' indicate triplets. A red dashed line labeled 'I' is positioned above measure 16. A green 'f' dynamic marking is located in measure 18.

Example 3.51: Op. 18/ii guitar part, measures 14-18 with tablature and Koozin-shapes.

3.3.5 CLARINET PART AS GUITAR PART

In this section I will discuss the clarinet part of “Erlösung” as if it were to be read by the guitar. Like the similar analysis of “Schatzerl klein” I will uncover here the guitar’s appropriateness as harmonic

support by arguing that the clarinet line's construction displays a reliance on the guitar part's own voicings and abilities.

The clarinet's opening sixteenth-note motive, with its characteristic dramatic descending leap is made possible with an open string at $\{s = 5, r = 0\}$, while $pc4$ at the end of the gesture allows for a transition to the guitar's upper reaches with its own $\{r = 0\}$. This is shown in example 3.52 below.

The image shows a musical score for guitar and clarinet. The top staff is a treble clef with a 7/8 time signature. The music is marked "Sehr bewegt (♩ = ca 100)". The first measure contains a sixteenth-note motive with dynamic markings *sf*, *p*, and *sf*. The bottom staff is guitar tablature with strings T, A, and B labeled. The fret numbers are 2, 0, 11 on the top line; 7, 0, 3, 1, 12 on the middle line; and 0, 3, 1, 12 on the bottom line.

Example 3.52: Op. 18/ii opening clarinet motive with guitar tablature notation.

Many of the clarinet's most sweeping gestures would be easily performed on the guitar in compact Koozin-shapes similar to those that permeate the guitar part itself. For example in measure three, shown below, the clarinet's gesture descends sharply nearly two octaves, spaced in such a way to only span three frets. Webern's consecutive leaps of a major seventh, a perfect fourth, and an augmented fourth, are all easily grasped from the first position. Measures one through three are shown in

example 3.53 below.

The image shows a musical score for Example 3.53. The top staff is a treble clef with a key signature of one flat and a 7/8 time signature. It contains three measures of music. The bottom staff is a guitar tablature with fret numbers: 6, 2, 0, 0, 0, 0, 8, 4, 4, 2, 2, 1. Dynamic markings in green are placed below the notes: *fp* < *fp* < *p* < *sf* *fp* < *f*. A blue bracket labeled '3' is above the final measure. A red bracket labeled '<-122-4>' is below the guitar tablature.

Example 3.53: Op. 18/ii clarinet part measures 1-3 with guitar tablature notation.

The image shows a musical score for Example 3.54. The top staff is a treble clef with a key signature of one flat and a 7/8 time signature. It contains two measures of music. The bottom staff is a guitar tablature with fret numbers: 12, 10, 10, 13, 13, 0, 1, 2. Dynamic markings in green are placed below the notes: *f*, *sf*, and *p*. A red dashed line with an 'X' above it spans the first measure of the guitar tablature. A red bracket labeled '<2-2311>' is below the guitar tablature.

Example 3.54: Op. 18/ii clarinet part measures 4-5 with guitar tablature notation.

Measure four may make use of a barre at the tenth fret, arpeggiating a <2-2311> Koozin-shape. Immediately following, in measure five, is the inverted form of the opening clarinet motive which is similarly aided in its performability through two open strings. Both

{s = 1, r = 0} and {s = 3, r = 0} are placed in the middle of the gesture, allowing for a shift from the thirteenth fret, down to first position.

Measures four and five are shown in example 3.54 above.

The majority of Webern's beat-to-beat pitch material throughout the remainder of the song may each be easily played from a single, compact, Koozin-shape. An exception is found in the last triplet figure of measure twelve. There, the particular pc8 needed is only found at {s = 6, r = 4}, while the lowest possible r value for Webern's notated pc2 is found at {s = 1, r = 10}. Therefore, this gesture requires a modest shift either between the first and second pitches of the gesture, or the second and third pitches. These measures appear in example 3.55 below.

The image shows a musical score for the clarinet part of Op. 18/ii, measures 6-12. It includes two systems of music. The first system (measures 6-8) and the second system (measures 9-12) each consist of a musical staff with notes and dynamics, and a guitar tablature staff with fret numbers and triplet markings. Red and blue annotations highlight specific pitch classes and fret positions.

Example 3.55: Op. 18/ii clarinet part measures 6-12 with guitar tablature notation.

On the occasions where the clarinet reaches toward the top of its range, that pitch is often worked up to gradually through a widely

ascending gesture. Upon reaching its highest note the clarinet often languishes on that note, which is then followed by a considerably shorter “release” note. This may be seen in measures nine and ten in example 3.55, and measures fifteen, and sixteen in example 3.56 below.

The image shows two staves of music. The top staff is a standard musical notation for a clarinet part, featuring a melodic line with slurs and dynamic markings: *pp*, *p*, and *fp*. The bottom staff is a guitar tablature notation corresponding to the same measures, with fret numbers (14, 13, 11, 15, 15, 17, 17, 16, 0, 16) and string numbers (0, 7, 11) indicated. Red annotations below the tablature show string sequences: <-1034>, <-1-55>, and <-1012>. Blue brackets above the tablature indicate triplets of notes.

Example 3.56: Op. 18/ii clarinet part measures 15-16 with guitar tablature notation.

The closing clarinet gesture, just as the two before it, makes use of two open strings, the first of which allows for a shift down to the first position. This closing gesture is shown in example 3.57.

The image shows two staves of music. The top staff is a standard musical notation for a clarinet part, featuring a closing gesture with slurs and dynamic markings: *f* and *sff*. The bottom staff is a guitar tablature notation for the same measure, with fret numbers (9, 8, 0, 1, 3, 0, 2) and string numbers (7, 0) indicated. A red annotation below the tablature shows the string sequence <-031-2>.

Example 3.57: Op. 18/ii clarinet part measure 18 closing gesture with guitar tablature notation.

3.3.6 VOICE PART AS GUITAR PART

In this brief examination of the voice line for “Erlösung” we will see Webern continuing to write his melodic material as if the line were for guitar. The voice no longer seeks to mimic yodeling as in the first song, instead Webern writes the voice part here in a manner that expresses the poetic meaning of this particular text, while remaining indebted to the guitar’s mechanics and harmonic support.

Though there are a great many leaps throughout the voice part of “Erlösung,” the line is written in a manner which lends to it a legato character. Webern indicates this quality with an increased use of slurs between pitches, and longer durations throughout.

The widest leaps, as described before, are present in the “wunden” motive, appearing in measures seven, and eleven, with the “alle Stunden” addendum in measure nine. These wide, legato gestures are shown below as performed on the guitar. Measure seven uses a compact Koozin-shape of <-3-1-3>, while measure eleven fits under a barre at the third fret in an even more compact <1121—> shape. This second statement of “wunden” consists of a string of mostly perfect fourths, with the exception of the opening ascending major seventh. Due to this construction each note exists on the third fret, except for that major seventh, which places pc6 on the fourth fret. This gesture is highly idiomatic to the guitar. Similarly guitaristic, though with different

interval content, is the “alle Stunden” motive of measure nine. The first statement of “wunden” and “alle Stunden” are shown in example 3.58.

Example 3.58: Op. 18/ii voice part showing “wunden” in measure seven, and “alle Stunden” in measure nine, with guitar tablature notation.

Examples of some of the other wide leaps required for executing the voice part are found in measures four, which fits inside a <14-43-> Koozin-shape; the entirety of measure eight, spanning only frets six through eight; measures twelve through thirteen may all remain within the first position with measure thirteen held under a barre at the first fret and a simple <—1-31> shape. These measures appear in example 3.59 below.

Sün - der laß ver ·

die ich für dein Sünd trag

Wun - den mein, — ein Op - fer für die Sün - de sein.

<14-43>

<3-1132>

<2-1-3>

rit.

<1-21--> <-111--> <-2--12>

Example 3.59: Op. 18/ii measures 4 (top left), 8 (top right), and 11-13 (bottom).

Just as we have seen with “Schatzerl klein,” “Erlösung” provides another example of the guitar’s undeniable influence on Webern’s vocal and instrumental writing.

3.4 OP.18/III “AVE REGINA COELORUM”

3.4.1 TEXT ANALYSIS

The text for this final song of Op. 18 is taken from one of the four Marian antiphons. While the precise date, and author, of the antiphon is unknown, it is believed to date as far back as the twelfth-century. “Ave Regina Coelorum” consists of two stanzas of four lines each, composed entirely in Latin. That text is found below:

1a) Ave, Regina Caelorum,

1a) Ave, Domina Angelorum:

1b) Salve, radix, salve, porta

1b) Ex qua mundo lux est orta:

2c) Gaude, Virgo gloriosa,

2c) Super omnes speciosa,

2b) Vale, o valde decora,

2b) Et pro nobis Christum exora.

A common translation of the Latin text is as follows:

Hail, O Queen of Heaven enthroned.

Hail, by angels mistress owned.

Root of Jesse, Gate of Morn

Whence the world's true light was born:

Glorious Virgin, Joy to thee,

Loveliest whom in heaven they see;

Fairest thou, where all are fair,

Plead with Christ our souls to spare.

With the conclusion of this song Webern closes Op. 18 on a text from a third unique source. This isn't to say that his chosen texts do not contain links between them. All of Webern's later works which include text take that text from poet and personal friend Hildegard Jone.⁹⁸ One of the main unifiers of those works, therefore, is quite obvious. With Op. 18 the thread holding these texts together resides in their content.

Webern is specifically using well-known texts, discussing universal, and therefore personally and culturally unifying, topics. "Schatzerl klein," as I mentioned, is universally accepted as a folk-text with a source that is dubious at best. "Erlösung" is taken from "Des Knaben Wunderhorn," a well known collection of anonymous folk poems. Using the "Erlösung" text also connects Webern to one of his

⁹⁸ By "later works" I am speaking about the texted works beyond Op. 19.

compositional idols, fellow Austrian Gustav Mahler, who also used texts from the same collection in one of his orchestral song cycles.

This final text moves away from folk-oriented universality, into the realm of sacred universality. “Erlösung” serves as a thematic bridge between the first and last songs; it has the folk element derived from the anonymous poetry, as well as the sacred element of text being presented from the perspectives of The Virgin Mary, Christ, and God the Father.

Webern’s settings for the first two songs are also similar. Both songs adhere closely to his method of having each instrument take part in the row’s pitch exposure. Stylistically they had similarities as well, with the guitar underscoring the upper melodic lines with simultaneities of up to five pitches. Again, the second song may be seen as forming a stylistic bridge, connecting the simpler single-row repetition of “Schatzerl klein” to the linear, and horizontally considered, individual rows of the third song, with its exploration of row permutations.

“Ave Regina coelorum” is set in a horizontal manner, which contrasts with the construction of the two previous songs of the opus. Joining the ranks of Dufay, Lassus, Gesualdo, and many others before him, Webern’s setting appears to, once again, set his new language within an old form. The form here happens to be less of a form and more of a stylistic appropriation of the horizontally considered imitative counterpoint of the sixteenth-century. Perhaps it would be possible to

make another connection between Webern’s twelve-tone setting of “Ave Maria coelorum” and that of Gesualdo, whose own music was shocking in its time for its abundant chromaticism.

Differences in rhythmic organization exist between this final song and the two before it. “Ave Maria coelorum” is the only song in this opus set in a compound meter, and is also the only song to feature more than one time signature, alternating between 3/8 and 2/8. Another notable difference is the rhythmic values used throughout. Where the first two, more folk-influenced, songs are set using relatively easier to read eighth-note, and quarter-note values, “Ave Maria coelorum” is set with mostly sixteenths, and thirty-seconds. Finally, with a tempo of eighth-note equals fifty-six, this song has the slowest tempo of the set. The tempo here is nearly half that of “Schatzerl klein,” and nearly a quarter the tempo of “Erlösung.” Op. 18, therefore, forms an overall slow-fast-slow tempo scheme. The tempo scheme for Op. 18 is shown in figure 3.19 below.

“Schatzerl klein”	“Erlösung”	“Ave Regina coelorum”
Sehr ruhig: quarter-note = ca. 54	Sehr bewegt: quarter-note = ca. 100	Langsam: eighth-note = ca. 56

Figure 3.19: Tempo scheme for Op. 18.

3.4.2 ROW COUNT ANALYSIS

As mentioned in the previous section, Webern's "Ave Maria coelorum" marks his first time experimenting with multiple row-forms simultaneously. Rows are no longer exposed in an array as they had been in "Schatzerl klein" and "Erlösung," which as you'll remember involved the entire ensemble simultaneously running through a single row-form. Instead, in Op. 18's final song, each instrument of the ensemble presents its own row, furthering the piece's concept as a horizontally conceived entity. Unlike "Erlösung," "Ave Maria coelorum" makes use of inverted, and retrograde-inverted versions, of rows other than those related to P_0 .⁹⁹

0	e	8	7	6	t	9	3	2	1	5	4
1	0	9	8	7	e	t	4	3	2	6	5
4	3	0	e	t	2	1	7	6	5	9	8
5	4	1	0	e	3	2	8	7	6	t	9
6	5	2	1	0	4	3	9	8	7	e	t
2	1	t	9	8	0	e	5	4	3	7	6
3	2	e	t	9	1	0	6	5	4	8	7
9	8	5	4	3	7	6	0	e	t	2	1
t	9	6	5	4	8	7	1	0	e	3	2
e	t	7	6	5	9	8	2	1	0	4	3
7	6	3	2	1	5	4	t	9	8	0	e
8	7	4	3	2	6	5	e	t	9	1	0

Figure 3.20: The Op. 18/iii matrix.

⁹⁹ By this I mean that in "Erlösung" Webern essentially used the top, and left-most rows of the matrix, whereas in "Erlösung" Webern uses I_8 and RI_8 , which are based from order number 2 of P_0 .

Once again the guitar’s part, like in “Schatzerl klein,” begins with pc0. The guitar, therefore, begins with row-form P₀, giving us the matrix shown in figure 3.20 above.

Analyzing that row we with regard to interval content we find that Webern is, like in “Schatzerl klein,” constructing a row with two mismatched, z-related, hexachords: 6-z₄ and 6-z₃₇. An increased usage of adjacent half-steps is also present within the row, with the row following a pattern of alternating dyads and triads of successive half-steps.

Discrete trichords within the row reveals three set-class 3-3 trichords, and a single trichord belonging to set-class 3-5 as the penultimate discrete trichord. Both imbricated and discrete trichord content is shown in figure 3.21.

Order #	pcs	Prime Form
0	0 e 8	[014]
1	e 8 7	[014]
2	8 7 6	[012]
3	7 6 t	[014]
4	6 t 9	[014]
5	t 9 3	[016]
6	9 3 2	[016]
7	3 2 1	[012]
8	2 1 5	[014]
9	1 5 4	[014]
10	5 4 0	[015]
11	4 0 e	[015]

Figure 3.21: Imbricated trichords based off each consecutive order-number of the Op. 18/iii row.

This first row exposure moves through the first three measures, P_0 opening toward the higher end of the guitar's range, and closing with its lowest pitch. Opening the work, however, is the clarinet beginning the equivalent of three sixteenth-notes before the guitar's entrance. Webern begins the clarinet line with row-form RI_8 , which continues through the fourth measure. The guitar serves as the clarinet's only counterpoint. Immediately upon the guitar's completion of P_0 , it pivots on order number **11** of that row to begin RI_8 while under the clarinet's extended pc_9 . Underneath the clarinet's order numbers **1** and **0** the guitar runs through order numbers **11** through **3** of the same row. While the clarinet rests before its next entrance the guitar completes RI_8 just as the voice enters. This introduction, it is worth noting, is the longest of any within Op. 18. These measures are shown in example 3.60 below.

Example 3.60: Op. 18/iii introduction, measures 1-3 with rows and order numbers shown.

The image shows a musical score for measures 4-7 of Op. 18/iii. It includes parts for Voice, Clarinet (Kl.), and Guitar (Gt.). The score is annotated with red numbers and letters: R0 (row form), P0 (pitch class set), and RI8 (row-inversion). The lyrics are: "ve, Re-gi-na coe-lo-rum, a-ve, Do-mi-lei-cha An-ge". The tempo is marked "rit. - sehr ruhig" and "tempo". The score includes dynamic markings like "pp" and "p".

Example 3.61: Op. 18/iii measures 4-7 with rows and order numbers shown.

The voice's entrance occurs as a sixteenth-note anacrusis to measure five, beginning with row-form R_0 . Once again the clarinet enters the equivalent of three sixteenth-notes before the guitar. Row-form P_0 is this time played by the clarinet underneath the voice through measure five to nearly the end of measure seven at precisely the same time as the voice begins the word "Angelorum." Back in measure five the guitar, despite appearing to begin on pc_0 , is actually a continuation of I_8 which began with the guitar's dyad at the beginning of the measure. Where the guitar pivots on pc_4 at the end of measure three to move between P_0 and RI_8 , now Webern pivots on pcs_8 , and 9 to move from RI_8 to I_8 . Using a dyad in order to pivot provides Webern with more flexibility, as pitch

order in this case does not play a factor. The guitar, keeping with its pacing of moving through two rows underneath one of the clarinet's, begins RI_8 at the end of measure six, pivoting on pc_4 . The guitar's RI_8 concludes at nearly the exact same time as the clarinet's P_0 at "Angelorum." Measures four through seven are shown in example 3.61 above.

The image shows a musical score for measures 8-11 of Op. 18/iii. It features four staves: Clarinet (top), Voice (middle), Guitar (bottom), and Bass (bottom). The score is annotated with red text indicating rows and order numbers. The Clarinet staff shows $RI_8: 8$ and 8 . The Voice staff shows $RI_8: 6$ and $RI_8: 11$. The Guitar staff shows $P_0: 1$ and $P_0: 11$. The Bass staff shows $R_0: 3$ and $R_0: 11$. The lyrics are: "Sal - ve ra - dix, sal - ve por - ta, ex qua mun - do lux est or - ta:". The score includes dynamic markings like pp and p , and articulation like accents and slurs. A reference number "3 U.E. 8884" is visible at the bottom of the score.

Example 3.62: Op. 18/iii measures 8-11 with rows and order numbers shown.

As the voice begins row RI_8 in the middle of measure seven, the guitar and clarinet conclude at the voice's order number **1**, beginning their new rows P_0 , and R_8 , respectively. The clarinet and voice rows close only a thirty-second-note apart, at the end of measure nine, and downbeat of measure ten. The guitar, having finished P_0 at the downbeat

of measure nine, continues with RI₈, which carries through to the middle of measure ten.

Measure eleven, for the first time, brings the entire ensemble's individual rows to a close simultaneously. These row endings occur upon the close of the first verse. Measure eleven is also the first measure in 2/8 meter. Measures eight through eleven are shown in example 3.62 above.

The image shows a musical score for three instruments: Voice (V), Klavier (Kl.), and Gitarre (Gt.). The score is for measures 12, 13, and 14 of Op. 18/iii. The lyrics are: "Gau - de, Vir - go glo - ri - o - sa, su - per om - nes spe - ci -". The score includes various musical notations such as dynamics (p, pp, f), articulation (accents), and phrasing slurs. Red annotations above the staves indicate row numbers (RO) and order numbers (PO) for each measure. For example, in measure 12, the RO is 9 and the PO is 0. In measure 13, the RO is 11 and the PO is 0. In measure 14, the RO is 7 and the PO is 0. The score also shows various rhythmic patterns and fingerings.

Example 3.63: Op. 18/iii measures 12-14 with rows and order numbers shown.

Webern opens the second verse in measure twelve without any break before the voice's entrance, the first two songs of this set. Instead Webern distinguishes between these verses with the simultaneous close of each row, and therefore their simultaneous beginnings in measure twelve. Additionally, the voice part's rhythm and contour resembles that of the first verse. The contour of the voice's melody through measure fourteen is also highly evocative of its melody in measures four through seven. Measures twelve through fourteen's row projections are shown in example 3.63 above.

Example 3.64 below compares the rhythm and contour of the voice's opening to verses one and two.

The voice begins P_0 at the start of the second verse, while the clarinet and guitar open the verse with R_0 , and RI_8 , respectively. The clarinet has pivoted in the previous measure on pc_4 while the guitar begins RI_8 precisely on the downbeat of measure twelve. The voice's row covers measures twelve through to the first beat of measure fourteen. That relatively long line is supported by one and a half appearances of R_0

in the clarinet; and two RI₈s, and half of P₀ in the guitar.

Example 3.64: The opening of the first (top two), and second (bottom two) verses showing similarities in contour and rhythmic structure.

Measure fourteen continues with RI₈ now in the voice on “speciosa.” The guitar, upon concluding P₀ moves to I₈ at the end of measure fourteen, pivoting on a 3-4 trichord consisting of order numbers **1** and **0** of I₈, and order number **11** of P₀. I₈ in the guitar concludes on the downbeat of measure sixteen, moving to R₀ and I₈ in measures sixteen and seventeen, respectively. The clarinet supports the voice line with R₀ and I₈, closing at the beginning of measure seventeen. The row counts for measures fifteen through seventeen are shown in example

3.65 below.

The image shows a musical score for three staves: voice, clarinet, and guitar. The score is annotated with red text indicating rows and order numbers. The first system (measures 15-17) includes the instruction "etwas breiter (♩ = ca 100)" and "rit.". The voice part has lyrics: "sa! Va - le, val de de". The guitar part has lyrics: "co - - ra et pro". The annotations include:

- RI8: 7 6 5 rit. - - 4 3 nf .2 1 0 p 11
- RO: 6 - 5 4 sa! 3 2 1 0 I8: 0 1 - 2 le, 3 4 5 6 7 8 val de 9 10
- I8: 15 p 16 f mf p p
- I8: 18: 4 p 6 7 8 9 10 11 f 7 3 2
- RI8: 10 9 8 7
- I8: 11 co - - ra et pro 0 1 2 pro
- I8: 17 18: 3 4 5 6

Example 3.65: Op. 18/iii measures 15-17 with rows and order numbers shown.

The voice's final row, measures seventeen through eighteen, is once again RI₈. The clarinet closes its P₀ simultaneously with the voice's conclusion. After an exposure of I₈ beginning in measure seventeen, the guitar moves to R₀ in the middle of measure eighteen which concludes at the beginning of the coda in measure nineteen. Measure eighteen's row

counts are shown in example 3.66 below.

The image shows a musical score for Op. 18/iii, measure 18. It consists of three staves: a vocal line, a piano (P) line, and a guitar (G) line. The vocal line has the lyrics "no bis Christum ex - o - ra." and is annotated with red numbers 1 through 11 above the notes. The piano line is annotated with red numbers 3, 4, 5, 6, 7, 8, 9, 10, 11 above the notes. The guitar line is annotated with red numbers 7, 8, 9, 10, 11 above the notes. The score includes dynamic markings such as *f*, *p*, *mf*, and *f*. The key signature has one flat (B-flat), and the time signature is 3/4. The annotations include row labels: RI8:6, P0:, R0:, and RI8:11.

Example 3.66: Op. 18/iii measure 18 row exposure which marks the end of the vocal melody.

“Ave Maria coelorum” closes with a three measure coda similar in length to the introduction. The clarinet immediately jumps to its highest register, while the guitar remains mostly in its lowest, with all but a single pitch written in bass-clef.

Rows used in the coda include the clarinet’s RI_8 , and I_8 . Supporting these are the guitar’s P_0 , pivoting on its R_0 final trichord. This first P_0 is concluded within the space of a single beat, across four separate trichords. Webern then pivots from pc_4 to RI_8 , which is joined to the concluding R_0 in a 3-3 trichord at the end of measure twenty. The guitar closes with a wry nod to common-practice harmony with a pc_7 to pc_0 bass. These closing measures are shown in example 3.67 below.

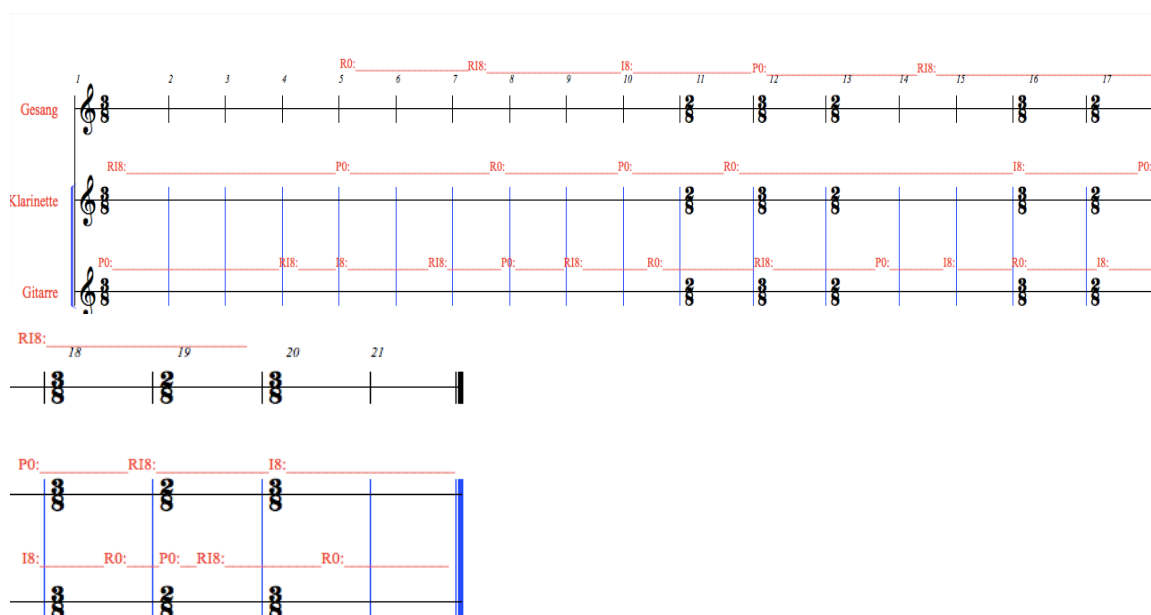


Figure 3.22: Overview of row pacing across the ensemble in Op. 18/iii.



Example 3.67: Op. 18/iii coda with row counts.

Looking to the overall counterpoint created by the individual row-form in the ensemble we can see that the voice and clarinet parts remain primarily locked in a 1:1 relationship. The guitar and clarinet, however, changes from a 2:1 relationship until measure ten, to matching the

clarinet's single P_0 with a single instance of R_0 through measure eleven. In measures twelve through fifteen the guitar and clarinet move to a 3:1 row-exposure relationship before moving back to the primarily 2:1 pacing of the beginning from measure sixteen to the end. This is shown in figure 3.22 above.

3.4.3 HARMONIC ANALYSIS

Due to Webern's horizontal organization throughout "Ave Maria coelorum" we do not find the systematic, and regular projection of consistent trichords. Instead we find mostly horizontal projections of trichords belonging to set-classes 3-3 and 3-5; a synthesis of the harmonies of both "Schatzerl klein" and "Erlösung." There are a limited number of vertical projections of these trichords as well, however the verticals mostly project set-class 3-1.

The introduction finds the clarinet and guitar lines moving between set-classes 3-3 and 3-5, with the first two horizontal 3-3 trichords of the clarinet forming another of the same set-class with the guitar's entrance. A single 3-5 trichord appears in the guitar's introduction melody in measure two, which also aligns vertically with the clarinet's pc_{10} to create the same trichord horizontally and vertically simultaneously.

The first simultaneity in the guitar part occurs in measure four at the close of the instrumental introduction. Once again this trichord represents a member of set-class 3-5 surrounded by set-class 3-3 in both the clarinet and guitar parts. This 3-5 trichord also forms a connector of 3-3 trichords with not only surrounding guitar material, but with the soaring clarinet gesture above it. The first three measures with each harmony, and the set-classes to which they belong, are highlighted in example 3.68 below.

Set-classes 3-3 and 3-5 continue horizontally upon the voice's entrance, with 3-3 appearing with more frequency, though occasionally these harmonies are bridged by set-class 3-5. As the piece is only concerned with using one row per instrument, without altering that row in any way, we begin to see that these patterns of set-classes are continually reiterated. The instances when they connect their vertical aspect vary due to rhythm and pitch saturation, which sets this song further apart from its Op. 18 predecessors.

The figures below present the harmonic chains created throughout the song. I will highlight the horizontal trichords of set-classes 3-3 and 3-5 on the score, and then highlight them as motion around the hyper-hexatonic system. This post-tonal hyper-hexatonic system contains the same pitch-content as the standard graph, but instead highlights the voice-leading parsimony between set-class 3-3, and 3-4 trichords in

chains around each pole, instead of 3-11 trichords. In between each pole, “rounding the corners” so to speak, are 3-5 trichords which aid in motion between hexatonic poles. These trichords can be seen as subsets of an enneatonic collection, as described in the second chapter.

The image shows a musical score for three parts: Gesang (Vocal), Es-Klarinette (E-flat Clarinet), and Gitarre (Guitar). The score covers measures 1, 2, and 3. The tempo is marked 'Langsam (♩ = ca 56)' and includes a 'rit.' (ritardando) section followed by 'tempo'. The vocal part is marked 'doppelt zart'. The guitar part includes dynamic markings like 'pp' and 'p'. Red boxes highlight specific chords in each part, with arrows pointing to set-class labels. The labels are: 347 (014), 367 (014), 56e (016), 5te (016), t12 (014), 901 (014), 39t (016), 78e (014), 69t (014), 923 (016), 8e0 (014), 67t (014), 9t3 (016), 125 (014), 145 (014), and 347 (014).

Example 3.68: Op. 18/iii measures 1-3 with harmonies of various set-classes highlighted.

We will find stretches of music belonging to the same hexatonic pole, and can more easily track the harmonic progression as it travels through the system. This will also help us to better take into account the pitch-content generated by the ensemble as a whole.

The first measure is contained completely within the Northern Hexatonic pole, with the exception of the final pitch in the clarinet part. As we approach the first 3-5 trichords in measure two we see pitches that are taken from the Southern hexatonic pole, but also the Western.

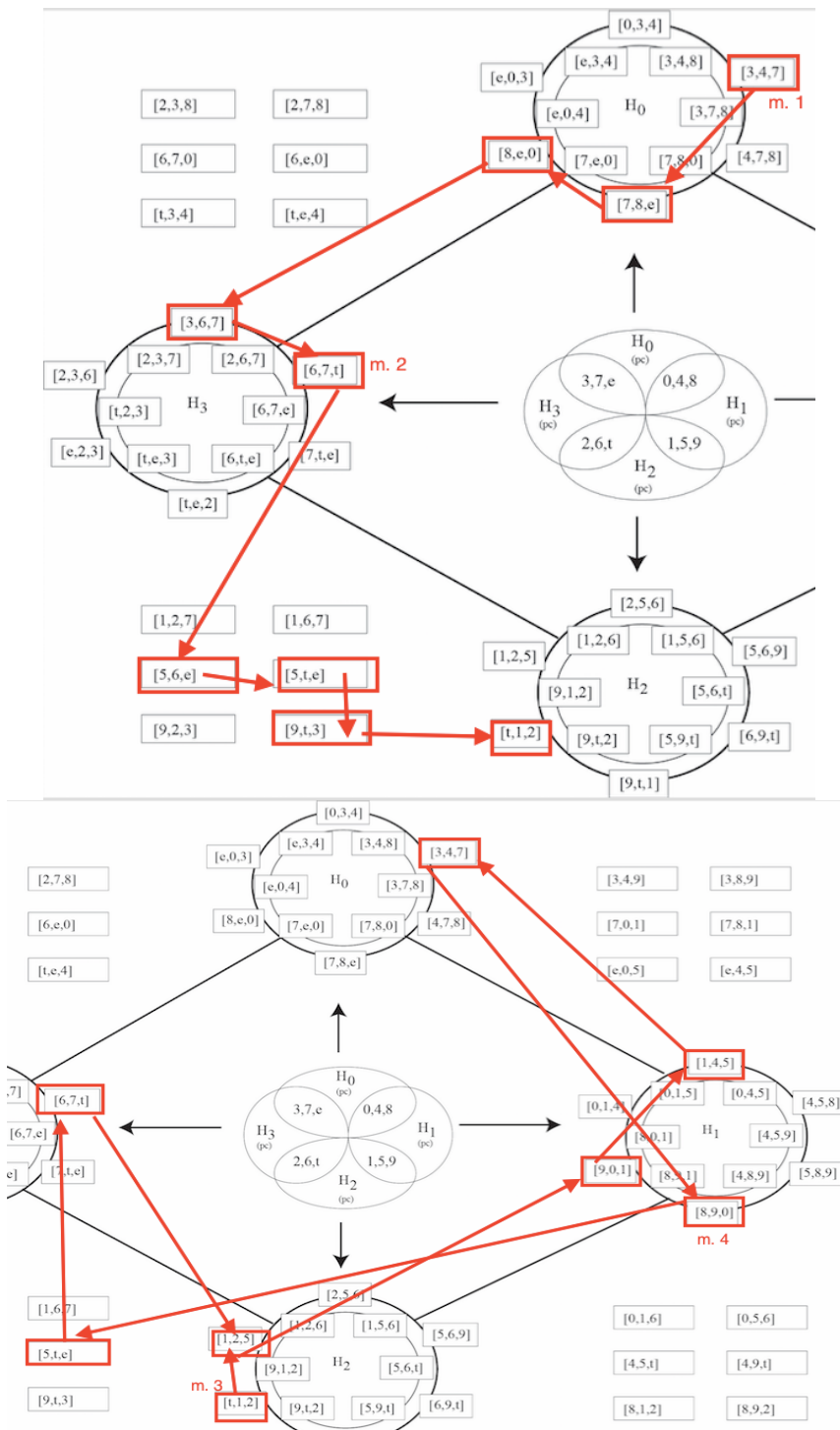


Figure 3.23: Op. 18/iii measures 1-4 harmonies graphed onto hyper-hexatonic system.

As the introduction continues, measure three moves from the Southern to the Eastern pole. Finally the introduction comes to a close in measure four moving back through the Southern, and Western poles before returning to the Northern pole where it began for the introduction of the voice. This hyper-hexatonic system representation is shown in figure 3.23 above.

The image shows a musical score for three staves: voice (top), Klavier (middle), and Gitarre (bottom). The score is annotated with numerous set-class labels in parentheses, such as (014), (016), (036), (015), and (014). Red boxes highlight specific harmonic structures across the staves. Performance markings include 'rit.', 'pp', 'tempo', and 'pp'. The lyrics 've. Re - gi - nae coe - lo - rum.' are written under the voice staff. The annotations include labels like 145 (014), 125 (014), 923 (016), 69t (014), 78e (014), 014 (014), 589 (014), e23 (014), 67t (014), 367 (014), 8e0 (014), 890 (014), 891 (015), t12 (014), 347 (014), 67t (014), 0367 (014), 901 (014), 890 (014), 5t (016), 347 (014), 034 (014), 903 (036), 125 (014), 045 (015), 6te (015), 923 (016), 145 (014), 348 (015), 56e(016), 12t (014), 890 (014), and 901 (014).

Example 3.69: Op. 18/iii measures 5-7 with harmonies of various set-classes highlighted.

Measure five moves from the East pole to the West with very little connection other than pc1 in the voice, which is not connected to any

other verticality. As we move through the next measures we see verticalities belonging to set-classes other than 3-3 and 3-5. Set-class 3-4, also a subset of the hexatonic collection, appears at the end of measure five as an [891] trichord. Through the end of the second line of the first verse we see more verticalities from set-class 3-4, and 3-10, in addition to the horizontal 3-3 and 3-5. This is shown in example 3.69.

Figures 3.24 and 3.25 below graph measures five through seven on the hyper-hex(enne)atonic system. In these graphs we can see the ways in which one or more pitch from one trichord plays a role in moving to another trichord of either the same or a differing set-class.

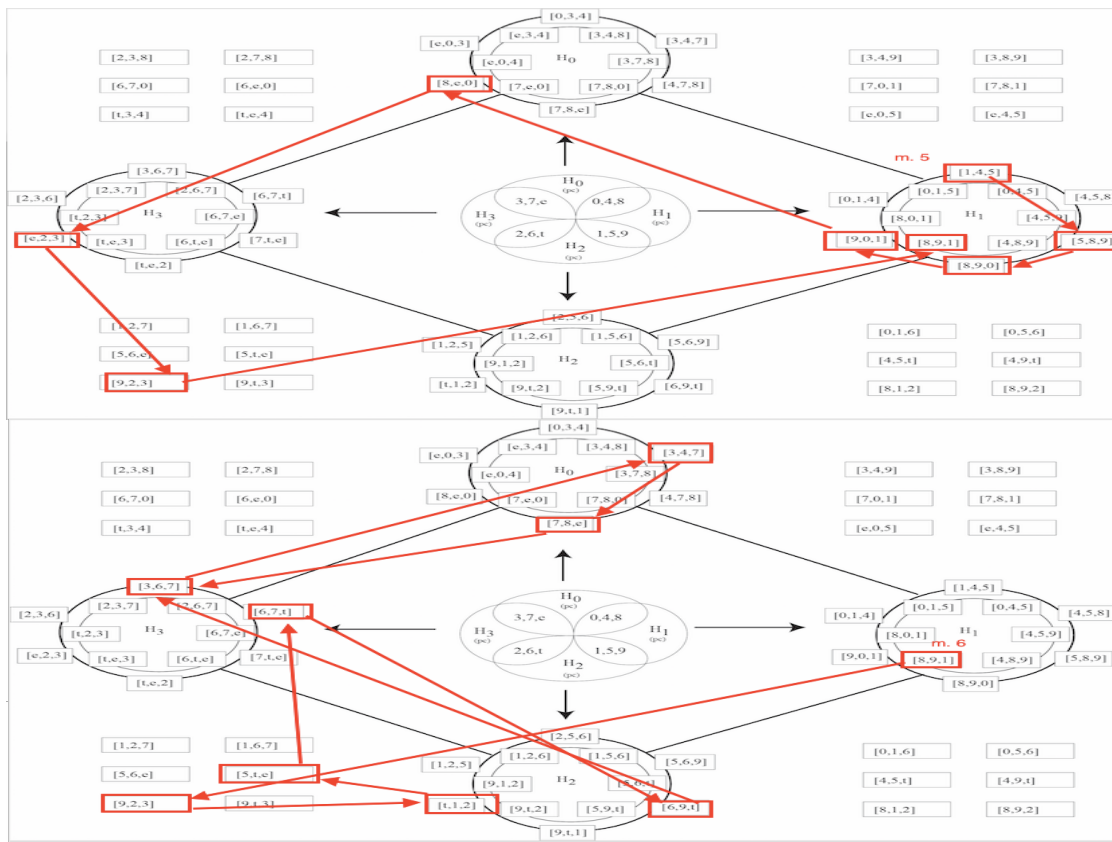


Figure 3.24: Op. 18/iii measures 5-6 harmonies graphed onto hyper-hexatonic system.

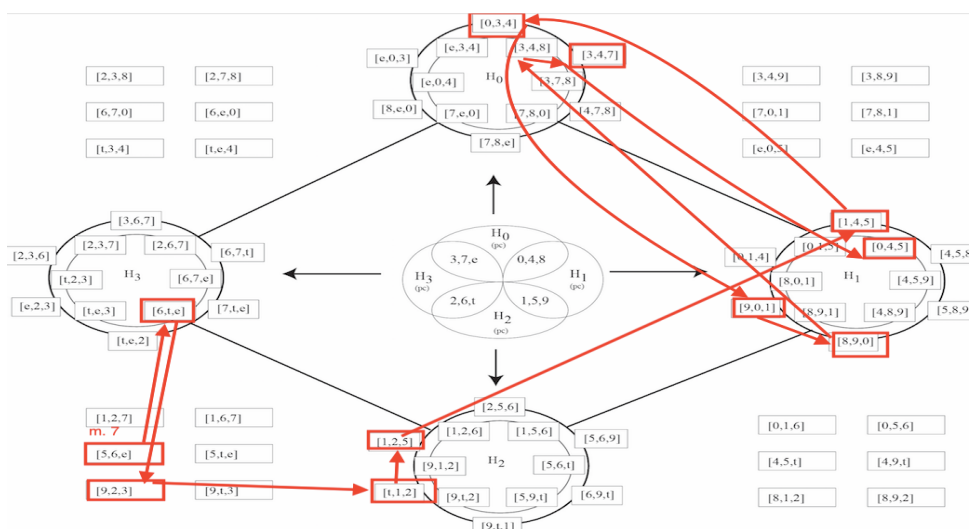


Figure 3.25: Op. 18/iii measure 7 harmonies graphed onto hyper-hexatonic system.

Closing the first verse, in measures nine through eleven, we see an instance of the vertical and horizontal trichords matching as set-class 3-3 [78e] appears between the voice and clarinet parts, as well as in three consecutive pitches of the clarinet. This happens once again in measure ten between the voice and guitar, with pc0 of the voice concluding its own horizontal exposure of [890]. Measures nine through eleven with set-classes 3-3, 3-4, and 3-5 trichords highlighted are shown

in example 3.70.

The image shows a musical score for three parts: Voice (V), Clarinet (Cl.), and Guitar (Gt.) for measures 9-11 of Op. 18/iii. The score is annotated with set-class trichords in red boxes and arrows. The voice part has lyrics: "Sal - ve ra - dix, sa - ve por - ta ex - aus - tu - m - de - lux - est or - ta:". The guitar part includes a section marked "II" with a double bar line. The annotations include various trichord labels such as 2te (014), 12t (014), 890 (014), 901 (014), 12t (014), 5te (016), 56e (016), 367 (014), 347 (014), 67t (014), 78e (014), 8e0 (014), 67t (014), 69t (014), 9:3 (016), 923 (016), 124 (014), e45 (016), 348 (014), 67e (015), 5te (016), 912 (015), 459 (015), 45 (014), 489 (015), 923 (016), 9t3 (016), 478 (014), 49t (016), and 156 (015). The score also includes dynamic markings like *p*, *pp*, and *ppp*, and articulation like accents and slurs.

Example 3.70: Op. 18/iii measures 9-11 with set-class 3-3, 3-4 and 3-5 trichords highlighted.

As the piece continues through the second verse we continue to see these vertical harmonic pillars interspersed amongst horizontal strings of the same types of harmonies. In measure twelve three overlapping instances of the same set-class 3-3 [67t] trichord occur vertically between the clarinet and voice twice, and once horizontally in each part all aligning in the same place on the word “Virgo” and the first two syllables of “gloriosa.” Another interesting alignment occurs at the end of measure sixteen when the clarinet and voice form set-class 3-3 [478] and [347], while the guitar repeats pc8 to complete another [478] between all three voices. Measures twelve through eighteen with set-classes 3-3, 3-4, and 3-5 highlighted are shown in example 3.71.

The image displays a musical score for measures 12-18 of Op. 18/iii, featuring a Clarinet (Kl.) and Guitar (Gt.) part. The score is annotated with set-class labels such as 8e0 (014), 78e (014), 67t (014), 69t (014), 9t3 (016), 923 (016), 034 (014), 923 (016), 145 (014), 9t3 (016), 67t (014), 78e (014), 8e0 (014), 145 (014), 347 (014), 56e (016), 901 (014), 890 (014), e34 (015), 5te (016), t12 (014), 78e (014), 780 (015), 56e (016), 347 (014), 367 (014), 5te (016), te2 (014), 12t (014), 901 (014), 890 (014), 125 (014), 9t3 (016), 78e (014), 890 (014), 901 (014), te2 (014), 347 (014), 923 (016), 9t (014), 67t (014), 5te (016), 56e (016), 9t2 (015), 127 (016), 489 (015), 349 (016), te2 (014), 5te (016), 7e0 (015), 78e (014), 045 (015), 923 (016), 67t (014), 348 (015), 238 (016), 367 (014), 56e (016), 2te (014), 12t (014), 901 (014), 890 (014), 347 (014), 8e0 (014), 69t (014), 67t (014), 78e (014), 9t3 (016), 239 (016), 125 (014), 145 (014), 034 (014), 890 (014), 27 (016), 7te (014), 56e (016), 134 (016), 145 (014), 348 (015), 267 (015), 67t (014), 125 (014), 489 (015), 56e (016), 458 (014).

Performance markings include *fpp*, *f*, *mf*, *etwas breiter* (♩ = ca 100), *molto rit.*, and *tempo I* (♩ = ca 56). The score includes lyrics: "Gau - der - Vir - go - glo - ri - sa, 145 (014) per - nes - 9t3 (016) ci - o - 15 - 16 - val - de - re 347 (014) co - ra, et pro - 69t (014) - bis Chri - stum ex - o - ra: 367 (014) 267 (015) 267 (015) 67t (014) 56e (016) 458 (014)".

Example 3.71: Op. 18/iii measures 12-18 with set-classes 3-3, 3-4, and 3-5 highlighted.

Finally, the coda between the clarinet and guitar in measures nineteen through twenty-one moves through a great number of distinct trichords. This is in contrast to the considerably less dense instrumental introduction.

56e (0163) 367 (014)
 347 (014)
 (014)
 125 (014)
 236 (014) 367 (014) 8e0 (014)
 69t (014)
 67t (014)

Example 3.72: Op. 18/iii measure 21 with harmonies highlighted.

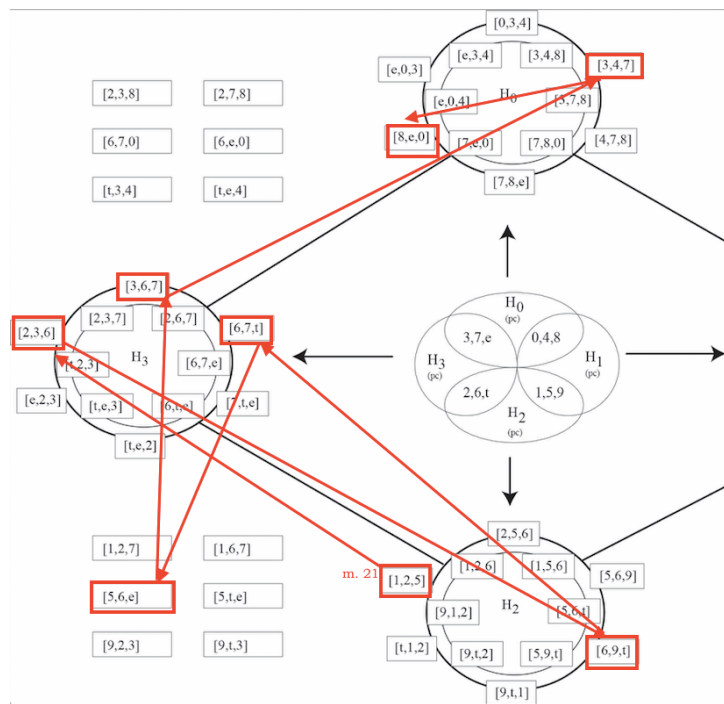


Figure 3.26: Op. 18/iii measure 21 harmonies graphed onto the hyper-hex(enne)atonic system.

The guitar's final trichord at the end of measure eighteen combines with the clarinet's pc3 to create a set-class 3-5 [367] as a formal start of the instrumental coda. The horizontal and vertical harmonies are shown

below. Upon the final beats of this coda, we see that a natural result of the retrograded version of the initial row results in a return to the Northern hexatonic pole where the piece began. The final measure of the piece is shown in example 3.72, and its hyper-hex(enne)atonic system representation appears in figure 3.26.

3.4.4 GUITAR PART

From a performance standpoint, despite or perhaps because of, the increased chromaticism in the row used for “Ave Maria coelorum,” coupled with a focus on the horizontal aspect, this song is the least demanding on the performer. Of course, while it is the “least demanding” in some aspects, it is more so in others. For the concerns of this section, regarding the physical closeness of Webern’s chosen pitches on the fretboard, I will show that the material here is among the most compact of this set. As a result of this physical closeness we shall see, once again, compact Koozin-shapes, and consecutive *s* and *r* values.

The majority of the introductory material is purely linear with the exception of a single trichord, with compact Koozin-shape <-122—> followed by two double-stops in measure four. Among this linear material is an abundance of re-articulated pitches, something not used to nearly this extent in the previous two songs. The guitar’s opening descending

gesture involves a span of only three frets, followed by four frets of the next measure up to the thirty-second-note rest.

The widest leaps within this introductory material are aided in their inclusion of rests, or the use of $\{r = 0\}$, for example, pc3 down to pc2 in measure three, and pc5 down to pc4 in measure three. The Koozin-shapes for the introduction are shown in the example below. The first three measures of the guitar part are shown in example 3.73 below.

Example 3.73: Op. 18/iii guitar part measures 1-3 with tablature notation and Koozin-shapes.

Moving to the next several measures the guitar's line continues with more double-stops, all of which span three frets or less. Of the three trichords between measures five and nine, one spans four frets, one spans two, while the other spans three. The Koozin-shapes for these trichords are shown in example 3.72 below. Note also the correlation between the Koozin-shape of the trichord in measure four, and that of the trichord in measure eight, placing them both within the same set-

class of 3-5. The <-4-21-> trichord belongs to set-class 3-3. Measures five through eight are shown in example 3.74 below.

The image shows a musical score for guitar, measures 5 through 8. The top staff is in treble clef with a key signature of one flat (B-flat). The bottom staff is a guitar tablature. The score includes dynamic markings (pp, p), articulation (accents), and fingering (3 for triplets). Koozin-shapes are indicated by red arrows and labels: <-20-1->, <-10-2->, <112--->, <-4-214>, <-2-01>, and <-122-4>. Measure 8 includes an artificial harmonic marking 'art. harm. VI'.

Example 3.74: Op. 18/iii guitar part measures 5-8 with tablature notation and Koozin-shapes.

Continuing through to the end of the first verse in measure eleven, the guitar remains primarily concerned with single pitches and double-stops. Once again the double-stops are all contained within a span of three frets at most. Triplet figures, such as at the beginning of measure ten, can often be grouped together into trichords under a single hand position. Of the trichords within this stretch of measures only a single set-class 3-5 appears in the form of a <-122—> Koozin-shape at the end

of measure nine. Measures nine through eleven of the guitar part are shown in example 3.75 below.

The image shows a musical score for guitar, measures 9-11. The top staff is a standard musical notation in treble clef. Measure 9 starts with a triplet of eighth notes (G4, A4, B4) followed by a quarter rest. Measure 10 contains a series of chords and triplets, including a half-note chord (G4, B4) and a quarter-note triplet (G4, A4, B4). Measure 11 features a half-note chord (G4, B4) with an artificial harmonic (VII) and a quarter-note triplet (G4, A4, B4). Dynamic markings include *p*, *pp*, and *pp*. The bottom staff is a Koozin-shape tablature with fret numbers (0-9) and strings (1-6). Red arrows indicate trichord shapes: <-122-->, <-3-12->, <-21-30>, <-1-2-4>, and <-1-2-2>. Blue brackets above the tablature indicate triplet groupings. Roman numerals II and VII are marked above the staff.

Example 3.75: Op. 18/iii guitar part measures 9-11 with tablature notation and Koozin-

Opening the second verse in measure twelve we find chains of thirty-second notes that can often be grouped together into trichords under a single hand position. As for trichords appearing in this section set-class 3-3 appears at the end of measure thirteen with a <—315-> Koozin-shape; set-class 3-4 appears at the end of measure fourteen with a <-021—> Koozin-shape; and a final set-class 3-5—the same as the trichord in measure nine shifted up an octave—appears in measure fifteen with a <—123> Koozin-shape. Measures twelve through fifteen are shown

in example 3.76 below.

Example 3.76: Op. 18/iii guitar part measures 12-15 with tablature notation and Koozin-shapes.

Concluding the second verse in measure sixteen the nearly two-octave spanning sixteenth-note-triplet figure spans only two frets and includes the use of an open string at $\{r = 0, s = 6\}$, the lowest pitch performable on the guitar. There are a few more trichords present within these measures, all of which make use of consecutive s values. Measures sixteen through eighteen are shown in example 3.77 below.

Example 3.77: Op. 18/iii guitar part measures 16-18 with tablature notation and Koozin-shapes.

The final three measures increase considerably the pitch saturation in the guitar part. Before measure nineteen concludes Webern begins and ends one row and begins another, by using four trichords in

rapid succession. Of those trichords the outer two include $\{r = 0\}$, and non-consecutive s values, while the middle two trichords have compact Koozin-shapes with consecutive s values.

Only three more trichords appear in the final two measures: the same $\langle -122 \rangle$ Koozin-shape we have seen twice before, and two final set-class 3-3 trichords appear, both taking advantage of $\{r = 0\}$. These three trichords, due to their inconsistent voicing, each contain different Koozin-shapes. The final three measures of this song are shown in example 3.78 below.

The image displays a musical score for guitar, measures 19-21. The top staff is a standard musical notation in 8/8 time, featuring a complex rhythmic pattern with triplets. The bottom staff is a guitar tablature with fret numbers and Koozin-shapes. The Koozin-shapes are labeled as $\langle -14-0 \rangle$, $\langle -314 \dashrightarrow \rangle$, $\langle -2-10 \rangle$, $\langle -122 \rangle$, $\langle -4-21 \rangle$, $\langle -3120 \rangle$, $\langle -1123 \rangle$, and $\langle -3-10 \rangle$. The score includes dynamic markings such as f , sf , ff , p , and pp , as well as articulation marks like accents and slurs.

Example 3.78: Op. 18/iii guitar part measures 19-21 with tablature notation and Koozin-shapes.

The guitar part of “Ave Maria coelorum” is considerably different from the two songs before it. Not only is the material largely linear, and focuses on the horizontal aspect, but also contains a variety of trichords from different set-classes in a variety of voicings. Despite these variables, Webern is still able to construct a compact part that is, as I have shown, highly idiomatic to the guitar.

3.4.5 CLARINET PART AS GUITAR PART

The clarinet line for “Ave Maria coelorum” presents us with few performance issues even as it reaches toward the top of its register multiple times. Focusing on the clarinet’s extreme high register does point to a clearer registral delineation of parts. In contrast, in the first two songs the clarinet and guitar parts often overlapped, and in general occupied relatively the same space.

Immediately upon the downbeat of the first measure the clarinet is found to throw itself ever higher in its registral capabilities. Following those high points we see pc3 in measure one giving way to pc5 in measure two, and finally pc9 soaring across measure three into measure four.

Of the pitches preceding that pc9 we find that once again they are organized in such a way that if reading this part on a guitar, the fret-spans between pitches would be relatively small. For example in measure four the high pc9 falls two octaves and a minor second to pc8, only spanning a single fret. Measures five and seven, where leaps of over two octaves once again appear, also manifest similar physical properties. The first seven measures are shown in example 3.79 below.

Example 3.79: Op. 18/iii clarinet part measures 1-7 with tablature notation and Koozin-shapes.

Also unlike the guitar part, and having to do with Webern's reliance on the clarinet's highest register, the clarinet-part-as-guitar-part remains mostly well above the tenth fret. We continue to see the compact Koozin-shapes representing even the steepest melodic gestures. The downbeat of measure eight carries a high pc5 over from the previous measure that proceeds downward by wide leaps while only spanning four frets. A similar-spanning gesture appears on the downbeat of measure eleven, also only spanning four frets; and in measure twelve, after the highest pc10 reachable by the guitar in the middle of the measure is contained within a relatively compact Koozin-shape. These gestures with their possible Koozin-shapes are shown in example 3.80 below.

Material in measures thirteen through fourteen with immediate repetitions in quick succession are reminiscent of the kind of tremolando gestures used by classical guitarists. That Webern marks many of these notes as staccato is reminiscent of a repeated single string attack using

the customary {f = ami} plucking pattern.

Example 3.80: Op. 18/iii clarinet part measures 8 (left) and 11-12 (right) with tablature notation and Koozin-shapes of similar wide-voiced gestures.

Also, the wide-ranging leaps here require spans of only three and four frets, while measure fifteen presents us with several successive spans of only a single fret despite repeated incredibly large leaps. Measures thirteen through fifteen are shown in example 3.81 below.

Example 3.81: Op. 18/iii clarinet part measures 13-15 with tablature notation and Koozin-shapes.

Drawing the clarinet part to a close we find several more examples

of the kind of sweeping, widely-voice, descending gestures that populated measures four, eight, and twelve.

First, the incredibly sharp descent at the end of measure sixteen that is followed by a repeated pitch attacked three times, is highly reminiscent of a gesture that appeared at the beginning of the song in measures four and five. These measures are shown in example 3.82 below.

Example 3.82: Op. 18/iii clarinet part measures 4-5 (left) and the end of measure 16-17 (right) with tablature notation and Koozin-shapes showing similar extreme descent followed by tremolando like gesture.

In the final three measures this wide descending gesture becomes the clarinet's main focus, separating itself completely from the registral neighborhood of the guitar. As before, with the exception of the downbeat of measure nineteen covering a span of five frets, these sharp descents require spans of only three, or four frets.

Finally, the final three measures include more pitches that are unreachable on the guitar. The highest pitch of the entire opus falls at the end of measure twenty, a pc11 that would be the highest pitch a

guitar would be expected to perform. Webern continues to expand the tessitura of his ensemble to the greatest degree so far in his output. We will only see this trend continue in the Op. 25 songs as well as the Op. 30 Variations for Orchestra. The final three measures of the clarinet part are shown in example 3.83 below.

Example 3.83: Op. 18/iii clarinet part measures 19-21 with tablature notation and Koozin-shapes.

3.4.6 VOICE PART AS GUITAR PART

Unsurprisingly the same compact Koozin-shapes and small fret-spans amongst linear material that existed in both the guitar and clarinet lines, exist within the voice part of “Ave Maria coelorum.”

From the opening of the voice part in measure four, through to the downbeat of measure sixteen, with the exception of only pc8 in measure six, and pc0 in measure twelve, only the pitches in measure sixteen necessitate a fretting-hand position above the seventh fret. In measure sixteen we find the highest required fretting-hand position, moving up as

high as the eleventh fret, but immediately returning to the lower reaches of the guitar for the voice's final two measures. Speaking also to the voice's range as it relates to the guitar is the fact that only one pitch in my guitar version would be played on $\{s = 6\}$, appearing in measure eighteen, which if not for the surrounding pitches could be played at $\{r = 1, s = 5\}$.

Measure to measure we can find mostly compact Koozin-shapes to facilitate strings of pitches. Measures five and six make use of open strings, while fretted pitches fall inside spans of only four frets at most. A simple $\langle -3-1-3 \rangle$ shape facilitates the triplet figure on the downbeat of measure seven, while a barre at the third fret allows the pitches of "Angelorum" to sound. Measures five through eight with tablature notation and possible Koozin-shapes are shown in example 3.84 below.

The image shows a musical score for guitar and voice. The top staff is a voice line with lyrics: "A - ve, Re - gi - na coe - lo - rum, a - ve, Do - mi - na An - ge - lo - rum:". The bottom staff is a guitar tablature with fret numbers and Koozin-shapes: $\langle -0031 \rangle$, $\langle -3-1-3 \rangle$, and $\langle --2-21 \rangle$. Performance markings include "rit.", "tempo", and "pp".

Example 3.84: Op. 18/iii voice part measures 5-8 with tablature notation and Koozin-shapes.

Concluding the first verse, "Salve radix, salve porta, ex quamundo lux est orta" follows a compound melodic structure down through a

series of close Koozin-shapes. Measures nine through eleven are shown in example 3.85 below.

The image shows a musical score for voice part, measures 9 through 11. The top staff is a vocal line with lyrics: "Sal - ve ra - dix, sal - ve por - ta, ex qua mun - do lux est or - ta:". The score includes dynamic markings (*p*, *pp*) and articulation marks (accents, slurs). Below the vocal line is a guitar tablature staff with fret numbers (0, 2, 3, 4, 6) and fingerings (2, 3, 2, 3, 2, 3, 2, 3, 2, 3). Red arrows and brackets indicate Koozin-shapes: <-10-15>, <-2-1-3>, <-2021->, and <-12-01>. Measure numbers 9, 10, and 11 are indicated above the tablature staff.

Example 3.85: Op. 18/iii voice part measures 9-11 with tablature notation and Koozin-shapes.

The second verse opens much in the same way as the first, with a high pitch tied into the next beat followed by a syncopated attack after a sharp descent. The similar thirty-second note gestures of measures twelve and fourteen also share very similar Koozin-shapes, separated by a two-fret spanning dyad, and a two-fret spanning trichord with intervening $\{r = 0 \ s = 4\}$. Measures twelve through fourteen are shown in example 3.86 below.

The voice reaches its apex in measure sixteen, with pitches found on the eighth, tenth, and eleventh frets. Measure sixteen can be divided into two separate Koozin-shapes: a two-fret spanning, <-2—1>, and a four-fret spanning, <-4—31> trichord. The final two measures are similarly compact with no more than three frets between adjacent

pitches, save for when $\{r = 0\}$.

The image displays a musical score for voice and guitar. The top staff is the voice part, written in 3/8 time, covering measures 12, 13, and 14. The lyrics are "Gau - de, Vir - go glo - ri - o - sa, su - per om - nes spe - ci". The bottom staff is the guitar part, showing tablature notation with fret numbers (0, 1, 2, 3, 4, 5, 8) and Koozin-shapes (e.g., 8-8, 0-1-4-3, 5-4-0-2, 1-2-2-4-0-2). Red annotations include "<-21-1>" and "<-2041>" below the guitar staff.

Example 3.86: Op. 18/iii voice part measures 12-14 with tablature notation and Koozin-shapes.

In conclusion the voice part’s melodic construction for “Ave Maria coelorum” resembles a melodic line that would be idiomatic to the guitar, much the same as the clarinet part. Small fret-spans, the potential for barre usage, and an abundance of $\{r = 0\}$ also lend a guitaristic quality to the voice’s part.

3.5 OP. 18 CONCLUSIONS

In this chapter I have discussed the many ways that the texture, contour, and register of each member of the Op. 18 ensemble has been influenced by the idioms of the guitar.

Webern’s text settings have been shown to faithfully represent the poetic meter of his selected texts. This more traditional method of setting the texts accentuates their folk nature, which I have discussed as

relating to nature, and universal concerns. These topics have their foundations in folk tradition, and tie to Webern's deeply held personal beliefs and interests.

The appearance of guitar acting as harmonic generator relates to its use as part of a continuo ensemble, but also again to folk music. I showed the ways in which the history of the guitar in Austria has linked it to folk culture, providing a bridge between concert musics in its association to the continuo, and folk styles, which is linked again to Webern's interests.

More specific to the music is that Webern begins his excursion into twelve-tone composition with these songs. The guitar, with its unique capabilities for widely-voiced simultaneity, allows Webern to create his most dramatic gestures in the clarinet, and voice parts. Op. 18 finds Webern able to expand his melodic contours to previously unexplored degrees of disjunction. The wide leaps of the voice are made possible through the support provided by the guitar's equally widely voiced harmonic support.

The voice's disjunct line is tied to the guitar through its large leaps—the largest and most frequent of any Webern vocal pieces to this point—as shown by the ease with which the guitar would be able to perform the voice line. I showed the ways in which compact Koozin-shapes and sequential *r* and *s* values revealed a smoothness of line at a deeper level

when examined through the lens of guitar performance. Furthermore, the voice is tied to a larger folk tradition in that it is being used, not only to express the poetic meaning of the text's pastoral imagery, but to mimic the sound of yodeling, therefore personifying the sound of the Austrian Alps and countryside.

Ties to the guitar and a larger folk tradition were also shown to exist in the clarinet part. Though the clarinet's line here is not necessarily un-idiomatic for the instrument it does, like the voice, appear to be influenced greatly by the capabilities of the guitar. The clarinet line throughout these three songs features an uncommon melodic contour that could quite easily be transferred to the guitar; it also features compact Koozin-shapes and sequential *r* and *s* values similar to those found in the voice part.

Webern's connections to Mahler create the link between the E-flat clarinet here and a larger folk tradition. As Webern had been known to conduct Mahler's symphonies with his semi-professional orchestra of community members, he therefore borrows Mahler's own folk associations with the instrument. Mahler's use of this less-used member of the clarinet family was meant to aid in creating a pastoral atmosphere in many of his symphonies. Furthermore, Webern's "Nachtmusik II" movement of his seventh symphony featured heavily the use of both the E-flat clarinet as well as the guitar; a movement that Webern has been

quoted in letters stating it is one of his favorites and one of Mahler's most beautiful.

It is these connections that I will show Webern to develop in his Op. 25 songs as well as his Op. 30 variations for orchestra. In his Op. 25 songs, the piano takes on the guitar's spacious sound and sharp articulations continuing to perform disjunct material. Finally, Op. 30 will place Webern at the peak of his compositional powers, manipulating the orchestra's sound to emulate the aforementioned sharp attacks and spacious sound of the guitar. In that piece more often than not instruments are required to play material that is atypical of their repertoire, much like the clarinet line in Op. 18, and can therefore be tied back to the guitar, and folk-influenced sound of these three songs.

CHAPTER IV

OP. 25 “DREI LIEDER NACH GEDICHTEN VON HILDEGARD JONE”

4.1 INTRODUCTION

Originally written for voice and piano, in this chapter I will argue that the content of each song —textually, melodically, and harmonically — closely resembles writing for the guitar that has evolved since Webern first used the instrument in Op. 18.

First I will present an analysis of the rows used for each of the songs with regard to their interval content as it relates specifically to the guitar. I will then explore the piano and voice parts for each song, showing the appropriateness of the guitar as harmonic foundation over the piano. My analysis will also include an investigation into the voice-leading characteristics of Webern’s harmonic language at this point in his life. I will show the numerous significant changes in Webern’s style between his having composed the songs of Op. 18 and those of this opus.

4.2 OP. 25/I “Wie bin ich froh!”

4.2.1 TEXT ANALYSIS

The first of Op. 25’s three songs sets a poem of four verses divided into two groups of two based on terminal punctuation. Jone follows a strict iambic rhythm throughout, with each verse having a different

number of poetic feet. The first verse consists of two iambs, while the remainder of the verses contain six, five, and eight-and-a-half feet, respectively.

Jone's text is as follows. Note that I have placed in bold each of the stressed syllables.

- 1a.) "Wie **bin** ich **froh**!"
- 2b.) Noch **einmal** **wird** mir **alles** **grün**
- 2a.) und **leuchtet** **so**!
- 3b.) Noch **überblühn**
- 3c.) die **Blumen** **mir** die **Welt**!
- 4d.) Noch **einmal** **bin** ich **ganz** ins **Werden**
- 4c.) **hingestellt**
- 4d.) und **bin** auf **Erden**.

The English translation is as follows.

- 1.) How delighted I am!
- 2.) Once again all turns green for me and shines so bright!
- 3.) And still the flowers are covering my world.
- 4.) Once again I am positioned totally into becoming, and I am on Earth.

One can immediately discern why Webern has chosen this poem, as it describes a scene in which the narrator is made happy by being surrounded by nature's bounty. This poem seems to celebrate the

connection between man and nature, and it even goes one step further by linking the narrator closely to that nature itself.

“Wie bin ich froh!” follows an alternating rhyme scheme that is balanced in its four pairings of end-rhyme. The fourth verse breaks away from those before by placing an odd number of syllables in each line, resulting in lines ending with alternating weak, strong, and weak syllables. Each verse, except for the third, increases the number of syllables from the previous, with two, six, five, and finally eight and a half syllables in the final verse.

The addition of the final two and a half feet to the end of the fourth verse form what could be deemed in musical terms to be a coda, where the line could have perhaps concluded after “hingestellt” and remained a complete thought. Instead Jone appears to place the narrator in the position of stating one last realization through her use of a catalexis, a brief soliloquy: “und bin auf Erden,” “and I am on Earth.”

This set of three songs begins, then, with a poem depicting a solitary person taking in their surroundings. Their world is covered in flowers, and all around them is green—“überblühn die Blumen” and “wird mir alles grün.” The poem exists completely within the corporeal world, with a focus on vivid description. Jone’s rhyming of “froh” with “leuchtet so” connects the narrator’s excitement with the bright colors of nature all around them. They is surrounded, and the world itself is covered. The

first two verses describe the narrator's relation to nature, while the final two verses place the narrator into that very world, rather than simply observing it, as if the nature that is all around is enveloping, and covering them. This places a significant importance onto the last two and a half iambic feet of the final verse, for it is a complete summation of the intertwining of this one person, at first separate from his world, as he comes to the realization that he is *on* the Earth. The narrator, then, comes to the realization that they are just as much a part of the Earth, as the greenery that surrounds them.

In this way the poem is therefore closely associated with how Webern himself viewed nature. He found himself most at peace, perhaps even discovered his purpose, while he was hiking through the forests and mountains of his native Austria. He also felt himself to be at one with his natural surrounds. This not only speaks to the character of the poem here, but also appeals directly to Webern himself as we have seen these same ideals play an important role in his own life.

4.2.2 TEXT SETTING

Webern's choices with regard to prosody throughout in this setting at times go against Jone's consistent iambic rhythm. An overarching symmetrical scheme of ascending and descending motion from verse to verse sometimes obscures Jone's original stresses.

In measure two Webern begins the text on the weak part of the downbeat, which starts the musical setting off in agreement with the text. “Bin,” though accented in the poem, also appears on the weak part of a beat. The final two pitches of this measure agree with the accents of the original source with “ich” appearing as an eighth note, allowing accented “froh!” to land on beat four. The fourth beat may be the weakest beat in a measure of 4/4, however this pitch gets its metric strength by being the only pitch in the measure to sound on a beat.

The second verse begins with barely a break from the first, in the third measure. “Noch” appears as the second eighth note of a triplet, and “ein” is denied its accented status due to its being placed as the third note in that same triplet. “Ein” is further denied its accent by being placed lower registrally than “noch.” “Wird mir” at the end of the measure follows the poetic accent from a beat standpoint; though “mir” is registrally accented, it is leading up to the first syllable of “alles” on the downbeat of the next measure, which is accented both musically and poetically.

Concluding the second verse each of the stressed syllables, “grün,” “leuch,” and “so,” are registrally accented. Each of those syllables steadily work their way down from the highpoint of pc8 on “grün” in measure four. That highpoint is also dynamically, and durationally accented, a major seventh above the weaker “-les” that precedes it, and

marked *forte*. Measures two through five of the voice part with poetic stresses highlighted are shown in example 4.1.

The image shows three staves of musical notation for a voice part. The first staff contains measures 2 and 3. Measure 2 is marked 'tempo' and 'f'. Measure 3 is marked 'rit.'. The lyrics 'Wie bin ich froh!' are written below the notes. Red boxes highlight the syllables 'bin', 'ich', and 'froh!'. The second staff contains measures 4 and 5. Measure 4 is marked 'tempo' and 'f'. Measure 5 is marked 'rit.'. The lyrics 'noch ein-mal wird mir al-les grün und' are written below the notes. Red boxes highlight the syllables 'ein-mal', 'wird', 'al-', and 'grün'. The third staff shows measure 6, marked 'tempo', with the lyrics 'leuch-tet so!'. Red boxes highlight the syllables 'leuch-' and 'so!'.

Example 4.1: Op. 25/i measures 2-5 of voice part with poetic stresses highlighted.

Measure six includes the beginning of the third verse, which is separated from the previous verse by the equivalent of a full measure of 4/4, plus one eighth-note. “Noch” is unaccented in the measure by beginning on an offbeat, as is the first syllable of über, which should be accented. The second syllable of über is an anacrusis to measure seven, and therefore matches its poetic status as an unaccented syllable. “-blühn” completes the word überblühn, and falls on a downbeat, agreeing with its poetic stress. This syllable is also accented through an ascending major sixth melisma. Measure seven concludes with “die Blumen,” marked *forte*, with accented “Blu-” falling on the third beat, with adjacent unaccented syllables on either side falling on off-beats. The third verse concludes in the following measure, accenting “Welt” through another melisma which this time spans a major ninth. The poetic stresses as they exist in the score in measures six through eight are shown in example

4.2.

The image shows a musical score for voice in 3/4 time. The first line (measure 6) shows the notes for 'noch ü - ber -' with a red box around the 'ü' syllable. The second line (measures 7-8) shows the notes for 'blüh - die Blu - men mir die Welt! - noch ein -' with red boxes around 'blüh -', 'Blu -', 'mir', 'Welt!', and 'ein -'. The score includes dynamic markings like *f* and *rit.*, and a tempo change to *tempo*. Measure numbers 6, 7, and 8 are indicated above the staff.

Example 4.2: Op. 25/i measures 6-8 of voice part with poetic stresses highlighted.

Webern places barely a break between the final two verses. Only a single triplet-eighth-note exists between the conclusion of the third verse and the beginning of the fourth. A greater break exists between the word “hingestellt” and “und bin auf Erden” between measures ten and eleven, concluding the poem. Webern is in fact treating these final seemingly extra two and a half iambic feet as a musical coda. The rhythm to which these final words are set resemble quite closely the rhythm which opened the text. In the second measure Webern sets “Wie bin ich froh!” to two quarter-notes, an eighth-note and a quarter-note with an eighth-rest on the downbeat; in this final measure Webern uses a quarter-note, a dotted-quarter-note, an eighth-note and finally two triplet-eighth-notes, once again with an eighth-rest on the downbeat. The final measures of the voice part are shown in example 4.3.

Example 4.3: Op. 25/i measures 9-11 of voice part with poetic stresses highlighted. Note the similarity between measure eleven's similarity in contour and rhythm to that of measure two.

This setting falls in line with my interpretation of the poem from the previous section. By linking these two statements, “Wie bin ich froh!” and “und bin auf Erden” Webern is highlighting that connection between the narrator, and his happiness, or fulfillment, when coming to the realization that he is part of the nature that the world brings forth. In Webern’s setting we can read “How delighted I am! And I am on Earth.” Webern makes explicit his oneness, and perhaps all man’s oneness, with nature. The subject matter, once again, relating directly to Webern’s own life and strongly held heimat, as well as the pastoral imagery that began back in the first song of Op. 18, “Schatzerl klein.”

4.2.3 ROW ANALYSIS

The following section will uncover in detail not only Webern’s row usage throughout Op. 25/i, but will break the score down into a chain of

consistent set-classes in order to trace a logical harmonic progression that displays a high degree of close voice-leading.

Webern's row usage in this song integrates ideas from Op. 18, although with a considerably higher degree of clarity. The near unflagging consistency of rhythm in the accompaniment, which I also discuss in the section following this, adds to this clarity. Webern chooses individual rows for the voice and piano parts, but his exploration of row invariances helps him close rows and phrases in the voice with the pitch content of the piano. This can be seen as a way Webern creates cohesion between the parts, unlike the strictly distinct rows of Op. 18/iii.

Unlike Op. 18, in Op. 25 Webern bases all three songs on a single matrix. His row choices between songs display an overall formal consideration mimicking a tonic, departure from tonic, and return to tonic. These two elements bind the entire work as a whole.

Analyzing this row we find symmetry built right into its structure. The row is made from two hexachords of the same set-class, 6-2. This immediately shows that Webern has, since the time of Op. 18, become increasingly cognizant of the importance of row construction upon the larger structure of his works. The symmetry that becomes a hallmark of the composer's later style is a direct result of his row construction.

Looking closer at the harmonies created by adjacent order numbers shows us that these hexachords do consist of three set-class

3-3 trichords, with one 3-4 trichord appearing as order numbers three through five. Imbricated trichord harmonies are shown starting from each order number of the Op. 25 row in figure 4.1.

Order Nos.	pc integers	normal order	prime form	Forte number
0 - 2	0, 9, 8	{8 9 0}	[014]	3-3
1 - 3	9, 8, e	{8 9 e}	[013]	3-2
2 - 4	8, e, 6	{6 8 e}	[025]	3-7
3 - 5	e, 6, t	{6 t e}	[015]	3-4
4 - 6	6, t, 7	{6 7 t}	[014]	3-3
5 - 7	t, 7, 4	{4 7 t}	[036]	3-10
6 - 8	7, 4, 3	{3 4 7}	[014]	3-3
7 - 9	4, 3, 5	{3 4 5}	[012]	3-1
8 - 10	3, 5, 2	{2 3 5}	[013]	3-2
9 - 11	5, 2, 1	{1 2 5}	[014]	3-3

Figure 4.1: Imbricated trichord harmonies of Op. 25.

The matrix created from the row used throughout Op. 25 is shown in figure 4.2.

0	9	8	e	6	t	7	4	3	5	2	1
3	0	e	2	9	1	t	7	6	8	5	4
4	1	0	3	t	2	e	8	7	9	6	5
1	t	9	0	7	e	8	5	4	6	3	2
6	3	2	5	0	4	1	t	9	e	8	7
2	e	t	1	8	0	9	6	5	7	4	3
5	2	1	4	e	3	0	9	8	t	7	6
8	5	4	7	2	6	3	0	e	1	t	9
9	6	5	8	3	7	4	1	0	2	e	t
7	4	3	6	1	5	2	e	t	0	9	8
t	7	6	9	4	8	5	2	1	3	0	e
e	8	7	t	5	9	6	3	2	4	1	0

Figure 4.2: The Op. 25 matrix.

“Wie bin ich froh!” makes use of only four row-forms, P_7 , I_7 , and their retrogrades. The piece opens with RI_7 in the piano, where that final pitch, order number **0**, is the first pitch of the voice part, which continues to project P_7 . Immediately following the vocal entrance in measure two, the piano also plots its own course through P_7 . The piano runs through its row faster than the voice, concluding on the first beat of measure three while the voice continues its P_7 through to the end of measure four. The voice’s conclusion of P_7 coincides with the end of the second line of poetry, indicated in the previous section as line 2b. The conclusion of the piano’s RI_7 , following its own P_7 , also concludes here.

A small rest exists between the simultaneous conclusions of both the voice and piano’s P_7 and the next P_7 , which also appears in the voice. The first four order numbers of P_7 round out the final words of the second verse, “und leuchtet so!,” with the piano concluding the row’s pitches in a brief interlude that takes up most of measure five. Measures one through five and their row order numbers are shown in example 4.4.

The image shows a musical score for a voice and piano piece. The tempo is marked 'Langsam' (slow) at approximately 60 beats per minute. The score is divided into three systems. The first system covers measures 1-4, the second system covers measures 5-11, and the third system covers measures 12-17. The voice part (Gesang) and piano part (Piano) are both in 3/4 time. The score includes German lyrics and English translations. Red annotations highlight P7 rows and order numbers. The first P7 row is 11 10 9 8 7, and the second is 9 10 11. The third system starts with a P7 row of 1 2 3 and ends with 6 7 8 9 10 11 0. Dynamics include *f* (forte) and *p* (piano). Performance instructions include 'rit.' (ritardando) and 'tempo'.

Gesang Voice
 Langsam ♩ ca 60 rit. - P7: - tempo 0 1rit. - 2 3 -
 Wie bin ich froh!
 What great de-light!

Piano
 RI7: 11 10 9 8 7 6 5
 P7: 0 1 2 3 4 8 7 5
 P7: tempo 4 5 6 7 8 9 10 11 rit. 0 -
 P7: 9 10 11 8 7 6 5 4 3 2 1 0
 RI7: 11 10 9 8 7
 P7: 1 2 3 tempo 5 6 7 8 9 10 11 0
 leuch-tet so! shines so bright!

Example 4.4: Op. 25/i measures 1-5 with rows and order numbers.

The first and second verses, then, form a compact symmetrical form inside approximately the first third of the song. Where the anacrusic measure's row led to the voice's first pitch of "Wie bin ich froh!," the concluding phrase, using the same row, begins with the voice's rhyming answer "und leuchtet so!," before being concluded by the piano. Adding to this arch-form are the P7 rows at the open and close of

the voice, with that same row bookending a single RI_7 in the middle of this section. Furthermore, these rhyming lines of two iambic feet each, are set to the exact same pitches. Webern inverts the first two intervals of “Wie bin ich froh!” for his “und leuchtet so!” answer, starting from the exact same pc_7 . This contour is shown in example 4.5.

The image shows two staves of musical notation. The top staff is in 2/4 time, marked 'tempo' and 'f', with lyrics 'Wie bin ich froh!'. The bottom staff is in 3/4 time, marked 'rit.' and 'p', with lyrics 'und leuch-tet sol...'. The notation shows pitch contours and dynamics for both parts.

Example 4.5: Comparison of opening of the first verse (top) and closing of the second verse (bottom) of Op. 25/i.

Contrast between the first two verses and the final two verses is created in part through Webern’s use of I_7 in measure six, which begins the third verse after a relatively significant piano interlude.

Once again Webern uses the same row in the voice and piano, though this time creating a separation of parts by not sharing pitches between parts like in the piece’s opening.

The fourth and final row-form used, R_7 , appears in measure seven in the piano part, which is repeated upon completion in the next measure, continuing through to the middle of measure ten. Measures six through ten are shown in example 4.6.

6 *I*: 0 1 *I*: 7 2 3 *f* 4 5 *rit.* 6 7 8 - 9 - *tempo* 10 11
 noch ü - ber - blühn die Blu - men mir die Welt! noch ein -
And still the the is o - ver grown with flow'rs! Once more
 world_

p 1 2 3 4 5 6 7 8 9 10 11 *f* 11 10 9 8 7 5 2 1 0 11
 mal_ bin ich ganz ins Wer - der hin - ge - stellt
I in cre - a - tion's por - tal live my hours,
f 7 6 5 4 3 2 1 0 11 10 9 8 7 *RI*: 7
 10 8

Example 4.6: Op. 25/i measures 6-10 row counts.

The final completed row in the voice is P_7 , which begins in a markedly weak position as the highpoint of a melisma on the unstressed second syllable of “einmal,” the second word of the fourth verse. This pitch, pc_7 , appears in a weakened metrical place as well as the second eighth-note of a triplet. All this to say that Webern does not appear to be making an effort to separate these rows from each other, but is instead adjoining these row-forms in a manner that allows him to avoid a phrase break or cadence.

Though the P_7 in the voice is the last full row to appear in the voice, the final three syllables of text draw their pitches from the piano’s RI_7 , and I_7 . In measure ten, the piano’s final two beats expose order numbers **11** through **7** underneath the voice’s order number **9** of P_7 . In

the penultimate measure Webern concludes the voice's P_7 and the piano's RI_7 on the third beat. The final pitch of RI_7 , pc_7 , appears in the voice, and acts as a pivot to I_7 which is then shared by voice and piano. Order numbers **4** through **11** of I_7 appear in the piano's final measure, balancing out the piano introduction's RI_7 . The piano's 4/4 meter also counters the tension created by the introduction's 3/4 meter that beams its first two eighth-note grouping across the bar. Incidentally the piano introduction, though set in 3/4, is equal to one full measure of 4/4. The final measure, therefore, resolves several tensions created at the opening of the piece. The row counts for measures eleven and twelve are shown in example 4.7.

Example 4.7: Op. 25/i measures 11-12 row counts.

4.2.4 HARMONIC ANALYSIS

Joseph Straus points out Webern's grouping of 3-3 trichords within the row as the first, third, and fourth discrete trichords. He also details Webern's beginning to group non-adjacent pitches into consistent

3-3 harmonies through registral placement.¹⁰⁰ These observations help to place Op. 25 as a bridge between Op. 18 and Op. 30 which I discuss in chapter five. That Webern is favoring one particular set-class, and that that set-class is 3-3, points to one of the compositional concerns of Op. 18. It was in that piece, namely Op. 18/ii, where Webern organizes the pitch-class content of the entire ensemble into areas of 3-3 saturation. This, as I showed in chapter three, is opposed to Op. 18/i where the pitch-class content is organized for set-class 3-5 saturation. The pitch content for the pieces of Op. 18, if you recall, having been derived from three separate matrices, is a dissonance that is resolved in this piece.

Highlighting specific set-classes, or intervals, is something that we will see take a primary role in my analysis of Webern's Op. 30. I will argue in chapter five that this is one of the elements used in later Webern that drew his acolytes to extrapolate integral serialism.

In the following analysis I will uncover the many instances of 3-3 harmony as they appear throughout this song. I will then explore the close voice-leading relationship between these harmonies as they exist in my tetrachordal hexatonic poles.

Being that each of the groups of triplet-sixteenths belong to set-class 3-3, they can serve as a point of relative harmonic repose. We can

¹⁰⁰ Straus, Joseph, *Introduction to Post-Tonal Theory: First Edition* (Englewood Cliffs: Prentice Hall, 1990), 18-21.

approach these triplets as harmonic goals, mostly linked by the material in between. The opening gesture is shown in example 4.8.

Example 4.8: Op. 25/i introduction with set-class 3-3 harmonies highlighted.

Figure 4.3 below shows this introductory gesture mapped on a set-class 3-3 hyper-hexatonic system.

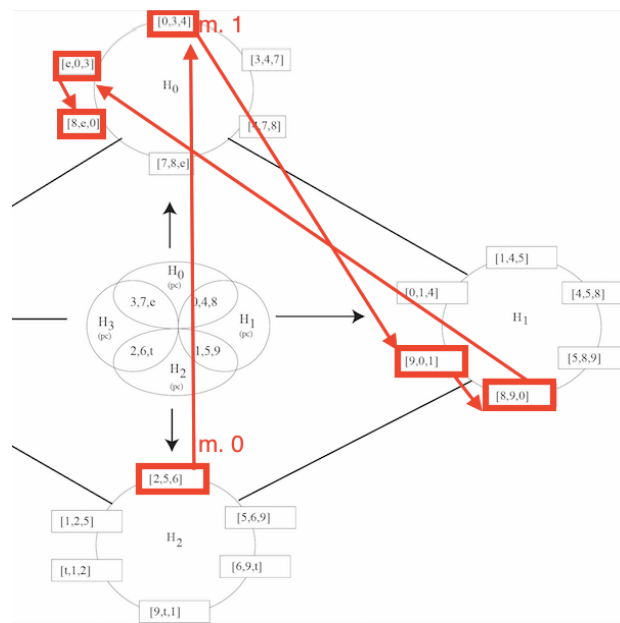
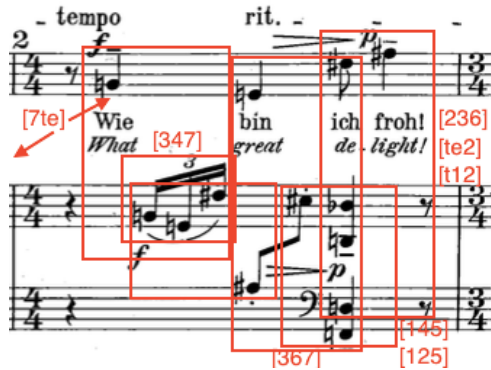


Figure 4.3: Op. 25/i opening measures mapped onto a set-class 3-3 hyper-hexatonic system.

The instrumental introduction draws the pitches of its very first triplet, [256], from the southern hexatonic pole. The introduction immediately breaks away, with the two eighth notes following it coming from the northern pole with seemingly no connection or smooth transition between the two. Continuing to the voice's entrance such a dramatic disconnect does not exist.

In the first full measure set-class 4-7 appears in the form of an [8901] tetrachord. This tetrachord is contained within the Eastern hexatonic pole, and breaks down into two distinct 3-3 trichords— [890] and [901]. The eighth notes flanking this tetrachord, with pitch-classes 3, 4, t, and e, continue the chain of 3-3 harmony through to the voice's entrance with trichords derived from the Northern hexatonic pole, namely [034], [e03], [8e0], with pc10 connecting to pc7 in the next measure of the accompaniment doubling the voice. Shown on the 3-3 Tonnetz, this piano introduction, after breaking away from the initial [256], surrounds pc0, leaving [014] to be assumed as each of its pitches have been taken up by surrounding trichords.

A [347] 3-3 trichord appears as the first triplet in the second measure. The tetrachord in that same measure, [te25], can be broken down into trichords located in the Western and Southern hexatonic poles. Example 4.9 below shows measure two with set-class 3-3 highlighted.



Example 4.9: Op. 25/i measure 2 highlighting set-class 3-3 harmonies.

Figure 4.4 below shows set-class 3-3 from measure two graphed onto the hyper-hexatonic system.

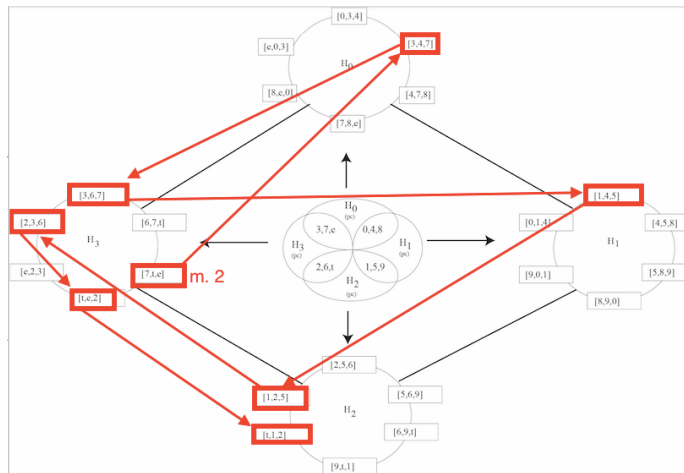


Figure 4.4: Op. 25/i measure 2 set-class 3-3 mapped onto hyper-hexatonic system.

The third measure strips away all but one of the surrounding eighth notes from the tetrachord. The eighth note that remains, despite being separated from the tetrachord by an eighth note rest, connects to that tetrachord with regard to close voice-leading. On the downbeat of the measure an [890] trichord derives its pitches completely from the

Eastern hexatonic pole, while pc6 belongs to both the Southern and Western poles. This connects the tetrachord, which contains one pitch from each pole, to trichord subsets in adjacent poles. Interestingly this tetrachord is a rare instance of Webern using set class 4-1 as a verticality.

Example 4.10 below shows set-class 3-3 highlighted in measures three through four.

The image shows a musical score for Op. 25/i, measures 3-4. The score is in 3/4 time and features a vocal line and a piano accompaniment. The tempo is marked 'tempo' and the dynamics range from *f* to *rit. p*. The lyrics are: 'noch ein-mal / Once more now / wird mir / all the / al - [901] / - les grün / un - furled / und / and'. The set-class 3-3 harmonies are highlighted in red boxes and labeled with set-class numbers: [125], [890], [236], [256], [te2], [034], [78e], [7te], and [78e].

Example 4.10: Op. 25/i measures 3-4 highlighting set-class 3-3 harmonies.

Figure 4.5 below shows measures three and four with set-class 3-3 graphed onto the hyper-hexatonic system.

In measure four the only pitch not belonging to a triplet-sixteenth is pc8, allowing Webern to move from the Eastern pole to the Western with a stop in the intervening Northern pole.

A bridging trichord may once again be assumed when connecting the final triplet of measure four to the tetrachord in measure five.

Measure four comes to a close with the Western hemisphere [7te], while

the next accompanimental sonority, after the conclusion of the second verse, is a [1256] 4-7 tetrachord in the middle of measure five. On the *Tonnetze* the voice-leading between these two distantly related simultaneities can be seen to have significant links. The tetrachord breaks down into two 3-3 trichords, [125] and [256], with [7te] an apparent LPL move away. However, we may assume the existence of both [te2] and [t12] as another subset of the septachord created between these two beats.

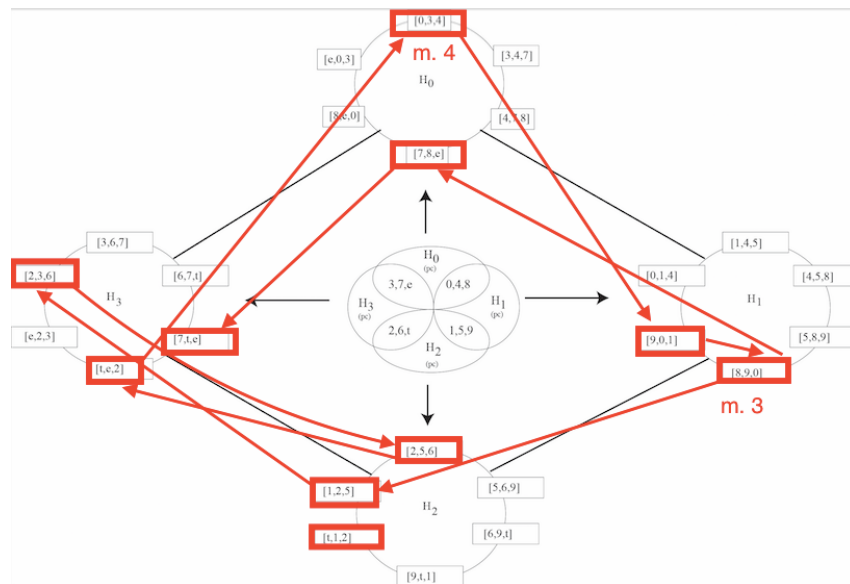


Figure 4.5: Op. 25/i measures 3-4 set-class 3-3 graphed on hyper-hexatonic system.

The remainder of measure five, and measure six finds motion between opposite poles, at first moving between East and West, with two tetrachords in measure six providing connections. Only the second of these tetrachords, the 4-2 on the third beat, contains a 3-3 subset. The first beat's 4-11 works as a connector, similar to the 4-1 tetrachord in

measure three. Example 4.11 shows measures five and six with set-class 3-3 highlighted.

The image shows a musical score for measures 5 and 6 of Op. 25/i. The score is written for voice and piano. The voice part has lyrics: "leuch-tet sol noch ü-ber shtnes so bright! still". The piano part features a triplet in measure 5. Red boxes highlight specific set-class 3-3 harmonies in both parts, labeled with set-class numbers: [347], [125], [256], [te2], [7te], [t12], [890], [390], [256], [034]. The tempo is marked "tempo".

Example 4.11: Op. 25/i measures 5-6 highlighting set-class 3-3 harmonies.

Measures five and six graphed onto the hyper-hexatonic system is shown in figure 4.6 below.

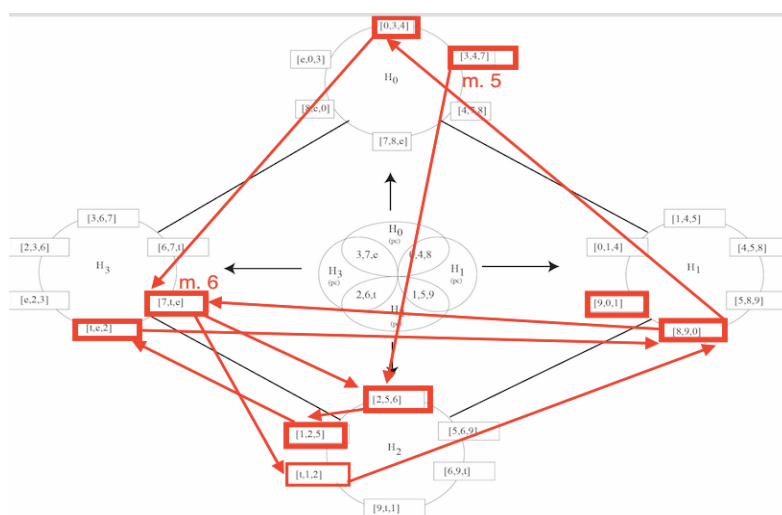


Figure 4.6: Op. 25/i measures 5-6 set-class 3-3 graphed on hyper-hexatonic system.

Measures seven and eight once again follow the pattern of beginning with a triplet derived from one hexatonic pole, moving abruptly to its polar opposite, but then connecting smoothly to the next triplet via

motion through adjacent poles. These two measures trace a path from West to North with a tetrachord derived entirely from the Southern pole. Measures seven and eight with set-class 3-3 highlighted is shown in example 4.12.

Example 4.12: Op. 25/i measures 7-8 highlighting set-class 3-3 harmonies.

Figure 4.7 graphs these harmonies onto the hyper-hexatonic system.

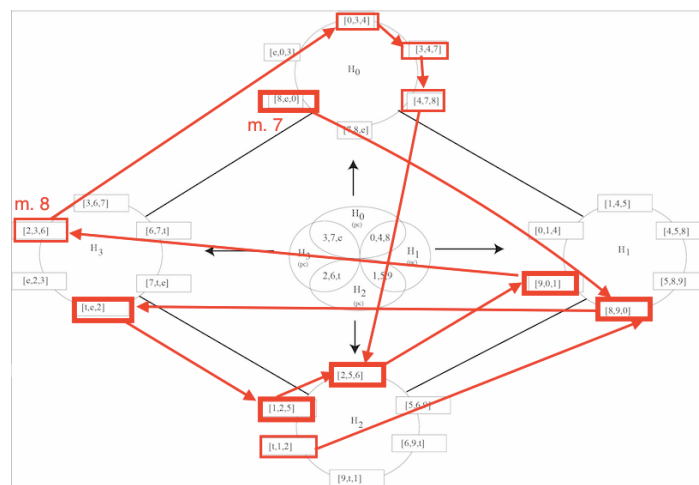


Figure 4.7: Op. 25/i measures 7-8 set-class 3-3 graphed on hyper-hexatonic system.

Another 4-1 tetrachord appears in measure nine, and is once again used as a bridge between two opposing poles. [9te0] is used as a

connector between North and South. At the end of measure nine a solitary pc6 stands as another connector between North and South, forming [367] from the Western pole with the triplet on the second half of the first beat of measure ten. The measure ends with the introduction of pitch-classes 4 and 3 at the end of the measure. With those two pitches the concluding measures consist of a chain of harmonies all linked through adjacent hexatonic poles. This chain of harmonies creates cohesion within the voice-leading across the final line of poetry, the coda-like passage of “und bin auf Erden.” The final measures are shown in example 4.13 below, and graphed onto the hyper-hexatonic system in figure 4.8.

The image shows two systems of musical notation for measures 9-12 of Op. 25/i. The top system covers measures 9 and 10, and the bottom system covers measures 11 and 12. Red boxes highlight specific set-class 3-3 harmonies in both the vocal and piano parts. The harmonies are labeled with set-class numbers: [871], [034], [256], [125], [034], [78e], [8e0], [890], [251], [347], [256], [890], [7te], [7te], [901], [034], [8e0], [901], [890], [7te], [78e], and [256]. The score includes lyrics in German and English, tempo markings like 'rit.', 'sehr langsam', and 'tempo I', and dynamic markings like 'f', 'pp', and 'p'. Measure numbers 9, 10, 11, and 12 are clearly marked at the beginning of their respective staves.

Example 4.13: Op. 25/i measures 9-12 highlighting set-class 3-3 harmonies.

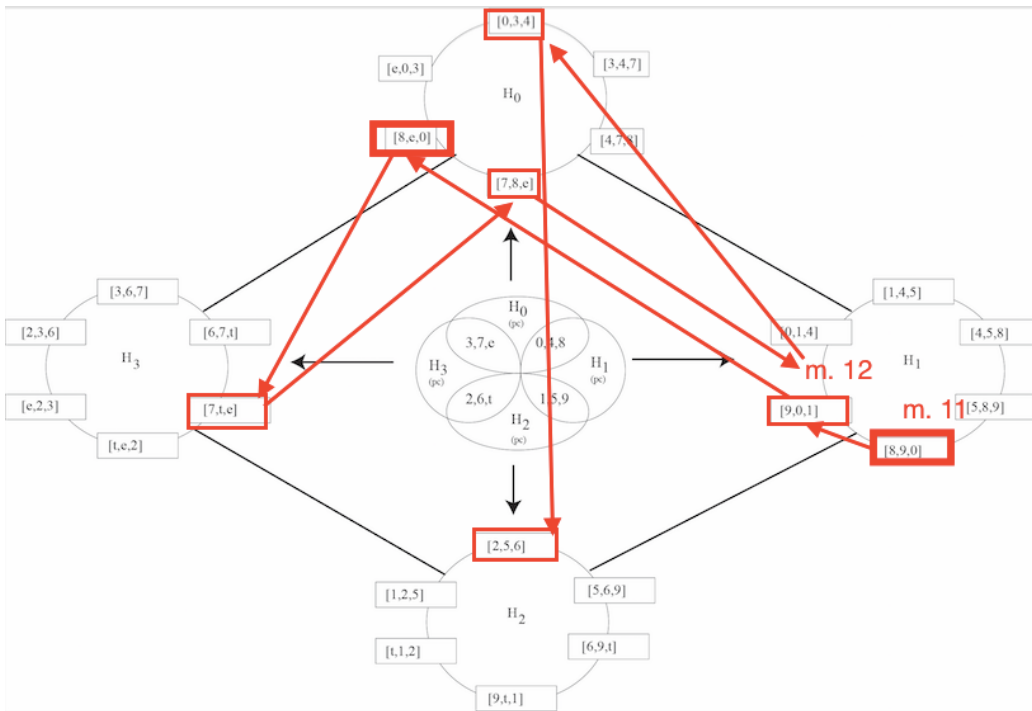
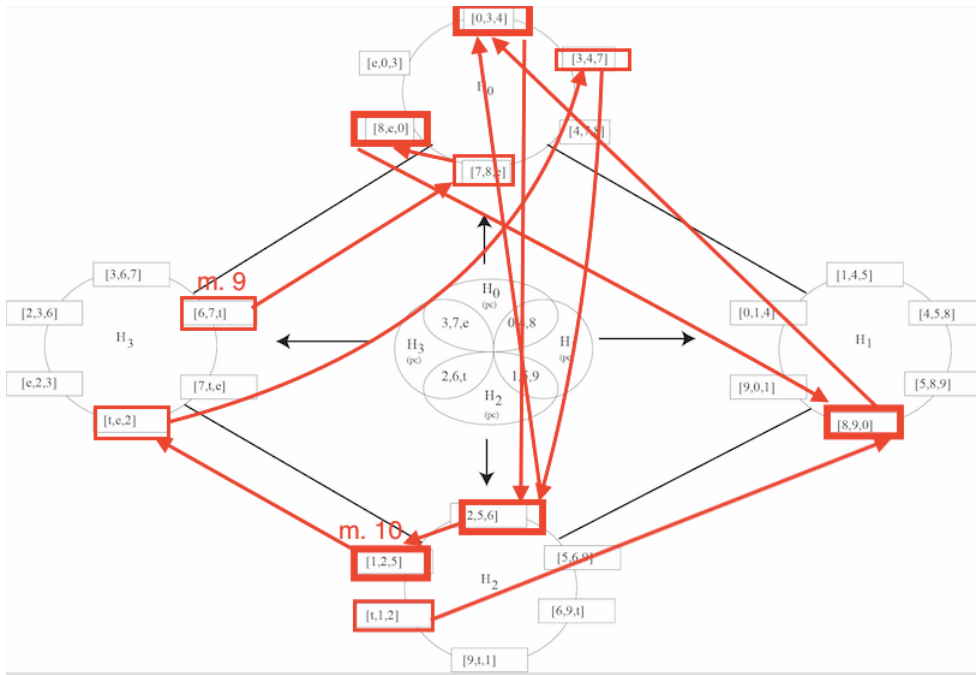


Figure 4.8: Op. 25/i measures 9-12 set-class 3-3 graphed on hyper-hexatonic system.

In working with a regularly recurring pattern of gestures in a near ostinato Webern is continuing to develop old forms to suit his new language. With this ostinato of sorts Webern creates a systematic progression using his triplet figures as harmonic touchstones which each belong to set-class 3-3. By using these harmonic touchstones Webern is able to vary the material which surrounds it, relying on the interaction between the voice and accompaniment to create his steady chain of set-class 3-3s.

Throughout the piece we find sudden leaps across the hyper-hexatonic system to opposite poles which then connect a string of harmonies to adjacent poles. Looking at the harmonic motion present in the examples throughout this section one will notice harmonies clustering around two adjacent poles for extended periods before breaking away to an opposite pole.

The harmonic motion here, though disjointed in parts, shows a considerable increase in focus when compared to the scattershot connections created in as many ways as possible throughout Op. 18. A more focused harmonic fabric here owes to a more conservative pitch saturation within the piano part, which I believe stems directly from an underlying association with the spacious sound and sharp attacks of the guitar which this part mimics.

4.2.5 PIANO PART AS GUITAR PART

The guitar arrangement of this piano part is aided throughout by its fairly regular cycling between the three different rhythmic cells. The rhythm throughout the accompaniment consists of single-beat rhythmic cells of triplet-sixteenths, two-eighths, and one-quarter. Some alterations of these cells do appear, but are closely related to the original cells. This song is the only one of the set to feature changing meter, moving between $3/4$ and $4/4$, while the second and third songs are in $3/8$, and $2/4$, respectively.

We will also see recurrent Koozin-shapes, and each rhythmic pattern constructed like arpeggiated chords with mostly consecutive s and r values.

Only one pitch in this song falls outside the upper range of the guitar, and required an octave adjustment. Pitch-class 0 in the middle of measure six has been brought down an octave. As a result of this change, the remaining three pitches of the tetrachord were also brought down one octave so as not to change the voicing of the simultaneity.

Two pitches in the piano part lie outside the guitar's low range. In the first full measure $pc9$ was brought up an octave, as was $pc5$ in measure six. Once again, in order to keep the voicing intact the other three pitches of these tetrachords was also adjusted up an octave. No

other pitches were harmed in the creation of this arrangement, and it is otherwise played at the exact sounding octave as written by Webern.

The introductory phrase is split across two measures of 3/4. The first two beats, spanning five attacks, are playable with each pitch dedicated to a single string. The opening anacrusis measure forms a <-142-4> Koozin-shape, that moves to <21321-> on the downbeat of the first full measure. The two eighth notes that close the first full measure are easily graspable from the same position as the tetrachord before the rest, with the open {s = 2, r = 0} aiding its simplicity. These opening measures are shown in example 4.14.

The image shows a musical score for guitar. The top staff is in treble clef, 3/4 time, with a key signature of one sharp (F#). It contains two measures of music. The first measure is an anacrusis, starting with a quarter rest followed by two eighth notes. The second measure is a full measure, starting with a quarter note followed by two eighth notes. Dynamic markings include *f*, *sf*, and *p*. A blue '3' indicates a triplet. Below the staff is a guitar tablature with fret numbers 9, 10, 12, 4, 5, 7, 0, 6. Red Koozin-shapes <-142-4> and <21321-> are written below the tablature.

Example 4.14: Op. 25/i opening measures as guitar part with tablature notation and Koozin-shapes.

Measure two mirrors the rhythmic pattern which opened the piece, also beginning on the second beat, but here the measure is in 4/4 which means the pattern can be contained without spilling over into the next bar. The tetrachord at the close of this measure includes a bit of a stretch, however the placement of pc2 and pcE onto {s = 2, 4, r = 0}

makes it possible. Example 4.15 below shows measures two and three with tablature notation and Koozin-shapes.

The image shows a guitar score for measures 2 and 3. The top staff is in treble clef, 4/4 time, with a key signature of one flat. It features a melodic line with triplets of eighth notes, marked with dynamics *f* and *p*. The bottom staff is a six-string guitar tablature, with fret numbers 6, 12, 14, 11, 14, 14, 0, 7, 10, 12, 13, 14, 12, 11, 11. Red arrows and brackets indicate Koozin-shapes: a blue bracket labeled '3' under the first triplet, and red brackets labeled '<-42-1>', '<-314-5>', and '<-2-31-3>' under the corresponding fret numbers in the tablature.

Example 4.15: Op. 25/i measures 2-3 as guitar part with tablature notation and Koozin-shapes.

We can break down each rhythmic element into their relative hand-shapes to get a better idea of the big picture link between harmony and hand-shape as the piece progresses. This is because there is, once again, a link between Koozin-shape and set-class, and each of the triplet figures in this song belong to set-class 3-3.

For each of the fourteen triplets that appear in the piece, the Koozin-shapes break down as follows: nine, or 64.4%, span four frets; three, or 21.4%, span five frets; and one, each 7.1%, span either three, or two frets.

Of the nine four-fret spanning Koozin-shapes, two are what I'm calling "124" shapes, and seven are "134" shapes. These can be seen below. These are found in measures two, three, four, five, seven and twelve in addition to the anacrustic measure. These four-fret spanning

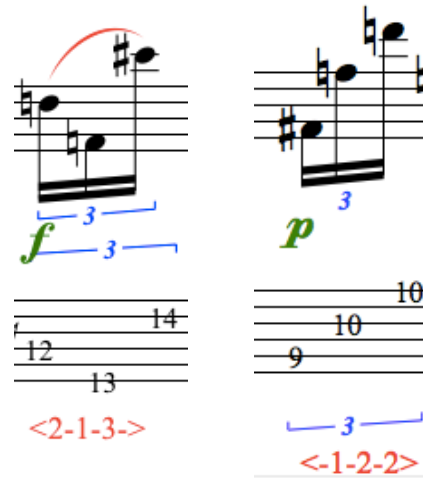
trichords are shown in example 4.16.

Example 4.16: The 4-fret spanning trichords in Op. 25/i from left to right (top): measure 0, 2, 3, 4, and (bottom) measures 5, 7, and 12.

Koozin-shapes spanning five frets appear in measures four, eight, and ten. Each of these creates a “135” shape, and can be seen below in example 4.17.

Example 4.17: The 5-fret spanning trichords in Op. 25/i from left to right in measures 4, 8, and 10.

Finally, in measures nine, and ten, are the triplet-sixteenth shapes spanning three, and two frets, respectively. These cells form “123” and “122” shapes, respectively. These trichords are shown in example 4.18.



Example 4.18: The 3-fret and 2-fret spanning trichords in Op. 25/i from left to right measures 9 and 10.

There are instances of triplets shown here that are equivalent in pitch and octave position, yet with differing *r* and *s* values and therefore different Koozin-shapes for at least one of the pitches. I decided upon a trichord’s particular positioning, or more specifically the *s* values of that trichord, by a combination of the position of the pitches approaching and following the trichord, a desire to maintain unique *s* values for as many proximal pitches as possible, while maintaining the most compact fret-span (closely related *r* value).

Tetrachords included in this song can be mapped out in a similar manner to that of the triplets. Unlike the consistent 3-3 harmonies

arpeggiated in the triplet figures, the tetrachords belong to several different set-classes. Set-classes represented include four 4-7 tetrachords, two 4-1, and a single tetrachord from set-classes 4-2, 4-3, 4-11 and 4-18. This multiplicity of set-classes means a lack of consistent Koozin-shapes. Despite these varying set-classes, and shapes, we can still group each into their varying degree of fret-spans; though the spans presented in these tetrachords in a few instances are larger than anything from the triplet harmonies.

Of the ten tetrachords in the piece four span three frets, three span four frets, and one each span five, six, and seven frets.

Three-fret spanning tetrachords appear in measures one, three, and six. The precise shapes and set-classes are shown in example 4.19 below, as are the tetrachords spanning four frets which appear in measures five, eight, and eleven.

The image displays seven musical examples of tetrachords, each consisting of a staff with notes and a corresponding fretboard diagram below. The examples are arranged in two rows. The first row contains four examples, and the second row contains three. Each example includes a dynamic marking in green (*p*, *f*, *pp*, or *ppp*) and a set-class label in red below the fretboard diagram. The set-class labels are: <2132-->, <2-31-3>, <213-0> <01-2-3>, <1-22-4>, <1-22-4>, <-4-214>, and <-2-31-5>. The fretboard diagrams show fingerings for the notes, with some examples including triplet markings.

Example 4.19: Op. 25/i tetrachords spanning 3 and 4 frets, from left to right in measures 1, 3, 6, 5, 8, and two in measure 11.

The remaining harmonies require somewhat extended stretches. A seven or five-fret spanning harmony may be difficult or impossible at lower positions on the neck, but in this instance they are rooted at the thirteenth and fifteenth frets, reaching to the nineteenth, where the frets are closest together. The six-fret spanning tetrachord does appear at a lower position on the neck, but its inclusion of two pitches with *r* values of 0 makes it considerably more playable, though still difficult. These tetrachords are shown in example 4.20.

The image shows two musical examples. The left example is a tetrachord marked with a green *p* (piano). It consists of four notes on a staff, with a flat sign on the first note. Below the staff is a fret diagram with three lines: the top line has the number 6, the middle line has 0, and the bottom line has 1. Below the fret diagram is the red label *<1-0-06>*. The right example is a tetrachord marked with a green *f* (forte). It consists of four notes on a staff, with a flat sign on the first note. Below the staff is a fret diagram with three lines: the top line has the number 19, the middle line has 14, and the bottom line has 13. Below the fret diagram is the red label *<-1-217>*.

Example 4.20: Op. 25/i 6 and 7-fret spanning tetrachords in measures 2 and 9.

The remaining rhythmic element, the pairs of eighth notes, sometimes appear in slightly altered forms as a single eighth-note, or in a triplet.¹⁰¹ All members of this eighth-note rhythmic group do serve as bridges between the previously mentioned rhythmic elements. Often

¹⁰¹ I am not including these with the triplet figures for a number of reasons. First, these pitches do not occur as triplets with any regularity, or a high frequency; and whenever these pitches appear as triplets they are two of three triplet eighth-notes, or a quarter-note with an eighth-note rest under a triplet bracket therefore more closely related to the original eighth-note dyad than to the three sixteenth-note attack.

times the eighth notes function as an extension of the sixteenth-note triplet figure, remaining in the same relative position on the guitar neck. For example in the opening measure, the high pc4 that follows the opening triplet-sixteenth pattern has the same r value as the pitch before. This means that the simple $\langle -142 \rangle$ Koozin-shape of that opening figure becomes $\langle -142-4 \rangle$ with the eighth note. The first full measure finds pc3 extending the $\langle 2132 \rangle$ shapes of the tetrachord in that measure to $\langle 21321 \rangle$. The leap from $\{s = 1, r = 12\}$ pc3, to $\{s = 2, r = 4\}$ pc3 is aided by a staccato mark on pc4. These are shown in example 4.21.

The image shows musical notation for the opening measures of Op. 25/i. The top staff is a treble clef in 3/4 time, with a guitar icon and the number 8 below it. The first measure contains a triplet of eighth notes (f, sf, p) and a sixteenth note. The second measure contains a quarter note (sf) and a quarter note (p). The bottom staff shows guitar fretboard diagrams for the first two measures. The first measure shows frets 9, 10, 12, and 12. The second measure shows frets 4, 5, 6, and 7. Below the fretboard diagrams are the Koozin-shapes: $\langle -142-4 \rangle$ for the first measure and $\langle 21321 \rangle$ for the second measure. Dynamic markings f , sf , and p are placed under the notes in the first measure. A staccato mark is placed under the note in the second measure.

Example 4.21: Op. 25/i opening measures with Koozin-shapes taking entire measure into account.

Measure three, the two eighth notes can be seen as extending the gesture of the triplet-sixteenths, extending the $\langle -314 \rangle$ Koozin-shape to $\langle -314-5 \rangle$. The high pc6, again marked staccato, is also in close proximity to the three-fret spanning tetrachord that follows. This is shown in example 4.22.

Example 4.22: Op. 25/i Koozin-shape for measure 3.

Measure four alters the two eighth-note gesture to an eighth-rest with a quarter note, all contained within a triplet bracket. Pitch-class 8 has the same r value as both the pitches surrounding it, making it the ideal pivot pitch. This is shown in example 4.23.

Example 4.23: Op. 25/i triplet figures with Koozin-shapes in measure 4.

Crossing from measure five into measure six, Webern places an eighth-note over the barline, much like he had done from the opening measure into the first full measure. Here the eighth notes share an r value of 15, perfectly within the range of the preceding sixteenth-note

triplets. This is shown in example 4.24.

Example 4.24: Op. 25/i measures 5-6 with Koozin-shapes.

Measure eight's eighth notes extend the previous beat's triplet sixteenths similarly. Only a single staccato eighth-note appears at the end of this measure, with a matching $\{r = 13\}$ to that of the first attack of the sixteenth-note triplet. Similarly, measure nine's eighth-note positions itself inside the sixteenth-note's Koozin-shape, as seen in example 4.25.

Example 4.25: Op. 25/i measures 8-9 with Koozin-shapes.

Finally, in measures ten through twelve the eighth note cells,

unlike those previously mentioned, require some small degree of a hand-shift, and do not insert themselves into a Koozin-shape held just prior.

Measure ten's eighth notes have the option of being played on the same strings as the two previous sixteenth-notes, moving $\{s = 1, 3 \ r = 10\}$ to $\{s = 1, r = 11\}$ and $\{s = 3, r = 9\}$. This would be the simplest solution. However, there is also the option of relegating these two pitches to their own strings previously unused by the sixteenth-note triplet figure. This solution would mean a greater upward shift of the fretting hand to $\{s = 2, r = 16\}$ and $\{s = 4, r = 14\}$. Despite the combined sixteenth-note, eighth-note figures using five individual strings, this would not make it possible to hold a single Koozin-shape as it would require a span from the ninth to sixteenth frets. However, this shift would facilitate grasping the tetrachord in measure eleven which spans the thirteenth through sixteenth frets. Positioning for the tetrachord is not necessary as measure eleven begins with a quarter-note rest plus an eighth-note rest. Both options for measure ten are shown in example 4.26.

Example 4.26: Op. 25/i two different options for performing measure 10.

Measure eleven has only one option due to the tetrachord's voicing, and the inclusion of the highest pc11 for the eighth note pair's first pitch. This means having to use two previously used strings, with an upward shift of the fretting hand.

The closing measure extends the Koozin-shape, while making use of $\{r = 0\}$ on the same string, $\{s = 1\}$. Measures eleven and twelve, with Koozin-shapes, are shown in example 4.27.

The image displays two staves of music. The top staff is a piano score in 4/4 time, featuring a melodic line with dynamic markings *pp*, *ppp*, *f*, and *p*. Blue brackets labeled '3' indicate triplet rhythms. The bottom staff is a guitar tablature corresponding to the piano part, with fret numbers (7, 14, 15, 16, 17, 19, 11, 14, 13, 11, 0, 12, 10, 9) and red Koozin-shapes: <-4-214>, <-2-31-5>, <--1431>, and <-142-->. Blue brackets labeled '3' are also present under the tablature.

Example 4.27: Op. 25/i measures 11-12 with tablature notation and Koozin-shapes.

In many ways the guitar arrangement of this piano part compares to the guitar part for Op. 18.

The relatively small fret-spans required to transfer the piano part directly onto the guitar are quite reminiscent of the part written for Op. 18, which I detailed in the previous chapter as being written quite well for the instrument. Related to this are the sequential r values used in both the Op. 18 guitar part and the piano arrangement here.

Interestingly there exists, within Op. 25/i, what I would argue is an increased degree of “guitarness” to the supporting piano part. The increased clarity, and spaciousness of the part, is considerably less active than any of those of the Op. 18 songs. This seems to work against the advantages of using a piano. Specifically, a piano would typically be called upon to sustain notes, creating many layers with its capacity for resonance.

These specific traits point toward the guitar’s influence working its way into Webern’s instrumental writing. In the sections which follow, discussing the remaining songs of Op. 25, we will see these trends continue.

4.3 OP.25/II “DES HERZENS PURPURVOGEL FLIEGT DURCH NACHT”

4.3.1 TEXT ANALYSIS

Webern takes as the text an excerpt from a poem by Hildegard Jone titled “September,” the third and last poem in the collection *Die Freude*, which paints a vivid picture of autumn. According to Paul Taylor Morgeson, the excerpt

depicts two creatures in the throes of death, who are, in a sense, coming to terms with the final moments of their life cycle. The magenta bird of the heart has a dualistic connotation, one being

the blood that is physically pumped through the heart and the other a reference to the mythical phoenix.¹⁰²

The poem describes a metamorphosis, and this excerpt's conclusion "clearly represents death, but more specifically it represents a corporeal death, not a spiritual one."¹⁰³ This is an important distinction, as the lyrics of this song are concerned with depicting nature's realities, something physical and tangible, not personally-held spiritual or religious beliefs.

Based on punctuation there are five verses in the poem that are, according to the abba/abba rhyme scheme, written in the form of an octet. The first four lines contain ten, eleven, eleven, and ten syllables, respectively; while the next four lines invert that organization with eleven, ten, ten, and eleven syllables, respectively. I have placed in bold the stressed syllables of the poem in the text below:

- 1a.) Des **Herzens Purpurvogel fliegt** durch **Nacht**.
- 2b.) Der **Augen Falter, die** im **Hellen gaukeln**,
- 2b.) sind **ihm voraus**, wenn **sie** im **Tage schaukeln**.
- 3a.) Und **doch** ist **er's**, der **sie** ans **Ziel gebracht**.
- 4c.) Sie **ruhen oft**, die **bald** sich **neu erheben**

¹⁰² Paul Taylor Morgeson, "Deconstructing Webern's Op. 25, Drei Lieder: A Multidimensional Assessment" (Master's Thesis, University of North Texas, 2013), 18.

¹⁰³ Morgeson, "Multidimensional Assessment," 19.

- 4d.) zu **neuem Flug**. 5.) Doch **rastet endlich er**
5d.) am **Ast** des **Todes**, **müd** und **Flügel schwer**,
5c.) dann **müssen sie** zum **letzten Blick** **verbeben**.

In English the text translates as:

- 1) The purple bird of the heart flies through the night.
- 2) The butterflies of the eyes that flutter in the light,
are ahead of him, when they sway in the day.
- 3) And yet it is he, who brought them to their goal.
- 4) They often rest, those who will soon rise again
to new flight. 5) But finally he rests
on the branch of death, weary and with heavy wings,
then they must expire with one last look.

Metrically the poem follows a strict iambic pentameter pattern that alternates unstressed and stressed syllables. However the lines with eleven syllables have a catalexis, meaning they are metrically incomplete lines of verse. In this case the eleven syllable lines leave off a stress at the end of each line.

Webern's music faithfully sets the text, paying close attention to its meter, verse structure, and meaning. Jone's consistent iambs are matched by Webern's unchanging 3/8 meter.

Just as the first line of the poetry serves as an introduction, Webern begins his setting with a short, two measure, piano introduction. "Des," the first word, is set with an anacrusis, appearing as the final sixteenth note of the third measure. That unaccented syllable is followed by a quarter note on the downbeat of measure four, to indicate the accented "Her-" of "Herzens." The next two accented syllables of the first verse also fall on the downbeats of their measures.

For the second verse, which also begins with an anacrusis, Webern completes the voice part's initial row, I_0 , with its final pitch $pc11$, adding another layer of anacrusis, with the accented syllable to follow on the next downbeat beginning a new row.¹⁰⁴ In this verse there appears a gesture of a quarter note tied to a sixteenth-note that is followed by a leap to another sixteenth note. The gesture in this verse leaps down an octave and a minor third from G5 to E4 on the word "Hellen," meaning "bright," in measure fourteen. In the first verse the similar gesture, in measure four, leaps upward a minor ninth from E-flat 4 to E5 on the word "Herzens," or "heart's." The similar gestures, the first of which leaps up, and the second of which leaps down, suggests an antecedent-

¹⁰⁴ A detailed discussion of the row-counts appears in the next section.

consequent relationship that connects the “heart” with a “bright”-ness, or an indication of the heart as that which provides life, and brings light into the eyes. This gesture appears once again in the same verse, in measure seventeen, on the next line on the second syllable of “voraus,” meaning “ahead of.” This third appearance features an ascending leap of an octave and a minor third from C4 to E-flat 5. The poetic stresses for the first two verses, within the context of Webern’s setting, are shown in the example below.

The three gestures that alternate with ascending and descending wide leaps are matched by a similar such gesture in the piano accompaniment that I will discuss in a later section of this chapter. These gestures seem to highlight specific words and hint at a hidden meaning within the poem.

The entire third line of poetry, measures sixteen through twenty, is set such that the stressed syllables according to the poetic meter, are also stressed according to the musical meter.

The first twenty measures of the voice part with poetic stresses highlighted, are shown in example 4.28 below.

The fourth line is the first not to begin with the same anacrusis as the previous lines. Instead, measure twenty-three begins with a sixteenth-note rest in the voice, over a silence of an eighth-note plus sixteenth note rests in the accompaniment. This break in

accompaniment is preceded by two measures of solo piano, creating an appropriate spacing between the relatively lengthy second verse, and the third. The setting of this fourth line of text on the second sixteenth-note of measure twenty-three, though not the same anacrusis as before, still retains the poetic meter, with “er’s” falling on the downbeat of measure twenty-four.

The image shows a musical score for Op. 25/ii, verses 1 and 2. The score is in 3/4 time and includes markings for 'rit.', 'tempo', 'p', and 'pp'. The lyrics are: 'Des Herzens Purpurvogel fliegt durch Nacht. Der Augen Falter, die im Helikoptergelenk, sind ihm vor aus, wenn sie im Tage schauen.' Red boxes highlight the poetic stresses on the following syllables: 'Her', 'zens', 'Pur', 'pur', 'vo', 'gel', 'fliegt', 'durch', 'Nacht.', 'Der', 'Au', 'gen', 'Fal', 'ter,', 'die', 'im', 'Hel', 'ken', 'gau', 'keln,', 'sind', 'ihm', 'vor', 'aus,', 'wen', 'sie', 'im', 'Ta', 'ge', 'schau', 'keln.'

Example 4.28: Op. 25/ii verses 1 and 2 with poetic stresses highlighted.

Measure twenty-nine introduces another rhythmic/gestural motive that appears three times. The motive consists of four or five sixteenth-notes in rapid succession which are preceded by a sixteenth-note rest that maintain the song’s prosody by continuing to place poetically stressed syllables on metrically strong parts of the measure. When this motive appears only two measures later, in measure thirty-one, the general contour of the first iteration is held, while the final occurrence in measure forty inverts the direction of the first two intervals and

concludes with a descending leap of a minor 6th. These motives are shown in the example below which details the poetic stresses as set by Webern for the third and fourth verses. These final verses are shown in example 4.29.

The image shows a musical score for Op. 25/ii, verses 3 and 4. The score is written in a single staff with a treble clef and a key signature of one flat. The lyrics are: "Und doch ist er's, der sie ans Ziel ge-bracht. Sie ru - hen oft, die bald sich net er - he - ben zu neu em Flug. Doch ra - stet end - lich er am Ast des To - des, müd - und flü - gel schwer, dann müs - sen sie zum letz - ten Blick ver - be - - ben." The score includes various dynamic markings (f, p, pp) and tempo changes (rit., tempo, sempre più lento). Red boxes highlight specific notes and rests that correspond to poetic stresses in the text.

Example 4.29: Op. 25/ii verses 3 and 4 with poetic stresses highlighted.

This section of the song further depicts the text in its musical setting. Beginning in measure thirty-four, around the words “am Ast des Todes,” or “the branch of death,” we see more rests being placed in between individual words, obscuring the break between the final two lines of poetry. Also indicated on the score is a ritard directly over

“Todes,” continuing through “müd und flügel schwer.” As the bird becomes tired, and its wings heavier with the inevitable approach of death, so too does the music grow slower and labored in its gradual unfolding. The final seconds become ever slower, “immer langsamer,” until the final measures marked “verlöschend,” or “dying away.”

Beginning in measure thirty-five the dynamic also struggles to remain at *pp*, as it pushes itself upward slightly, again laboring in its attempts to grow louder. The accompaniment quiets to *ppp* in its final two spacious measures before concluding just before the final word, “verbeben,” is complete.

4.3.2 ROW ANALYSIS

The songs contained within Webern’s Op. 25 song cycle are connected to his Op. 18 song cycle in a number of ways, though naturally a significant degree of evolution is present within every facet of the construction of these later songs. This comparison is strengthened in the fact that Webern’s Op. 25 was his last song cycle, whereas his Op. 18 song cycle is an important beginning to his serial method that ultimately led to these works.

Where the Op. 18 songs function as a testing ground for Webern’s new-found language, it is clear that he has mastered those techniques by the time of Op. 25. The construction throughout these songs is more

consistent, focusing on rows belonging to a single matrix through each of the songs. The relation between the rows here also plays an important role in the overall harmonic structuring of the song cycle, and can be thought of as relating to a classical idea of large-scale form.

The poem describes a metamorphosis, using two creatures normally associated with transforming themselves: the butterfly, and the Phoenix. Another connection concerning lyrical content therefore exists between Opp. 18 and 25. That the middle song of the earlier opus is also about an equally well-known transformation in the story of Jesus Christ is the first obvious link.

Harmonically the songs are also linked through the prevalence of 3-3 trichords that permeate their fabric. Where that harmony was almost overwhelmingly present in the earlier song, often overlapping in every combination of instruments as well as in the guitar part alone, its usage is still prevalent, but considerably more sparse throughout the piano accompaniment of Op. 25, and specifically in “Des Herzens Purpurvogel.” This is due to the great difference of texture and pitch density between the two opera.

Only two row-forms and their retrogrades are used throughout “Des Herzens Purpurvogel.” P_0 , R_0 , I_0 , and RI_0 make up the entirety of the melodic and harmonic structure of the song. These rows are shown in figure 4.9 below.



Figure 4.9: The row-forms of Op. 25/ii.

Once again, a focus on set class 3-3 plays an important role in the harmonies that make up “Des Herzens Purpurovogel.” Nearly every pitch throughout the piano part is a member of set class 3-3, on occasion with the help of a pitch from the voice part. This is also how the harmony of Op. 18’s “Erlösung” and “Ave Maria coelorum” was constructed, although harmonically speaking “Des Herzens Purpurovogel” is considerably less dense of an arrangement, often projecting no more than one or two members of set class 3-3 simultaneously.

As far as pitch exposure is concerned, Op. 25 no. 2 resembles that of Op. 18 no. 3, where each instrument of the ensemble is given its own row-form. But again, as with the advanced row construction that makes up this piece, so too is the vertical aspect of this piece evidence of Webern’s greater control over his harmonic language. To this end, Webern also explores similarities between the simultaneous rows used

within the work, enabling some pitches to serve double duty by functioning in two rows at once.

The first example of this happening within Op. 25 no. 2 is in measure five. The voice, which begins with an anacrusis to measure four, uses row-form I_0 while only a few beats later the piano follows its P_0 introduction with another iteration of P_0 . Webern makes use of the fact that order number **4** of both I_0 and P_0 is pc6. Webern does this again a measure later, using pc2 simultaneously as order number **5** of the voice's I_0 , and order number **10** of the accompaniment's P_0 . Measures one through eight with their row counts are shown in examples 4.30, and 4.31 below.

Example 4.30: Op. 25/ii measures 1-4 with row counts above each pitch.

Example 4.31: Op. 25/ii measures 5-8 with row order numbers above each pitch. Arrows point to pitches shared between rows.

Sharing pitches across rows happens regularly throughout this song. Anywhere from one pitch, as in the examples above, to three pitches, like in measure sixteen, will appear in the voice line depending upon what is necessary for the seamless continuation of the piano's row. Vertically aligning pitches like this resembles the pitch exposure array technique used in the first two songs of Op. 18, though the technique is considerably advanced here.

Pitches may simultaneously function as a member of more than one row horizontally as well. This occurs when Webern moves directly from one row to its retrograde, such as in the voice part on pc0 in measure twenty-eight.

There are also times when a pitch in the melody fills in a spot in the piano part as a result of their alignment. Take for example measure twenty. In that measure the voice part arrives at the word "schaukeln," set to pc5 and pc8, respectively. At that point the vocal melody is at the middle of its projection of I_0 that began in measure seventeen. The harmonic support at that point finds the piano also reaching the same point in its row projection despite having only started in the previous measure.

The row counts for the remainder of "Des Herzens Purpurvogel" are shown in examples 4.32 through 4.34 below. In the examples notice the

arrows that point toward instances where rows combine, or borrow pitches from one another as described above.

The image shows a musical score for measures 9-16 of Op. 25/ii. It features a vocal line and a piano accompaniment. The score is annotated with row order numbers (RIO) and arrows indicating shared pitches between rows. The tempo markings are 'rit.' and 'tempo'. The lyrics are: 'De - Au - gen fal - ter, The eyes, like day, light's die im Hel - len gau - keln, sind ihm vor - but ter a - ter'. The piano part includes dynamic markings like 'p' and 'mp', and articulation like 'acc.' and 'sc.'.

Example 4.32: Op. 25/ii measures 9-16 with row order numbers. Arrows point to pitches shared between rows.

Webern is able to manipulate the pacing with which each row is presented without disturbing either the text-setting, or the rhythmic, gestural, or voicing considerations of the piano part. This is accomplished through the use of consistent dovetailing of harmonic and melodic parts, or an interweaving of parts. The voice and piano cooperate in forming one unified fabric while still retaining their individual roles of harmony and melody.

All of these elements reveal Webern's increased mastery with serial composition. These evolutionary leaps in Webern's compositional process provide more evidence to support my claim that Webern is moving

toward what would become the orchestration of Op. 30 in which all the instruments work together to become, and project, one instrument.

The image shows a musical score for Op. 25/ii, measures 17-32. It features a vocal line (IO) and a piano accompaniment (PO). The score is annotated with red row order numbers (RO) and arrows pointing to specific pitches shared between rows. The lyrics are in German and English.

Measure 17: IO: 0, PO: 3. Lyrics: aus, head.

Measure 18: IO: 1, PO: 4. Lyrics: wenn sie and fly.

Measure 19: IO: 2, PO: 5. Lyrics: im be.

Measure 20: IO: 3, PO: 6. Lyrics: ta - ge fore it.

Measure 21: IO: 4, PO: 7. Lyrics: schau - kein. e - ver.

Measure 22: IO: 5, PO: 8. Lyrics: Und doch 1 ist 4 er's, 5 6 7.

Measure 23: IO: 6, PO: 9. Lyrics: Yet it's 1 the 4 bird 5 6 7.

Measure 24: IO: 7, PO: 10. Lyrics: der sie ans Ziel ge-bracht. Sie ru - hen oft, ten rest.

Measure 25: IO: 8, PO: 11. Lyrics: that brought them to their goal. They of ten rest.

Measure 26: IO: 9, PO: 10. Lyrics: die bald sich neu er - he - ben zu neu-em Flug. Doch Yet.

Measure 27: IO: 10, PO: 9. Lyrics: who soon must rise to head - ven to fly a-gain.

Measure 28: IO: 11, PO: 8. Lyrics: die bald sich neu er - he - ben zu neu-em Flug. Doch Yet.

Measure 29: IO: 0, PO: 7. Lyrics: die bald sich neu er - he - ben zu neu-em Flug. Doch Yet.

Measure 30: IO: 1, PO: 6. Lyrics: die bald sich neu er - he - ben zu neu-em Flug. Doch Yet.

Measure 31: IO: 2, PO: 5. Lyrics: die bald sich neu er - he - ben zu neu-em Flug. Doch Yet.

Measure 32: IO: 3, PO: 4. Lyrics: die bald sich neu er - he - ben zu neu-em Flug. Doch Yet.

Example 4.33: Op. 25/ii measures 17-32 with row order numbers. Arrows point to pitches shared between rows.

langsamer, $\text{♩} = \text{ca } 84$

PO: 33 11 10: 0 1 34 2 3 35 4 rit. 5 6 pp 7

ra - stet end - lich er am Ast des To des, müd
fin - al - ty he rests on death's grey branches, tired

IO: 1 2 3 4 5 6 7 8 9 10 11

PO: 2 1 2 3 4 5 6 7 8 9 10 11

RIO: 9 10 11

tempo rit. 8 9 10

immer langsamer, $\text{♩} = \text{ca } 58$

36 37 38 39 11 10 9 8

und fl - gel - schwer, dann müs - sen sie
with hea - vy wings: the but - terflies

RIO: 3 0 8 5 3 0 9 4 0 1 2

40 pp 41 42

verlöschend

zum letz - ten Blick ver - be - - ben.
then took their last and pe - - rish.

IO: 3 5 9

pp ppp

6 7 8 10 11

Example 4.34: Op. 25/ii measures 33-42 with row order numbers. Arrows point to pitches shared between rows.

4.3.3 GUITAR CONSIDERATIONS

By looking at the piano part specifically, and comparing it to the harmonic support provided by the guitar and E-flat clarinet in Op. 18, the sparseness of Op. 25 is quite striking. At no time during “Des Herzens Purpurvogel” are more than four pitches sounded in the piano part simultaneously, and even that happens only beginning at measure thirty-three, and again in measure thirty-six. Trichords also appear infrequently, in measures eight and nine only. The vast majority of the harmonic texture consists of single lines and dyads.

That the accompaniment is considerably more sparse makes it considerably more guitaristic. Webern’s musical language here is constructed in such a way that it is more readily transferable to the guitar. Webern favors interval-classes 3, 4, and 5 in adjacent order numbers, in a row that resembles that of the row for Op. 18 no. 2. Both of these rows are constructed from hexachords of the same set-class: Op. 18 no. 2 is made from two adjacent 6-1 hexachords, compared to Op. 25 no. 2’s adjacent 6-2 hexachords.

The rows for the first and last songs of Op. 18 seem disorganized when compared to those of the middle songs of both Op. 18 and Op. 25. Op. 18 nos. 1 and 3 are formed from rows that lack a focus on any particular interval-class, while Op. 18 no. 2’s row features heavily interval-classes 3 and 4 heavily. This is shown in figure 4.10.

Work	Row	Adjacent interval classes
Op. 18/i	0 e 5 8 t 9 3 4 1 2 7 6	1, 6, 3, 2, 1, 6, 1, 3, 1, 5, 1
Op. 18/ii	0 3 e 2 t 1 9 5 8 4 7 6	3, 4, 3, 4, 3, 4, 4, 3, 4, 3, 1
Op. 18/iii	0 e 8 7 6 t 9 3 2 1 5 4	1, 3, 1, 1, 4, 1, 6, 1, 1, 4, 1
Op. 25	0 9 8 e 6 t 7 4 3 5 2 1	3, 1, 3, 5, 4, 3, 3, 1, 2, 3, 1

Figure 4.10: Adjacent interval classes present in each of the rows for Opp. 18 and 25.

A semitone is, of course, the simplest horizontal interval for any instrument to traverse. For the purposes of simultaneous pitch, though, interval-classes 1 and 2 are not a convenient option for stringed instruments. Without the aid of an open string, a guitarist would need to reach the distance of either four frets, or six frets on adjacent strings depending upon whether the pitch would ascend or descend when moving from lower-pitched string to higher-pitched string.

If we use Rockwell's method where $\{s = 4,5\}$ then $\{r = 2,6\}$ or $\{r = 1,7\}$, the first voicing of which is already quite difficult to grasp, would become all but impossible if used as part of a trichord requiring another fretted pitch; the second voicing is nearly impossible to grasp without bringing the thumb out from behind the neck, or painfully contorting ones hand, which would be completely unnatural and ill-advised. However if $\{s = 2,3\}$, then $\{r = 3,6\}$ or $\{r = 2,7\}$. Voicings of ic1 are more manageable when they involve these adjacent strings. These examples are shown in figure 4.11.

Figure 4.11: Two ways of positioning semitones on the guitar neck on differing pairs of adjacent strings.

This reliance on ic1 within the context of a primarily linear piece of music, such as Op. 18 no. 3, makes sense. That each member of the ensemble is simultaneously exposing unique rows, means the vertical aspect of row projection is completely eliminated from the equation, and Webern gives up a considerable amount of control with regard to consistent simultaneous set-classes. Songs with only one instrument providing all support for the vocal line, like those in Op. 25, would not benefit from such a row.

Looking at the articulations, and pitch saturation used throughout Op. 25, one will notice how in many ways the piano writing is rather un-pianistic. Webern does not take advantage of the piano's ability to sustain for extended periods of time, to produce thick chords, or to explore a vast dynamic range. Instead, Op. 25 no. 2 remains subdued and mostly focused on *pp* to *p* with *f* only appearing twice, covering a

space of only three measures and always immediately followed by a decrescendo indication.

Pedal usage is equally limited, with indications reserved for the dotted-eighth to sixteenth-note figures in measures eight, nine and twelve along with a handful of other very brief appearances totaling approximately ten measures. The focus of the dynamic range, and lack of extensive sustain, suggests a degree of intimacy and restraint unlike what is usually expected from the piano.

Another element of “Des Herzens Purpurvogel” that suggests the guitar as a model for the piano accompaniment is the range in which the piano part is contained. On only a few occasions does the piano reach beyond what would be the range of the guitar, and not once does it reach below its range. A total of five pitches need to be brought down one octave in order to be played. The highest pitch of the piece, an E6 on the downbeat of measure sixteen, is the furthest out of range, by a perfect 4th. Other pitches too high for the guitar include three instances of C6, appearing in measures sixteen, thirty-four, and thirty-eight; two instances of C-sharp 6, appearing in measures thirty-five and thirty-six; and a D6 in measure twenty-eight. Those pitches are one, two, and three semitones out of range, respectively. The closest the piano comes to the low open E string, E2, is the F2 in the left hand of measure twenty-six.

This means that Webern leaves out a full octave plus a minor sixth from the low end of the piano's range.

Significantly restricting the dynamic range, avoiding characteristic sustain, and Romantic-era lushness, as well as the abbreviated range of the piano runs counter to the idea of using that instrument for accompaniment at all. Instead, these are characteristics more common to an instrument such as the guitar, with its quiet, personal character, comparative lack of sustain, and focus on simultaneities usually consisting of three, or four pitches. Continuing with that idea I will show the practicality of performing the piano accompaniment on a guitar. This could be thought of as an arrangement of the piano part for guitar, but as I will show, very little in the way of arranging needs to take place. Instead, what is involved requires only a few pitches be brought into range, while the entire rest of the score remains in place exactly as Webern wrote it.

4.3.4 PIANO PART AS GUITAR PART

More specific traits of the appropriateness of guitar over that of the piano become clear after comparing the piano part with the same music prepared for guitar. In my examples below I have prepared a tablature staff below the guitar part, which will help to show the mechanics involved in performing the part on the guitar. I will also use adapted

versions of Koozin and Rockwell's analytic methods where appropriate to show plucking-hand mechanics in support of the fretting-hand-based mechanics shown via tablature notation.

Despite its advantages, there are occasions when string-crossing, much like the hand-crossing throughout Op. 25's piano part, give a false impression of the directionality of a gesture by placing a higher pitch on a lower string. Tablature also fails to faithfully show plucking finger indications, and when necessary I will be discussing it using *f*.¹⁰⁵

Unlike the piano, a guitar performance offers the performer, in the majority of cases, multiple ways in which a harmony or passage may be played. The rigidity with which one pitch appears in only one place on the piano leads to the added difficulty of near constant hand-crossing in this piece. Perhaps the hand-crossing necessary throughout Op. 25 adds a level of virtuosity to the performance, and disguises the folk music basis of the work imbedded within. The hand-crossing required for the piano part is also an indication of the voicings used throughout the work. The mingling of both hands within the very same space on the keyboard points to the creation of a more singular voice, antithetical to the divided real-estate normally required of a piano part where each

¹⁰⁵ In Joti Rockwell's article he indicates the plucking finger with *p*. Because the specific style of banjo music that he discusses only makes use of three fingers, whereas classical guitar requires the use of four, I have made an alteration. Where Rockwell's *p* can equal T, I, or M for thumb, index, and middle fingers, respectively; I will be using *f* to equal P, I, M, and A for thumb, index, middle, and ring, respectively. I cover this in more detail in the methodology chapter.

hand has its specific zones of operation. Webern is instead creating a more difficult part by finding places for each hand to go, when what it seems he is really writing for is a single mechanism capable of playing what is written.

The opening two measures of the piano part can be played easily on adjacent strings of the guitar. The first measure can be played in the 2nd position, making use of the open B string, and following a $\{f = \text{piam}\}$ plucking pattern. Alternatively, the measure can be played in the 11th position, reaching down to the eighth fret for the first pitch. This path comes with two different sub-paths that both have their own advantages: playing each pitch on individual strings, $\{s = 6,5,3,2\}$, with an $\{f = \text{pima}\}$ pattern, using a pull-off from the pc8 to the pc11 on the second string, $\{s = 652-\}$ with an $\{f = \text{pim}\}$ pattern.¹⁰⁶ The former sub-possibility would allow for an easy transition due to the placement of the open second string as the final pitch of the measure, though it would be difficult to avoid doubling an $\{f = a\}$ attack from that pitch to the beginning of the descending gesture of the following measure. The latter possibility, though breaking from all other possibilities in that two adjacent pitches are assigned to the same string, would avoid the aforementioned double-plucking. These options are showed in the examples below. Note that at a

¹⁰⁶ A “pull-off” is simply a descending slur not articulated by the plucking-hand, but only by the fretting-hand.

higher position on the neck one can quite easily reach to more frets that would be considered reasonable from the lowest positions. Measure one and two are shown in example 4.35 below.

<-4014>

Example 4.35: Op. 25/ii measures 1-2 piano part as guitar part with tablature notation and Koozin-shape.

The second measure is also easily played on adjacent strings $\{f = \text{amip}\}$ in the 11th position. As mentioned before the open third string makes adjacent strings and adjacent plucking hand fingerings possible. The backwards roll, $\{f = \text{amip}\}$, directly relates to the general descent of the gesture that answers the $\{f = \text{pima}\}$ or $\{f = \text{pim}\}$ of the first measure. The pc3 on the downbeat of the third measure concludes the gesture, and can be easily reached from the same position as the measure that precedes.

The second measure also makes use of an open string, though this time it is the open third string. Where the open second string in the first measure made possible a characteristically Webernian leap of a descending major sixth followed by an ascending octave plus a perfect

fifth; the open third string in the second measure connects the descending octave plus a minor third. Open strings are often responsible for the largest leaps in the accompaniment.

An open fourth string in the third measure once again enables a correlation between the ascending gesture, and the forward plucking hand motion of $\{f = pim\}$. That open string is once again responsible for holding together large leaps that surround it and can be seen as the center of two widely voiced melodic segments. The pc3 on the downbeat of measure three ultimately resolves to the open fourth string via an F3 that is easily grasped without moving from the initial hand position of measure one. The open string then allows for the next three-pitch widely-voiced melodic fragment that moves through pc1 to arrive at pc0. That pc0 begins the next phrase, and concludes the arrival at the 6th position. Therefore, the open fourth string is important both in its musical, and physical manifestations. If, for example, the pc2 was instead placed an octave higher instead, the passage would not fit under the hand nearly as easily and the shift into the next phrase that begins in measure four would not be a smooth one. Example 4.36 below shows this discrepancy.

The image shows two musical staves side-by-side. Each staff has a treble clef and a key signature of one flat (B-flat). The left staff shows a melodic line starting on a half note G4, followed by quarter notes A4, B4, and C5, then a quarter rest. A red 'v' is above the C5 note. Below the staff, a red label reads '<-301-->'. The right staff shows the same melodic line, but the C5 note is replaced by a C6 note (two ledger lines above the staff). A red 'v' is above the C6 note. Below the staff, a red label reads '<-6-41->'. Both staves have a green 'pp' dynamic marking below the first note.

Example 4.36: Op. 25/ii with 3rd measure as written (left) and with pc2 moved up an octave.

Throughout my creation of a guitar version for Op. 25 no. 2, I found that it is never necessary to shift the fretting hand great distances in order to maneuver within a phrase. On the contrary, the majority of measures can be connected by simple shifts, sometimes aided by the use of an open string. Shifts of position throughout the piece happen mostly once per measure, akin to the harmonic rhythm of a traditionally tonal piece of music that changes harmonies at the same rate. As such there are sections of hand-position stasis linked together through transitional measures.

What should be noticed, regarding hand-positions and shifting is that a great number of the gestures, and indeed entire measures “fill the strings.” By this I mean that measures often can be played without any shifting around within the measure. Once the hand position is placed it is simply a matter of plucking-hand fingering.

The rhythmic similarity between measures four and five on the one hand, and measures eight and nine on the other are matched by similarities in their fingerings. Firstly, each of the pairs of measures can be played from a single hand-position. Measures four and five fall within a span of three frets, and for both measures $\{s = 1,4,2\}$ with an $\{f = \text{apm}\}$ plucking pattern. Measures eight and nine fall mostly within a four-fret range, with measure nine’s pc3 requiring a stretch down to the 11th fret. Despite this stretch both of these measures include the same s , with

{s = 1,2,4,5}, and {f = ima,p}. Non-adjacent measures five and eight are also connected by fretting-hand shape. Adopting Koozin's method for describing fretting-hand finger placement we would say that measures five and eight both feature a <-2-21> shape. This indicates that the s of these measures is the same, and their relative r is also the same. For measure five {r = 7,8,8}, while in measure eight the dotted eighth note trichord has {r = 14,15,15}; the interval between each successive element of r for both of these measures is equal with +1, +0, +0 showing, that these measures are connected by simple transposition. These four measures serve as bookends that are also connected through the transitional material found in measures six and seven that move the hand from the previous measure's 7th position to the latter's 13th. These measures are shown in example 4.37 below.

The image displays musical notation for two pairs of measures from Op. 25/ii, piano as guitar part. Each pair consists of a musical staff and a corresponding guitar fretboard diagram. The left pair shows measures 4 and 5. Measure 4 has a dynamic marking of *p* and a trichord shape <-1-32>. Measure 5 has a dynamic marking of *p* and a trichord shape <-2-21>. A dashed red line labeled 'VII' connects the 7th fret of measure 4 to the 7th fret of measure 5. The right pair shows measures 8 and 9. Measure 8 has a dynamic marking of *pp* and a trichord shape <-32-21>. Measure 9 has a dynamic marking of *pp* and a trichord shape <-64-31>. The fretboard diagrams show fingerings in red and fret numbers in red.

Figures 4.37: Op. 25/ii measures 4-5 (left) and 8-9 (right) of piano as guitar part.

Measure seven is where we come across one unplayable dyad. I have lowered pc7 down one octave, as the pitch written is only available on the first string, as is the high pc10. In order to retain the voicing of the dyad I decided to lower pc7 an octave while retaining the position of pc10. If it were possible to sound the pc7 on the second string, it would appear on the 20th fret. Lowered an octave, and played on the fourth string the note is found on the 17th fret. This means that either the written pitch, if it were possible, and the lowered pitch as I have written it, are both within the same hand-position of the notes that surround it. Measure seven is shown in example 4.38.

Example 4.38: Op. 25/ii measure 7, piano as guitar part.

Once again, in measure ten we find the first three sixteenth notes to match the *s* and relative *r* of measure eight, meaning they share a <—2-21> fretting-hand shape. This measure also functions as a connection from the idea presented in measure eight to new ideas for the next line of poetry that begins in measure eleven. The pitches of measure

eight are now sounded in a downward arpeggiation at the same octave level, though where measure eight followed this [256] trichord with a descending leap to pc1, measure ten's arpeggiation of that same trichord now leaps up to pc8. The downward leap to pc1 in measure eight is described by $\{r = 16\}$ and $\{s = 5\}$, and the upward leap to pc8 by $\{r = 16\}$ $\{s = 1\}$. Both leaps have the same r , but differ in s by -4. This shows the relative physical closeness of the pitches, despite their separation of an octave and a perfect fifth. Pitch-class 8, in the second half of measure ten, is then easily grasped in preparation of the descending gesture that closes the measure. Measures eight through ten are shown in example 4.39.

The image displays musical notation for three measures (8, 9, and 10) of a piano piece, specifically the guitar part. The top staff shows the piano part with dynamics *pp* and *f*. The bottom staff shows the guitar fretting-hand shape with fingerings and fret numbers. Red annotations below the guitar staff indicate fretting-hand shapes: $\langle -32-21 \rangle$, $\langle -64-31 \rangle$, and $\langle -2-21 \rangle$.

Example 4.39: Op. 25/ii measures 8-10 of piano as guitar part.

This shape appears a few other times throughout the piece. In addition to the aforementioned measures five, eight, and ten, measure twenty-seven also features the $\langle -2-21 \rangle$ fretting-hand shape. This, once again due to the nature of the guitar's tuning scheme, results in set-class

consistency. Measure twenty-seven is shown in example 4.40.

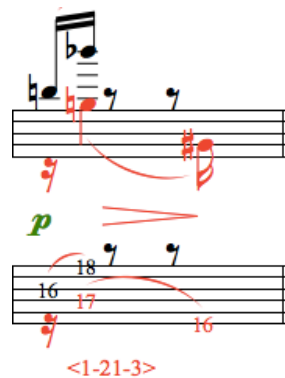
Example 4.40: Op. 25/ii measure 27 of piano as guitar part.

Measures five, and twenty-seven feature [7te] trichords, while measures eight and ten present [256] trichords. Both [7te] and [256] belong to the same set-class, 3-3, and therefore any simultaneity that fits within the <—2-21> shape will belong to set-class 3-3. Another recurring shape, <-1-2-2>, seen in measures thirty-one and forty-one results in a 3-3 trichord. In these measures the trichords are [589] and [7te], respectively. These two measures are shown in example 4.41.

Example 4.41: Op. 25/ii measures 31 (left) and 41 (right) of piano as guitar part.

Further long-range connections can be found within Op. 25 no. 2.

A rhythmic and gestural motive that recurs throughout the song features the most dramatic, and widest, leaps in either the accompaniment or the voice. This gesture, appearing in measures seven, fifteen, twenty-six, and thirty-one, is comprised of a quarter-note followed by a sixteenth note and bound together by a slur. This gesture as it appears in measure seven is shown in example 4.42.



Example 4.42: Op. 25/ii recurring gesture as it appears in measure 7.

In measure seven a descending leap of an octave and a major 7th accompanies the final words of the first line of poetry. Those words “flied durch Nacht” translate to “flies through the night,” and refers to the purple bird of the heart mentioned in the first half the line. Webern draws attention to this motive as it appears for the first time in support of these words, the first mention of flight, and that the motive here is laid bare so as to punctuate the soaring nature of the high pc7 as it falls alone dramatically to pc8. The gesture is situated at the beginning of row-form RI₀, aligned against the voice’s I₀ here aligned such that order

number **8** in the voice sits right between the two notes of the gesture, order numbers **9** and **7**. The soaring pitch that then falls from that great height is a summation of the entire story of the text.

From a guitar-centric point of view, the descending leap in measure seven requires motion from $\{r = 17, s = 4\}$ to $\{r = 16, s = 6\}$, connecting it physically to the descending skips in the aforementioned measures eight and nine, which both also step down to $\{r = 16\}$ pitches.

In the instance of this motive that follows, in measure fifteen, it is inverted to ascend as it reaches past its original height from measure seven by one half-step. Supporting the word “gaukeln,” meaning “flutter,” the leap of a major 7th from pc0 to pc11 moves from $\{r = 13, s = 2\}$ to $\{r = 19, s = 1\}$. The “flying through the night” of measure seven, is continued here as the bird “flutters” back toward the sky of the guitar’s highest pitch.

This inversion of measure seven’s motive propels the accompaniment into the upper reaches of the guitar, with the energy created dissipating in the measures that follow in a series of dyads beginning in the middle of the “fluttering” motive in measure fifteen, and continuing through measure twenty, when finally there is a major arrival point at the end of the second verse. Measures fifteen through twenty are

shown in example 4.43.

Example 4.43: Op. 25/ii measures 15-20 of piano as guitar part.

Measure twenty-six finds the next appearance of the “flying” motive. This time the initial quarter note moves from a dyad consisting of pc3 and pc4, to pc6. At this point the accompaniment is not able to ascend to previous heights, even with the support of an underlying, widely-voiced motive. Both the “flying” motive, here falling, and the supportive gesture that crosses from the bottom voice into the top while the “flying” motive is buried beneath, fit together under the hand like a jigsaw puzzle.

The middle note of the supportive lower-voice gesture can be played with an open third string {s = 3, r = 0}, while the dyad of the

gesture above is easily grasped with $\{s = 1, r = 11\}$ and $\{s = 4, r = 14\}$, also setting up the pc10 that is reached from $\{s = 2, r = 11\}$, as the two voices cross each other.

This supportive gesture is seen once again in measure thirty-seven, and also incorporates an open string. This time the gesture – exactly the same rhythmically, and similar in its wide ascending leaps – starts off with the open fourth string $\{s = 4, r = 0\}$ followed by two successive leaps of a major seventh. Those successive major sevenths are not quite as widely voiced as measure twenty-six’s ascending major ninth followed by ascending octave and a minor third. Despite their differences, both gestures remain equally playable regardless of the overlapping voices surrounding it. This widely voiced gesture is shown in its two instances in example 4.44.

Example 4.44: Op. 25/ii measure 26 (left) and 37 (right) of piano as guitar part.

The “flying/falling” gesture appears for the final time in measure thirty-one in its lowest form registrally. The quarter-note is once again a

dyad, and this time so too is the sixteenth-note. The dyads are played on adjacent strings, ultimately once again fitting together like a jigsaw puzzle. Appearing first on {s = 6, 4}, and followed by {s = 5, 3}, the pitches in this pair of dyads encompass the eleventh through thirteenth frets.

From the standpoint of fretting-hand fingering the dyads invert in shape, first creating a shape of <2-1—> followed by <-1-2—> or <2112—> when taken together. Two sixteenth notes above the motive are also fretted on the eleventh and thirteenth frets {s = 3, 1}, respectively. Measures thirty-one and thirty-two are shown in example 4.45.

Example 4.45: Op. 25/ii measures 31-32 of piano as guitar part.

These “flying/falling” gestures are reminiscent of the large leaps made by the voice in “Schatzerl klein,” the first song of Op. 18. Where the voice part in that song was used to symbolize yodeling, now the accompaniment is representing the flight of a bird.

4.3.5 HARMONIC ANALYSIS

As with the first song of this set, “Des Herzens Purpurvogel” also consistently projects set-class 3-3. A thinner texture means that harmonic motion becomes clearer and more directed. In this section I will detail the harmonic motion as it exists throughout “Des Herzens Purpurvogel.”

The opening two measures of piano introduction features two tetrachords, the first with two set-class 3-3 subsets, and the second creating a second 3-3 subset with the introduction of the pc3 on the downbeat of measure three. The voice opens measure four with [034] in between two other 3-3s in the piano as harmonic support. The opening four measures are shown in example 4.46.

The image shows a musical score for the piece "Fließend" (Op. 25/ii), measures 1 through 4. The score is in 3/8 time and includes piano and voice parts. The tempo is marked "rit." for measures 1-3 and "tempo" for measure 4. The lyrics "Des Herzens" are under the voice line in measure 4. Red boxes highlight specific harmonic structures. Labels include [890], [8e0], [67t], [347], [125], [901], [890], and [034].

Example 4.46: Op. 25/ii measures 1-4 highlighting set-class 3-3.

The hyper-hexatonic representation of these opening measures is shown in figure 4.12.

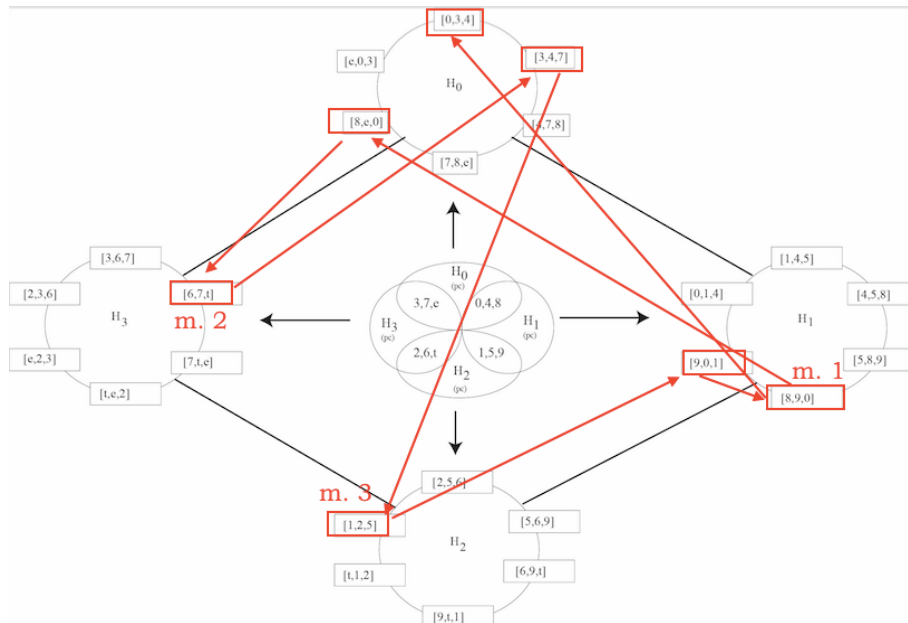


Figure 4.12: Op. 25/ii measures 1-4 graphed onto hyper-hexatonic system.

The graph in figure 4.12 details motion between adjacent hexatonic poles through the introduction. Upon the [125] on beat two of measure three the break between the introduction and the beginning of the first verse is indicated by motion between polar opposites. The [347] which marks the end of the introduction appears in the northern pole, which moves directly to the southern pole for the [125] trichord.

The reiteration of pitch as described in the row analysis section, plays an important role in projecting set-class 3-3 throughout this song. Often times, as can be seen in each of these examples, harmonies are returned to similar to the way we have seen before in Webern's overall harmonic schemes. Combining this with the relatively sparse texture finds a consolidation of harmonies, with groups of measures relying on a

relatively few different members of the same set-class. Additionally, due to the construction of the row, the majority of the piano's gestures belong to set-class 3-3, and more often horizontal appearances of a member of set-class 3-3 overlap with vertical instances of the same trichord.

Measures five-through eight, showing set-class 3-3, is shown in example 4.47.

Example 4.47: Op. 25/ii measures 5-8 highlighting set-class 3-3.

Measures five through eight graphed onto the hyper-hexatonic system are shown in figure 4.13.

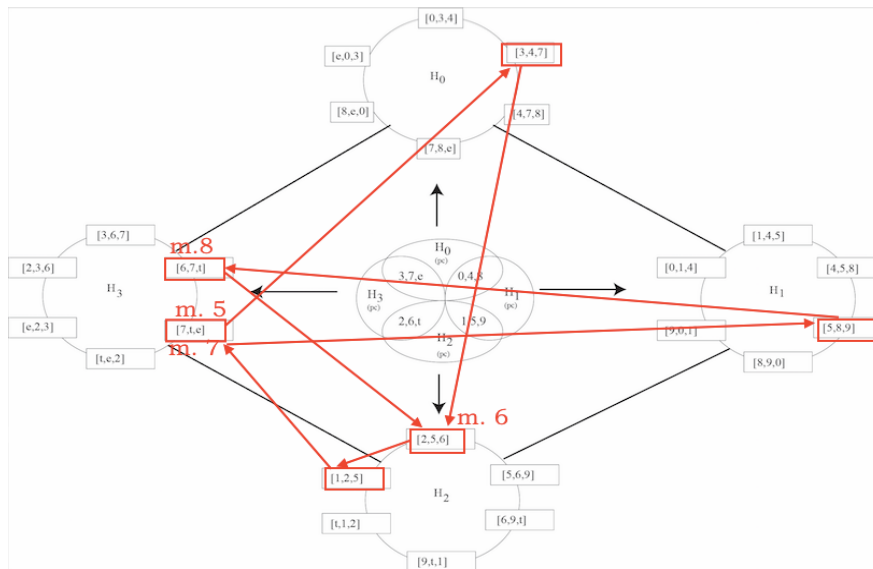


Figure 4.13: Op. 25/ii measures 5-8 graphed onto hyper-hexatonic system.

In the above graph we can see the outlier trichord [589] existing outside of the surrounding harmonies. This trichord is created through a combination of the voice and piano parts, where pc9 exists in the setting of the word “durch,” while pc8 and pc9 come from the conclusion of the piano’s “falling” gesture and the tetrachord that follows, respectively.

Relatively simple harmonic motion can be found in some of Webern’s recurring gestures. Measures eight and nine, discussed in the previous section as having special properties when analyzing its guitar performability, can be seen here to represent simple neo-Riemannian transformations, R and P respectively. These measures move from [256] to [125] in measure eight, and [034] to [014] in measure nine.

We see many of these characteristics recurring throughout the harmonic analysis of “Des Herzens Purpurvogel.” Examples 4.48 through 4.56 which follow detail the song, highlighting the harmonic progressions as they exist on the score, and then mapping them onto the set-class 3-3 hyper-hexatonic system in figures 4.14 through 4.22.

The image shows a musical score for measures 9 through 12 of Op. 25/ii. The score is written for voice and piano. The tempo markings are 'rit.' for measures 9 and 11, and 'tempo' for measures 10 and 12. The piano part is marked with dynamics *p* and *f*. The voice part has lyrics: 'Der Au - - gen Fal - ter, The eyes, like day light's'. Red boxes highlight specific set-class 3-3 harmonies in both parts, labeled with their respective set-class numbers: [034], [014], [256], [589], [7te] in measure 9; [t12], [125], [347] in measure 10; [890] in measure 11; and [8e0], [69t] in measure 12. The piano part also has a red box labeled [347] in measure 10.

Example 4.48: Op. 25/ii measures 9-12 with set-class 3-3 highlighted.

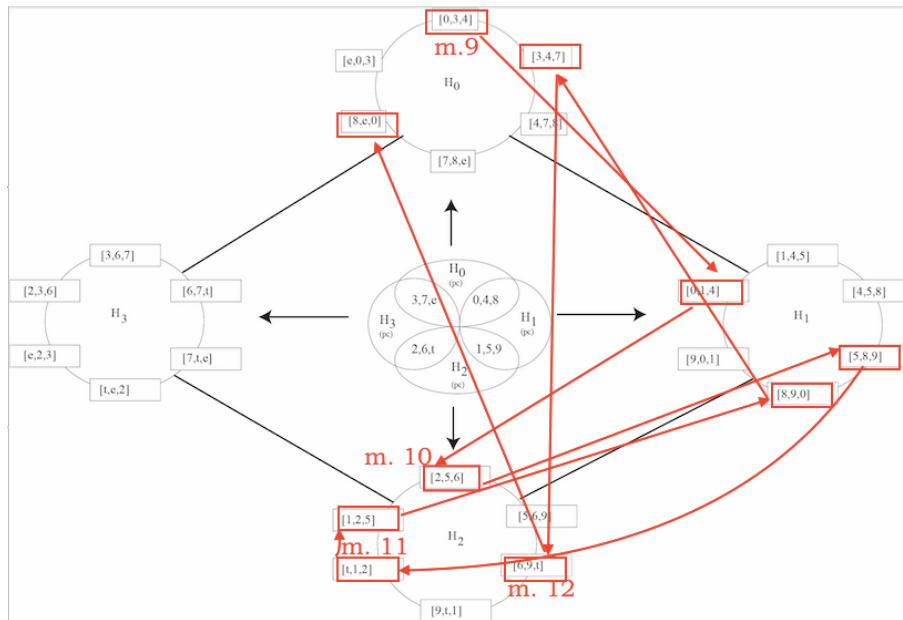


Figure 4.14: Op. 25/ii measures 9-12 graphed on hyper-hexatonic system.

Example 4.49: Op. 25/ii measures 13-16 with set-class 3-3 highlighted.

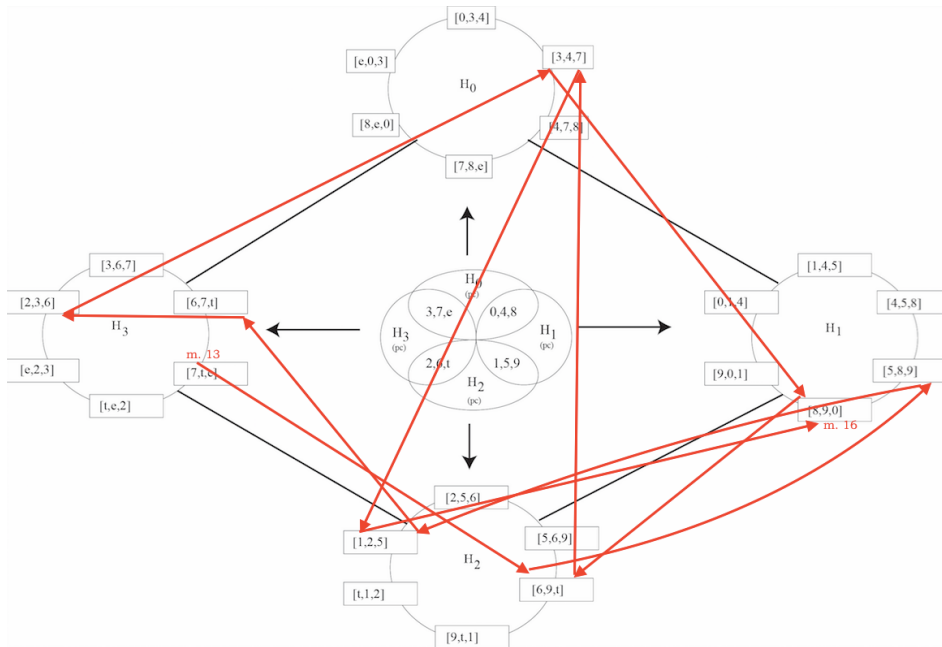


Figure 4.15: Op. 25/ii measures 13-16 graphed on hyper-hexatonic system.

Example 4.50: Op. 25/ii measures 17-20 with set-class 3-3 highlighted.

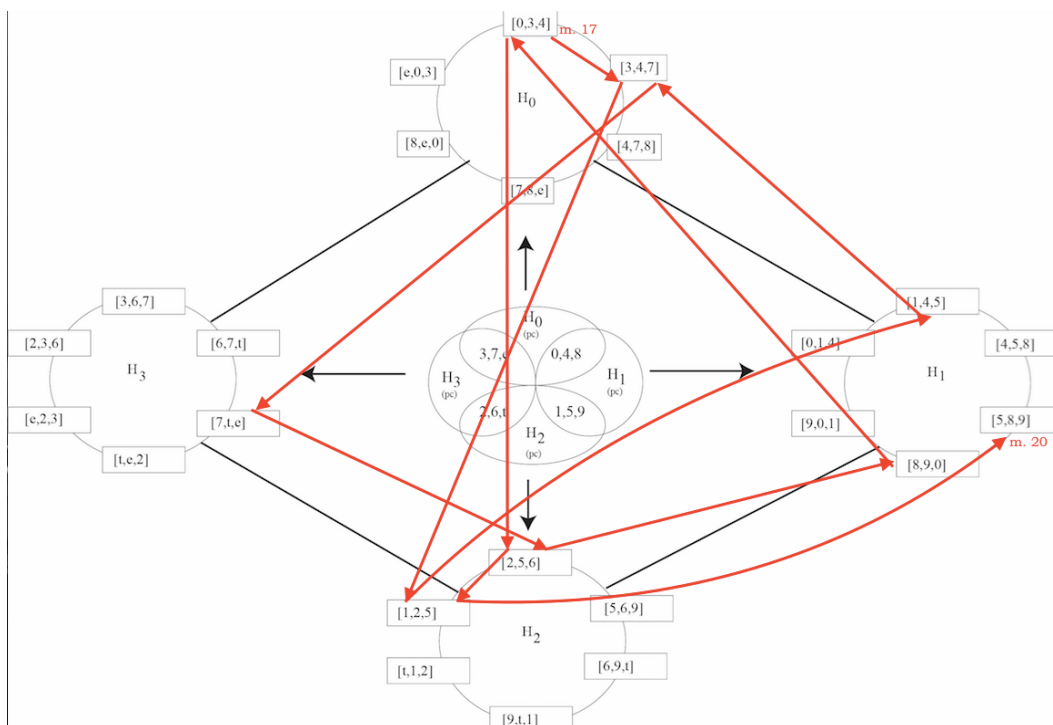


Figure 4.16: Op. 25/ii measures 17-20 graphed on hyper-hexatonic system.

Example 4.51: Op. 25/ii measures 21-24 with set-class 3-3 highlighted.

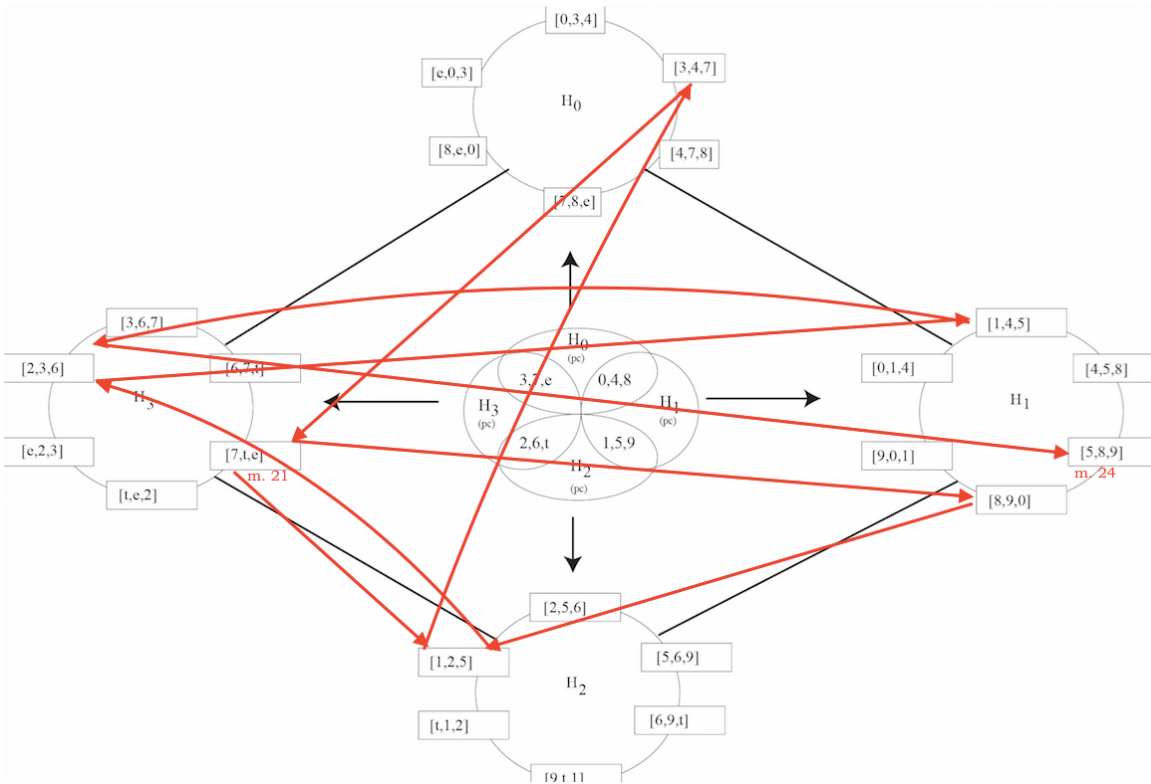


Figure 4.17: Op. 25/ii measures 21-24 graphed on hyper-hexatonic system.

Example 4.52: Op. 25/ii measures 25-28 with set-class 3-3 highlighted.

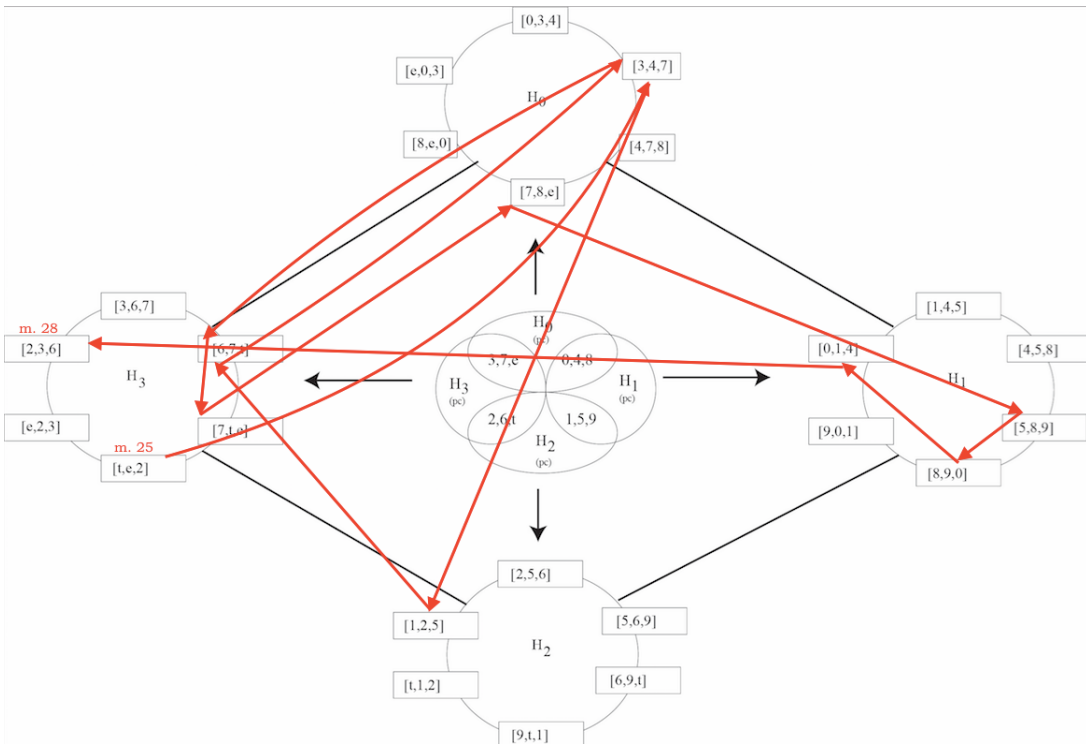


Figure 4.18: Op. 25/ii measures 25-28 graphed on hyper-hexatonic system.

Example 4.53: Op. 25/ii measures 29-32 with set-class 3-3 highlighted.

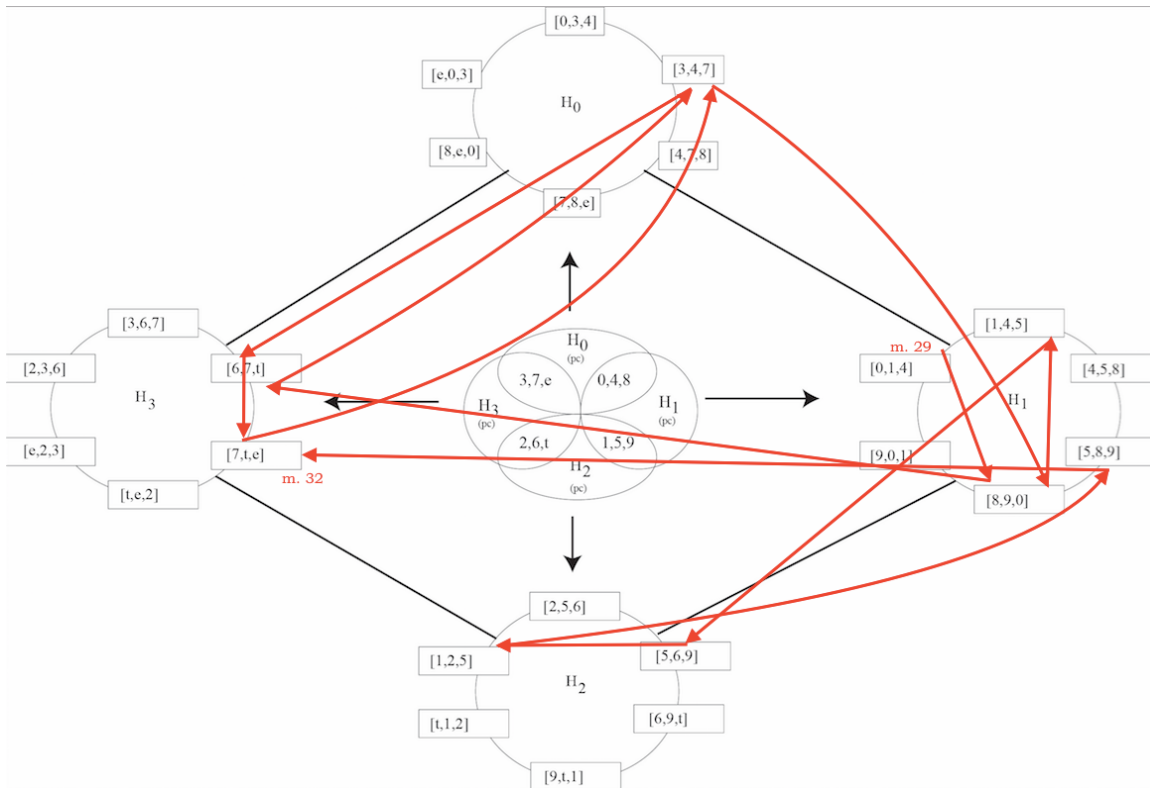


Figure 4.19: Op. 25/ii measures 29-32 graphed on hyper-hexatonic system.

langsamer, $\text{♩} = \text{ca } 84$ [034] 33 34 35 rit. - [256] - - - pp

ra - stet end - lich er am Ast [67t] [347] des To - des, müd
 fin - [367] dt - ty [589] rests [7te] on death's [367] grey branches, tired

[034] [014] [890] [8e0] [te2] [t12] [7te]

Example 4.54: Op. 25/ii measures 33-35 with set-class 3-3 highlighted.

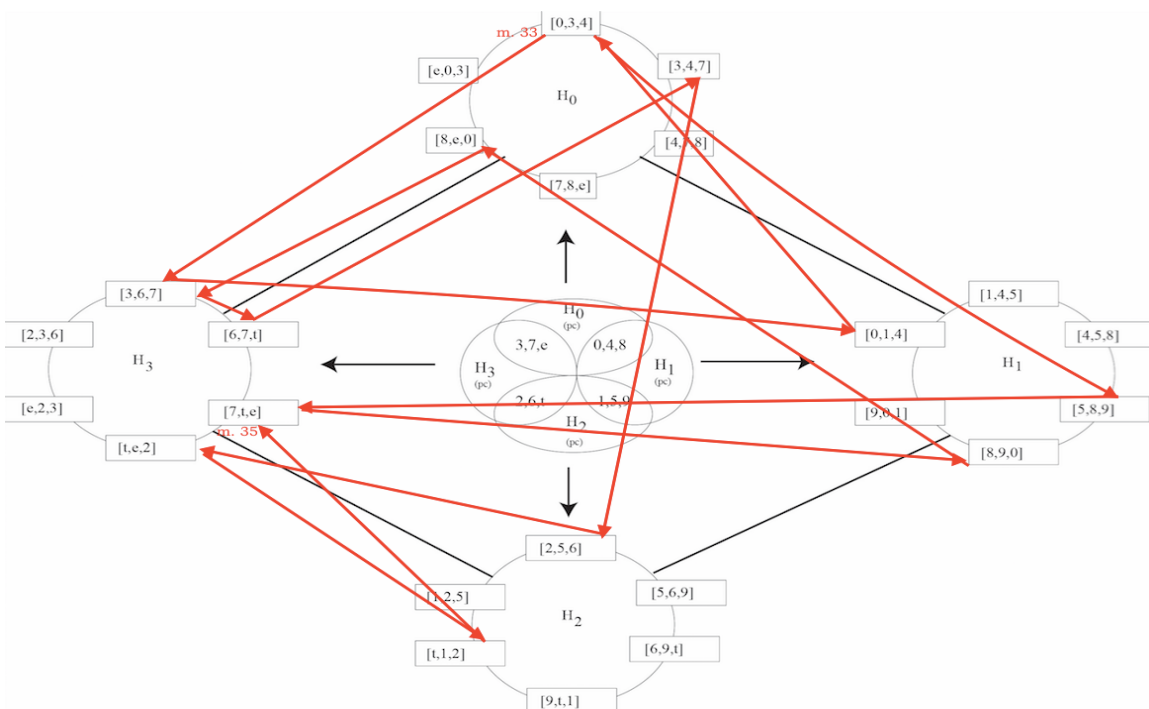


Figure 4.20: Op. 25/ii measures 33-35 graphed on hyper-hexatonic system.

Example 4.55: Op. 25/ii measures 36-39 with set-class 3-3 highlighted.

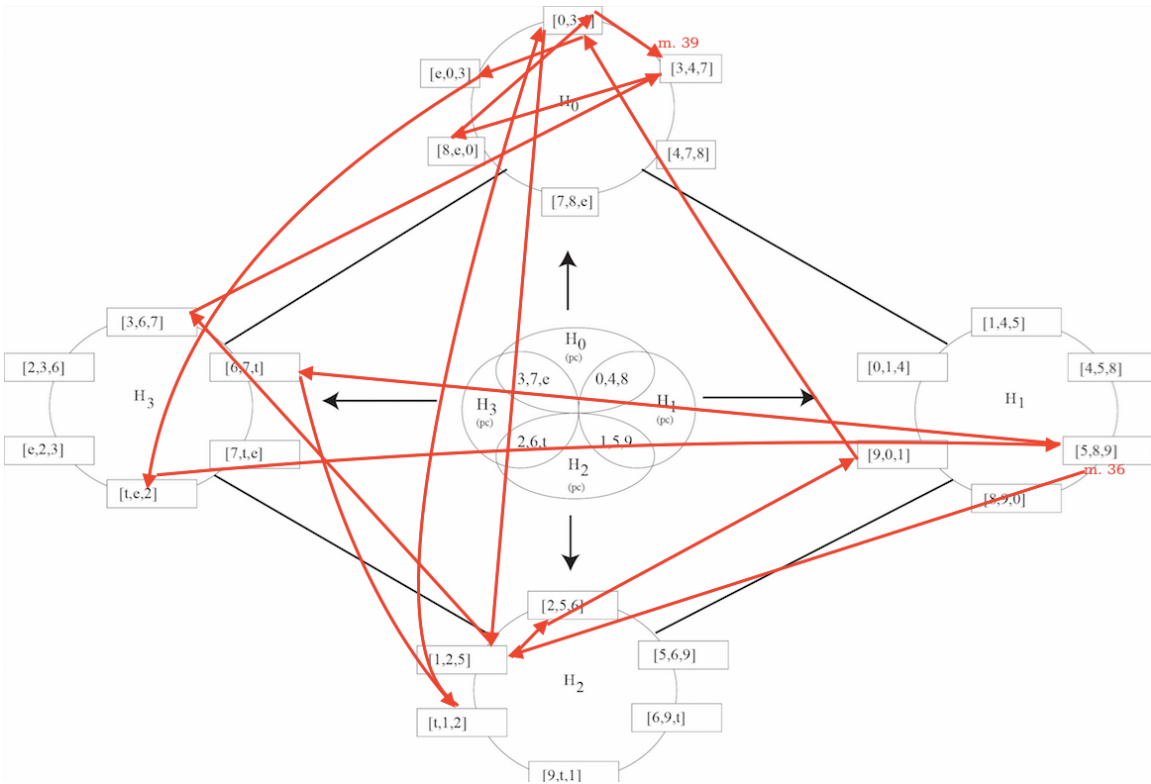


Figure 4.21: Op. 25/ii measures 36-39 graphed on hyper-hexatonic system.

Example 4.56: Op. 25/ii measures 40-42 with set-class 3-3 highlighted.

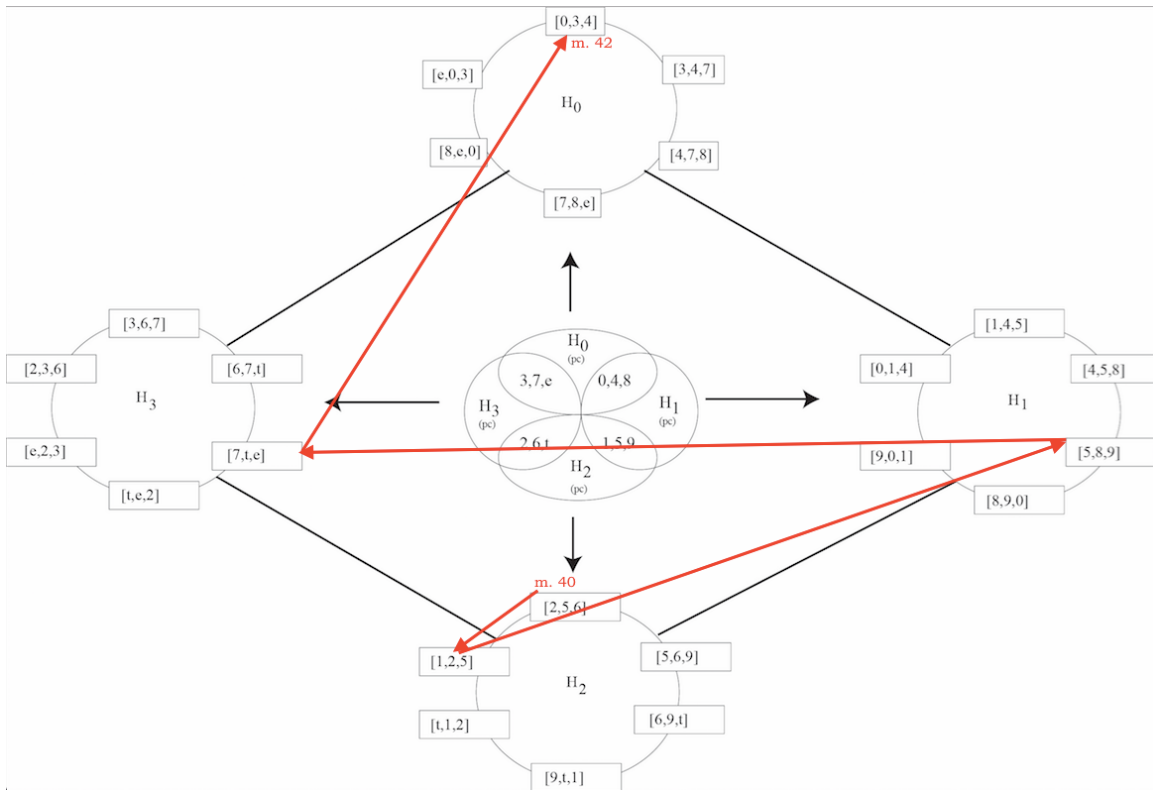


Figure 4.22: Op. 25/ii measures 40-42 graphed on hyper-hexatonic system.

In the above figure which traces the harmonic motion throughout we notice a few characteristics continuing from that of the first song.

Firstly, we largely see motion between adjacent poles. Notable exceptions occur, interestingly at each appearance of the “flying/falling” motive. In measure seventeen following successive harmonies in the voice moves from the northern pole’s [034] to the southern pole [256] with an intermediary [145] connecting to the eastern hexatonic pole with the cooperation of the piano accompaniment taking up pc3 and pc4

while the voice takes up pc1. This is shown in example 4.50 and figure 4.16 above.

In measures twenty-six to twenty-seven, shown in example 4.52 and figure 4.18 above, with the piano's same gesture, we see a [347] trichord flanked by two [67t] trichords. This then moves smoothly from [7te] to [78e] before the voice begins again in the following measure.

In measure thirty-one a break occurs between [589] and [7te] before the voice begins the third verse. In this measure the piano is once again presenting the "falling" gesture, this time in dyads. This motion is represented by a direct move from the eastern to the western pole of the hexatonic system. Unlike the connection represented in measures seventeen and eighteen which used the accompaniment to remain connected to adjacent poles as the voice is in the middle of a line of poetry, the full stop between the second and third verses is represented here with not connections of any kind. This is shown in example 4.53 and figure 4.19 above.

Finally, in the last three measures of the song, shown in example 4.56 and figure 4.22 above, we see the dissipation of harmony and melodic fragments being represented through a lack of meaningful adjacent connections on the hexatonic system.

4.4 OP. 25/III “STERNE, IHR SILBERNEN BIENEN DER NACHT”

4.4.1 INTRODUCTION

Glenn Gould’s recording of the Op. 25 songs provides a clear distinction between these songs and the songs of earlier opera. The sharp, clear, articulations throughout this song are especially noticeable thanks to Gould’s characteristic playing that eschews any use of the sostenuto pedal, instead respecting Webern’s exacting written articulations whereby every pitch that is not under a slur is marked staccato. This certainly brings the piece outside the realm of pianistic technique and closer to the sound-world in which the guitar resides. Gould’s interpretation captures the increasingly un-pianistic nature of these songs. Webern increases the amount of space between pitches through his rhythmic arrangement, and incessant staccato.

These characteristics combine with the text and overall arrangement in solidifying my assertion that Webern is arranging guitar music for the piano. We will see in the following section ways in which the text continues to connote the principles of folk music, much like the two songs preceding it.

4.4.2 TEXT ANALYSIS

The text of this third and final song, like the first two, threads together ideas of the physical world with that of the spiritual world.

However, in this final poem, the physical imagery on the surface of the poem lends itself more to metaphor than the two poems which precede it. Webern, unfortunately from the standpoint of interpretation, does not include the text that follows which places the context of the poem clearly within the realm of praise to God, and all the beauty God creates.

The poem contains four verses, which can be divided into six lines according the rhyme scheme. That rhyme scheme, however, is considerably looser than the one found in “Des Herzens Purpurvogel.” In general an a-b-c-a'-b-c' pattern exists, with lines organized in an increasing number of dactyls. The poetic meter is just as elastic as the rhyme scheme, diverting in a few places. Further complicating this poem's organization is an additive syllable scheme in which each line increases in its syllabic content, except for the second line.¹⁰⁷

The text of the poem is as follows, with stresses in bold:

- 1a) **Sterne**, Ihr **Silbernen Bienen** der **Nacht**
- 1b) um die **Blume** der **Liebe**!
- 2c) **Wahrlich** der **Honig** aus **ihr** hängt **schimmernd** an **Euch**.
- 3b') **Lasset** ihn **tropfen** ins **Herz**, in die **goldene Wabe**,
- 3d) **füllet** sie **an** bis zum **Rand**. Ach schon **Tropfet** sie **über**,
- 4e) **selig** und **bis** ans **Ende** mit **ewiger Süße** durch**tränkt**.

¹⁰⁷ Morgeson, 20.

The English translation is as follows:

Stars, you silver bees of the night
around the flower of love!
Truly the honey from it hangs shimmering upon you.
Let it drip in the heart, into the golden honeycomb,
fill it up to the edge. Oh already it runneth over,
and up to the end penetrated by the eternal sweetness.

This poem is quite clearly the most graphic we have looked at thus far, heavy with double-meaning. Ostensibly about stars, which segues into talk of flowers and bees, but obviously is a thinly veiled reference to romantic relations, this text, like many of the other Jone texts Webern chose, describe nature and universality.

Just as with the other songs, Webern's setting of the text here adheres closely to the poem's stress patterns. This is the fastest of the set, marked "sehr rasch" at half-note equals ninety-six. Rhythmically speaking, this is the simplest of any of the six songs discussed in this and the previous chapter, consisting only of quarter-notes and half-notes. Half notes only appear in the voice part, while the piano accompaniment is purely quarter-notes with grace-note accents appearing often.

The spaciousness of Webern's setting depicts the open night sky, while the staccato notes and rapid tempo depicts the relations inspired by this night scene. For the first time in Op. 25 we find full measures with no accompaniment, something that also did not occur in Op. 18. We will see measures of silence appear occasionally in the Op. 30 variations for orchestra in the next chapter as well. Clearly the spaciousness achieved here is becoming an increasingly important part of Webern's musical language.

The entirety of the first line, encompassing measures four through twenty-four, is set such that the stressed syllables as I have indicated above land on a downbeat. The opening and closing of this line, however, present the weak syllables of both "Sterne" and "Liebe" on downbeats. The setting of the bookends of this verse features durational accents that adhere to the stress pattern of a four-bar hypermeter with the first syllable occupying two full measures, and the second syllable occupying one full measure. The second syllable, therefore, feels weak in relation to the first, and the 2/4 meter is obscured until the voice's reappearance in measure nine. The first verse, with poetic stresses highlighted is shown in example 4.57.

Example 4.57: Op. 25/iii first verse, measures 4-24 with poetic stresses highlighted.

After a brief interlude of four measures, the second verse enters in measure twenty-nine, eliding with the third in measure thirty-seven with no break between them. Both verses, contrary to their text beginning with a stressed syllable, start on the weak beat of their respective measures. The second verse also introduces the quarter-note triplet figure that appears with regularity through this middle section between measures twenty-nine and fifty-two, where the next extended vocal silence occurs. These triplets, aside from aiding in the creation of a contrasting middle section, place rubato-like emphasis on some of the most suggestive material of the poem. Within this middle section only twelve measures do not contain a quarter-note triplet figure, and those that do not appear closer to the beginning of the section. Measures twenty-nine through fifty-one are shown in example 4.58.

rit. - - - wieder viel mäßiger ($\text{♩} = \text{ca } 69$) rit. - - -
 29 *p* 30 31 *p* 32 33 34 35 *p*
 Wahrlich der Hönig aus ihr hängt schimmernd an
 - tempo I rit. - - - tempo
 36 37 38 39 40 41 42 *f*
 Euch. Lasset ihn tropfen ins Herz, in die
 43 44 45 46 *ff* 47 48 rit. - 49 50 51 tempo
 golde- ne Wä- be, fü- let sie an bis zum Rand.

Example 4.58: Op. 25/iii measures 29-51 with poetic stresses highlighted.

56 *ff* 57 58 *f* 59 60
 Ach schon tropfet sie über,
 wieder viel mäßiger
 61 *p* 62 63 64 *p* 65 66
 so- lig und bis ans
 rit. - - - tempo rit. - - - tempo
 67 68 69 *pp* 70 71 72 73 74 75 *pp* 76 tempo
 En- de mit e- wi- ger Sil- be durch- tränkt.

Example 4.59: Op. 25/iii measures 56-76 with poetic stresses highlighted.

The final line begins in measure fifty-six after another four-measure break. Webern places “Ach” separate from the rest of the line, emphasizing the moment of climax with a major seventh ascending leap marked *ff*, followed immediately by a “molto ritard” and falling to *p* by measure sixty-one. That measure is marked “wieder viel mäßiger,” with the tempo not returning to its initial half-note equals ninety-six until the final two measures, which do not include the voice. The remainder of the voice part, with poetic stresses highlighted, are shown in example 4.59.

4.4.3 ROW ANALYSIS

In this final song Webern returns to rows based on pc_7 , matching those of the first song, forming an overarching ternary form. So, like “Wie bin ich froh!” this song uses only P_7 , and I_7 as well as their retrogrades. We also continue to see Webern tying rows together by having the piano part finish the voice’s row in spots, and vice versa.

The first row-forms used are R_7 in the piano in measures one through six, and P_7 in the voice upon its entrance in measure four through to measure eighteen. The first instance of the two parts sharing pitches occurs in measure fifteen. In that measure on the words “der Nacht,” the piano and the voice share order numbers **8** and **9**, as they are both projecting P_7 at that point. In measure seventeen the piano begins RI_7 , while in measure nineteen the voice starts P_7 again after a tempo reduction to half-note equals sixty-nine. This is shown in examples 4.60 and 4.61 below.

The next instance of row overlap appears in measure twenty-four where the piano’s R_7 reaches order number **4** while the voice’s phrase comes to a close on order number **3** of P_7 . In the four-measure break between verses that follows, the piano moves to RI_7 in measure twenty-seven, while the voice picks up where it left off with order number **4** of P_7 in measure twenty-nine. The tempo returns to its original half-note equals ninety-six during this break, but will ritard once again upon the

voice's return, slowing to half-note equals sixty-nine once again by measure thirty-one.

Example 4.60: Op. 25/iii measures 1-14 row order numbers.

In measure thirty-one the piano uses pc7 as both the end of its RI7 and the beginning of P7, and the voice takes up R7 in measure thirty-three using the same technique, but with pc8 as the end of P7 and beginning of R7.

Example 4.61: Op. 25/iii measures 15-21 row order numbers.

The next instance of shared pitches between the parts appears in measure forty-one where the piano's I₇ meets the voice's RI₇ at order number **9** on the word "Herz." The rows and order numbers for measures twenty-two through forty-two are shown in example 4.62 below.

The image displays three systems of musical notation for measures 29-42 of Op. 25/iii. Each system includes a vocal line and a piano accompaniment. Red annotations indicate row order numbers for the voice (RI₇) and piano (P₇) parts. The tempo is marked 'tempo I (♩. ca. 96)'. The lyrics are in German and English. Red arrows point to specific notes in measures 25 and 41.

System 1 (Measures 25-28):

- Vocal: Lie - bel
- Piano: P7: 2, 3, 25, 26, 27, 28
- RI7: 9, 5, 4, 2, 10, RI7: 11, 9

System 2 (Measures 29-35):

- Vocal: Wahr - lich der Ho - nig aus ihr hängt schim - mernd an
- English: Tru - ly the hon - ey from it hangs shim - mering on
- Piano: P7: 0, 1, 2, 3, 4, 5, 6, 7, 8
- RI7: 4, 5, 6, 7, 8, 9, 10, 11, 10, 9, 8, 7

System 3 (Measures 36-42):

- Vocal: Euch. — Las - set ihn trop - fen ins Herz, in die
- English: you. — Let - it then drop in the heart, in the
- Piano: P7: 17: 0, 3, 7, 8, 10, 11, 11
- RI7: 6, 5, 4, 3, 2, 1, 0, 11, 10, 9, 8, 7

Example 4.62: Op. 25/iii measures 29-42 row order numbers.

The largest overlap of rows appears in the break between the second and third verses. In measures fifty-one through fifty-four the voice's RI₇, the piano's conclusion of I₇, which is followed by the beginning of R₇, become completely intertwined. This occurs just before

the moment of climax in the poetry with the exclamation of “Ach” on a dramatic ascending gesture. The culmination of this romantic encounter is personified in the two separate rows, which have been dancing around, and occasionally joining each other, finally combining completely such that their pitch content is one and the same.

After this significant overlap, and immediately upon the voice’s “Ach” the rows begin to go their separate ways, traveling in opposite directions as the voice picks up I_7 in measure fifty-six, and the piano begins RI_7 in the next measure, with pc_7 serving as the conclusion of the piano’s R_7 , and the beginning of the voice’s I_7 . Measures forty-three through sixty are shown in example 4.63.

The image displays a musical score for measures 43-60 of Op. 25/iii. It consists of three systems of staves. The top system (measures 43-46) shows the voice line with lyrics: "gol - de - ne Wa - be, fül - let sie gold - comb of han - ey, I7: full up the". Above the voice staff, red numbers indicate row order: 43 (RI7: 7 6 5), 44, 45 (3 2 1), and 46 (RI7: 11). The piano accompaniment below has red numbers: 43 (R7: 8 7), 44 (6), 45 (3), and 46 (0). The middle system (measures 47-54) shows the voice line with lyrics: "an bis zum Rand. an - tempo comb to the brim." Above the voice staff, red numbers indicate row order: 47 (10 9), 48 (8 7 6), 49 (5 4), 50 (3 2 1), 51 (0), 52, 53, and 54. The piano accompaniment below has red numbers: 47 (6), 48 (4), 49 (7 8), 50 (11), 51 (10), 52 (9), 53 (8), and 54 (7). The bottom system (measures 55-60) shows the voice line with lyrics: "Ach schon trop - fet sie ü - ber, Oh the heart run - neth o - ver". Above the voice staff, red numbers indicate row order: 55 (17), 56 (1), 57 (2), 58 (3), 59 (4 5 6), 60 (7 8). The piano accompaniment below has red numbers: 55 (R7: 3), 56 (0), 57 (RI7: 7), 58 (5), 59 (8), 60 (6). Red arrows and boxes highlight the overlap between the voice's I_7 in measure 56 and the piano's RI_7 in measure 57.

Example 4.63: Op. 25/iii measures 43-60 row order numbers.

There are still a few instances of overlap in the final section of the

song, but nothing nearly as significant as what appeared between this and the previous verse.

In measure sixty-three, R_7 of the piano and I_7 of the voice combine to share pitches. This time, however, the order numbers don't match up. The piano's R_7 uses the voice's pc5 and pc6 for its order numbers **5** and **3**, while those pitches serve as order numbers **10** and **11** for the voice. Though a moment has been shared, it is at this time that the subjects of this poem are now clearly separate and in different places, no longer lining up in the way that they had previously.

One final overlap between the voice and piano appears in measure seventy-one. At this point the voice's final row, RI_7 , which started back in measure sixty-four, has reached order number **4**. In measure seventy the piano moves to R_7 , and in measure seventy-one a set-class 4-18 [te25] tetrachord is created with order numbers **8** through **5**. Order number **4**, pc1, is shared between both parts in the same measure.

The piano concludes R_7 in measure seventy-three, and pivots to I_7 on pc7 which is repeated in measure seventy-four, and placed once again as the middle voice of a set-class 3-3 trichord. That I_7 row then closes the piece in measure seventy-eight. Measures sixty-one through seventy-eight are shown in example 4.64.

The image displays a musical score for Op. 25/iii, measures 61-78. It consists of three systems of music. The first system (measures 61-68) features a vocal line with lyrics: "so - lig - und bis - ans". The piano accompaniment includes dynamic markings like *p* and *pp*, and row order numbers such as 9, 10, 11, 10, 9, 11, 10, 9, 11, 10, 9. The second system (measures 69-72) has lyrics: "En - de mit e - wi - ger e - ver, ver, mit full of the great". The piano accompaniment includes dynamic markings like *p* and *pp*, and row order numbers such as 8, 7, 6, 5, 4, 3, 8, 7, 6, 5, 4, 3. The third system (measures 73-78) has lyrics: "Si - Be durch - tränkt. sweet - ness of love." and includes the instruction "tempo I (d. ca. 96)". The piano accompaniment includes dynamic markings like *pp* and *p*, and row order numbers such as 2, 1, 0, 77, 78, 2, 1, 4, 7, 3, 2, 3, 5, 8, 10, 11.

Example 4.64: Op. 25/iii measures 61-78 row order numbers.

Throughout this song Webern maintains sparse piano gestures with a considerably extended vocal line then we have seen previously. Webern is exploring the properties of row invariances throughout, while maintaining his harmonic and melodic language, serving the larger purpose of providing musical meaning to the text. This is a technique we will see Webern continue to explore in his Op. 30 variations for orchestra in the next chapter.

4.4.4 HARMONIC ANALYSIS

Just as with the first two songs of this opus, the 3-3 trichord is ubiquitous throughout this third and final song. With the thinnest texture of this opus, let alone the songs in Op. 18, the connections between these 3-3 trichords in song three are considerably clearer. Throughout the harmonic foundation of Op. 25 no. 3, each pitch is

linked in a series of 3-3 trichords both horizontally and vertically. Many pitches are revealed to belong to more than one 3-3 trichord, adding to the close voice leading present throughout.

Like the two songs before it, “Sterne, Ihr silbernen Bienen der Nacht” begins with a brief introduction. And, like “Des Herzens Purpurvogel,” this song also lacks any meter changes, instead remaining in 2/4 throughout. Harmonically, this opus closes the same way that it began, drawing all its pitches from rows P₇, R₇, I₇, and RI₇.

Opening with R₇, the piano continues its row projection through measure six. In measure four when the voice enters with P₇, it creates an interesting interaction with the accompaniment akin to voice-crossing. Pc₇ of the voice, followed by pc₄ in measure six, are supported by pc₄ and pc₇ in the accompaniment, as Webern has overlapped the closing of the piano’s R₇ with the opening of the voice’s P₇.

The first simultaneity of the piece appears in measure two, and introduces a fundamental characteristic of the harmonic organization throughout. The 4-18 tetrachord itself, [te25] contains a single 3-3 subset of [te2]. However, the pitch that immediately follows, pc₁, creates another 3-3 subset with the preceding 4-18 tetrachord by incorporating its unused pc₅ to create the subset [125].

Creating 3-3 subsets from a 4-18 tetrachord and its immediately following pitch occurs three more times throughout. We find this figure

in measures eight, fifty-eight, and seventy-one, in addition to measure two. Every tetrachord simultaneity within this song is a member of set-class 4-18. These tetrachords are shown in example 4.65.

The image shows four musical excerpts with red boxes highlighting tetrachord simultaneities.
 - Top left: Measures 2-3. Labels: [te25] (top), [te2], [t125], [t12] (middle).
 - Top middle: Measures 8-9. Labels: [9034] (top), [034], [014], [901] (middle).
 - Top right: Measure 58. Labels: [9034] (top), [901], [034], [014] (middle).
 - Bottom: Measures 71-73. Labels: [te25] (top), [te2] (middle), [256] (bottom).
 Red arrows indicate transformations between these sets.

Example 4.65: Set-class 4-18 transforming to set-class 3-3 subsets via delayed pitch onset in measures 2-3 (top left), 8-9 (top middle), 58 (top right) and 71-73 (bottom).

Placed on the 3-3 Tonnetz the first three instances of this figure are represented by a PR transformation, while its final appearance in measure seventy-one is a PRL transformation, as shown in the example above. Additionally the figures in measures eight and fifty-eight move between the exact same trichords, from [034] to [901]. The only difference between these two measures is that the measure fifty-eight is voiced one octave lower than measure eight; in addition to this surface-level change Webern has notated measure fifty-eight to be played with

crossed hands. Depictions of this motion on the 3-3 Tonnetz are shown in figure 4.23.

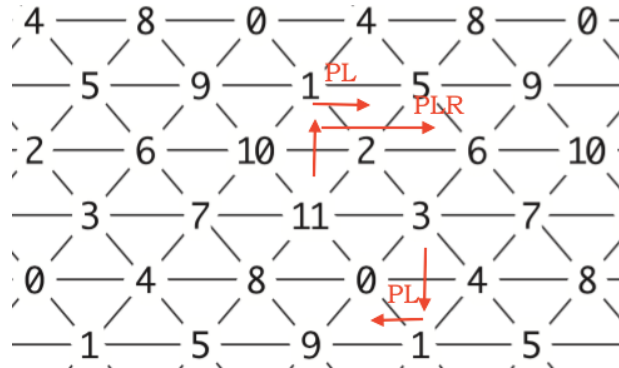


Figure 4.23: Set-class 4-18 to 3-3 subsets from delayed onsets depicted on the Tonnetz.

Webern's row-usage, with the voice and piano parts sharing sections of their rows, plays an important role in his harmonic organization. In the places where the parts come together to share one or more order number from their rows it is usually in the service of holding set-class 3-3 harmony consistent. For example in measure sixteen the shared pc0 allows Webern to form set-class 3-3 in the form of [890] with the piano dyad below. Similarly in measure forty-one, where the voice's pc2 combines with the piano's pc10 and pc11 dyad to create set-class 3-3 [256].

This technique plays a large role in the piano interlude of measures fifty-two through fifty four, where in the previous section I detailed the rows coming together in the most dramatic fashion in the piece. This short piano interlude contains a series of interlocking

trichords in which each pitch in measures fifty-two through fifty-six is a member of at least one instance of set-class 3-3. Measures fifty-two through fifty-six are shown in example 4.66 below.

The image shows two musical excerpts. The left excerpt covers measures 52, 53, and 54. Above the staves, the measure numbers are labeled. Below the staves, red boxes enclose groups of notes. Labels above these boxes are: [56], [569], [589], [890], [8e0], [901], [7te], [te2], [t12], and 125. The right excerpt covers measures 55, 56, and 57. Labels above the boxes are: [256], [236], [367], [347], and [236] [256]. Dynamics *sf* and *ff* are indicated. The word 'Ach' is written above the staff in measure 56.

Example 4.66: Chain of interlocking close voice-leading in Op. 25/iii measures 52-56.

The [256] trichord on the downbeat of measure fifty-two concludes the piano's row, but includes none of the pitches needed for the completion of the voice's row. In the second half of measure fifty-two, however, pc8 and pc9 are order numbers 3 and 5 of the voice's row, while pc1 in the right hand is order number 4. Although [891] is a member of set class 3-4, if pc5 is taken from the previous beat it can be combined with the two left-hand pitches here to create [589], a member of set-class 3-3. Pitch-class 1, which is slurred to pc0 on the following downbeat, can also use pc9 to create another member of set-class 3-3, [901]. These pitches also indicate the beginning of a new row in the piano, now that its I_7 has been completed.

The aforementioned order numbers **3** and **5** of the voice's row in measure fifty-two also serve as order numbers **11** and **10** of the piano's R_7 , respectively. The piano's row then ignores $pc1$, instead waiting for the following $pc0$ which is order number **9**. The final trichord of the measure, $[7te]$ which is also a member of set-class 3-3, is used to complete the voice's RI_7 , while only the outer voices of the trichord are part of the piano's row. Measures fifty-five and fifty-six conclude the piano's R_7 with several more interlocking 3-3 trichords, described in detail below.

Close voice-leading naturally plays an important role in this interlude. It is possible in these measures to trace a path of common pitches held between harmonies. Beginning in measure fifty-two $pc5$ is held from $[256]$ to $[589]$; where $pc9$ is then held for $[901]$. After this chain of 3-3 trichords all holding one pitch, the piano shifts down to a lower octave to $[7te]$, whose $pc10$ and $pc11$ are both held to create $[te2]$; this is followed by $[125]$ to $[256]$, and $[367]$ to $[347]$. These transformations are shown on the 3-3 hyper-hexatonic system in figure 4.24 below.

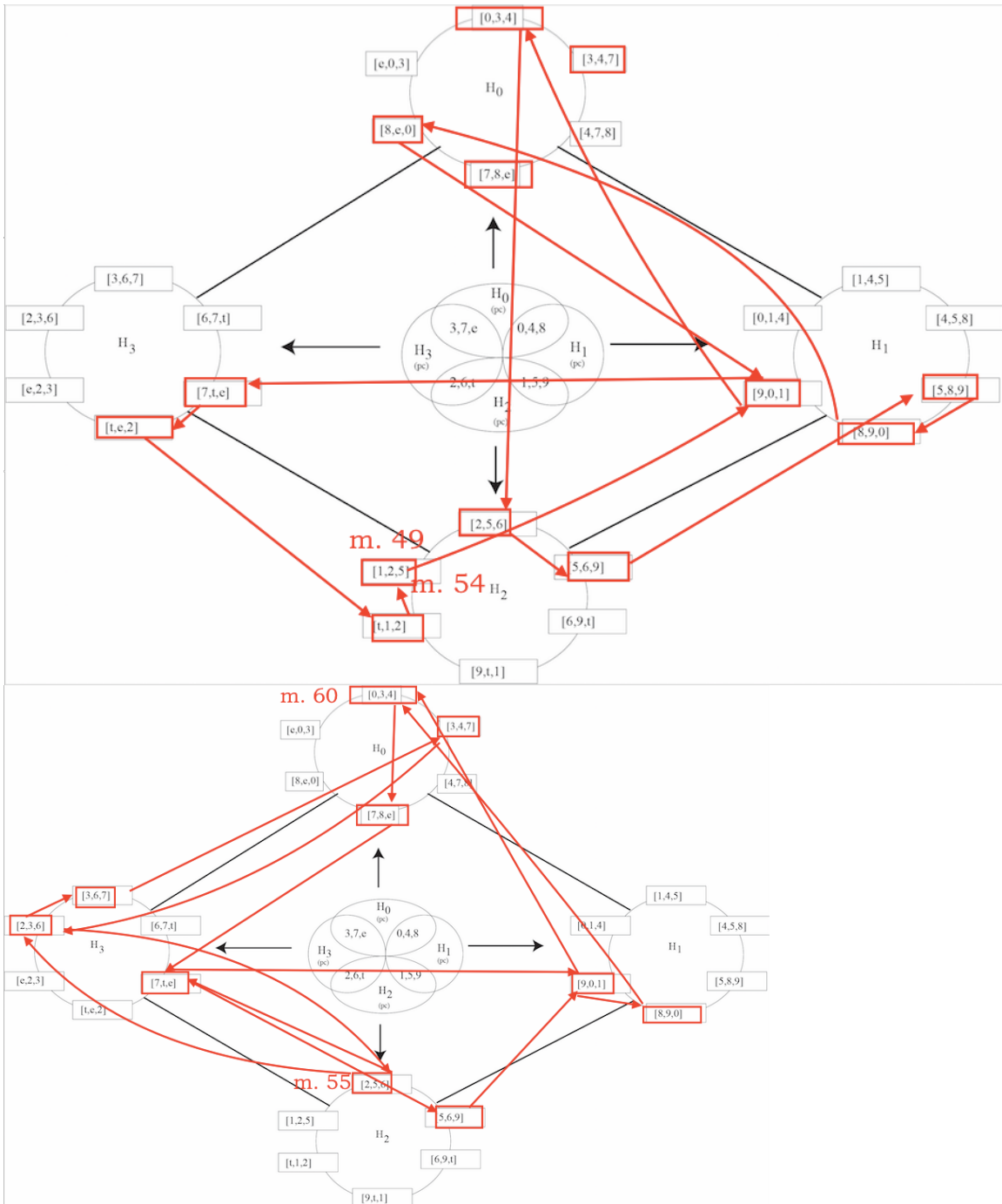


Figure 4.24: Op. 25/iii measures 49-60 graphed onto 3-3 hyper-hexatonic system including chain of close voice-leading in measures 52-57.

Interpreting the mapping above, we begin to see longer chains of

close voice-leading again connecting harmonies on adjacent poles of the hyper-hexatonic system. I have specifically focused on segmenting harmonies which produce the smoothest possible voice-leading when overlapping harmonies existed. We do see, however, in this section of the song, Webern concentrating his efforts on close voice-leading to a certain degree through the use of the recurring motive in the piano which appears in example 4.66. The consistent use of set-class 4-18 resembles Webern's consistent use of set-class 3-3 in the triplet figures of the first song of this opus. I believe that this shows Webern's focus on longer form harmonic connections throughout this song, and this opus.

On the Tonnetz these connections would be represented by an LP transformation from [256] to [589], followed by LR to connect to [901]. On the hyper-hexatonic system these harmonies would move from the southern pole, with the latter two harmonies both belonging to the eastern pole.

Following that, beginning with the [7te], a simple L transformation brings us to [te2]; PR moves [te2] to [125]; R transforms [125] to [256]; PR transforms [256] to [367]; and finally P transforms [367] to [347]. Each of these transformations move their harmonies either with the same hexatonic pole, or an adjacent pole, moving from the west to the south, and coming back through the western pole to conclude in the north.

In measure sixty-three comes the next instance of voice pitches serving double-duty by helping to complete the piano's row. At this point, the voice has arrived at order numbers **10** and **11** of I_7 on "selig," while the piano simultaneously reaches order numbers **5** and **3** of R_7 . Pitch classes 5 and 6 are serving double-duty here, allowing Webern to once again trace an extended path of close voice-leading.

If we follow the harmonic progression as it unfolds through the end of the piano's phrase in measure sixty-five we will notice once again a chain of harmonies each sharing two pitches between them. Since Webern is here tying the voice part and the piano part together, it only seems appropriate to consider both parts as contributing to the forward motion of the harmonic progression. Also noteworthy is that Webern's repetition of pc6 in measure sixty-four on "und" is necessary for the close-voice leading between [236], [367], and [347]. This chain of close voice leading is shown in example 4.67, and on the hyper-hexatonic system in figure 4.25 below.

Example 4.67: Op. 25/iii measures 55-66 with set-class 3-3 highlighted.

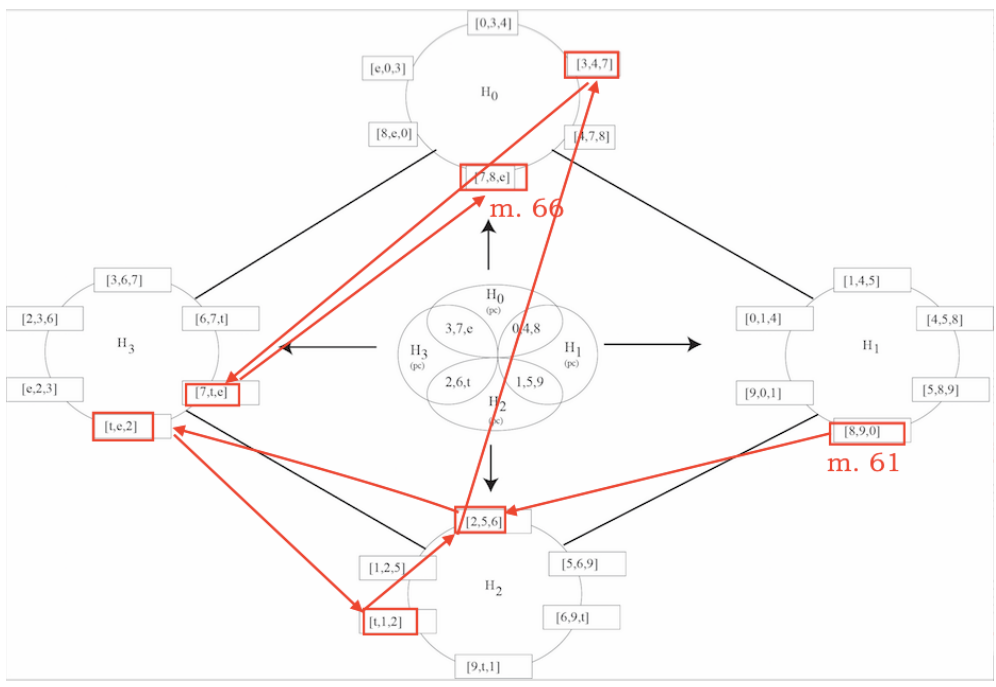


Figure 4.25: Op. 25/iii measures 61-66 graphed onto the 3-3 hyper-hexatonic system.

The final measures of this song are shown in example 4.68 below, while its hyper-hexatonic system representation appears in figure 4.25.

Example 4.68: Op. 25/iii measures 67-78 with set-class 3-3 highlighted.

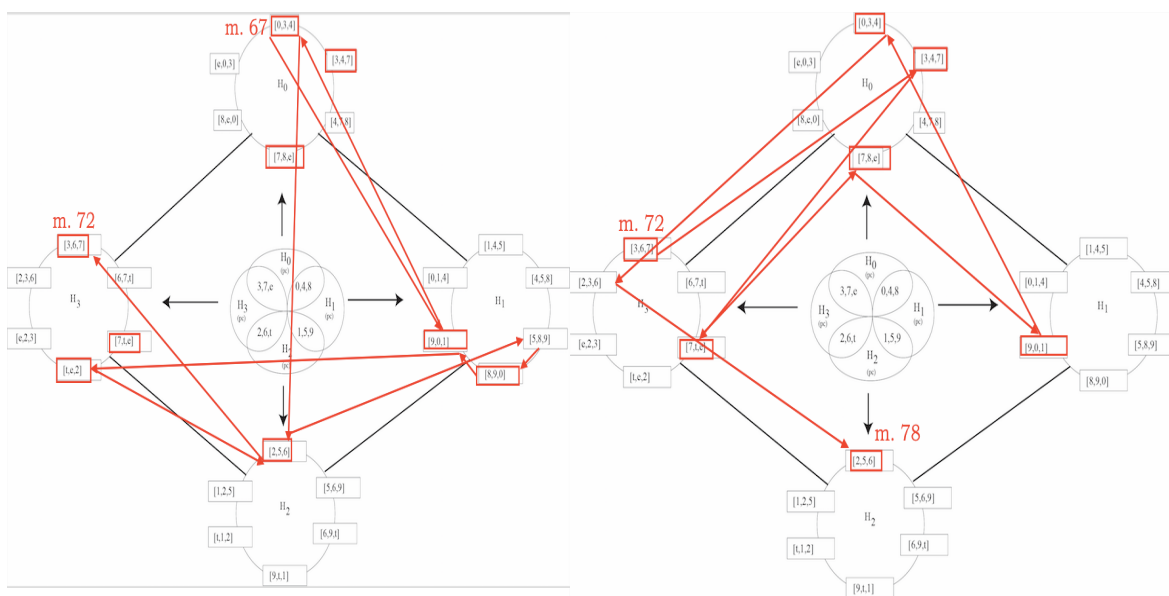


Figure 4.26: Op. 25/iii measures 67-78 graphed onto the 3-3 hyper-hexatonic system.

The double-duty of pitches momentarily combining two distinct row-forms occurs for the last time in Op. 25 at this point, as do any extended chains of close voice-leading. In the next section I will consider this song's harmonies from a guitar performance perspective.

4.4.5 PERFORMANCE CONSIDERATIONS FOR OP. 25/iii

Contrasting with the second song of opus 25, this final song requires more substantial alterations to the octave positions of pitches in the piano part. Although the texture is thinner and there are no dyads that are impossible to play, like the one instance in "Des Herzens Purpurvogel," the accompaniment makes more thorough use of the piano's full range. However, this does not mean that the guitar does not serve as the basis for the overall sound of this song. As mentioned in the previous section, the overall texture, articulations, and extended chains of close-voice leading all play an important role in creating the overall impression of the guitar's sound as the basis for this song.

In preparing the guitar edition of this score it became apparent that those pitches that were out of range were not merely a second or third out of range, but now up to a perfect fifth. By and large the low end of the accompaniment remains well within the guitar's range, with the lowest pitch for the first seventy-two of its seventy-eight measures being pc6 in measure forty-five. The one pitch below the guitar's range appears

in measure seventy-three; the pc6 here is a full minor seventh below the guitar's open sixth string. The accompaniment is largely shifted to the higher end of its range, and remains within the realm of the treble clef for the vast majority of the piece.¹⁰⁸

Expanding the octave range of the accompaniment part, as will be discussed in the following chapter, can be seen as Webern simply exaggerating the abilities inherent in the guitar in order to make full use of the instrument for which he is writing—the piano.

From the outset of this song we can see that the accompaniment, when played on the guitar, functions in the same way with regard to the jigsaw-puzzle-like physical placement of pitch and simultaneity. Take, for example the opening two measures. The first measure's pc8, which leaps down a major-seventh to pc9 and back up an octave plus a minor third for the grace-note pc0 can be played on {s = 1, 2, 4 r = 8, 7, 9}, respectively. This results in the comfortable Koozin-shape of <—1-32>. The set-class 4-18 tetrachord on the second beat of the second measure, when combined with pc1 in the following measure, consists of two 3-3 subsets. Those subsets, [te2], and [125] can be formed from <1-21—> and <-2-1-3>. Note the interlocking nature of these two 3-3 trichords. The first two measures of the guitar part are shown in example 4.69

¹⁰⁸ Only approximately 10.89% of the pitches in the accompaniment are notated within the bass-clef.

below.

The image shows a musical score for piano and guitar. The piano part is in 2/4 time, starting with a forte (f) dynamic and a sforzando (sf) dynamic. The guitar part is in 2/4 time, starting with a 9th fret and moving to a 7th fret. Red annotations include arrows and trichord symbols: <--1-32> and <1221-3>.

Example 4.69: Op. 25/iii measures 1-2 of piano as guitar part.

In performance, however, placing pc1 of the third measure with $\{s = 1, r = 9\}$ does not work with the gesture that follows. Instead, as the accompaniment ascends heavenward in support of the text's opening "Sterne" the pc1, followed by pc6 in measure 5, can both be found at $\{r = 14\}$ on $\{s = 2\}$ and $\{s = 1\}$, respectively. In the guitar version the ascent is condensed an octave since the pc6 as notated is a perfect fifth out of the guitar's range. This pitch does play a role in the consistent projection of 3-3 harmonies in that when combined with pc7 of "Sterne," which is held for the entirety of measures four and five, it becomes connected to the grace-note pc3 in measure five. And, starting with that grace note, and once again taking the voice part into consideration here, using the same pc7 held over through measure five, a [347] 3-3 trichord is formed.

The chromatic passage which continues from measure five's pc3 grace note, through pc5 in measure seven, is formed from interlocking 3-3 and 3-1 trichords, which themselves also fit together like puzzle pieces when performed on the guitar. The 3-3 trichord, [347], may be performed on {s = 2, 1, 3}, where pc7 then also begins the 3-1 trichord {5, 6, 7} on {s = 3, 1, 4}. The Koozin shape for this chromatic trichord is [—41-3].

The opening accompanimental phrase concludes in measure nine with 3-3 set class member [901]. In example 4.70 we can see the path the progression takes on the guitar neck as it moves from the opening [890] to that [901].

The image displays musical notation for Example 4.70, consisting of two staves. The top staff is a piano accompaniment in treble clef, showing measures 3 through 9. Dynamics markings are *sf*, *f*, *sf*, and *p*. The bottom staff is guitar tablature, showing fret numbers: 14, 14, 16, 0, 12, 14, 15, 10, 13, 14, 14. Red arrows and brackets indicate Koozin shapes: <-41-3> and <-4431>.

Example 4.70: Op. 25/iii measures 3-9 piano as guitar part with tablature notation and Koozin-shapes.

A similarly parsimonious progression may be traced through the beginning of the next phrase, measures eleven through fifteen. Opening with an arpeggiation of [78e] in measure eleven through thirteen, this next phrase begins by sharing two pitches from the harmony that opened the entire song, [8e0]. Measure eleven begins this phrase at the close of

R1₇, presenting order numbers three through one, whereas the song opened with R₇. Measures eleven through fifteen are shown in example 4.71 below.

The image shows a musical score for guitar. The top staff is a treble clef staff with a key signature of one sharp (F#). It contains five measures of music. The first measure starts with a forte (*f*) dynamic. The second measure has a grace note on the second string, eighth note. The third measure has a grace note on the second string, eighth note. The fourth measure has a grace note on the second string, eighth note. The fifth measure has a grace note on the second string, eighth note. The bottom staff is a tablature staff with fret numbers 13, 0, 15, 14, 16, 9, 9, 0. Below the tablature are three Koozin-shapes: <--4101>, <--1-32>, and <-4-214>. A red wedge indicates a dynamic change from *f* to *p* between measures 12 and 13.

Example 4.71: Op. 25/iii measures 11-15 piano as guitar part with tablature notation and Koozin-shapes.

This progression, as can be seen on the tablature, fits under the hand quite well when performed on the guitar. Connected to the previous phrase's <—4431> hand shape in measure eight, the fretting-hand may remain in the same position without shifting until measure fourteen's second beat. The melodic strand that follows measure eight remains within the span of frets thirteen through sixteen, and once again for the most part fit together like a jigsaw with measures twelve through the downbeat of measure fourteen forming a <—1232> shape, discounting measure twelve's grace-note.

Measure fourteen's grace note, which is slurred into the second beat of that measure, surrounds those pitches to which it is pointing.

Taken together the 4-4 tetrachord of [1256] fits under a <-4-214> shape, which can be pulled apart into two 3-3 subsets, [256], and [125]. The fretting-hand shapes for those 3-3 subsets are <-4-21->, and <—214>, respectively.

The best place to play measure fifteen's pc11 would be with the open second string, as it prepares for a shift up to the higher positions that make it possible to more easily perform measures sixteen and seventeen. Those two measures, which begin a new phrase in the accompaniment by making an abrupt shift from [te2] to [589], find the drastic shifting on the Tonnetz being physically manifested in a similarly drastic shift from frets six through nine of the previous measures, to frets fourteen through sixteen.

Taken together, measures sixteen and seventeen form a 4-3 tetrachord, which once again contains two 3-3 subsets. The full tetrachord is made with the shape <1-21-3>, and breaks down into [589] and [569] 3-3 subsets with shapes of <—21-3> and <1-21—>, respectively. The motion between these trichords are as close on the Tonnetz as they are within the physical space of the guitar, moving through a simple L transformation flipping over the ic3 axis. The end of

measure fifteen through seventeen are shown in example 4.72.

The image shows two staves of music. The top staff is a grand staff (treble and bass clefs) representing the piano part. It contains three measures of music. The first measure has a dynamic marking *p*. The second measure has a dynamic marking *pp*. The bottom staff is a single staff representing the guitar part. It contains three measures of music with tablature notation: 0, 16, 14, 15, 14. Below the guitar staff, the Koozin-shape <1-21-3> is written in red.

Example 4.72: Op. 25/iii measures 15-17 piano as guitar part with tablature notation and Koozin-shapes.

For the sake of playability the pc2 on the downbeat of measure eighteen has been lowered one octave. This move, admittedly, somewhat weakens the overall descent through to the downbeat of measure twenty. That lowered pitch therefore resides at $\{s = 2, r = 15\}$, which fits inside, physically, the 4-3 tetrachord created in the two preceding measures. This connection exists both with regard to closeness on the Tonnetz, as well as a physical closeness on the guitar. The [569] created from pc9 of measure sixteen, and pc5 and pc6 from measure seventeen, then moves to [256]. On the guitar fretboard this would mean a move from <1-21—> to <1-2-2->. The motion from measures sixteen through the downbeat of eighteen are represented on the Tonnetz by a P transformation followed by an L transformation.

Continuing to the next sequence of harmonies, beginning on the second beat of measure eighteen through to the grace note in measure

twenty, an overall shape of <-34431> forming a 5-16 pentachord, breaks down into two interlocked 3-3 trichords. A [034] subset is formed from a <-4-31> shape; and [901] from the <-3-43-> subset, which equates to <-1-21-> as the pc3 on {s = 1, r = 11} does not appear within the subset. This motion is represented similarly on the Tonnetz to the harmonies of the previous measures. PL would move [034] to [901], but motion through [014] does not exist here.

Pitch-class eight on the downbeat of measure twenty serves as the intermediary between the [901] that precedes it, and [7te] that follows. By disregarding the grace-note pc1 of measure twenty, pc8 forms a 3-3 trichord with pc0 and pc9 of measure nineteen. Therefore moving [901] through [8e0] on its way to [7te].

Moving into measure twenty-one, a shift to lower positions on the guitar requires pc10 on beat two of measure twenty to be moved to {s = 3, r = 3} despite being played at {s = 5, r = 13} for the grace-note only a beat before. This shift signals the beginning of a new chain of harmonies that will continue through to measure twenty-four. Measures eighteen through twenty-one are shown in example 4.73.

Example 4.73: Op. 25/iii measures 18-21 piano as guitar part with tablature notation and Koozin-shapes.

Example 4.73: Op. 25/iii measures 18-21 piano as guitar part with tablature notation and Koozin-shapes.

Measures twenty-one through twenty-four are connected through transformations of PRP, followed by a skip back up to [te2], which moves to [125] to complete the phrase. On the guitar fret-board this chain of harmonies manages to stay between $\{r = 3\}$ and $\{r = 8\}$, before the next chain of harmonies brings it back up to some higher positions. Measures twenty-one through twenty-four are shown in example 4.74.

Example 4.74: Op. 25/iii measures 21-24 piano as guitar part with tablature notation and Koozin-shapes.

Example 4.74: Op. 25/iii measures 21-24 piano as guitar part with tablature notation and Koozin-shapes.

The division of lines of text is represented in the accompanimental interlude that takes place between measures twenty-five and twenty-nine. A shift away from the previous harmonic chain begins with measures twenty-five and twenty-six's [347]. This break is physically

represented through a shift to $\{r=12\}$ through $\{r=18\}$; only one pitch resides on $\{r=12\}$, which is pc7 in measure twenty-six. That pc7 serves as a pivot between two gestures—one of which ends after beginning a descent from the heights of measure twenty-four, with another ascent beginning a journey to its goal on the downbeat of measure twenty-nine.

Note here that pc2 on the first beat of measure twenty-eight has been lowered one octave, which curtails the ascent begun in measure twenty-six, and also distorts the descent into measure twenty-nine. This is shown in example 4.75 below.

The image displays two staves of music. The upper staff is a standard musical notation with a treble clef and a key signature of one sharp (F#). It shows six measures of music. The lower staff is a guitar tablature with fret numbers: 15, 18, 16, 0, 12, 14, 15, 11, 13, 14, 10, 10. Below the tablature, there are two Koozin-shapes: <-3-4-51> and <-2-21>. A green 'p' dynamic marking is located between the two staves, aligned with the second measure of the upper staff.

Example 4.75: Op. 25/iii measures 24-29 piano as guitar part with tablature notation and Koozin-shapes.

The conclusion of the interlude pivots toward its end with an interlocking simultaneity in measure twenty-eight, followed by a $\langle -2-21 \rangle$ Koozin-shape, forming a $[901]$ set-class 3-3 trichord.

Measure twenty-nine begins the next vocal phrase, with the accompanying gesture in measure thirty dramatically sweeping upward

two octaves and a major seventh. This gesture can be performed a number of ways. An interlocking tetrachord is possible theoretically, though it would be un-performable, due to the particular pc8 only being playable on $\{s = 6, r = 4\}$. This interlocking possibility is not only prevented through that first pitch, but also that pitch-classes 10, 11, and 7 are separated by a difficult span of six frets. A shift here would be inevitable, even if each pitch of the measure is kept on separate strings.

Instead, the best way to perform this gesture would be to involve the open $\{s = 2\}$, proving the option of pc10 to be sounded via $\{s = 1, r = 6\}$ or $\{s = 3, r = 15\}$. With pc10 on $\{s = 3, r = 15\}$ there is the added advantage of not needing to shift to reach pc7 in measure thirty-one, whereas a large leap would be required for the other option. Each option requires a shift either between the first and second beats of measure thirty, or between the second beat of measure thirty and the downbeat of measure thirty-one. This is shown in example 4.76 below.

The image displays two musical examples for guitar. Each example consists of a standard musical staff with a treble clef and a guitar-specific staff below it. The left example (measures 30-31) features a melodic line with a red slur over the first two notes. The guitar staff shows fret numbers 4, 15, and 15. The right example (measures 45-46) features a melodic line with a red slur over the first two notes. The guitar staff shows fret numbers 2, 0, and 3. A green *ff* dynamic marking is present in the right example.

Example 4.76: Op. 25/iii measures 30-31 (left) and 45-46 (right) piano as guitar part with tablature notation and Koozin-shapes.

A gesture similar to this one appears in measures forty-five into forty-six. Whereas measure thirty's gesture begins on a downbeat, measure forty-five's gesture begins on the second beat. These measures have in common a similarly wide leap covered by the outer pitches, here two octaves and a minor second appear where previously there was two octaves and a minor seventh; also, both gestures feature the possibility for using an open string to better facilitate its performance.

Once again the initial pitch, here pc6, is only performable at one location on the guitar, $\{s = 6, r = 2\}$. The following downbeat's pc4 also leaves the performer with no choice other than $\{s = 6, r = 0\}$. Unlike the earlier gesture, there is no leap required here as the large outer span only covers three frets resulting in a <2-1—3> Koozin-shape, discounting the open string pc4.

Where the first wide gesture, that of measure thirty, appears at the close of an RI_7 , it appears in measure forty-five at the close of an R_7 . Both gestures also stand in the center of lengthy chains of closely related sonorities on the *Tonnetz*. These harmonic chains were discussed apart from their guitar implications in the previous section. Briefly, measure thirty's wide gesture participates in [78e] and [7te] set-class 3-3 trichords in the chain that begins in measure twenty-eight and concludes in measure thirty-two, and is more or less in the center of that progression.

Measure forty-five's wide gesture is at the center of a much longer chain of harmonies that begins in measure forty-three and concluding in measure fifty-one, with each harmony holding at least one pitch in common with those on either side of it. The gesture here creates several more 3-3 trichords, including [256], [236], [347], and [7te].

Descending gestures of approximately equal breadth appear later, in measures fifty-eight through fifty-nine, and immediately following in measure sixty to sixty-one.

Measures fifty-eight through fifty-nine cover a span of two octaves and a major second, while the following gesture is slightly smaller at an octave plus a minor seventh. The wider gesture covers a space of only three frets, similar to measures forty-five and forty-six, <1-2-33>, a 4-10 tetrachord. The following gesture covers a space of four frets, <-1-2-4>, forming a 3-1 trichord with its adjacent descending major sevenths.

A 4-10 tetrachord contains no 3-3 subsets, but when combined with the 3-1 trichord that follows, a series of 3-3 trichords are created, namely [78e], [7te], and [890]. Measures fifty-six through sixty-two are shown in example 4.77 below.

Closing out this chain of harmonies is one final pitch-class, pc0 in measure sixty-two, forming [890] with the two previous pitches. This final pitch marks the end of a stream of interlocking pitches that starts back on measure fifty-nine's pc11 grace-note. From that grace-note until

the final pc0 in measure sixty-two, there is one pitch on each of the six strings. If traced back to beat two of measure fifty-nine we can break the stream of single pitches to measure sixty-two into two hand positions requiring only one shift between them.

Example 4.77: Op. 25/iii measures 56-62 piano as guitar part with tablature notation and Koozin-shapes.

Measures fifty-eight's second beat, which follows a <5531—> Koozin-shape built from the eighth fret, finds pc1 at $\{s = 1, r = 9\}$. Starting there and including the three pitches that follow creates the Koozin-shape <1-2-33> discussed above. Shifting to the next descending gesture creates the Koozin-shape <-314-6>, built from the tenth fret and forming a 4-4 tetrachord with the 3-3 subset of [890].

An important overarching element of the accompaniment of Op. 25 no. 3 as played on the guitar is the way that similar Koozin shapes play an important role in the ease of performing this song; interlocking Koozin-shapes that physically link the transformation of chords also plays an important role. Of course, this goes hand-in-hand with

Webern's consistent voicing of chords, which can also feature members of different set-classes voiced in similar ways, and therefore resulting in comparable physical shapes. Even passages of single pitches, when stacked vertically, will result in similar Koozin shapes. This all results in lengthy chains of similarly fretted chords aiding in connecting harmonies both closely, and not so closely, related on the 3-3 Tonnetz.

CHAPTER V

OP. 30 VARIATIONEN FUR ORCHESTER

“The guitar is a miniature orchestra in itself.”

Ludwig Van Beethoven

5.1 HISTORY AND ANALYSIS OF OP. 30

5.1.1 OVERVIEW

Published in 1940, Webern’s Variations for Orchestra is the composer’s final complete, published instrumental work. Flanked by his two cantatas, the Op. 30 serves here as the representative work from Webern’s latest period, displaying his orchestrational, formal, and compositional considerations at their most fully realized point. As such, I argue in this chapter that elements appearing first in Op. 18, which continued to develop through Op. 25 as shown in the previous chapter, have reached their most advanced point in Op. 30. This piece, despite lacking text, continues to project similar elements evocative of Webern’s earliest folk influences.

Just as I have shown with the Op. 25 songs, an arrangement of the Op. 30 variations for guitar will provide several insights into Webern’s contrapuntal and orchestrational style. I will relate compositional

elements throughout this work to idiomatic voicings and gestures on the guitar, and trace them back to earlier uses of similar considerations.

William W. Austin said that “Webern modifies our sense of the [symphonic] tradition, as any true part of a tradition must do. He demands that we think again about Haydn, Mozart, and Beethoven, that we value their thematic contrasts less than their structural harmony...”¹⁰⁹ This pertains undoubtedly to Webern’s Op. 30, as Webern is once again using variations as a touchstone, and placing his by now thoroughly-considered compositional language within that known form.

Webern’s characteristic melodic style, regularly featuring wide leaps of an octave or more, first developed in the Op. 18 songs, and which the composer continued to use throughout his later songs, exists in this instrumental work as one of its prime characteristics. Also present here is a restrained orchestrational style that finds the composer dealing in fragmented gestures pieced together only after being passed between the orchestra’s various sections. The majority of Op. 30’s variations use the orchestra as if it were one large instrument capable of producing many timbres over an incredible range. As such, I argue that Webern’s Op. 30 projects references to folk music by its having been imbued with the characteristic sound of the guitar. In support of this we

¹⁰⁹ Austin, William W. “Webern and the Tradition of the Symphony.” In *Anton von Webern: Perspectives*, eds. Hans Moldenhauer and Demar Irvine (Seattle and London: University of Washington Press, 1966), 85.

can look once again to Julian Johnson, who plainly stated, “By the time Webern returned to using the orchestra (in four of the late works), the guitar has disappeared altogether, being replaced by the ‘celestial’ harp-celesta combination familiar from the early orchestral works.”¹¹⁰ Johnson later says that “...while the topic of nature remains as central to the late works it is constructed there in a way very different from its appearance in the early works.”¹¹¹ Webern’s return to the orchestra meant a return to instruments commonly found within it; he did not choose to go the exact route of Mahler who, as I mentioned, incorporated a guitar into his orchestra for his Seventh Symphony. If you recall I described the particular movement in Mahler’s Seventh Symphony which uses the guitar as being focused around the instrument. It was Mahler’s use of guitar which guided the harmonic ebb and flow of the movement, returning it to its “home” state of F-major before making excursions to different keys. Webern is, instead, making use of the instruments more traditionally found in the orchestra. Also, recall my mention of Webern’s Op. 19 which extended the guitar’s sound by using the celesta in order to project over the larger forces of that ensemble. Here, then, the harp works in conjunction with the celesta for a similar effect.

¹¹⁰ Julian Johnson, *Webern and the Transformation of Nature* (Cambridge: Cambridge University Press, 1999), 164.

¹¹¹ Johnson, *Transformation*, 230.

This, and other analytical considerations will be taken into account throughout this chapter.

I will consider voice-leading, melodic shape, the voicing of harmonies, and their physical manifestations on the guitar, as parts of my analysis.

5.1.2 FORMAL ORGANIZATION OF THE OP. 30 VARIATIONS

Although Webern's work was ultimately published under the title of "Variationen für Orchester," scholars disagree on whether the piece truly reflects the formal organization typical of a set of variations. Neil Boynton concludes that the piece may be considered more of a hybrid form, more closely fulfilling the requirements for an adagio form, and not those of variation. Material varying the thematic material presented at the opening of the piece is present, but because that opening material does not appear between the sections containing varied material, according to Boynton the piece does not truly fit the mold of a set of variations. Because of the proportions of the sections, as determined by number of measures in each section, Boynton also points out that the piece does not completely fulfill the properties of an adagio. Counting the number of strong beats within each section brings the piece's proportions more into balance, but conflicting requirements of both

formal structures ultimately excludes the piece from fully belonging to one category or another.¹¹²

John W. Reid, on the other hand, sticks with the “variations” moniker, saying that the piece contains “variations in the sense that each section uses the set differently, but still retains some features of the first section, thus giving the work continuity.”¹¹³ His assertion is based on the double-barred sections that follow the opening, and that those sections are all based on the same material. His main concern is the ways the material is manipulated in each of those sections, accepting Webern’s original title and perhaps implying that this piece represents a re-imagining of the form on the part of the composer.

In this chapter I will uncover the ways in which Webern’s Op. 30 Variations show both a leap forward in pitch organization with regard to Webern’s increasing experimentation with and solidification of his style of serial composition. I will also show the ways in which close voice-leading plays a part in the formal organization of the work, and how these elements relate to my assertion that this work represents not only a re-imagining of variation form, but also contains elements of folk music in its organization. Those folk implications, I assert, result in a piece for full

¹¹² Neil Boynton, “Formal Combination in Webern’s Variations Op. 30,” *Music Analysis*, Vol. 14, No. 2/3 (Jul. - Oct., 1995): 209.

¹¹³ John W. Reid, “Properties of the Set Explored in Webern’s Variations, Op. 30,” *Perspectives of New Music*, Vol. 12, No. 1/2 (Autumn, 1973 - Summer, 1974): 344.

orchestra with voice leading, and orchestration that is less idiomatic for the instruments in the orchestra and more so for a single guitar.

Once again, according to John W. Reid, “Webern uses the all-combinatorial source hexachord consisting of a six note chromatic segment. The set is ordered so that hexachord two is the retrograde-inversion of hexachord one.”¹¹⁴ He also notes that the registral placement of pitches throughout play an important role throughout the work. These two statements point to Webern’s increased desire for true organic unity, in forming a piece around a row with combinatorial properties, which ties into Webern’s lifelong desire for achieving complete symmetry within a work. Kathryn Bailey also points to Webern’s concern for symmetry in her 1996 article “Symmetry as Nemesis: Webern and the First Movement of the Concerto, Opus 24.” In that article, Bailey shows how Webern’s sketches find the composer continuously searching for a way to represent the symmetrical phrase “sator arepo tenet.”¹¹⁵¹¹⁶ In those sketches for the concerto, Webern’s last instrumental work for orchestra before the variations, he would attempt to construct the row by dividing each word into three syllables, assigning each a pitch. He found that the

¹¹⁴ Reid, “Properties of the Set,” 344.

¹¹⁵ Kathryn Bailey, “Symmetry as Nemesis: Webern and the First Movement of the Concerto, Opus 24,” *Journal of Music Theory*, Vol. 40, No. 2 (Autumn, 1996).

¹¹⁶ That phrase was something that Webern had been fascinated with since beginning his exploration of the twelve-tone technique, and even attempted to explain his compositional method in a letter to Hildegard Jone using the phrase as an example.

only way to represent the phrases in a completely symmetrical manner was to use two rows. He became so focused on this pre-compositional process that he kept track of all the relationships contained within the trichords of his row, taking great pains to express each relationship.¹¹⁷

In my analyses of the songs of opuses 18 and 25 I showed Webern's increasing attention to the rows he constructs, which over time show an increased effort to find close relationships between row-forms. In the following analysis I continue to trace this trajectory, and the implications it has upon this, his last instrumental work.

5.2 OP. 30 THEME

5.2.1 ROW ANALYSIS

Op. 30's thematic material is presented in its first twenty measures. Webern, at this point in his stylistic evolution, finds himself developing not only pitch material, but also rhythmic, and as mentioned before, the registral aspects of his compositions. Webern's attention to organizing each element of a composition, in creating a unified product, reaffirms the assertions of Boulez and Eimert that he is best described as a "multi-dimensional" composer. Furthermore, we can think of Webern's

¹¹⁷ Webern did eventually arrive at an all-combinatorial row for the Op. 24 concerto. That row was constructed from 6-20 hexachords, which were derived from 3-3 trichords. Set-class 6-20 is classified as a third order hexachord due to its possessing three axes of symmetry, and therefore three instances of each type of combinatoriality. Set-class 6-1, used for constructing the rows of Op. 30, is a first order hexachord.

later organizational concerns such as these as leading to the integral serialism of Boulez, Babbitt and others that would come into play only after Webern's death. The integral serialists saw Webern's music as their guide. With this late work I am once again asserting that there is a "hidden" dimension of folk and guitar influence embedded within the work.

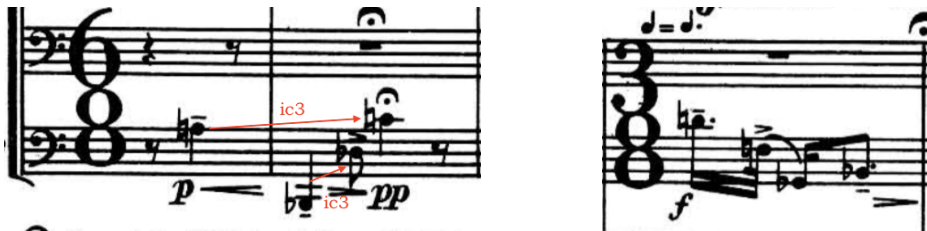
Neil Boynton, once again, points to four elements that make up the theme, upon which all variations are based. These two rhythmic cells and two tetrachords are presented in the first three measures, and can be seen below. Boynton's example is shown below in figure 5.1 below.



Figure 5.1: Boynton's deconstruction of Webern's Op. 30 into two rhythms, "a" and "b," and two tetrachords, "x" belonging to set-class 4-3, and "y" belonging to set-class 4-17.

The tetrachords that Boynton points to belong to set-classes 4-3 and 4-17, respectively, and relevant to my interests here, both of these tetrachords contain two set-class 3-3 trichord subsets. As previously mentioned, Webern's presentation of the theme uses registral placement

to bring out certain interval relationships, namely those of ic3. This registral placement is displayed in the opening measures, shown in example 5.1 below.



Example 5.1: Boynton’s “a” rhythm as the opening motive, displaying ic3 orchestrated to match register, set-class 4-3 (left), and “b” rhythm set-class 4-17.

In his article, John W. Reid illustrates the invariant properties of the rows used within Op. 30.

Displayed in the example below taken from Reid, one can see the tetrachords of which Boynton is speaking present as the first eight pitches of P_{t_0} .¹¹⁸ The figure also makes clear the invariant properties of this row with that of transpositions of five and ten semitones. Order numbers **5** through **11** of his P_{t_0} are equivalent to order numbers **0** through **6** of P_{t_5} , and order numbers **5** through **11** of P_{t_5} are equivalent to order numbers **0** through **6** of $P_{t_{10}}$. Reid’s figure is shown below in figure 5.2.

That Op. 30’s row is made up of two 6-1 hexachords contrasts with the 6-2 hexachords that made up Op. 25’s row, and the 6-z36, 6-z3, 6-

¹¹⁸ Reid uses P_{t_0} for the initial form of the row—what I will call P_9 for consistency’s sake.

z4, and 6-z37 of the Op. 18 serial experiments. None of these other Op. 18 hexachords possess the combinatorial properties of 6-1. Op. 18 no. 2 also uses the all-combinatorial 6-1 hexachord, however it is notable that the rows of both Op 18 no. 2 and Op. 30 are not derived from a single set-class's trichord, instead containing adjacent 3-3 and 3-2 trichords. Also, Webern did not explore any of the combinatorial properties of his row in Op. 18 no. 2.

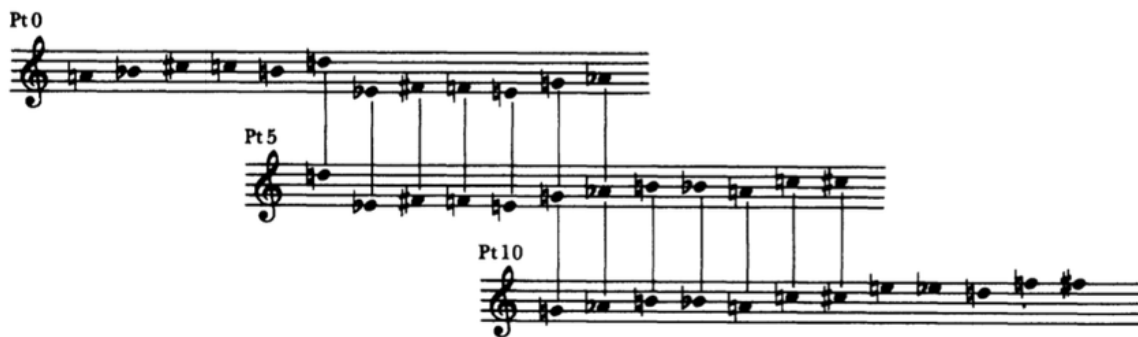


Figure 5.2: From Reid. Op. 30 row-forms.

Another layer of symmetry exists amongst the organization of those trichords in that the first hexachord consists of adjacent 3-3, and 3-2 trichords while the second hexachord is made up of adjacent 3-2, and 3-3 trichords. The combinatorial properties of the Op. 30 matrix allows my analysis to call upon only P and R row-forms. Despite the symmetry that exists with trichords of the row, and because of Webern's persistent focus upon projecting his row-forms one tetrachord at a time, I will be

focusing my analysis upon those tetrachords. The tetrachords display an a-b-a relationship as well with set-class 4-17 flanked by set-class 4-3.

Finally, those tetrachords also display the same a-b-a property in their interval content. Set-class 4-3, [0134], contains +1 +2 +1 half-steps between each pitch, while set-class 4-17, [0347], has +3 +1 +3. A comparison of the Op. 18/ii row and the Op. 30 row appears in figure 5.3.

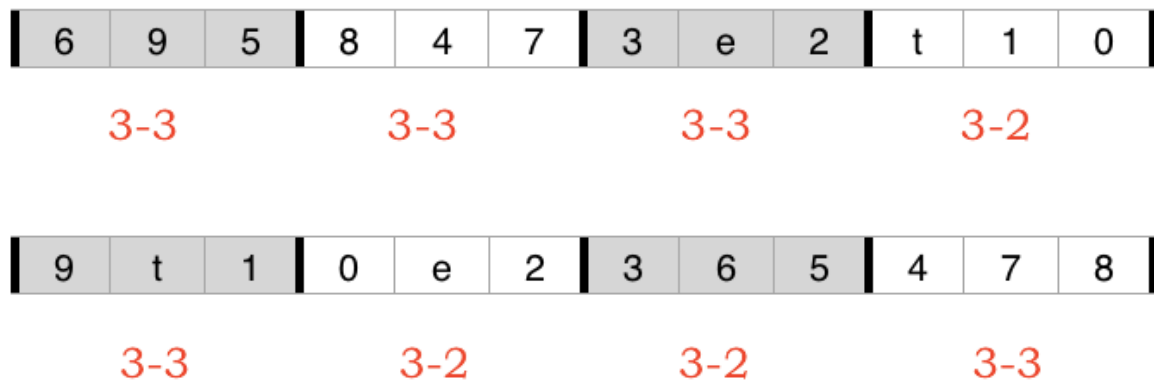


Figure 5.3: Op. 18/ii row (top), and Op. 30 row (bottom) with adjacent trichord set-classes labeled.

Because this is an all-combinatorial set we find Webern exploring invariances between rows throughout. Figure 5.4 shows the matrix for this work, while figure 5.5 shows the combinatorial pairs for the four varieties of hexachordal combinatoriality.

Rhythmically the opening measure, with the half-measure anacrusis, present Boynton’s “a” shown in the example above, while measure two presents his “b” gesture in the oboe. Together with the

trombone melody in measure four, which uses a retrograded and rhythmically halved “a,” these opening measures expose P_9 . The row, dispersed amongst three instrumental families, in three tetrachordal segments, traces the melodic path of x^1 - y - x^2 .¹¹⁹ The registral focus on ic3 is also apparent in all three segments. The oboe’s “y” is underpinned with a 4-3 “x”-related melody in the viola part that indicates the opening of P_t .

9	t	1	0	e	2	3	6	5	4	7	8
8	9	0	e	t	1	2	5	4	3	6	7
5	6	9	8	7	t	e	2	1	0	3	4
6	7	t	9	8	e	0	3	2	1	4	5
7	8	e	t	9	0	1	4	3	2	5	6
4	5	8	7	6	9	t	1	0	e	2	3
3	4	7	6	5	8	9	0	e	t	1	2
0	1	4	3	2	5	6	9	8	7	t	e
1	2	5	4	3	6	7	t	9	8	e	0
2	3	6	5	4	7	8	e	t	9	0	1
e	0	3	2	1	4	5	8	7	6	9	t
t	e	2	1	0	3	4	7	6	5	8	9

Figure 5.4: Op. 30 matrix.

P_9	9	t	1	0	e	2	3	6	5	4	7	8
P_3	3	4	7	6	5	8	9	0	e	t	1	2
P_9	9	t	1	0	e	2	3	6	5	4	7	8
I_8	8	7	4	5	6	3	2	e	0	1	t	9
P_9	9	t	1	0	e	2	3	6	5	4	7	8
R_9	8	7	4	5	6	3	2	e	0	1	t	9
P_9	9	t	1	0	e	2	3	6	5	4	7	8
RI_2	3	4	7	6	5	8	9	0	e	t	1	2

Figure 5.5: Op. 30 hexachordal combinatorial row pairs.

¹¹⁹ To prevent confusion due to the symmetrical nature of Webern’s row, I will refer to the first and last tetrachords as x^1 and x^2 , respectively. The tetrachord in the middle will remain “y.”

The beginning of P_t in measure two also begins with a tetrachordal projection organized as to accentuate ic3 registrally. Unlike P_9 that spreads itself throughout the orchestra, P_t remains rooted in the string section. After the opening x^1 tetrachord in the violas, y appears beginning in measure four in the cellos, and the row is concluded in measures eight and nine divided equally between the harp and basses. P_t , therefore, aligns its conclusion with that of R_t that began in measure four. This is shown in example 5.2 below.

A projection of R_t begins in measure four, two measures after the aforementioned P_t , and like P_9 that opened the work, this R_t divides its three tetrachords between the instrumental families, moving from strings, to winds, before concluding in the strings. Also, like the first row of the piece, the first tetrachord of this R_t is set to rhythm “a,” but with the rhythmic values halved. The “y” tetrachord, in the bass clarinet in measure six, augments rhythm “b,” save for the final quarter-note which should be dotted if “b” was to be consistently doubled. R_t ’s concluding “x” tetrachord appears back in the first violins from measures seven through nine with a retrograded “a” rhythm.

Following the simultaneous conclusions of both R_t and P_t , with a cadence accentuated by a ritard to eighth-note = 112 from the opening eighth-note = 160, Webern indicates a tempo increase to the original *lebhaft* (eighth-note = 160) for a single measure, before once again

returning to eight-note = 112. The malleability of tempi here works hand-in-hand with his row projections. The same technique is used at the next simultaneous conclusion of rows R_t and R_9 in measure fourteen.

Example 5.2: First row projections of Op. 30.

Comparing the two halves of this section we can see that Webern forms antecedent and consequent phrases that are mirror images of one another. By counterpoint and rhythmic organization, Webern alternates

single lines with polyphony before placing “a” “x” of R_t in retrograded rhythm and inverted contour of the opening P_9 statement. In the measures that follow new material is generated once again from the same materials, but contrasting noticeably with this first phrase. Measures five through eleven are shown in example 5.3.

Example 5.3: Op. 30 row projection measures 5-11.

R₉ covers measures ten through fourteen, moving from strings to winds and brass in exactly the same manner as P₉ which opened the piece. Each tetrachord here also shares properties with that first row as well. Measure ten's x¹ is set to a retrograded "a" rhythm with its rhythmic values diminished by half; measure eleven's y is set to a retrograded "b" rhythm; finally measures thirteen and fourteen present the concluding x² in the "a" rhythm. This entire exposure, from a rhythmic as well as pitch-class perspective, maps onto the opening P₉ as a mirror image. The two rows also share their being dispersed between the strings, winds, and then brass respectively.

At the same time, in measures ten through fourteen, a projection of R_t begins moving from brass for the first tetrachord, and the strings for the final two tetrachords. Measure twelve marks the first use of a vertical tetrachord and points toward its becoming the central focus of the following three variations. The final tetrachord here, just as with the final tetrachord of R_t in measures eight and nine, is divided between the harp and instead of the bass picking up the final dyad, here it is the violas. Rhythmically this row closes with the same rhythm in the harp, but a retrograde of the aforementioned bass dyad. Additionally, the viola's gesture features a wide ascending leap, ic1, as opposed to the bass' descending ic1 leap.

Measures ten through fourteen are what I am calling the middle section of the theme's three sections. Webern indicates these disparate sections with simultaneous row completions, and tempo changes as indicated above. This middle section contains retrograded forms of the rows presented in the first section, as well as retrograded rhythmic patterns creating a mirror image of the section that precedes it.

Reid labels the third section of the theme, measures fifteen through twenty, as a codetta that transitions to the first variation. Just as in the previous two sections, Webern continues to expose rows one tetrachord at a time. P_t appears in the strings, with violins one and two playing in unison in measures fifteen and sixteen, with a retrograded "a" rhythm; the row continues in the bass clarinet with a combination of the retrograded second half of "b" and the unaltered second half of "a"; the row is completed by a violin solo with rhythm "a" diminished by half.

The other row appearing in this final section, P_9 , also begins in measure fifteen as a vertical simultaneity in its first tetrachord. In measure seventeen the first instance of opposing rows in the same instrumental family occurs with the second tetrachord of P_9 in the oboe in counterpoint with P_t 's bass clarinet. The final tetrachord chord, just as the first, appears as a simultaneity, and continues into the first variation. Measures twelve through twenty, closing out the Op. 30 theme, are shown in example 5.4 below.

The image displays a musical score for Op. 30, measures 12-20, with various instruments and performance markings. Red annotations and arrows highlight specific harmonic and melodic elements. The annotations include:

- R9 y**: A red box around the first measure of the Flute staff.
- P9 y**: A red box around the first measure of the Clarinet staff.
- P9 x1**: A red box around the first measure of the Bassoon staff.
- R9 x2**: A red box around the first measure of the Horn staff.
- Rt x2**: A red box around the first measure of the Trumpet staff.
- Rt y**: A red box around the first measure of the Trombone staff.
- Pt y**: A red box around the first measure of the Piano staff.
- P9 x2**: A red box around the first measure of the Violin staff.
- Pt x2**: A red box around the first measure of the Viola staff.

Performance markings include *rit.*, *lebhaf*, *codetta*, *molto rit.*, *Alto pizz.*, *Solo*, and *mit Dämpfer*. The score is numbered 12 and 18 at the beginning of the two systems.

Example 5.4: Op. 30 measures 12-20 row projections.

5.2.2 VOICE-LEADING ANALYSIS

Tracing the harmonies throughout the theme, we arrive at the examples and figures that will follow. As described in the methodology chapter I will be continuing to use a hyper-hexatonic system. This particular hyper-hexatonic system used throughout explores the

connections between the harmonies appearing throughout this work, which belong to set-class 4-3 and 4-17. Again, no changes have been made to the core, center part of the hyper-hexatonic system here, and like the system used for Op. 18/iii above, the set-classes in the corners are subsets of the enneatonic collection, pulling pitches from two adjacent poles simultaneously.

Since Webern uses only a select few different row-forms, the harmonic motion is simpler.

The harmonies for measures the first four measures are shown in example 5.5 below. In these opening measures one clearly sees the spaciousness of Webern's orchestration being represented by a spaciousness on the hyper-hexatonic graph. Harmonies move mostly between the enneatonic corners of the graph, naturally due to the outer tetrachords of the row belonging to set-class 4-3; while tetrachords found directly on hexatonic poles occur less frequently.

Specifically, in these first measures shown in figure 5.6 there is considerable disjunct motion which moves from the bottom-right corner, to the western pole, to the bottom-left corner, before moving all the way across the entire graph to the top right corner. As these motions can not be described in terms of neo-Riemannian transformations we can only visualize the distance here and infer the number of transformations necessary for movement of such great distances.

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An Werner Reinhart

VARIATIONEN

für Orchester

ANTON WEBERN, op. 30

Lebhaft $\text{♩} = ca 160$ *langsamer* $\text{♩} = ca 112$ *wieder lebhaft* $\text{♩} = ca 160$

Flöte
Oboe
Klarinette
Bass-Klarinette
Horn
Trumpete
Posaune
Bass-Tuba
Celesta
Harfe
I Geigen
II Geigen
Bratschen
Violen/II
Kontra-Bass

Lebhaft $\text{♩} = ca 160$ *langsamer* $\text{♩} = ca 112$ *wieder lebhaft* $\text{♩} = ca 160$

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Example 5.5: Op. 30 measures 0-4 with harmonies labeled.

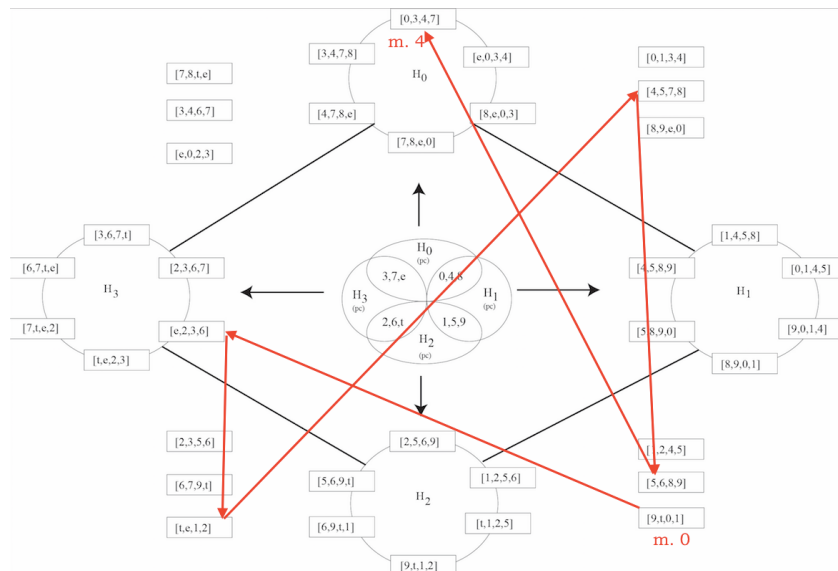


Figure 5.6: Op. 30 measures 0-4 motion on hyper-hexatonic system.

We can, however, infer transformations created out of the combination of successive harmonies. For example [9t01] moving to [e236] can be made possible if we consider a move first to [69t1] in the adjacent southern hexatonic pole, moving to [te12], and finally to [e236]. Using only the pitches already within the harmonies we can see the transformation with as close voice-leading as possible.

Disjunct motion within these measures is represented by disjunct motion across the hyper-hexatonic system, as Webern slowly introduces these separate tetrachords and rhythms as the generating idea of the piece. We will begin to see in the variations that follow, the ways in which Webern combines row-forms, and super-imposes them until they merge inseparably to create closer voice-leading as the piece develops.

In example 5.6 below we see measures five through eleven of the Op. 30 theme. The harmonic motion, seen below in figure 5.7, remains considerably disjunct but as a result of the row construction and Webern's choices of superimposed rows we find certain harmonies recurring within these measures.

This trend continues through the final measures of the theme, shown in example 5.7, and graphed onto the hyper-hexatonic system in figure 5.8. Notice the alignment of the two rows throughout the codetta, measures fifteen through twenty. Disjunct motion continues through the codetta, though there are two pitches shared between the tetrachords in

measures fifteen and nineteen, and only one pitch is shared between the tetrachords in between in the winds in measure seventeen.

The image shows a musical score for Op. 30, measures 5-11. The score is in 3/8 time and features a complex harmonic structure. Red boxes highlight specific harmonic regions, and red arrows indicate the relationships between them. The labels for these harmonies are: [0347], [5689], [5689], [5689], [te12], [0347], [4578], and [E236]. The score includes various dynamics such as *p*, *pp*, *f*, and *sfz*, and tempo markings like *wieder langsamer rit. lebhaft* and *langsam*.

Example 5.6: Op. 30 measures 5-11 with harmonies labeled.

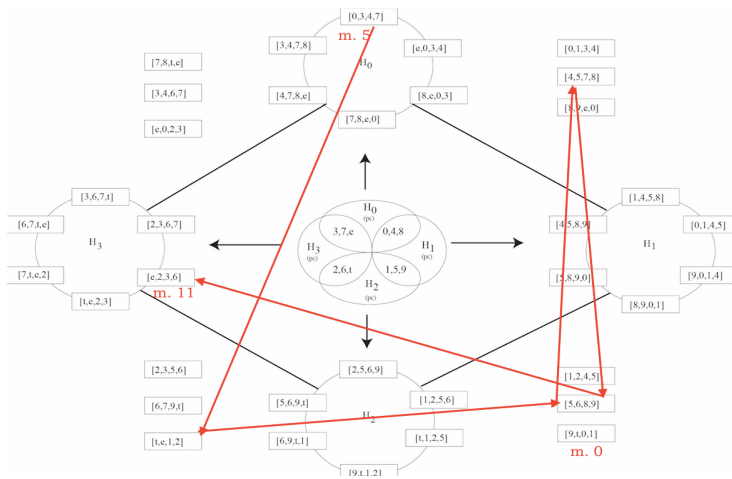


Figure 5.7: Op. 30 measures 5-11 motion on hyper-hexatonic system.

Musical score for Op. 30, measures 12-20. The score is in 3/16 time and features various time signatures (3/4, 2/4, 3/8, 2/8). Red boxes highlight specific harmonic areas, and red arrows point to labels such as [e236], [9t01], [0347], [te12], [4378], and [5689].

Example 5.7: Op. 30 measures 12-20 with harmonies labeled.

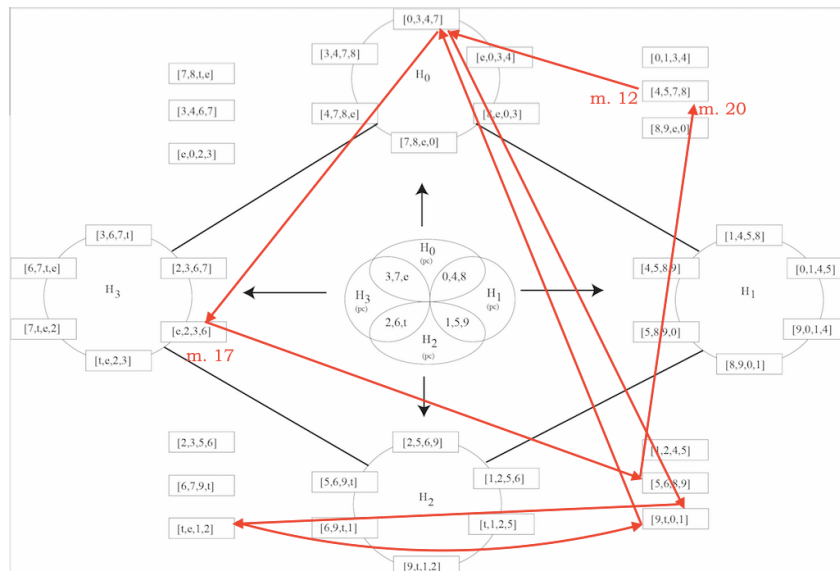


Figure 5.8: Op. 30 measures 12-20 motion on hyper-hexatonic system.

5.2.3 OP. 30 THEME AS GUITAR PART

Webern has constructed Op. 30's opening thematic section in such a way that is quite conducive to being readily played on the guitar. Firstly, his organizing of tetrachords into dyads of ic3 in separate registers is amenable to the guitar's construction, as we have seen with my arrangements of the Op. 25 songs. Secondly, throughout the majority of these twenty measures, Webern has limited himself to only two lines of music at once, saving vertical tetrachords for the latter third of the theme. We will see that those tetrachords are also quite readily playable on a guitar, as they are similar in interval content to any simultaneities we have come across so far. The ease of playing Webern's simultaneities here, just as with his linear material, is due in part to favoring specific and consistent intervals.

Furthermore, I would argue that the simple texture with which this opus is constructed points to its having been influenced by the simple elements that are a key characteristic of folk musics. The basis of the piece, laid out in these first twenty measures, consists of only two set-classes and two rhythmic cells and the basic manipulation thereof.

This does not mean, however, that the work can be simply played as is. As we have seen happening with Webern's works, the great vertical space that his melodic lines occupy only becomes greater. As such, there

are an increasing number of pitches that had to be adjusted to fit within the confines of the guitar's range.

These adjustments begin with the first tetrachord which appears in the anacrusis and first full measure. The low pc11 must be moved up an octave. Making this adjustment does not change Webern's organization of the two separate ic3s in different registers. Although the dramatic octave plus a major seventh descent is reduced, the lower and upper registers of the gesture are now equivalent in that pc9 and pc0, and pc10 and pc1 are both now exactly three half-steps apart. Additionally the gesture is performable, just as we have seen many times before, with one string dedicated to each pitch. This opening gesture is shown in example 5.8 below.

The image shows a musical score for guitar. The top staff is a treble clef with a 6/8 time signature. It contains an anacrusis (two eighth notes) and a full measure (four eighth notes). The notes are: G4 (quarter), A4 (quarter), B4 (quarter), and C5 (quarter). The bottom staff is a guitar tablature staff with strings T, A, B labeled on the left. It shows fret numbers: 7, 7, 6, 4, 5, 7. A red annotation "<3142-->" is placed below the tablature staff.

Example 5.8: Op. 30 opening motive for guitar with tablature notation and Koozin-shape.

As can be seen from the tablature notation, the opening “a” “x” equates to plucking-hand $\{f = \text{mpia}\}$, which equates to $\{s = 4, 6, 5, 3\}$ and $\{r = 7, 6, 4, 5\}$, respectively.

Measure two displays an interesting characteristic of making an arrangement of this work. Webern's large registral leaps, combined with his ic3 groupings, mean that the two voices will become intertwined when placed on a single staff. For example, the second tetrachord of P_9 which appears in the oboe, is revealed as the upper voice for its first dyad, and the lower for its second. The counterpoint of P_t 's first tetrachord in the viola, then wraps itself around those pitches with its outer pitches well below the oboe, and its inner dyad well above.

This interweaving of lines holds the identical pitch content and a nearly mirror-image (save for a dot that would need to be placed on the second pc2) rhythmic content of the upper voice to the same r , and s values of $\{r = 19, 15\}$, $\{s = 1, 2\}$. The lower voice finds each note on its own string, $\{s = 5, 4, 3, 6\}$, and remains within the same approximate position on the guitar's neck, $\{r = 13, 13, 11, 9\}$. Note that the intertwining of the two rows here means that a reach from $\{r = 15, s = 2\}$ for pc2, down to $\{r = 9, s = 6\}$ for the measure's concluding pc1, is not necessary, as the pc1 will be easily graspable as a member of the lower voice at this point. Measure two is shown in example 5.9.

The following measure, once again with ic3 dyads formed between the outer, and inner pitches, is easily playable from the first position. Each pitch is played on adjacent frets in incremental r numbers, although the outside pitches expressing ic3 in this instance must both

be played on $\{s = 6\}$.

The image displays two musical staves. The top staff is a standard musical staff with a treble clef, showing a sequence of notes in black and red. The bottom staff is a guitar tablature staff with a treble clef, showing fret numbers (19, 15, 13, 11, 9) and a Koozin shape notation <-11-3-> below it.

Example 5.9: Op. 30 measure 2 for guitar with tablature notation and Koozin-shape.

The symmetrical nature of the opening ten measures, and Webern's deliberate use of tetrachordal segments, means that similar hand-positions, or at least patterns of similar and limited spans, will recur throughout. These repeated hand shapes are directly related, I argue, to the simple chord shapes necessary for the execution of folk songs on the guitar.

P_9 's first tetrachord is played with a Koozin shape of <3142—>, the second tetrachord, if separated from RI_9 's counterpoint, has a <—3159> shape.¹²⁰ And with the counterpoint this measure moves from <-1—37>, to <—3159>, interestingly showing consistent Koozin shapes as P_t

¹²⁰ Despite the large span of nine frets, at the extreme high positions it is still possible to maneuver with limited difficulty.

imitates P_9 in the second half of the measure. The final tetrachord, because of the outside pitches needing to be played on the same string, might be seen as $\langle 1-2-3 \rangle$ and $\langle 3-1-2 \rangle$ together.

Measure four exhibits a $\langle -2-1-3 \rangle$ shape, moving into $\langle -318- \rangle$, before moving down through $\{s = 5, r = 7\}$ to $\{s = 6, r = 3\}$, which prepares the player for the lower position statement of R_t 's “y” tetrachord in augmented “b.” The shape here is once again simple and compact, with each pitch on its own string in incremental $\{r\}$, $\langle 2-143- \rangle$. Measures three through six are shown in example 5.10.

Example 5.10: Op. 30 measures 3-6 for guitar with tablature notation and Koozin-shape.

Another example of symmetry at the local level occurs between measures five and six. From pc_3 on the downbeat of measure five to that same pitch landing in the middle of the following measure, an exact repetition of pitches occurs, remaining in their same octave positions. However, as a result of the high pc_5 also on the downbeat of measure five, a guitarist would not be able to perform the aspect of symmetry

within these measures from the same position on the neck. The symmetry is physically and compositionally anchored by pc7 in that not only does the mirror form around that pitch, but the pitch can also only be performed at $\{s = 6, r = 3\}$. As such, pc3 in measure five must be played at $\{s = 4, r = 13\}$ in order to reach pc5 above, and to ensure that each pitch in the measure is played on a dedicated string. Therefore pc4 that follows in the lower voice should be performed at $\{s = 5, r = 7\}$ to prevent a large shift of position. Measure six can then be played, in the increasingly common incremental r , forming the Koozin-shape <2-143->.

Moving into the final measures of this phrase, the open strings begin to play an important role, facilitating the large shifts between pc11 and pc5 in measure eight, and between pc9 at the conclusion of the phrase, which leads back into the first position for the second section beginning in measure ten.

Pitch-class 1 in measure seven needed to be moved down one octave, and I made the decision to do the same with pc2 that follows in order to retain the contour of the tetrachord. Similarly, pc8 and pc9 were raised an octave for the same reasons.

The next phrase, beginning in measure ten, also opens with a compact Koozin shape, <1021-3>. For the second half of measure eleven, beginning the “b” rhythmic cell, a similar shape is used, <—214>. This

transitions to the high pc11 of measure twelve where the first vertical tetrachord is introduced.

Webern's extreme registral placement of lines becomes even more extreme in these next measures. The highest pitch here is also the highest possible pitch reachable on the guitar, and countered with a set-class 4-17 "y" tetrachord playable only in the lowest reaches of the guitar. That tetrachord uses a <2-143-> Koozin-shape, which means it does not share an s value with the preceding high pitch.

The remaining vertical tetrachords of the theme appear in measures fifteen and twenty. Each of these is positioned at the end of their respective measures and voiced as a pair of closely voiced ic3s separated by an augmented fifth. The Koozin-shape for these tetrachords is, therefore, <3142—>. It is the case for both of these tetrachords, just as the one in measure twelve, that the line appearing above need not have the same {s} value as any member of the tetrachord. Interestingly, the closing tetrachord in measure twenty is for the first time played at a higher position than the upper voice preceding it. Measures ten through

twelve are shown in example 5.11 below.

Example 5.11: Op. 30 measures 10-12 for guitar with tablature notation and Koozin-shape.

Measure thirteen remains compact with a <1-2—2> shape, with Webern’s indicated slur into measure fourteen possible via shared $\{s = 6\}$. Measure fourteen makes use of the open second string in order to facilitate the shift from $\{s = 6, r = 6\}$ to $\{s = 5, r = 12\}$ for the lower voice. The <-1—7> stretch at the close of the measure is possible once again due to its high position on the neck. Measures thirteen and fourteen are shown in example 5.12.

Example 5.12: Op. 30 measures 13-14 for guitar with tablature notation and Koozin-shape.

Moving into the final section of the theme one will notice the exact repetition of pitch-classes, in the same octave positions as a result of I₉ concluding and RI₉ beginning. Once again a large shift is made possible because of the open second string, where the lower voice's 4-3 tetrachord may be played along with the upper voice's pc2, with each pitch on its own string. The resultant Koozin-shape of this pentachord is <42531->, once again displaying incremental *r* values, across adjacent strings.¹²¹

The final four measures test the extremes of range separation, requiring the pc8 notated in measure nineteen of Webern's solo violin part to be lowered an octave. I chose to leave the remainder of the pitches with unchanged octave positions, at the sacrifice of the original's extremely wide-voiced gesture. More importantly, I am able to maintain the relationship of ic3 in the upper and lower pitches without having to alter any of the pitches in the final measure. Measures fifteen through

¹²¹ One may notice, however, that despite the shape, and the fact that each pitch-class may be played simultaneously on individual strings, that a performer does not have five fingers available on the fretting hand, so that pc2 of the upper voice would need to be cut one eighth note short in performance.

twenty arranged for guitar are shown in example 5.13.

Example 5.13: Op. 30 measures 15-20 for guitar with tablature notation and Koozin-shapes.

5.3 OP. 30 VARIATION NO. 1

5.3.1 ROW ANALYSIS

The first variation begins in measure twenty-one and continues to measure fifty-five. Differing from the strictly two-voice, linear counterpoint of the theme, the first variation features vertical tetrachords throughout with a horizontal melodic line that traces a path through the orchestra in the manner of *klangfarbenmelodie*. This organization into a harmonic texture creating a rhythmic propulsion, versus extended melodic lines does not necessarily coincide with tetrachordal changes as cleanly as was the case in the theme. As the variation unfolds, Webern continually explores the invariance between rows, blurring the line between the end of one and the beginning of another. Once again we find

pitches playing “double duty,” with rows continually interacting to a greater degree.

As pointed out by Webern himself in a letter to Willi Reich, “The first [variation] bring[s] the first subject (so to speak) of the overture (andante-form), which unfolds in full.”¹²²

From the outset of this variation Webern introduces the main idea of rhythmic harmonic underpinning of vertical tetrachords, with a melodic line over top. The melodic lines are of considerably greater rhythmic values than anything seen in the theme, though still clearly linked to the same four elements, two rhythmic motives and two tetrachords, that made up the entirety of the theme.

Measures twenty-one through twenty-three present rows R₉ and P₉ in their harmonic and melodic roles, respectively. R₉'s vertical tetrachords are presented in a symmetrical rhythmic pattern created from quarter notes and quarter note rests beginning with its onset, creating a pivot point on the third attack. Meanwhile, P₉'s melody is derived from the same pitch content that opened the theme, but with doubled rhythmic values in retrograde with the contour inverted. The melody is deemed by Boynton to make up “phrase 1.” According to Boynton, there are a total of nine phrases that make up the melodic content of this first variation. The aforementioned symmetrical rhythmic

¹²² Webern, *Path*, 62.

pattern is shown in figure 5.9.

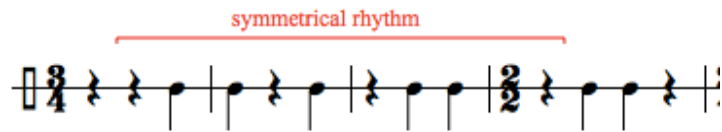


Figure 5.9: Symmetrical rhythm found in measures 21-23.

Example 5.14 compares the pitch, rhythm, and contour of the opening motive to the melody as it appears in measures twenty-one through twenty-three.



Example 5.14: Opening motive (left), and melody in measures 21-23 (right). Both figures have the exact same pitch content, though the contour is reversed (up-up-down compared to the original down-up-up), and the rhythms are doubled in the latter, but retrograded (half-quarter-half-(dotted)half compared to quarter-quarter-eighth-quarter).

Measures twenty-four through twenty-six show Webern taking full advantage of the invariant middle, “y,” tetrachord of P₉ and R₉. The rhythm here, though not entirely symmetrical, does contain a repeated four-attack pattern that continues through the second beat of measure twenty-six.

The melody, Boynton’s phrase two, continues from the first phrase in the solo violin, though now doubled at the unison in the second

violins, and projects the first tetrachord of P_t . The rhythmic values are similarly augmented, and remains retrograded but the contour is returned to its original shape. Boynton's phrase two is shown in example 5.15.



Example 5.15: Phrase two, Op. 30 measures 24-26.

Measure twenty-seven, marked *subito lebhaft*, returning to the opening tempo of quarter-note = 160, inverts the melody and harmony by placing them in the winds and strings, respectively. Phrase three makes up the melodic content in measures twenty-eight through thirty-one. This phrase begins with the final tetrachord of P_9 in the clarinet part, which dovetails with P_7 causing pc7 and pc8 in measure twenty-nine and thirty to simultaneously serve as order numbers **10** and **11** of P_9 and order number **0** and **1** of P_7 , respectively. The first two pitches of the phrase, pc5 and pc4, seemingly stand outside of any reference either of the original rhythmic cells. However, the final four pitches, in measures twenty-nine through thirty-one, display an augmented “a” rhythmic cell that has been retrograded and features an altered contour of two upward gestures. Unlike the two phrases that came before it,

Webern does not highlight the ic3 relationships via registral organization. Instead, the lowest pitches are in an ic4 relationship, while the upper pitches are separated by a distance of ic2.

R₉ concludes in the violas and cellos, through measure twenty-nine, alternating quarter note rests with quarter note attacks.

Phrase four moves the melodic material to the trumpet from measures thirty-two to thirty-four with the second tetrachord of RI₉, which came from back in phrase two at measure twenty-four in the violins. The phrase is constructed rhythmically similar to “a,” and once again is augmented as has been the case in this variation up to this point. However, the augmentation is slightly uneven with the first pitch given the value of a whole-note, rather than what would be a half-note. Viewing the contour, we can see that once again it is inverted from the original form, although with a half-note rest between the first two pitches.

Underneath this fourth phrase are vertical tetrachords in measure thirty-two and thirty-three coming from the middle tetrachord of P₇, and therefore R₇. Here then, at this convergence of “y” tetrachords, Webern continues the final tetrachord of R₇ in the brass while P₇ moves to the strings in measure thirty-five for phrase five.

Rhythmically the vertical tetrachords of measures thirty-two and thirty three revive the off-on pattern that supported the conclusion of

phrase three's P₉ tetrachord, following the fermata between measures thirty-one and thirty-two.

That fermata indicates a change in tempo, returning once again to the slower quarter-note = 112, marked *weider sehr ruhig*. A timbral change also takes place following the fermata, in that all material shifts from winds and bowed strings to brass, harp and celeste. Boynton's phrases two, three, and four are shown in example 5.16.

Example 5.16: Boynton's phrase two (top), three (middle) and four (bottom). Notice each phrase presents a variation of the rhythm and/or contour of the original motive that appeared at the opening of the work.

Following the conclusion of phrase four in measure thirty-four, the tempo once again shifts back to its original quarter-note = 160, *wieder lebhaft, sehr bewegt*. Melodic material has now moved to the first violin, while R₇'s final tetrachord appears vertically in the brass. And, just as measures thirty-two and thirty-three found P₇ and R₇ converging, measure thirty-six in the brass is simultaneously the final tetrachord of

RI₉ and R₇. RI₉ is coming from the melodic material of phrase four which immediately precedes it, while R₇ was the harmonic support for that phrase.

Tetrachordal invariance begins to play an increasingly larger role throughout this piece. Webern takes advantage of this property which links outer tetrachords which belong to set-class 4.3. For example the [9t01] tetrachord which appears as the first tetrachord of P₉ is also the first tetrachord of R₂. Of course, given the combinatorial properties of the row, this means that connections can be made from that [9t01] to any number of rows; aside from P₉ and R₂, tetrachord [9t01] appears in I₁, and I₈, and their retrogrades.

Phrase five appears as the melodic material in the first violins, measures thirty-five through thirty-eight. Interestingly this segment is not taken from one of the usual tetrachordal partitions as we have seen, but rather from the hexachord in the middle of P₀, order numbers **3** through **8**. This would mean that the first and last trichords of that row are contained within surrounding row-forms. Specifically, order numbers **0** through **2**, pc0, pc1, and pc4, appear as a subset of the middle tetrachord of P₇ in the harp and celeste of measure thirty-two; and order numbers **9** through **11** are found in the strings that follow in measure forty. This overlapping of rows to create phrase five is shown in example 5.17.

Example 5.17: Phrase five emerging via invariance between P_0 order numbers 8 through 11, and P_7 order numbers 3 through 6 and continuing. P_7 finds its conclusion in the measures that follow.

Using a hexachord allows Webern to develop the materials with which he has been working up to this point. Two versions of the “a” rhythmic cell are imbricated within the first five pitches of phrase five’s hexachord. The first four pitches invert the original contour while maintaining the relationship between rhythmic values, doubling all values equally. Starting from the second pitch of the phrase, on the downbeat of measure thirty-six, we see that the contour is a retrograded form of the original, with an augmented rhythm that is also retrograded.

Interval content in this phrase remains focused upon ic_3 relationships. Once again, due to Webern’s use of the middle hexachord of a row, those relationships appear in new and more plentiful ways. These relationships, shown in example 5.17 above, exist between the

first and third pitches of the phrase, placed in closest proximity to each other; another exists between pc5 and the final pitch of the phrase, pc8, which has been placed apart from the preceding five pitches as if to elucidate the aforementioned rhythmic and contour relations of those preceding pitches.

For the first time in the piece, we find Webern beginning to expose pitches outside of the usual tetrachordal segments. For example, the third beat of measure thirty-five contains a solitary pizzicato pc6 in the bass, and measure thirty-seven contains a single pc5, trilled in the trombones. The bass' pitch is positioned between the violin's pcs 3 and 2, thus forming an ic3 relationship with the preceding pitch, and beginning P_t's final tetrachord, which is then continued in the timpani, which then also overlaps with phrase five's final two pitches.

At the conclusion of phrase five, in the cello part there appears the first tetrachord of P₈, described by Boynton as a canonic accompaniment to phrase five. Ic 3 relationships are formed from the outer pitches through a durational accent; registrally, however, these outer pitches represent the lowest and highest pitches of the gesture. There appears a symmetric rhythmic cell within this canonic accompaniment as well as a contour similar to that appearing in phrase three. Phrase five, with its canonic accompaniment in the cellos, is shown in example 5.18 below.

The image shows a musical score for measures 34-39. It features five staves: Violin I (Vl. I), Violin II (Vl. II), Cello (Vcl.), Double Bass (Vcl. ab.), and Double Bass (Vcl. ab.). The score includes dynamic markings such as *f*, *p*, and *pp*, and performance instructions like *mit Dämpfer* and *rit.*. The time signature changes from 3/4 to 2/2 and back to 3/4. The measure numbers 34, 35, 36, 37, 38, and 39 are indicated at the bottom of the staves.

Example 5.18: Phrase five in violins with canonic accompaniment in the cellos, measures 34-39.

The vertical tetrachord moves to the winds, beginning an R_5 projection once again, rhythmically pulsating with alternating rests and quarter-note attacks through measures thirty-seven and thirty-eight. Moving to the strings, the second tetrachord is followed directly by the third from measures forty to forty-five. These tetrachords line up with the tempo changes that once again slow to quarter-note = 112, and return to quarter-note = 160.

The second tetrachord of R_5 , measures forty through forty-two, contains a trichord subset containing the first three pitch-classes of row P_{10} , allowing Webern to pull one row out from another just as with phrase five. Order numbers 3 through 8 of P_{10} go on to form phrase seven in the tuba and trombone, concluding to the next fermata and tempo change. The final trichord of P_{10} is then completed as part of the middle tetrachord of R_3 that appears in the percussion section that has expanded to include the timpani in addition to the celeste and harp.

Phrase six, appearing in the horn, works with the middle tetrachord of P_8 , which began in the canonic accompaniment to phrase five in the previous measures. Rhythmically, this phrase is once again a retrograded “a” which is augmented, except for the final pitch which is quadrupled to become a whole note. The contour here is inverted. Highlighting ic3 in the middle tetrachord such as the one used here means that Webern places adjacent pitches in the same register. This means that pc10 and pc1 are placed an octave and a sixth above pc2 and pc5.

Following phrase six, in the canonic accompaniment to phrase seven, Webern’s approach is altered somewhat by dividing the final tetrachord of P_8 amongst two families of instruments, the strings and brass, specifically the trumpet. The trumpet, in measure forty-five completes the final tetrachord of P_8 with pc7, while the row’s preceding pc4, pc6, and pc7, appear above in the winds.

Phrase seven is divided amongst the low brass with the trombone’s concluding two pitches following the tuba’s 4-3 {0134} tetrachord. The tuba’s first three measures take their rhythm from the harmonic material which preceded it in measure forty-one. The phrase’s repeated off-on structure simplifies, in alternating half-note rests and half-note attacks, the string section’s alternating two quarter-note rests with two quarter-note attacks. A symmetrical rhythmic cell emerges beginning with

measure forty-five's tied note, which then hands the phrase off to the trombone. Phrases six and seven, with the canonic accompaniment to phrase seven, are shown in example 5.19.

Example 5.19: Phrases 6 and 7, and the latter's canonic accompaniment, measures 40-45.

The row exposures around phrases six and seven are found in example 5.20 below.

Because Webern chose to only use a trichord in the winds in measures forty-four and forty-five, order numbers **3** through **1** of P₈, and not a tetrachord as has been law up to this point, the trumpet is used to pick up the final pitch of the row. This stands out as another way for Webern to dovetail two rows together, yet rather than using an entire

tetrachord, he pivots between P₈ and P₆ via pc6 in the strings. That pitch, simultaneously serves as order number **10** of P₈ and order number **0** of P₆. The following pc7 in the trumpet continues P₆ while concluding P₈, and moves to pc10 before completing its first tetrachord with pc9 once again in the winds.

Example 5.20: Row exposures for measures 40-45 showing phrase 6 and the beginning of phrase 7.

The final two phrases conclude the variation. Both break up their melodies, exposing only two pitches at a time before moving to another instrument for the next two.

Phrase eight moves from the horn in measures forty-eight and forty-nine, before switching to the cello in measures forty-nine and fifty, revealing the middle tetrachord of P₆. The final tetrachord of that row, once again divided in two, is split between the bass-clarinet and viola in measures fifty-two through fifty-five. In relating this penultimate phrase to the original pitch and rhythm content of the theme we can note that this is another instance of Webern inverting the contour. Interestingly though, this phrase creates for the first time a variation on the “b” rhythmic cell. The rhythmic values within this phrase are related by similar ratios as “b,” in retrograde. Where I have shown “b” to be comprised of two halves both displaying a 3:1 relationship of their rhythmic values, so too does phrase eight. In the figure below, a simplified version of phrase eight is shown with only the rhythm appearing. The relationship of 3:1 exists here between the two dotted-half-notes which are tied, followed by the quarter-note and quarter-rest; it also exists between the quarter-note and the dotted-half-note in the cello. The quarter-note rest also creates an axis of symmetry between the dotted-quarter to quarter-note rhythm in the horn and the cello. Figure 5.10 below shows a comparison between the rhythmic values of the initial “b” with those of phrase eight.

Example 5.21 below shows phrase eight starting in the horn and concluding in the cello.

Figure 5.10: Rhythm “b” (left top) with common denominator break-down (left bottom). Phrase eighth (right) then does the same, revealing the same underlying ratio as that of “b.”

Example 5.21: Phrase 8, measures 46-51.

Phrase eight’s shift in alluding to rhythmic cell “b” here is setting us up for the second variation which will work exclusively with that rhythmic motive in the same way that variation 1 worked with the first.

The beginnings of the final phrase can be traced back to the seventh phrase in that the third pitch of that phrase, pc3, can also serve as order number **0** of P₃, and it concludes the first tetrachord at the end of the phrase. P₃’s middle tetrachord is shared with the middle tetrachord of R₃ in the percussion section, before completing phrase nine with its final tetrachord beginning in measure fifty-one in the violins. That final tetrachord is divided between the violin and the clarinet.

Phrases eight and nine, with their tetrachordal exposures, can be found in example 5.22.

Example 5.22: Op. 30 measures 46-55. Phrase eight is found in the horn in measure 48, moving to the cello, labeled $P_6 y$, while phrase nine appears immediately after in the violins in measure 51, with the bass clarinet in measure 52.

The main organizing *gedanke* of this variation is revealed to be the exploration of invariant tetrachords between rows. Furthermore, Webern uses these invariances in order to shift rows from harmonic to melodic roles and vice versa. Melodic material in this variation contrasts with any linear material in the theme by virtue of their rhythmic values being significantly longer than the mostly single measure fragments appearing in the first twenty measures of the opus. Despite these differences,

rhythmic, and gestural material is still derived from the thematic material. Interval content, specifically ic3 relationships, continue to be highlighted by means of registral organization throughout.

5.3.2 VOICE-LEADING ANALYSIS

Due to Webern's increasing experimentation with the invariant properties between rows, I argue that the voice leading is closer than in the previous theme. Despite the clear division between vertically-oriented harmonic tetrachords, and the horizontal melodic phrases, Webern weaves rows together, and draws rows out of others in order to form phrases later in the piece. The result is increased pitch-class repetition, as well as an increased number of pitches and row segments that serve as members of more than one row simultaneously.

The clear distinction between what I have deemed the harmonic voice and the melodic voice maintains a fairly simple harmonic motion throughout despite Webern's decidedly thicker textures compared to the first twenty measures. Example 5.23 below shows the harmonies as they appear between measures twenty-one and twenty-eight.

In figure 5.11 below we see that the simple harmonic motion in these measures remains mostly within the enneatonic corners, doubling back onto [9t01] and [4578].

The image displays two pages of a musical score. The left page shows measures 21-28, and the right page shows measures 24-31. Red boxes highlight specific harmonic structures, and red arrows indicate the movement of these structures across different rows of the score.

- Left Page (Measures 21-28):**
 - Measures 21-22: Marked *sehr ruhig* and *erreichte* (ca. 112). A red box labeled [4578] highlights a harmonic structure in the piano part.
 - Measures 23-24: Marked *sehr ruhig* and *erreichte* (Solo). A red box labeled [9t01] highlights a harmonic structure in the piano part.
- Right Page (Measures 24-31):**
 - Measures 24-25: Marked *subito lebhaft* (ca. 100). A red box labeled [e236] highlights a harmonic structure in the piano part.
 - Measures 26-27: A red box labeled [4578] highlights a harmonic structure in the piano part.
 - Measures 28-29: Marked *subito lebhaft* (ca. 100). A red box labeled [te12] highlights a harmonic structure in the piano part.
 - Measures 30-31: A red box labeled [9t01] highlights a harmonic structure in the piano part.

Arrows originate from the highlighted boxes on the left page and point to corresponding highlighted boxes on the right page, illustrating the movement of the harmonic structure across the score.

Example 5.23: Op. 30 measures 21-28 with harmonies highlighted. Arrows follow a row as it moves from tetrachord to tetrachord.

Measures twenty-nine through thirty-nine carry us through the next two phrases where comparatively lengthier melodic ideas are now interacting with multiple rows at once, as described in the previous section. These measures are shown in example 5.24 below.

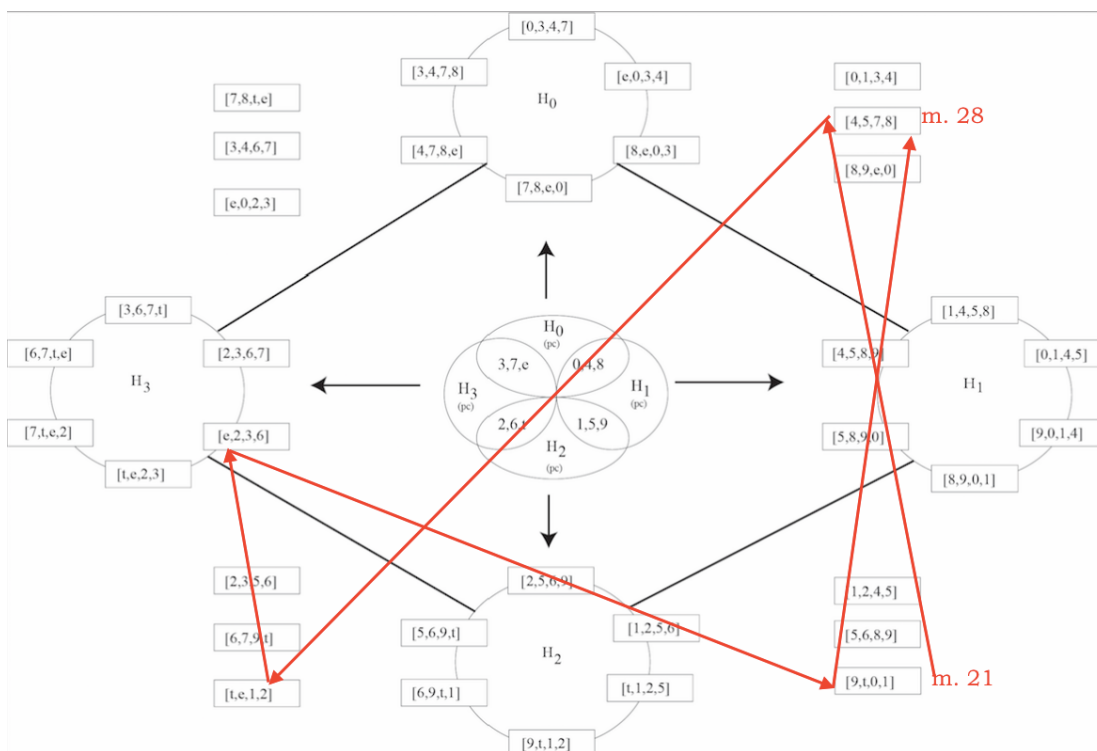


Figure 5.11: Harmonic motion for measures 21-28 graphed onto the hyper-hexatonic system.

Harmonic motion in these measures, just like the ones in the previous example, move between relatively few tetrachords. Once again we see instances of the harmonic motion doubling back to re-trace a path due to row-form repetition. This motion is shown in the hyper-hexatonic system in figure 5.12 below.

As this variation draws to a close, the phrases begin to break down, appearing as dyads divided amongst different instruments. Harmonic blocks and melodic phrases are locked in a 1:1 ratio: where one melodic strain ends, so too does the harmonic support, before they

both move to different sections of the orchestra. Example 5.25 below shows the harmonies for measures forty through fifty-two, which closes out the variation.

The image displays two systems of musical notation, measures 29-39. The left system covers measures 29-33, and the right system covers measures 34-39. Red boxes highlight specific tetrachords in various staves, with red arrows pointing to their labels. The labels are: [4578] in the first staff of measure 29; [78te] in the first staff of measure 30; [0347] in the second staff of measure 30; [9014] in the third staff of measure 30; [9014] in the fourth staff of measure 30; [9101] in the first staff of measure 31; [2356] in the first staff of measure 31; [2356] in the first staff of measure 32; [2356] in the first staff of measure 33; [9101] in the first staff of measure 34; [0134] in the first staff of measure 34; [78te] in the first staff of measure 35; [0347] in the first staff of measure 35; [9014] in the first staff of measure 35; [2569] in the first staff of measure 36; [2356] in the first staff of measure 37; [2356] in the first staff of measure 38; [89e0] in the first staff of measure 39. The score includes tempo markings such as 'rit. - - tempo' and 'wieder sehr ruhig', and dynamic markings like 'p' and 'pp'.

Example 5.24: Measures 29-39 with each tetrachord highlighted and labeled.

In figure 5.13 below we see similar patterns of touchstone harmonies such as [te12] and [3467] revisited repeatedly. Motion throughout these measures focuses on the Southwest corner collection of set-class 4-3.

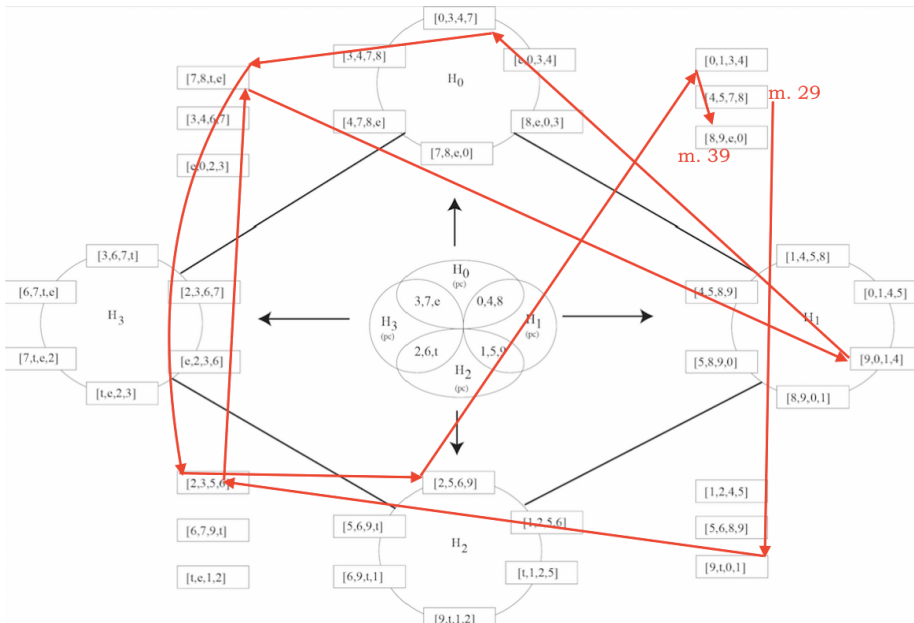


Figure 5.12: Harmonic motion for measures 29-39 graphed onto the hyper-hexatonic system.

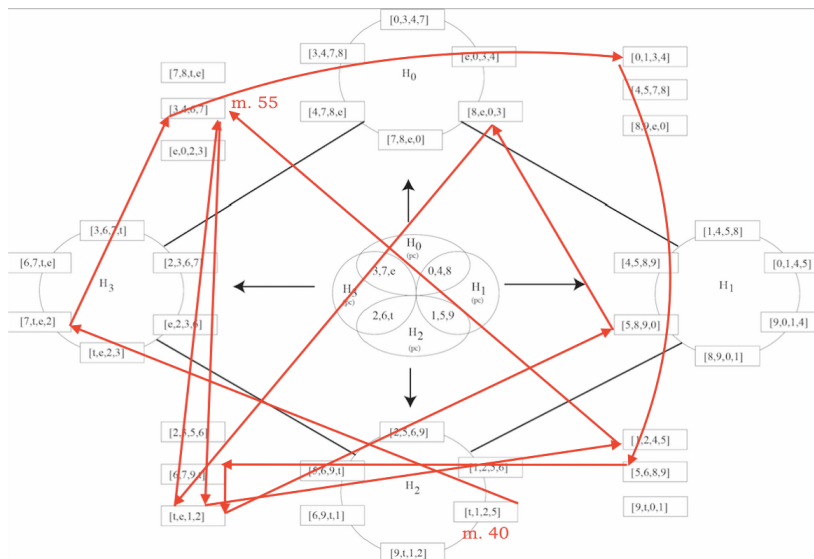


Figure 5.13: Harmonic motion of measures 40-55 graphed onto the hyper-hexatonic system.

The image displays a musical score for Op. 30, measures 40-52, with tetrachordal harmonies highlighted in red boxes and connected by red arrows. The score is divided into two systems: measures 40-45 and 46-52.

Measures 40-45:

- Measure 40: *sehr ruhig* (♩ = ca. 112), *rit.* (♩ = ca. 100), *wieder sehr bewegt*. Tetrachordal harmonies: [125], [3467], [679†], [0134].
- Measure 41: *sehr ruhig* [7te2], *rit.*, *wieder sehr bewegt* [5689].

Measures 46-52:

- Measure 46: *rit.* [679†], *sehr ruhig* (♩ = ca. 112), *rit.*, *tempo*. Tetrachordal harmonies: [8e03], [5890].
- Measure 47: *rit.* [te12], *sehr ruhig* (♩ = ca. 112), *rit.*, *tempo* [te12]. Tetrachordal harmonies: [te12].
- Measure 48: *rit.*, *tempo*. Tetrachordal harmonies: [te12].
- Measure 49: *rit.*, *tempo*. Tetrachordal harmonies: [te12].
- Measure 50: *rit.*, *tempo*. Tetrachordal harmonies: [te12].
- Measure 51: *rit.*, *tempo*. Tetrachordal harmonies: [te12].
- Measure 52: *rit.*, *tempo*. Tetrachordal harmonies: [te12].

Red arrows indicate the flow of tetrachordal harmonies across measures and staves, showing how these harmonies are shared or transformed between different parts of the score.

Example 5.25: Op. 30 measures 40-52 with tetrachordal harmonies indicated.

5.3.3 VARIATION NO. 1 AS GUITAR PART

Since this entire variation is built around two alternating considerations of a vertical harmonic tetrachord with a horizontal melodic line, the orchestration as guitar part becomes at once clearer and more complicated.

That Webern chooses not to stray from his chosen voicing for the harmonic tetrachords makes it possible to perform for long stretches while the fretting-hand fingers remain fixed in their position. The melody line's attacks are usually placed in distinct metric positions that do not coincide with the vertical tetrachords supporting them. Throughout this variation it became necessary to reposition more pitches such that their octave positions would be reachable on the instrument. Once again, in all cases where pitches were required to shift, the preservation of the contour took precedence above all. As another note, when a positioning was decided upon for the harmonies, I did not alter them for the duration of that verticality's existence. Though this may happen in the literature, I felt that, due to the complexity of the piece, it made more sense to weave the melodic line around these static harmonies. There is no instance in this variation where a pitch from the vertical harmonic tetrachords needed to be shifted in octave position, and all pitches are sounded exactly as written.

For the first phrase the melody remains bound to $\{s = 1\}$ while the harmony remains fixed on $\{s = 2-5\}$. Being that pc1 in measure twenty-two required a downward shift of two octaves, pc10 which precedes it was lowered an octave as well. The outer pitches remain fixed at their written positions, retaining the contour and registral separation of ic3.

Webern's voicing of set-class 4-3, [4578] allows for incremental s values, and closely positioned r values which includes the use of only four frets in the span of four strings. This is due to the tetrachord consisting of two ic3 dyads separated by an augmented fifth. The first three measures of this variation, arranged for guitar, is shown in example 5.26.

The image shows three measures of music for guitar. The top staff is a treble clef with a 3/4 time signature, containing a melody of eighth notes and chords. The bottom staff is a guitar tablature with a 3/4 time signature, showing fret numbers (5, 6, 9, 8) and chord shapes. A red '<-3143->' is written below the tablature.

Example 5.26: Op. 30 measures 21-23 arranged for guitar with tablature notation and Koozin-shapes.

The next harmony, set-class 4-17 in measure twenty-four, though not voiced in separated thirds in exactly the same manner, instead consists of what amounts to a traditional minor triad and augmented

fifth above the bass pc3. As such, the hand position changes slightly, moving from a <-31431> shape to a <1421—> shape, with the barre held at the eleventh fret. Pitch-class 10 on the downbeat of measure twenty-four is registrally separated significantly from its supporting harmony, necessitating a truncated rhythmic value for practical purposes. The melody pitches that follow result in simple re-articulations of pitches already within the harmony through to measure twenty-six.¹²³ Measures twenty-four through twenty-six are shown in example 5.27.

The image displays a musical score for guitar, measures 24-26. The top staff is a treble clef with a key signature of one flat (B-flat). The melody line starts with a dotted quarter note on the downbeat of measure 24, followed by eighth notes. The bottom staff is a guitar tablature with fret numbers and Koozin-shapes. The Koozin-shapes are <1421-->, <--1432>, and <-1422->.

Example 5.27: Op. 30 measures 24-26 arranged for guitar with tablature notation and Koozin-shapes.

Webern's widely voiced set-class 4-3 in the next three measures leaves the barre at the sixth fret, resulting in a <1-21-3> shape, with melody pitch pc5 requiring a bit of a leap of hand position in between the harmonic attacks. Following that leap, melody pitches are positioned well

¹²³ Pc1 of the melody, on the downbeat of measure twenty-six, has been moved down one octave.

within the realm of the harmony, on their own dedicated strings resulting in [1221-3], and [1-2133] shapes respectively. Measures twenty-seven through twenty-nine are shown in example 5.28.

The image displays musical notation for guitar across three measures (27-29). The top staff is in treble clef with a 2/2 time signature. It features a melody line with a barre at the 8th fret. The bottom staff is a guitar tablature with fret numbers 8, 13, 8, 8, 8, 8, 8, 8, 8, 8. Below the tablature are three Koozin-shapes: <1-21-3>, <1221-3>, and <1-2133>, each aligned with a measure.

Example 5.28: Op. 30 measures 27-29 arranged for guitar with tablature notation and Koozin-shapes.

Measures thirty through thirty-one once again voice their 4-3 tetrachord in the same manner as was seen in the first measures of this variation. This results in the properties of incremental s , and r values. Melodic attacks remain separated from harmonic attacks, with distinct s values which lay outside those of the harmony. Measures thirty and thirty-one are shown in example 5.29.

Another widely voiced chord, similar to that of measures twenty-seven through twenty-nine is present in measures thirty-two through thirty-four, although here the harmony belongs to set-class 4-17. Once again a barre may be used, at the ninth fret with each pitch of the melody once again separate from the harmony. Measures thirty-two

through to the downbeat of thirty-five are shown in example 5.30 below.

Example 5.29: Op. 30 measures 30-31 arranged for guitar with tablature notation and Koozin-shapes.

Example 5.30: Op. 30 measures 32-35.1 arranged for guitar with tablature notation and Koozin-shapes.

Webern's vacillation between close and open voiced harmonies becomes increasingly apparent with measures thirty-two through thirty-four's widely voiced 4-17, moving to a close voiced 4-3 for measure thirty-six, before moving back to an open 4-3. The 4-3 in measure thirty-seven is [0134], which is closely related to measure thirty-two's [9014]

4-17. Whereas that 4-17 has a Koozin-shape of <1-212->, the 4-3 here voiced in similar fashion is also shaped similarly with <1-21-3>, holding the same relative r values on $\{s = 6-3\}$. Measures thirty-six through thirty-nine are shown in example 5.31.

The image displays a musical score for guitar, measures 36 through 39. The top staff is a treble clef with notes and accidentals. The bottom staff is a guitar tablature with fret numbers and red arrows indicating fingerings. Below the tablature, Koozin-shapes are written: <-3143-> for measure 36, <1-21-3> for measure 37, and a red dash for measure 38. Measure 39 is partially visible and contains a red dash.

Example 5.31: Op. 30 measures 36-39 arranged for guitar with tablature notation and Koozin-shapes.

Measures forty through forty-two hold a <-221-3> shape, with an open-voiced set-class 4-17 tetrachord. Two of the melodic pitches over this harmony are re-articulations of pitches existing within the harmony, while the remaining melodic pitches on the downbeat of measures forty-one and forty-two are graspable without shifting hand position. Measures forty through forty-two are shown in example 5.32 below.

Set-class 4-3 in measures forty-three through forty-five are limited in their possibilities with regard to hand position as pc_6 anchors the tetrachord to $\{s = 6, r = 2\}$. The remainder of the simultaneity is still easily performed in first or second position with a shape of <1-21-3>.

including a barre across the second fret. Difficulties do arise, however, when adding the melodic line. In the canonic accompaniment to phrase seven, appearing in the winds, the outer pitches must be lowered one octave. A similar change occurs in phrase seven itself as its first pitch is raised an octave. In following with all previous edits, once again the contour was maintained and therefore phrase seven's pitch in measure forty-four, pc0, was raised an octave. Finally, pc7 in the melody in measure forty-five, having been lowered an octave to maintain the contour of the line, falls one half-step from the top-most pitch in the harmony. This makes the pitch incredibly difficult to play without omitting the lowest harmony pitch. Measures forty-three through forty-six are shown in example 5.33.

Example 5.32: Op. 30 measures 40-42 arranged for guitar with tablature notation and Koozin-shapes.

Example 5.33: Op. 30 measures 43-46 arranged for guitar with tablature notation and Koozin-shapes.

Another member of set-class 4-3 follows in measures forty-six and forty-seven, voiced in the characteristic manner of two ic3s separated by ic4.¹²⁴ Set-class 4-17 in measures forty-eight to fifty remain voiced in the second position, with the melody line including two re-articulated pitches while the remainder are easily graspable.

Example 5.34: Op. 30 measures 51-55 arranged for guitar with tablature notation and Koozin-shapes.

¹²⁴ Spelled like a minor sixth here, and as an augmented fifth previously.

This first variation's final harmony is separated from the previous 4-17 by pc11 in measure fifty-one, and interestingly this solitary pitch is the highest pitch on the guitar. The only pitch throughout these final measures that must be altered is pc2 in measure fifty-four, the final pitch of phrase nine.

Set-class 4-3, two ic3s separated by ic4 remains fixed while re-articulations and pitches in close proximity make up the melodic line which wraps around it. This final sonority differs from that which opened the variation by only a half-step, meaning the Koozin-shape of <-3143-> remains, but where the "1" in that shape represented $\{s = 5, r = 8\}$ it now stands in for $\{s = 5, r = 7\}$. These measures are shown in example 5.34 above.

Throughout this variation Webern's alteration of close and open voicing of harmonies, which also alternate between set-class 4-3 and set-class 4-17, benefit from close physical positioning when placed onto the guitar. With no octave re-positioning of harmonies they remain closely related in their physical voice-leading. This further supports my argument that the textures and voice-leading of Webern's later works is strongly influenced by the guitar.

5.4 OP. 30 VARIATION NO. 2

5.4.1 ROW ANALYSIS

The second variation comprises measures fifty-six through seventy-three. The main difference between this variation and the first is that here the vertical sonorities are not simply the primary focus, but the only element in existence. This variation, then, is clearly a development of the ideas of the first.

There are several instances throughout this variation, contained within measures fifty-six through seventy-three, where performing the piece exactly as written is impossible on the guitar due to Webern's juxtaposing contrasting tetrachords as simultaneities. As this variation unfolds, tetrachords become more akin to subsets of octachords. Although this may often be the case, as with the previous variation, we will find that the attacks of these tetrachords are sometimes—though not as often—separated making it possible to sound the harmonic progression, even if some rhythmic values must be shortened to do so.

Tracing the path of rows becomes increasingly difficult, though once again Webern has for the most grouped tetrachords together within the same family of instruments. As previously mentioned, although there is no one melodic line that stands out, Webern does create contrast by placing durationally accented tetrachords against more percussive, pointillistic attacks.

Measure fifty-six opens the variation with the first tetrachord, 4-3, from P_t , which is slurred into the following measure in the winds and brass. That row concludes in measure fifty-eight with three of its final tetrachord's pitches remaining in the brass, with pc8 appearing in the solo violin.

Row R_9 is juxtaposed with this opening row, exposing its first two tetrachords in the opening two measures as well, though in the strings. This row also concludes in measure fifty-eight, in the harp.

Just as the invariance between rows plays an important role in transitioning from one row to another in the previous variation, it does in this variation as well. The final tetrachord of I_8 in the harp, for example, also becomes the first tetrachord of R_2 , which then moves to the strings in measure fifty-nine, before concluding in the winds in the following measure.

A durationally accented first tetrachord of P_0 is present in the brass section through measures sixty and sixty-one. It moves to the celeste in measure sixty-two before concluding in the strings in measure sixty-three. For this final tetrachord Webern orchestrates double-stops in each instrument, with the tetrachord sounding in the violins on the weak part of the first beat, while it is repeated an eighth-note later in the viola and cello.

Returning to the winds in measures sixty and sixty-one, if the 4-3 tetrachord is thought of as the first tetrachord of R_7 , then we can trace a path to the harp in measure sixty-two, then to the strings in measure sixty-three. The double attack of the [78te] 4-3 tetrachord in the measure suggests the convergence of two rows. Measures fifty-six through sixty-four are shown in example 5.35.

Example 5.35: Op. 30 measures 56-64 with row exposures labeled.

Using the string section's 4-3 in measure sixty-three, which may serve as the conclusion of the two aforementioned rows, we can also find that same tetrachord as beginning an instance of R_0 which then shifts up

to the winds an eighth-note later before concluding in the brass in measures sixty-five and sixty-six. The brass' conclusion pivots to become the opening of R₅.

Measure sixty-five also begins an instance of P₂ in the winds, once again durationally accented. The next tetrachord of that row is found on the downbeat of measure sixty-seven in the strings as a sharp attack, and concludes with the final tetrachord in the harp, measure sixty-eight. R₅'s second tetrachord comes immediately after P₂, and also in the strings. R₅ is then moved up to the winds for its conclusion.

Once again using the conclusion of one row as the beginning of another, R_t begins with the tetrachord that closed R₅ in the winds. The middle tetrachord of R_t is found in measure sixty-eight as well, an eighth-note later. R_t's final tetrachord is found in measure sixty-nine once again in the winds.

The final tetrachord of P₂ becomes the first tetrachord of P₉, which moves next to the viola and cello in measure sixty-eight, before concluding in the brass in measure sixty-nine. Naturally P₉'s conclusion becomes the beginning of another row. P₄ begins with the final tetrachord of P₉ in the brass, moves to the harp in measure seventy, and concludes at the end of that measure in the viola and cello.

As the variation comes to a conclusion two final rows appear. P_e emerges from the end of P₄, with its middle tetrachord in the brass before

breaking down into unilinear material in measures seventy-two and seventy-three. Row R_8 begins in the winds in measure seventy-one, its middle tetrachord appears at the end of that measure in the viola and cello before similarly unraveling into unilinear material in the final two measures of the variation. Measures sixty-five through seventy-three are shown in example 5.36.

The image shows a musical score for measures 65-73 of Op. 30, annotated with red boxes and arrows. The score is divided into two systems. The first system covers measures 65-71, and the second system covers measures 72-73. The annotations include:

- Measure 65:** P2 x1 (Violin I), R5 x1 (Violin II), Rt x1 (Viola), P4 x1 (Cello), P9 x2 (Double Bass).
- Measure 66:** R5 x2 (Violin I), Rt x1 (Violin II), Rt x2 (Viola), R8 x1 (Cello).
- Measure 67:** P4 x1 (Violin I), P9 x2 (Violin II), Pe y (Viola).
- Measure 68:** R5 x1 (Violin I), P2 x2 (Violin II), P9 x1 (Viola), P4 y (Cello).
- Measure 69:** R5 x1 (Violin I), P2 y (Violin II), P9 y (Viola), P4 x2 (Cello), Pe x1 (Double Bass).
- Measure 70:** R8 x1 (Violin I), R8 x2 (Violin II), R8 y (Viola).
- Measure 71:** R8 x1 (Violin I), R8 x2 (Violin II), R8 y (Viola).
- Measure 72:** Pe x2 (Violin I).
- Measure 73:** R8 x2 (Violin I).

Tempo markings include *rit.*, *tempo*, and *rit. tempo*. The score also includes performance instructions such as *Solo*, *arco*, *diverger en*, and *diverger out*.

Example 5.36: Op. 30 measures 65-73 row exposures.

Over the course of the theme and these first two variations we have seen Webern compressing his initial ideas from the separated melodic fragments of the theme, to the increased exploration of invariance in the

first variation which reaches its apex in the second variation. Webern is also continuing to vary the rhythmic material.

Despite the entirety of this variation consisting of tetrachords presented vertically Webern does make a distinction between harmonic and melodic material through their differing attacks and phrasing. What I will consider melodic material throughout this variation will be that which is slurred together, while the harmonic support is provided by the solitary attacks that are deliberately separated.

At the outset, in measures fifty-six through fifty-nine the first melodic phrase, appearing in the winds and brass, uses a variation of the “b” rhythm introduced in the theme. The dotted-quarter which is connected to an eighth note, followed by a quarter-note which is slurred to an eighth note, can be seen as an augmented version of the first half of “b” This is shown in figure 5.14 below.



Figure 5.14: “b” rhythm (left) and measures 56-59 melody rhythm (right) comparing lowest common denominator ratios.

Measures sixty to sixty-one, and sixty-five to sixty-six present two simultaneous and related symmetrical rhythmic ideas. The rhythm of the

melody in the winds in measures sixty and sixty-one is mimicked in the brass, measures sixty-five to sixty-six. Similarly, the rhythm in the brass in measure sixty to sixty-one is mimicked in the winds in measures sixty-five and sixty-six. This mirror-image rhythmic pattern consists of quarter-note tied to a dotted-quarter, which overlays its retrograde. This is shown a bit more clearly in figure 5.15 below.

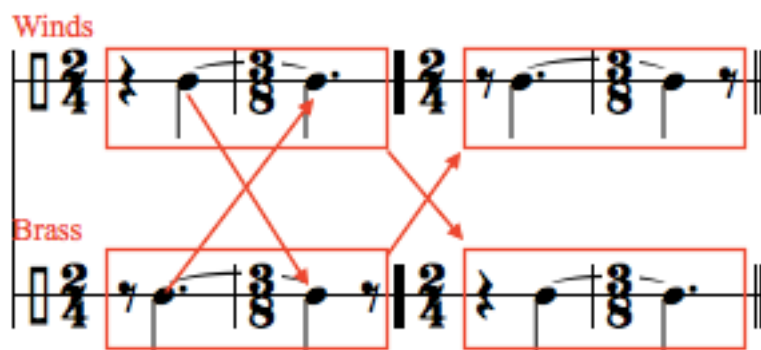


Figure 5.15: Measures 60-61 (left) and 65-66 (right) showing rhythmic exchange between winds and brass.

The remainder of the variation continues to use sharply-attacked tetrachords throughout the string section, presented consistently in eighth-notes. Only two of the attacks in measures sixty-seven to seventy-three are of greater rhythmic value than an eighth note; a dotted-quarter-note in the brass in measure sixty-nine, and a quarter-note in the winds in the same measure.

Measures seventy-two and seventy-three present the final tetrachords of P_e in the clarinet, and R_8 in the first violin, as linear material which leads into the third variation.

5.4.2 VOICE-LEADING ANALYSIS

Measures fifty-six and fifty-seven trace the following path: [te12], [4578], [0347], [e236]. As detailed in the previous section, I have divided the score into distinct harmony and melody roles, with the longer, generally tied values as the melody, and the staccato tetrachordal punctuations as the harmonic support. Here we see that the tetrachords in the melody, scored in the winds and brass, are separated from the harmony, with the intervening tetrachords present in the following measure. The winds and brass appear in the lower-left corner, moving to the Northern hexatonic pole, while the strings move from the upper-right corner to the Western hexatonic pole. The tetrachords presented in these sections are shown in example 5.37 below.

Figure 5.16 shows these harmonies graphed onto the hyper-hexatonic system.

The next measures include 4-3 tetrachords [5689] and [9t01]. Measure fifty-nine creates a break in the melody, where there is only harmony of [478e] present in the strings.

A break away from the harmonic chain comes at measure sixty with two separate 4-3 tetrachords in the winds, and brass, respectively. This break mirrors the fact that a new phrase has begun, after the first

four bars of the variation conclude with rest in the melody, and a solitary harmony attack in the strings that is followed by a brief rest.

The image shows a musical score for 'wieder lebhaft 2. - ca. 188'. It consists of two systems of staves. The first system shows a melody in 2/4 time and a harmony in 3/8 time. Red boxes highlight two measures, with labels [te12] and [0347] below them. The second system shows a melody in 2/4 time and a harmony in 3/8 time. Red boxes highlight two measures, with labels [4578] and [e236] below them.

Example 5.37: Measures 56-57 showing tetrachords as they are presented divided between harmonic and melodic parts.

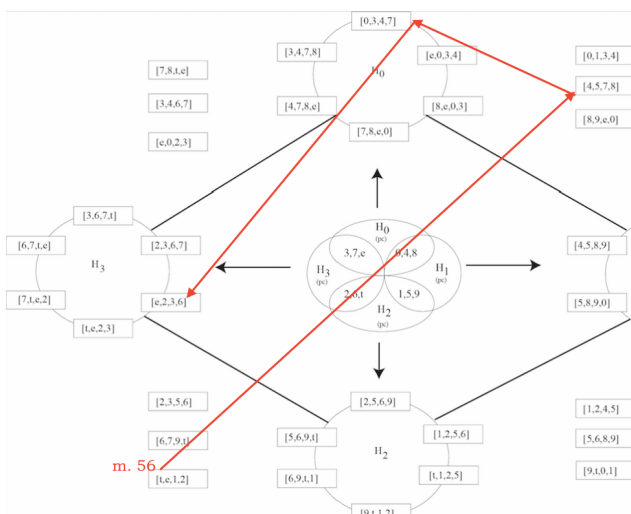


Figure 5.16: Measures 56-57 graphed onto hyper-hexatonic system.

The tetrachords in the winds and brass both fall into the category of melodic material through their extended duration. In the winds a [2356] tetrachord is presented against the brass section's [0134]. An intervening assumed [3467] tetrachord connects the previous measure's harmony when accounting for dyad subsets of each harmony.

The image shows a musical score for measures 58-64 of Op. 30. The score includes staves for Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Bsn.), Horns (Hrn.), Trumpets (Trp.), Trombones (Tbn.), Piano (Pn.), and strings (1st Violin, 2nd Violin, Viola, Violoncello, Double Bass). The score is annotated with red boxes highlighting specific harmonic structures and tetrachords. Red arrows indicate the relationships between these structures across measures. The labels for the tetrachords are: [2356] (Flute/Oboe), [0134] (Horns/Trumpets/Trombones), [9014] (Piano), [5689] [7te2] (Horns/Trumpets/Trombones), [9t01] (Piano), [2569] (Piano), [478e] (Solo strings), and [78te] (Solo strings). The score also includes tempo markings: *rit.*, *tempo*, and *rit.* again, with *tempo* appearing in the string section.

Example 5.38: Op. 30 measures 58-64 with harmonies highlighted.

Interestingly the two harmonies that follow in measures sixty-two and sixty-three both overlap with the two previous separated melody tetrachords. Measures fifty-eight through sixty-four, with their harmonies highlighted, are shown in example 5.38 above.

Symmetrical properties continue to play an important role, even at the voice-leading level. Measures sixty-two and sixty-three move back and forth between the same three tetrachords. A symmetrical chain of five tetrachords is formed, pivoting on [78te]. The pivoting [78te] is placed in the strings, struck twice in immediate succession, which helps to highlight the symmetry. Webern even divides the harmonies on the score symmetrically in his orchestration. A full 3/8 measure of rest follows the symmetry, accenting the figure. This can also be seen in example 5.38 above.

Measure sixty-five picks up from the end of that symmetrical progression, [2569], with the melody creating [2356] in the winds. An [0134] tetrachord in the brass connects to the formerly disconnected [9014] from the previous symmetrical progression. Measure sixty-six brings this phrase to a close in the same manner as the variation's first phrase; the measure clears away the melodic material, and sounds two percussive harmonic attacks in the strings, *pizzicato* and marked *sff*.

Measure sixty-nine closely resembles measures sixty and sixty-one in Webern's usage of the wind and brass sections. The material in

measure sixty-nine might be considered melodic due to its occupying a full measure, and additionally the inclusion of a crescendo. This contrasts with the sharp attacks presented in the surrounding measures.

Another degree of symmetry is present here, again aside from the orchestration, as this point in the variation is four measures from its conclusion, whereas measure sixty is the same distance from its beginning. Once again the orchestration here includes a symmetrical organization with measure sixty-nine in the winds and brass, which was preceded by harp/celeste, and strings—and followed in the same manner.

The harmonies in measure seventy-one connect around in a loop back to measure seventy's harmonies, concluding by connecting the whole chain back to the [4578] that was left in the open from measure sixty-nine's separated harmonies. The harmonies for the conclusion of this variation, measures sixty-five through seventy-three, are shown in example 5.39 below.

If we consider, as we did with previous analyses, the intervening harmonies where additional tetrachords are formed from subsets of sounding tetrachords, a nearly completely unbroken chain of tetrachords is revealed through to measure sixty-nine. Interpolating these tetrachords uses the exact same technique as was used in chapter three for Op.18, and Op. 25, however the voice-leading has shown a marked

improvement in clarity and consistency here. This chain can be seen in figure 5.17.

The image displays a musical score for measures 65-73, with red boxes highlighting specific tetrachordal harmonies and red arrows indicating a chain of relationships between them. The score is written for multiple instruments: Flute (Fl.), Clarinet (Cl.), Bassoon (Ba.), Trumpet (Trp.), Trombone (Tbn.), Piano (Pn.), Violin (Vn.), Viola (Va.), Cello (Vcl.), and Double Bass (Cb.).

Measures 65-71 are marked with a tempo change from *rit.* to *tempo* and back to *rit.*. Measures 72-73 are marked with *tempo* and *rit.*. The score includes various dynamics such as *pp*, *p*, *f*, *mf*, and *ff*. The key signature is one flat (B-flat major/D minor).

Red boxes highlight the following tetrachordal harmonies:

- [2356] in measure 65 (Flute)
- [5689] in measure 66 (Clarinet)
- [e12] in measure 66 (Bassoon)
- [3467] in measure 66 (Trumpet)
- [0134] in measure 66 (Trumpet)
- [4578] in measure 67 (Trumpet)
- [1458] in measure 67 (Trumpet)
- [0347] in measure 67 (Piano)
- [9t01] in measure 67 (Piano)
- [69t1] in measure 67 (Piano)
- [7te2] in measure 68 (Violin)
- [478e] in measure 68 (Cello)
- [e236] in measure 68 (Cello)
- [5890] in measure 68 (Cello)
- [e023] in measure 68 (Cello)
- [t125] in measure 68 (Cello)
- [679t] in measure 72 (Flute)
- [89e0] in measure 73 (Violin)

Red arrows indicate the chain of relationships between these harmonies, showing how they are related through tetrachordal transformations.

Example 5.39: Op. 30 measures 65-73 highlighting tetrachordal harmonies.

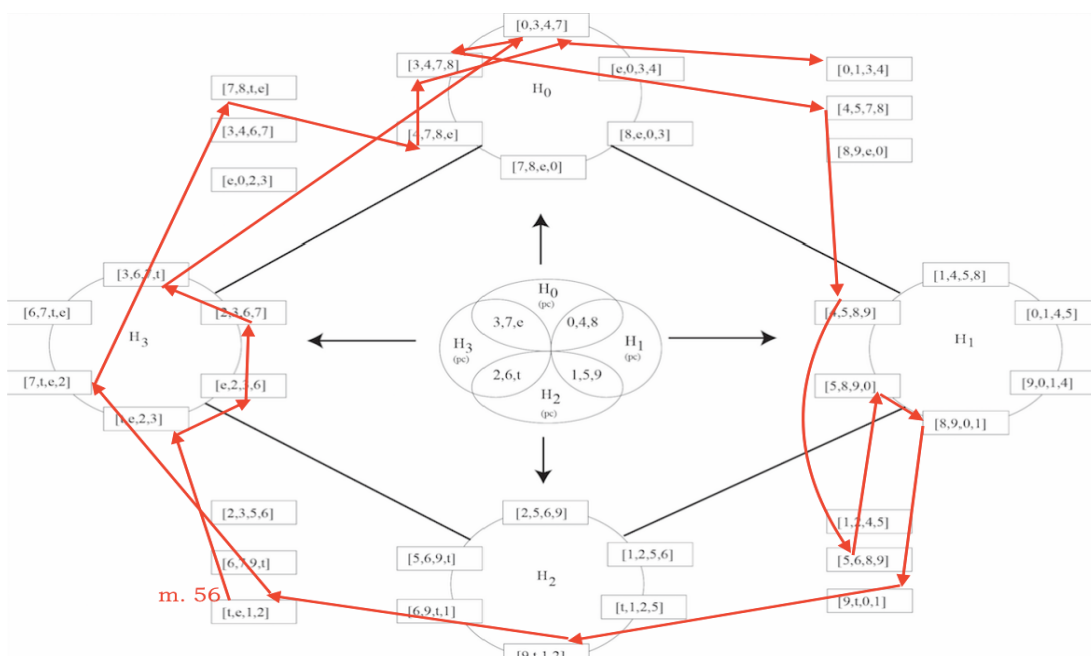


Figure 5.17: Op. 30 measures 55-69 tracing all tetrachords by chaining their voicings together into strings of closely-related harmonies.

5.4.3 VARIATION NO. 2 AS GUITAR PART

As previously mentioned, this variation presents several difficulties when creating a guitar arrangement. There are several measures that can not be accurately played due to Webern's having superimposed tetrachords. This variation does not exclude the entire work from being seen as developing out of the overall sound of the guitar. This shortest variation still includes, in the individual voicing of tetrachords, many characteristics seen earlier in the work with regard to Koozin-shapes.

Many of the simultaneities within this variation may be played on adjacent strings, therefore containing consecutive *s* values and often times with consecutive *r* values.

Although these sonorities, when broken into tetrachords, may be voiced on successive strings, and often frets, at the outset of the variation, significant adjustments to the rhythm and octave positioning of pitches must be made. Large leaps of position appear more frequently here than in previous variations as well. These large leaps are made more manageable due to the combination of similar Koozin-shapes, and incremental *r* and *s* values. Once again, both of these things relate back to Webern's preference for adjacent minor thirds in the voicing of tetrachords.

The winds' pc1 at the very beginning of the variation, measure fifty-six, is brought down one octave, and shortened from a dotted-quarter to an eighth in order to accommodate the harmonic support of the string section later in the measure. The octave adjustment of pc1 does not further impact the tetrachord, and the rest of the pitches remain as written. In fact, this is the only pitch within this variation that must be adjusted in order to be brought into the guitar's range.

These 4-3 tetrachords both require a span of five frets, with the first using adjacent strings {*s* = 1-4}; the second tetrachord must be played in first position due to the pc5 as bass with {*s* = 1, 2, 3, 6}.

No adjustments of any kind are required for measure fifty-seven. Both tetrachords require spans of only four frets, and adjacent strings, with Koozin-shapes of <—4231>, and <-4221-> respectively.

The quarter-note attack melodic trichord within the brass was shortened by one eighth note in measure fifty-eight, with no other adjustments required. Measures fifty-six through fifty-nine are shown in example 5.40 below arranged for guitar with tablature notation and Koozin-shapes.

The image shows a musical score for guitar with four measures. The top staff is a treble clef in 2/4 time. The bottom staff shows tablature for strings T, A, and B. Red Koozin-shapes are written below the tablature. Measure 56 has a 2/4 time signature and a key signature of two flats. Measure 57 has a 3/4 time signature and a key signature of one flat. Measure 58 has a 2/4 time signature and a key signature of one flat. Measure 59 has a 3/4 time signature and a key signature of one flat.

Tablature and Koozin-shapes for measures 56-59:

Measure	Time Signature	Key Signature	Tablature	Koozin-shapes
56	2/4	Two flats	7 9 1 7 3 7	<--3153><1--153>
57	3/4	One flat	11 13 3 7 14 6	<--4231><4221->
58	2/4	One flat	16 5 6 15 7 9 14 6	<3142--><--4231><--4231>
59	3/4	One flat	3 7 6	

Example 5.40: Op. 30 measures 56-59 arranged for guitar with tablature notation and Koozin-shapes.

Measure sixty provides us with a significant challenge. Webern has indicated two tetrachords to combine by sustaining them across a total rhythmic value of five eighth notes. P_0 's first tetrachord enters first, followed one eighth-note later by R_2 's final tetrachord. Individually these tetrachords may be played in the same fashion as, say, measure fifty-six, with an eighth note shortening of the first tetrachord. This results in adjacent sonorities with consecutive s values, both spanning four frets. Notice also that the tetrachords share pc_3 , with that pitch being the highest pitch of the first, and lowest pitch of the second tetrachord

moving from the trumpet part to the bass clarinet part, respectively. Each tetrachord also shares a <-3143-> Koozin-shape as well, aiding in the large shift.

In the following measure, no adjustment can accurately duplicate what Webern has written in the score. Three pitches are meant to be sustained through the second eighth-note of the measure, while the remaining four carry through the entire measure. Measures sixty through sixty-one are shown in example 5.41 below.

This variation finds Webern employing the largest forces of the orchestra throughout the piece. The pitch density and sustain is unlike anything seen in Op. 30 to this point, or will be seen at any point after this. Furthermore, in the entirety of Opp. 18 and 25, Webern has avoided simultaneities of this size.

Despite this variation's status as an aberration of Webern's typical use of harmony, there are still connections to be made to those previous works. First, notice, again in example 5.41, that the two tetrachords are hinged on pc3, the highest voice of the lower tetrachord and the lowest voice of the higher tetrachord. Secondly, both tetrachords are voiced in a similar manner, more specifically as two minor thirds separated by a minor sixth, or its equivalent. This means that both tetrachords in measure sixty are made from the same Koozin-shape, and in that way connected to Webern's consistent chord voicings which I have shown to

be directly tied to his choice to use the guitar in his Op. 18. These tetrachords, in other words, are essentially doublings which despite being made of different pitch-classes, would benefit from the guitar's correlation of hand-shape and set-class.

The image shows musical notation for guitar. The top staff is a treble clef staff with a 7/8 time signature, starting at measure 60. It contains two measures of music. The first measure has a quarter rest followed by a dotted eighth note and a sixteenth note. The second measure has a dotted quarter note and an eighth note. The bottom staff is a guitar tablature staff, also starting at measure 60. It shows fret numbers for each string: 7, 4, 2, 4 in the first measure, and 3, 4, 1, 8 in the second measure. Below the tablature, there are Koozin-shapes: <-3143-><-3143-> for the first measure, and <xxxxxx> (<-3143->) (<-3143->) for the second measure.

Example 5.41: Op. 30 measures 60-61 arranged for guitar with tablature notation and Koozin-shapes. Though measure 61 is impossible to play as written, I have included what the individual Koozin-shapes for the two tetrachords would theoretically be.

Rhythmically, Webern is superimposing these tetrachords, but I believe that this is a depiction the two row forms coming together to imitate each other. These tetrachords are each contained within their own family of instruments, with the lower tetrachord in the brass and the higher tetrachord in the winds.

Measures sixty-two through seventy-one contain only sonorities that feature consecutive s values, many of which also contain

consecutive r values. This section, with their Koozin-shapes, can be seen in the figure below. These measures are shown in example 5.42 below.

Throughout these measures, more rhythmic alterations became necessary. In measure sixty-three the string section on Webern's score includes a re-articulation of the same 4-3 tetrachord, [78te]; but since that re-articulation occurs at the same time as the attack in the brass, it was truncated.

Measure sixty-four, a tacet $3/8$ measure, is relatively easy to perform. This measure allows the guitarist a chance to grab a cup of coffee, or stretch for one and one-eighth second.

The first attack of measure sixty-five is shortened by one eighth note to make way for the attack on the second beat. However, this causes further problems in that both tetrachords are meant to sustain across the barline into measure sixty-six. Despite the tetrachords sharing pc3, the shift necessary to perform both simultaneities at once, not to mention its status as a septachord, deems this impossible. I chose to attempt to replicate the sound of these measures by creating a symmetrical attack pattern that captures each tetrachord's initial onset and conclusion. This is the symmetrical pattern shown in figure 5.15 on page 397, which can be compared to my arrangement for guitar in

example 5.42.

1->

Example 5.42: Op. 30 measures 62-73 arranged for guitar with tablature notation and Koozin-shapes. Notice the significant number of simultaneities with consecutive s values, and several recurring Koozin-shapes.

In measure sixty-eight, pc9 was eliminated from the middle simultaneity in order to constrain it to six pitches. My decision to omit

this pitch is based on its sounding in the exact same octave position on the downbeat.

The downbeat of measure seventy was shortened by an eighth-note in order for the following tetrachord to sound in its correct place in the measure.

No further alterations of any kind, other than the ones mentioned here, were made. Measures seventy-two and seventy-three present a return to contrapuntal material similar to that which was presented in the theme. Webern moves away from a strictly vertical construction scheme in the third variation, which thins the texture significantly and allows for new ways of intertwining separate row-forms.

5.5 OP. 30 VARIATION NO. 3

5.5.1 ROW ANALYSIS

The third variation, encompassing measures 74 through 109, returns to a texture that is considerably more sparse and primarily concerned with unilinear material. Throughout these measures Webern moves away from his largely consistent pattern of exposing one tetrachord at a time within a single instrument, to divisions of each tetrachord into one-plus-three, or two-plus-two, segments which are placed in contrasting sections of the orchestra.

Rhythmically, this variation uses a recurring three-sixteenth-note gesture that, through measure eighty-seven, consistently leaps downward. After that point this rhythmic cell is found to ascend, or change direction, but remains conspicuous by its placement against quarter-note and eighth-note gestures that are comparatively more legato in their compact tessitura, and use of rests to create a longer melodic line.

The legato fragments that make up the melodic material are unlike the contrapuntal sixteenth-note gestures that surround it in their consistent tetrachordal exposure that remains within one instrument. Furthermore, a delineation between the two voices is created in the melodic line's frequent allusions to the rhythmic cells introduced at the outset of the theme.

For example, measures seventy-six and seventy-seven repeat an augmented version of rhythmic cell "b" in the first violin, crossing over the bar-line, as does the oboe's material beginning a single eighth-note later in canonic imitation. Measures seventy-four through seventy-seven are shown below in example 5.43.

Measure 105 resembles rhythmic cell "a" in retrograde in the trombone and viola parts, but is clearly also developed from another recurring rhythmic element that first appears in measures seventy-four and seventy-five at the outset of the variation. This rhythmic variation is

seen in example 5.44 below.

Example 5.43: Op 30 measures 74-77 showing row exposures.

Small-scale rhythmic symmetry is present in ancillary gestures as well, such as in the aforementioned measures seventy-six and seventy-seven, as well as measures eighty-eight and eighty-nine in the violins. Finally measures 105 through 107 include their own rhythmic symmetry, placed simultaneously in the trombone and viola once again in canonic imitation offset by a quarter note. Measures eighty-six

through ninety are shown in example 5.45 below.

The image shows a page of a musical score, page 104, for measures 74-77. The score is for Op. 30 and includes parts for Flute (Flöte), Horn (Hrn.), Trumpet (Trp.), Trombone (Tbn.), Tuba (Tu.), Cello (Cel.), Harp (Hr.), Violin (Vn.), Viola (Va.), and Double Bass (Kb.). The tempo and dynamics are marked as *flott* (♩ = ca. 112) and *subito lebhaft beschleunigend* (♩ = ca. 160). The time signature changes from 2/4 to 3/8 and back to 2/4. Red boxes and arrows highlight specific rhythmic patterns: P2 x1 (Flute), P2 x2 (Flute), P3 x2 (Horn), P2 y (Trombone), R3 x2 (Cello), and R3 y (Viola). The score includes dynamic markings such as *pp*, *mf*, and *ff*, and performance instructions like *mit Dämpfer* and *ohne Dämpfer*.

Example 5.44: Op. 30 measures 74-77 with variants of “a” rhythm in trombone and viola parts.

Pitch-wise the variation once again consistently makes use of two contrasting rows simultaneously. Each row remains focused on only one of the two separate linear elements present throughout. For example, R₁ moves from the flute, to the first violin, to conclude back at the flute from the opening of the variation through measure eighty-one. Each

tetrachord traces the melodic line with symmetric orchestration, while P_6 remains fixed on the counterpoint beneath it.

Example 5.45: Op. 30 measures 86-90 showing row tetrachordal exposure. Measures 88-89 in the violins display a rhythmic variant of “b.”

P_2 picks up the melody, once again in the flute, in measure eighty-three after nearly a full measure of rest. Once again the melody here moves from the flute, to the violin for the middle tetrachord, and back to the flute in measure eighty-nine. Supporting this melodic gesture is R_5

and P₅, which also moves from the winds to the strings, albeit the lower-register winds and strings.

It is worth noting here Webern's near total avoidance of the brass section throughout this variation. The first brass entrance is that of a single pitch in the trumpet in measure eighty-seven—thirteen full measures into the section. The brass section remains relatively sparse, only picking up the melody in measure ninety-one, with P₃ in the trumpet; it continues after a full measure of rest, also in the trumpet, before finally moving to the cello in measure 100 for its conclusion. The brass is used for the final time in measures 104 and 105, but as one half of the canonic imitation that occurs there. Row exposures for measures ninety-one through 109 are shown in examples 5.46, 5.47, and 5.48.

The image shows a musical score for measures 91-96 of Op. 30. The score is annotated with red boxes and arrows highlighting specific musical elements. The annotations include: P2 y (Flute), P5 x2 (Oboe), P3 x1 (Trumpet), P4 x1 (Cello), P4 y (Trumpet), P4 x2 (Trumpet), R4 x1 (Trumpet), and P3 y (Trumpet). The score includes tempo markings like 'tempo molto' and 'subito lebhaft', and dynamic markings like 'sf' and 'p'.

Example 5.46: Op. 30 measures 91-96 showing row tetrachordal exposure.

17

97 *molto rit. . . tempo* *subito lebhaft* *sehr ruhig* ♩ = ca. 112 *subito lebhaft* ♩ = ca. 160

Fl. *P4 x2*

Ob. *P3 x2*

Hrn. *P3 y*

Tpt. *espr. molto f*

Tbn. *pp*

Perc. *Dämpfer ab*

Cl. *P3 x1*

Hr-f. *pp*

Vn. *molto rit. . . tempo* *subito lebhaft* ♩ = ca. 160 *sehr ruhig* ♩ = ca. 112 *subito lebhaft* ♩ = ca. 160 *pp* *Solo* *P3 x2*

Vla. *espr. f* *Dämpfer ab* *Solo* *P3 x2*

Cb. *R4 y*

97

Example 5.47: Op. 30 measures 97-103 showing row tetrachordal exposure.

Flöte ♩ = ca. 112 *subito lebhaft beschleunigend*
♩ = ca. 160

104

P2 x1

P2 x2

P3 x2

mit Dämpfer

P2 y

R3 x2

Flöte ♩ = ca. 112 *subito lebhaft beschleunigend*
♩ = ca. 160

R3 y

ohne Dämpfer

sf

pizz.

Dämpfer auf

sf

mit Dpf.

pp

104

Example 5.48: Op. 30 measures 104-109 showing row tetrachordal exposure.

5.5.2 VOICE-LEADING ANALYSIS

The harmonies for measures seventy-four through eighty-five are shown in example 5.49 below.

The image displays a musical score for Op. 30, measures 74-85, with voice-leading analysis. The score is divided into two systems. The left system shows measures 74-77, and the right system shows measures 78-85. Red boxes highlight specific notes and chords, with red arrows indicating voice-leading paths between them. The annotations include row tetrachord labels: [89e0], [8e03], [679t], [1245], [2356], [0134], and [7te2]. Performance instructions such as 'etwas bedächtig', 'leicht bewegt', 'subito flott', 'rit.', 'wieder leicht bewegt', and 'subito lebhaft' are present throughout the score.

Example 5.49: Op. 30 measures 74-85 highlighting row tetrachords as they are exposed.

In figure 5.18 below measures seventy-five through eighty-five are graphed onto the hyper-hexatonic system interpolating as many tetrachords as possible. This reveals sections of relatively close voice-leading, though not nearly the lengthy chain that we saw in the previous variation.

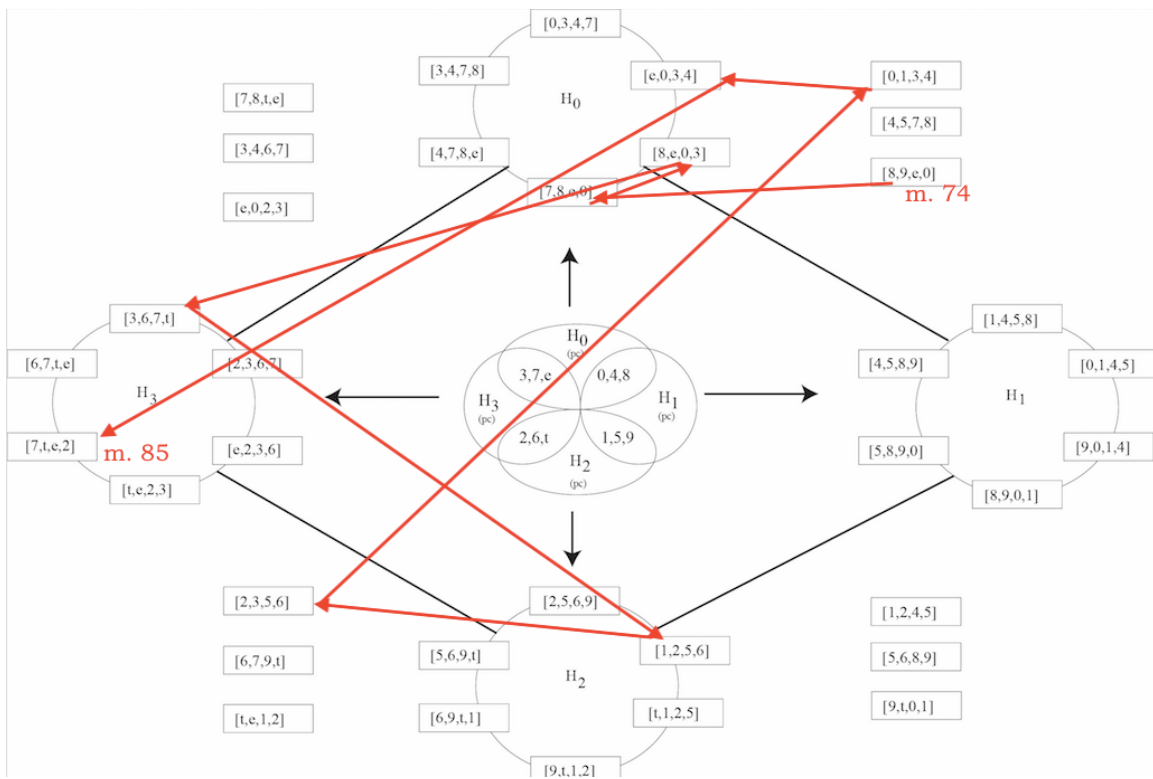


Figure 5.18: Op. 30 measures 74-85 graphed onto the hyper-hexatonic system with interpolated tetrachords.

In example 5.50 below we can see the harmonies as they are present in measures eighty-six through ninety-six. As the texture becomes more dense, we begin to see the possibility for closer voice-

leading.

Example 5.50: Op. 30 measures 86-96 highlighting row tetrachords as they are exposed.

The measures above reveal a pattern on the hyper-hexatonic scale that spirals inward as all the tetrachords are connected through interpolation. These measures graphed onto the hyper-hexatonic system are shown in figure 5.19 below.

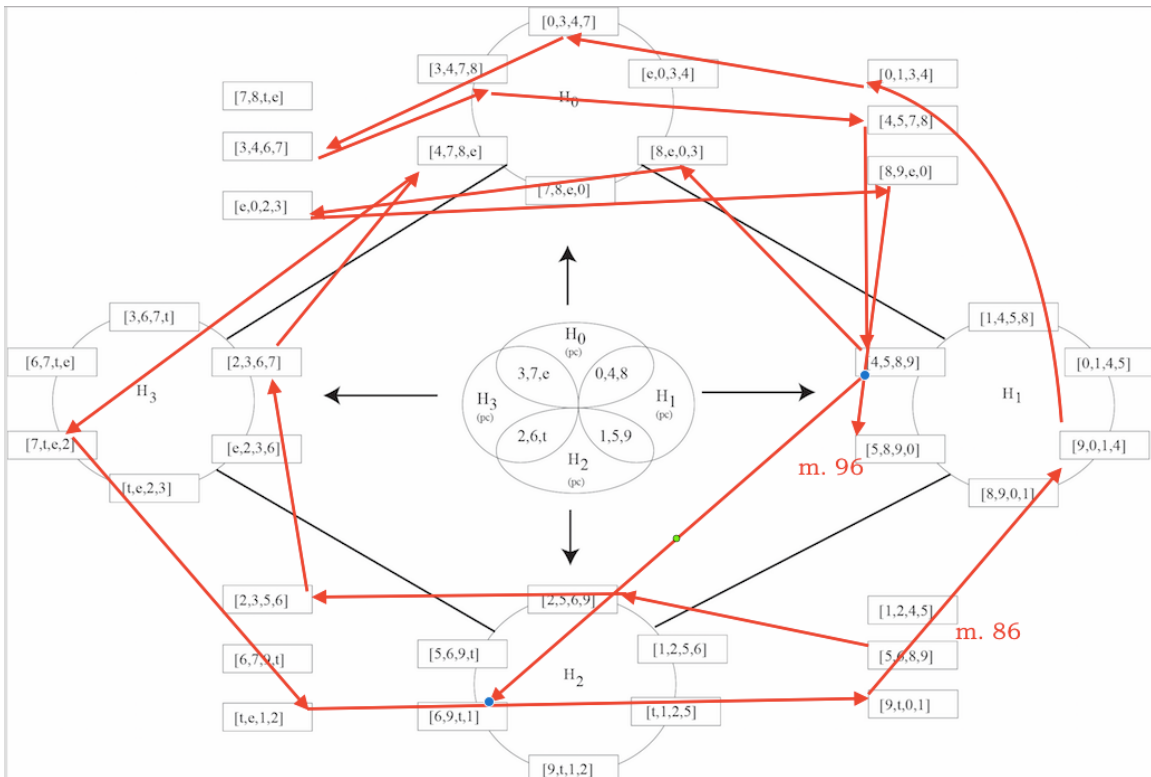


Figure 5.19: Op. 30 measures 86-96 graphed onto the hyper-hexatonic system with interpolated tetrachords.

The conclusion of this variation, measures ninety-seven through 109 are shown in example 5.51 below. As before, the harmonies have been labeled near each tetrachordal exposure, although at this point in the piece Webern is beginning to break down these exposures into smaller pieces that become increasingly scattered across the orchestra.

When graphing these measures onto the hyper-hexatonic system we can see the chains of tetrachords that move around the system. The final juxtaposition of harmony, [3467] and [9t01], exist in complete opposite corners and as such two interpolated tetrachords stand between

them. Figure 5.20 displays these measures as they are graphed onto the hyper-hexatonic system.

The image shows a musical score for measures 97-109 of Op. 30. The score is divided into two systems. The left system covers measures 97-103, and the right system covers measures 104-109. The instruments are: Flute (Fl.), Clarinet (Cl.), Horn (Hr.), Trumpet (Trp.), Trombone (Tbn.), Piano (P), and Cello/Double Bass (Cb.).

Measure 97: Flute part has a red box around the notes [4578]. Horn part has a red box around the notes [5890].

Measure 98: Flute part has a red box around the notes [te12]. Horn part has a red box around the notes [0347] and [3467].

Measure 99: Flute part has a red box around the notes [te12]. Horn part has a red box around the notes [5890].

Measure 100: Flute part has a red box around the notes [2356]. Horn part has a red box around the notes [478e].

Measure 101: Flute part has a red box around the notes [9t01]. Horn part has a red box around the notes [3467].

Measure 102: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Measure 103: Flute part has a red box around the notes [te12]. Horn part has a red box around the notes [te12].

Measure 104: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Measure 105: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Measure 106: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Measure 107: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Measure 108: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Measure 109: Flute part has a red box around the notes [5890]. Horn part has a red box around the notes [5890].

Example 5.51: Op. 30 measures 97-109 highlighting row tetrachords as they are exposed.

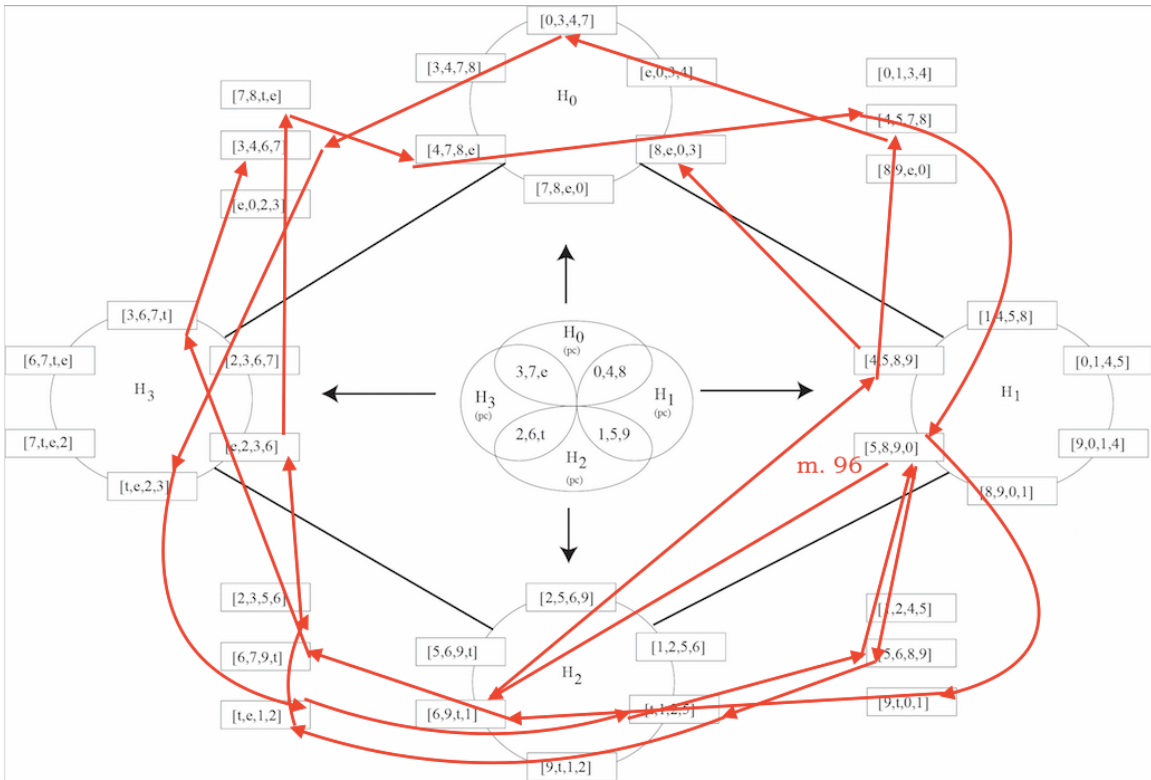


Figure 5.20: Op. 30 measures 96-107 graphing harmonies onto hyper-hexatonic system with interpolated tetrachords.

5.5.3 VARIATION NO. 3 AS GUITAR PART

The overwhelmingly contrapuntal and unilinear third variation is exceedingly guitaristic, contrasting greatly from the previous variation. Some adjustments were required, though limited to octave positioning. The gestures throughout are, much like we have already seen, easily graspable on a guitar neck, more often than not benefitting from consecutive *s* and *r* values. Drastic shifts do not occur with great frequency here, due in no small part to the largely contrapuntal style used throughout. Rhythmically this is the simplest variation yet,

including a high degree of regularity, and a lack of cross-rhythms or densely layered canons.

The first pitch of the variation required an adjustment down one octave. This is also true of pc7 in the upper voice of measure seventy-six. Measure eighty-one, pc1 originally in the flute, has been lowered one octave; also pc4 in measure eighty-eight has been lowered, with no effect on the overall shape of its ascending and then descending gesture. Only one more pitch, pc3 in the harp and double-bass, the final pitch of the variation, were raised by an octave. These were the only adjustments made in order to facilitate the arrangement of this variation.

Being that this variation is resigned to two voices, and at times only a single voice, there are usually several options in performing sections throughout. I chose for my fingerings patterns that retained the smallest span of frets, while minimizing any shifts between measures and phrases.

Measures seventy-four and seventy-five move from the upper reaches of the guitar, down to the first position through a transition that takes advantage of the open $\{s = 3\}$. These measures, with tablature notation included, are shown in example 5.52 below.

The close voiced, interweaving canonic gesture in measures seventy-six and seventy-seven is contained between the eleventh and eighteenth frets, though largely within the four-fret range of sixteen

through nineteen. Measures seventy-six and seventy-seven are shown in example 5.53 below.

Example 5.52: Op. 30 measures 74-75 from guitar arrangement with tablature notation.

Example 5.53: Op. 30 measures 76-77 from guitar arrangement with tablature notation.

Measures seventy-eight through eighty-two are completely unilinear save for a single dyad in measure eighty. These measures benefit from the repetition of pc4, $\{s = 1, r = 0\}$, and otherwise requires spans of no more than one fret; the dyad exception requires a span of two frets.

After this point, the largely-ascending accompanimental gestures in the lower voice now descend. The unilinear material forms a noticeable link between these phrases. The next measures are equally as accessible as the first eight-bar phrase despite the upper pc2 pedal reaching over top of the descending patterns of the accompaniment. The entirety of measures eighty-two through eighty-five cover only a four-fret span, and only three frets during the upper pc2 pedal. Measures seventy-eight through eighty-five are shown in example 5.54 below.

Example 5.54: Op. 30 measures 78-85 from guitar arrangement with tablature notation.

A large shift up the neck between the descending sixteenth-notes in measures eighty-five and eighty-six is facilitated by $\{r = 0\}$ for pc7 that concludes measure eighty-five.

All material in the following measures, eighty-seven through ninety-two, which are mostly unilinear save for measures ninety and ninety-two, also include material contained completely within very small fret-spans. There are also instances of immediately repeated pitch

content, for example pc7 in measure eighty-eight, and pc11, with an *r* value of 0, allowing for an easier transition, in measure eighty-nine.

Narrow spanning Koozin-shapes between beats in measure eighty-eight are nearly identical. Measure ninety-one spans only three frets, while measure ninety-two spans five. Measures eighty-seven through ninety-two are shown in example 5.55 below.

The image shows a musical score for guitar, measures 87-92. The top staff is a treble clef staff with notes and accidentals. The bottom staff is a tablature staff with fret numbers. Red annotations are present: '<-31-3>' and '<-313>' are written below the first two measures, and '<-3153>' is written below the final measure. The score includes various time signatures and rests.

Example 5.55: Op. 30 measures 87-92 from guitar arrangement with tablature notation.

Once again, in measure ninety-three, an upper pedal, this time pc6, does not prevent other pitches from being played. The pitch in question here is actually a unison, re-articulated within the pedal's sustain. The leap upward, originally in the oboe, is made possible in two ways. First, pc7 on the downbeat of the measure is articulated alone, only requiring a reach of two frets to commence the upper pedal. The ascending major-seventh leap ends up being very guitaristic in that a unison doubling is quite easily performed at this high of a position on the neck. A sixteenth-note rest following this gesture enables a shift back to the middle of the neck, readying the performer for the widely voiced

run of sixteenth-notes that follow, also readily graspable from this position. Measure ninety-five's run of sixteenth notes creates a compound melody in its wide voicing, both ascending to pc5 in measure ninety-six, and pointing toward a delayed pc0 at the end of that measure.

Repeated rhythmic gestures ascending across descending quarter notes in measures ninety-seven and ninety-eight fit within a three-fret span. Measure ninety-seven benefits from the use of a barre across the second fret, which can be held into the following measure. Immediately following is a sixteenth-note line resembling an inverted measure ninety-five, with its compounded melodies both descending. This measure opens up slightly, covering a span of four frets, remaining in the same position on the neck as the previous two measures. Measures ninety-three to ninety-nine are shown in example 5.56 below.

Example 5.56: Op. 30 measures 93-99 from guitar arrangement with tablature notation and Koozin-shapes.

The widest voicing of this variation appears in measure 101, covering two octaves plus a perfect fourth. Despite this incredibly wide span the dyad only requires a span of six frets, with the remainder of the measure, and the following measure, contained within half as many. Measure 102 is, once again, aided by an open string, $\{s = 4, r = 0\}$. Another sixteenth-note run follows, and its compound melody breaks apart into separate voices through to the variation's conclusion in measure 109. Additionally these concluding measures are equally as graspable, and playable as the rest of the variation before it, largely consisting of spans of no more than three frets. Measures 101 to 109 are shown in example 5.57 below.

The image shows a musical score for guitar. The top staff is a treble clef with a key signature of one flat and a 2/4 time signature. The bottom staff is a guitar tablature with six strings and fret numbers. Red annotations include Koozin-shapes: <-1-123>, <-31-2>, <-31-3>, <3-2-1>, <3-2-1>, and <-22-1>.

Example 5.57: Op. 30 measures 101-109 from guitar arrangement with tablature notation and Koozin-shapes.

The vast majority of this variation, by virtue of its mostly unilinear design as well as its range, rhythm, and specific voicing, is highly guitaristic.

5.6 OP. 30 VARIATION NO. 4

5.6.1 ROW ANALYSIS

Webern ties the fourth variation, measures 110 through 134, to the third via a low pc3 in the double-basses that is held over, revealing it to be the start of R₄.

Just as in variation three where some tetrachords were broken into uneven groupings, Webern continues to disperse tetrachords with an increasing frequency throughout this variation. This first row, for example, has its first and last tetrachord split evenly between the double-basses and horn, and harp and viola, respectively; R₄'s middle tetrachord remains whole, in the cellos in measures 113 through 114.¹²⁵

When R₆ begins in the oboe its first tetrachord is also broken into a pair of dyads, first in the oboe, and then in the trombone. The remainder of R₆ is presented as full tetrachords.

Although the orchestration in variation four is similar to variation three in its relatively sparseness, the pitch usage in the latter is considerably more complex. For the first time in the piece Webern is

¹²⁵ When referring to these broken tetrachords I will describe them as sub-sections of one of the three tetrachords of the row. For example, breaking R₆'s first tetrachord into two dyads would be labeled as "x^{1a}" and "x^{1b}," the number "1" indicating it as the first of the 4-3 tetrachord bookends (order numbers 0 through 3 of all P forms; order numbers 11 through 8 of all R forms); the number "2" would indicate the latter 4-3 tetrachord. Being that the middle tetrachord belongs to a unique set-class, 4-17, it would be labeled simply "y^a" and "y^b" should it be broken down from a tetrachord. In this labelling system "a" and "b" designate groups of pitches exposed together in the same instrument regardless of the tetrachord being reduced to two dyads, or a trichord and single pitch.

consistently placing more than two distinct row-forms against each other. In the opening measures R₄, R₅, and R₆ appear with each entrance staggered, entering in measure 109, 110, and 111, respectively. Another row, R₇, also begins in measure 111, a half-note after R₆, and also in the winds. Measures 110-117 are shown in example 5.58.

Example 5.58: Op. 30 measures 110-117 showing row exposures. Note that the bass' pitch is tied over from the final measures of the previous variation.

Upon R₅'s completion in measure 116, P₂ immediately begins in the clarinet right where R₅ left off.

Measure 118 finds Webern using a technique not previously seen in this piece. In this measure Webern reverses the final two pitches of R_4 . The reason for this alteration lies in the entrance of R_9 . These two rows share a {4578} 4-3 tetrachord; R_4 's x^2 and R_9 's x^1 . Moving back to the harp in measure 115 we find pc7 and pc8, which, combined with the viola's pc4 and pc5 in measure 118, form that tetrachord. Just as Webern has previously used tetrachords to serve double-duty before, and does so here as well, preserving x^{2a} , and x^{1b} , of R_4 , respectively. R_9 then continues through the double-bass and harp for its middle tetrachord in measures 119 through 121, then concludes in the cellos and clarinet in the two measures that follow. Webern immediately begins another iteration of R_9 to coincide with its own x^2 in the double-bass and tuba parts, also in measures 123 and 124. Measures 118-124 row exposures are shown in example 5.59 below.

A similar technique is used with R_8^{xb} , becoming R_t^{xa} , which in conjunction with the harp in measures 124 and 125 completes the latter's first tetrachord. However, no re-ordering is necessary here.

Multiple overlaps such as these continue in the densely-packed string section from measures 127 through 130. This section is also notable for the absence of the brass section, resembling the orchestration of the previous variation. This timbral silence is broken in measure 131 with the brass section creating a *klangfarbenmelodie* that moves

through the horn, trumpet, and trombone. Each instrument used in the brass here is pulling from a different row; R_t, R₀, and R₁ all come to a close within this section, the final four measures of the variation.

Example 5.59: Op. 30 measures 118-124 row exposures.

Rhythmically, Webern continues to reference the theme. Augmented versions of rhythmic motive “b” appear in measures 113 and 116 in the cello and first violin, respectively. A retrograded and augmented version of the same rhythm occurs between these two instances, in the flute in measures 114 and 115. Another augmented version of “b” is present in measures 130 and 131 in the woodwind section. Measures 125-130 appear in example 5.60 below.

125 *a tempo, sehr bewegt* ca. 180

Fl. *ff*

Ob. *ff*

Cl. *ff*

Fg. *ff*

Hrn. *ff*

Trp. *ff*

Tbn. *ff*

Cym. *ff*

Sn. *ff*

Bd. *ff*

R9 y

R9 x2

R0 x1

R6 x2

R8 x2

Rt x1

R0 x1

R1 x1

R6 x1

Re x1

Re ya

R8 y

Rt y + x2

Rt y

125

Example 5.60: Op. 30 measures 125-130 row exposures.

A gesture highly evocative of rhythmic motive “a,” the very first pitches heard in the piece, is present in measures 119 and 120. The first violin presents an inverted version of that opening gesture with a slightly altered augmented version of the rhythm in retrograde. The trombone, only a measure earlier, begins a contrapuntal gesture made from the same rhythmic material, though augmented with each value quadrupled. Another version of “a” appears in the first violin in measures 127 and

128. Here the rhythm is matched exactly to the original version, but the contour is retrograded as it encapsulates the final dyad of R_8 which becomes part of the first tetrachord of R_t .

Fragments of these opening rhythms appear throughout the comparatively densely packed string section in these measures. A final rhythmic retrograde of “a” appears just before the conclusion of the variation, in measures 131 and 132, again in the first violin. The melodic gesture here is not strictly related to the original iteration, however it is hard to ignore the exaggerated downward leap here of two octaves plus a minor third. The conclusion of this variation appears in example 5.61.

The image shows a musical score for measures 131-134, annotated with red boxes and labels. The score is divided into two systems. The first system (measures 131-132) includes staves for Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Fag.), Trumpet (Tr.), Trombone (Tbn.), Percussion (Perc.), Violin (Vln.), and Viola (Vla.). The second system (measures 133-134) includes staves for Violin I (Vln. I.), Violin II (Vln. II.), Viola (Vla.), and Cello/Double Bass (Vcl./Cb.). The annotations include:

- Fl.:** A red box around the first measure of measure 131 is labeled "Ro y".
- Vln.:** A red box around the first measure of measure 131 is labeled "Rt x2".
- Vln.:** A red box around the first measure of measure 132 is labeled "R0 x2".
- Vln.:** A red box around the second measure of measure 132 is labeled "R1 x2".
- Vln.:** A red box around the first measure of measure 133 is labeled "Re x2a".
- Vln. I.:** A red box around the first measure of measure 133 is labeled "R1 x1".
- Vln. I.:** A red box around the second measure of measure 133 is labeled "R1 y".
- Vln. I.:** A red box around the first measure of measure 134 is labeled "Re yb".
- Vcl./Cb.:** A red box around the first measure of measure 134 is labeled "Re x2b".

 Red arrows point from the "Rt x2" label to the "R0 x2" and "R1 x2" labels, and from the "R1 x2" label to the "Re x2a" label, indicating relationships between these rhythmic and melodic elements across different instruments and measures.

Example 5.61: Op. 30 measures 131-134 row exposures.

5.6.2 VOICE-LEADING ANALYSIS

Much like the variations before it, measures 110-134 continue to create relatively smooth voice-leading around the hyper-hexatonic system, due to an increasing dependence upon overlapping segments. The examples and figures that follow will trace the harmonic motion through these measures. Example 5.62 reveals the harmonies for measures 110-117.

The image shows a musical score for measures 110-117 of Op. 30. It features vocal staves (Soprano, Alto, Tenor, Bass) and piano accompaniment. Red boxes and arrows highlight specific harmonic segments and their voice-leading paths across measures. Labels include [1245], [2356], [8e03], [2356], [5689], [679t], [0134], [0134], [7tc2], [9014], [1245], [e023], [e023], [69t1], and [78te]. Performance instructions like 'rit...', 'tempo', 'subito a tempo', and 'poco' are also present.

Example 5.62: Op. 30 measures 110-117 harmonies.

Measures 110-117 are placed onto the hyper-hexatonic system in figure 5.21.

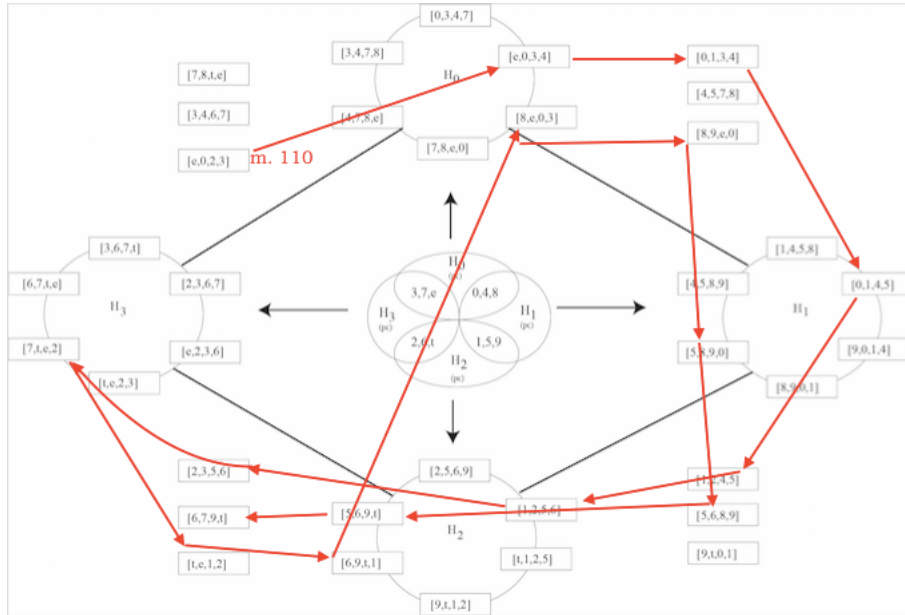


Figure 5.21: Op. 30 measures 110-117 graphed onto hyper-hexatonic system.

Example 5.63: Op. 30 measures 118-130 harmonies.

Example 5.63 shows the harmonic motion across measures 118-130.

Measures 131 to the end of this variation, measure 134, are in example 5.64 below.

The image shows a musical score for measures 131-134. The score is divided into two systems. The first system (measures 131-132) is marked *molto rit.* and *leicht bewegt*. The second system (measures 133-134) is marked *molto rit.* and *nicht eilen*. The score includes staves for Flute (Fl.), Clarinet (Cl.), Bassoon (Fag.), Trumpet (Tr.), Trombone (Tb.), Piano (P), and Cello/Double Bass (Cb.). Red boxes highlight specific harmonic areas, and red arrows connect these areas across measures. Labels in red brackets indicate specific harmonies: [2569], [0134], [1245], [e023], [3671], [89e0], and [1458]. The tempo markings are *molto rit.* and *leicht bewegt* / *nicht eilen*. The time signature changes from 2/4 to 3/4.

Example 5.64: Op. 30 measures 131-134 with harmonies labeled.

Figure 5.22 below graphs measures 118-128 onto the hyper-hexatonic system. The harmonic motion, once again, traces a circular path around the poles, using tetrachords outside of those represented in the row as intermediaries to transition while keeping as many pitches in common as possible.

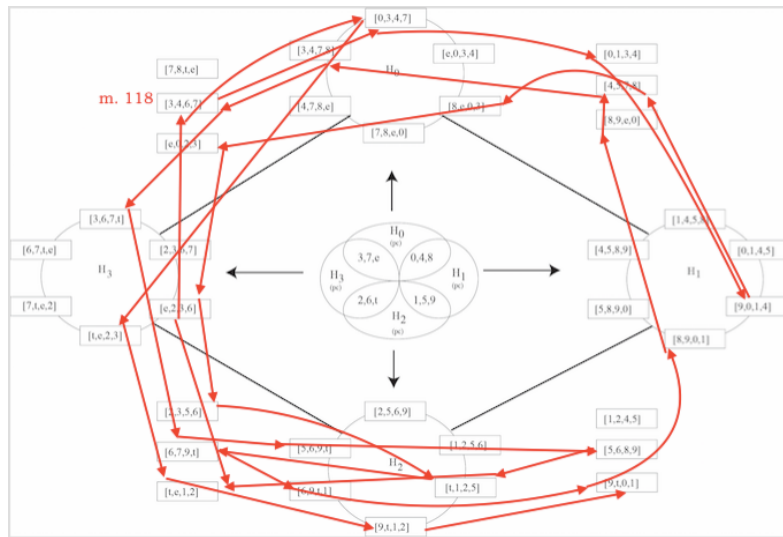


Figure 5.22: Op. 30 measures 118-128 graphed onto the hyper-hexatonic system.

Figure 5.23 below concludes the harmonic chain to the end of the variation, measures 128-134.

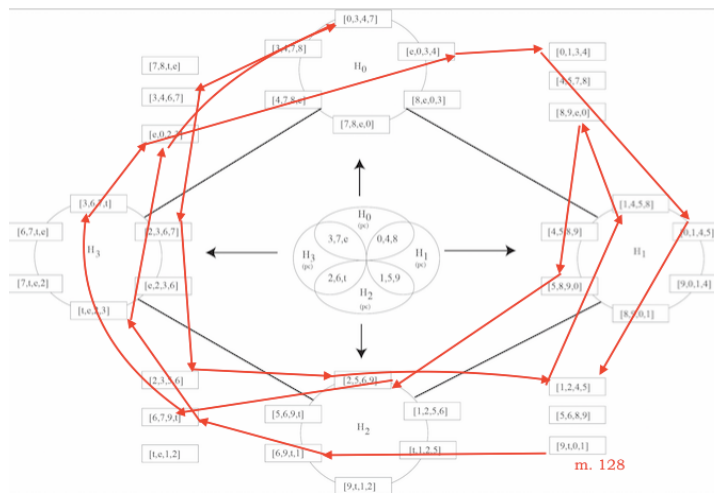


Figure 5.23: Op. 30 measures 128-134 graphed onto the hyper-hexatonic system.

5.6.3 VARIATION NO. 4 AS GUITAR PART

Picking up from the pc3 that is tied over from the previous variation, this fourth variation begins in an unassuming manner. The first few measures gradually shift from the sparse and rhythmically simple textures of the third variation, to the dense pitch and rhythmic material of the next thirty-five measures. This does not mean, however, that the vast majority of this variation is unplayable. On the contrary, much like that previous variation, and with much of Op. 25 from the previous chapter, Webern's increased pitch and rhythmic information remains within relatively small fret-spans. The Koozin-shapes required throughout this variation once again often feature consecutive *s* and *r* numbers. Finally, these shapes are once again only altered once per measure, creating an effect similar to a harmonic rhythm that also changes once per measure.

Measure 112, despite its rhythmic complexity, can be easily performed via a barre placed across the ninth fret, with the remaining pitches arpeggiated just as if the entire measure was made up of one chord that is broken up. Pc1, the lowest pitch in the measure, is re-articulated, but unlike in the previous variation's measure ninety-three this pitch must be played on the same string, preventing the pc1 on the downbeat for truly ringing for its intended full-bar duration. The barre

may be held into the next measure before moving up one fret for the consecutive r values of measure 114. Measure 114, much like measure 112, breaks up its dense pitch content into an arpeggiation that makes use of all six strings, covering the small span of four frets. That measure's pc7 on the second beat benefiting from its $\{r = 0\}$ status allows it to be played on the same string as the previous pc10 without necessitating any rhythmic sacrifices. Measures 112 is shown in example 5.65 below.

Example 5.65: Op. 30 measure 112 from guitar arrangement with tablature notation and Koozin-shapes.

Constant upward motion in the “a” rhythm in measure 115 is broken suddenly and briefly on the second beat, with a leap down to pc7 to create a trichord within a measure otherwise filled with dyads. This leap seems almost tailor-made for the guitar due to its positioning at $\{r = 0 \ s = 3\}$. All pitches surrounding it are held to their high positions between $\{r = 13\}$ and $\{r = 19\}$ due to the apex of the gesture at the highest pitch possible. Had this pc7 been placed an octave higher or an octave

lower this trichord, and the entire measure, would be either impossible to perform, or at the very least incredibly difficult. Instead this measure is made up entirely of three, four, and six-fret spans, with that largest span rendered less difficult due to its high neck position. Measures 114 and 115 appears in example 5.66 below.

Example 5.66 Op. 30 measures 114-115 from guitar arrangement with tablature notation and Koozin-shapes.

Complex rhythms in four parts run through the upward arching gestures of measures 116 and 117. Both of these measures, once again, benefit from a barre across the thirteenth fret, and the inclusion of $\{r = 0\}$ at $\{s = 1\}$, $\{s = 3\}$, and $\{s = 4\}$. The measure includes exactly the same voicing of pc9 and pc11, and therefore gives exactly the exact same fretting-hand position. Measures 116-117 are shown in example 5.67.

Another spate of unison re-articulations occurs in measures 118 through 120. This group of re-articulations are readily playable as written. Measure 118's unison pc4 can be performed from a $\langle -61-6 \rangle$

shape, which transitions easily into the final beat of that measure; the down beat of measure 119, with the same unison pc4, makes use of the open first string, $\{r = 0, s = 1\}$, while the remainder of that measure benefits from a barre across the ninth fret. A difficult, but still possible, unison doubling appears on the final beat of measure 120 with a Koozin-shape of $\langle -661- \rangle$. The unison doublings in measures 122 and 123, are not possible due to their particular voicings. Measures 118-120, showing a string of unison re-articulations is shown in example 5.68.

The image displays two staves of music for measures 116 and 117. The top staff is a treble clef with a 3/4 time signature, showing a melodic line with various accidentals and articulation marks. The bottom staff is a guitar tablature for the same measures, with fret numbers (0, 13, 14, 15, 16) and Koozin-shapes $\langle -11-2- \rangle$ and $\langle -11-34 \rangle$ written below. The Koozin-shapes are color-coded to match the notes in the tablature above them.

Example 5.67: Op. 30 measures 116-117 from guitar arrangement with tablature notation and Koozin-shapes.

Measure 126, with its chain of perfect-fourths, fits exceptionally well under the hand of a guitarist. Once again a barre, this time across the eleventh fret, facilitates this measure. Measure 126 appears in example 5.69.

118

118

<-61-6> <3-221-> <-661-->

Example 5.68: Op. 30 measures 118-120 with unison re-articulations or doublings on pc4 in measures 118 and 119, and pc2 in measure 120.

126

126 XI

<-12211>

Example 5.69: Op. 30 measure 126 string of 4ths fitting under a compact shape with a barre at the 11th fret.

The final eight measures of this variation increase the pitch and rhythmic density considerably. This is the first variation with measures containing upwards of four different voices, each tracing their own rhythmic path through a measure. As a result often times the score may become difficult to read, however I decided to leave all the rhythms as they were written in order to preserve to the best of my ability the integrity of Webern's original score. I believe that in doing this, a

performer will be able to make more informed decisions with regard to phrasing and provide the listener with a better idea as to where each voice is moving.

The final measures of this variation, 127-134, are shown in example 5.70.

The image shows a musical score for guitar, measures 127-133. The top staff is a treble clef staff with notes and accidentals. The bottom staff is a guitar tablature staff with fret numbers (0-19) and Koozin-shapes (e.g., <4-2-1>, <-23-1->, <-1322>, <-1-1-2>, <-1-233>, <221-4->, <-11-2->, <-2-14>, <-133>, <-1-202>, <22-1-3>). The Koozin-shapes are written in red and are placed below the tablature staff.

Example 5.70: Op. 30 measures 127-133 of the guitar arrangement with tablature notation and Koozin-shapes.

5.7 Op. 30 VARIATION NO. 5

5.7.1 ROW ANALYSIS

The penultimate variation is relatively compact, contained within the eleven measures of 135 through 145. Webern is once again combining vertical tetrachords with horizontal ones in a fashion similar to what was seen in the first variation. That the second to last section of Webern's piece is mimicking in its orchestration that of the second section of the piece points toward another instance of symmetry, this time on the largest scale of the whole seven-part structure.

These vertical tetrachords are used to punctuate a largely contrapuntal texture. Within that contrapuntal texture we find once

again linear elements that expose entire tetrachords, as well as tetrachords broken down into smaller fragments similar to the previous variation. Also like the previous variation, we find overlaps of more than two simultaneous row-forms throughout.

This fifth variation's texture, however contrapuntal, is immediately thinner than the string section's dense pitch content toward the end of the fourth variation. Opening with a retrograded "a" rhythm alone in the violas, the first row at work here is P_2 . Webern is once again exposing a tetrachord at a time, starting with the P_2 that moves from the strings to the winds and back to the strings, in an orchestrational organization resembling the theme.

The vertical tetrachords, of which there are only a few contained within these measures, appear in the celeste in measures 137 and 138, and then 3 measures before the end, measure 143. Measures 137-138 double up on the final tetrachord of R_4 , which becomes the first tetrachord of R_9 . Because of the vertical nature of this simultaneity the ordering is not important, only the fact that they are both members of set-class 4-3. These measures appear in example 5.71 below.

Webern continues to experiment with invariance, as can be seen in measures 139 and 140. The first violin part in those measures presents the final tetrachord, x^2 , of P_2 with x^2 of R_9 in the harp and celeste. Both tetrachords consist of different orderings of [9t01], and the harp and

celeste part is constructed to fit more-or-less inside the violin part, rhythmically.

Example 5.71: Op. 30 measures 137-143 with only verticalities in this variation appearing in measures 137-138, and 143 in the celeste and string parts.

As has largely been the case, Webern continues to focus on ic3 throughout this variation. Measures 137 and 138 in the flute organizes the first two pitches of P_2y in a distinct high register, with the following dyad considerably lower, both focusing on ic3. Similarly a few measures later, in measures 140 through 142 in the flute, Webern places pc10 and pc7 in the same range, with an upward leap of a minor ninth between them. The 4-3 tetrachord in measure 142 is also organized such that

both ic3 subsets remain in distinct octaves. This tetrachord also fulfills an invariant role, being the final tetrachord of R_7 and the first tetrachord of R_0 .

Adherence to the main generating rhythmic cells presented in the theme continue to appear, with sometimes considerable abstraction. The opening measure presents a retrograded “a,” though bearing little resemblance to its original contour. This very same abstraction was presented only four measures prior, in measure 131 in the first violin at the end of the previous variation. The opening of this variation, measures 135 and 136 are shown in example 5.72 below, where a distinct appearance of “a” resides, unadorned like at the opening of the piece.

Following immediately in the flute part, Webern constructs an abstraction of the “b” rhythm, though adding rests and therefore organizing the pitches somewhat symmetrically around two central sixteenth notes.

Measure 142 presents another symmetrically-designed rhythm in the winds, filling a $3/8$ measure with a sixteenth-note rest, followed by an eighth-note, and then the same values in reverse.

The solo clarinet line in measures 144 and 145, when once again taking the rests into account, resembles both the rhythm and gesture of rhythmic cell “a.” Depending upon how one groups rests with pitches the rhythm can be understood as the original rhythm as well as the

retrograded rhythm simultaneously. Also appearing at this point in the variation is a canon in measures 144 and 145 between the viola and first violin. The solo clarinet line, as well as the viola and violin canon are shown in example 5.73 below.

The image shows a musical score for Example 5.72, Op. 30 measures 135-136. The score is in 2/4 time and consists of five systems. The first system is marked 'lebhaft' and '♩ = ca. 160'. The second system is marked 'rit. ---'. The third system is marked 'lebhaft' and '♩ = ca. 160'. The fourth system is marked 'rit. ---'. The fifth system is marked 'lebhaft' and '♩ = ca. 160'. A red box highlights a measure in the fifth system, containing a solo clarinet line with a 'P2 x1' annotation.

Example 5.72: Op. 30 measures 135-136 with “a” rhythm appearing in the violas unaccompanied.

The variation’s closing measures feature instances of symmetrical rhythms in the first violin, evocative of the flute in measure 137; and a reference to rhythm “a” at the same time in the second violin, with its stark downward leap of a major seventh from quarter-note to eighth-

note. The gesture in the viola during these measures also resembles the counter of “a,” despite being presented in sixteenth-notes with rests separating each pitch. When including those rests as part of the pitch groupings, the original rhythm of the “a” pitch onsets remains intact. Registrally, the gesture continues to highlight ic3.



Example 5.73: Op. 30 clarinet melody, measures 144-145 (top) referencing “a.” Measures 143-145 (bottom) strings displaying a canon between the 1st violin and viola. Note the shared pitch content of the canon.

Example 5.74: Op. 30 measures 135-145 with harmonies labeled.

5.7.2 VARIATION NO. 5 VOICE-LEADING ANALYSIS

What follows is a harmonic analysis of this brief variation.

Example 5.74 above shows the harmonies as they are present in measures 135-145.

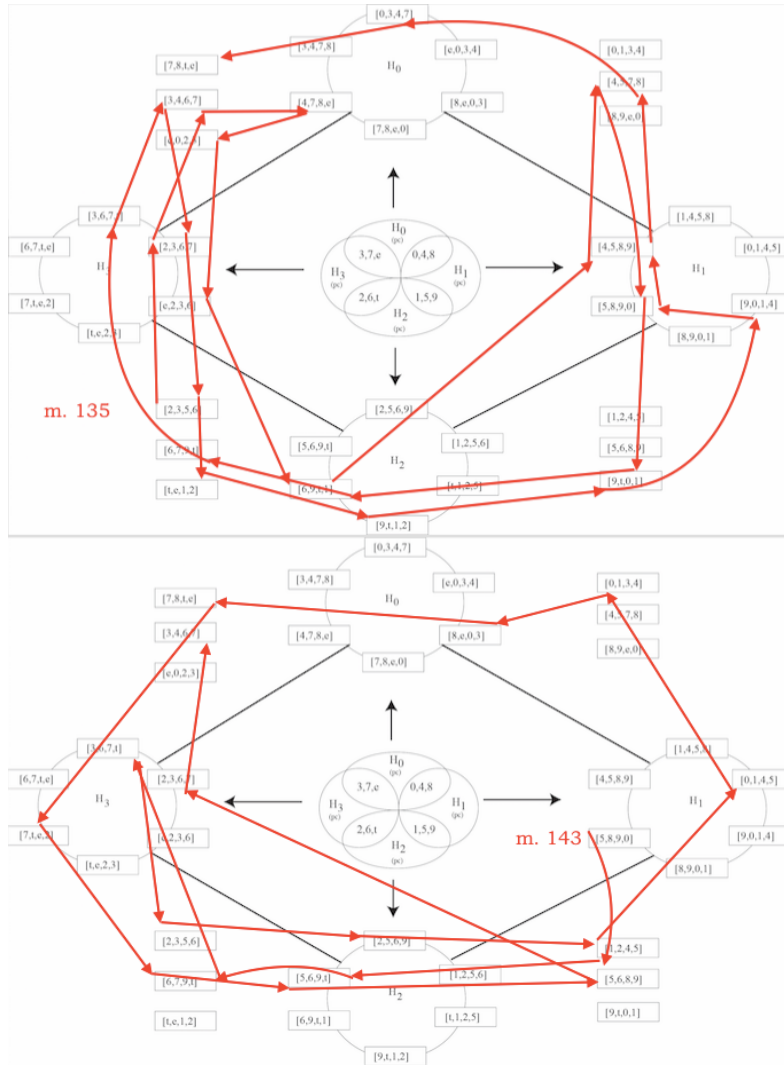


Figure 5.24: Op. 30 measures 135-142 (top), and measures 143-145 graphed onto the hyper-hexatonic system.

Measures 135-145 are shown graphed onto the hyper-hexatonic

system in figure 5.24 above. More often in this variation do we see Webern overlapping the same tetrachord. For example measure 139 contains overlapping [9t01] tetrachords, while measure 140 finds three overlapping [te12] tetrachords dispersed amongst the orchestra.

5.7.3 VARIATION NO. 5 AS GUITAR PART

Quick moving and consisting mostly of dense verticalities with counterpoint weaving through them, this fifth variation finds a few new voicings as it develops of the simpler melodic and rhythmic content of the third variation.

On the downbeat of measure 137, pc4 on the downbeat, as well as pc7 and pc8, originally belonging to the flute part, have been brought down one octave. Though only pc4 was originally outside the range of the guitar, the other two pitches following it were brought down in order to preserve the overall shape of the gesture. Another result of altering this melodic gesture, was that the accompaniment was also brought down an octave to preserve the overall voicing within the measure. Measure 138 finds all pitches in their original octave positions.

These measures benefit from consecutive *s* values that span either four or five measures. The downbeat of measure 138, which is very widely voiced and not possible to perform with consecutive *s* values,

makes use of $\{r = 0\}$ for pc9, allowing the remaining pitches to fall within three frets.

Both of measure 139's pc10 are brought down an octave, as have been the harp's pitches on beat two to preserve the gesture due to its pc0 being one half-step beyond the capabilities of the guitar. Finally, the three pitches of the first violin part were lowered an octave in order to preserve the downward motion toward pc1 in the following measure. This rhythmically complex measure finds all but two of its pitches within the topmost four frets of the neck. Those that do not form the trichord in the middle of the measure with the Koozin-shape of <—201->.

Continuing to measure 140 the downbeat has been lowered an octave, preserving the gesture that continued from the previous measure. Additionally pc2 and pc3, originally in the clarinet part, have been lowered an octave. From a performance standpoint, this measure requires spans of no more than four frets, and consists primarily of dyads. Measures 137-140 are shown in example 5.75 below.

Webern's exploration of the extremes of register means that several pitches in measure 141 needed to be brought down an octave as well. This measure contains several pitches an octave or more outside the range of the guitar. Those adjustments, as we have seen in the measures immediately preceding, cause a chain reaction so as to not alter the voicing of simultaneities even if its other members are within the range of

the guitar. Following the adjustments this measure makes use of a barre across the twelfth fret. A unison re-articulation is difficult, but possible, at the end of the measure.

The image displays a musical score for guitar, measures 137-140. The top staff is a treble clef with a 3/4 time signature and a key signature of one flat. The bottom staff is a bass clef with a 3/4 time signature. The score includes tablature notation with fret numbers (12, 13, 15, 18, 10, 18, 5, 10, 4, 9, 6) and Koozin-shapes (e.g., <-3143->, <5331-->, <40-214>, <--4231>, <--201->, <-4-2-1>). The Koozin-shapes are written in red text below the tablature.

Example 5.75: Op. 30 measures 137-140 of guitar arrangement with tablature notation and Koozin-shapes.

The supporting tetrachord in the bottom voice of measure 142 features a relatively compact Koozin-shape, though the addition of a melody requiring a position of $\{s = 1, r = 11\}$ makes holding that underlying harmony for its intended duration difficult. However if pcE is played on $\{s = 6\}$, with pc8 on $\{s = 5\}$, meaning the higher pitch is played on a lower sounding string and vice versa, the resulting pentachord is possible due in part to a barre across the eleventh fret. Simultaneously ascending s and r values further aid in the playability of this measure.

At the end of measure 143, the final three tetrachords exist mostly on frets seven through ten, with the exception of pc10 in the final tetrachord, located at $\{r = 6, s = 1\}$. Because of their proximity, the quick

shifts necessary are made easier. This entire measure benefits from consecutive *s* values with mostly consecutive *r* values, save for the second and third tetrachords which are, unfortunately, not performable as written. Measures 141-142 are shown in example 5.76 below.

141

141

12 19 13 10 13 8 11 12 17 14 6 12 7 6

12 18 12 13 12 12 17 12 2 12 10 9

16 16 13

<--1-11> <-31-3-> <64-211><64-210> <3142--><--4231> <--4231>

Example 5.76: Op. 30 measures 141-143 of guitar arrangement with tablature notation and Koozin-shapes.

Webern's orchestration throughout this variation is revealed clearly in this arrangement as containing stretches of unbroken sixteenth-notes, that he has placed in various distinct instruments. Again, structurally, and rhythmically, this variation starts to have a considerable resemblance to that of the third variation. In the final two measures of this variation, Webern continues to create dense counterpoint with three individual voices intertwining their disparate rhythms. Measure 144 divides its asymmetric 5/8 into voices of a quarter-note plus an eighth-note; four pairs of sixteenth notes and an eighth note; and finally an imitative answer to the first rhythm, though through ascending leap instead of descending.

Despite these complex cross-rhythmic voices, and two unison re-articulations, measure 144 may be comfortably performed without sacrifice. Opening with a unison re-articulation, the hand is quickly returned to a four-fret span and continues to hover around the high positions of the neck, only shifting for the measure's final two eighth-notes.

Measure 145 closes the variation with two distinct voices once again crossing over one another, creating an interlocking rhythmic and registral gesture. The entirety of this measure is articulated within the span of five frets, and benefits from a barre at the eleventh fret. These final two measures appear in example 5.77 below.

The image shows two staves of music. The top staff is a treble clef staff with a key signature of one sharp (F#) and a 3/8 time signature. It contains two measures of music. The first measure starts with a unison re-articulation (two eighth notes on the same pitch) and continues with a series of eighth notes. The second measure continues the eighth-note pattern. The bottom staff is a bass clef staff with a 3/8 time signature. It contains two measures of music. The first measure starts with a unison re-articulation (two eighth notes on the same pitch) and continues with a series of eighth notes. The second measure continues the eighth-note pattern. Red Koozin-shapes are written below the tablature: <4---61>, <-22-41>, and <-231-5>.

Example 5.77: Op. 30 measures 144-145 of guitar arrangement with tablature notation and Koozin-shapes.

5.8 Op. 30 VARIATION NO. 6

5.8.1 ROW ANALYSIS

The final variation covers the final thirty-four measures, numbered 146 through 180. The texture in this variation continues to dissipate, opening with two vertical tetrachords with relatively lengthy durations, before commencing with its largely linear material.

Webern begins with three overlapping rows in the brass, which on the surface looks exactly like all preceding variations. However, unlike all preceding variations, Webern creates a tetrachord here that belongs to neither set-class 4-3 or 4-17. Instead, we discover that the opening tetrachords are actually beginnings of linear representations of tetrachords. Measure 146 sounds set-class 4-12, while measure 147 sounds set-class 4-2. These new harmonies are a result of order numbers **0** and **1** of P_7 and P_9 in the horn and trumpet, while the entire first tetrachord of P_6 is placed in the trombone and tuba parts. Although these tetrachords have not been used overtly until this point in the work, they do share with 4-3 and 4-17 the trait of a 3-3 subset. Both set-classes in these opening measures include one 3-3 subset. These opening tetrachords are shown in example 5.78 below.

P7 x1a

P4 x1a

P6 x1

sehr ruhig \downarrow ca. 112

Dämpfer auf

Dämpfer auf

Dämpfer auf

Example 5.78: Op. 30 measures 146-147 highlighting opening two tetrachords created from 3 separate row-forms.

The x^{1a} dyads of P_4 and P_7 continue with x^{1b} in the low strings, and low winds, respectively. New row-form R_e appears in measures 148-150, with its first tetrachord divided amongst the harp and first violin. Order numbers **0** and **1** are presented in measures 148 and 150, while measure 149 contains the remainder of the tetrachord. Measures

148-153 are shown in example 5.79 below.

Example 5.79: Op. 30 measures 148-153 highlighting row exposures.

Another instance of Webern using canonic counterpoint is present in measures 150-152 between the viola and cello. Soon after, in measure 155, all rows that emerged at the beginning of the variation come to a near simultaneous end. The creation of this line of demarcation resembles a similar instance in the theme, specifically measures fourteen. It was in that measure of the theme that both row-forms came to a simultaneous end as well as indicating the beginning of a codetta

that marked a transition to the first variation. However, the rows that continue after this point actually find their beginnings before measure 155.

This does not mean that the apparent border created at the conclusion of measure 155 does not mark a significant change in the piece. It is after this point in the variation that we see a highly increased degree of tetrachords that are performing double-duty. Webern, in the final measures of this final variation, is maximizing his use of the invariant properties of the rows. The thesis presented in measures 146 and 147 wherein three separate row-forms were combined to produce tetrachords unlike any other in the piece, is expanded upon by blending several rows together to create a much richer chromatic texture. This is not dissimilar to Webern's use of three simultaneous rows in Op. 18/iii.

Beginning with measure 156, the oboe and clarinet continue a projection of P_2 that can actually be traced back to pc_2 in the flute and oboe parts of measures 154 and 155. The row then continues to the first violin, and concludes in the brass in measures 161 through 163, divided between the horn and tuba. Similarly we can see that P_4 grows out of the conclusion of P_6 in the trumpet. The row continues in the low strings in measures 159 through 162, finally concluding in the right hand of the harp part in measure 163. Measures 154-163 are shown in example 5.80 below.

Example 5.80: Op. 30 measures 154-163 highlighting row exposures.

Measures 165 and 166 find the flute, oboe, trumpet and first violin playing in canon with a rhythm that closely resembles “a” in retrograde. Each instrument at this point takes its pitches from the middle tetrachord of their row. The flute, trumpet, violin, and oboe, each following the previous by a quarter note, present the middle tetrachords of P_0 , R_3 , P_2 , and P_3 . Measures 164-168 appear in example 5.81 below.

In measure 167 the brass sounds the first tetrachord of P_9 , and is followed in the brass by the final tetrachord of that row. The middle tetrachord, $\{e236\}$, is not immediately apparent, appearing across the oboe and second violin in the intervening space between brass

tetrachords. Similar ambiguity appears with regard to P_3 , where the first tetrachord of that row appears in the clarinet and oboe in measures 168 and 169. Order numbers **8** and **9** appear in those measures, but soon thereafter disappears into the first tetrachord of P_t in the winds, or possibly in the strings.

Example 5.81: Op. 30 measures 164-168 highlighting row exposures.

Several more ambiguities show up in this closing section. The first tetrachord of rows P_1 and R_6 are shared in the low strings in measure 171, however R_6 then presents its middle tetrachord in the harp in

measure 172 before concluding in measure 173 in the second violins. Measure 174 finds the final tetrachord of both P_e and R_6 , connecting the low strings and harp part in the preceding measures. The tetrachord in the celeste in measure 175 can serve as the first tetrachord of P_6 and R_e , as it continues to either the harp or low strings for the next tetrachord of each of those rows, respectively. This section, then, features many distinct rows growing out from one another, showing Webern's increased mastery of the invariant properties of the rows.

Other instances of vagueness with regard to row-forms appear in measure 168 where P_1 appears to be missing pc4 in its first tetrachord, order number **3**. The pitch may be thought of as being included in the brass at the same time, which then moves to the celeste for order numbers **4** through **6** in the following measure; it may then possibly move to the second violin for order numbers **7** and **8** and the harp for the final three pitches. All these pitches are found within the row-forms simultaneously occurring throughout the ensemble. The final measures of this variation, and the entirety of Op. 30, are shown in example 5.82 below.

The image shows two pages of a musical score, measures 169-180. The score is for a piano piece, likely from Op. 30. The notation includes various instruments (Flute, Clarinet, Violin, Viola, Cello, Double Bass) and includes dynamic markings (pp, p, f) and tempo markings (rit., tempo, wieder lebhaft, sehr rasch). Red boxes highlight specific harmonic structures, which are identified as row exposures. These are labeled with set-class notations: [te12], [1458], [367], [e023], [8e03], [1245], [679t], [Pt x2a], [P8 x2b], [Re x2], [P6 x1], [P6 y], [Pt yb], [Re y], [P1 x2], and [P6 x2b]. Arrows connect these labels to their corresponding boxes in the score.

Example 5.82: Op. 30 measures 169-180 highlighting row exposures.

5.8.2 VOICE-LEADING ANALYSIS

In the following examples I will show the harmonies as they exist throughout this final variation, as well as graph them onto the hyper-hexatonic system in order to display the voice-leading.

The harmonies present in measures 146-153 are shown in example 5.83 below.

In the first two measures, being that neither [467t] or [5789] belong to any of the set-classes represented in my hyper-hexatonic system, I have graphed them as a combination of [4589], [4578], and [679t]. The shortest path between these harmonies moves from the East

hexatonic pole, to the top-right enneatonic corner and then back around to the bottom-left corner. With this we arrive at [679t] which is presented in measure 148 between the harp and first violins. This is shown in figure 5.25 below.

Example 5.83: Op. 30 measures 146-153 with harmonies highlighted.

The harmonies for measures 154-163 are shown in example 5.84 below.

The harmonies of measures 154 through 163 appear in figure 5.26 below. A marked preference for the Western side of the system is present

throughout these measures as it repeatedly traces back onto itself. This is due to Webern's continued, and extensive, exploration of row invariances, which leads to repeated pitch material within the multiple diverse rows used.

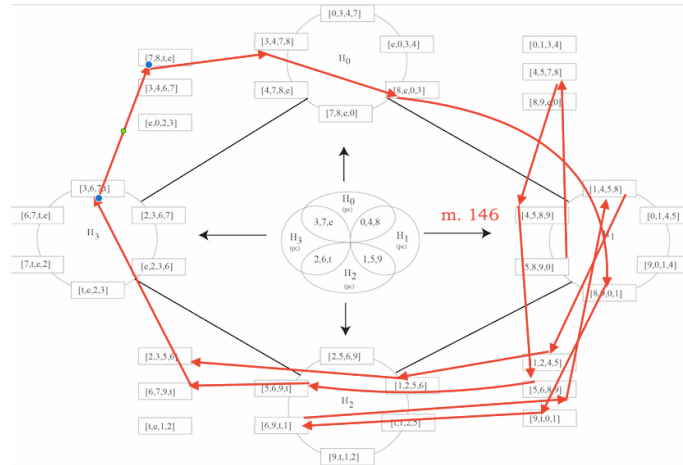


Figure 5.25: Op. 30 measures 146-153 graphed onto hyper-hexatonic system.

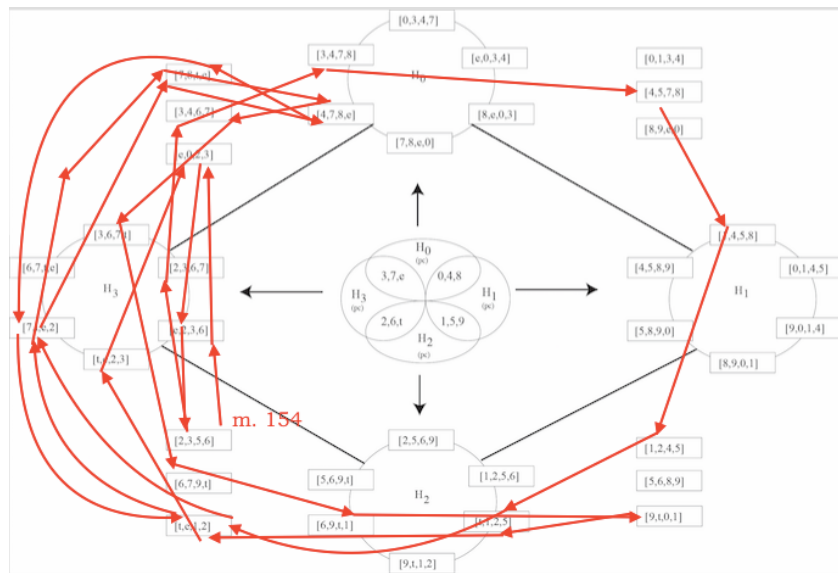


Figure 5.26: Op. 30 measures 154-163 graphed onto hyper-hexatonic system.

Example 5.84: Op. 30 measures 154-163 with harmonies highlighted.

The harmonies for the next group of measures that closes the piece, 164-180 are shown in examples 5.85 and 5.86 below.

Example 5.85: Op. 30 measures 164-174 with harmonies highlighted.

Musical score for Op. 30 measures 175-180. The score is in 3/4 time and features a key signature of one sharp (F#). The music is divided into two systems. The first system (measures 175-178) includes a piano part (p) and a vocal part (v). The second system (measures 179-180) includes a piano part (p) and a vocal part (v). Red boxes highlight specific harmonies in the piano part, labeled with numbers in brackets: [5689], [3671], [1245], [e023], [8e03], [0347], [1458], and [89e0]. The vocal part includes lyrics in German: "wieder lebhaft", "solch rasch i-ou iiz", "wieder lebhaft", "solch rasch i-ou iiz".

Example 5.86: Op. 30 measures 175-180 with harmonies highlighted.

Figure 5.27 below graphs measures 164-168 onto the hyper-hexatonic system. Many of the harmonies are more closely related than in previous sections. Note the concentration of harmonies along the Southern part of the system.

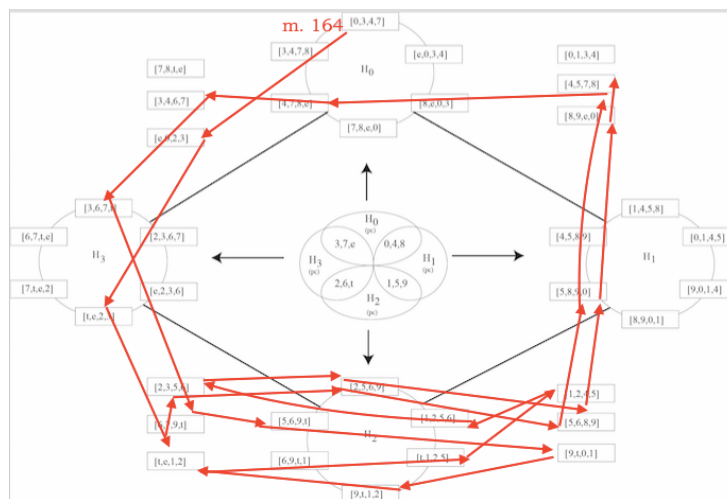


Figure 5.27: Op. 30 measures 164-168 graphed onto hyper-hexatonic system.

The final measures of Op. 30 graphed onto the hyper-hexatonic system are shown in figure 5.28 below.

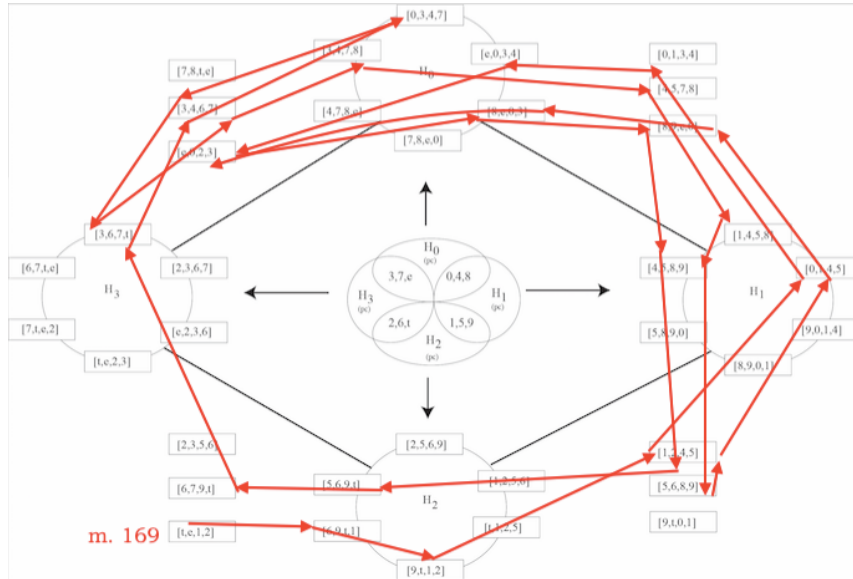


Figure 5.28: Op. 30 measures 169-180 graphed onto hyper-hexatonic system.

5.8.3 Op. 30 VARIATION NO. 6 AS GUITAR PART

Alterations made throughout this variation include measure 153 where pc2 has been brought down an octave from both the harp and viola parts. The same pitch was brought down an octave in the measure that follows as well, originating in the flute, and second violin parts. Measure 155's pc3 in the oboe and clarinet parts were brought down an octave, though pitches from earlier in the measure were left unchanged, as I view them as belonging to the conclusion of a previous idea, whereas the oboe and clarinet duet presents new supportive harmonic material in this and the two measures which follow. Those pitches following in these

parts include a large leap downward which allowed me to return to using the pitches as written, without destroying the idea of Webern's original phrasing. Also, pc7 in measure 157 has been brought down one octave.

The "a" rhythmic motive appears throughout measures 165 and 166 in canon, as mentioned in a previous section. As the first violin's iteration exaggerates greatly the leap that exists between the first two pitches I chose to lower its entire version of the motive from the second violin down one octave to preserve this leap amongst the other iterations of the motive.

In measure 174 the first violin strikes pc0 three octaves above middle-C. This pitch was therefore lowered two octaves. Finally in measures 176, and 179 pc4 and pc6 were brought down one octave.

These were the changes made in order to facilitate an arrangement of this variation.

The opening tetrachords created from three disparate rows are, just as before, formed with relatively simple Koozin-shapes. Measure 146 makes use of a barre at the twelfth-fret, with consecutive *r* values, <32-1-1>. This is followed by another widely voiced chord in measure 147 which uses a Koozin shape of <2—153>. Measures 146-147 from the guitar arrangement are shown in example 5.87 below.

Measure 148 makes use of a harmonic on pc10. An artificial harmonic such as this is performed on the guitar in the exact same

fashion as on the harp, the instrument this pitch in particular was originally scored for. The plucking hand reaches over the string, positioning a finger exactly halfway between the fretting pitch and the bridge; this distance is quickly found by adding twelve to the fret where the fretting-hand is, in this case the first fret, and therefore thirteenth. The “i” finger is rested gently on the string over the fret and plucked with the thumb just behind “i” to produce the harmonic.

Example 5.87: Op. 30 measures 146-147 of guitar arrangement with tablature notation and Koozin-shapes.

Measures 149 and 150, both consisting of only three attacks, make use of a unison re-articulation, and an *r* value of 0, respectively. These two measures are shown in example 5.88 below.

Rhythmic and contrapuntal activity increases sharply in measure 151 and those that follow. Extremes of range draw the fretting hand to the highest position of the neck, though holding a relatively compact Koozin-shape. An ascending leap from pc11 to pc0 in the lowest voice of measure 152 allows a barre at the ninth fret to be held throughout.

Example 5.88: Op. 30 measures 149-150 of guitar arrangement with tablature notation and Koozin-shapes.

A slight rhythmic alteration will occur in performance of measure 154. In order to maintain a compact Koozin-shape pc1 in the trichord on beat three will be shortened by one eighth-note in order to position the melody pitch. This would mean that the remaining pitches of that trichord, and the melody pitch at the end of the measure would each occupy the tenth fret. The entire measure would remain within the span of five frets. Measure 155 is equally compact, slightly higher on the neck. Measures 151 through 154 of the guitar arrangement is shown in example 5.89 below.

Example 5.89: Op. 30 measures 151-154 of guitar arrangement with tablature notation and Koozin-shapes.

Measures 156 and 157 remain mostly within a compact three-fret span, except for pc5 on the second beat of measure 157. Tremolo pitches in these measures can be easily articulated with $p = i$, while $p = p$ is used for pc6 in measure 156. In measure 157 the tremolo pitches must be cut short in order to accommodate pc5 and pc7 at the end of the measure. Despite both of these tremolo dyads being separated by a string, one is still able to strike them with one plucking finger by muting the intermediate string, in this case $\{s = 2\}$, with the fretting hand. Measures 156 and 157 of the guitar arrangement appear in example 5.90 below.

Example 5.90: Op. 30 measures 156-157 of guitar arrangement with tablature notation and Koozin-shapes.

Before breaking back down into two registrally very distinct voices in measure 159, which resembles measure 148, the trichord in measure 158 is interrupted by another harmonic. This time the harmonic is of pc4, and originates in the first violin, not the harp as was the case previously. Each pitch in the measure, as we have seen countless times before, remains on its own dedicated string.

Material following those sparse measures, separated considerably via fermatas covering measures 158 through 160 with a ritardando, resembles the material which opened the variation. Widely voiced tetrachords in relatively simple rhythms pervade measures 160 through 162. Relatively compact Koozin-shapes also pervade this stretch of measures. Except for shortening the duration of the trichord on beat two of measure 160 in order to reach the high pc6 on the third beat of that measure, no other rhythmic alterations are necessary and each pitch may be played on a unique string. Many of the simultaneities in these measures feature the use of consecutive *r* values, as can be seen below.

Significantly denser contrapuntal textures return in measure 163 and the measures which follow. Measure 164 is broken in two by a beat of rest, which facilitates a hand position shift from the lower portion of the neck, which continues from the previous measure, to a higher position, making a transition to measure 165 easier. The second half of measure 164 features both consecutive *r* and *s* values. Measures 158-164 are shown in example 5.91 below.

The overlapping canonic entrances of “a” in measures 165 and 166 form a contrapuntal fabric that is difficult to traverse. Measure 166 in particular is broken into four distinct rhythmic patterns. However, despite the interweaving rhythms, only pc5 on the downbeat, must be shortened slightly in performance in order to sound pc7 an eight-note

later. The less dense measure 165 benefits from staggered fourths, allowing a barre at the tenth fret to be held throughout the measure.

Example 5.91: Op. 30 measures 158-164 of guitar arrangement with tablature notation and Koozin-shapes.

A rising and then falling series of tetrachords and trichords in measures 167 and 168 supports a soaring melody at the upper reaches of the guitar. In performance pc8 on the downbeat must be shortened, as does the tetrachord on beat two in order to make way for the high pcE. The final pitch of the measure also cuts short the preceding pcE which is meant to be carried over the barline.

There is a recurring pattern of *s* values throughout these two measures where the two tetrachords of measure 167, as well as the second and fourth trichords of measure 168 share use of $\{s = 1, 2, 4, 5\}$.

Koozin-shapes of these tetrachords also share similar properties, as shown below, revealing the endpoints as matching chords, with the final tetrachord a repeat of the first though shifted up one half-step.

The final eleven measures clear out the texture significantly, with simpler rhythmic divisions of each measure, forgiving Koozin-shapes with consecutive s and r values, and many simultaneities aided through the use of $r = 0$. Several instances of repeating s value groupings recur throughout these final measures. Measures 165 through 169 are shown in example 5.92 below.

The image shows a musical score for guitar, measures 165 through 169. The top staff is a treble clef staff with notes and accidentals. The bottom staff is a tablature staff with fret numbers (10, 14, 13, 15, 16, 10, 13, 16, 2, 19, 15, 9, 5, 1, 3, 6, 19, 15, 16) and Koozin-shapes (e.g., <-11-1>, <-11--3>, <-42-14>, <-53-1>, <-4231>). The Koozin-shapes are color-coded: red for the first and last, green for the second, and blue for the third.

Example 5.92: Op. 30 measures 165-169 of guitar arrangement with tablature notation and Koozin-shapes.

Measure 177 marks the end of the variation, and the piece proper, while measure 178 forms a break between it and a short two bar coda. Measure 178 allows the performer to take a short, 1.33 second, break in order to work up the energy for the final eleven eighth-notes of the piece.

The final two measures feature, once again, interlocking patterns of Koozin-shapes with the penultimate measure's barre at the seventh fret allowing one to arpeggiate through the two voices present. The final

measure's single voice, broken into two groups of two eighth-notes each, with a final eighth-note rest, concludes toward the low-middle portion of the guitar neck. The last measures are shown in example 5.93 below.

The image displays a musical score for guitar, consisting of two systems of music. The first system covers measures 169 to 174, and the second system covers measures 175 to 180. Each system includes a treble clef staff with notes and a guitar tablature staff with fret numbers and Koozin-shapes. The Koozin-shapes are represented by red arrows and numbers, such as <--4231>, <--2-10><31-0>, <31110->, <7311-->, <--3153>, <--4153>, <5331-->, <4221->, <21133>, <0-12-->, and <--123>. The score is written in a complex, chromatic style with frequent changes in rhythm and meter.

Example 5.93: Op. 30 measures 169-180 of guitar arrangement with tablature notation and Koozin-shapes.

5.9 CONCLUSIONS

Throughout the 180 measures of Anton Webern's Op. 30 Variations for Orchestra, he adheres to a largely contrapuntal style with relatively sparse orchestration. This set of variations stands as Webern's final published instrumental work, and can therefore be considered the apex of his compositional evolution.

With the exception of one short variation, the entirety of this work may be readily performed on a single guitar, further cementing its status as high-art folk music via its close association with the implications of the guitar. The thin textures resemble more a chamber piece than a work for the full forces an orchestra is capable of providing. The spacious, even pointillistic orchestration mimics the sound-envelope of the guitar. Though, in certain respects, Webern does of course take advantage of the full registral capabilities available to him through using the orchestra as the instrument here, requiring multiple octave shifts throughout my arrangement; though these shifts in most cases continued to result in compact Koozin-shapes, and many instances of consecutive *s* and/or *r* values. My guitar analysis, combined with a close reading of the piece's row count and voice-leading, points to a highly-developed style of twelve-tone serial composition that takes into account elements of form, rhythm, and orchestration.

Where Webern's Op. 30 begins with the utmost of clarity with regard to rows that trace a clear, and unambiguous path through a section, he develops the complexity, and intricacy of his musical language throughout, making increased use of tetrachord and dyad invariants and overlapping rows more intricately as the piece progresses. Much like the development that may be seen across the three songs of

Op. 18, this work also finds Webern growing in his abilities with his own twelve-tone serial language.

Furthermore, this piece, through its manipulation of simple rhythmic cells, symmetrical properties, and highlighting of intervals through the voicing of simultaneities, does point to the “multi-dimensional” elements mentioned by Boulez, Stockhausen and others. This piece also, as those composers argue, does lead the way to the inevitable development of the school of total serialism.

However, an underlying simplicity forms the foundation of the entire work. Webern’s use of canon throughout, his deliberate pacing, phrase construction, and consistent articulation of harmony and melody point to this work truly having developed from ideas of much simpler works.

Webern’s Op. 30 continues to express his own deeply held *heimat*, with one foot firmly planted in the world of art music, and the other in the realm of the folk. The work’s impossibly simple foundation creates a densely layered and complex finished product.

One can equate this to Webern’s deep connection with both the intellectual worlds of Schoenberg’s teachings, and his own involvement with conducting community orchestras as well as his love of the country. Specifically, the spacious texture that permeates the majority of this work, its fundamental simplicity, and its adherence to harmonic

organizations developed out of his earliest serial works, combine to express characteristics of folk music. This final instrumental work continues in the direction set in motion by Op. 18, showing a more fully formed realization of all elements of composition from that earlier work.

CHAPTER VI

CONCLUSION

In the preceding chapters I have re-contextualized Anton Webern's late works through the lens of guitar composition. In order to do so I presented extensions of transformational theoretical models of my own design, modeled after both Joseph Straus and Richard Cohn. My models adapted, for the former, a contextual inversion space designed to explore the voice-leading of set-class 3-5 trichords, and for the latter separate hyper-hexatonic systems for exploring the voice-leading between several different trichords and tetrachords.

Each of these models were designed for a specific purpose in order to explore specific pieces. The set-class 3-5 contextual inversion space was used in the analysis of Webern's Op. 18/i, while a set-class 3-3 based hyper-hexatonic system was used for Op. 18/ii, and another similar hyper-hexatonic system was designed to map the relationship between members of set-classes 3-3, 3-4, and 3-5. Later, when analyzing the Op. 30 Variations for Orchestra a hyper-hexatonic system which included members of set-class 4-3, 4-7, and 4-17 was implemented.

Coherence of Webern's voice-leading remains tied to its physical manifestations on the guitar, and the instrument's feature of set-class consistency being tied to Koozin-shape. Though the hyper-hexatonic graphs included throughout my study are influenced by choices related

to segmentations decided upon in my analyses, Webern's consistent voicing of simultaneity, clarity of orchestration, and favoring of set-class 3-3 as well as tetrachords with that set-class as a subset, point to a concern for smoother voice-leading.

As a specific example we can turn to measures one-hundred forty-one through one-hundred forty-three in the Op. 30 variations for orchestra. It is in these measures we find that the orchestra at its most complex can still be boiled down to a texture which is conducive to performance on the guitar. These measures, shown in example 5.76, continue to display many of the characteristics found in each opus analyzed in this dissertation. Namely, we find the compact Koozin-shapes made up of sequential r and s values, and other harmonies easily facilitated by barre placement of the guitarist's fretting hand. These compact shapes are shown to travel between hexatonic and enneatonic systems around the tetrachordal hyper-hexatonic systems in figure 5.24 in the previous chapter. The motions, though not close in the traditional sense of voice-leading, are shown to be more closely related in their physical proximity on the guitar. The same is true for the most complex parts of this opus, as well as the piano part of the Op. 25 songs.

For each of the works studied, which included six songs and a piece for orchestra, I re-contextualized most or all of the texture in terms of the guitar. I made, in the case of Op. 18, improvements upon the

already-written guitar part by including notation more commonly found in guitar literature. Namely, this meant the use of one sub-octave G-clef throughout, which makes the guitar part throughout those songs considerably easier to understand. This was done not only for ease of analysis, but also for the purpose of encouraging the performance of these songs, which are commonly thought of as “difficult,” and therefore often overlooked.

In the case of Op. 25 I arranged the piano part for solo guitar. This was done in order to strengthen the case for my assertion that Webern was looking to inject folk elements in his post-Op. 18 works. This is due to Op. 25 having, relative to other atonal pieces of the time, a simpler and more folk-like accompaniment. Additionally I showed how Webern’s sensitivity to text-setting continues a simpler, more traditional sense of prosody despite his progressive, new harmonic and melodic language. I connected Webern’s voice-leading between set-class 3-3 trichords, as well as through tetrachordal motion across a specially designed hyper-hexatonic systems. My intention in graphing the harmonic motion across these systems was to tie the motions to the physicality of guitar performance that was detailed in sections uncovering the compact Koozin-shapes borne out of performance possibilities shown via tablature notation.

In the introductory chapter I provided evidence for Webern's strong connection to the folk culture of his native Austria, which is linked to a sincere and all-encompassing drive to project his *heimat* through his music. The history of the guitar links it to folk cultures around the European continent, though I also discussed its importance to Austria specifically. The creation of a folk-like ensemble in Op. 18 with its guitar, E-flat clarinet, and yodeling soprano, is at once evocative of a continuo with singer, and Mahler's depiction of folk culture throughout his symphonies, namely his seventh. This, I believe, is also linked to the greater tradition of the pastoral in music.

In creating Op. 25's thinner texture, with increasingly wide-voiced simultaneities, dramatically leaping melodic lines, and greatly increased use of staccato attacks, I asserted that Webern was effectively using the piano to mimic the guitar's abilities, and overall sound-envelope. The piano part's avoidance of sustained simultaneities, use of pedal, and in the case of the second song a limitation of the piano's range that brought the part within the guitar's range all lead to a more guitaristic piano sound. This isn't to say that just because the piano was molded to mimic the guitar that it automatically exudes a certain "folkness." However, coupled with these facts, the associations presented through the text, and Webern's own personal *heimat* which encompassed everything he did

at this point in his career, all place this set of songs into the category of folk, or possessing a degree of folk qualities.

In analyzing the composer's Op. 30 variations for orchestra, I provided evidence for its serving as a further extension of the many techniques which began in Op. 18, which were continued in Op. 25. The spacious orchestration, and voicing of simultaneities, were seen to be a continuations of Webern's earlier work. The Op. 30 variations continue to project folk characteristics that find their root in the Op. 18 songs, and were developed through the Op. 25 songs on texts by Hildegard Jone. Though these variations for orchestra are, obviously, not texted, I viewed them as extending the practices beginning in those earlier works. Webern's works throughout this dissertation are considered to develop in a straight line with each opus picking up where previous ones had left off with regard to all the elements I have considered throughout.

I believe that Webern's works straddled the line between folk-music and concert music, reflecting his own interest in both. I have shown evidence that in creating these middle and late period works, Webern created a new kind of folk music. Allusions to old forms, such as canons, variation, and liturgical music exist amongst his continuous development of serial practices. These materials are something that we see connected in Op. 18, where Webern's three chosen texts discussed in turn connect imagery from his native Austria, to more general allegorical nature

content, which were both placed in conjunction with spiritual texts. For Webern the juxtaposition of these various considerations, which included both textual and musical concerns, were important to projecting his underlying idea of *heimat*.

In using tablature notation with what I have called “Koozin-shapes,” I pointed toward one of the guitar’s great advantages which is set-class consistency related to the physical position of the fingers on the strings. In the pieces I analyzed I point to a great many instances of consecutive *r* and/or *s* values, which mean that the majority of simultaneous pitch material occurs on adjacent strings and/or frets. These qualities lead to a compact fretting-hand shape, which results in increased playability.

From the perspective of voice leading, the main conclusion drawn is that Webern’s clarity of orchestration, and focus on specific, and consistent, set-classes, contributed to an overall smoothness of voice-leading. Earlier works, such as the three songs of Op. 18, found an overall crowded and muddled conflagration of pitch content. Though this crowded pitch content was still shown to project one overall set-class in the case of Op. 18/i, the resulting graphs only uncover an underlying structure with no one clear direction with regard to a harmonic path. The piano songs of Op. 25 continued to focus on set-class 3-3 with an increased clarity, using serial operations in the interpretation of the text,

at the same time holding constant his projection of a single set-class in both the vertical and horizontal aspect of the piece. The complex surface texture present in Op. 18, with its dense counterpoint and high degree of rhythmic activity, hides a much simpler underlying structure. I pointed to the basis of “Schatzerl klein” being a row which repeated without changing, which began with pc0, alluding to a simpler harmonic structure like one that might be the basis for a simple folk tune. The improvisatory character of the melodic material in that piece, as well as the other two songs of the set, plays more of a central role than in the later works. That improvisatory character can be seen as another layer of meaning behind Webern’s choice of ensemble, having chosen the instruments to mimic a traveling folk group, with the guitar also serving a continuo role simultaneously.

Finally, Op. 30’s initial focus on projecting a row one tetrachord at a time expanded upon the former works’ set-class 3-3 projections. Throughout this final instrumental piece Webern explores the tetrachordal invariance created through the underlying a-b-a set-class structure of his row. The underlying simplicity of this orchestral work relies on two main rhythms, and two main set-classes throughout, which itself ties to the underlying simplicity of his older songs.

In future research I will continue to explore the use of my trichordal- and tetrachordal-based hyper-hexatonic systems, with

models which explore the physical embodiment of those models. I believe that the combination of my analytic models, and arrangements for guitar, have gotten closer to the musical meaning of Webern's works than any pure pitch study can. In bridging the theoretical concepts of pitch-class and set-class, with the physical realm and embodiment of performance, I have pointed toward a new understanding of these works by one of the most important composers of the 20th century.

Drei Lieder

für Gesang, Es-Klarinette und Gitarre

Anton Webern, Op. 18

Performance edition by Adam Shanley

Sehr ruhig (♩ = ca 54)

rit. ----- I tempo

Gesang

Schat - zerl klein, muß nit

Es-Klarinette

Gitarre

rit.

I tempo

tran - rig sein, eh' das Jahr ver - geht, bist du

Kl.

Gt.

rit.

tempo

pp p p mp mf

mein. Eh' das Jahr ver - geht, grünt der Ros - ma - rin, sagt der

Kl.

Gt.

pp p mp pp mf p

2

p *mf* *p* *p* *pp*

rit. ----- molto

Pfar - rer laut: Nehmts euch hin. Grünt der

Kl. *mp* *p* *fp* *p*

Gt. V VII XII VII V

tempo

p *mp*

Ros - ma - rin, grünt der Myr - ten - strauß und der

Kl. *pp* *p* *fp* *p* *p*

Gt. II 3 3 3 3 VII

rit.

p *p* *pp*

Na - gerl - stock blüht im Haus.

Kl. *p* *pp*

Gt. *mf* *p* *pp* *ppp*

II

Erlösung

(aus "Des Knaben Wunderhorn")

Anton Webern, Op. 18

Performance editon by Adam Shanley

Sehr bewegt (♩ = ca 100)

Gesang

Es-Klarinette

Gitarre

Maria *f*

Mein Kind, sieh an die

sf *p* *sf* *fp* *fp* *p* *sf* *fp*

fp *sf* *fp* *sf* *f* *più f*

rit.

Kl.

Gt.

Brü - ste mein, — kein Sün - der laß ver - lo - ren sein.

più f *f* *mf* *p*

sf *ff* *f* *mf* *p*

rit.

Tempo I (♩ = ca 100)

Vater *più p* zart *p* *ruhig* *p*

Sün - - - de sein. Sohn, lie - ber Sohn mein,

Kl. 13 14 15

Gt. 8

pp *p* *pp* *p* *pp* *p*

p *rit.* *accel.* *tempo* *f*

al - - - les was du be - gehrst, das soll sein.

Kl. 16 17 18

Gt. 8

p *mf* *fp* *p* *pp* *p* *f* *ff* *sff*

III

Anton Webern, Op. 18
Performance edition by Adam Shanley

Langsam (♩ = ca 56)

rit. ----- tempo

Gesang
äußerst zart

Es-Klarinette
p *pp* *ppp* *pp* *pp* *ppp*

Gitarre
pp *pp* *p* *pp* *p*

rit. ----- tempo
sehr ruhig *pp* *pp* *pp* *pp*

A - ve, Re - gi - na coe - lo - rum, a - ve,

Kl.
4 5 6

Gt.
8 *p* *pp* *pp* *p*

Do - mi - na An - ge - lo - - - - rum:

Kl.
7 8 *pp* *pp* *pp*

Gt.
8 *pp* *pp* *p* *pp*

p *pp* *p* *p*

Sal - ve ra - dix, sal - ve por - ta, ex qua mun - do lux est or - ta:

Kl. *pp* *p* *pp* *pp* *pp*

Gt. *p* *pp* *pp* *p* *pp* *p*

p *p*

Gau - - - - de, Vir - go glo - ri - o - - - sa, su - per

Kl. *fpp* *p* *p* *p*

Gt. *p* *f* *p*

p *rit.* *f* *mf* *p*

om - nes spe - ci - o - - - sal Va - le, o val - de de -

Kl. *p* *pp* *p* *p* *f* *mf* *p*

Gt. *p* *p* *p* *sf* *sf* *f* *f* *p*

etwas breiter (♩ = ca 100)

co - - - ra, et pro no - - - bis Chri - stum ex - o - - ra.

Kl.

Gt.

molto rit. ----- ♩ = ca 56 tempo I (♩ = ca 56)

Kl.

Gt.

DREI LIEDER

nach Gedichten

von

Hildegard Jone

ANTON WEBERN, op. 25

Arranged for guitar by Adam Shanley

Langsam ♩ = ca 60

rit.

tempo

rit.

Gesang

Wie bin ich froh!

Gitar

tempo

noch ein - mal wird mir al - les grün und

tempo

leuch - tet so!

noch ü - ber -

2 7 *f* 8 *rit.* *tempo*

blühn — die Blu - men mir die Welt! — noch ein -

rit.

mal — bin ich ganz ins Wer - den hin - ge - stellt

sehr langsam ♩ = ca 42 *tempo I*

und bin auf Er - den.

II

1 Fließend, ♩ = 112 2 3 rit. - - - - *p* 4 tempo

Des Her - zens

5 6 7 8 *p*

Pur - pur - vo - gel fliegt durch Nacht. —

9 rit. - - - - 10 tempo rit. - - - - 11 tempo 12

Der Au - gen Fal - ter,

13 rit. *p* 14 tempo 15 16 *f*

die im Hel - ten gau - keln, sind ihm vor -

17 18 *p* 19 rit. 20 *pp* tempo

aus, wenn sie im Ta - ge schau - keln.

21 22 23 rit. *f* 24 tempo

Und doch ist er's,

25 *p* 26 rit. 27 tempo 28 tempo 3

der sie ans Ziel ge-bracht. Sie ru - hen oft,

p *sf* *p* *f*

29 *f* 30 rit. tempo 31 rit. 32 *p*

die bald sich neu er - he - ben zu neu - em Flug. Doch

f *p* *pp*

33 langsamer, ♩ = ca 84 34 35 rit. *pp*

ra - stet end - lich er am Ast des To - des, müd

p *p* *pp*

4 — — — — — tempo rit. — — — — — immer langsamer, ♩ = ca 58

36 37 *pp* 38 *pp* 39

— und flü - gekchwer, dann müs - sen sie

pp *p* *pp* *p* *pp*

40 41 42

pp *pp* *ppp*

zum letz - ten Blick ver - be - ben.

verlöschend

pp *pp* *ppp*

III

1 **Sehr rasch** ($\frac{\text{♩}}{2} = \text{ca } 96$)

2 3 4 *f* 5 6 7

Ster - ne,

8 **rit.** - - - - **tempo** 9 *f* 10 11 12 13 **rit.** - - - - 14

Ihr sil - ber - nen Bie - nen

15 *p* 16 17 *p* 18 19 20 21 *pp*

der Nacht um die Blu - me der

2
 22 *rit.* 23 24 25 *tempo I* ($\text{♩} = \text{ca } 96$) 26 27 28

Lie - - - be!

pp

29 *rit.* 30 31 *wieder viel mäßiger* ($\text{♩} = \text{ca } 69$) 32 33 34 *rit.* 35 *p*

Wahr - lich der Hö - nig aus ihr hängt schim - mernd an

p *pp* *p*

36 *tempo I* 37 *f* 38 39 *rit.* 40 41 *tempo* 42 *f*

Euch. Las - set ihn trop - fen ins Herz, in die

pp *f* *sf* *p* *f*

43 44 45 46 *ff* 47 48 *rit.* - - 3

gol - de - ne Wa - be, fül - let sie

f *ff* *sf*

tempo

49 50 *p* 51 52 53 54

an bis zum Rand.

f *sf* *ff*

55 56 *ff* 57 58 *f* 59 60 *molto rit.* - - - -

Ach schon trop - fet sie ü - ber,

ff *dim.*

4 wieder viel mäßiger

61 *p* 62 63 64 *p* 65 66

se - lig und bis ans

p *pp* *p*

67 *rit.* 68 69 *pp* 70 71 72 *tempo*

En - de mit e - wi - ger

p *pp*

73 *rit.* 74 75 *pp* 76 77 78 *tempo I* (♩ = ca 96)

Sü - ße durch - tränkt.

pp *sf* *p* *pp*

An Werner Reinhart
VARIATIONEN

Thema

ANTON WEBERN, op. 30
arranged for guitar by Adam Shanley

Lebhaft ♩ = ca 160
langsamer ♩ = ca 112
wieder lebhaft ♩ = ca 160
wieder langsamer ♩ = ca 112
lebhaft ♩ = ca 160 *langsamer* ♩ = ca 112
sehr zart *rit.* *lebhaft* ♩ = ca 160
molto rit.

p *pp* *f* *fp* *f* *f* *sf*
sf *p* *p* *pp* *pp* *f* *f*
fff *sf* *p* *pp* *f* *fff* *ff*
sfp *p* *pp* *pp*

An Werner Reinhart
VARIATIONEN

ANTON WEBERN, op. 30

Arranged for guitar by Adam Shanley

Variante 1

sehr ruhig
♩ = erreichte (ca 112)

pp *pp* *pp*

subito lebhaft ♩ = 160

26

f *dim.* *p* *sf*

rit. *wieder sehr ruhig*
♩ = ca 112

31

p *pp* *morendo*

wieder lebhaft, sehr bewegt
♩ = ca 160

35

f *f* *sf* *sf* *p* *p* *pp*

rit.

sehr ruhig
♩ = ca 112

40

pp *rit.* *morendo* *wieder sehr bewegt*
♩ = ca 160

f

2
45

f *sf* *p* *pp* *p*

sehr ruhig
= ca 112

rit.

50

pp *pp* *pp*

tempo

An Werner Reinhart
VARIATIONEN

Variante 2

ANTON WEBERN, op. 30
Arranged for guitar by Adam Shanley

wieder lebhaft ♩ = 160

Musical notation for measures 56-60. The piece is in 2/4 time. Measure 56 starts with a *sff* dynamic and a *sf* dynamic. Measure 57 has a *sf* dynamic. Measure 58 has a *sfp* dynamic. Measure 59 has a *pp* dynamic. Measure 60 has a *sff* dynamic. A *rit.* marking is above measures 58-59, and a *tempo* marking is above measure 60.

Musical notation for measures 61-65. Measure 61 has a *p* dynamic. Measure 62 has a *sff* dynamic. Measure 63 has a *sff* dynamic. Measure 64 has a *sff* dynamic. Measure 65 has a *sff* dynamic. A *rit.* marking is above measures 61-62, and a *tempo* marking is above measure 63.

Musical notation for measures 66-70. Measure 66 has a *sff* dynamic. Measure 67 has a *sff* dynamic. Measure 68 has a *pp* dynamic. Measure 69 has a *p* dynamic. Measure 70 has a *p* dynamic. A *rit.* marking is above measures 66-67, and a *tempo* marking is above measure 68.

Musical notation for measures 71-75. Measure 71 has a *pp* dynamic. Measure 72 has a *sff* dynamic. Measure 73 has a *sff* dynamic. Measure 74 has a *sff* dynamic. Measure 75 has a *sff* dynamic. A *rit. tempo* marking is above measure 71. Measure 76 has a *f* dynamic. Measure 77 has a *f* dynamic. Measure 78 has a *sf* dynamic. Measure 79 has a *sf* dynamic. A *rit. tempo* marking is above measure 76.

An Werner Reinhart
VARIATIONEN

Variante 3

ANTON WEBERN, op. 30
Arranged for guitar by Adam Shanley

etwas bedächtig ♩ = ♩ (ca 160) *leicht bewegt* ♩ = 112 *subito flott* ♩ = 112

80 *rit.* *wieder leicht bewegt* ♩ = 112 *subito lebhaft* ♩ = ca 160

86 *rit.*

91 *tempo* *molto rit.* *wieder leicht bewegt* ♩ = 112 *subito lebhaft* ♩ = ca 160

96 *wieder leicht bewegt* ♩ = 116 *molto rit.* *tempo* *subito lebhaft* ♩ = ca 160

p *tr* *f* *p* *p*

100 *sehr ruhig* ♩ = 112 *morendo* *subito lebhaft* ♩ = ca 160

pp *pp* *pp* *f*

105 *flott* ♩ = ca 112 *subito lebhaft beschleunigend* ♩ = ca 160

ff *sf* *sf* *pp*

An Werner Reinhart
VARIATIONEN

Variante 4

ANTON WEBERN, op. 30

Arranged for guitar by Adam Shanley

ruhig
fließend

erreichte ♩ = ca 112

pp sf f p rit. ----- tempo

subito a tempo,
leicht bewegt ♩ = ca 112

wieder ruhig

fließend ♩ = ca 112

115 sf sf p pp p pp p rit. -----

subito lebhaft ♩ = ca 160

120 pp morendo f sf fp p pp

a tempo,
sehr bewegt ♩ = ca 160

124 morendo ff sf sf sf ff rit. -----

128 ff > f nicht eilen

molto rit.

leicht bewegt ♩ = ca 112

131 ff p pp

An Werner Reinhart
VARIATIONEN

Variante 5

ANTON WEBERN, op. 30
Arranged for Guitar by Adam Shanley

Lebhaft ♩ = 160 *rit.* ----- *wieder leicht bewegt* ♩ = 112 *rit.* ----- *tempo*

p < *sf* *p* > *sf* > *p* > *pp* *f* > > *p*

beschleunigend *subito a tempo*

140

pp *sf* *sfp* < > *p* > *pp*

molto rit. ----- *tempo* ----- *rit.* -----

143

p *pp* *ppp*

An Werner Reinhart
VARIATIONEN

Variante 6

ANTON WEBERN, op. 30
Arranged for guitar by Adam Shanley

sehr ruhig ♩ = ca 112

rit. -----

Musical notation for the first system, measures 1-6. The piece is in 4/4 time. The first measure has a *pp* dynamic. The second measure has a *ppp* dynamic. The third measure has a *pp* dynamic. The fourth measure has a *pp* dynamic. The fifth measure has a *f sf* dynamic. The sixth measure has a *f sf* dynamic. The tempo is marked *sehr ruhig* with a quarter note equal to approximately 112 beats per minute. A *rit.* marking is present at the end of the system.

tempo

♩ = ca 112

Musical notation for the second system, measures 7-12. The piece is in 4/4 time. The first measure has a *p* dynamic. The second measure has a *pp* dynamic. The third measure has a *sfp sf* dynamic. The fourth measure has a *sfp sf* dynamic. The fifth measure has a *p* dynamic. The sixth measure has a *p* dynamic. The tempo is marked *tempo* with a quarter note equal to approximately 112 beats per minute.

beschleunigend

*wieder sehr
ruhig*

♩ = ca 112

rit. ---- *tempo*

rit. -----

Musical notation for the third system, measures 13-18. The piece is in 4/4 time. The first measure has a *fp* dynamic. The second measure has a *morenfo* dynamic. The third measure has a *fp* dynamic. The fourth measure has a *p* dynamic. The fifth measure has a *pp* dynamic. The sixth measure has a *pp* dynamic. The tempo is marked *wieder sehr ruhig* with a quarter note equal to approximately 112 beats per minute. *rit.* markings are present at the beginning and end of the system.

tempo

rit.

tempo
♩ = ca 112

beschleunigend

Musical notation for the fourth system, measures 19-24. The piece is in 4/4 time. The first measure has a *ppp* dynamic. The second measure has a *sfp sf* dynamic. The third measure has a *p* dynamic. The fourth measure has a *f* dynamic. The fifth measure has a *f* dynamic. The sixth measure has a *f* dynamic. The tempo is marked *tempo* with a quarter note equal to approximately 112 beats per minute. *rit.* markings are present at the beginning and end of the system.

lebhaft ♩ = ca 160

wieder sehr ruhig, doch nicht schleppend ♩ = ca 112 >

165

f sf sf p sf

rit. ----- *tempo*

168

p pp p pp

rit. ----- *wieder lebhaft* ♩ = ca 160

subito doppelt so langsam ♩ = ♩

172

pp p sf sf p pp

wieder lebhaft ♩ = ca 160

morendo

177

pp ppp ff ff

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