



Universiteit
Leiden
The Netherlands

The polyphonic touch : coarticulation and polyphonic expression in the performance of piano and organ music

Wright, A.J.

Citation

Wright, A. J. (2016, June 22). *The polyphonic touch : coarticulation and polyphonic expression in the performance of piano and organ music*. Retrieved from <https://hdl.handle.net/1887/41220>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/41220>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/41220> holds various files of this Leiden University dissertation

Author: Wright, Andrew

Title: The polyphonic touch : coarticulation and polyphonic expression in the performance of piano and organ music

Issue Date: 2016-06-22

The Polyphonic Touch

**Coarticulation and polyphonic expression in the
performance of piano and organ music**

Proefschrift

ter verkrijging van

de graad van Doctor aan de Universiteit Leiden

op gezag van Rector Magnificus prof.mr. C.J.J.M. Stolker,

volgens besluit van het College voor Promoties

te verdedigen op woensdag 22 juni 2016

klokke 15.00 uur

door

Andrew Wright

geboren te Poughkeepsie (VS)

in 1983

Prof. Frans de Ruiter	promotor	Universiteit Leiden
Dr. Vincent Meelberg	co-promotor	Radboud Universiteit Nijmegen / docARTES, Universiteit Leiden
Promotiecommissie		
Ellen Corver		Koninklijk Conservatorium/ docARTES, Universiteit Leiden
Dr. Darla Crispin		Norwegian Academy of Music
Dr. Alessandro Cervino		KU Leuven
Prof.dr. Mine Dogantan-Dack		University of Oxford
Prof.dr. Ton van Haften		Universiteit Leiden
Dr. Anna Scott		Koninklijk Conservatorium/ docARTES, Universiteit Leiden

Dit proefschrift is geschreven als een gedeeltelijke vervulling van de vereisten voor het doctoraatsprogramma docARTES. De overblijvende vereiste bestaat uit een demonstratie van de onderzoeksresultaten in de vorm van een artistieke presentatie.

Het docARTES programma is georganiseerd door het Orpheus Instituut te Gent.

In samenwerking met de Universiteit Leiden, de Hogeschool der Kunsten Den Haag, het Conservatorium van Amsterdam, de Katholieke Universiteit Leuven en het Lemmensinstituut.

Disclaimer

The author has made every effort to trace the copyright and owners of the illustrations reproduced in this dissertation. Please contact the author if anyone has rights which have not been acknowledged.

Table of Contents

List of Figures, Examples, and Tables	v
Preface	vii
Introduction	1
Overview of dissertation	6
Research context and audience	8
Language and structure	11
Methods	12
Part I: A preliminary look at polyphony in performance	16
1 Polyphony as metaphor	17
2 Polyphony as a compositional texture	23
3 Polyphony as an expressive texture	25
4 Single player polyphonic expression	28
5 Polyphonic expression as a performative turn	31
Glossary for Part I	36
Part II: Thinking with and about the body	37
6 The subject/object divide	39
6.1 Objectification of the body	40
6.2 Framing	44
7 Embodied cognition	51
8 Body movement and sound	56
9 Musical gesture	58
9.1 Heard - Seen	59
9.2 Intentional - Extensional	61
9.3 Continuous - Discontinuous	62
9.4 Sound-producing - Concurrent	65
9.5 Contour-based - Rhythm-based	67
9.6 In-time - Out-of-time:	67
9.6.1 Imagination Perspective	68
9.6.2 Playing perspective	71
9.6.3 Listening perspective	73
9.7 Involuntary - Allowed - Willed - Willed and overt	76
10 Musical gesture and its abstraction	79
10.1 Expression of gesture through musical details	79
10.2 Notation and gesture	85
10.2.1 Fingering	93
10.2.2 The Staccato Dot	99
10.2.2.1 Example 1: Beethoven Sonata in A-flat op. 110	100
10.2.2.2 Example 2: Bach French Overture BWV 831	101
10.2.2.3 Example 3: Schubert: Impromptu op. 120 no. 3	102
10.2.3 Tenuto	104
10.2.4 Visual shapes	105
10.3 Abstraction and embodied knowledge	108
11 Conclusion	110

Glossary for Part II	111
Part III: Coarticulation	113
12 Introduction	115
12.1 Hierarchical structuring of gesture	116
12.2 Coarticulation and Musical Structure	118
13 Background	124
13.1 Empirical musicology	125
13.2 Practitioner literature	128
13.3 Other approaches	136
14 Musical structure and embodiment in performance	142
14.1 Hierarchical structure	144
14.2 Ambiguities	147
14.3 Terminology	148
14.4 Notation	154
14.5 Transfer of understanding through teaching	156
14.6 Differences in structure between performances of the same piece	158
15 Coarticulation - an exploration	160
15.1 Research Process	161
15.2 Coarticulation issues	164
15.2.1 Pianistic and organistic legato	165
15.2.1.1 Conceptual versus embodied legato	168
15.2.1.2 Activity and inhibition	173
15.2.1.3 Phrase-arching and intonation	176
15.2.2 Coalescence	181
15.2.2.1 Anticipatory cognition and the "singing hand"	183
15.2.2.2 Unification of hand - double notes, one gesture	189
15.2.3 Division and Weight	191
15.2.3.1 Levers and felt time	192
15.2.3.2 Streams of power	193
15.2.4 Contours and rhythms	195
15.2.5 Hierarchical organising principles	200
15.2.5.1 Centre to periphery / Top-down	201
15.2.5.2 Periphery to centre / Bottom-up	205
15.2.5.3 Alternation	210
15.2.6 Topology, resonance and initiation of movement	212
16 Conclusion	215
Glossary for Part III	219
Part IV: Polyphonic Expression	221
17 Voices	223
17.1 Focus of attention	229
17.2 Perception	235
17.3 Voicing lines	237
17.4 Voicing homophony	243
17.5 Voicing polyphony	246
17.5.1 Fractional timescale relationships	247
17.5.2 Divergence in direction	255

17.6 Voicing and performer's choice	257
18 Experiments - layered recordings	259
18.1 Goals and expectations	261
18.2 Method	263
18.3 Experiments	265
18.3.1 Bach: Prelude and Fugue in C Minor, WTK II	265
18.3.2 Bach/Krebs: Wir glauben all' an einen Gott BWV 740	268
18.3.3 Grieg: Fugue in G minor	270
18.3.4 Reger: Phantasie und Fuge über BACH	274
18.4 Reflections	275
18.4.1 Reification of expression	276
18.4.2 Agency of voices	282
18.4.3 Musical tension	283
18.4.4 Spatiality	284
18.5 Conclusion	287
19 Exercises for pianists	288
19.1 Duets for one hand	291
19.2 Polyphonic use of existing exercises	292
19.3 Polyrhythmic exercises	295
19.4 Excerpts from pieces	297
19.5 Other helpful experiences	299
19.5.1 Kinaesthetic awareness using extra-musical techniques	299
19.5.2 Organ study	301
19.6 Conclusion	304
20 A recital program	306
20.1 Scarlatti: Sonata in D Minor	310
20.2 Beethoven: Eroica Variations	313
20.3 Scriabin: Prelude op. 11 no. 2	320
20.4 Bach: Prelude and Fugue in E Minor BWV 548	323
20.5 Reger: Phantasie und Fuge über BACH	329
Conclusion	336
Glossary	342
References	I
Samenvatting	XVII
Abstract	XIX
Curriculum vitae	XXI
Acknowledgements	XXII

List of Figures, Examples and Tables

Example I.1 Chopin Ballade no. 3.....	4
Table I. My perceptions of recordings of Example I.1.....	5
Example 6.1: Ravel Ondine from Gaspard de la nuit	49
Example 10.1: Schubert Moment Musical no. 3 D. 780	80
Example 10.2: Chopin Polonaise in E-flat Minor, op. 26 no. 2	82
Example 10.3: Beethoven Sonata op. 2 no. 2, Movement IV	89
Example 10.4: Mozart Sonata in E-flat K. 282, Movement I	95
Example 10.5: Chopin Nouvelle Etude in F minor op. Posth.	97
Example 10.6: Chopin Nouvelle Etude in F minor op. Posth.	97
Example 10.7: Chopin Nouvelle Etude in F minor op. Posth.....	98
Example 10.8: Beethoven Sonata in A-flat op. 110, Movement I	100
Example 10.9: Bach French Overture in B minor BWV 831	101
Example 10.10: Bach French Overture in B minor BWV 831	102
Example 10.11: Schubert Sonata in A major D. 959, Movement II	104
Example 10.12: Rachmaninoff Concerto no. 3 in D minor op. 30.....	105
Example 10.13: Bach Trio on Allein Gott in der Höh sei Ehr.....	106
Example 10.14: Bach Fugue in G Minor from Das wohltemperiertes Klavier II	107
Figure 10.1: Bach Monogram.....	108
Example 12.1: Hanon Exercise no. 1 from <i>The Virtuoso Pianist</i>	116
Figure 12.1: Hierarchy of phrase structure	119
Figure 12.2: Time-span tree structure	120
Table 14.1 Timescale descriptors.....	150
Example 14.1: Chopin Barcarolle in F-sharp op. 60	151
Example 14.2: Notation of hierarchically nested timescales showing suffix and prefix.....	155
Example 15.1 Chopin Etude in C Major op. 10 no. 1	183
Example 15.2 Exercises before Chopin Etude in C Major op. 10 no. 1	184
Figure 15.1 The hand of Gilels	187
Example 15.3: Chopin Etude in A minor op. 10. no. 2.....	189
Example 15.4: Chopin Etude in G-sharp Minor op. 25 no. 6	190
Example 15.5: Chopin Etude in E Major op. 10 no. 3	194
Example 15.6: Chopin Etude op. 10 no. 8 in F Major	196
Example 15.7: Chopine Etude op. 10 no. 8 in F Major.....	197
Example 15.8: Chopin Etude in A-flat Major op. 10 no. 10	198
Example 15.9: Chopin Etude in G-flat Major op. 10 no. 5	199
Example 15.10: Chopin Etude in E Major op. 25 no. 5	200
Example 15.11: Chopin Etude in C Major op. 10 no. 1	201
Example 15.12: Chopin Etude in C Major op. 10 no. 1	203
Example 15.13: Chopin Etude in A-flat op. 10 no. 10.....	206
Example 15.14: Chopin Etude in F major op. 25 no. 3	207
Example 15.15: Chopin Etude in F major op. 25. no 3	208
Example 15.16: Chopin Etude in E-flat op. 10 no. 11.....	209
Example 15.17: Bach Courante from Partita no. 2, BWV 826	210
Example 15.18: Chopin Etude in A minor op. 25 no. 11.....	211
Example 15.19: Chopin Etude in C major op. 10 no. 7	212
Example 17.1: Bach Trio Sonata in D Minor, BWV 527	224
Example 17.2: Compound melody analysis of Bach Chaconne	225
Example 17.3: Step-progression analysis of Bach Flute Sonata no. 4.....	226
Example 17.4: Chopin Nocturne in E Minor op. 72 no. 1	228
Figure 17.1: A visual counterchange	232
Example 17.5: Chopin Nocturne op. 48 no. 2 in F-sharp minor	239
Example 17.6: Brahms Paganini Variations op. 35	240
Example 17.7 Bach: Prelude in G Minor from the Das wohltemperiertes Klavier II.....	242

Example 17.8: Schubert Impromptu op. 90 no. 4 in A-flat	242
Example 17.9: Chopin Nocturne in D-flat op. 27 no. 2	244
Example 17.10: Mozart Rondo in F major K. 494	245
Example 17.11: Chopin: Etude in F Minor op. 24 no. 2	247
Example 17.12: Chopin Etude in F Minor op. Posthumous	249
Example 17.13: Chopin Etude in A-flat op. Posthumous	250
Example 17.14 Chopin Nocturne in B-flat Minor op. 9 no. 1	253
Example 17.15: Chopin Nocturne in F-sharp op. 15 no. 2	254
Example 17.16: Rudolf Escher: Trio for Viola, Clarinet and Piano	254
Example 17.17: Chopin Ballade No. 3 in A-flat, op. 47	255
Example 17.18: Chopin Ballade no. 2 in F Major, op. 38	256
Example 18.1: Bach Prelude and Fugue in C Minor, Das wohltemperiertes Klavier II.....	267
Example 18.2: Bach/Krebs Wir glauben all' an einen Gott	269
Example 18.3: Grieg Fugue in G minor	272
Example 18.4: Reger Phantasie und Fuge über BACH op. 46.....	275
Example 18.5: Ligeti Etude Book I no. 5 "Fanfares"	279
Example 18.6: Beethoven Sonata in A major, op. 2 no. 2	280
Example 19.1: Exercise in the form of a duet	292
Exercise 19.2: Brahms Exercise no. 1a WoO 6	294
Example 19.3: Brahms Exercise no. 33 WoO 6	294
Example 19.4: Brahms Exercise no. 24b WoO 6	294
Example 19.5: Brahms Exercise no. 24b WoO 6	295
Example 19.6: Brahms Paganini Variations op. 35, Book II, Variation 7.....	296
Example 19.7 Exercise with layered polyrhythm	297
Example 19.8: Bach Trio Sonata no. 1 in E-flat BWV 525.....	303
Example 20.1: Brahms Cello Sonata in F major.....	308
Example 20.2: Brahms Cello Sonata in F major.....	308
Example 20.3: Brahms Cello Sonata in F major	309
Example 20.4: Scarlatti Sonata in D Minor K. 213 L. 108.....	312
Example 20.5: Scarlatti Sonata in D minor K. 213 L. 108.....	312
Example 20.6: Scarlatti Sonata in D minor K. 213 L. 108.....	313
Example 20.7: Scarlatti Sonata in D minor K. 213 L. 108.....	313
Example 20.8: Beethoven Eroica Variations op. 35, Introduzione col Basso del Tema	314
Example 20.9: Beethoven Eroica Variations op. 35, A due	315
Example 20.10: Beethoven Eroica Variations op. 35, A tre.....	316
Example 20.11: Beethoven Eroica Variations op. 35, A quattro	316
Example 20.12: Beethoven Eroica Variations op. 35, Tema	317
Example 20.13: Beethoven Eroica Variations op. 35, Variation 1	317
Example 20.14: Beethoven Eroica Variations op. 35, Variation 2.....	318
Example 20.15: Beethoven Eroica Variations op. 35, Variation 3.....	319
Example 20.16: Beethoven Eroica Variations op. 35, Variation 4.....	319
Example 20.17: Beethoven Eroica Variations op. 35, Variation 5.....	320
Example 20.18: Beethoven Eroica Variations op. 35, Variation 6.....	320
Example 20.19: Scriabin Prelude op. 11 no. 2	322
Example 20.20: Bach Prelude and Fugue in E minor BWV 548.....	324
Example 20.21: Bach Prelude and Fugue in E minor BWV 548.....	325
Example 20.22: Bach Prelude and Fugue in E minor BWV 548.....	325
Example 20.23: Bach Prelude and Fugue in E minor BWV 548.....	326
Example 20.24: Bach Prelude and Fugue in E minor BWV 548.....	326
Example 20.25: Bach Prelude and Fugue in E minor BWV 548.....	326
Example 20.26: Bach Prelude and Fugue in E minor BWV 548.....	327
Example 20.27: Bach Prelude and Fugue in E minor BWV 548.....	328
Example 20.28: Bach Prelude and Fugue in E minor BWV 548.....	329
Example 20.29: Reger Phantasie und Fuge über den Namen B-A-C-H.....	331
Example 20.30: Reger Phantasie und Fuge über den Namen B-A-C-H.....	334

Preface

For a time during the period leading up to my second masters degree, I began to be quite simply bored with the solo recitals I was playing. Each successive concert seemed to have less meaning, and though I knew what was required to make the performance adequately expressive, my own inspiration was at a low point. In an effort to regain the spirit and liveliness in music making, I looked to the “system” of actor and director Konstantin Stanislavski (after a journey of thought stemming from the famous question of music theorist Edward Cone (1982: 1): “If music is a language, who is speaking?”) which helped to map the inner territory and processes by which inspiration could be regained. In Stanislavski’s “system” I found a pathway to a certain kind of authenticity which connected music making much more deeply and personally to my life experiences, not only through “emotional memory” (an idea appropriated and modified by American Method Acting, see Hull 1985) but also through his idea of “muscle memory.” The orientation of actors promoted by Stanislavsky towards engaging authentically and personally with the action onstage (which is overheard, as it were, by the audience) contrasted the traditional “ham-bone” acting where actors focus on a repertoire of pre-planned techniques to represent and communicate the emotions of the character to the audience. This choice of inner orientation and the “system” to achieve it seemed to be particularly applicable to performing music¹.

In *chamber music*, this focus on the immediacy of interaction is natural, though with predictable partners it can dissipate through excessive rehearsal or too many performances of the same piece. My goal was to find the “cast of characters” hiding within *solo music* and

¹ How can one summarise Stanislavski in one paragraph? His system in a sense is a moving target, since it evolved throughout the course of his work. His own books (*An Actor Prepares* (1989a) and *Building a*

orient myself as a performer towards the interaction between the voices of these characters. Such an orientation invites the audience onto the stage where they “overhear” this communication, a model of communication different from the projection of the music towards the audience by the performer.

Can these voices hold surprises for each other that might come out in the moment of performance, considering they are all played by one person? With the “authenticity-towards-self” inspired by Stanislavski, the fact that the embodiment of each voice is localised in a different combination of body movements is meaningful and has the potential to give each voice its own subjectivity. If we allow the embodiment to shape the music at the moment of performance, each voice speaks with unique subjectivity under its own “given conditions.”²

Developing expression and imagination through the body is thus a central topic in this effort, and the particular focus of this dissertation is on not only the expression resulting from divergence between voices, but also on the embodied experience of creating such textures. This embodied experience is itself a form of musical thinking, the theoretical foundation for which is far from self-evident. As I wrestled with the topic, it became apparent that this foundation (beginning with embodied cognition at the base, proceeding to establish the centrality of gesture in expression, and then characterising the structure of gesture through coarticulation) was a necessary prelude without which the central topic of embodied polyphonic expression could easily slither away.

Writing about this topic, because of its embodiment focus, requires the first person perspective of a performer, a feature in common with other artistic research projects. It is

² In Stanislavski’s “system,” “given conditions” represent the circumstances amidst which a character finds itself in a play. An actor acts always as him or herself, under the “given conditions” imposed by the character (Stanislavski 1989).

distinctly unnerving to be faced with the task of trying to verbalise the tacit³ knowledges that underlie the practice of making music, and it has to be recognised that in such a project as this dissertation, the process of verbalisation lags far behind the artistic work. A sympathetic reader is needed, both to read between the lines and to reflect following the direction towards which the ideas point. The full flowering of this artistic research project can best be heard when the written text is taken in combination with a live concert.

Who does artistic research serve? While I applaud cutting-edge projects that centre on specific works, composers or style periods on the one hand, and projects that seek to radically break with traditional practice on the other, the goal of this research is to describe and support the lifelong learning process with which musicians engage through the specific example of polyphonic expression. My own practice as a musician has become quite broad, with piano and organ playing and piano teaching forming the centre of my activities. As a church musician I interact continuously with musicians and singers of all levels, and my class of students spans an enormously wide spread of ability levels. Perhaps for this reason, I have consciously chosen a topic that can be useful for musicians of all levels, not just the top percentage. The groundwork leading up to the final specific chapter on polyphonic expression is built upon a inter-disciplinary raft of sources, many of which contain insights that can be used in any stage of development, from the first piano lesson onwards. The research can also be useful at a meta-level in exemplifying an approach to writing about embodiment and solutions to problems that such an endeavour calls forth.

³ See (Polanyi 1958)

