

City Research Online

City St George's, University of London

Citation: Chapkanov, B (2022). Harmony and Tonality in the Late Piano Music of Franz Liszt – Functional and Transformational Analytical Perspectives. (Unpublished Doctoral thesis, City, University of London)

This is the accepted version of the paper.

This version of the publication may differ from the final published version. To cite this item please consult the publisher's version.

Permanent repository link: https://openaccess.city.ac.uk/id/eprint/28252/

Copyright and Reuse: Copyright and Moral Rights remain with the author(s) and/or copyright holders. Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge, unless otherwise indicated, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way. For full details of reuse please refer to City Research Online policy.

City Research Online: http://openaccess.city.ac.uk/ publications@citystgeorges.ac.uk

Harmony and Tonality in the Late Piano Music of Franz Liszt – Functional and Transformational Analytical Perspectives

By

Bozhidar Chapkanov

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Musical Arts

City, University of London

School of Arts and Social Sciences

Department of Music

London, May 2022

Table of Contents

List of examples……..……..vi

List of figures……ix

List of tables……..xv

Acknowledgements……...xvi

Abstract……xvii

Introduction.....1

Chapter I – The harmony of Liszt's late music in analytical literature……..…6

1. Analytical traditions and methodologies of interest up to the 1980s……6
2. Allen Forte's '*experimental idiom*' versus James Baker's '*implicit tonality*' – on the limitations of pitch-class set analysis and Schenkerian methodologies for analysing late Liszt……..11
3. Satyendra and later studies – an attempt to acknowledge more equally diatonic functionality and freer chromaticism……...17
4. The problem with describing Liszt as a precursor to modernism.....26
5. Summary……29

Chapter II – Analytical methodology……..32

1. Hugo Riemann's *Funktionstheorie* and modern Neo-Riemannian theory……..33
2. Richard Cohn's 'double syntax' – a basis for hybrid methodology for analysing Liszt's polymorphous late harmony……39
3. A purely neo-Riemannian methodology for Liszt's non-functional late chromatic harmony……..42

4. Dmitri Tymoczko's theoretical work and the limitations and advantages of the geometrical approaches to harmony……51

PART I – Liszt's Double Harmonic Syntax……55

Introduction……55

Chapter III – Functionally framed double syntax……59

1. *Valse oublieé no. 1*……61
2. *En rêve*……66
3. *Romance oublieé*……71
4. *Elegie no. 1*……77
5. *Les Jeux d'Eau a la villa d'Este*……83

Conclusions……92

Chapter IV – Simultaneous double syntax……94

1. The blurring of the boundaries between functions in a ***TSDT*** cycle through more dissonant tetrads and pentads……95
2. Achieving a modulation through simultaneous double syntax……98
3. Achieving a smoother functional progression through extending of the main functional triads to seventh chords……100
4. A combination of diatonically-related triads and non-diatonic seventh chords within a passage……102
5. Inflected repetitions and simultaneous double syntax……103
6. Simultaneous double syntax in the absence of clear ***TSDT*** cycles……108

Conclusions……111

Chapter V – Successive double syntax……113

1. Harmonically vague introductions versus tonally clearer expositions of the main thematic material……114
   - 1.1. *Valse oublieé* no. 1……115
   - 1.2. *Elegie* no. 1……117
   - 1.3. *Elegie* no. 2……118
   - 1.4. Mephisto Waltz no. 2……120
   - 1.5. *Csárdás I*……123
2. Diatonic thematic sections versus more chromatic transitional material……125

2.1. *Valse oublieé* no. 1……126
2.2. *En rêve*……128
3. The secondary thematic area as a chromatic island within the overarching main functional frame……130
3.1. *Elegie* no. 1……131
3.2. *Csárdás obstineé*……134
4. More loosely outlined successive double syntax……137
4.1. The final *A* section and the coda of *Csárdás obstineé*……138
4.2. *Romance oublieé*……141
4.3. Mephisto Waltz no. 2……145
4.4. *Csárdás I*……149
4.5. *Les Jeux d'Eau a la Villa d'Este*……153
Conclusions……158

Chapter VI – Structurally differentiated double syntax……..162

1. Chromatic background structure to diatonic foreground progressions……163
1.1. *Valse oublieé* no. 1……164
1.2. *Csárdás I*……166
1.3. *Csárdás obstineé*……169
2. Diatonic background structure to chromatic foreground progressions……171
2.1. *Valse oublieé* no. 1 (2nd theme) ……172
2.2. Mephisto Polka……173
2.3. *Romance oublieé*……176
Conclusions……179

Part II – Liszt's non-functional chromatic harmony – A neo-Riemannian analytical perspective.....181

Chapter VII – How the 'Unwelcome Guest' became most welcome – the story of the augmented triad in late Liszt….181

Introduction……181

1. *La lugubre gondola I* – The augmented triad on E functioning as a harmonic frame……193
2. *R. W. – Venezia* – A sectional level juxtaposition of augmented and consonant triads……202
3. *Nuages gris* – A subtle balance between G minor tonality and the structural use of augmented triads……209
4. Hungarian rhapsody no. 17 – A major-minor triadic structure, derived from a single augmented triad……215
5. Other cases, in which the augmented triad has a temporal or weaker structural supremacy……223
   5.1. *Via Crucis*……223
   5.2. *Aux Cyprès de la Villa d'Este I: Thrènodie*……233
   Conclusions……240

Chapter VIII – Gravitating around the 'sweet' diminished seventh chord……242

Introduction……242

1. *Bagatelle sans tonalité* and the hidden structural backbone of $Fdim^7$……245
2. *Trauervorspiel und Trauermarsch* – $C\sharp dim^7$ as a central sonority……260
3. *La lugubre gondola II* – A frame made of diminished seventh chords around the main thematic sections……268
4. *Polonaise I* from the oratorio *St. Stanislas* – A harmonically unstable section, dominated by diminished seventh chords……274
   Conclusions……278

Chapter IX – Chromatic transformations based around consonant triads and seventh chords……280

Introduction……280

1. Surface-level triadic progressions, involving the basic and compound neo-Riemannian transformations……283
   1.1. *Am Grabe Richard Wagners* – A dominance of the ***R*** and ***L*** transformations flavored with some augmented triads……283
   1.2. *In Festo Transfigurationis Domini Nostri Jesu Christi*……289
   1.3. *In Domum Domini Ibimus*……294

1.4. *Ungarns Gott* – An abundance of consonant triads in close chromatic relation……..301
1.5. The closing section of *Polonaise I* from *St Stanislas* – exclusively triadic transformations involving Hexatonic poles and tritone-distant chord couples……..307
1.6. *Der blinde Sänger* – a complete occupation of the triadic space around a central pitch……311
2. Mixed neo-Riemannian transformations involving triads and seventh chords……315
2.1. *Sursum Corda*……315
2.2. *Schlaflos! Frage und Antwort*……322
2.3. The main thematic (*A*) sections of *La lugubre gondola II*……325
2.4. Bars 70-97 of *Polonaise I*……328
2.5. The ending of the *Sarabande* transcription based on Handel's *Almira*……331
2.6. Station III of *Via Crucis*……336
Conclusions……338

Chapter X – A late-Liszt challenge to neo-Riemannian theory……341

1. The visualising limitations of the *Tonnetz*……342
2. Giving chords a break – on Liszt's use of monody……344
3. Liszt's other idiosyncratic non-chordal textures – The case of *Csárdás macabre*……348
4. The emancipation of the whole-tone scale and the dim/aug polychord – *Unstern! Sinistre, disastro*……352

Concluding remarks and areas for future research……360

Bibliography……365

List of Examples

Ex. 1.1. Alan Forte's pitch-class set analysis of *Nuages gris, Liszt's Experimental Idiom*, p. 226.

Ex. 1.2. James Baker's Schenkerian graph of *La Lugubre gondola II*, *The Limits of Tonality*, p. 160.

Ex. 4.1. Bars 17-89 of *Csárdás obstineé.*

Ex. 4.2. Bars 17-48 of *Mephisto Polka*.

Ex. 5.1. Harmonic reduction of bars 1-35 of *Elegie* no. 2.

Ex. 5.2. Harmonic reduction of bars 1-34 of Mephisto Waltz no. 2.

Ex. 5.3. Harmonic reduction of bars 1-38 of *Csárdás I*.

Ex. 5.4. Bars 83-120 of *Csárdás obstineé*.

Ex. 5.5. Section *A''* and the coda of *Csárdás obstineé*.

Ex. 5.6. Harmonic reduction of bars 27-46 of Mephisto Waltz no. 2.

Ex. 5.7. Harmonic reduction of bars 47-70 of Mephisto Waltz no. 2.

Ex. 5.8. Harmonic reduction of *Csárdás I* (excluding section 1 – introduction).

Ex. 6.1. Bars 165-184 of Mephisto Polka.

Ex. 7.1. Harmonic reduction of *La lugubre gondola I*.

Ex. 7.2. Harmonic reduction of *R. W. – Venezia*.

Ex. 7.3. Harmonic reduction of *Nuages gris*.

Ex. 7.4. Harmonic reduction of Hungarian Rhapsody no. 17.

Ex. 7.5. Station II of *Via Crucis* (first half).

Ex. 7.6. A harmonic reduction of Station II (second half) of *Via Crucis*.

Ex. 7.7. Station IV of *Via Crucis* (second half).

Ex. 7.8. A harmonic reduction of the coda of *Via Crucis*.

Ex. 7.9. A comparison between bars 4-6 of *Aux Cyprès I* and bars 9-12 of *Nuages gris*.

Ex. 7.10. Harmonic reduction of bars 1-50 of *Aux Cyprès I.*

Ex. 8.1. Harmonic reduction of bars 13-22 of *Bagatelle sans tonalité*.

Ex. 8.2. Harmonic reduction of bars 37-52 of *Bagatelle sans tonalité*.

Ex. 8.3. Harmonic reduction of section *B* and the *quasi cadenza* of Bagatelle sans tonalité.

Ex. 8.4. Harmonic reduction of bars 95-104 of *Bagatelle sans tonalité*.

Ex. 8.5. Harmonic reduction of bars 127-148 of *Bagatelle sans tonalité*.

Ex. 8.6. *Trauervorspiel*.

Ex. 8.7. Bars 23-60 of *Trauermarsch*.

Ex. 8.8. Bars 61-84 of *Trauermarsch*.

Ex. 8.9. Bars 93-120 of *Trauermarsch*.

Ex. 8.10. Bars 121-148 of *Trauermarsch*.

Ex. 8.11. The introduction of *La lugubre gondola II*.

Ex. 8.12. The transition of *La lugubre gondola II*.

Ex. 8.13. Harmonic reduction of bars 50-69 of *Polonaise I*.

Ex. 9.1. Harmonic reduction of the introduction (bb. 1-8) of *Am Grabe Richard Wagners*.

Ex. 9.2. Harmonic reduction of bars 9-24 of *Am Grabe*.

Ex. 9.3. Harmonic reduction of bars 25-44 of *Am Grabe*.

Ex. 9.4. Harmonic reduction of bars 46-52 (codetta) of *Am Grabe Richard Wagners*.

Ex. 9.5. Harmonic reduction of *In Festo Transfigurationis*.

Ex. 9.6. Bars 1-20 of *In Domum Domini Ibimus*.

Ex. 9.7. Bars 21-56 of *In Domum Domini Ibimus.*

Ex. 9.8. Bars 57-95 of *In Domum Domini Ibimus* (section *C*).

Ex. 9.9. Harmonic reduction of bars 1-18 of *Ungarns Gott*.

Ex. 9.10. Harmonic reduction of bars 19-28 of *Ungarns Gott*.

Ex. 9.11. Harmonic reduction of bars 98-127 of *Polonaise I*.

Ex. 9.12. Harmonic reduction of bars 1-42 of *Der blinde Sänger.*

Ex. 9.13. Harmonic reduction of bars 1-22 of *Sursum Corda*.

Ex. 9.14. Harmonic reduction of bars 23-36 of *Sursum Corda*.

Ex. 9.15. Harmonic reduction of bars 37-60 of *Sursum Corda*.

Ex. 9.16. Bars 1-13 of *Schlaflos! Frage und Antwort.*

Ex. 9.17. The first half of section *A* (bars 35-51) of *La lugubre gondola I*.

Ex. 9.18. Harmonic reduction of bars 70-92 of *Polonaise I*.

Ex. 9.19. Harmonic reduction of bars 167-179 of the *Sarabande* based on Handel's *Almira*.

Ex. 9.20. Harmonic reduction of Station III of *Via Crucis*.

Ex. 10.1. Harmonic reduction of the first 13 bars from *Via Crucis*, Station V.

Ex. 10.2. The opening of Hungarian rhapsody no. 16.

Ex. 10.3. The opening of *Sunt lacrymae rerum*.

Ex. 10.4a. The monodic opening of *Csárdás macabre*.

Ex. 10.4b. The monody develops into double notes.

Ex. 10.4c. Double notes grow into triads (bars 25-40 only).

Ex. 10.4d. Triads are followed by parallel open fifths.

Ex. 10.4e. Open fifths are followed by parallel thirds/sixths.

Ex. 10.5. Harmonic reduction of bars 163-216 of *Csárdás macabre*.

Ex. 10.6. Harmonic reduction of bars 229-244 of *Csárdás macabre*.

Ex. 10.7. Bars 1-20 of *Unstern! Sinistre, disastro.*

Ex. 10.8. Bars 21-57 of *Unstern*.

Ex. 10.9. Bars 58-87 of *Unstern*.

List of Figures

Fig. 2.1. Hugo Riemann's three-dimensional Tonnetz from the *Ideen zu einer Lehre von den Tonvorstellungen*, 1916.

Fig. 2.2. Richard Cohn's four Hexatonic systems from *Maximally smooth cycles, Hexatonic systems and the analysis of Late-Romantic triadic progressions*, 1996, p. 17.

Fig. 2.3. A triadic chromatic progression through a Hexatonic cycle, taken from Liszt's Consolation no. 3 (S. 172/3).

Fig. 2.4. Notation of a Weitzmann region with neighbouring Hexatonic systems.

Fig. 2.5. Douthett and Steinbach's Cube Dance, 1998, p. 254.

Fig. 2.6. Three Boretz spiders in union with three octatonic 'pools', *Audacious Euphony*, p. 157.

Fig. 2.7. Tymoczko's three-dimensional alternative of Cube Dance.

Fig. 3.1. The functional skeleton of *Valse oublieé* no. 1.

Fig. 3.2. The functional skeleton of *En rêve*.

Fig. 3.3. The functional skeleton of *Romance oublieé*.

Fig. 3.4. The functional skeleton of *Elegie* no. 1 (Introduction and section *A*).

Fig. 3.5. The functional skeleton of *Elegie* no. 1 (sections *B*, *A''* and coda).

Fig. 3.6. Harmonic reduction of bars 1-9 of *Les Jeux d'Eau a la Villa d'Este.*

Fig. 3.7. The functional skeleton in sections 2-5 of *Les Jeux d'Eau*.

Fig. 3.8. The functional skeleton in sections 6-7 of *Les Jeux d'Eau*.

Fig. 3.9. The functional skeleton in sections 8-10 of *Les Jeux d'Eau***.**

Fig. 4.1. A *Tonnetz* representation of bars 35-47 of *En rêve*, with main functions in the key of B major labelled.

Fig. 4.2. A *Tonnetz* representation of bars 20-28 of *Elegie* no.1.

Fig. 4.3. Simultaneous double syntax in bars 8-11 of *Romance oublieé*.

Fig. 4.4. Simultaneous double syntax in bars 28-38 of *Romance oublieé*.

Fig. 4.5. Simultaneous double syntax in bars 16-88 of *Csárdás obstineé*.

Fig. 4.6. Simultaneous double syntax in bars 17-49 of *Mephisto Polka*.

Fig. 5.1. Successive double syntax in bars 1-32 of *Valse oublieé* no. 1.

Fig. 5.2. Circular harmonic movement in the introduction of *Elegie* no. 1 (bars 1-19), which leads towards the main tonic A♭ major.

Fig. 5.3. Successive double syntax in bars 1-35 of *Elegie* no. 2.

Fig. 5.4. Successive double syntax in bars 1-34 of Mephisto Waltz no. 2.

Fig. 5.5. Successive double syntax in bars 1-38 of *Csárdás I*.

Fig. 5.6. Successive double syntax in bars 124-209 of *Valse oublieé* no. 1.

Fig. 5.7. Successive double syntax in bars 1-28 of *En rêve*.

Fig. 5.8. Successive double syntax in bars 52-103 of *Elegie* no. 1.

Fig. 5.9. Successive double syntax in bars 73-128 of *Csárdás obstineé*.

Fig. 5.10. Successive double syntax in bars 234-334 (section *A''* and coda) of *Csárdás obstineé*.

Fig. 5.11. Successive double syntax in bars 8-17 of *Romance oublieé.*

Fig. 5.12. Successive double syntax in bars 18-27 of *Romance oublieé*.

Fig. 5.13. Successive double syntax in bars 27-46 of Mephisto Waltz *no. 2*.

Fig. 5.14. Successive double syntax in bars 47-70 of Mephisto Waltz no. 2.

Fig. 5.15. Three-stage successive double syntax in bars 23-121 of *Csárdás* I.

Fig. 5.16. Successive double syntax in sections 5-7 of *Les Jeux d'Eau*.

Fig. 5.17. Successive double syntax in sections 9 and 10 of *Les Jeux d'Eau*.

Fig. 6.1. Structurally differentiated double syntax with a background chromatic progression in bars 17-80 of *Valse oublieé* no. 1.

Fig. 6.2. Structurally differentiated double syntax with a background chromatic progression in bars 23-54 (sections 2 and 3) of *Csárdás I*.

Fig. 6.3. Background-level harmonic progression within *Csárdás I*.

Fig. 6.4. Structurally differentiated double syntax with a background chromatic progression within section A'' of *Csárdás obstineé.*

Fig. 6.5. Structurally differentiated double syntax with a background standing on the dominant in bars 89-106 of *Valse oublieé* no. 1.

Fig. 6.6. Structurally differentiated double syntax with a background subdominant-dominant progression – bars 169-184 of *Mephisto Polka*.

Fig. 6.7. Structurally differentiated double syntax with a background *TSDT* cycle – bars 8-27 of *Romance oublieé*.

Fig. 7.1. Weitzmann's grouping of augmented triads with their closest consonant triads, *Der übermässige Dreiklang*, p. 188 in Saslaw's bilingual edition for the Journal of the Music Theory Society of New York State, 2004.

Fig. 7.2. A series of *P* and *L* transformations circling through a Hexatonic region, as depicted on the *Tonnetz*.

Fig. 7.3. The Weitzmann region of Caug (*WtzR-C*), as depicted on the *Tonnetz*.

Fig. 7.4. An adapted version of Cube Dance, designed for the current thesis.

Fig. 7.5. The harmonic movement in bars 1-39 of *La lugubre gondola I*.

Fig. 7.6. Anti-clockwise (downshifting) harmonic movement in bars 65-76 of *La lugubre gondola I*.

Fig. 7.7. A full circle through the four Weitzmann regions, Section *B* of *La lugubre gondola I*, bb. 77-120.

Fig. 7.8. The harmonic progression of bars 4-9 of *R. W. – Venezia*.

Fig. 7.9. Summary of the harmonic movement throughout section *A* of *R. W. – Venezia*.

Fig. 7.10. Harmonic movement within section *B* and codetta of *R. W. – Venezia* (bars 31-49).

Fig. 7.11. The harmonic movement in *Nuages gris*.

Fig. 7.12. *Tonnetz* representation of the harmony of Hungarian rhapsody no. 17.

Fig. 7.13. A *Tonnetz* representation of harmony in Station II (first half) of *Via Crucis.*

Fig. 7.14. A *Tonnetz* representation of harmony in Station II (second half) of *Via Crucis*.

Fig. 7.15. A *Tonnetz* representation of the harmony is Station IV (second half) of *Via Crucis*.

Fig. 7.16. A *Tonnetz* representation of harmony in the coda of *Via Crucis*.

Fig. 7.17. A Cube Dance representation of harmony in the coda of *Via Crucis*.

Fig. 7.18. A Cube Dance depiction of the harmony in bars 1-40 of *Aux Cyprès I*.

Fig. 7.19. A *Tonnetz* visualisation of the harmony in bars 40-50 of *Aux Cyprès I*.

Fig. 8.1. *Tonnetz* representations of bars 13-16 (a) and 17-22 (b) of *Bagatelle sans tonalité*.

Fig. 8.2. *Tonnetz* representation of bars 37-52 of *Bagatelle sans tonalité*.

Fig. 8.3. *Tonnetz* representation of bars 57-64 of *Bagatelle sans tonalité*.

Fig. 8.4. *Tonnetz* representation of bars 77-86 of *Bagatelle sans tonalité*.

Fig. 8.5. *Tonnetz* representation of bars 95-104 of *Bagatelle sans tonalité.*

Fig. 8.6. *Tonnetz* representation of bars 127-138 of *Bagatelle sans tonalité.*

Fig. 8.7. The essential harmonic content and harmonic movement of *Trauervorspiel und Trauermarsch*.

Fig. 8.8. The harmonic progression within the introduction of *La lugubre gondola II*.

Fig. 8.9. The implied harmonic progression within the transition of *La lugubre gondola II*.

Fig. 8.10. The harmonic progression within bars 50-69 of *Polonaise I*.

Fig. 9.1. A *Tonnetz* representation of the introduction of *Am Grabe Richard Wagners.*

Fig. 9.2. A *Tonnetz* representation of bars 9-24 of *Am Grabe*.

Fig. 9.3. A *Tonnetz* representation of bars 25-55 of *Am Grabe*.

Fig. 9.4. The harmonic progression of *In Festo Transfigurationis*.

Fig. 9.5. A *Tonnetz* representation of the harmony in section *A* of *In Domum Domini Ibimus*.

Fig. 9.6. The essential neo-Riemannian transformations in bars 21-35 of *In Domum Domini Ibimus*.

Fig. 9.7. The essential neo-Riemannian transformations in bars 37-57 of *In Domum Domini Ibimus*.

Fig. 9.8. A *Tonnetz* depiction of harmony in bars 1-18 of *Ungarns Gott*.

Fig. 9.9. A *Tonnetz* depiction of harmony in bars 18-28 of *Ungarns Gott*.

Fig. 9.10. A *Tonnetz* representation of harmony in bars 98-127 of *Polonaise I*.

Fig. 9.11. The triadic harmonic progression in bars 1-42 of *Der blinde Sänger.*

Fig. 9.12. A *Tonnetz* representation of the harmonic progression of bars 9-22 of *Sursum Corda*.

Fig. 9.13. A *Tonnetz* representation of the harmonic progression of bars 23-36 of *Sursum Corda*.

Fig. 9.14. A *Tonnetz* representation of the harmonic progression in bars 37-60 of *Sursum Corda*.

Fig. 9.15. The harmonic progression in bars 1-13 of *Schlaflos*! *Frage und Antwort*.

Fig. 9.16. The harmonic progression within bars 35-51 (section A) of *La lugubre gondola II*.

Fig. 9.17. The circular harmonic progression in bars 70-92 of *Polonaise I*.

Fig. 9.18. The harmonic progression in bars 167-179 of the *Sarabande* based on Handel's *Almira*.

Fig. 9.19. The harmonic progression in Station III of *Via Crucis*.

Fig. 10.1. *Tonnetz* representation of the progression within the first 7 chords of *Via Crucis*, Station V.

Fig. 10.2. Implied harmonic relationships in the opening of *Sunt lacrymae rerum*.

Fig. 10.3. A *Tonnetz* representation on harmony in bars 71-84 of *Unstern*.

List of Tables

Table 3.1. Sectional division and harmonic overview of *Elegie* no. 1.

Table 3.2. Sectional division within *Les Jeux d'Eau*.

Table 5.1. The structure of *Csárdás obstineé*, based on changes in harmony and thematic material.

Table 5.2. Sectional subdivision of *Csárdás I*, based on changes of harmonic syntax.

Table 6.1. An overview of the species of double syntax, exemplified in the pieces, which have been analysed throughout chapters III-VI.

Table 8.1. Sectional subdivision and essential harmonic content of the *Bagatelle sans tonalité*.

Table 8.2. Sectional subdivision and main structural harmonies in *La lugubre gondola II*.

Table 9.1. Sectional subdivision of *In Domum Domini Ibimus*.

Acknowledgements

I would like to express my deepest appreciation to Dr Shay Loya for his continuous support, numerous rounds of feedback and invaluable advice, which span almost five years from the prenatal phase of this project until the present day. His high proficiency in music theory and analysis, coupled with his unmatched familiarity with the music of Liszt have been my indispensable companions in this long, but ever exciting journey.

I am aware that my interest in music analysis and in this particular repertoire is the result of an intellectual accumulation over a long period of time and therefore I would like to thank the following people for nurturing my talents throughout the years before my doctoral study: to Zlatka Taskova-Stoycheva for building the love of piano music in me since my earliest stages of development, to Dr Steven Jan for guiding me in my first attempts as a music analyst, to Prof Andrey Diamandiev for sparkling my interest in harmony and acquainting me with the multifaceted theoretical ideas of Hugo Riemann, and to Prof Filip Pavlov, for helping me understand music better and develop as a composer.

My warmest gratitude goes to my parents, who always believed in me and supported me in numerous ways throughout my studies, to my uncle and aunt, whose words of encouragement and support made the beginning of my study in London possible, and last but not least, to Xintong, for her smiling and ever motivating presence, which helped me maintain my positive attitude towards what I do.

Abstract

This dissertation proposes a method for harmonic analysis of Franz Liszt's late piano music, which is based on neo-Riemannian theory and on traditional Riemannian functional analysis. Based on the presence and strength of functional harmonic procedures in the works under discussion, their analytical investigations are separated into two parts. Part I focuses on ten pieces composed between 1874 and 1885, in which an overarching tonality and functional chord relations are still prevailing over non-functional chromaticism. A hybrid methodology is proposed for analysing such works – one that combines the strengths of functional analysis with the ability of mainstream neo-Riemannian theory to account for parsimonious transformations between chromatically related chords. A fuller picture of Liszt's sophisticated harmonic language is achieved as a result, accounting equally well for the more functionally diatonic and the more chromatic features of it.

The term *double syntax*, derived from Richard Cohn, is used for Liszt's harmony, which combines diatonic functionality with non-functional chromaticism. Based on the different ways, in which the two types of harmonic syntax complement each other in this music four *species* of it are conceptualised. These are called functionally framed double syntax, simultaneous double syntax, successive double syntax and structurally differentiated double syntax. Each of these shows in its own way Liszt's music as a complex blend between the conventions of his past and his more original, idiosyncratic treatments of harmony. These features of his style have been considered a most important part of his compositional individuality to conceptualise and discuss at present. The broader purpose of part I is to offer some categories for discussing music with double-syntactic harmony and to put forward the neo-Riemannian *Tonnetz* in combination with functional chord labelling as a basis for analysing Liszt and other composers of the 'long' nineteenth century.

Part II focuses solely on Liszt's more chromatic treatments of harmony in some of his most avant-garde late piano pieces, and offers analyses of over 20 works composed between 1875 and 1885. Neo-Riemannian theory is employed as the sole basis for discussing such highly chromatic repertoires. The ability of the *Tonnetz* to visualise chromatic transformations between a wide variety of triads and seventh chords is exploited to a certain extreme, with the main purpose of this analytical endeavour being to stretch the boundaries of what we can show in such geometrical pitch space with the most common visual tool of

this theory. Only in the context of Liszt's extensive uses of the augmented triad in some of his late pieces another visual tool – the Cube Dance – is used for visualising harmonic relationships. The strive to prove that in comparison to traditional modes of analysis the visual apparatus of neo-Riemannian theory can more easily and clearly reveal surface-level chromatic chord relations has been the main motivator for limiting the analytical inquiry to chromaticism and to this particular method.

Without the grand ambition to show Liszt's late piano music in a completely new light, this study has been led by the aim to provide a wide picture of this composer's highly individualistic treatment of chromaticism and to put forward a comparatively simple neo-Riemannian methodology as a viable alternative to the more traditional theories for analysing similar repertoires.

Introduction

Franz Liszt's music represents a multifaceted mixture of creative ideas, so rich, original and far-encompassing that attempting to systematise even just the piano *oeuvre* of a decade from composer's life poses a number of problems. The current study has been motivated by the belief that in 2017, when it was in its inception phase, a wider picture of Liszt's uses of chromatic harmony in his final years had not yet been fully finished. If there were a handful of extensive studies on harmony in late Liszt (to be discussed), these have for most part been leaning on more traditional methodologies, such as Schenkerian (in some cases being adapted as freer post-Schenkerian), Functional or Roman numeral analysis. Conversely, in recent years a sprawling interest in transformation theory (with its most established branch being neo-Riemannian theory) has led to a number of studies, covering the music of the nineteenth century and beyond. Surprisingly, no extensive studies on Liszt have been identified, which employ neo-Riemannian theory, and this has created a significant gap in our discipline, considering that chord successions in this repertoire often tend to be directed by voice-leading motion rather than functional root-directed motion. In other words, the nature of Liszt's harmonic practice can be related to the kinds of compositional styles from the nineteenth century (primarily from about the 1840s onwards), which transformational theories have developed in response to – with a commitment to relate harmonies directly to each other, without necessarily referencing a tonic, and focusing on efficiency of voice leading, rather than on functionality of chords. While this dissertation proposes comparatively new models for harmonic analysis of Liszt's piano works from his last decade based around neo-Riemannian theory and combining the latter with Functional Riemannian analysis, it acknowledges that the full story of harmony in this

repertoire may eventually be left without a definitive ending, in similarity to the open endings of some extraordinary miniatures from the 1880s such as *La lugubre gondola II* and the *Bagatelle sans tonalité*.

Chapter I portrays the history of research on Liszt's uses of harmony, with a special emphasis on more recent studies dedicated to the issues of voice leading, functionality and chromaticism – all these being most relevant to the current analytical inquiry. Special attention is given to the limitations of the methodologies of the studies under discussion, exposing the weaknesses of the theories designed for the more traditional harmony from the common-practice era (such as Schenkerian theory), thus my subsequent neo-Riemannian analyses, by themselves or in combination with Functional analyses, can stand out as more viable alternatives for the majority of Liszt's late piano works.

Chapter II outlines my analytical methodologies for both subsequent parts of this dissertation. Neo-Riemannian theory and the relevant analytical models derived from it are introduced for readers who might not be familiar with it and its essential terminology. While the origins of this theory, its development and current scholarly field are introduced without excessive detail, more space is given to summarising the work of Richard Cohn and the adaptation of some of his ideas for the purposes of this study.[1] Cohn's idea of the double harmonic syntax is at the basis of Part I, while his methods for exploration of non-functional 12-tone pitch space have inspired my purely neo-Riemannian perspective on Liszt's harmony in Part II, with a focus on the surface-level chord-to-chord transformations. Cohn's version of the neo-Riemannian *Tonnetz* is employed as the main analytical tool for visualising harmony throughout this thesis, while the more closely specialised Cube Dance is used in chapter VII,

[1] Richard Cohn, *Audacious Euphony – Chromatic Harmony and the Triad's Second Nature* (New York, 2012).

which is dedicated to Liszt's use of the augmented triad in some of his most avant-garde late pieces.

The double harmonic syntax is based on the combination of diatonic functionality and non-functional chromatic chord relations within the music of different periods and styles, but it is also of high relevance to Liszt's harmonic practice. By focusing on the question of tonality, tonal voice leading or functionality in general, most of the studies on late Liszt have encountered problems when trying to explain the more unusual non-functional and highly chromatic chord progressions of this repertoire. Some authors like Ramon Satyendra have pointed out this issue and have proposed alternative analytical methodologies, while still relying on quasi-Schenkerian reductive graphs in order to extract the essential harmony.[2] The acknowledgement of such alternative ways of pitch organisation in Liszt's music has opened the door for other, more reliable methodologies, which account for the non-functional chromatic procedures in it with more rigour. Today, more than quarter of a century after Satyendra's studies of late Liszt (to be discussed in more detail within chapter I), I have had the privilege to benefit from the more recent development of neo-Riemannian theory, and to apply its readily available visual tools and methods of analysing chord relations to late Liszt. As a product of that, the double harmonic syntax in a selection of pieces from the period 1874-1885 will be shown on the *Tonnetz*, where both the functionality and the freer chromaticism of the music can be discussed, with their interrelations being fleshed out as much as needed. Four different *species* of double harmonic situations will be conceptualised in Part I, with a chapter dedicated to showing each within a number of examples from Liszt's late piano pieces. A more traditional mode of analysis, almost

[2] Ramon Satyendra, *Chromatic Tonality and Semitonal Relationships in Liszt's Late Style* (PhD diss., University of Chicago, 1992).

exclusively based on Hugo Riemann's *Funktionstheorie*, will only be relevant to the case studies of chapter III, where I admit to be dependent (by coincidence or in an inevitable way) to the reductive procedures of Schenkerianism for my so-called functional frames of the pieces under discussion. Conversely, chapters IV, V and VI rely primarily on the *Tonnetz* for providing analytical insights into Liszt's double syntax in pieces, where the freer chromaticism is seen as gaining more importance.

In contrast to Part I, Part II of this thesis only focuses on Liszt's forward-looking harmonic devices in his more adventurous late piano music, while the issues of the possible tonality and functionality are abandoned. It has to be admitted that for a small number of Liszt's most experimental pieces, these issues lose relevance and it is most logical to seek a different organising principle for harmony on both surface and large-scale levels. Therefore, the analyses throughout this second part solely rely on neo-Riemannian theory. Firstly, chapter VII demonstrates how the augmented triad has turned into a main structural chord in some pieces, having major and minor triads 'gravitating' around it – a harmonic occurrence, which is most pertinent to be analysed with the neo-Riemannian concept of Weitzmann regions (to be introduced in chapter II) and illustrated on the corresponding visual tool called Cube Dance. Secondly, chapter VIII will offer a selection of harmonic situations, occurring in whole late Liszt pieces or sections of them, in which the diminished seventh chord has a similar structural role. As in such cases there is often a rich mixture of seventh chords and triads within a single harmonic progression, my prolonged analytical attempts have brought me to the decision to only use the *Tonnetz*, as the latter has turned out to be most flexible and versatile in showing the relations between a wide variety of chords. Unlike chapters VII and VIII, chapter IX has different types of chromatic chord relations as an organising principle for putting pieces

and sections of pieces into categories, and it subdivides into two sub-chapters. Finally, chapter X discusses the limitations of my neo-Riemannian inquiry into late Liszt and provides analytical examples from a handful of works, in which the weaknesses of my methodology can be exposed. In such examples the analytical apparatus of main-stream neo-Riemannian theory runs into obstacles, but it is still demonstrated how the *Tonnetz* and neo-Riemannian terminology can be useful if focusing on particular musical moments in particular ways.

Chapter I

The harmony of Liszt's late music in analytical literature

1. Analytical traditions and methodologies of interest up to the 1980s

The stylistic features of Liszt's late piano works have long been unexplored, mainly because of the fact that many of them remained unpublished until about the middle of the twentieth century. An early example of a study on Liszt's stylistic origins is the book of his compatriot Zoltán Gárdonyi, which was published in 1931.[3] Having surveyed a large number of works, the author comes to the conclusion that Liszt's creative individualism is closely related to the Hungarian character of his music.[4] To take an example, the composer's extensive use of the so-called Gypsy scale (or *verbunkos*-minor scale with raised 4th and 7th degree) provided him with the opportunity to explore novel and versatile tonal relationships, which was a major step away from the surface-level use of Hungarian motives.[5] However, a number of interesting and historically important late pieces were not yet known at the time of Gárdonyi's study and also the development of music theory had not yet reached a point where a more systematic study of late Romantic music would have been possible. I will continue with reviewing the relevant studies from the 1950s onwards, which is

[3] Zoltán Gárdonyi, Z, *Liszt Ferenc Magyar stílusa/Le Style hongrois de François Liszt* (Budapest, 1936). Originally published as *Die ungarischen Stileigentümlichkeiten in den musikalischen Werken Franz Liszts* (Berlin, 1931).
[4] Ibid, p. 55.
[5] Ibid, p. 68.

when some of the emblematic late pieces, such as *Bagatelle sans tonalité* (S. 216a) and *Am Grabe Richard Wagners* (S. 202) were first published. It is only at that time that Liszt's music from the 1870s and 80s first attracted attention as representing significant stylistic traits, hence more deeply analytical studies dedicated to that repertoire began accumulating.

The first important contributor to late Liszt research in Anglophone musicology is the composer and writer on music Humphrey Searle (1915-1982). He is the author of one of the most comprehensive single-volume surveys of Liszt's compositional output, as well as a seminal Grove article and a couple of shorter studies on his later works and their relation to the music of the twentieth century.[6] Searle acknowledges the importance of the late pieces thus: 'only in recent years their real significance has begun to become apparent'.[7] His style is described as 'stark and austere', with 'long passages in single notes and a considerable use of whole-tone chords', also 'anything resembling a cadence is avoided'.[8] In his article from 1963 Searle discusses the influence of Liszt on some of the major early twentieth-century composers. Harmony and tonality are briefly touched on and the recently discovered at the time *Bagatelle sans tonalité* has brought Searle to the following bold conclusion:

> Clearly then Liszt was working towards the atonal music which was characteristic of the early part of this century, and also towards the free and equal use of all the 12 notes of the chromatic scale.[9]

[6] Humphrey Searle, *The Music of Liszt* (New York, 1966). Also see "Liszt" in *Grove Dictionary of Music and Musicians*, ed. by Stanley Sadie, 11:49-51 (London, 1980), as well as "Liszt's Final Period (1860-1886)", *Proceedings of the Royal Musical Association, 78th Session* (1952), and "Liszt and 20th-Century Music*", Report of the Second International Musicological Conference* (Budapest, 1963, 277-281).
[7] Searle, 1952, p. 69.
[8] Ibid.
[9] Searle, 1963, p. 279.

The word *towards* is most important in the above sentence – yes, during his final decade Liszt was attempting to anticipate what the music of his near future would sound like. However, during the 1880s there was still a way to go before reaching the strictly dodecaphonic writing of Schoenberg. Supposedly, after becoming well familiar with the writings of visionary theorists such as François-Joseph Fétis and Carl Friedrich Weitzmann Liszt must have received a conceptual image of where the music was heading towards.[10] A discussion of the influence of Weitzmann on Liszt's late style will be pertinent to the analytical discourse in Chapter VII of this thesis.

A comprehensive survey of composer's final years, Bence Szabolcsi's book *The Twilight of Ferenz Liszt* includes both bibliographical data and discussions of Liszt's style and its origins.[11] According to the author, the Hungarian, *verbunkos* idioms play a role in Liszt's music in a way that foreshadows some stylistic features in Bartók, but they are not of primary importance – Liszt is seen more as a cosmopolitan figure, who uses the modern ideas of the different Central and Eastern European national schools in new and imaginative ways.[12] Having similar beliefs as a starting point, I will be discussing Liszt's harmony for what it is, without claiming that certain characteristic features of it are borrowed from somewhere else, but instead seeing these as having organically evolved over decades of personal compositional practice.

[10] For a detailed discussion about Liszt's relationship to the renowned Belgian music theorist François-Joseph Fétis (1784-1871) on Liszt's compositional practice, see Klára Móricz, "The Ambivalent Connection between Theory and Practice in the Relationship of F. Liszt and F.-J. Fétis*", Studia Musicologica* 35 (1994, 399–420). Acknowledging Liszt's intertwining of traditional and forward-looking elements in his late music, the author reaches the following conclusion: 'Liszt succeeded in realizing what remained an unresolved problem in Fétis' theory: how to incorporate the past into a compositional practice that moves further and further away from the conventions of the time', p. 420.

[11] Bence Szabolcsi, *The Twilight of Ferenz Liszt* (Budapest, 1959).

[12] Ibid, p. 70.

The first doctoral dissertation dedicated solely to piano pieces of Liszt's late period which I am aware of has came out in 1970 and was written by Robert Charles Lee. [13] It includes observations and short analytical summaries for a total of 19 pieces written after 1869 and distributed into three cathegories – original works, transcriptions of works by Liszt and transcriptions of works by other composers. Most of those pieces were very little known at the time, so the author has aimed to provide a general introduction for most part, briefly touching on issues of form, texture, aesthetic quality and harmony in them. A term which frequently appears throughout the dissertation is 'tonal obscurity'[14], an effect which occurs 'through emphasis upon a note other than the key-note – most notably the dominant of the prevailing tonality – and by use of whole-tone material'[15]Lee's thesis cannot be labelled as an in-depth study of the repertoire and its chronological position can justify that – descriptive repertoire surveys accompanied by short conclusions at the time would have been appreciated better than going into too much detail or evaluating the position of this music in the history of tonality. However, it can be argued that the main issues with analysing harmony and discussing tonality in late Liszt had been identified at this point and going into more detail with this niche was the most logical continuation in the following decades.

An important part in Liszt's harmonic language is played by the whole tone scale, segments of it and chord relations, which derive from it, and these issues are thoroughly explored in Harold Adams Thompson's doctoral dissertation from 1974.[16] The origins of whole-tone sound are traced back to the mediant

[13] Robert Charles Lee, *Some Little-Known Late Piano Works by Liszt (1869-1886): A Miscellany,* (PhD. diss., University of Washington, 1970).
[14] Ibid, p. 41.
[15] Ibid, p. 43.
[16] Harold Adams Thompson, *The Evolution of Whole-Tone Sound in Liszt's Original Piano Works,* (PhD. diss., The Louisiana State University and Agricultural and Mechanical College, 1974).

relationships in pieces by Beethoven and Schubert, which are followed by a chronological exploration of no less than 20 pieces by Liszt, including the famous B minor and *Après une lecture du Dante* sonatas (S. 178 and S. 161/7). Thompson emphasises the tendency throughout composer's life for endless experiments with structures and musical materials. As a result, unconventional materials (such as the whole-tone scale sound) gradually became handled more and more masterfully and penetrated deeper levels of structure, gaining primacy over conventional tonal procedures in this way. Or, as Thompson puts it: 'Liszt's last style, as strikingly different from the style of his earlier works as it may appear, results not from radical change in the sense that he pursues totally different directions in his last period, but rather from a gradual process of abstraction and reduction of his ideas.[17]

The notion that the style of Liszt's late music results from a gradual evolution of his creative ideas and more precisely – from gradual crystallising of some of his most original compositional devices, which had occurred here and there throughout his *oeuvre*, is a powerful one. Once we see the original features of this music as integral part of its structure, we would consider such an analytical approach, which would do justice to both convention and innovation in it. Such analytical grounding informs the later more thorough studies on this repertoire and puts it into perspective, in order to avoid the earlier false presumptions of it being an exotic island, which rests somewhat unfittingly in the sea of nineteenth-century music.

[17] Ibid, p. 278.

2. Allen Forte's '*experimental idiom*' versus James Baker's '*implicit tonality*' – on the limitations of pitch-class set analysis and Schenkerian methodologies for analysing late Liszt

The concept of progressive ideas first appearing in earlier works and then gradually becoming more central to Liszt's music at the expense of conventional idioms was further developed by Allen Forte – one of the main proponents of pitch class set theory[18]. Forte, who was best known for developing this theory for analysing the atonal music of the twentieth century[19], applies its methods to a selection of pieces by Liszt, starting with earlier ones and finishing with 'a complete work in the experimental idiom'– *Nuages gris*[20]. Forte devises the term *experimental idiom* and describes it thus: 'there is an increasingly stronger movement toward a different sphere of sonic organisation, one that came into full view some twenty-three years after Liszt's death in the new music of Bartók, Schoenberg, Webern, Scriabin, and Stravinsky'.[21] Later in his introduction Forte makes an important remark, which must be stressed and related to my own study. He states the following:

> Traditional ways of labelling harmonic entities (such as Roman numerals) may imply certain tonal functions, whereas pitch-class set names are neutral. There are many harmonic formations in the composer's experimental music that lack any such familiar traditional names. In such cases, the use of pitch-class set names is not only a convenience, but perhaps also a necessity.'[22]

[18] Allen Forte, "Liszt's Experimental Idiom and Music of the Early Twentieth Century*", 19th-Century Music* 10/3 (1987, 209-228).
[19] Allen Forte, *The Structure of Atonal Music* (New Haven and London, 1973).
[20] "Liszt's Experimental Idiom", pp. 225-227.
[21] Ibid, p. 210.
[22] Ibid, p. 212.
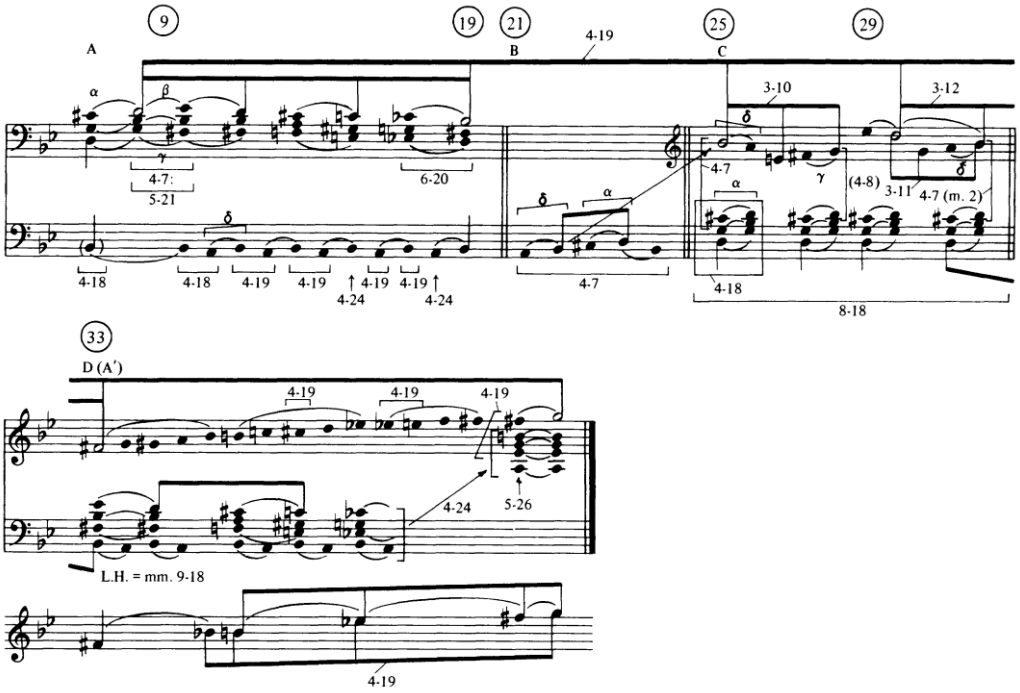
The author refers to harmonies in Liszt's music, which seem to be enharmonically misspelled. The question of why certain chord is spelled in a way that contradicts its tonal context is important, but ironically enough, it can be answered by applying a theory, which ignores enharmonism. No matter whether it is C-E-G♯ or C-E-A♭, pitch-class set theory will label such chord as *3-12*. In this way the use of 'experimental' sonorities can be explored outside the realm of diatonic tonality, acknowledging the existence of chords in 12-tone chromatic space. The way neo-Riemannian theory operates is similar and this is one of the reasons why I have chosen to use it in my own study. While the issues of tonality and the tonal implications of chords will be important in Part I of this study, Part II will adopt a more tonality-independent approach, resonating with Forte's tonally neutral view of chords.

What is unique about Forte's study is his integration of quasi-Schenkerian graphs with pitch-class set nomenclature, which he uses to demonstrate appearances of non-diatonic chords (mainly augmented and diminished triads) both vertically and as horizontal unfoldings in the pieces he analyses. Combinations of these symmetrical triads with consonant ones and with other chords form more complex sonorities of up to six pitches, which are difficult to perceive, but the author claims that they play a structural role and Liszt must have purposefully implied them. For example, in *Mignon's Lied* (S. 275) from 1842 there is a chord, which is one of only two pentads containing both the augmented and diminished triad.[23] The same pentad is outlined in the bass at the very beginning of the late piece *Trauervorspiel* (S. 206).[24] A number of other complex intervallic interrelationships between pieces and within pieces at

[23] The chord in question is F♯-B-D-E♯-A♯ or 5-22 in pitch-class set theory nomenclature. Although this piece will not be considered later by myself, I will show how Liszt uses the augmented and diminished triad at the same time in the culmination of the highly dissonant late piece *Unstern* in the final Chapter X.

[24] Contrary to Forte's view, my analysis of *Trauervorspiel* in chapter VIII interprets an augmented triad as being the only structural harmony, which is outlined harmonically and melodically in the piece, see pp. 260-261.

different levels, both harmonically and melodically, are traced. Moreover, Forte is keen to draw parallels with the early twentieth-century composers by referring to pitch-class set theoretic studies on their music and showing how Liszt has anticipated the systematic use of dissonant sonorities by later composers. The culmination of the article is the detailed analysis of *Nuages gris*, which Forte claims to represent 'a high point in the experimental idiom with respect to expressive compositional procedure.'[25] For someone not familiar with the piece it may seem that a work in the freely (or even strictly dodecaphonic) atonal style of Schoenberg is being analysed, as everything is interrelated with pitch-class sets in a highly sophisticated manner (ex. 1.1). This is clearly not the case, as just by looking at the score, one can easily notice the melodically outlined G minor triad and the highly obscured, but still present cadencing gesture F♯-G at the



Ex. 1.1. Allen Forte's pitch-class set analysis of *Nuages gris*, *Liszt's Experimental Idiom*, p. 226.

[25] "Liszt's Experimental Idiom", pp. 225-227.

end. Moreover, a key signature of G minor is present throughout the piece - something unusual for the late piano works.[26] Forte's analysis ignores these facts at the expense of his rigorous exploration of Liszt's *experimental idiom*, but he should not be criticised for that, as this has been the whole purpose of his article. Nevertheless, I believe that a complete view and a most objective evaluation of tonality and harmony in late Liszt can only be achieved by paying equal attention to both tonal harmony and one that seems to work by other rules. This in turn can only be achieved by being more flexible and less theoretically rigorous in the analytical process.

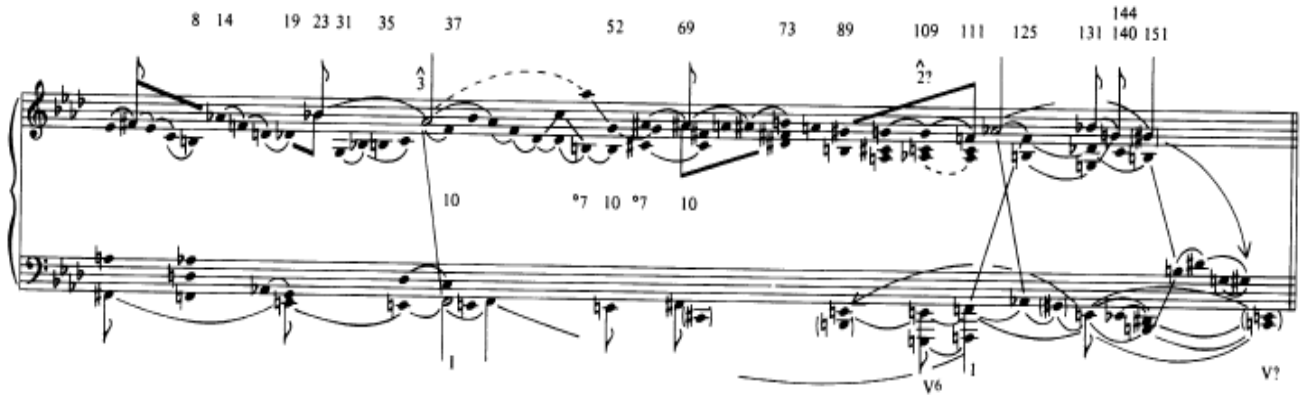
Coming out as a response to Forte, James Baker's article *The limits of tonality in the late music of Franz Liszt* explores the techniques of implicit tonality, which the composer develops more and more towards his later years.[27] His method and the conclusions he reaches are quite different from Forte's – while Forte boldly claims that he has excavated the prehistory of post-tonal thinking in Liszt, Baker asserts that 'as non-tonal relations gained primacy, tonal relations were not suspended at once, but rather gradually became less and less explicit.'[28] To illustrate this point, Baker analyses seven pieces, beginning with the very late, but more traditionally written *En rêve* (S. 207), and finishing with the extreme example of *Richard Wagner – Venezia* (S. 201). Schenkerian graphs and terminology are used for all of these and the often missing structural descents and final cadences are proposed by the author in most cases.

Here comes the important question of whether or not the theory and analytical methods of Schenker, which were certainly not developed for that kind

[26] A detailed analysis of this piece, acknowledging both the use of augmented triads and the possible tonality of G minor, will follow suit in Chapter VII, pp. 209-215.
[27] James Baker, "The Limits of Tonality in the Late Music of Franz Liszt", *Journal of Music Theory* 34/2 (1990, 145-173).
[28] Ibid, p. 146.

of music, are applicable to such unconventionally composed pieces as *Unstern* (S. 208) and *Richard Wagner – Venezia*, bearing in mind that for the latter Baker claims that 'Liszt did attain true atonality'.[29] Even the most traditionally written of the seven pieces, *En rêve*, does not contain the structural descent $\hat{3}$-$\hat{2}$-$\hat{1}$ – it begins on a D♯, which is clearly the third scale degree of the tonic, but the $\hat{2}$ and $\hat{1}$ are only added in parentheses at the very end of Baker's graph. This is not uncommon in Schenkerian analyses of pieces from the twentieth century, but once we come to *La Lugubre gondola II* (S. 200/2) the graphs become less-self-explanatory without the detailed commentaries of the author (ex. 1.2). I agree that the structural $\hat{3}$ is established upon the first presentation of the main theme at the end of bar 36 and the G in bar 108 is a relatively strong candidate for the $\hat{2}$ and the structural dominant, as it comes just before the reprise. However, in my opinion the closing section of the piece with its harmonic ambiguities becomes problematic to analyse in Schenkerian terms. Baker comes to the conclusion that the final section is 'an opening away from the tonic'[30] and relates the prominent G♯ to its earlier appearances in the middle section. It can be agreed that the descent G♯-G in bar 108 implies the dominant C major chord, but should the countermotion G-G♯ at the very end be interpreted as hinting towards the same dominant? The final bass notes in the graph taken from the piece are B-D♯ from the G♯ minor chord of bar 151 and these are connected to a C-E dyad in parentheses at the end, implying an augmented dominant with the real G♯ above them. Baker does not comment on the *V* he has put with a

[29] Ibid, p. 167. However, Baker does not clearly define true atonality. Moreover, just before using this expression he claims that he believes in the ability of tonality 'to penetrate even extremely dissonant, ambiguous contexts and exert considerable control even in the absence of explicit statements of tonal functions.'
[30] Ibid, p. 163.



Ex. 1.2. James Baker's Schenkerian graph of *La Lugubre gondola II*, *The Limits of Tonality*, p. 160.

question mark at the end of his graph and however detailed and well justified his analyses are overall, some obscurities still remain.

In my view, Schenkerian analyses of pieces such as *Lugubre gondola II* or *Unstern* keep under question the presence of a structural descent and the tonic prolongation. But what is more important in the context of the alternative methodology I propose is the fact that Schenkerian graphs such as the one in ex. 1.2 can supress what could be perceived as a multiplicity of chromatically related chords that have meaningful, systematic interrelationships and are not governed by subservience to a single tonic chord. This issue is of particular relevance to the introduction of the piece (bars 1-34) and the transition (especially between bars 125-131), which include a number of chromatic transformations involving diminished seventh chords and other closely related tetrads, which remain to a large extent hidden on Baker's graph. Conversely, my neo-Riemannian analysis of the above sections in chapter VIII, as well as the focus on the main theme (bars 35-51) in chapter IX will lead to some very different, and arguably no less important, findings about the transformational nature of harmony in this piece.

3. Satyendra and later studies – an attempt to acknowledge more equally diatonic functionality and freer chromaticism

The problems posed by the studies outlined so far can be solved by putting diatonic and chromatic space into a single system of analysis and this is what Ramon Satyendra has achieved in his writings on Liszt. The most substantial of these writings is his doctoral dissertation, which lays out a wide range of categories for chord relations and structures within chromatic pitch space and also takes into consideration nearly 50 piano pieces, most of them from the period 1869-1886.[31] The author uses the term *stacked spaces* to describe the simultaneous existence of diatonic and symmetrical or chromatic scales and chords in the musical fabric.

> The notion of stacked spaces usefully extends traditional analytical perspectives, which, whether exclusively diatonic (as in Schenkerian analysis) or exclusively chromatic (as in set-class analysis), overlook distinctive features of progressive tonality. Chromatic tonality is best seen not as an exclusively diatonic or exclusively chromatic system but as an interaction between pitch-space systems.[32]

This claim suggests that Forte's and Baker's studies have both overlooked one important aspect of harmony at the expense of another. Moreover, Satyendra uses the term *transformational tonality*, which is foundational for the later development of neo-Riemannian theory:

> In transformational theory, harmonic events are linked through either real transposition or semi tonal displacements. Unlike common-practice tonality, in transformational tonality keys may not be established and endings may not thematically or tonally recapitulate opening material. **The emphasis is on smoothness of moment-to-moment connections rather than large-scale formal and tonal balance.**[33]

[31] Ramon Satyendra, *Chromatic Tonality and Semitonal Relationships in Liszt's Late Style*. (PhD diss. 2 vols. University of Chicago, 1992).
[32] Ibid, p. vi.
[33] Ibid.

I have emboldened the last sentence myself, as it is precisely what neo-Riemannian theory is about and what I will look for in this music. Unlike Satyendra, the twenty-first-century analyst now has a range of analytical tools for that, which were developed only after he approached the music similarly to the way I want to approach it. He uses Schenkerian graphs to identify structural levels in his analyses, whereas I will use the *Tonnetz* and less so Cube Dance for illustrating chords and the transformations between them. By doing that I can concentrate on the foreground chord-to-chord relations irrespective of the possible overarching tonality.

A couple of clarifications should follow here. Firstly, my functional analyses in Part I, Chapter III will be based on harmonic reductions, in which the analytical discourse develops around the importance of chords in what I call a *functional frame* of the piece being analysed, therefore a functional hierarchy between chords is implied. However, in such functional analyses the three types of chords (*tonic, subdominant and dominant*) are seen as separate entities and building blocks of the harmony (in similarity to neo-Riemannian theory, which derives from Riemann's *Funktionstheorie* not by accident), unlike Schenkerian theory, in which everything needs to subordinate to a single *tonic*. In other words, my analyses will be less concerned with the overarching single main key, but more interested in the moment-to-moment functional (or, later in the thesis, increasingly non-functional) harmonic events. Secondly, in the above statement I am mostly referring to Part II of this thesis, where my hybrid methodology will be substituted by a purely neo-Riemannian analytical perspective, which tests the limits of the theory and focuses on the types of surface-level chord relations.

The issues of background structure and hierarchic levels in the music cannot be addressed when one uses the concepts of chromatic tonality and this has been recognised as a main problem in Satyendra's dissertation. He claims

that the perception of structural hierarchy can depend on contextual features, which differ between pieces. Before making that clarification the author acknowledges the influence of Forte's article and of two other important studies, which have provided the basis for deeper understanding of chromatic music. The first one is an article by Robert Morgan[34], whereas the other one is the doctoral dissertation of Gregory Proctor.[35] Morgan's idea that a dissonant chord can have the function of a main referential sonority in a piece turns one of the basic principles of Schenkerian theory upside down. Nevertheless, his analysis of *Bagatelle sans tonalité* seems quite convincing in demonstrating how the diminished seventh chord on F gradually can be perceived as central to the piece. More on this will come in chapter VIII, when I myself come to analysing the *Bagatelle*.

Another article on Liszt's use of harmony from the 1990s deserves a mention here.[36] In his survey Zdenek Skoumal concentrates on the weakening of the traditional tonic-dominant axis in a selection of pieces from the middle and late period of the composer, and shows instances, in which the harmony is tonic and dominant simultaneously, creating a synthesis of function. This is one of Liszt's main devices associated with his move towards atonality. Despite Skoumal's article being convincing and providing further analytical insights into some of the seminal late pieces, I am also interested in the idea of functionality disappearing altogether in these, which provides the listener with the opportunity to hear chords as sonorities and appreciate their coloristic effects independently from any functional occurrences. Although my approach to analysing *Nuages gris*, *La Lugubre gondola I* and *Richard Wagner – Venezia* in

[34] Robert Morgan, "Dissonant Prolongations: Theoretical and Compositional Precedents", *Journal of Music Theory* 20/1 (1976, 49-91).
[35] Gregory Proctor, *Technical Bases of Nineteenth-Century Chromatic Tonality: A Study in Chromaticism* (PhD diss., Princeton University, 1978).
[36] Zdenek Skoumal, "Liszt's Androgynous Harmony", *Music Analysis* 13 (1994, 51-72).

chapter VII is quite different from Skoumal's, it has been aided by his Schenkerian reductions of these pieces, which shows that the analytical tools of Schenkerian theory can be useful in a variety of contexts, and as in this case – in a preparation for a different type of analysis, especially when the main harmony is difficult to distinguish from the overall texture.

Jung-Ah Kim's doctoral dissertation is mainly concerned with harmony in Liszt's music and in the words of the author, he has aimed to 'examine, identify and trace the development in the use of harmonic and melodic idioms that produced non-tonal or 'omnitonic' effects in Liszt's music[37] by investigating the origins of the style of the composer, then attempting to 're-define tonality and atonality' and finally, analyse four of the piano pieces associated with Mephistopheles – the 1st and 3rd Mephisto Waltzes, the Mephisto Polka and *Bagatelle sans tonalité*.[38] There is also a final chapter, which briefly traces the influence of Liszt on later composers and attempts to reassess his historical position.

In his analyses Kim provides descriptions, which come from the viewpoint of functional tonality. Music examples with Roman numerals are used, but each of Liszt's main non-tonal devices (most notably the use of augmented and diminished seventh chords, whole-tone and octatonic scale) are pointed out with explanations on how these work to 'erase whatever tonal orientation the music might have created'.[39] The *Bagatelle* is referred to as 'his final testament to his experimentation with devices in creating omnitonic music' and it is claimed

[37] Jung-Ah Kim, *A study of Liszt's concepts of changing tonality* (PhD. Diss., University of North Texas, 1999), p. ii (not numbered).
[38] A special place in Kim's introduction is dedicated to the Liszt- Fétis connection. Fétis' classification of changes in musical composition into four idioms (unitonic, transitonic, pluritonic and omnitonic) is explained and according to the author, 'by becoming acquainted with these Liszt received a vision – at least through a conceptual imagery – of the music of the future, not only in terms of the later years of his life but also of those beyond his lifetime', p. 16.
[39] Ibid, p. 45.

that 'from the first measure to the last, there is not a single passage or phrase that connotes, implies, or remotely suggests any tonal focus'[40], to which I largely subscribe and will justify why at the end of my own analysis of the piece. Although it might not have received much critical attention because of its somewhat limited scope, Kim's dissertation is important in contributing the research niche of Liszt's attitude towards tonality, which I would like to readdress in Part I of the current study.

Ben Arnold's chapter *Piano Music: 1861-1886*[41] in *The Liszt Companion* provides another overview of the music in question with analytical commentaries, although most of these are quite brief. A quotation from another book is brought to the reader's attention and it is a precise description of what the aesthetics of the music has been heading to at the end of the nineteenth century, with Liszt's late music being an important contribution:

> Sound, with the assistance of symmetry, would take over; harmony would be absorbed into colour and lose its cadential function.[42]

Symmetrical chords and scales, chord-to-chord relations instead of long phrases built around a cadence, chords existing as mere sound objects as opposed to tonal functions – this is what neo-Riemannian theory was developed to account for and it is to a certain extent surprising that it has not yet been applied in a larger study of Liszt's music, be that late or earlier.

The first extensive dissertation on late Liszt in our century has come out in 2002 and in its case tonal voice leading has been approached as an analytical basis for a large selection of works from all genres.[43] Stefanie Dickinson puts pieces into six categories of tonal experimentation, four of which are explored

[40] Ibid, p. 54.
[41] Ben Arnold, "Piano Music: 1861–1886*",* in: *The Liszt Companion*, ed. Ben Arnold (Westport, 2002, 139–77).
[42] Ibid, p. 169, quoted from Leonard Ratner, *Romantic Music: Sound and Syntax* (New York, 1992, 267).
[43] Stefanie Dickinson, *Tonal Voice Leading as an Analytic Basis for Liszt's Late Experimental Works* (PhD diss. University of Rochester, 2002).

thoroughly.[44] She regards tonality as a family of musical languages, with each member of that family having its own distinct, but related laws of voice leading. Dickinson's analyses are largely Schenkerian and thus not far removed from James Baker's. However, she does not always go too far in trying to identify a structural descent, but only provides a contrapuntal framework for the pieces, which lack a clear ending on the tonic. Liszt's most unorthodox pieces are excluded from this study under the claim that tonal voice leading cannot be an analytical basis for all of his late experimental works.

Early on in her introductory chapter Dickinson points out three main problems in defining Liszt's late experimental style:

> The first problem is that Liszt's late works do not seem to belong to a single style at all; on the contrary, he seems to have composed pieces in a variety of idioms. (…) The second problem is that no single chronology can be used to trace the development of experimental devices through the repertoire. (…) The third problem is that Liszt's late pieces were never disseminated as a coherent repertory.[45]

The above problems are the reason why I would prefer not to structure my thesis based on different categories of late pieces, but more around different harmonic situations and, as in chapter IX – based on different types of neo-Riemannian transformations. However, in similarity to Dickinson's six categories, a gradual transition might be observed from works with clearer tonal structure to ones, in which tonality gets weaker.

In order to justify her approach to the music, Dickinson relies on criticising a number of the important earlier studies of the repertoire. Resonating with

[44] The six categories are as follows:
1) Functionally tonal, locally weakened
2) Incomplete tonal structures
3) Functionally weakened
4) Augmented functions
5) Non-tertian sonorities
6) Dissonant projections

[45] Ibid, pp. 10-14.

Satyendra, she is critical towards Forte's analytical approach and claims that 'Forte's decision to segment chord tones together with non-chord tones seems counterintuitive.'[46] The main reason for her scepticism is the fact that his analyses go against seeking tonality-governed voice leading, as in her own study. Dickinson's criticism towards earlier studies does not end here. She also criticises Robert Morgan for the ways he isolates dissonant chords and justifies them as being structural[47]. To support her claim the author argues that the hierarchical organisation inherent in tonality cannot be satisfactorily replicated with a hierarchy of dissonant chords, because if doing so, then the criteria for choosing which chord is structurally more important than the others would be arbitrary.

Dickinson also comments on and critiques the work of Richard Cohn, using his neo-Riemannian analysis of Liszt's *Polonaise I* based on the oratorio *St Stanislas* as an example.[48] Her '*exposed limitations*' of the neo-Riemannian approach sum up the problems that may arise when applying only this theory to late Liszt.

> In addition to losing the gravitational pull of an underlying tonal centre, several other important characteristics of tonality are lost with this approach. First, transformations cannot duplicate tonality's system of structural levels. (…) Second, the analytic application involved in a transformational approach is not well defined. Excerpts merely illustrate chains of P, R, and L operations with no attempt at a comprehensive analysis. Third, this methodology cannot deal with sonorities outside the set class 3-11. This already omits a vast amount of chromatic music containing seventh chords, French and German augmented sixth sonorities, etc. [49]

Dickinson is right with the first of these observations and it is the reason why I do not intend to use neo-Riemannian theory exclusively in my study, but will combine it with the more traditional Functional analysis, in order to account for structural levels and ask questions about tonality. However, years have

[46] Ibid, p. 26.
[47] Ibid, p. 42.
[48] Portions of this piece (catalogued S. 519) will be analysed in chapters VIII (pp. 274-278) and IX (pp. 328-330).
[49] Ibid, p. 52.

passed since that dissertation has been written and now much more sophisticated chains of transformations have been theoretically defined by neo-Riemannians, including those mentioned above.[50] Also, in response to Dickinson's claim about the problems with establishing a hierarchy of dissonant chords, my methodology in chapters VII and VIII will show that it is actually possible for certain pieces to conceptualise the augmented or diminished seventh chord as main structural sonorities and subordinate other types of chords, including consonant triads, to them.

Additionally to his article on tonality, James Baker has contributed Liszt scholarship with his two chapters on the late piano works in the *Cambridge companion to Liszt.*[51] Based on their genre and stylistic features pieces are separated into six categories, one of which is distinguished as having attracted most analytical attention. It is the music of premonition, death and mourning, which includes the majority of Liszt's experiments with harmony, but Baker gives examples of the latter from pieces of all categories. It should be noted that all the studies mentioned so far have either partially or fully ignored the larger forms, whereas Baker's second chapter provides a detailed overview of the keyboard version of *Via Crucis* (S. 53), the *Historical Hungarian portraits* (S. 205) and the third year of *Années de Perelinage* (S. 163). It is interesting to trace the unusual key relations across pieces in Liszt's two late cycles and Baker does justice to these, showing how the composer conceived and put pieces into a coherent whole. In contrast to Baker, my analyses on parts of *Via Crucis* (Chapters VII and IX) and *Années III* (Chapters III, V, IX and X) will demonstrate

[50] Adrian Childs has proposed a model for transformations between seventh chords in an article of his from as early as 1998. Also, Dmitry Tymoczko (2011) and Richard Cohn (2012) have both developed analytical models for a variety of scales and chords in their books and, as already mentioned, I will derive most of my analytical tools from Cohn's book *Audacious Euphony* (to be discussed in detail in the next chapter).

[51] See James Baker, "Liszt's late piano works: a survey", pp. 86-119 and "Liszt's late piano works: larger forms", pp. 120-151, in: *The Cambridge Companion to Liszt,* ed. by Kenneth Hamilton (Cambridge, 2005).

that Liszt's modern ideas appear here and there throughout a variety of pieces, often coexisting with a more traditional functional syntax, so it would not be practical to consider whole large-scale works or whole suites in the context of the current analytical discourse.

Two doctoral dissertations, which explore the idea of connection between Liszt's late music and the avant-garde music of the twentieth century are among the more recent studies on this repertoire, which I am aware of. The first of these was completed by Philipp Richardsen in 2007.[52] It includes analyses of different musical parameters in five of the late pieces and a separate chapter on the Liszt-twentieth century connection. The artistic connections between Liszt and Debussy are explored, together with a general review of composer's reception during the next century and an overview of pitch-class sets in *Unstern* and *Nuages gris*. Not very different in structure and content, Matthew Cataldi's dissertation emphasises the importance of the augmented triad in pieces such as *La Lugubre gondola I* and the two Wagner threnodies.[53] Here parallels are drawn not only with the impressionists, but also with the Second Viennese School and examples of melodic and harmonic similarities with Liszt are taken from Alban Berg's early piano sonata (Op. 1).[54] It is interesting to see that Berg opens his piece with the transposed version of the main motive of *Nuages gris* and the way he uses augmented triads is strikingly similar, but still these commonalities remain rather superficial and it is hard to claim any deeper artistic connection between the two composers. Nevertheless, Cataldi provides a short but clear and focused overview of the most important modern features of Liszt's

[52] Philipp Richardsen, *The Late Piano Works of Franz Liszt and their Anticipation of Musical Ideas of the Twentieth Century* (PhD diss., University of California, Santa Barbara, 2007).
[53] Matthew Cataldi, *Franz Liszt: Prophecy in the Late Piano Works* (PhD diss., Indiana University, 2014).
[54] Ibid, pp. 37-39.

late pieces, with an example of each given from a single most relevant piece.[55] His analysis of *La Lugubre gondola I* resonates with my view of it and his conclusion can be the starting point of my own analysis:

> Perhaps the '*experiment'* here is to forge a new harmonic hierarchy to supersede if not replace the world's dependence on diatonic triads and to open doors for composers decades down the road to pick up the baton and push the same boundaries further.[56]

However, Cataldi's analysis is not comprehensive and does not imply the use of any theory beyond his functional descriptions of chord relations, whereas in my chapter VII I will apply the neo-Riemannian concept of Weitzmann regions to the piece, in order to reassess the role of the augmented triads in it.

4. The problem with describing Liszt as a precursor to modernism

An issue in Liszt scholarship, which resurfaced in the above discussion, is the fact that his late music had been understood as a precursor to modernism and consequently it has been attempted to fit it in what Shay Loya has termed as the '*Grand Tonal Narrative'*.[57] In short, the repertoires from the middle of the nineteenth century through to around 1910 can be described as constituting the transition between tonal harmony and the atonal style of the Second Viennese

[55] *La Lugubre gondola I* is analysed for demonstration of swapping of structural roles between augmented and consonant triads, *Unstern* exemplifies Liszt's use of pitch class sets, the question of tonality is naturally explored in *Bagatelle sans tonalité,* and *Nuages gris* is seen as 'an amalgamation of techniques' – combining significantly weakened tonality of G minor with the more forward-looking compositional devices.

[56] Ibid, p. 12.

[57] See Shay Loya, *Liszt's Transcultural Modernism and the Hungarian-Gypsy Tradition* (Rochester, 2011, 154-157). The idea of grand tonal evolution throughout the centuries, culminating with the total dissolution of tonality during the twentieth century is succinctly described by Bryan Hyer, see "Tonality", *Grove Music Online*, retrieved 21 Apr 2022, from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000028102.

School, with Liszt's late piano miniatures playing an important role in the process. Bryan Hyer has outlined the main problems with this simplified teleological thinking of music history, pointing out that the more time progressed after the turn of the century, the more deviations there were from this linear development of harmony.[58] In light of this, it is fitting to acknowledge that the evolution of Liszt's harmonic style throughout his long life does not simply represent a transition from post-classical conventions to extreme chromaticism. In fact, a number of his early works are harmonically more innovative than some of the late piano pieces. My review of Forte, Baker and earlier authors served to expose the ways, in which their methodological flexibility has been limited by their teleological understanding of Liszt's late music, particularly in the case of Forte.

The issues of Liszt's lateness discourse have already been discussed at length in Shay Loya's first book, as well as in a recent book chapter of his.[59] Loya has warned about the 'persistent problem with the anachronistic way Liszt's modernist champions tended to compare small fragments of his music to that of later generations', whereby of utmost concern is 'the historical and tonal decontextualisation of musical material'.[60] Further on, it is explained how a focus on 'Liszt the Modernist' has in some cases led to seeing his late piano miniatures as historically important, but failing to achieve aesthetic greatness the way later progressivists like Debussy have done with their ground-breaking compositions. In the case of Charles Rosen, Liszt's music from the 1830s and 40s is seen as more influential to later generations, being 'vulgar and great', while the late works are

[58] Ibid. p. 11. Consider the persisting tonal styles of important twentieth-century composers such as Rachmaninoff and Gershwin, as well as the later developed minimalism, not to mention the rise of popular music.
[59] See Shay Loya, *Liszt's Transcultural Modernism* (2011, 154-163) as well as "Lateness in Context", in: *Liszt in Context* (Cambridge, 2022, 271-281).
[60] Ibid, p. 277.

'admirable and minor'.[61] In an attempt to set aside this kind of thinking in analysis of late Liszt, the current study will employ a more flexible and comprehensive hybrid methodology for the versatile harmonic language of this music. The repertoire to be discussed may not be vast, but it is harmonically diverse enough to resist strict categorisation and historical teleology.

Neo-Riemannian theory was originally developed to address the intricate chromatic chord relations of late nineteenth-century music irrespective of the overarching key of the musical work and thus the tonality discourse becomes more or less peripheral in its analytical application. Consequently, a neo-Riemannian study of harmony in late Liszt should be expected to either circumvent the teleological thinking, which was described above, or – even better – to enrich it with a fuller picture of Liszt's multifaceted compositional skills. The ways this composer deals with harmony are often dependent on the rules of tonality and represent a creative evolution throughout his life and within his late period, as it will be demonstrated in Part I of this study. However, some other more stylistically daring late works seem to be 'out of their time' and therefore they make the Grand Tonal Narrative more or less irrelevant, while at the same time neo-Riemannian theory offers us some highly useful tools for exploring non-tonal harmonic relationships in such pieces, as it shall be revealed in Part II.

Admittedly, with the careful balancing of focus on functional or post-functional chord relationships, my hybrid methodology in Part I can relate to the teleological thinking of Forte or Baker. Still, my aim will be to examine whatever this repertoire presents, instead of selecting particular excerpts that enhance post-tonal theory and teleological historiography. Therefore, the issue discussed

[61] Charles Rosen, *The Romantic Generation* (Cambridge, 1998, 473-74), quoted in "Lateness in Context", p. 278.

here cannot fully address the broader question that I have had in mind while analysing this repertoire: 'What is Liszt's late piano music harmonically like?'

5. Summary

Based on the above literature review a few conclusions must follow now. First of all, it can be inferred that this music, which remained unknown for a long time and then was only superficially studied for years, has received the analytical attention it deserves during the last three decades. Earlier studies (before the 1970s) have either only listed pieces with short descriptions of what they are like in terms of their overall style, or concentrated on describing (more often than explaining) the foreground features, which are considered to make this music sound ahead of its time. Those surface-level oddities were the initial source of fascination about this repertoire and it is hardly surprising that they have attracted most analytical attention upon the first encounters with it. The question of whether there is a connection between Liszt's novel ideas in his late music and his earlier works only started being systematically explored during the 70s, as in Thompson's dissertation on the evolution of whole-tone sound throughout composer's life.[62] This idea of gradual stylistic evolution leading towards 'the music of the future' was later picked up and developed with different analytical tools by scholars like Allen Forte[63] and James Baker.[64] As demonstrated above, by concentrating on a single analytical approach, Forte and Baker were ignoring one important aspect of the music at the expense of

[62] Harold Adams Thompson, *The Evolution of Whole-Tone Sound in Liszt's Original Piano Works* (see above).
[63] Allen Forte, "Liszt's Experimental Idiom and Music of the Early Twentieth Century".
[64] James Baker, "The Limits of Tonality in the Late Music of Franz Liszt".

another. Satyendra acknowledged this problem and invented the term '*stacked spaces*', referring to Liszt's harmonies, which function on a diatonic and chromatic level at the same time.[65] Also, he was the first to apply the term transformational tonality to Liszt's late music, thus suggesting the potentials of a future neo-Riemannian study of it. The notion of one chord or scale transforming into another one and opening up a number of possibilities for harmonic variations through minimal semi tonal displacements was central to Satyendra's work on Liszt and is also central to neo-Riemannian theory. The latter was only in early stages of development in the 1990s, so the possibility to apply it to the same repertoire remained open until the present day.

I claimed in relation to Baker's article that applying Schenkerian analysis with all its original rules to Liszt's late music can be to a large extent problematic. However, Schenkerian reductive methodologies continued to be applied, as in the studies of Dickinson[66] and Richardsen.[67] The main concepts of Schenkerian theory, such as the *Urlinie* and bass *arpeggiation* do not have to be applied to every analysed piece and textural reductions as well as some principles of prolongation can be used in preparation for a neo-Riemannian analysis, to clarify what the basic harmony is by eliminating passing notes and *appoggiaturas*. Considering that the dissonant prolongation idea was strong in analysis during the 1980s, it is not surprising that even Allen Forte has relied on quasi-Schenkerian graphs in his anachronistic application of set theory to Liszt.

However, I will demonstrate in my analyses that there can be alternative ways to acknowledge the importance of a dissonant chord, in addition to Robert

[65] In addition to his doctoral dissertation, Satyendra contributed Liszt scholarship with two later articles: "Liszt's Open Structures and the Romantic Fragment" and "Conceptualising Expressive Chromaticism in Liszt's Music", both from 1997. The latter of these will be related to my study in chapter IV.
[66] Stefanie Dickinson, *Tonal Voice Leading as an Analytic Basis for Liszt's Late Experimental Works.*
[67] Philipp Richardsen, *The Late Piano Works of Franz Liszt and their Anticipation of Musical Ideas of the Twentieth Century.*

Morgan's dissonant prolongation idea. The concepts of Weitzmann and Boretz regions (outlined in the next chapter, while Weitzmann regions are at the basis of chapter VII) put the augmented and diminished seventh chord at the center of harmonic syntax and invert their traditional relationship with the consonant chords. There is an analogy to Morgan, but at the same time my approach will be different, for it will determine the relationships between chords based on their proximity under chromatic voice leading and their corresponding visual arrangement on the neo-Riemannian *Tonnetz*.

To summarise, the studies of Liszt's late piano music have gradually developed and become more sophisticated over the years. The nature of Liszt's innovations, his experiments with harmony and tonality have been scrutinised with a variety of theories – Schenkerian, Functional Riemannian, Roman numeral, even set theory. As a result, it is now better known in what ways the composer has combined a variety of innovative harmonic devices, such as the symmetrical augmented and diminished chords, whole-tone and octatonic scales, in order to obscure the sense of tonality in the music. What the above mentioned studies and the theories behind them have in common, is that they all seek to understand the pieces of music as a whole, whereas for the neo-Riemannian theorist the surface chord-to-chord progressions are more important than the overall harmonic frame. Additionally, in cases where neo-Riemannian transformations underpin the harmony of a whole piece or large spans of it, the logic behind the complete structure can be explained with them, without the necessity to refer to a tonic key. Here we arrive at a major claim of this study. I argue that Liszt consistently repeats a number of idiosyncratic chromatic harmonic progressions and chord relations throughout his late piano works, which can best be conceptualised, visualised and explained through the analytical tools of neo-Riemannian theory.

Chapter II

Analytical Methodology

While the previous chapter served to position my study as a continuation of earlier studies on harmony in late Liszt and justify my choice to apply neo-Riemannian theory to this repertoire, this chapter will elaborate on my choice of methodology and will put the bipartite structure of this thesis into perspective. Firstly, I will start my analytical journey with a selection of late Liszt pieces, which are relatively traditionally conceived and more or less clearly based on a tonal structure dominated by functional chord relations. Bearing in mind that less functional chromaticism also plays its role in most such works, a hybrid methodology, in correspondence with what has already been suggested by Satyendra in 1992, will be developed for Part I, which will include a focus on the Functional analysis for chapter III, and a more flexible hybrid approach for chapters IV, V and VI. Secondly, considering how important and in fact, how central, some dissonant sonorities and non-functional chromatic chord relations become to the harmonic structure of many late Liszt pieces, Part II will be dedicated solely on this and on testing the applicability of neo-Riemannian theory to these more unusual harmonic features of this repertoire.

1. Hugo Riemann's *Funktionstheorie* and modern Neo-Riemannian theory

A superficial knowledge on Hugo Riemann's *Funktionstheorie* and the basics of present day neo-Riemannian theory does not necessarily help one understand the connection between the two. Only after digging deeper into Riemann's later writings the line of continuation towards early neo-Riemannian studies might be discovered. Riemann's designation of three main functions to all chords – *Tonic, Subdominant and Dominant* – creates key relations mainly on a diatonic level and also at different levels of structure, which, in that general sense, is not much unlike the basic concepts of Schenkerian theory. In contrast, a central tenet of neo-Riemannian systems is their independence from scale-degree identification and in many cases from the constraints of the key.[1] However, in his later studies of harmony Riemann develops the idea of moving between third-related chords as a substitution for the circle of fifths.[2] Chromatic mediant relations are pointed out as a viable alternative to the purely diatonic principles of Gottfried Weber's earlier harmonic system, which Riemann was keen to criticise.[3] David Kopp has asserted that with this theoretical innovation Riemann introduced the possibility that 'the power of fifth relation may be superseded to some degree by that of third relation should the latter exert a stronger pull.'[4]

Riemann further elaborates his new ideas by claiming that often the best way to move between keys might be through minimal motion of voices, be that

[1] David Kopp, *Chromatic Transformations in Nineteenth-century Music* (Cambridge, 2002, 137).
[2] I am referring to Riemann's "Ideen zu einer Lehre von den Tonvorstellungen" from *Jahrbuch der Musikbibliothek Peters 1914-15*, ed. Rudolf Schwartz, vols. XXI-XXII (Leipzig, 1916, 1-25), which is summarized by Kopp in *Chromatic Transformations*, pp. 139-142.
[3] Hugo Riemann, *Katechismus der Harmonielehre.* (Berlin, 1890). Also 7th ed., as *Handbuch der Harmonie- und Modulationslehre*, (1920, 65). The earlier treatise Riemann discusses is Gottfried Weber, *Versuch einer geordneten Theorie der Tonsetzkunst (1817-21), vols. I-II* (Mainz, 1846).
[4] David Kopp, *Chromatic Transformations*, p. 140.

on a diatonic or chromatic level. To illustrate this, he designs his own *Tonnetz*, which is reproduced here as figure 2.1. Each horizontal line of chords is part of the circle of fifths, but there are also the northwest-southeast lines representing movement in minor thirds (upper mediants in minor keys) and the northeast-southwest lines representing major third motion (major mediants).

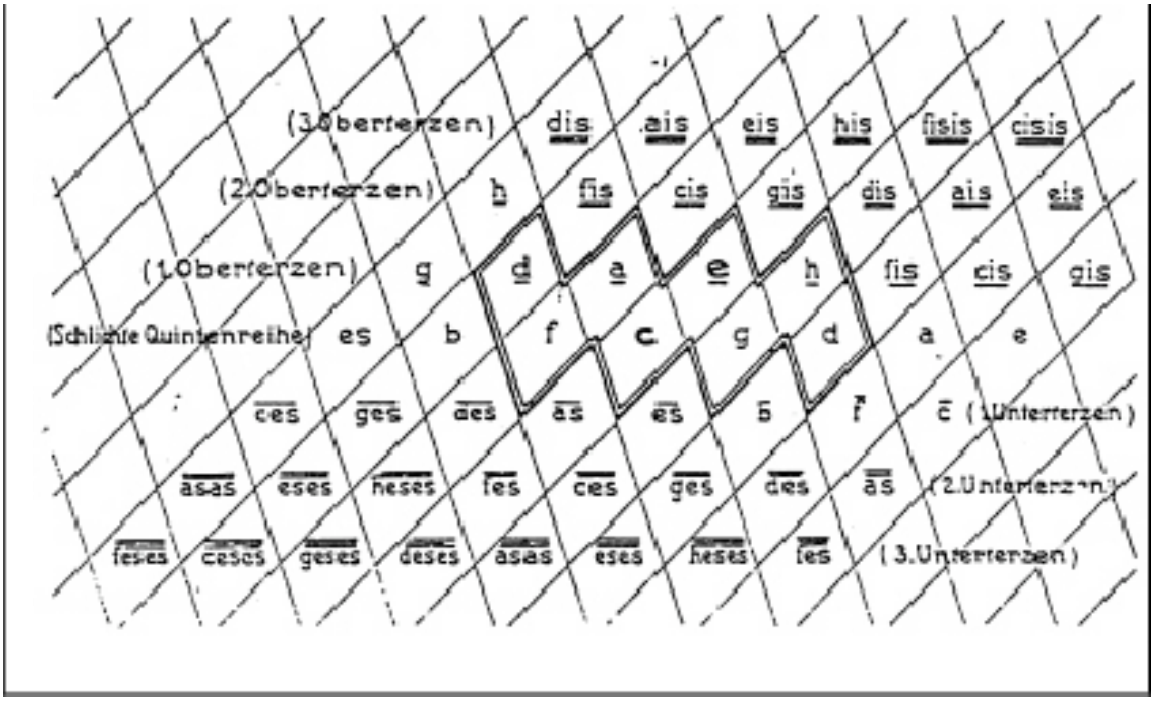


Fig. 2.1. Hugo Riemann's three-dimensional *Tonnetz* from the *Ideen zu einer Lehre von den Tonvorstellungen*, 1916.

Any chord in this grid is closely related to the others around it and this closeness is determined by minimal motion of voices between the chords. It turns out that the diatonically distant A♭ major is as close to C major as its dominant G major – both can be reached by only moving two pitches from the starting chord, while the third one remains unchanged. The three *basic* neo-Riemannian transformations, which connect triads in maximal proximity – derive from Riemann himself and these will be identified in Liszt's music throughout

this study. Their labels – ***P*** (for *Parallel*, connecting a major and a minor chord on the same root), ***L*** (for *Leittonwechsel* or leading tone exchange, connecting a major and a minor triad lying a major third apart) and ***R*** (for *Relative*, connecting a major and a minor triad lying a minor third apart) will be emphasised in Bold, in order to make them stand out in my analytical commentaries.[5]

The above conceptualisation of chord relations is at the heart of modern neo-Riemannian theory, however, it took decades before the ideas of Riemann's later work were picked up and further developed.[6] There has been a considerable branching of ideas within transformational theory throughout the last three decades, but most theorists refer back to the studies of David Lewin (1933-2003) as most important predecessor of their work. His treatise *Generalized Musical Intervals and Transformations* proposes a model for application of mathematical group theory to music, investigating the basic concepts – interval and transposition – and extending them beyond their traditional application to pitch.[7] Based on a powerful metaphor of musical space, this theory can be applied to pitch, rhythm and metre, or even timbre. Moreover, it can be applied to both tonal and atonal repertoires.[8] While I acknowledge the importance of Lewin's work for transformational theory in general, I do not derive any aspects of my methodology directly from him. This is mainly because of the abstract nature of his models and the often overly mathematical presentation of objects and their relationships, which in music analysis might distract the reader from the music itself. In contrast to that, I have aimed to make

[5] It is important to note that the ***L*** and ***P*** transformations only require a single semi tonal displacement in one of the pitches of a triad, whereas the ***R*** transformation requires a single whole-tone shift, in that sense being what I would call a less smooth transformation.
[6] See footnotes 2 and 3.
[7] David Lewin, *Generalized Musical Intervals and Transformations* (New Haven, 1987).
[8] The short description of *Generalized Musical Intervals* is taken from Steven Rings, *Tonality and Transformation. Oxford Studies in Music Theory* (Oxford and New York, 2011, 2).

my methodology as simple and as effective as possible, keeping graphical representations and harmonic reductions in standard notation closely related.

Among the authors who have adapted Riemann's ideas to serve a more straight-forward transformational system, Brian Hyer deserves a mention here.[9] He can be credited for simplifying Lewin's transformation formulas, but also for dispensing with the idea of tonic dependency in the analysis of chromatic music, claiming that the triple application of a major-third transposition in the face of a ***P+L*** compound transformation returns the initial chord and hence creates a sense of closure without the need for a tonal or prolongational process.[10] One of Hyer's main aims has been to demonstrate the group-theoretical potential of Riemann's theories, in other words – the potential of the different fifth (***Q*** from *Quint*) and third (***T*** from *Terz*) relations to create a variety of arrangements between triads, but only when we switch from Riemann's conception of the *dominant* as a label for a chord to a more contemporary one (derived from Lewin), which denotes a relationship between two chords. This gradual shifting of perspective has culminated in the work of several theorists around the turn of the century and it is Richard Cohn among these who has been the biggest inspiration for my current neo-Riemannian methodology.

In his work on chromatic tonality Cohn focuses on what he describes as 'triadic universe' – the non-hierarchical operation of all consonant major and minor triads in 12-tone equal temperament. In his view there are three ways to measure the distance between the triads: the first one being the 'classical metric', which relates to the mutual membership of chords in diatonic pitch collections, while the second and the third way are closely related, but important to distinguish between – common-tone retention and minimal voice

[9] Brian Hyer, "Reimag(in)ing Riemann", *Journal of Music Theory, 39/I*, (1995, 103-138).
[10] See David Kopp, *Chromatic Transformations*, pp. 151-155 for a summary of Hyer's writings.

movement.[11] If the common-tone retention is prioritised when interpreting chord connections then an A minor chord would be closer to C major than it is to F minor, but if we only count the amount of voice leading work between the two pairs of chords then A minor would be equally distant from both resulting chords, because a whole-tone movement in one voice equals two semi tone movements in two voices. Clarifying this early in his book has been important for Cohn, as interpreting all concepts and models for moving around the triadic universe starts with the choice to prioritise either common tone retention or smoothness of voice leading.[12] However, in my analyses throughout the following chapters, I will not rely heavily on the specific distance between chords. Instead, my focus will be on charting paths through pitch space, observing the visual proximity of harmonies on my diagrams and seeking recurring patterns in Liszt's late harmonic practice. A central tenet of this study is the qualitatively new way of discussing harmony through the neo-Riemannian visual tools and the potential it opens for new findings in the polymorphous harmonic styles of the late nineteenth century, Liszt's music being a highly potent case in point.

Before moving on I would like to insert an important side note here. Despite the clear lines of continuation running from Riemann's original ideas and treatises towards contemporary neo-Riemannian theory, it should be born in mind that there are some significant differences between the methodologies, technologies and the basic assumptions about tonal harmony of the two. These have been investigated by Steven Rings, who has attempted to partially reconcile them by seeking what the two have in common as core analytical values.[13] In

[11] Richard Cohn, *Audacious Euphony – Chromatic Harmony and the Triad's Second Nature.* (New York, 2012, 1-8).
[12] Ibid, pp. 5-8.
[13] Steven Rings, "Riemannian Analytical Values, Paleo- and Neo- ", in: Edward Gollin and Alexander Rehding, *Oxford Handbook of Neo-Riemannian Music Theories* (New York, 2011, 487-506).

short, throughout his career as a theorist Riemann had been led by the belief that all the music he analyses and considers of value is grounded in his functional tonal system and any excessive chromaticism, which is harder to explain with his functional labelling is considered a divergence from his tonal rules, or in other words, an expansion of the tonic, which gets subsumed into the same all-encompassing laws of tonal motion, regardless of the specific context of the composition. Unlike this self-proclaimed formalism of Riemann, his music-theoretical successors towards the end of the twentieth century were focusing on the structural particularities that make the great musical works of the Romanticism unique, while establishing a normative system of harmonic relations for it and explaining these with independence from the so-called paleo-Riemannian tonal system. Despite this apparent conflict on a conceptual level, Rings arrives at the following concluding remarks:

> Is the 'coherence' of the neo-Riemannian analyst really that far removed from the 'logic' or 'syntax' of Riemann? Despite some obvious differences in philosophical underpinnings, both projects are underwritten by a drive towards systematization and logical rigor; a penchant for elegant, symmetrical theoretical structures; and a desire above all to detect *order* in complex music, containing harmonic extravagances in controlled, rational spaces. These values, it would appear, are pan-Riemannian.[14]

I would only like to add that in the current study I am concentrating on what brings together the two dichotomous ways of relating chords to one another, and correspondingly, on how the two theoretical perspectives on that can work together to create a more holistic picture of harmony in late Liszt.

[14] Ibid, p. 499.

2. Richard Cohn's 'double syntax' – a basis for hybrid methodology for analysing Liszt's polymorphous late harmony

Before focusing on Cohn's specific neo-Riemannian models, which I will be applying throughout this study and more exclusively throughout Part II, the double harmonic syntax concept of this author should be introduced, as it will be at the basis of my analyses throughout Part I. The term 'double syntax' implies the co-existence and mutual complementation of different kinds of logic in the way chord progressions and phrases are built.[15] The logic of semi tonal voice leading between chords and the logic of moving between chords from the same (or a close) diatonic collection are not only different, they are diametrically opposed ways to measure distance between chords. The former is based on the chromatic proximity of chords in 12-tone pitch space, while the latter derives from the closeness of their roots in the overtone series, where the fifth is more acoustically consonant than the third. However, Cohn has demonstrated that the two types of syntax can sometimes operate at the same time in a passage, which is the reason he considers them to function as an inseparable whole.[16]

In order to account for the surface-level and large-scale functionality in a selection of late Liszt pieces with more conservative harmony, I will be subjecting these to functional analysis, labelling chords as *tonic* (***T***), *subdominant* (***S***) and *dominant* (***D***). In addition to the three main functions, some variants of them,

[15] Richard Cohn, "Double Syntax and the Soft Revolution", in: *Audacious Euphony – Chromatic Harmony and the Triad's Second Nature* (New York, 2012, 195-210).

[16] Ibid, pp. 199-201. After giving a short overview of what sceptics of such hybrid methodologies has had to say against it, Cohn lists three reason why it nevertheless can be fruitful. I particularly sympathise with the third of these: 'Double syntax provides a framework through which to achieve a perspective on some aspects of the historical developments that connected the First and the Second Viennese Schools, such that we can see how the one in some sense "became" the other.'

rooted on an alternative scale degree or derived through modal mixture, may be identified. As such, a tonic-functioning chord on the third scale degree would be labelled ***TIII*** in a minor key and ***Tiii*** in a major key, or more loosely, as ***Tv*** – denoting a tonic *variant*, whenever the new tonic contains pitches outside of the main diatonic collection. Similarly, a subdominant-functioning chord on the second scale degree within the main key would be labelled as ***SII*** or ***Sii***, depending on whether it is a major or minor triad, or as ***Sv*** – when outside of the main diatonic collection. Last but not least, all dominant-functioning chords will be labelled with the same ***D***, in order to limit the amount of different labels, but also keeping in mind the observation that in some highly chromatic contexts even Riemann with his original system of labels has encountered problems in his attempts to account for each chord with a specific label and to keep being theoretically consistent.[17]

Chapter III will comprise functional analyses based on my harmonic reductions of five of Liszt's late piano pieces. The focus in these will be on what I call the *functional frame* or *functional skeleton* – a hierarchical structure of tonic-, dominant- and subdominant-functioning chords and sections, with only occasional remarks on the non-functional harmonic logic of some other segments, which will be labelled as *functionally independent*. Coming in as an analytical tool in chapter IV, the *Tonnetz* will serve to show a variety of double-syntactic situations and the discussion will accordingly shift between selected segments of pieces, abandoning the large-scale analysis approach of chapter III. As Cohn has remarked, the two perpendicular axes of movement on the *Tonnetz*

[17] See Alexander Rehding, "Tonality between Rule and Repertory; Or, Riemann's Functions – Beethoven's Function", *Music Theory Spectrum 33/2* (2011, 109-123), in which the author demonstrates that Riemann's sophisticated theoretical system has run into trouble throughout his large-scale project to analyse functionally all of Beethoven's piano sonatas. Of particular concern for the theorist remain the occasional symmetrical divisions of the octave, when the harmony moves in consecutive thirds, and the enharmonic alternatives, when interpreting the functional relation between diatonically distant key areas.

(up-down and left-right) correspond to the two types of harmonic syntax – chromatic and based on smooth voice leading or diatonic and based on functional chord relations.[18] Accordingly, throughout chapters IV, V and VI of this dissertation double-syntactic situations will be shown on the *Tonnetz* with focus on the balance between horizontal (diatonic) and vertical (chromatic) movement, whereby green arrows are used for the former and yellow arrows for the latter.

Of primary importance for the larger scale analyses throughout this study (and generally) is the question of how we determine what the essential harmony is and under what conditions certain tones and chords are dismissed as inessential or not participating in the overarching harmonic structure. While Middleground and Background prolongations supress and conceal the kind of chordal relationships that are important to highlight in late Liszt (as I will show), I do not reject Schenkerian techniques of reduction altogether. Indeed, these have been helpful to some extent in preparing the notational reductions I offer as the basis for my neo-Riemannian diagrams. A clear sequence of chords is often not easily perceivable from a Liszt score and it has been necessary to produce one, in order to make it clearer what it is that is going to be depicted on the neo-Riemannian *Tonnetz*. In similarity to a conventional Schenkerian graph, different note heads have been used for harmonies with different structural importance, but I should stress that my reductive decisions have been more context-dependant and considering other factors such as rhythmic or dynamic emphasis. Also, a contextual harmonic frame of reference has been identified for many, especially shorter pieces. For example, the augmented triad has been considered to be a main harmonic frame of reference for *Nuages gris* (hence the discussion

[18] See *Audacious Euphony*, pp. 169-189, where Cohn demonstrates how diatonic chord relations and modulations to more distant key areas get mapped onto the *Tonnetz*.

of this piece is in chapter VII), and therefore any further pitches attached to it have been considered subsidiary in my harmonic reduction of this piece. Consequently, these have been either omitted or shown in smaller note heads. Last but not least, it must be acknowledged that extracting the essential harmony in some of Liszt's late music is particularly challenging, considering its harmonic diversity and complexity. In such cases some of my reductional choices might be debatable. However, I have always attempted to provide a clear and detailed enough rationale for each of my reductions and to annotate these, whenever it is needed to clarify the relation between the reduction and the neo-Riemannian diagram based on it. Lastly, it should be noted here that in some cases some tones and chords, which would be considered passing or neighbour tones and harmonies in a strictly tonal context, have been included in my *Tonnetz* diagrams, as I have considered them to be essential participants in a chromatic progression, which is interesting to chart from a transformational point of view. In short, different harmonic contexts may invite different kinds of harmonic reductions, some of them more succinct, some being more detailed, and a flexible approach in the analysis of such a stylistically diverse repertoire should be most suitable.

3. A purely neo-Riemannian methodology for Liszt's non-functional late chromatic harmony

After exhausting the issues of the double syntax in late Liszt, I will transition into the second main objective of this study – to outline a set of categories for conceptualising non-functional chromaticism through neo-Riemannian theory in this repertoire and to test how far it is possible to get with

providing original insights on harmony exclusively with this theory. To begin with, Richard Cohn's models for exploring non-tonal chord relations should be introduced.

The first such model, which I will repeatedly refer to, are the so-called *Hexatonic Cycles*.[19] Given any consonant major or minor triad, a single semi tonal

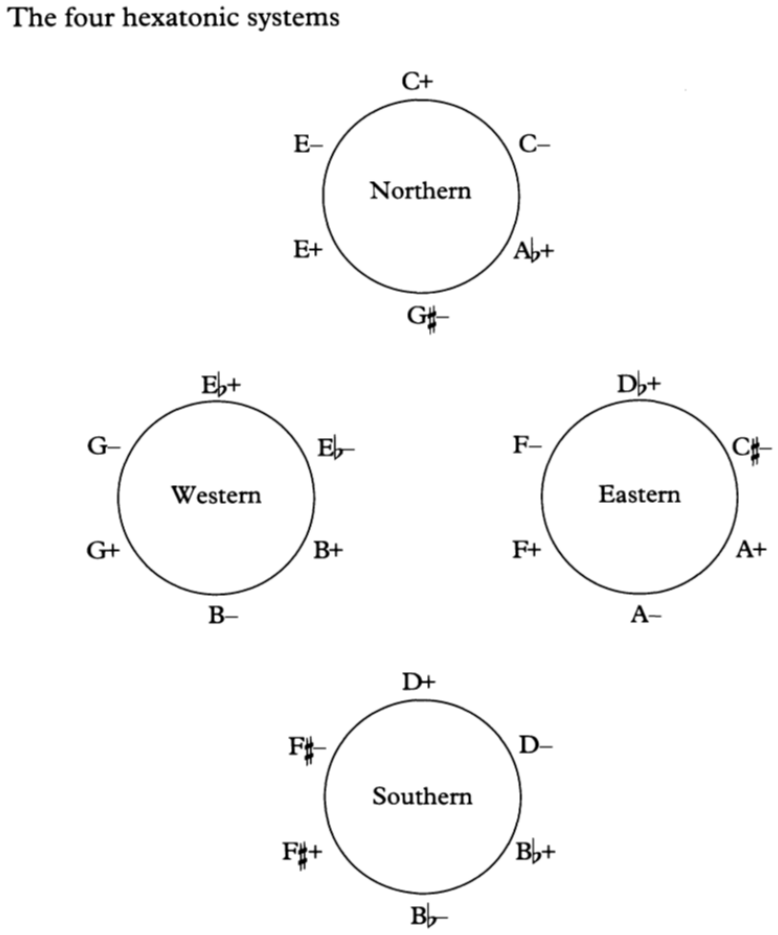


Fig. 2.2. Richard Cohn's four Hexatonic systems from *Maximally smooth cycles, Hexatonic systems and the analysis of Late-Romantic triadic progressions*, 1996, p. 17.

[19] *Audacious Euphony*, pp. 17-41.

displacement in one of its three pitches produces another consonant triad. If the same minimal-work displacement is applied to a different voice in the second triad we get a third triad and this chain continues until the sixth triad returns back to the first after its semi tonal transformation. This happens by alternation between the basic ***L*** and ***P*** transformations and the consequent transition through three major and three minor triads. First introduced in Cohn's article from 1996, the four Hexatonic cycles are reproduced here as figure 2.2.[20] In

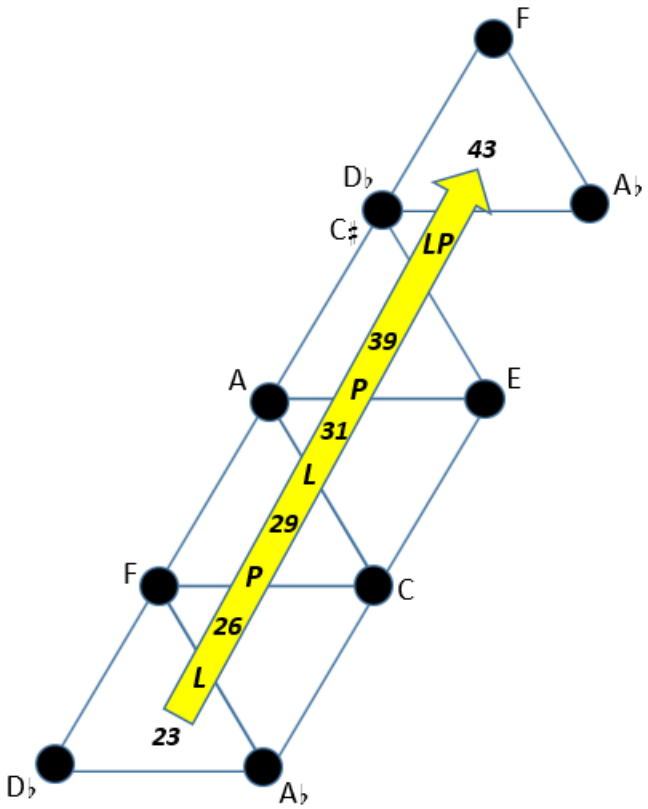


Fig. 2.3. A triadic chromatic progression through a Hexatonic cycle, taken from Liszt's *Consolation* no. 3 (S. 172/3). The figure is based on Cohn's figure 2.11 (b) from *Audacious Euphony*, p. 30. Bar numbering for the progression is given and transformations are labelled as *L*, *P* or *LP*.

[20] Richard Cohn, "Maximally Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions", *Music Analysis* 15/1 (1996, 9-40).

Cohn's book such circular progressions are taken and outlined from pieces by Brahms, Franck, Mahler, Wagner and Liszt. Particularly clear and informative for any beginner neo-Riemannian analyst is Cohn's example from Liszt's *Consolation* no. 3 in D♭ major.[21] A chain of the basic ***L*** and ***P*** transformations moves the tonic D♭ chord through its Hexatonic cycle until it is reached again towards the end of the piece. Only the penultimate chord in the sequence – C♯ minor – is omitted before the return of the tonic D♭ major, but the way Liszt ignores diatonic relations and smoothly progresses through the cycle in a very systematic way suggests of his awareness of this alternative harmonic syntax. Another such chain progression occurs in the late piece *Am Grabe Richard Wagners* (but ***R-L***, *Relative – Leittonwechsel*, in this case), again carried out in a very systematic way, and these will be traced throughout a number of Liszt's late piano pieces in the following chapters.

Although such text book examples of the basic neo-Riemannian transformations will be shown throughout this dissertation, interpreting harmony with this theory is generally more difficult for late Liszt than for pieces with clear triadic harmony such as *Consolation* no. 3. The reasons for that lie in some of the features of Liszt's late style – dissonant sonorities of four and more pitches, lack of clear distinction between chordal and non-chordal tones, also frequently there is a lack of *parsimonious* transformations and common-tone retention.[22] However, the alternative syntax, which Cohn talks about, is detectable in many of these pieces and it will be explored, while the limitations of neo-Riemannian theory can be exposed.

[21] *Audacious Euphony*, p. 30, more detailed analysis on pp. 172-173.
[22] Neo-Riemannian analysts call *parsimonious* those transformations that are most economical in their voice leading and this term will be applied accordingly throughout this dissertation.

Cohn's *Weitzmann regions* provide another model for exploring chromatic progressions, a model, which bears special relevance to late Liszt and it will be at the basis of my analyses in Part II, chapter VII.[23] Originating from the treatise *Der übermässige Dreiklang* (the augmented triad) of Carl Friedrich Weitzmann (1808-1880), these regions represent an alternative way of grouping the 24 consonant triads into four groups of six based on minimal voice-leading work between the members of a group.[24] In this case one of the four possible augmented triads is positioned at the center of each group, with six consonant triads around it (three minor and three major ones), each one resulting from a single semi tonal displacement of one of the pitches of the augmented triad. The

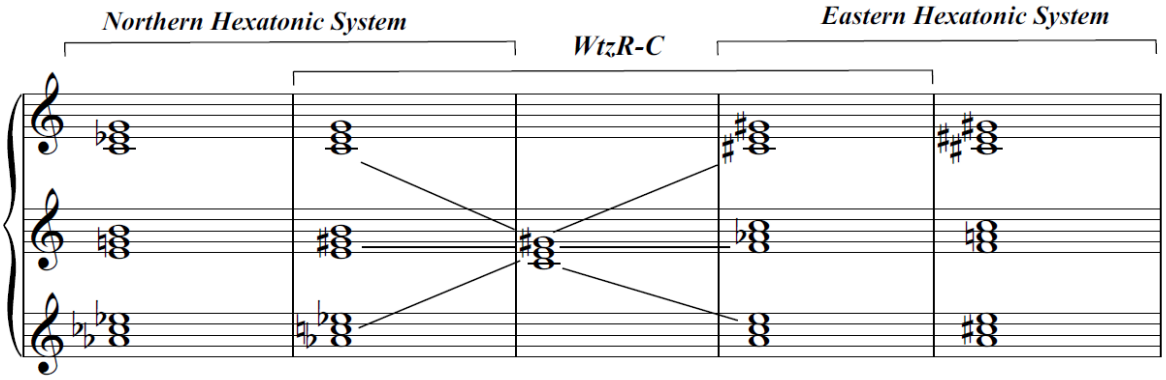


Fig. 2.4. Notation of a Weitzmann region with neighbouring Hexatonic systems.

chords of the Caug Weitzmann region (hereafter labelled ***WtzR-C***) are shown in figure 2.4, together with six more chords from its neighbouring Hexatonic cycles. A progression around a Weitzmann region consists of an alternation between the basic ***R*** (*Relative*) and compound ***N*** (*Nebenverwandt*) transformations. The

[23] "Weitzmann regions", in: *Audacious Euphony*, pp. 59-81.

[24] Carl Friedrich Weitzmann, *Der übermässige Dreiklang* (Berlin, 1853). This treatise will be discussed in more detail in chapter VII, where also the cross-influences between the theoretical work of Weitzmann and the compositional development of Liszt will be explored as a starting point of my analytical enquiry into certain late piano pieces.

latter connects a major chord to its minor subdominant and combines all three basic transformations – ***R+L+P***.

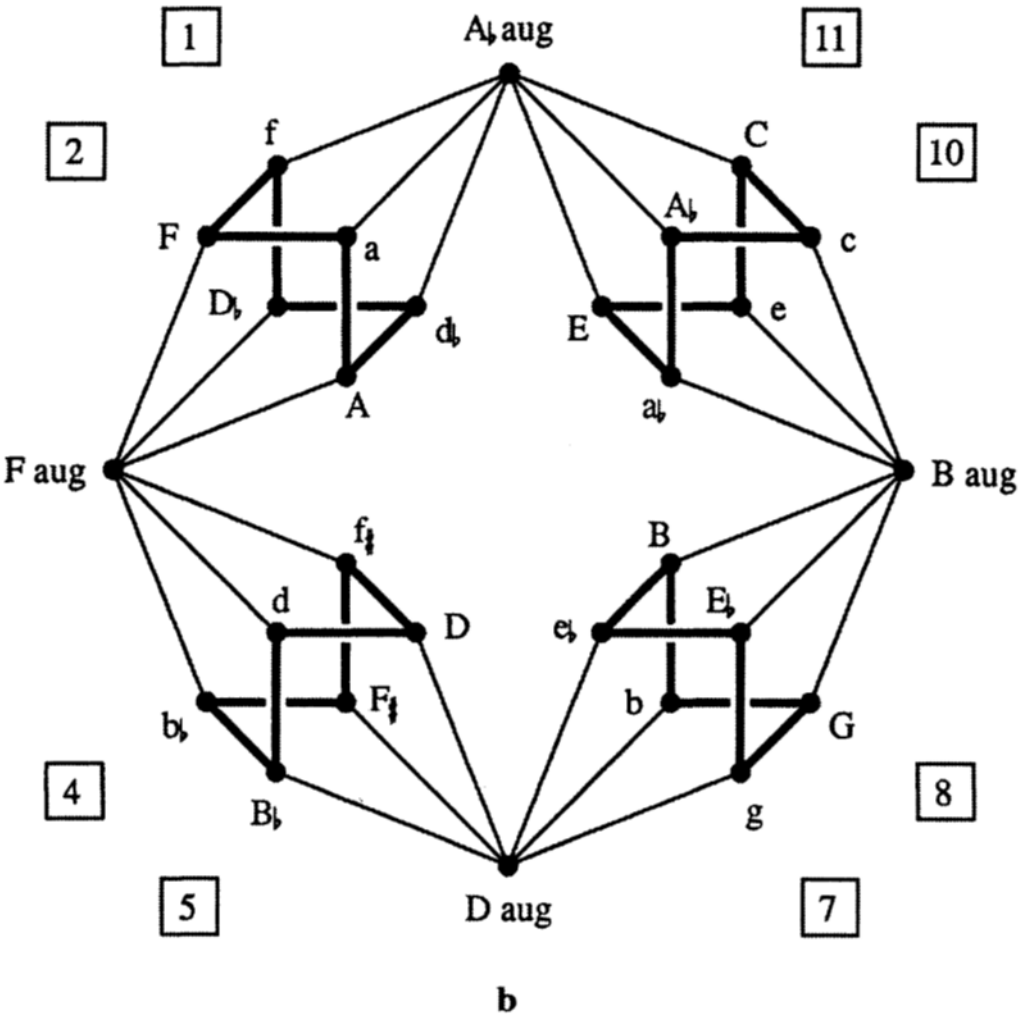


Fig. 2.5. Douthett and Steinbach's Cube Dance, *Parsimonious Graphs*, 1998, p. 254.

Cohn unifies Hexatonic cycles and Weitzmann regions with a circular system, which includes all the consonant and augmented triads. To visualise it he uses the so-called Cube Dance, which originates from an article of Jack

Douthett and Peter Steinbach.[25] Both *Tonnetz* and Cube Dance allow the visualisation of progressions, which move freely throughout the triadic universe, but the latter has the advantage of being 'a more direct model of true voice-leading distance, […] because it gives the augmented triad explicit locations'[26] (see figure 2.5). I will use Cube Dance in my own analyses in Chapter VII, because of its importance to the augmented triad – a chord, which is crucial to interpret in the context of some late Liszt pieces.

The main problem of the models summarised so far is that they solely concentrate on the interactions between triads – consonant and augmented – which are just a portion of the chordal diversity of nineteenth-century music. However, later in his book, Cohn proposes a model for connecting tetrads, which is very similar to the Weitzmann regions. This time he talks of *Boretz regions* and the name and idea are taken from the studies of the American composer and theorist Benjamin Boretz (b. 1934).[27] The three Boretz regions each have a diminished seventh chord at its center. Eight tetrads – four dominant seventh and four half-diminished seventh chords – connect to their corresponding symmetrical tetrad through single semi tonal displacements. Boretz regions connect to each other through octatonic regions – the tetra chordal equivalents of the Hexatonic cycles (see figure 2.6).

While being a very neat and rigorous analytical tool for analysing chromatic connections between the most common types of seventh chords, the

[25] Jack Douthett and Peter Steinbach, "Parsimonious Graphs: A Study in Parsimony, Contextual Transformations, and Modes of Limited Transposition", *Journal of Music Theory* 42/2, (1998, 241-264).
[26] *Audacious euphony*, p. 89.
[27] Benjamin Boretz, "Meta-Variations, Part IV: Analytic Fallout (I)", *Perspectives of New Music* 11/1, (1972, 146-223). Originally published in *Meta-Variations: Studies in the Foundations of Musical Thought* (PhD diss., Princeton University, 1970).

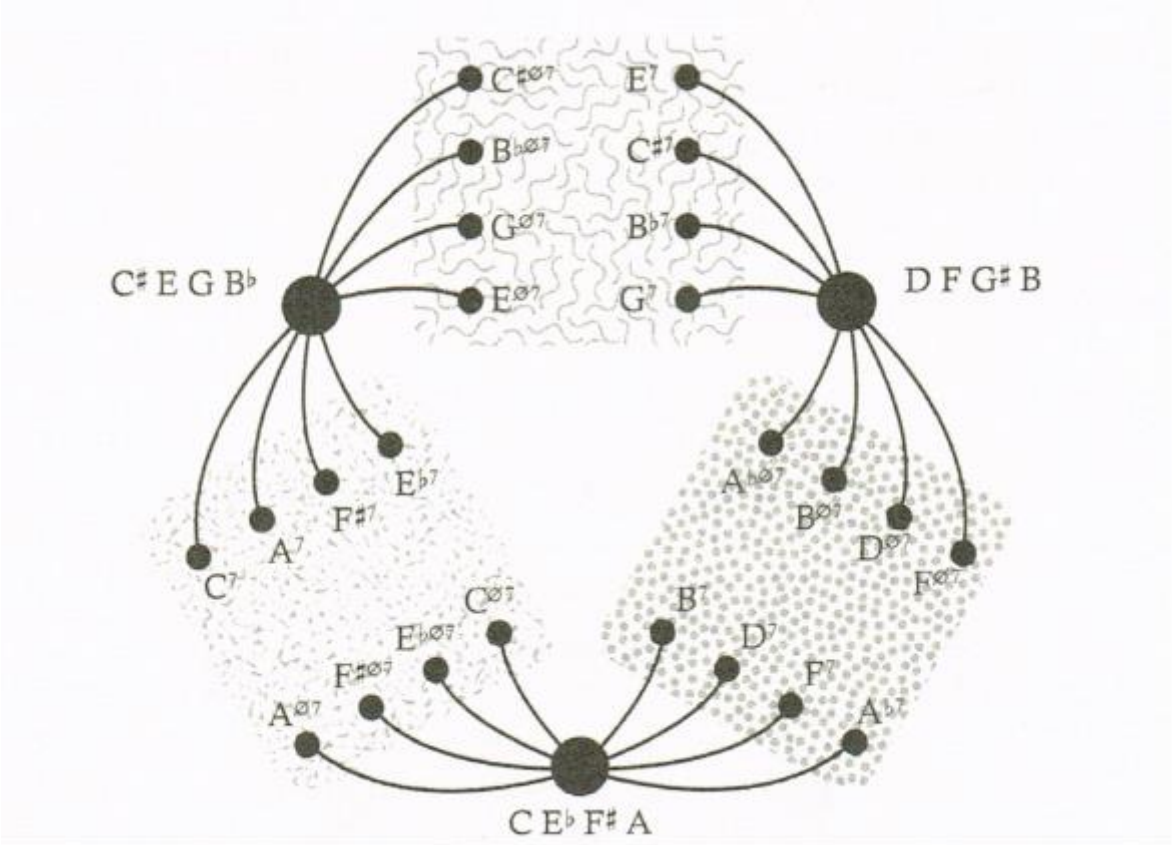


Fig. 2.6. Three Boretz spiders in union with three octatonic 'pools', *Audacious Euphony*, p. 157.

Boretz regions have turned out to be less applicable to late Liszt. The main reason for that is the fact that most of the time in Liszt there is a mixture of triads and tetrads within a unified harmonic progression, while the neo-Riemannian tools, outlined above, fail us in offering a unified model for both. This has been one of the major problems for neo-Riemannian analysis and it has been pointed out by Kenneth Smith and Dmitri Tymoczko, to name a few. After reviewing the important books of Tymoczko[28], Steven Rings[29] and Richard Cohn[30], Smith notes that 'for all the transformational maths in these volumes, we do not deal particularly well with simple additions to the number of pitch classes, nor the

[28] Dmitri Tymoczko, *Geometry of Music: Harmony and Counterpoint in the Extended Common Practice* (Oxford and New York, 2011).
[29] Steven Rings, *Tonality and Transformation* (Oxford and New York, 2011).
[30] Richard Cohn, *Audacious Euphony* (New York, 2012).

integration of triads and tetrachords'[31]. Indeed, the harmonic proximity of triads is based on major third transpositions, whereas the seventh chords need to be a minor third apart in order to be maximally close. However, it will be demonstrated throughout this study that Liszt has been employing a variety of chord combinations across a large number of chromatic progressions, and often without limiting himself to triads or seventh chords only. Therefore, my continuous work with this repertoire has made most of the neo-Riemannian analytical tools, considered initially to be viable, rather obsolete. As a result of that, only throughout chapter VII a geometrical tool different from the *Tonnetz* (Cube Dance in that case) will be systematically used. In all other chapters the long-lasting and ever-potent *Tonnetz* will be used to visualise harmony in a two-dimensional pitch space. One of the main objectives arising out of that will be to disprove the belief among neo-Riemannian scholars that the dissonant triads (augmented and diminished) as well as most of the tetrads commonly used in nineteenth-century music cannot be satisfactorily depicted on the *Tonnetz* and consequently progressions involving them cannot be clearly shown on this tonal grid. As it will become evident on the forthcoming pages, there are ways to depict augmented and diminished triads or seventh chords on the *Tonnetz*, even though these do not form triangles or some types of tetragons, but are only lines on the grid. As for the other types of seventh chords commonly used by Liszt, these form different kinds of triangles (whenever there is a repeated interval between pitches, so three pitches can lie on the same line – imagine the diminished triad within a dominant seventh chord) or tetragons, which can not only be depicted, but also their common tones and overlap can be observed on diagrams. In other words, it is easy to see on the *Tonnetz* how some triads are

[31] Kenneth Smith, "The transformational energetics of the tonal universe: Cohn, Rings, and Tymoczko", *Music Analysis* 33/2 (2014, 8).

subsets of some of the tetrads within a progression, while also different kinds of tetrads may share the same triad. Indeed, in some cases the proximity and overlap between chords makes it a challenge to show everything clearly, but after gaining an insight into the repertoire and testing different potential analytical tools for it, I have decided to take it to task and see what would the limits of the *Tonnetz* be in showing a large variety of chords and the progressions between them. Having included more than 70 original *Tonnetz* figures throughout this thesis, I remain hopeful that these will encourage other neo-Riemannian practitioners to rely more on this surprisingly robust analytical tool and apply it to all kinds of harmonic progressions from the Romantic period and beyond.

4. Dmitri Tymoczko's theoretical work and the limitations and advantages of the geometrical approaches to harmony

One final issue with the current neo-Riemannian methodology requires to be discussed at present. Firstly, it would not be fair to omit that Dmitri Tymoczko's book *A Geometry of Music*, which was only mentioned above in passing, is in fact one of the essential texts for any transformational theorist and for anyone interested in representing visually harmony from music of any genre and epoch. It enables a new way of thinking about such basic concepts in music as pitch, scale and chord, while positioning these into a variety of geometrical spaces, many of which, unlike Cohn's, are three-dimensional and allow a larger number of ways to visualise connections between harmonic entities. While I admit that *A Geometry of Music* has been inspirational for my methodology in a more abstract sense, I have not considered it crucial to develop any of its pitch

geometries for my current purposes. While being more detailed and versatile in showing chord or pitch connections, three-dimensional figures may pose the challenge of being more difficult to relate to what the music actually is in notation. Figure 2.7 represents Tymoczko's three-dimensional version of Cube Dance, in which the consonant and augmented triads are organised as the

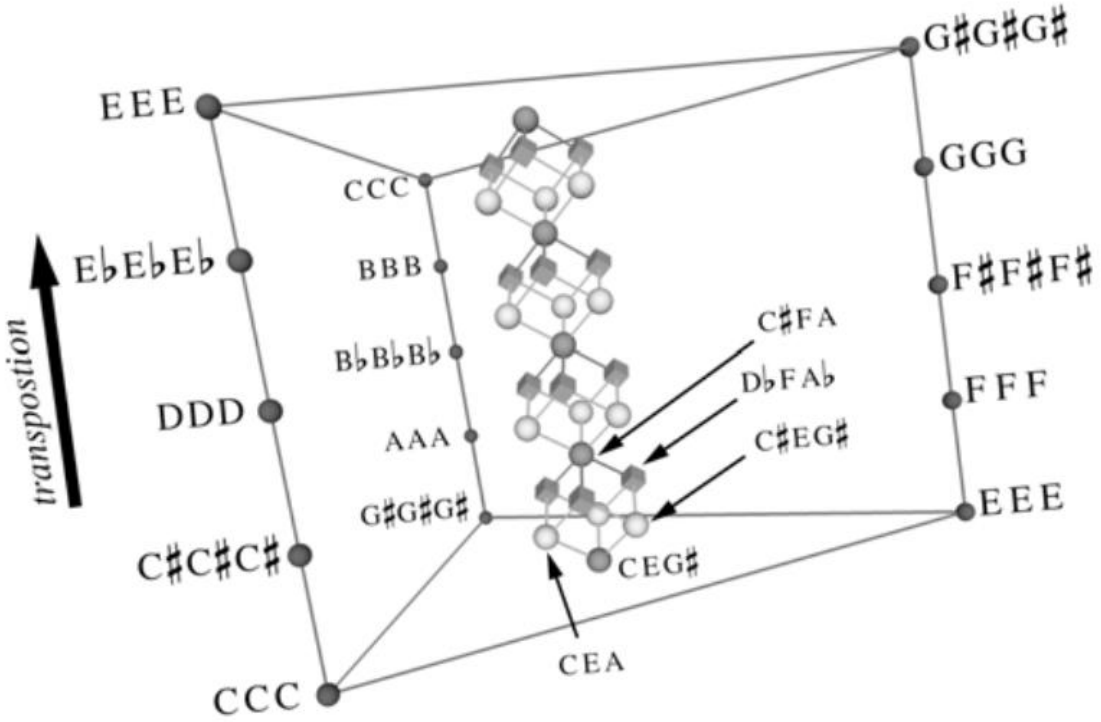


Fig. 2.7. Tymoczko's three-dimensional alternative of Cube Dance.[32]

vertices of four adjacent cubes. The latter are encapsulated into a pentahedron, which in my opinion does little to clarify the position of each particular triad around the cubes. The exact position of most chords in height and depth remain unclear and I would consider it an unnecessary challenge to depict any of the chord progressions analysed in chapter VII with such a visual tool.

[32] Dmitri Tymoczko, "Three Conceptions of Musical Distance", in: *Mathematics and Computation in Music*, ed. Elaine Chew, Adrian Childs, and Ching-Hua Chuan (Heidelberg, 2009, 5).

However, Tymoczko's insights about conceptualising harmony and pitch space geometrically are often highly valuable and I would like to finalise this chapter with some of his thoughts about the limitations and – last but not least – the advantages of these. In a succinct, but highly informative article of his, this author points out that 'larger distances in the [pitch] space do not faithfully mirror voice-leading facts.'[33] Providing a simple example on the *Tonnetz* proves the point: C major and F minor are closer to each other in voice leading (only two units of voice leading work apart) than C major and F major (three semi tonal shifts apart). However, the former pair seems to be more distant on the tonal grid than the latter, resulting from an ***RL*** compound transformation, whereas the latter couple of chords is related by the combination of all three basic transformations – ***RLP***. As an extension of this dichotomy, the further apart chords are on the *Tonnetz*, the less accurate the visual representation of their real voice leading is. In fact, the unfaithfulness of such transformational tools to voice leading has only become apparent once theorists have modelled geometrically relations between chords of four and more notes, which has exposed visually the problem already discussed – that 'it is difficult to represent voice-leading relations between chords of different sizes.'[34] However, after observing the properties of different geometrical shapes for different combinations of chords, Tymoczko concludes that 'some graphs are useful primarily insofar they depict a collection of local moves, while others give rise to a more complex geometry […].'[35] Relating all these observations to my current analytical aims, I would like to stress once again that my neo-Riemannian focus in this study will not be as much on measuring voice leadings and chord distances with precision, but on looking for recurring harmonic patterns and logic, which

[33] Dmitri Tymoczko, "Geometrical Methods in Recent Music Theory", *Music Theory Online* 16/1 (2010, 1).
[34] Ibid, p. 2.
[35] Ibid.

reaches beyond the tonal and functional implications of chord progressions. Lastly, Tymoczko has summarised clearly enough what it is that distinguishes the neo-Riemannian visual method from the traditional score-derived analytical figures:

> The geometrical patterns virtually jump off the page, without any effort or concentration on the analyst's part, whereas the corresponding musical patterns are much harder to identify. This is largely because our visual system is optimized for perceiving geometrical shapes such as triangles, but not for perceiving musical structures as expressed in standard musical notation. Translating the music into geometry thus allows us to bring our formidable visual pattern-matching skills to bear on musical analysis.[36]

[36] Tymoczko, *A Geometry of Music*, p. 76.

Part I

Liszt's Double Harmonic Syntax

Introduction

There is a substantial number of late Liszt pieces, which have throughout the years been left out of the narrative about the modernity of the composer in his late music. Many such piano works do not exemplify any of those most avant-garde harmonic devices, which have initially drawn the attention of analysts to the repertoire.[1] Although being studied in detail by a number of scholars from the 1970s onwards, those pieces have been analysed primarily in order to demonstrate the importance of tonality, tonal voice leading and diatonicism for Liszt's compositional processes even up to his very final years.[2] The choice of Schenkerian analysis or Schenkerian-derived reductive methodologies by itself implies the seeking of tonality or at least of some kind of tonal centricity in this repertoire. However, with my hybrid methodology, which will be employed most systematically throughout chapters IV, V and VI, I will not imply *a priori* that either the more traditional or the more modern features of this music have been more important than the other for Liszt. This question will be left open and it will

[1] I am by no means implying that the more conventional features of Liszt's late music (such as his use of tonality in the traditional sense) have not been surveyed and explored in detail already. The studies of Baker (1990), Dickinson (2002) and Loya (2011) are just a small portion of the vivid examples in this respect.

[2] Such pieces include the selected five, which will be analysed on a larger scale in the current chapter, but also a number of other solo piano works, which are more or less dependent on tonal syntax and employ functional chord relations. See Dolores Pesce, *Liszt's Final Decade* (Rochester, 2014, 209-211) for a table layout of the original piano works from 1877 onwards, of which there are 56. 28 of these have not been published in Liszt's lifetime, but only 8 pieces are marked as 'cited by scholars for experimental tonal language'. *En rêve* falls within this category, but it will be shown in this chapter how it is still largely dependent on the key of B major. Logically, the other 7 'experimental' pieces will be in focus within the exclusively neo-Riemannian Part II.

be approached on a contextual basis, while the more established (functional) and the more modern (neo-Riemannian) modes of analysis will be balanced, depending on the specific situation in each piece.

It will be demonstrated that the two types of harmonic syntax can sometimes operate at the same time in a passage, which is the reason I consider them to function as an inseparable whole. Also, they can interact in several different ways across the late pieces, which have been examined. A mere functional analysis (or Schenkerian or Roman numeral for that matter) or mere neo-Riemannian analysis would not be equally successful and reasonable for all of Liszt's pieces considered in the following four chapters, especially when it comes to the more conspicuously polymorphous works. By contrast, switching between the two theories or juxtaposing their analytical results within the same passage has proven to be a much more fruitful and flexible approach.

Four different *species* of the double syntax are conceptualised in Part I (to distinguish these from the two *types* of harmonic syntax) and accordingly, these are outlined in four chapters, with examples of each given from the same ten late piano pieces. The four species are titled and described as follows:

1) Functionally framed double syntax (Chapter III) – occurs in pieces, composed in a single tonal area, which open and close in the same key (or versions thereof, whenever a minor key is substituted with its parallel major). These are the most conventional works of Liszt considered in the current study and as such they have been largely neglected in the analytical literature at the expense of the more avant-garde, unusual pieces, which initially drew the attention to this repertoire. The clearer statement of the tonic key in the works from this category will make the functional analysis viable and for most part

unproblematic. Nevertheless, neo-Riemannian transformations are not alien to these pieces, occurring in them solely or for most part on a surface level and sporadically. Such harmonic episodes will be labelled as *functionally independent* (instead of having ***T***, ***S*** or ***D*** designations) and will be discussed in more detail throughout chapters IV-VI.

2) Simultaneous double syntax (Chapter IV) – occurs whenever a chord progression or a section of a piece can be described successfully with both functional and neo-Riemannian analysis. In other words, the progression is both functional and parsimonious (based on close related chords under chromatic voice leading). This is where the ***T***, ***S*** and ***D*** functional designations and the ***P***, ***R***, ***L*** neo-Riemannian transformations can be superimposed in my *Tonnetz* diagrams. It will be interesting to find out how the two are related and each of them contributes to the harmonic meaning of the passage.

3) Successive double syntax (Chapter V) – this term will be used to describe the alternation between purely (or largely) functional with purely (or largely) non-functional chromatic and parsimonious sections in a piece. In this case it is important to evaluate the role of each passage and the purpose of their juxtaposition in the context of the whole piece.

4) Structurally differentiated double syntax (Chapter VI) – with this final species of double syntax its two types can be discussed as operating at different *structural levels* in the harmony of some pieces. There are two

ways for the diatonic functionality and the non-functional chromaticism to coexist at different levels of the structure – a functional background to more chromatic foreground progressions or a chromatic background to functional foreground progressions.

Chapter III

Functionally Framed Double Syntax

This analytical journey through late Liszt will start with a selection of pieces from the period 1874-85, which within the repertoire considered currently are the ones with clearest projection of tonality in their structure and I consider them most appropriate for a full-scale functional analysis. These pieces all establish their main key either at the very beginning or after a more harmonically obscure introduction. Moreover, that key is reaffirmed throughout the form with the use of traditional cadences, even though it may be obscured by less conventional means – through unusual sequences of secondary dominants, sudden transposition to secondary key areas which are diatonically distant or through occasional harmonic progressions with unclear functionality. As already mentioned, non-functional chromatic transformations always occur in Liszt and these will be pointed out throughout this chapter, so that their placement and role within the larger scale *functional skeleton* can be discussed, while a systematic application of neo-Riemannian theory will be reserved for the next three chapters.

The functional analyses which will follow continue a line of studies dedicated to demonstrating Liszt's ties with the compositional traditions of his recent past. In James Baker's words, he was trying to 'trace forward [Liszt's] use of tonal procedures in the later works'.[3] Dickinson's objectives are similar in her

[3] James Baker, "The Limits of Tonality in the Late Music of Franz Liszt", *Journal of Music Theory* 34/2 (1990, 146).

doctoral dissertation.[4] There is a succession of similar mostly Schenkerian studies, which has started with David Damschroder's doctoral thesis (1981).[5] Having exposed some of the limitations of Schenkerian analysis in the context of late Liszt in chapter I, I will now point out the advantages of functional analysis in the case of the current chapter. Firstly, in all of the pieces analysed below there is an abundance of dominant-tonic relationships on both chord-to-chord level and larger scale in the form. Showing these in score reductions clarifies the functional harmony and the hierarchical levels, at which chords and whole sections function. Secondly, it is no coincidence that both *Funktionstheorie* and neo-Riemannian theory have their inception in the ideas of the same theorist. Attempting to conceptualise both chord relations by fifths and the more chromatic ones by thirds under the same functional principles, Hugo Riemann has opened the door for future theorists and analysts to explore the more chromatic music of his time by acknowledging the mutual supplementation of two different types of harmonic logic.[6] Acknowledging Riemann's significant contributions to music theory, but also being aware of the music-historical distance we have from him today, I am aligning with modern neo-Riemannian theorists and seeing *functional* chord relations with their more diatonic context as separate from chord *transformations* in the context of more chromatic harmony.

[4] Stefanie Dickinson, *Tonal Voice Leading as an Analytic Basis for Liszt's Late Experimental Works,* (PhD diss., University of Rochester, 2002).

[5] David Damschroder, *The Structural Foundations of "The Music of the Future": A Schenkerian Study of Liszt's Weimar Repertoire,* (PhD diss., Yale University, 1981).

[6] Note that one of Riemann's main theoretical endeavours was to relate all harmonies in a given context to one of the three main functions, no matter how remote or distant they are. He also illustrated the thus arising chord relations on his own version of the *Tonnetz* (not his own creation, but derived from Ottokar Hostinský's *Die Lehre von den musikalischen Klängen* (1879). It is with the development of those more radical ideas of Riemann by David Lewin (1984) and later theorists that the more diatonically distant chord relations ensuing from ***R***, ***P***, ***L*** and other transformations divorce neo-Riemannian theory from *Funktionstheorie* and the former stops being interested in referring back to the concept of the tonic.

1. *Valse Oublieé* no. 1

Although it is composed as late as 1881, *Valse oublieé* no. 1 (S. 215/1) clearly establishes the key of F♯ major and both in terms of use of harmony and overall style can be compared to Liszt's earlier piano music. Nevertheless, there are numerous examples of parsimonious chromatic voice leading between chords in this waltz, which will be examined in relation to the larger scale functionality of the piece.

The 16-bar introduction of the piece is based on the diminished seventh chord comprising the pitches F, G♯, B and D, decorated by half-diminished seventh *appoggiaturas*. Inferring the function of the chords retrospectively, after the main key of F♯ major is introduced from bar 17, Fdim^7 turns out to have served as a dominant (vii°^{7}) in respect to the main tonic, whereas the half-diminished chords can be interpreted as subdominants, unrelated to the main ***S*** in F♯ major, therefore labelled as ***Sv*** (*subdominant variants*) on figure 3.1. My harmonic reduction of the waltz brings forward in unfilled note heads the chords, which make up the functional skeleton of the piece, while the other harmonies, shown in smaller and filled in note heads do not have a clear function, but are significant for their chromatic closeness to the more structural chords – a fact that will come to the fore in my later neo-Riemannian revisits of the piece.

The main theme outlines the main dominant and tonic chords in bars 17-24 (C♯^{7} resolving to F♯) and the melodic outlining of these makes the relation clear enough, despite the rather weak harmonic support. This most basic progression (dominant to tonic) is repeated in the next eight bars, before getting transposed a major third upwards, reaching the E♯^{7} and A♯ minor chords – the latter labelled accordingly as ***Tiii***.
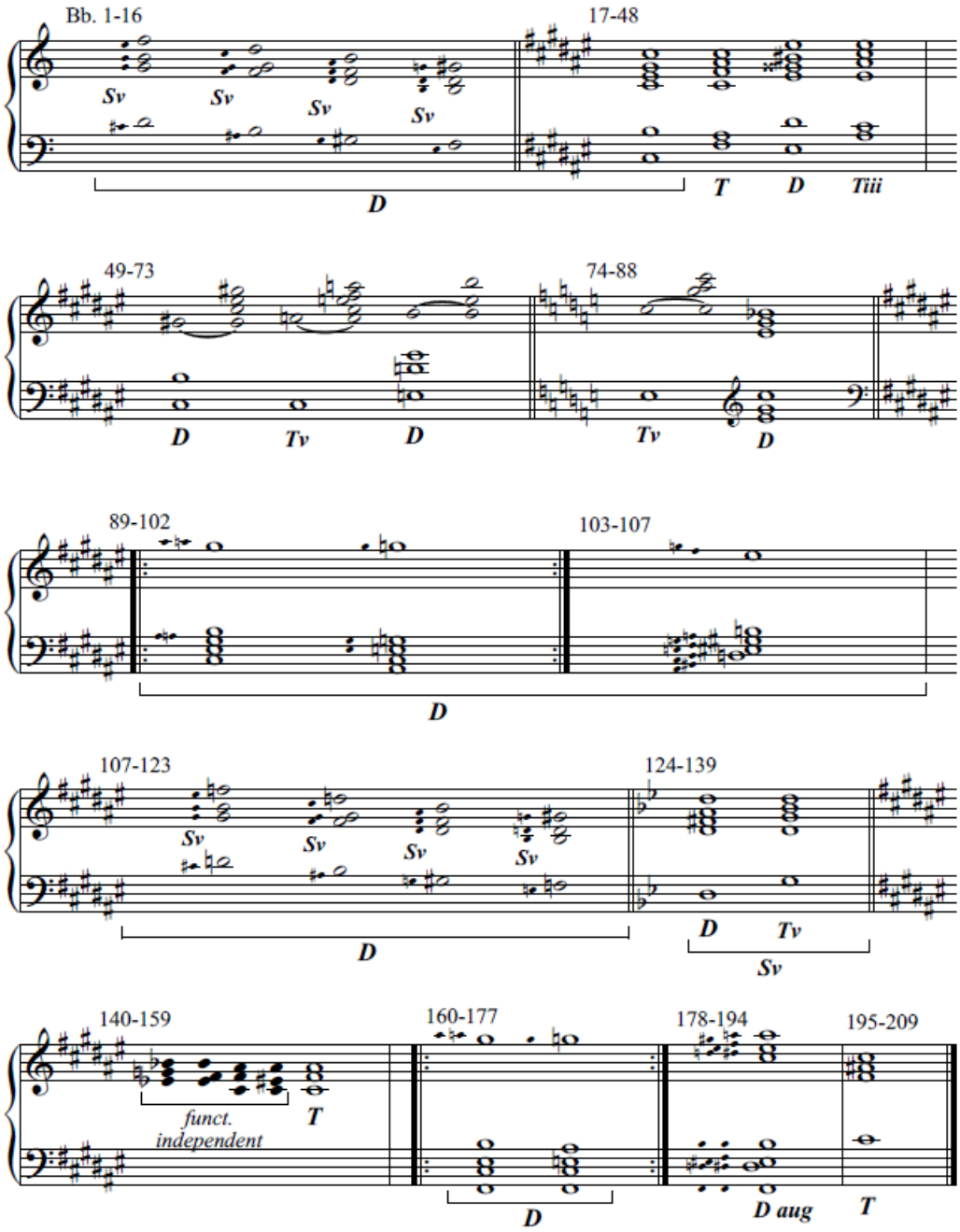


Fig. 3.1. The functional skeleton of *Valse oublieé* no. 1.

A new melodic idea is introduced in bars 49-64. The harmony returns to the initial dominant-functioning C♯^{7}, but the harmonic rhythm is augmented – both the dominant and the tonic are prolonged throughout eight bars, instead of the initial four. Moreover, F♯ major is now substituted by its parallel minor

chord (hence ***Tv*** in my reduction, meaning a variant of the tonic) and the seventh E is added to the F♯ minor triad. In similarity to the main motif, this one also gets transposed, but this time a minor third upwards, to reach the dominant-tonic relation between E^7 and Am^7. In short, after the tonicisation of the *mediant* in F♯ major (bars 33-48), the equivalent chord is tonicised in the parallel key of F♯ minor.

Bars 81-88 constitute a short transition – a fraction of the main motif is repeated several times, creating a harmonic ambiguity between C^7 and the diminished seventh chord on E. It turns out that, while apparently not abandoning functional harmony for a moment, Liszt has gradually dispensed with the black keys and reached the most distant chord to the main tonic – the tritone-distant C major. However, immediately after that the six-sharp key signature is restored for the passionate second theme, which is built upon a long standing on the dominant bass note C♯. Although the main dominant is substituted by several other chords in close chromatic proximity to it (to be described and discussed in more detail later), the long pedal tone has enough weight to remind the listener of the F♯ major tonic and therefore I am not hesitant to label this whole section with a ***D*** in my harmonic summary of the piece (fig. 3.1). The $A♯dim^7$ in bars 94-96 can serve as a dominant towards the main subdominant (B major), but instead it either leads to the return of the A♯m (bar 97) or initiates a sequence of dim^7 chords, which eventually return the $Fdim^7$ from the introduction.

What follows after the reiteration of the introduction is a harmonically, structurally and texturally altered repetition of the already heard material. The opening D-D♯-E♯ motif is enharmonically reinterpreted as D-E♭-F. This serves to lead towards the reprise of the main theme a semi tone higher – in G minor. In the context of the F♯ major main key G minor might be seen as its *Neapolitan*

chord – substituting for the subdominant, before the tonic returns a bit later. Contrary to the opening of the piece, this time there is no transposition of the theme a third higher – what comes instead is a new transition, which serves to lead straight into the *appassionato* section. In the context of the current analysis the subtle chromatic transformations within this transition are only passing harmonies, which connect the subdominant to the tonic.

The more tender version of the initially passionate and loud section is extended differently this time – G♯dim^7 is smoothly transformed into B major, the latter quickly being substituted for the more dissonant B^7 with a sharpened fourth (E♯ instead of F♯ – see bars 178-194). However, the most important difference between the two iterations of this second theme is the presence of a tonic pedal F♯ this time. Naturally, the dominant-leaning section resolves into a more tonic-oriented version of itself towards the end. Another conspicuous melodic gesture at the end of this section is the emphasis on A♮, which transforms the main dominant into an augmented version of itself. This is one of the most common ways to use the augmented triad in functional contexts throughout the music of the nineteenth century. As for Liszt's non-functional and less conventional uses of it – the whole chapter VII will be dedicated to this topic.

The piece finishes with a typical late Liszt gesture – a monody, which implies openness and lack of decisiveness in its conclusion. The main theme is rhythmically augmented and deserted on a C♯ – the pitch, which is also the root of the opening C♯m^7 chord. Still, the preceding long tonic pedal makes this final unaccompanied reiteration of the main theme sound in the tonic and therefore I have reduced it to the pitches of F♯ major in the final bar of my harmonic reduction of the piece.

Broadly speaking, *Valse oublieé no. 1* conforms to the most basic features of eighteenth- and nineteenth-century tonality, beginning and ending on the same tonic of F♯ major. However, there are several moves towards A♯ minor (the ***Tiii***), which is not used as a subsidiary key and approached through a common-practice modulation, but is treated more like a modal variant of the tonic – appearing initially after a major third transposition of the main theme and later to introduce the second theme. Upon the repetition of the first theme, the tonic F♯ major is substituted with its subdominant-functioning *Neapolitan* harmony on G minor, which makes sense as a temporary move away from the dominant-tonic polarity earlier on. However, Liszt demonstrates his freer, chromatic thinking when it comes to the chord-to-chord progressions and avoids clear dominant-to-tonic cadences, especially at the end. The long standings on the dominant (bars 89-106) or the tonic (160-192) are diversified through subtle chromatic inflections in both the melody and the harmony. Also, diatonically distant harmonies such as G minor and F♯ major are connected within a short time span (see bars 138-145) through chromatically shifting one pitch at a time, thus leading quickly from a key with two flats to another one with six sharps.

Understanding *Valse oublieé* no. 1 as an example of a functionally framed piece with some examples of the typical Lisztian chromatic transformations is not the only way to conceptualise the double harmonic syntax in it. Two more species of this syntax will be exemplified with this waltz in chapters V and VI.

2. En rêve

This delicate nocturne (composed in 1885, catalogued S. 207) is among Liszt's very last completed compositions. It has a strong sense of key despite otherwise sharing many stylistic features with other, more harmonically radical late works (concise form and texture, fragmented phrasing, and a conclusion that shares many aspects of other open-ended cadences, despite ending on the tonic).

What is most audible in the piece is the never-ending dominant pedal F♯.[7] The second inversion of the tonic chord (F♯-B-D♯) is used throughout as a substitution of its root position. I have labelled it as such with a ***T*** throughout my functional reduction of the piece (figure 3.2) with the sole exception of the first bar of the piece, where the $^{6}_{4}$ is part of a conventional double *appoggiatura* on the main dominant. Even in the final cadence the tonic remains in second inversion, with the persistent F♯ at the bottom. However, this pitch does not sound like a strong bass because of the fact that it never appears lower than a fifth below middle C (except for bars 21-2). With all this in mind, the sense of the harmony developing and moving the music forward is quite tenuous. The feeling of stillness and held back development is a notable feature of many late Liszt works and *En rêve* is no exception to this aesthetics, although not being as an extreme case as *Nuages gris*.

The tonic pitch B is used only at the end of the third bar for the first time and with its appearance the perception of a tonic becomes more audible than it

[7] This is very similar to the dominant pedal F♯ in *Csárdás obstineé* (S. 225/2) – to be considered in chapters IV (6), V (3.2, 4.1) and VI (1.3).
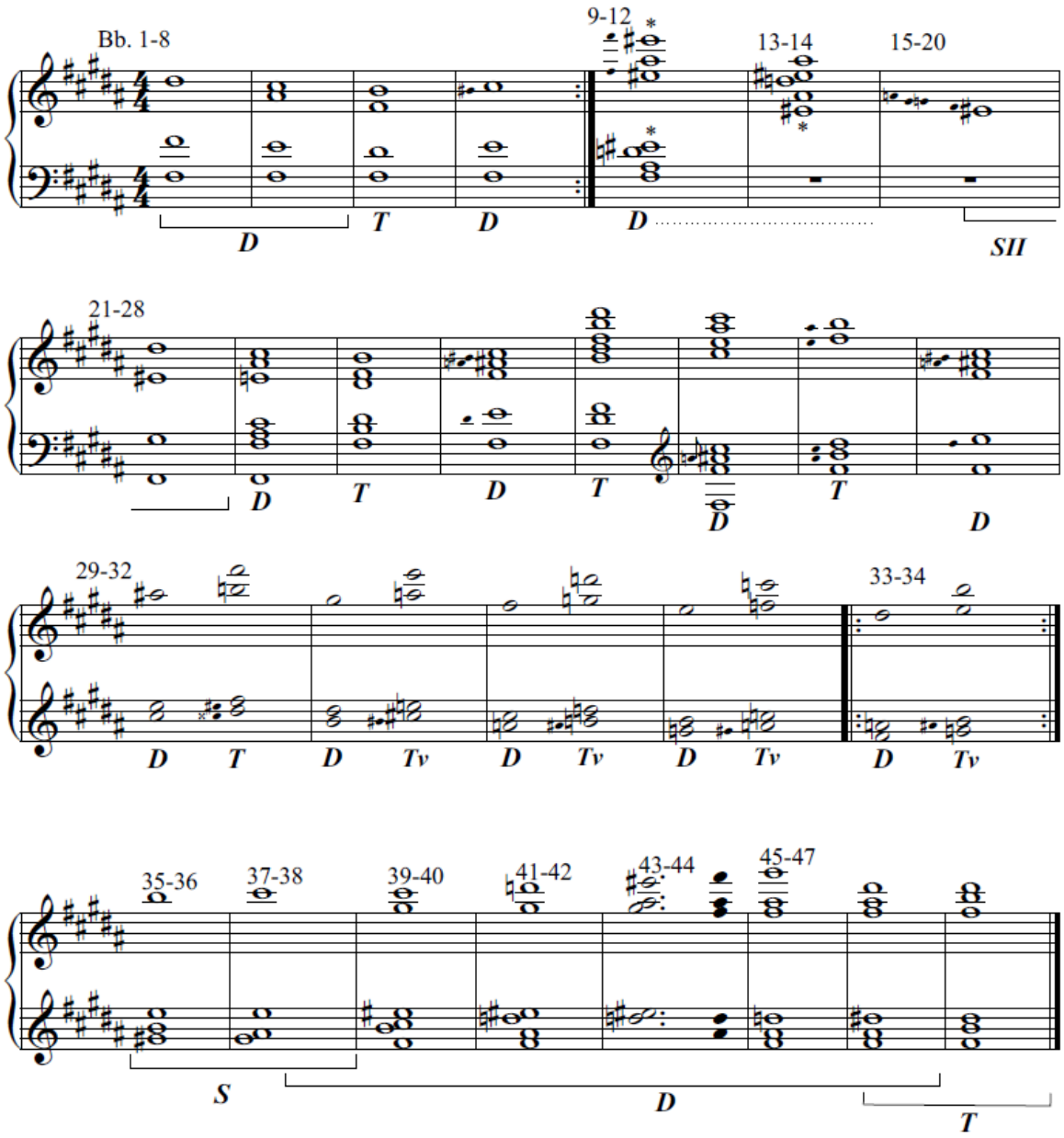


Fig. 3.2. The functional skeleton of *En rêve*.

might have been at the very beginning. Both melodically and harmonically (considering the bass note) B is avoided or sparsely used throughout the piece, which is a major contribution for its attenuated functionality. In similarity to the other works considered in this chapter, the other major factor for the obscuring of functional harmony are all the chromatic passing notes, which are numerous,

but never really materialising by taking harmony completely off course. Only in bars 29-34 the sequence employs dominant-tonic relations outside of the B major diatonic collection, but these serve to connect the main tonic with the main subdominant (E major) within a short time frame. All the other more unusual sonorities of four or five tones are lightly or more heavily altered versions of the main dominant. Some of those foreign pitches are more heavily emphasised and hence included in the chords of my functional skeleton (fig. 3.2 – see esp. bars 9-14), while others, which resolve to the following more structural chord, are diminished to the status of grace notes.

The new chord, which appears suddenly in bar 9, sounds dissonant and unexpected after the tonic-dominant alternation earlier on. In a strictly tonal progression it should be interpreted as a standard ***D^7*** with double appoggiaturas – E♯, which is to resolve upwards to F♯, and D♮, to go down to C♯. However, these appoggiaturas are prolonged to the extent that a new sonority is foregrounded over a long stretch and therefore, I have included the dissonating pitches D and E♯ in my reduction of bars 9-14 and similarly, towards the final cadence, in bars 39-45. Lingering on such a dissonant chord for four bars and then dispensing with the accompaniment, Liszt brings the harmonic development of the piece to a halt in bars 9-18. The scent of a dominant gradually dissolves with the descending monodic line, illustrated by the dotted line of my reduction. It is only with the final note of the first half of the piece – E♯ in bars 19-20 – that we can talk confidently about functional harmony again, and only when relating this single note to what follows.

C♯ major, in its capacity of V/V (dominant of the dominant) chord in B major is implied by its third, and is labelled accordingly as a ***SII*** in my functional reduction. Although the presence of that chord is obscured by the persistent F♯ in the bass in bar 21, and by the lack of C♯ in both melody and harmonic support,

it is nevertheless the most logical predecessor of the F♯ major and B major of the next two bars. The bass F♯ briefly moves to a more genuine bass register upon the reprise and a new melodic layer is added to the otherwise sparse texture, but the tonic still remains severely attenuated by the chord inversions and unusual use of register. Nevertheless, all I hear until bar 29 is an alternation between the main dominant and tonic chords.

The impression of only hearing dominant-tonic relations remains with the sequence of bars 29-34. The latter introduces the chords on scale degrees $\hat{7}$ and $\hat{6}$ in the parallel minor – A major and G major respectively. Continuing the downwards movement in whole tones, F major follows. Despite the latter being diatonically distant from the main tonic, Liszt's treatment of voice leading within this sequence can be seen as derived from parallel movement of sixth chords in a diatonic environment. It is logical for such a progression at this point of the piece to get to the main subdominant, which is initially presented in its minor form (and hence labelled as last in the line of tonic variants), before the subdominant proper arrives and lingers for four bars.

A series of curious chordal transformations ensues for the remainder of the piece. It is a perfect example of Liszt transitioning from subdominant, through dominant, to the final tonic unperceptively through minor chromatic inflections. Firstly, the main subdominant is followed by the sonority G♯-A♯-C♯-E, which includes two of the pitches of both the main subdominant and dominant. Therefore, I have reflected this functional overlap with my brackets at the bottom line of figure 3.2. The following F♯-B-C♯-E♯-G♯ also can be split into the tones belonging to E major and those part of F♯ major, but the regaining of F♯ at the bottom makes the dominantness of this dissonant sonority more prevalent. The same can be said about the following two chords, which progress towards

the augmented version of the main dominant with its ninth G♯ at the top. The penultimate chord – D♯ minor – can serve a tonic function in the key of B major according to Riemann's writings, but at the same time it includes the leading tone of the dominant. Therefore, I consider harmony at this point to represent an overlap between the dominant and tonic functions. The main tonic returns at the very end, but still in the second inversion, unlike anything composers at that time and Liszt himself could have been taught by their tutors.

Upon tracing the development of the harmony in *En rêve*, I was primarily focused on Liszt's use of the three main harmonic functions – tonic, dominant and subdominant – and on his adherence to earlier nineteenth-century harmonic practices. Without offering anything unconventional in the most general harmonic plan of the piece, the composer has established the main key at the beginning, lingered on the dominant towards the middle and gone back to the tonic for the reprise of the short binary form. Unsurprisingly, the subdominant E major has been briefly used before the final cadence on the tonic. Conversely, what is unusual in the piece is the never-ending dominant pedal, in combination with the almost exclusive use of high register and last but not least, the dissonant tetra- and pentachords, which are used as substitutions for the F♯-A♯-C♯-E dominant seventh. These more dissonant chords represent the more chromatic syntax in the piece, which interacts with its functionality by blurring the boundaries between the three main functions towards the end. It is in such harmonic circumstances that the unlimited opportunities of post-tonality started opening up and, as it will be shown in other more daring late pieces, Liszt kept exploring and showing what is possible once we free ourselves from the stringent rules of tonal harmony.

3. Romance oublieé

The *Romance oublieé* (S. 527, composed in 1880) is a typical example of Liszt's late 'music of the barest means'.[8] For much of the piece's duration melody is either left unaccompanied (as in the introduction – bars 1-7) or accompanied in an overtly economical way (see the exposition of the main theme – bars 7-17). However, the functional harmonic implications throughout most of the piece's duration are clear and they will be discussed in detail below. The perfect authentic cadence in bars 43-44, called a 'centralised cadence' in Dickinson's analysis of the piece, occurs at its exact midpoint and is followed by an unusually extended coda.[9] Generally, the harmony exemplifies a mixture of generic conventions and the unexpected and it is the balance between the two that determines to what extent functionality controls certain passage or not, which will be traced phrase by phrase.

In my harmonic reduction of the piece (figure 3.3) only those chords that have a clear function in the keys of E minor and E major have been shown in larger unfilled note heads. All other harmonies, which mostly result from smooth chromatic voice leading, are considered transitionary between the main functions, and as such are diminished to smaller filled-in note heads. While concentrating on the functional skeleton of the piece in the current analysis, the discussion will focus more on the chromatic chord relationships in all three

[8] Robert Larry Todd describes the compositional process in miniatures such as the Romance oublieé thus: '[Liszt was] methodically stripping away ornamental detail and leaving in place unaccompanied melodic lines and disturbingly sparse textures – in short, music of the barest means', see "The "Unwelcome guest regaled: Franz Liszt and the Augmented Triad", *19th-Century Music* 12/2 (1988, 114).

[9] Stefanie Dickinson discusses the so-called 'centralised cadence' in *Romance oublieé* and several other late miniatures as a 'weakening technique', used by Liszt to create 'an even greater sense of tonal ambiguity', because 'the distance from this cadence to the end of the piece diminishes its effectiveness'. See *Tonal voice leading as an analytical basis for Liszt's late experimental works*, pp. 78-83.

following chapters, meaning that *Romance oublieé* is representative of all four species of double syntax conceptualised at present.

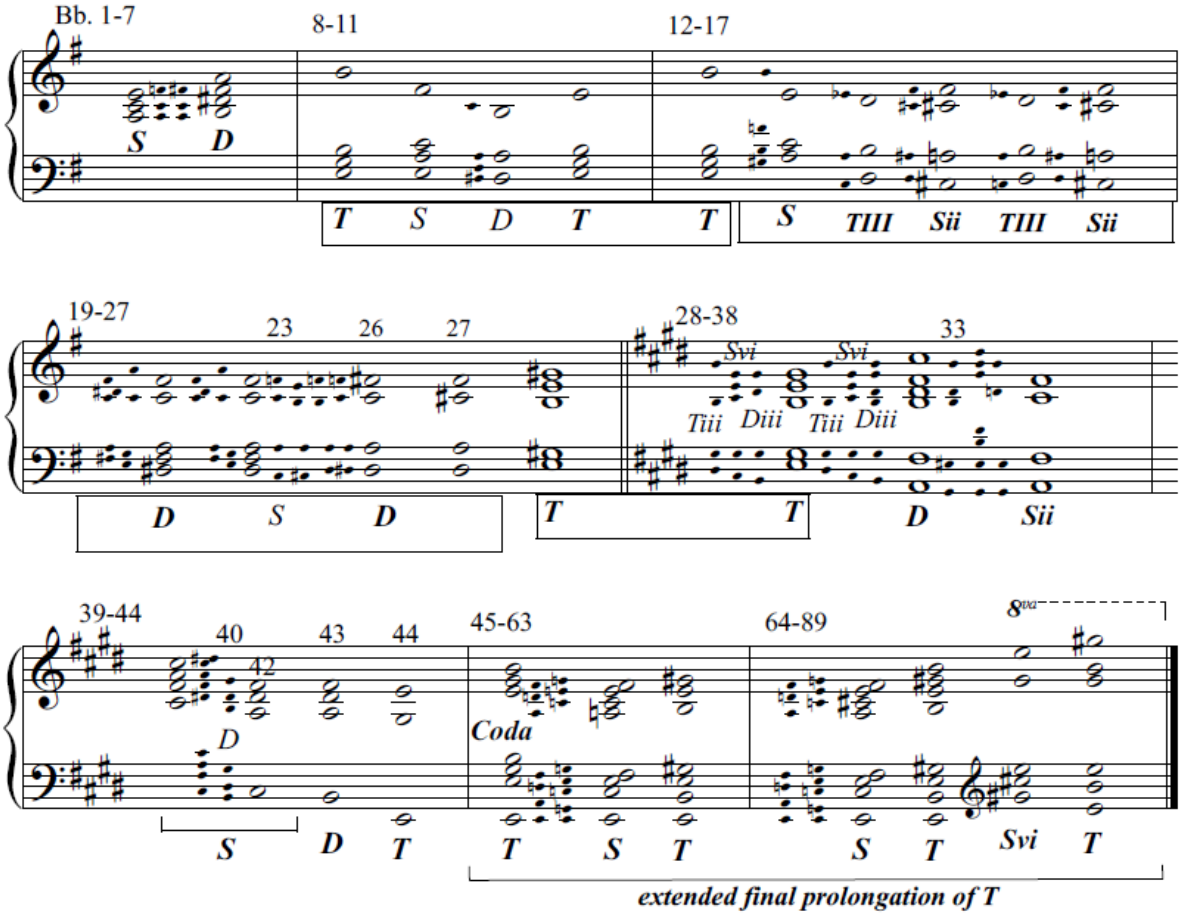


Fig. 3.3. The functional skeleton of *Romance oublieé*.

The short introduction of the piece does not include any chords, but the recitative-like melody firstly outlines the main subdominant (A minor), before getting to the dominant seventh chord (B^7) through semi tonal ascending of the pitch E. This is how A minor is transformed into implicit F major in bar 2 (a neo-Riemannian ***L***), then the latter is substituted by the diminished chord on F♯, and finally the long ascending line which spans bars 5 to 7 more clearly outlines the dominant seventh chord on B. Thus, similarly to *En rêve*, in the short and economic introduction of *Romance oublieé* Liszt has already asserted his

willingness to blur the diatonic functionality in E minor through subtle semi tonal inflections of the harmonies in use.

The main theme is presented in bars 8-17, which can be subdivided into two sentences – bars 8-11 and 12-15, with the second half of the latter being reiterated unchanged in bars 15-17. The former is based on a conventional ***TSDT*** progression, while the second time around the harmony diverges from the diatonic collection of E minor. A chromatically descending line is initiated, one which stops on C♯ in bar 14. From the resulting harmonies (Adim, G major, F♯ major and minor) only G major has clear tonal implications in the key of E minor, and especially in the second inversion it appears in (a cadential $^{6}_{4}$ chord, which is never followed by $^{5}_{3}$ and a tonic resolution). A modulation towards the relative major is prepared here, but then immediately frustrated with the continuation of the chromatic line, which is doubled a third lower. This chromatic line is contrasted against the clear functional progression, which came before it, and also dispenses with the evanescent possibility of G being established as a secondary key area. However, after looking at what follows in the next phrases (up to bar 27), one could infer an alternative functional interpretation of bars 13-17. The chords implied in bars 18-22 gravitate around the main dominant and they are preceded by an F♯ minor at the end of the previous phrase, which in general has a subdominant function in the key of E minor. In reality, hearing this F♯ minor as a subdominant in its immediate harmonic context is a rather ambitious exercise, but it could be interpreted so if we maintain that the chord at the end of such obscure phrase is more important than a possible G major in its middle.

So, on a slightly larger scale, concentrating only on the final chord of each phrase, what we have is tonic (bars 8-11), subdominant (12-17 – F♯ minor being a subdominant on the second scale degree in E minor), dominant (18-26, with a

slightly bigger chromatic deviation in the middle) and tonic again (this time E major!) in bar 27. To emphasise this larger scale ***TSDT***, I have put each of the overarching functions in boxes in my functional reduction of the piece.

The chromatically connected chords in bars 23-27 do not fit into the above functional narrative. They represent a detour from the otherwise straight forward functional frame, a delay of the expected resolution of the dominant. The F major at the beginning of this short progression is the Neapolitan harmony in E minor, which makes me hear it as a leaning back towards the subdominant, before the latter gradually transforms to the clearly dominant D♯dim^7 chord in bar 26. The anticipated perfect cadence is slightly obscured by the interpolation of D♯ø^7 right before the E major tonic. It results from a melodic ascend of F♮ to F♯, which seems to denote a movement to the diatonic scale of E major. This kind of subtle melodic inflections is capable of obscuring the functional syntax in some of Liszt's late works. In short, the composer has managed to infuse his functional skeleton with a sense of a functional ambiguity, created by the surface-level interpolation of diatonically distant chords, which are smoothly connected to the more clearly functional chords through semi tonal voice leading.

The new section in the parallel major revolves harmonically around the upper (G♯ minor) and lower mediant (C♯ minor) of E major. I hear a subtle ***TSDT*** within this sequence, G♯ minor sounding like a tonic substitution when it firstly appears with D♯ in the bass, followed by the subdominant C♯ minor and a dominant-functioning G♯ minor, because the presence of B in the bass and the leading tone D♯ in the alto make it sound so, especially before the return of E major in root position.

After the dominant seventh the expected tonic E major is displaced by a prolonged half-diminished chord on E♯ in bar 33. In an attempt to justify Liszt's compositional decision at this point, it should be noted that the voice leading from B^7 to E♯ø^7 requires two semi tonal displacements (see lowest two voices in the reduction), which is not maximally smooth, but a little smoother than going from the dominant seventh to the tonic. Liszt has firstly obscured the functionality of the passage with the introduction of the chromatic pitch E♯ (descended from F♯), and then seems to have abandoned the whole passage with the sudden cancellation of the accompaniment before the next change of harmony. The following chords preceding the *quasi cadenza* are very similar to the ones in bars 14-15 and once again a section is concluded on the subdominant-functioning F♯ minor. This subtle expansion of the subdominant area so far serves to delay the structural perfect authentic cadence and create the feeling of harmonic incompleteness. It is precisely what the effect of the *quasi cadenza* is – the long recitative is based throughout on the F♯ minor chord, extended to a D♯ø^7 in its latter half. D♯ is the leading tone in E major, so its addition on top of the subdominant-functioning F♯ minor makes it lean a little more towards the forthcoming dominant. Another irregular resolution in bars 40-41 precedes the perfect cadence – it is a half cadence leading to another G♯ minor chord. As there is no other dominant before the G♯ minor and because of the prominence of the D♯ in the bass, I hear this mediant functioning as a dominant in this particular case. Still, it is surrounded by the overarching D♯ø^7 subdominants and therefore shown as subservient to it in my reduction. The following perfect authentic cadence comprises the ambiguous subdominant C♯-A-D♯-F♯ (bass note from the main subdominant, but the other three pitches are part of the dominant 7th), the main dominant B^7 and again the E major mode triad.

The harmony throughout the unusually long coda represents a descending progression, which culminates with a plagal cadence. As Dickinson perceptively points out in her analysis, the main descending motif of the piece (G♯-F♯-E in the major mode) is augmented and harmonised with corresponding major triads, which are positioned whole tone steps below the tonic E major.[10] Thus, the E major arpeggios are followed by D major (with persisting E in the bass) and C major. Another half-diminished chord – F♯ø^2 (a half-diminished chord on the tonic pedal) – precedes the return of the tonic, forming a modified plagal cadence. The same progression repeats completely unchanged and the final longer E major arpeggios reach the highest register of the piano. Liszt puts a C♯ minor chord – a subdominant on the sixth scale degree – before the very final E major, in order to make use of a smoother version of the conventional plagal cadence.

In summary, *Romance oublieé* is among Liszt's late miniatures composed in the traditional functional idiom. Establishing E minor from the very beginning, and then substituting it with its parallel E major after a Picardy third resolution in bar 27, the piece lacks any modulations outside of these keys. However, there are some passages, in which chords outside of the E major/minor diatonic collections are connected through chromatic voice leading. Whenever harmony deviates more significantly from the main key, it happens briefly and serves to blur or prolong an underlying functional progression, as is the case in bars 13-17 or in 23-26. The above analysis has shown that the use of such more chromatic progressions and alterations to the main functional chords can make the transitions between them less easily perceptible – an approach, which achieves in practice Liszt's aesthetics of stillness and lack of directionality.

[10] Ibid, p. 79.

4. *Elegie* no. 1

Liszt's *Elegie* no. 1 (S. 196) was composed in 1874 and while representing the more conservative late style of the composer, it also includes a number of chromatic chord relations and progressions within the main functional frame of the piece. My analysis will serve to demonstrate that even with the whole variety of seventh chords and some more dissonant sonorities, the composer manages to keep the perception of the piece being 'in a key' throughout, while the harmony is representative of the late Romantic period.

In order to be clear when referring to particular sections in the piece, I have outlined its structure in a table format (see table 3.1), whereby also the main harmonies and the use of the three functions within the respective keys is described. There is the typical harmonically wandering introduction at the beginning, but a few bars before the main thematic material (section *A*) the main tonic of A♭ major is already arrived at. The main functions are clearly used in that key within the first eight bars of section *A* and in an identical way in B major afterwards. My harmonic reduction of the first 50 bars of the piece (figure 3.4, representing the introduction and section *A*) emphasises in unfilled note heads the three main functions in the key of A♭ plus the tonic variant of B major and the eventual dominant of C^7. Being a minor third apart, chord couples like A♭ major-B major and E♭ major-C major share their functions and this is how I interpret such minor third substitutions throughout this chapter.[11]

[11] I am adhering here to Tymoczko's diatonic model, in which prototypical minor-third substitutions of ***R***-related chords preserve the function, hence *V* and *iii* in the major are both dominants, and *IV* and *ii* are both subdominants. See Dmitri Tymoczko, *Geometry of Music: Harmony and Counterpoint in the Extended Common Practice* (Oxford and New York, 2011, 227-228).

Section	**Bar numbers**	**Key signature**	**Main harmonies (tonicised chords)**	**Use of *T*, *S* and *D* functions within the respective keys**
Introduction	1 – 20	No accidentals → A♭	A♭	***T*** only
A	20 – 50	A♭ → B → A♭	A♭ → B → unstable	Full ***TSDT*** used
A'	51 – 67	A♭ → B	A♭ → B	Full ***TSDT*** used
B	68 – 101	No accidentals → A♭	A → A♭	Unclear functionality in A; ***D*→*T*** in A♭
A''	101 – 121	A♭	A	***TSDT*** used, but vaguer this time
Coda	122 – 136	A♭	B → A♭	Only ***ST*** (plagal) cadences at the end

Table 3.1. Sectional division and harmonic overview of *Elegie* no. 1.

The seventh chords at the beginning are connected through smooth semi tonal voice leading, but do not have any tonal implications before the A♭ major arrives in bar 15. From there onwards the main tonic dominates and is surrounded by its main subdominant and by a dominant-functioning common-tone dim^7 chord (see bars 20-24 in the reduction). However, the chromatic voice leading and the use of some functionally indeterminate chords (such as the F♭-

B♭-D-G♭ in bar 24) makes the harmony of the passage more up-to-date with other late Romantic composers than it is reminiscent of the earlier masters. A full ***TSDT*** in bars 26-28 transforms the main tonic into its variant B major, but the same kind of chromatically altered functionality preserves.
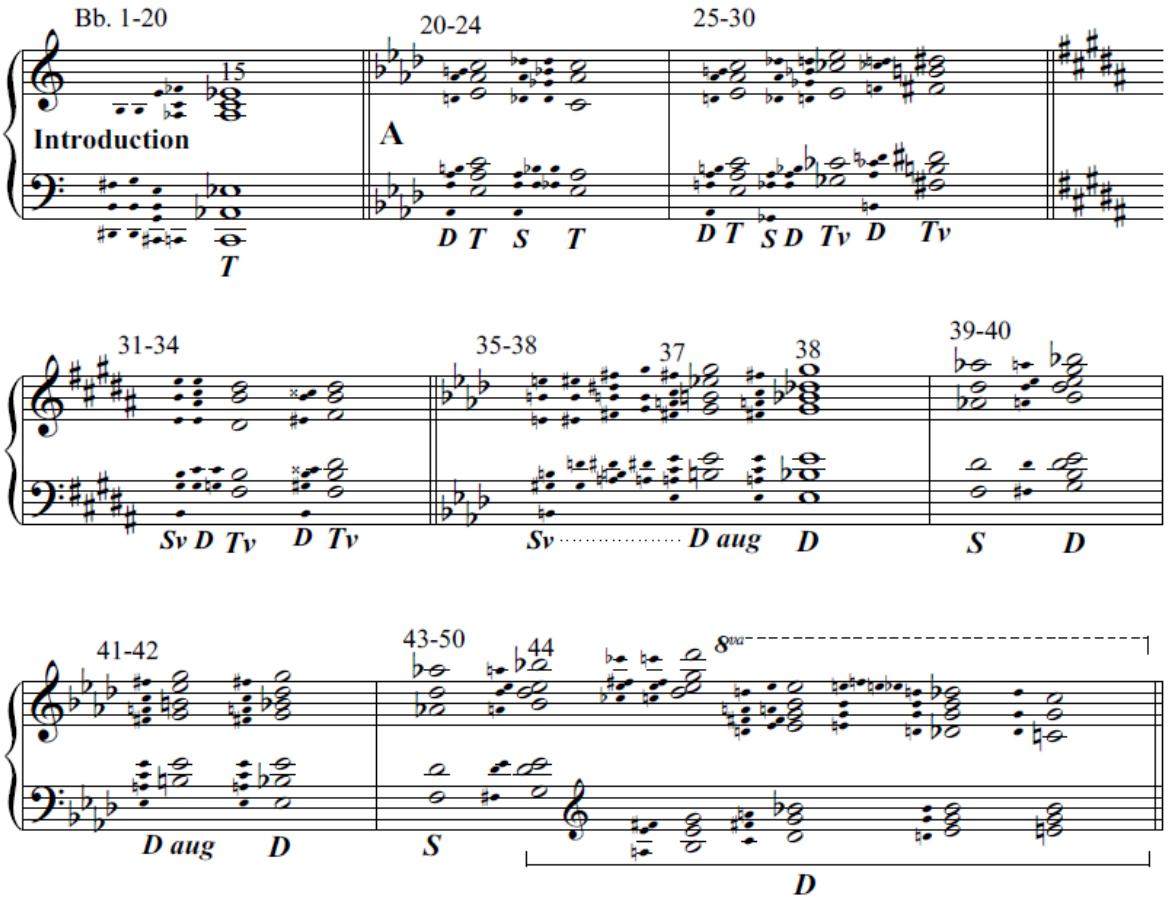


Fig. 3.4. The functional skeleton of *Elegie* no. 1 (Introduction and section *A*).

Even the following harmonically unstable passage (bars 37-50) has its hints of functionality, inasmuch as every time E♭^{7} follows from a different kind of seventh chord, the feeling of a subdominant-to-dominant progression is there, reinforced by the repeated use of the main dominant. In order to connect the subdominant of B major (bar 35) to the augmented main dominant (bar 37), Liszt gradually blurs the functionality of the progression (hence the dotted line after

the ***Sv***) and approaches the goal harmony chromatically. Everything between the ***Tv*** and the ***Daug*** I consider transitional harmonies and the following ***D7*** at the end of bar 38 is even heavier structurally, therefore emphasised in whole notes. A couple of subdominants after that enhances the anticipation of the main tonic, which is further sharpened by the long overarching dominant from bar 44 onwards. The whole passage in question is a long delaying of A♭ major, and finishes beautifully with the main dominant being substituted by the dominant of the relative minor – C^7. This is another favourable harmonic move of Liszt in his more mature years – juxtaposing dominant seventh chords, which are a minor third apart.
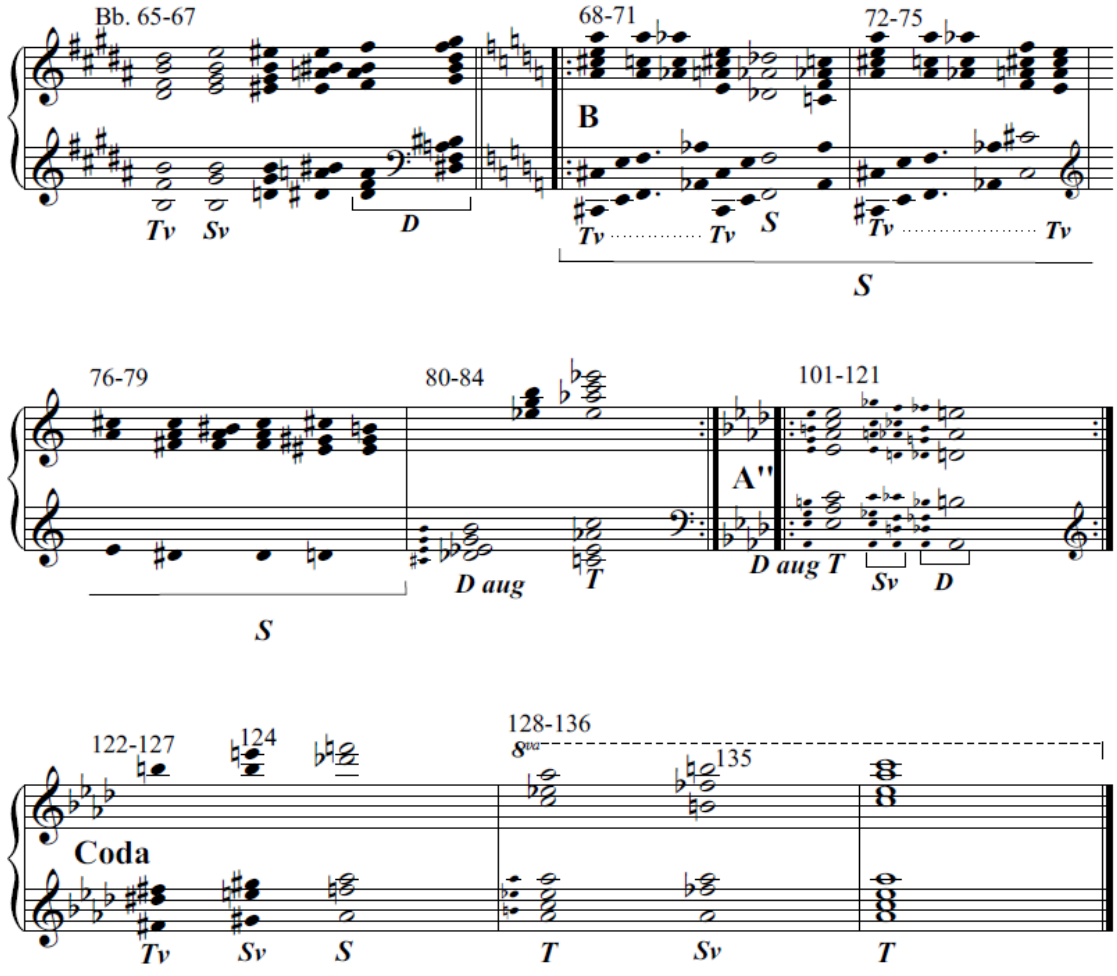


Fig. 3.5. The functional skeleton of *Elegie* no. 1 (sections *B*, *A''* and coda).

Section *A'* is harmonically and melodically identical to *A*, with the main difference being the substitution of the regular quavers in the inner voice by triplets. Everything repeats virtually unchanged until bar 66, where the patterns are disrupted and the passionate second theme (framed by section *B*) appears out of nowhere. My second chordal reduction for this piece (fig. 3.5) covers harmony from bar 65 onwards, which is just before the repeated functional progression in B major changes course. Here all chords in section *B* and in the coda are shown in note heads of the same size, because in my hearing of these sections the prevalent chromatic chord connections (especially in *B*) are elevated to the status of the functional relations. In other words, the supremacy of the functional skeleton is significantly weakened, especially in bars 68-75. Unlike the *A* sections, there is a clear chromatic (and largely triadic) progression here, and it becomes harder to label chords with functions. However, the suddenly appearing A major is preceded by the dim^7 chord on its leading tone, hence a dominant-tonic relation is inferred in figure 3.5. A major is labelled as a temporal tonic with a smaller ***Tv***, but in the main key of A♭ major it is the Neapolitan harmony, hence an overarching subdominant label is given for almost the whole section. The appearance of the main subdominant is pointed out with unfilled note heads, although as a whole this section is not governed as much by functional relations, as it is organised around chords from the same Hexatonic collection, which will be illustrated in chapter V. It is only in bars 80-84 where we clearly return to the main tonic with a modified perfect cadence, and it makes sense to return to using smaller note heads, in order to distinguish the chords of the functional cadence from those that decorate them.

The concluding iteration of the main theme (section *A''*) also contains the augmented version of the main dominant (in the place of the earlier A♭dim^7) and a descending sequence of diminished seventh chords, the last of which is a

version of the main dominant (Gdim^7), retrospectively acquiring a pre-dominant (or subdominant) function for its preceding counterparts (Adim^7 and A♭dim^7). The E major, which appears twice as a triad (bars 124-5 and 132) plays an important role in the coda – it is firstly the subdominant of the tonic variant B major and then substitutes for the minor version of the main subdominant (being in an ***R***-relation to C♯ minor), hence it forms a modified plagal cadence when used before the tonic A♭ major at the very end. However, firstly appearing as a seventh chord within section *A''*, there is a dominant feeling to it and I have labelled it as such. These final two sections of *Elegie* no. 1 demonstrate how the same chord can have a different function if used in different harmonic context, depending on its immediate surroundings.

Functionality might be loosened by the use of chromatic alternatives of the main diatonic chords in A♭ major throughout *Elegie* no. 1, but it is still present, reinforced by the persistent repetitions of the main theme in A♭ major and the use of the respective key signature. Table 3.1 reveals that the key signatures are matching the main harmonies, with the exception of the harmonically vague first 12 bars of the introduction and the contrasting section *B*. It is clearly a piece in A♭ major, but at the same time it is another harmonic laboratory for Liszt's large variety of seventh chords and augmented triads, which are extensively used throughout. The beauty of harmony in the piece lies in the inseparable connection between diatonic functionality and the smooth chromatic chord relations. The two types of syntax take turns in dominating over one another. Chromatic voice leading dominates throughout the first 15 bars of the introduction, but then it becomes subservient to functionality, after the main key of A♭ major is introduced. Section *B* elevates chromatic chord connections above functional ones, but still the use of the main subdominant and chords from its corresponding Hexatonic region invites the interpretation of the

overarching subdominant, which I have embraced. The final iteration of the main theme and the cadences in the coda reaffirm the tonality of A♭ major, but chromatic third relations (such as the one involving E major at the end) remain ubiquitous throughout the form.

5. Les Jeux d'Eau à la Villa d'Este

A centerpiece in the third book of *Années de Perelinage* (S. 163), *Les Jeux d'Eau à la Villa d'Este* (1877) is among Liszt's most beloved and frequently performed late piano works. Some of the novel instrumental techniques in it, which are reminiscent of the playing of a harp, seem to have inspired the impressionistic styles of Debussy and Ravel. Moreover, the form of the piece is unusual for its time and, in the words of James Baker, 'consists of a series of variations without the sharp contrast of key areas normally found in his compositions.'[12]

A quick overview of the harmonic content of the piece would reveal that it is mostly diatonic within the key of F♯ major. This is affirmed by the use of F♯ major key signature throughout three quarters of its duration – bars 1-131, 158-181, 206-251, 272-278. However, functional relations between chords and ***TSDT*** cycles are by no means easily perceptible. Liszt has achieved the sense of harmonic stillness through extending the tonic or the dominant by tonicising different scale degrees in F♯ major to the point that the listener almost forgets the function of chords. The harmony is not exactly static but it progresses very

[12] James Baker, "Liszt's late piano works: larger forms", in: *The Cambridge Companion to Liszt.* Edited by Kenneth Hamilton (Cambridge, 2005, 140).

slowly, without tonic/dominant tensions on the one hand, or chromatic modulations on the other. The latter does not mean that chromatic deviations (sometimes more abrupt, sometimes gradually prepared) do not appear in the piece. In fact, it is quite the contrary – chromaticism makes *Les Jeux d'Eau* what it is, contrasting the extended dwelling on the F♯ major scale against some beautifully exotic chord successions.

Section number	**Bar numbers**	**Key signature(s)**	**Chords from functional skeleton**	**Functional relation of chords to F♯ major**
1	1 – 39	F♯ major	C♯^{9} – A♯m	***D***
2	40 – 63	F♯ major	F♯ – G♯^{7} – C♯	***T*** – ***SII*** – ***D***
3	64 – 87	F♯ major	F♯ – G♯^{7} – A♯m	***T*** – ***SII*** – ***Tiii***
4	88 – 107	F♯ major	Bmaj^{7} – A♯m^{7} – G♯m^{7} – B^{7}	Overarching ***S***
5	108 – 131	F♯ major	D♯m^{7} – C♯ – B – G♯m^{7}	***Tvi*** – ***D*** – ***S*** – ***Sii*** (ovrch. ***S***)
6	132 – 157	E major, D major	E – D – D♯m	Functionally independent – ***Tvi***
7	158 – 181	F♯ major	F♯ – G♯^{7} – C♯	***T*** – ***SII*** – ***D***
8	182 – 219	A major/F♯ minor – no accidentals – F♯ major	Bm – C♯m^{7} – B♭ – E♭m – B	***S*** – ***D*** – ***DIII*** – ***Tvi*** – ***S***
9	220 – 251	F♯ major	C♯^{9} – D^{7} – F♯ – B^{7}	***D*** – ***Svi♭*** – ***T*** – ***S***
10	252 – 278	No accidentals – F♯ major	G♯m^{7} – F♯	Functionally independent – Sii – T

Table 3.2. Sectional division within *Les Jeux d'Eau*, with main harmonies and their functional relation to the main key shown.

Based on changes of thematic material or key signature or clear separation by a caesura I have divided the piece into 10 sections, which are outlined in table 3.2. Differences in key signature, harmonic content and function of chords in relation to the main key of the piece can be traced across these. I have attempted to extract the most essential chords from the functional skeleton of the piece, which itself is shown in several reductions below. However, identifying the functional skeleton of *Les Jeux d'Eau* and justifying the importance of the main tonic, subdominant and dominant chords in the key of F♯ major is a harder undertaking than it was in the previously analysed four miniatures. This is mainly

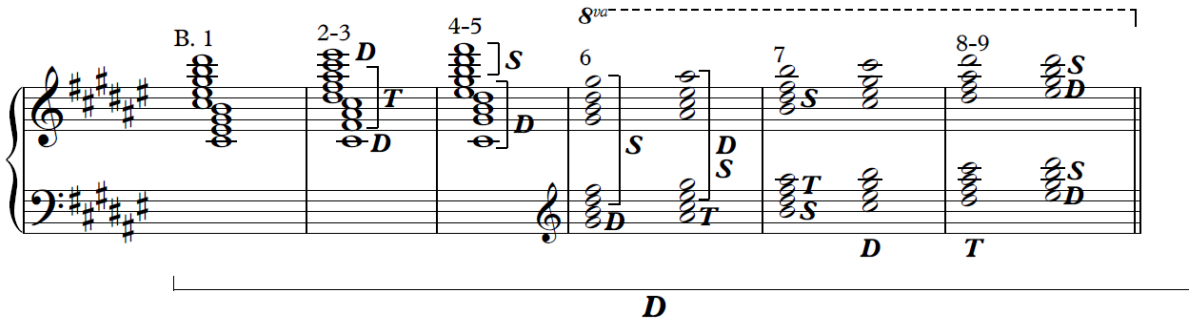


Fig. 3.6. Harmonic reduction of bars 1-9 of *Les Jeux d'Eau a la Villa d'Este.*

because Liszt's extensive use of seventh chords and especially of pentachords blurs the clear functional differentiation between chords. To illustrate this with an example, let us look at the sequence in the first 9 bars of the piece, summarised on figure 3.6. The opening pentachord is clearly C♯^{9}, based on the main dominant and can only be labelled as such with a big ***D***. The following chord, however, includes both the pitches of the tonic, and the leading tone plus the root of the main dominant at its bottom. Therefore, chords need to be split in order to assign functional labels to them in passages like this one. Consequently, the D♯m^{9} in bars 2-3 contains the pitches of the tonic surrounded

by the C♯ and E♯ from the dominant. As it becomes evident from the figure, most of the chords up to bar 9 contain at least two pitches from two of the three functions, and this, together with the diatonic scalar ascending of the progression, obliterates any feeling of a functional cycle, which otherwise might have existed.

Melodic lines in section 1 continue similarly going up and down in diatonic steps almost all the way until the appearance of the main theme in bar 40 (section 2). There are only two deviations from the scale of F♯ major and the corresponding chords (A♯ø^{7} in bar 27 and B$^{7}_{\sharp 4}$ in bar 36) can be considered mere passing notes within the skeleton of this section, which itself can be summarised as an overarching dominant, opening with the strong C♯^{9} and closing with the slightly weaker ***Diii*** of A♯m.

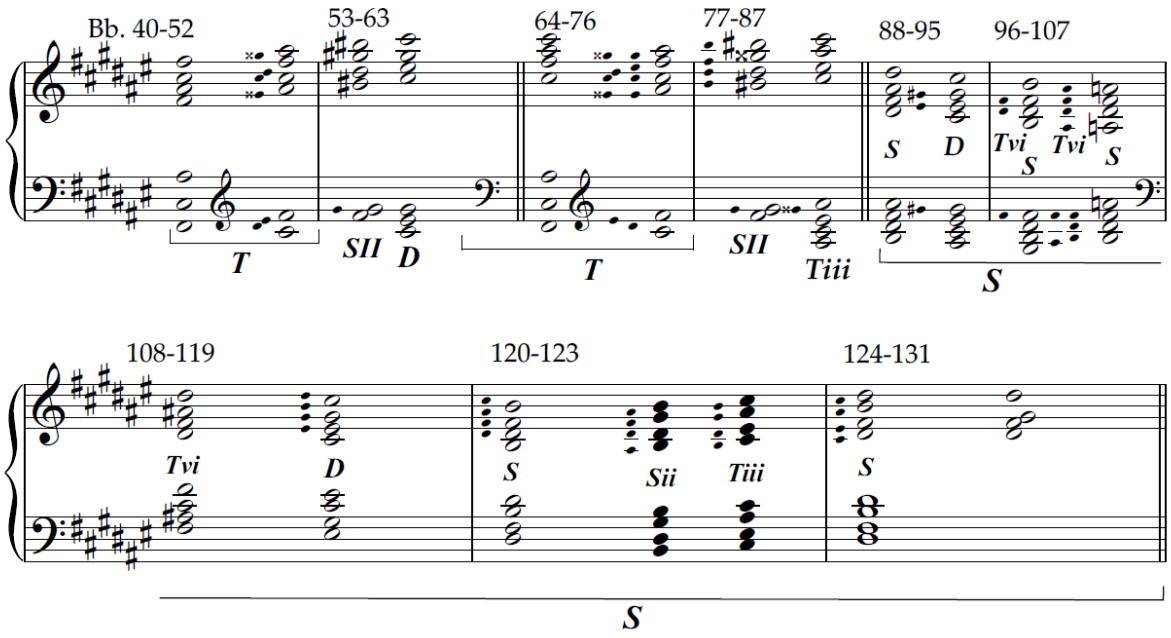


Fig. 3.7. The functional skeleton in sections 2-5 of *Les Jeux d'Eau*.

The C♯^{9} dominant is substituted by an augmented version of itself in bars 48-51, which, juxtaposed with the main tonic, forms the signature harmonic

motif of the piece (see the smaller note heads in the first bar of fig. 3.7). However, in the grander scheme of harmony, C♯^{9}aug very quickly resolves to F♯ on each occasion, so it can only be considered a small note head passing chord in my functional reduction of sections 2-5. The G♯^{7} in bar 53 is also passed through very quickly, but I have elevated it to the status of a proper subdominant (labelled ***SII***), as it is the much needed component for the completion of a half cadence (***TSD***) within this section. The same overarching tonic reiterates the main theme in a slightly varied form in the first half of the next section. It is followed by the same ***SII*** subdominant, but this time the main dominant is substituted by A♯m, which, unlike the ending of section 1, is prolonged and achieves a sense of completion here, hence I have labelled it as ***Tiii*** this time.

The following sections 4 and 5 resemble the opening of the piece, in that a scalar sequence of seventh chords is the main building block. Therefore, it is hard to strictly assign functions to each sonority, which I have anyways done between the staves of figure 3.7. However, what is more prevalent here is an overarching subdominant, which is periodically reaffirmed, most clearly with the Bmaj^{7} in bar 88, the B in 120, and the recurring G♯m^{7}, which also closes section 5. To zoom out and sum up the observations so far, the first 132 bars of *Les Jeux d'Eau* are confined to the key of F♯ major, and although functional relations between chords are blurred systematically, a clear ***TSDT*** progression can be traced across bars 40-76 if we attempt to establish some kind of hierarchy between chords, which is at the basis of my so-called functional skeletons in this chapter.

The first deviation from the F♯ major key signature at the beginning of section 6 denotes the use of some chords, which are diatonically more distant from the main tonic. Two varied repetitions of the main theme are drawn in, firstly in E major and then another whole-tone step down in D major (fig. 3.8).

Following the logic of Tymoczko and assigning equivalent functions to minor-third-related chords, E major could be considered a form of a dominant, and D major could be labelled as a subdominant. However, I prefer to hear this whole passage up to bar 155 as a chromatic deviation from F♯ major, which can be explained better with neo-Riemannian theory. In respect to the analytical inquiry here, I have elevated E and D major to the status of chords from the functional skeleton, because of the durational and structural emphasis they have, and they can be labelled with ***D*** and ***S*** respectively, as explained above. Nevertheless, the passage up to bar 155 (where the chords from the F♯ major diatonic collection return) is bracketed and labelled as functionally independent, which I believe is the best way to describe in functional terms such chromatic detours in Liszt's music. In other words, the functional syntax is paused for a while throughout most of this section, and an instance of successive double syntax occurs.

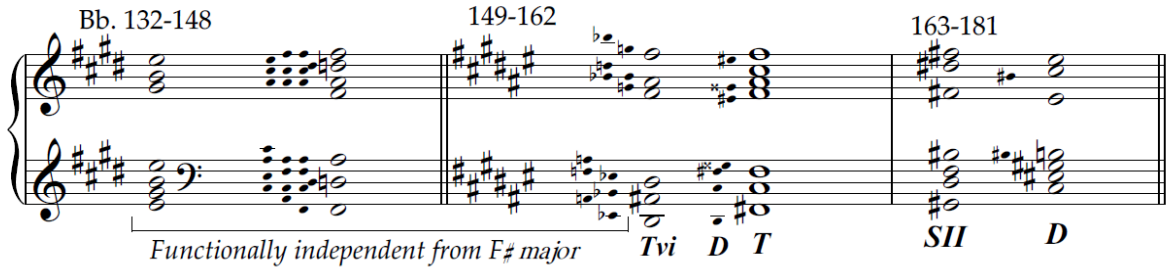


Fig. 3.8. The functional skeleton in sections 6-7 of *Les Jeux d'Eau*.

The main theme returns to F♯ major at the beginning of section 7, in which the functional progression (***T – SII – D***) is identical to section 2, although this time the dominant is held for longer. Another sequentially structured passage is at the basis of section 8, which combines some diatonic chords in F♯ major with a different kind of chromaticism – one governed by altered repetitions of the melody in the bass voice. Unlike section 6, where chords themselves were

transforming and the main theme was based on the pitches of those chords, here the harmony is following the changes in the melody. Firstly, minor mode versions of the subdominant and dominant chords are used in bars 182-189 (see figure 3.9). Then the melodic sequence continues the descent in semi tonal steps, which causes harmony to deviate from the F♯ major diatonic collection and go as far as F major within only two units of the sequence. Naturally, I have included Caug/F♯ø^7, F major and Bdim only as passing harmonies in small note heads in my reduction, whereas the following B♭ major arrives as an important dominant (the enharmonic equivalent of A♯ major), leading toward the ***Tvi*** in the context of the overarching F♯ major tonality. In short, section 8 gradually derails off the main key, but returns to it with a strong proclamation of the B major subdominant in bars 206-219. The latter is certainly the structurally heaviest harmony in the section, being shown as such with bigger note heads in the reduction, and emphasised by Liszt through being placed at the end of a long sequence, the culmination of a big *crescendo*, and through the return of the main key signature.

Section 9 is functionally identical and structurally very similar to section 1. The opening arpeggiated chords return, but this time they span a much larger register and the bass note is heavily accented in *fortissimo*. The second chord sounds like a tonic response to the opening C♯^{9}, while the third (G♯m^7/C♯ bass) and the fourth (D^7/C♯ bass) lean more towards the subdominant. However, the similarity to the opening of the piece is structurally more important than the differences in the details, and therefore everything up to about bar 241 is bracketed with a bigger, overarching ***D***.[13] The main motif returns one last time

[13] Note that in bar 241 the sustain pedal should be released and this is the point when the dominant pedal C♯ ceases to underscore the harmony.

in the tonic key in bars 244-247 and is followed by a typical Lisztian (or more broadly Romantic) harmonic event – a quick succession of chromatically related
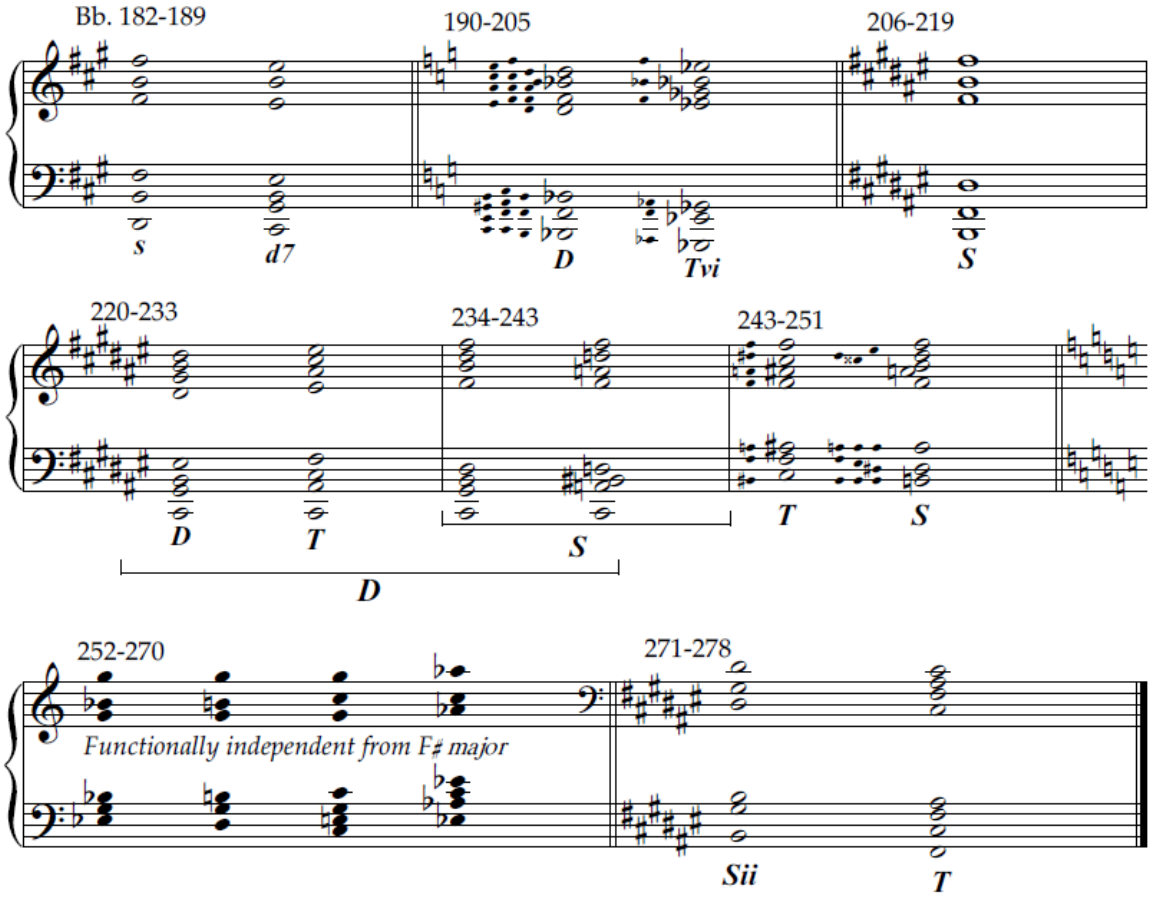


Fig. 3.9. The functional skeleton in sections 8-10 of *Les Jeux d'Eau*.

chords is inserted before the very final cadence in the main key. In similarity to section 6, and probably even more convincingly than previously, a functionally independent sequence of chords is inserted within the functional skeleton. This time the chords of E♭, G, C and A♭ major all harmonise the first half of the main theme, which makes them sound more important than mere passing chords, therefore they are shown in regularly sized filled in note heads in figure 3.9.

Les Jeux d'Eau finishes similarly to *Elegie* no. 1 and *Romance oublieé* with a plagal cadence (***Sii*^{7} – *T***), reiterating the already familiar G♯m^{7} chord for one

final time. Liszt remains faithful to his preference for avoiding perfect cadences at all costs, especially at the end of pieces.

The above observations must be followed by reflections and conclusions, in order to determine how the double syntax works in such a complex and more extended piece, and more specifically – how the functional skeleton holds everything together, even though it is disrupted intermittently by the chromatic detours. As evident from table 3.2, in 7 out of the 10 sections of the piece the diatonic collection of F♯ major with its corresponding key signature dominates. Complete ***TSDT*** cycles might be a rarity and purposefully made hard to perceive, but there is a constant ***S-T***, ***D-T*** or ***T-S-D*** succession, often not on an immediate chord-to-chord level, and this is why it has been important to distinguish more structural chords from the passing chords, which often include chromatic tones. A notable example in this respect has been the second half of the main theme and section 2 as a whole – Liszt's favourite augmented triad is an integral part of the main theme, but at the same time this more exotic chord is structurally subservient to the consonant triads, which construct a conventional ***T-S-D*** progression. Similarly, section 6 is based on a sequence of chords, which are connected through chromatic voice leading and is so typical of Liszt's harmonic writing, but eventually we can see (as shown on figures 3.7 and 3.8) how the resolving of the earlier wide-ranging subdominant gets evaded, in order to be followed slightly later by the tonic. Liszt was able to deny functionality even in more diatonic environments such as in section 4, but the existence of structural levels in *Funktionstheorie* allows us to see whole such sections as one overarching function, logically connecting to what comes before or after on the larger scale of the harmonic plan. In short, *Les Jeux d'Eau* is based on the tonality of F♯ major which is maintained and reaffirmed a number of times throughout the piece, but as it happens so often with Romantic music, it is the small details

that are most characteristic and make the piece what it is, therefore the more dissonant chords and the more chromatic chord progressions in combination with the rest of the harmony contribute to the uniqueness of Liszt's style in this particular case, as well as in the other four pieces analysed above, and more broadly in his late piano works.

Conclusions

The analyses in this chapter served to highlight the more traditional harmonic features of Liszt's late compositional practice and to counterbalance against the focus on non-functional chromaticism, which will gradually become more central to the analytical discussion in the following chapters. The use of functional labels revealed that in all the five pieces under discussion there is an intricate system (what I called a *skeleton*) of chord relations, often operating at different hierarchical levels, and a fine balance between more and less explicit functionality. Also, in all five pieces some chord progressions were revealed, in which functionality seems to have been abandoned for a limited period of time and instead a *functionally independent* sequence of chords (often based on parsimonious semi tonal voice leading) has been employed.

Valse oublieé no. 1 has been analysed at first as a most conservative example, because of its adherence to many of the structural and harmonic conventions of the waltz genre. These include the widespread use of dominant-tonic based phrases, lingering on and around the main dominant for its second theme and closing on the tonic harmony, despite the eventual only vague implications of an F♯ major chord. Of the next three miniatures, which were

analysed, each is distinguished by exemplifying in its own ways Liszt's late techniques for obscuring functionality. *En rêve* is built upon an unusually persistent dominant pedal in the key of B major, which significantly obfuscates a functionally-driven forward momentum, but still I demonstrated that a straight-forward functional analysis of this piece is possible. On the other hand, *Romance oublieé* was revealed to juxtapose functional ***TSDT*** and non-functional chromatic chord relations in a variety of ways, while being based on a deformed tonal structure with an unusually early appearance of its final structural cadence. Still in its own individual way, *Elegie 1* was proven to be a tonal piece in A♭ major, but this main key remains by no means uncompromised throughout its form, substituted either within a short time span for its variant B major, or by the diatonically distant A major for a whole middle section. Finally, in order to show how Liszt's idiosyncratic functionality operates in a large-scale piece, an analysis of the famous *Les Jeux d'Eau a la Villa d'Este* was offered and it was demonstrated how functional chord relations can be obscured not only by the use of diatonically distant chords, but also through freer diatonic sequences and tonicisation of different scale degrees in the main key.

By showing how the occasional chromatic excursions outside of the main functional skeletons complement and diversify the harmonic structure of these more conventional late works, the foundations were laid for a more detailed study of these more unusual harmonic progressions and chord relations. Accordingly, these will be scrutinised with my more visually appealing hybrid methodology from the next chapter onwards.

Chapter IV

Simultaneous Double Syntax

My analytical endeavors with Liszt's late music have revealed that most of the time either diatonic functionality dominates over chromatic transformations or the other way around, with the possibility of the two switching roles, often within a short time span. It is only in some cases (which are always limited to short progressions or sections of pieces at best, but never full pieces), that the two types of syntax seem to be of equal importance, and consequently, it is hard to separate one from the other. This is the reason why only certain sections of pieces will be discussed below, unlike the previous chapter, where the pieces with their overarching diatonic functional structure needed to be analysed as a whole. The main objective in conducting the following analyses will be to discern the harmonic logic of the passage in question by considering simultaneously both the functionality of chords and their proximity in the chromatic pitch space of the *Tonnetz*. Both neo-Riemannian transformations and ***T***, ***S***, ***D*** functional designations will be considered in my analytical diagrams and relevant commentary, which will aim to superimpose the two analytical systems. Naturally and logically, harmonic language which is based on two different types of syntax, invites such hybrid methodology for analysing it.

It should be borne in mind that the examples offered below are by no means exhaustive and there are a number of other similar cases of the simultaneous double syntax across Liszt's late piano music and beyond. Conversely, what is offered is a selection of different situations, in which Liszt has been keen to employ both diatonic functionality and chromatic chord connections, giving them equal structural weight.

1. The blurring of the boundaries between functions in a ***TSDT*** cycle through more dissonant tetrads and pentads

The final chromatic progression in *En rêve* is a fine example of Liszt's skill in maintaining functionality, while connecting some highly chromatic and occasionally dissonant chords. As already demonstrated in the previous chapter, the transition from the subdominant to the dominant and then to the tonic is gradual and some of the chords in the progression can be labelled with two functions. The A♯ø^7 in bars 37-38 includes three of the pitches of the dominant seventh chord in B major (A♯-C♯-E) and two of the pitches of its subdominant (E-G♯), while the penultimate D♯ minor includes D♯ and F♯ from the tonic, but also F♯ and A♯ from the dominant, equally weighted towards both functions. But what about the other chords in between? There are two pentads in the sequence (see bars 39-42), which are of a rare kind throughout Liszt's late piano music. In an attempt to trace the movement in pitch space from the initial subdominant to the tonic and evaluate if there is any pattern to it, I have positioned the nine chords of this sequence on the *Tonnetz* (see figure 4.1). The three main triads in B major are labelled with their functional designations, while all other harmonies are considered not to have a strict functional affiliation. The yellow arrows signify the chromatic chord relations and will be contrasted against green arrows depicting functional diatonic relations throughout this dissertation. Blue will be reserved for the stripes comprising diminished chords, while augmented chords will always be red. Exclusively here, the B-F♯ dyad is emphasised with a green stripe, which signifies the bond between the main functional pitch opposition (***T-D***) of the piece.

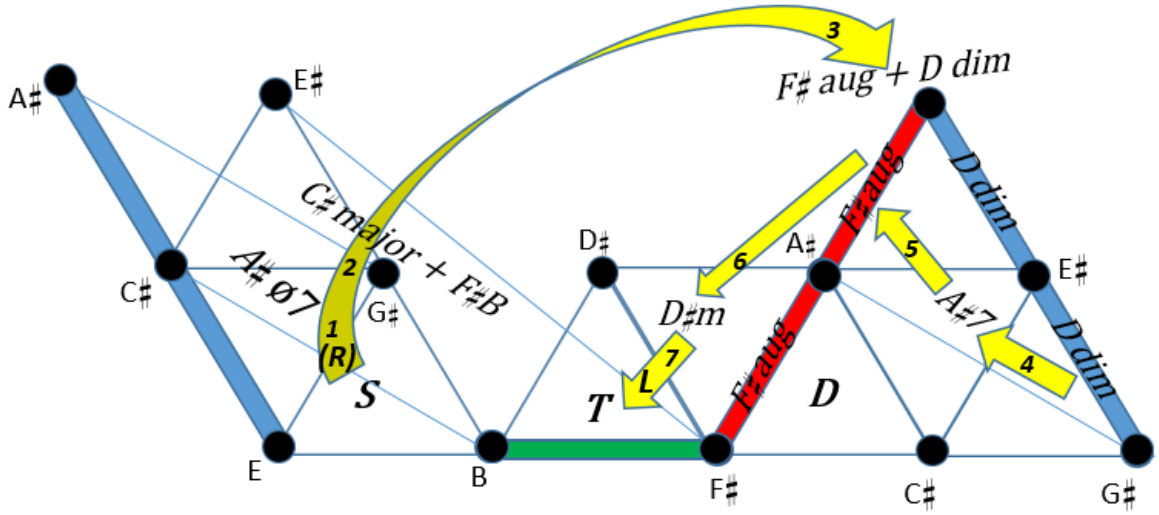


Fig. 4.1. A *Tonnetz* representation of bars 35-47 of *En rêve*, with main functions in the key of B major labelled.

In general, any strict or loose ***TSDT*** cycle would create a clockwise movement around the tonic triad on the *Tonnetz*. This is especially true when harmonies involving pitches above the main diatonic collection are involved, as it is in the current case. The E major subdominant is initially transformed into the half diminished chord on A♯, a neighboring non-equilateral triangle on the left, with two pitches (E and G♯) being shared between the two. As C♯ minor is part of the A♯ø^7 chord, we can claim that an ***R*** transformation with an extension (A♯) has taken place. It is labelled with an (***R***) and as step number 1 in the sequence.[1] The next transformation is more complex and difficult to show on the *Tonnetz*, as not only A♯ and E move upwards to B and E♯, but also F♯ is added at the bottom of the resulting chord, making it lean more towards the dominant function. The dominant pedal point, which has persisted throughout the piece with almost no interruptions, returns at this point. Considered theoretically from a traditional functional perspective, such a dominant pedal creates a forward motion towards

[1] Such 'hidden' basic transformations will be labelled with their labels being put in brackets throughout this dissertation.

the final tonic resolution. However, it is questionable to what extent such functional momentum is perceived at this point and the rest of the neo-Riemannian analysis here will show how the functional cycle is weakened.

Getting to the oddly shaped tetragon with step 2 on figure 4.1, we can see that a clockwise movement from the main subdominant has already been initiated at this point and it will be reinforced with the following more overtly dominant harmonies. The C♯ major + F♯B is followed by another pentad, which combines both the F♯aug and the Ddim triads, emphasised with the blue and red stripes on the right hand side of the figure. There is a subdominant flavor to the Ddim, but the augmented dominant is heavier at this point, also the proximity to the main dominant is visible on the *Tonnetz*. Step 4 in the sequence leads towards A♯^{7} – a subset of the chord preceding it, with the F♯ pedal being omitted at this point. This is the dominant seventh chord of the D♯ minor, which arrives a little later, just before the main tonic, so the movement back to the left is suggested at this point. The A♯^{7} resolves to F♯aug instead and after that a G♯ is added on top of the augmented dominant, making it a modified *Dom*^{9} chord. Finally, the F♯aug resolves to one of the chords from its corresponding Weitzmann region – D♯ minor – and a further minimal transformation reaches the main tonic – B major – to conclude the piece.

The arrows on figure 4.1 attempt to show the clockwise movement in pitch space within the sequence, but it should be noted that the transformations between the second pentad and the D♯ minor are blurrier and not all chords are visualised by easily visible triangles on the *Tonnetz*. However, my neo-Riemannian observations demonstrated that there is a gradual movement in chromatic pitch space from the region of the main subdominant, towards sonorities more closely aligned with the main dominant, and finally returning to the diatonic space of the tonic key and returning to the main tonic. In other

words, Liszt adheres to the normative practices of functional harmony, while being inventive in his choice of particular chords and using some uncommon sonorities of four and sometimes even five tones. Most of the chords in the progression lead into one another through ascending semi tonal motion in one or two voices, which allows for a relatively clear depiction of the sequence on the *Tonnetz*, including a clockwise motion around the main tonic and the positioning of chords in close proximity to one another. Thus, the harmony can be considered to be chromatic and representing some non-functional connections between complex chords, while at the same time exemplifying a ***TSDT*** functional cycle.

2. Achieving a modulation through simultaneous double syntax

As already discussed in the previous chapter, the way the main theme of *Elegie* no. 1 is presented and the key of B major is tonicised, exemplifies a fine balance between a conventional functional cycle and Liszt's harmonically rich chromaticism. On the *Tonnetz* a standard ***TSDT*** cycle in A♭ major followed by a modulation towards B major (including the latter's dominant F♯ major) would not deviate up or down from the lane of the main functions. However, in the *Elegie*'s case it can be seen on figure 4.2 that some chromatic pitches both above and below the ***T***, the ***S*** and the ***T variant*** of B major are involved. Firstly, there is a fluctuation between the tonic and the dim^7 chord on its root (see the bidirectional arrow with labelling corresponding to steps 1 and 6 of the progression). Then there is a clockwise circle in bar 24 (steps 2-5), going through

the main subdominant (hence the green arrow, to account for the diatonic functional relation), but then involving Gø^7 and the dominant-substituting Edim^7. In neo-Riemannian terms, an ***RL*** transformation is followed by the basic ***R*** with the extension of G. After that the Gø^7 is followed by its maximally close dim^7 chord, and finally, the resolving of Edim^7 to A♭ major is more functional than chromatically smooth, evident from the distance between the stripe of Edim^7 on the *Tonnetz* and the triangle of the main tonic. Still, Edim^7 is maximally close to E♭^{7}, which makes it the best possible dominant substitution while being part of a smooth progression from the tonic.

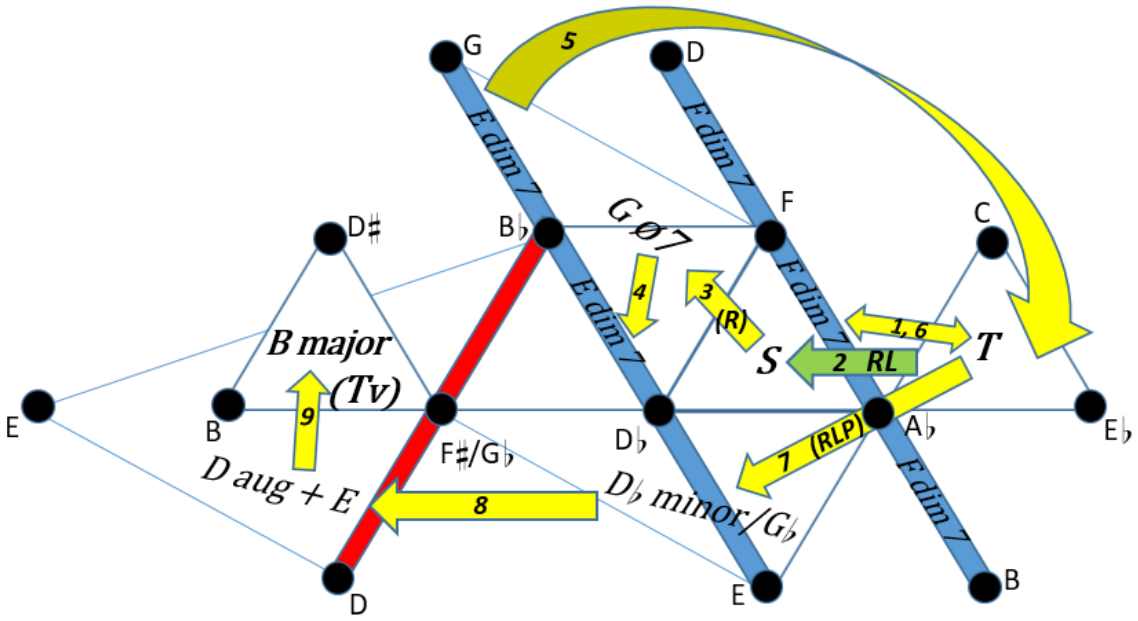


Fig. 4.2. A *Tonnetz* representation of bars 20-28 of *Elegie* no.1. Yellow arrows show chromatic transformations, whereas the green arrow is used for the only purely diatonic functional chord relation in the passage.

The progression in the second phrase included on the *Tonnetz* diagram is less smooth, but includes a couple of interesting substitutions for the main subdominant and the dominant of B major. A couple of pitches lying below the main diatonic lane (namely E and D) are involved. A minor version of the subdominant with the extension of G♭ comes after the tonic (D♭ minor is an ***RLP***

away from A♭ major) – a chord which includes a pitch from both tonics. The latter is then transformed into a segment from the whole-tone scale on D – Daug+E. It is interesting to see how the pitches of this chord surround the pitches of the forthcoming B major on the *Tonnetz*. The diagram makes obvious what might not become clearly audible from just listening to the piece – the proximity of chords with their shared pitches and the gradual, step-by-step movement to the left towards the B major. To sum up, the interpolated more dissonant chords in between the clearly functional chords in A♭ major work nicely in smoothening chord connections and diversifying the harmonic content of the piece, but their *Tonnetz* representation also reveals some clear circular or one-directional motions.

3. Achieving a smoother functional progression through extending of the main functional triads to seventh chords

The ***TSDT*** progression, which is at the basis of the main theme in *Romance oublieé* does not include any chromatic notes, but a *Tonnetz* representation of it will reveal how its constituting chords are more smoothly related than the exclusive use of the ***T***, ***S*** and ***D*** triads in E minor would be (see figure 4.3). Firstly, the tonic is followed by the half-diminished seventh chord, which includes the main subdominant of A minor – F♯ø^7. It is easily visible on the *Tonnetz* that the latter chord is maximally close to D♯dim^7 – the main dominant-functioning diminished seventh chord in the key of E minor, which is quickly passed through in bar 10. The latter separates the ***S-D*** move into two steps, labelled with numbers 2 and 3 on the figure, but in fact these are not perceived as separate

harmonic moves in their quick succession, therefore a single arrow is used between F♯ø^7 and B^7. D♯dim^7 also shares three pitches with the B^7, which comes just before the return of the tonic, to complete the functional cycle. This is how, following the logic of the smooth chromatic transformations between seventh chords but at the same time not abandoning the functional logic, Liszt transitions from subdominant to dominant. This progression is the simplest possible instance of Liszt's simultaneous double syntax, whereby pitches added to the main triadic ***S*** and ***D*** blur the boundaries between functions and smoothen the transitions between them.

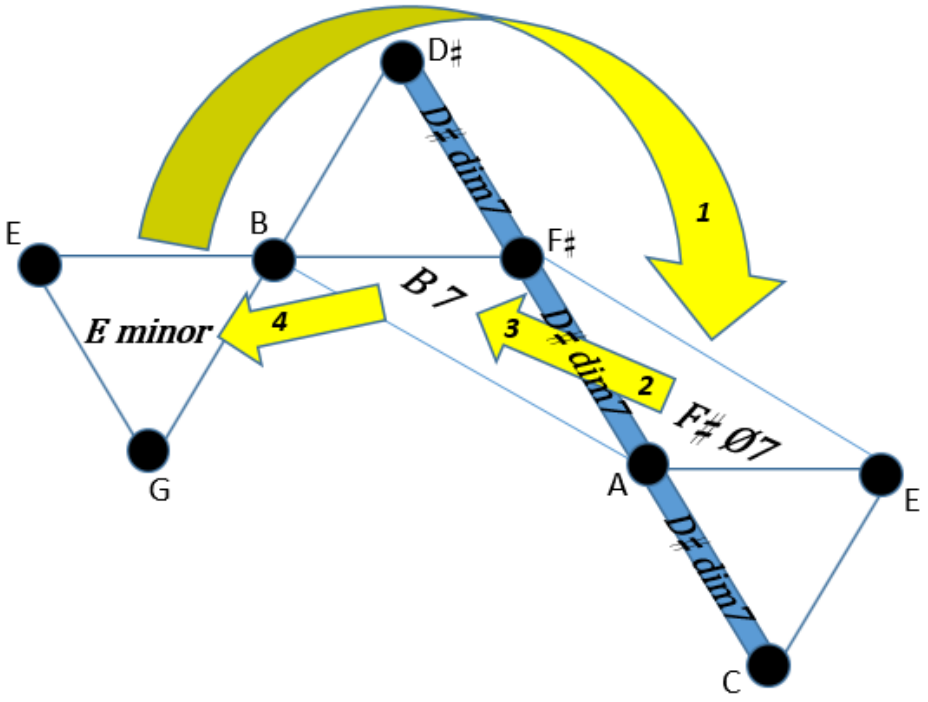


Fig. 4.3. Simultaneous double syntax in bars 8-11 of *Romance oublieé*.

4. A combination of diatonically-related triads and non-diatonic seventh chords within a passage

A different instance of the simultaneous double syntax occurs later in *Romance oublieé*, whereby the close proximity of diatonic triads around the main tonic is explored, before a series of seventh chords transitions towards the subdominant-functioning F♯ minor (figure 4.4). As already explained in the functional analysis of the piece, there is a subtle ***TSDT*** cycle within bars 28-31, obscured by the functional fluidity of G♯ minor, which throughout the piece can be either a weak tonic or a dominant. At the same time, there are some bi-directional ***L*** and ***LR*** transformations, as shown with steps number 1 and 2. These are followed by a move towards the main dominant (step 3), which can be described as an ***R*** transformation with an extension, if seeing A as an addition to the B major triad.

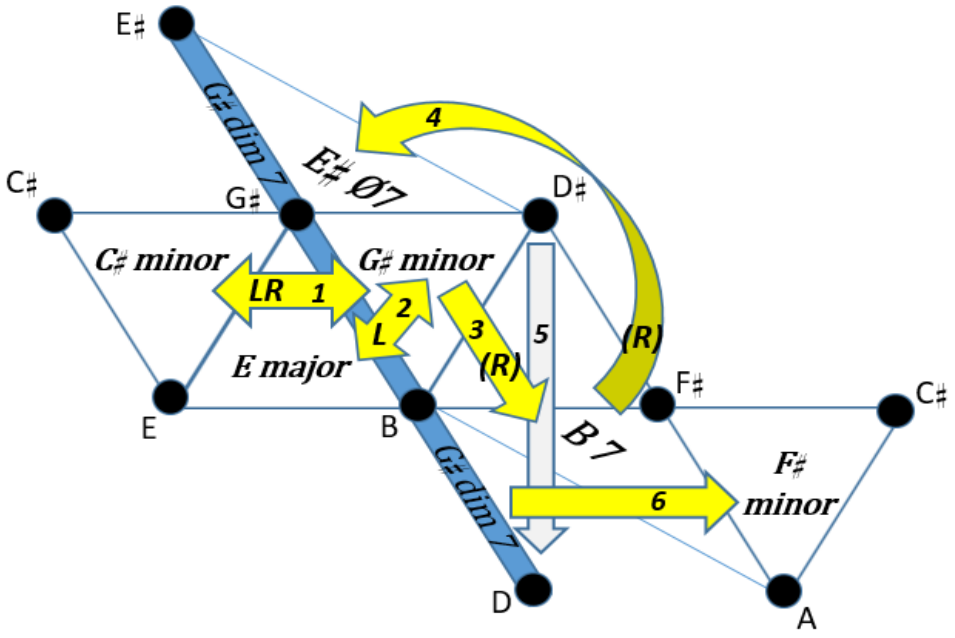


Fig. 4.4. Simultaneous double syntax in bars 28-38 of *Romance oublieé*.
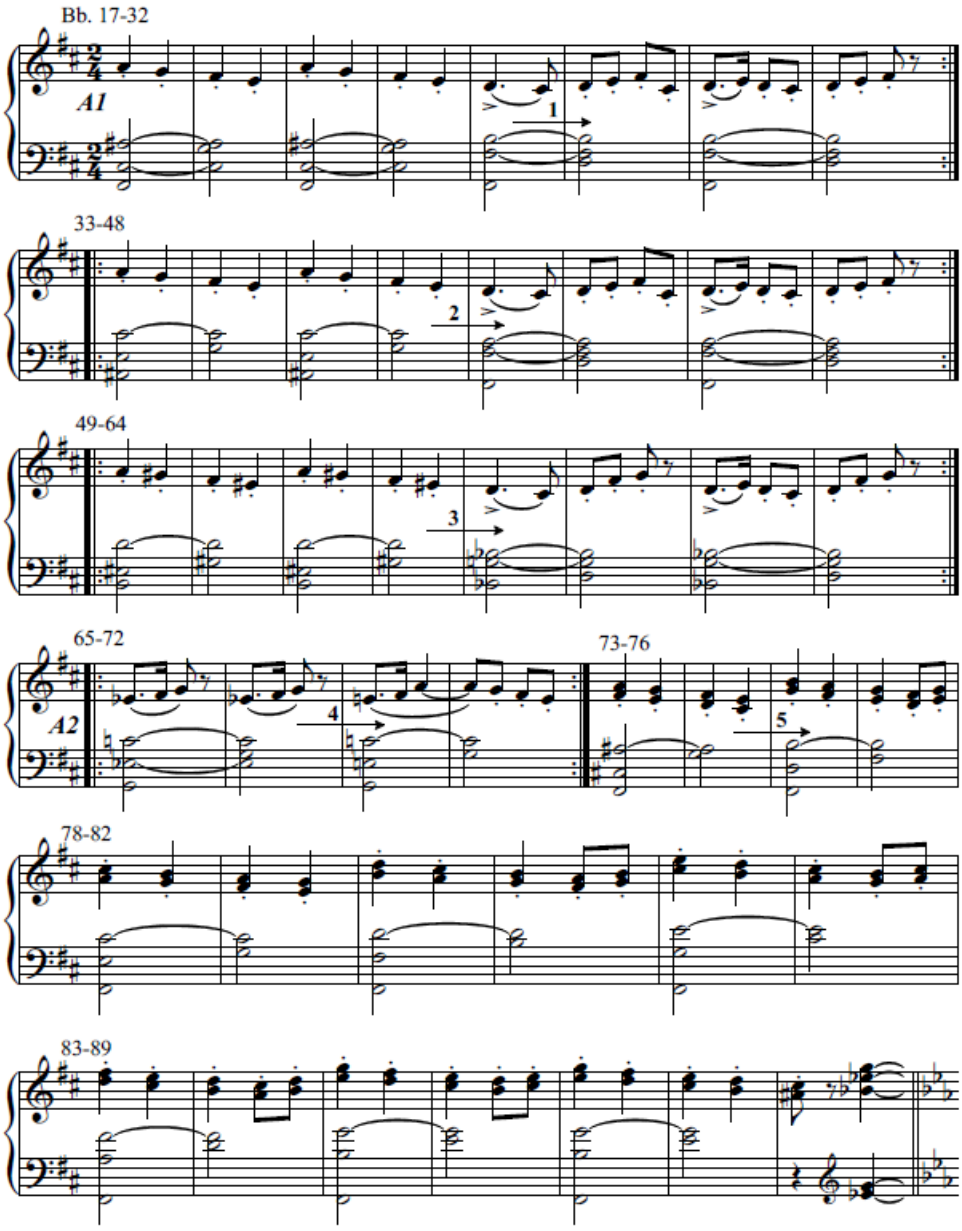
So far harmony has been rather smoothly transforming, while at the same time staying diatonic in the key of E major. The latter changes with the sudden addition of the chromatic pitch E♯ to the G♯ minor chord – on a triadic level B major returns to G♯ minor with another ***R*** transformation, but this time the extension of the resulting triad comes across as more alien. At the end of the passage E♯ø^7 transforms into its maximally close diminished seventh chord (G♯dim^7, for visual convenience the transformation is shown with a dark white arrow on a pitch level as opposed to the whole resulting chord being pointed at), and the latter fulfills its most logical tonic expectation in the key of E major by resolving to F♯ minor. It is just here at the end of this section that chromatic proximity is abandoned at the expense of functionality. All chord connections before that can be understood in the context of both types of syntax. Liszt certainly must have felt these points of contact between functional and parsimonious chord relations, which is evident from the voice leading and use of chord inversions in the passage. Movement from chord to chord is maximally smooth in bars 28-33 but also can be heard as functional until the introduction of the E♯.

5. *Inflected repetitions* and simultaneous double syntax

The term '*inflected repetition*' is introduced in an article by Ramon Satyendra from 1997 and defined as 'a pitch transformation in which a musical segment is repeated with one or more notes inflected by a semi tone.'[2] The concept is exemplified most convincingly in Satyendra's analysis of *Csárdás*

[2] Ramon Satyendra, "Conceptualising Expressive Chromaticism in Liszt's Music", *Music Analysis* 16, (1997, 219–252).

obstineé (S. 225/2, 1884-5).[3] It is shown how Liszt uses the obsessive repetition of a simple four-note motive with various changes ('inflections') of one or two notes as a substitution for the Classical-Romantic tonal syntax. In other words, melodic semi tonal changes facilitate the modulation to diatonically distant keys



Ex. 4.1. Bars 17-89 of *Csárdás obstineé* (no harmonic reductions; with rhythmic reductions of the accompaniment only).

[3] Ibid, pp. 239-245.

and supplant conventional cadences. Satyendra's analysis concentrates mostly on melody and it is rightful to do so, as 'the inflected repetitions serve not to reinforce but rather to *replace* the cohesiveness provided by functional harmonic links.'[4] However, I believe that it is still necessary to grant the accompaniment with more attention and more specifically to trace harmony on a chord-to-chord and on a phrase-to-phrase level, because a lot of the time there are dominant-tonic relations and phrases are within a key (or more loosely in a

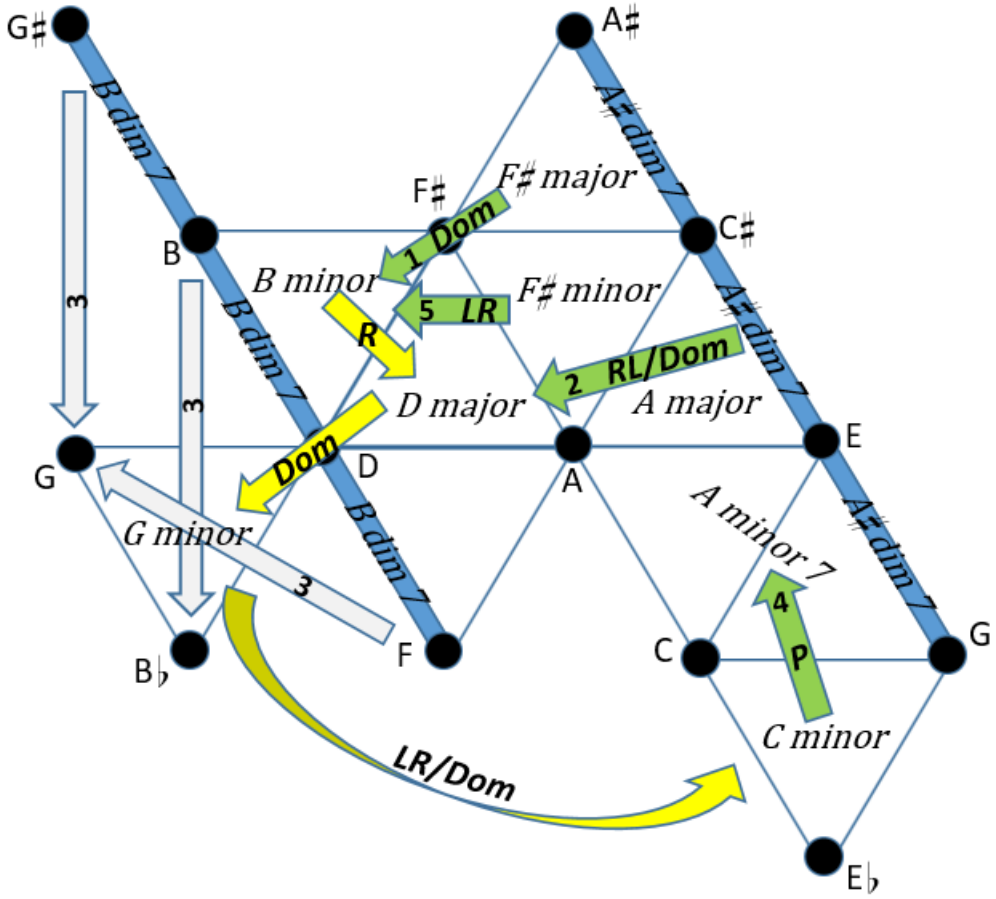


Fig. 4.5. Simultaneous double syntax in bars 16-88 of *Csárdás obstineé*. Green and yellow arrows represent chord-to-chord and phrase level progressions respectively, which are both a mixture of the two types of syntax.

[4] Ibid, p. 242.

key area), while at the same time voice-leading parsimony aids the access of more distant chords.

A fine example of simultaneous double syntax is revealed in *Csárdás obstineé* from bar 16 onwards, after the left-hand accompaniment kicks in and the main motive starts being reiterated and altered (see ex. 4.1). I have separated the section in question into two parts and labeled these as *A1* (bars 17-64) and *A2* (bars 65-89).[5] *A1* consists of six eight-bar phrases, each of which is repeated (6 x 8 = 48 bars in total). The first two of these are based on clear dominant-to-tonic progressions. F♯ major → B minor is slightly obscured by the A♮ in the melody and by the lack of root-position tonic, but nevertheless the pull of A♯ towards B is strong enough to neutralise any note, which does not belong to the chord, projected by the accompaniment. The second phrase contains the progression A♯dim^7 → A major → D major, in which the diminished seventh chord is substituted with a stronger dominant through a minor inflection, before proceeding towards the expected tonic. The ***RL/Dom*** labelling on figure 4.5 refers to the functional relation between A major and D major, while it is shown that the transformation in question starts from A♯dim^7. In the third phrase of this section another diminished seventh chord – Bdim^7 – is resolved into a minor triad, but the latter – namely G minor – is not among its most closely related consonant triads. This can be observed on the *Tonnetz* – G minor does not share an edge with the Bdim^7 blue stripe, but only the dot of D.[6] In fact, G minor is neither smoothly connected to, nor the expected tonic of Bdim^7. We have to look at harmony at a one-step higher level (phrase level) in order to discover that G minor is actually the expected tonic of the D major at the end of the previous

[5] My full sectional subdivision of *Csárdás obstineé* will be revealed in the next chapter, where a discussion of the whole piece will be more pertinent.

[6] Dark white arrows here connect moving pitches between Bdim^7 and G minor. The diminished seventh chord gets 'folded' into a consonant triad.

phrase. At this level chords are connected with yellow arrows on the figure and the ***R*** and ***Dom*** (or ***PRL***) transformations are revealed.[7]

Section *A2* introduces new chords only in its first four bars, whereas everything from bar 73 onwards is a reiteration (with several extensions) of the initial F♯ major → B minor. On a triadic level in bars 65-68 there is a ***P*** transformation involving C minor and major, or if we also include the A from the right-hand part it is C minor → A minor[7]. Another notable event in the build-up towards the next section is the cancellation of A♯ in the accompaniment from bar 78 onwards, which loosens the functionality of the passage, while at the same time smoothening the transformations towards B minor or D major – F♯ major → D major requires ***P+L***, while F♯ minor → D major happens through only an ***L***. However, F♯ minor → B minor is considered the most aurally prevalent chord relation in bars 72-88 and it is shown with a green line and labelled ***LR*** on figure 4.5 (step 5). On a phrase-to-phrase level I have connected the last chord of *A1* and the first chord of *A2*, as they are in the already exploited ***LR*** connection to each other, so parallels between phrases can be drawn from the *Tonnetz* representation of the section.

In short, there is a subtle interplay between diatonic functionality and chromatic transformations throughout the first 88 bars of *Csárdás obstineé*. Both dominant-tonic connections and transformations of diminished seventh chords into consonant triads occur in such a quick succession, as it becomes impractical to separate one type of syntax from the other. Parallels between phrases can be drawn, but with only partial validity, because the ascending fourth (***Dom***) connections between chords are always the result of different compound neo-

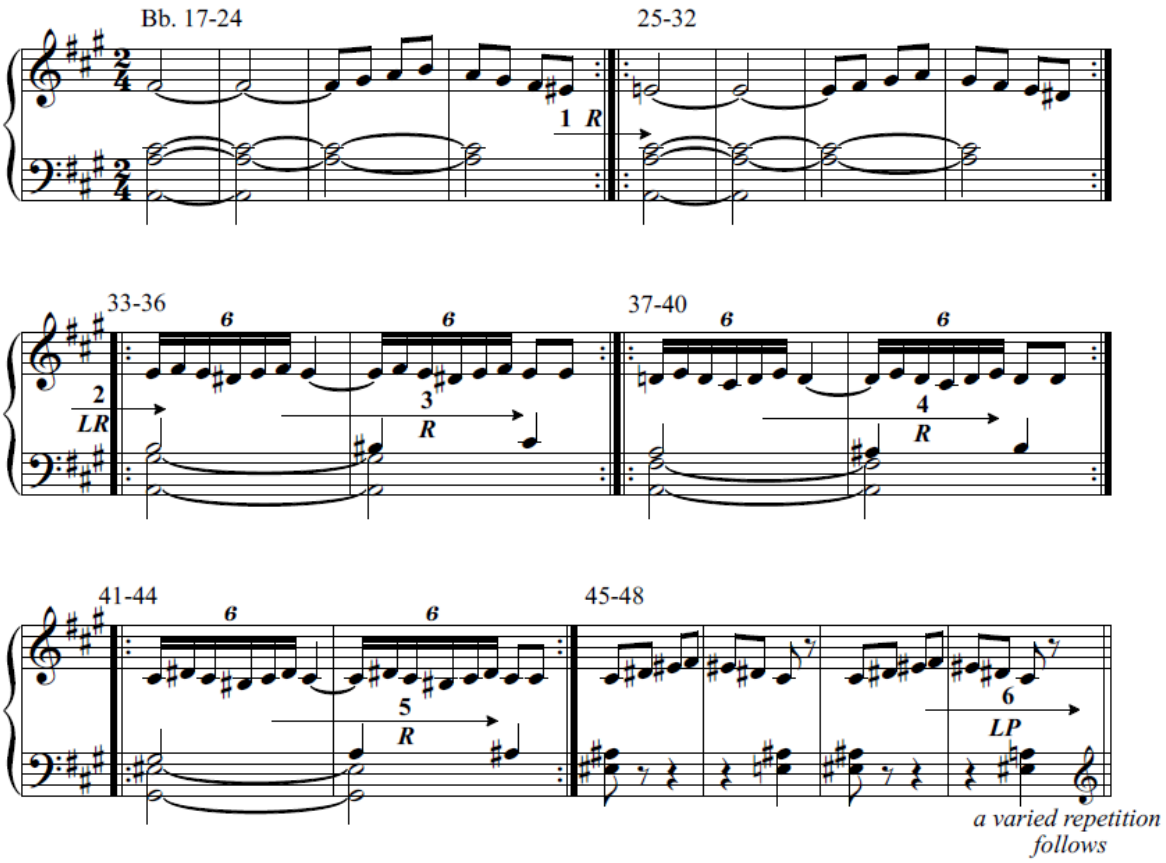
[7] Looking at progressions on different levels of the structure will be most pertinent to the analyses in chapter VI. However, in the current case there isn't a clear differentiation between the two types of syntax on the chord-to-chord and phrase level, which means that the two are difficult to separate from one another. The latter brings the conclusion that simultaneous double syntax is more appropriate for discussing this example.

Riemannian transformations – firstly an ***RL***, then a ***PLR***, and finally an ***LR***. It turns out that the small melodic inflections affect the resulting types of chords and by doing so diversify the harmony of the passage, which otherwise would have only contained a dull sequence of dominant-tonic connections. The neo-Riemannian perspective with the *Tonnetz* representation of the passage revealed that there is not a clear harmonic pattern and the section is actually less straight-forward than it might have sounded upon first listening.

6. Simultaneous double syntax in the absence of clear ***TSDT*** cycles

The simultaneous double syntax can exist even in pieces, in which the functional ***TSDT*** cycle is absent or severely weakened, such as in the ***Mephisto Polka*** (S. 217, composed in 1883). It might be impossible to pin point the three main functional chords in this piece, but it is distinguishable from the other works discussed in this chapter for Liszt's adherence to one and the same key signature from bar 17 until the very end. The tonic of F♯ minor is suggested with the appearance of the main theme in bar 17 and harmony does not deviate far from its diatonic area throughout the whole piece. However, the way it progresses is more in accordance with the principle of common tone retention than it is reminiscent of a functional cycle (see ex. 4.2). The theme is reiterated a whole tone lower without any changes in the accompaniment, which leads to the initial F♯ minor harmony in first inversion being transformed into a root-position A major harmony. In tonal terms this can be labeled as ***i-III*** (a move

towards the major mediant from F♯ minor), while it is labelled with the neo-Riemannian ***R*** on the *Tonnetz* of figure 4.6. A major is followed by its dominant



Ex. 4.2. Bars 17-48 of *Mephisto Polka*.

E major in bar 33 and what follows from there onwards is more interesting from a transformational point of listening.

A new harmonic idea, based on the initial sextuplets, is introduced in bars 33-34 and reiterated six times, being subjected to a descending sequence. Firstly, E major and its relative C♯ minor are bridged through the augmented triad of their common Weitzmann region – Eaug. A whole tone lower for the next phrase – D major and its relative B minor are connected in the same way. Then only another semi tone lower, the sequence starts from C♯ major, reaches A♯ minor and the latter is briefly contrasted with the diminished triad on its root, then with its closest augmented triad – E♯aug. Not coincidentally, as it is becoming

obvious that this is a carefully planned chromatic progression, the latter augmented triad resolves as an augmented dominant to the F♯ minor for the first varied repetition of the main thematic group (the latter event is not included in the score example). On the *Tonnetz* diagram only the transformations between

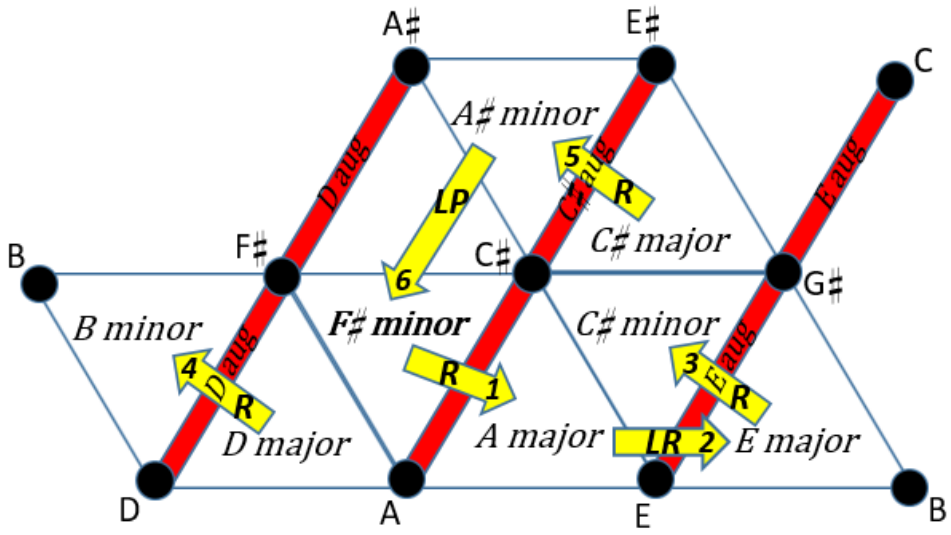


Fig. 4.6. Simultaneous double syntax in bars 17-49 of *Mephisto Polka*. The augmented triads are considered transitional chords between the given consonant triads.

consonant triads are shown with arrows – this is not only for clarity of reading, but because I consider the augmented triads and the A♯dim in bar 46 as passing chords. Still, a different interpretation of this passage, which attaches greater importance to the augmented triads, is possible.

The harmonic smoothness of the whole passage and the fact that everything is organised rather tightly around the F♯ minor becomes evident from figure 4.6. Moreover, and more importantly, the passage is limited to chords from the diatonic collection of this key, with the sole exception of the penultimate A♯ minor. The latter is, however, never properly modulated towards and its leading tone G𝄪 is purposefully notated as A♮ in bar 48. As pointed out in Shay Loya's analysis of the piece, 'Liszt asks the listener to continue hearing the

A♯-minor key area as a modal extension of F♯ minor'.[8] Relating this to the current analytical discourse, both the tonal centricity around F♯ minor and the smooth chromatic transition through more dissonant chords such as the augmented triads, or the insertion of a diatonically more distant chord such as the A♯ minor, are achieved at the same time. Therefore, another instance of the simultaneous double syntax is present, although this time occurring in functionally looser diatonic environment.

Conclusions

The above analyses lead to the inference that diatonic functionality and parsimonious chord relations, which were initially presented as posing a dichotomy, are in fact not mutually exclusive features of Liszt's harmonic syntax. As illustrated in all six examples, a sequence of chords can receive a functional labelling, while involving some basic and compound triadic neo-Riemannian transformations, or a smooth chromatic transition between seventh chords and pentads. Analysing such progressions in a more traditional manner would accordingly highlight the traditional features of the harmony. Conversely, my neo-Riemannian method with the use of the *Tonnetz* has provided a more holistic picture and has proven that neo-Riemannian theory can be reliable not only for discussing late Romantic chromatic harmony, but also for observing its mutual complementation with diatonic functionality.

The harmonic situations, that have been discussed so far, are not sufficient for drawing any wider-ranging conclusions about Liszt's use of simultaneous

[8] Shay Loya, *Liszt's Transcultural Modernism and the Hungarian-Gypsy Tradition* (Rochester, 2011, 238-239).

double syntax. Firstly, as already remarked at the opening, there can be many more examples with further, but still more multifarious double-syntactic situations of the same species. Secondly, the above six cases were only sufficient to show how Liszt could be inventive with his harmony without repeating the same chord relations twice or, so to speak, without using recurring harmonic clichés. Thirdly, in accordance with what has been claimed by other authors, our analytical journey through late Liszt so far shows that the composer's creativity has been leading him in different directions throughout his last years, never settling for a specific type of genres, forms, or, for that matter, use of harmony.[9]

[9] The difficulties in putting labels on Liszt's late compositions and assigning them into categories have been described by Dickinson 2002 (see pp. 9-14).

Chapter V

Successive double syntax

Achieving stylistic contrast through changes in the harmonic syntax is an important feature of Liszt's late compositions. The alternation of more diatonically conceived passages with ones, which are based on smooth chromatic chord connections for him has been a most potent technique for diversifying harmony. I will be describing this kind of organising principle in the current chapter, terming it successive double syntax. A couple of preliminary remarks should be made here. Firstly, there can still be a small amount of superimposition of the two types of syntax in a section, which is described as predominantly functional or predominantly chromatic. The main difference with the examples given in the previous chapter is that either diatonic functionality or chromatic chord relations will be proven to clearly dominate one another and be more systematically employed than the other at any point. More emphasis will be given on what happens when transitioning from section to section than on a chord-to-chord level within the sections. Secondly, in some sections of the pieces considered below diatonic functionality can be the only organising principle or conversely, the complete lack of it might be revealed. In such instances the sectional subdivision of the music becomes even clearer and the contrast between sections is brighter. In any case, there is an objective justification for establishing boundaries between sections in pieces, based not only on changes in harmony, but often on changes of key signature, appearance of new thematic material, or sudden change in texture.

Admittedly, the first three categories outlined below cover double syntactic situations, which had been well established and common for nineteenth-century composers at the time of Liszt's late years. Firstly, juxtaposing a harmonically vague introduction with a tonally clear exposition of the main thematic material is a fairly familiar aspect of Romantic music, which is taken to a certain extreme in some of Liszt's pieces, which will be discussed in this chapter.[1] Secondly, juxtaposing harmonically stable thematic sections with more dynamic (hence chromatic) developmental passages or chromatically related secondary thematic material was also well known to composers, performers and audiences by the 1880s. It is only the final fourth category that contains some more obscure cases, whereby traditionally stable thematic sections are built on successive double syntax, or the boundaries between non-functional chromatic and functional diatonic syntax are more loosely differentiated.

1. Harmonically vague introductions versus tonally clearer expositions of the main thematic material

The first category of successive double syntax in Liszt's late piano music is the easiest to relate to its music-historical precedents. While the works discussed below are formally freer than their Classical instrumental predecessors, it must be acknowledged that the origins of the introduction – exposition duality mentioned above is in some of the first movements of sonatas from the Viennese

[1] While acknowledging that the word 'exposition' is a loaded term and implies sonata form theory and procedures, I do not want to limit the current analytical inquiry to specific forms or genres, but only understand 'exposition' as a synonym for *presentation* and *appearance* in their most general meanings.

Classical period, Beethoven's *Pathétique* sonata op. 13 being a notable specimen.[2] Liszt's introductions in the following examples are relatively short and serve to prepare the main tonic with a brief and subtle chromatic progression, often involving chords in maximally close proximity. I will aim to demonstrate that the 'tonal fog' of the beginning can make more syntactical sense once neo-Riemannian reading lenses are applied. Also, it will be interesting to show how the point of transition between introduction and exposition works – whether through tonal, neo-Riemannian logic, or both.

1.1. Valse oublieé no. 1

The 16-bar introduction of the first *Valse oublieé* is built upon alternating minor seventh chords and the diminished seventh chord on D (see fig. 5.1). It is not possible to relate such sequence to any key and the lack of key signature is revealing in this respect. The voice leading proximity between the minor seventh chords and $D\text{dim}^7$ is shown on figure 5.1. The movement proceeds from the bottom up. Diatonic movement on the *Tonnetz* would be illustrated with a more extended sequence moving horizontally to the left or to the right, which is clearly not the case here.

The main theme is introduced in a clear way from bar 17 onwards, while the key of F♯ major is established and affirmed by its corresponding key signature. Although there is some well weighted vagueness in the accompaniment, the main dominant and tonic chords ($C♯^7$ – F♯ respectively) are

[2] Michael Tilmouth and Julien Budden, "Introduction", *Grove Music Online*, retrieved 27 Sep 2021, from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000013872.

clearly outlined in bars 17-32, which brings the expected amount of harmonic contrast and clarity after the more chromatic introduction. The dominant-tonic movement to the left is shown with the green line on figure 5.1 and contrasts against the initial ascending chromatic movement. C♯^{7} is the first chord of the

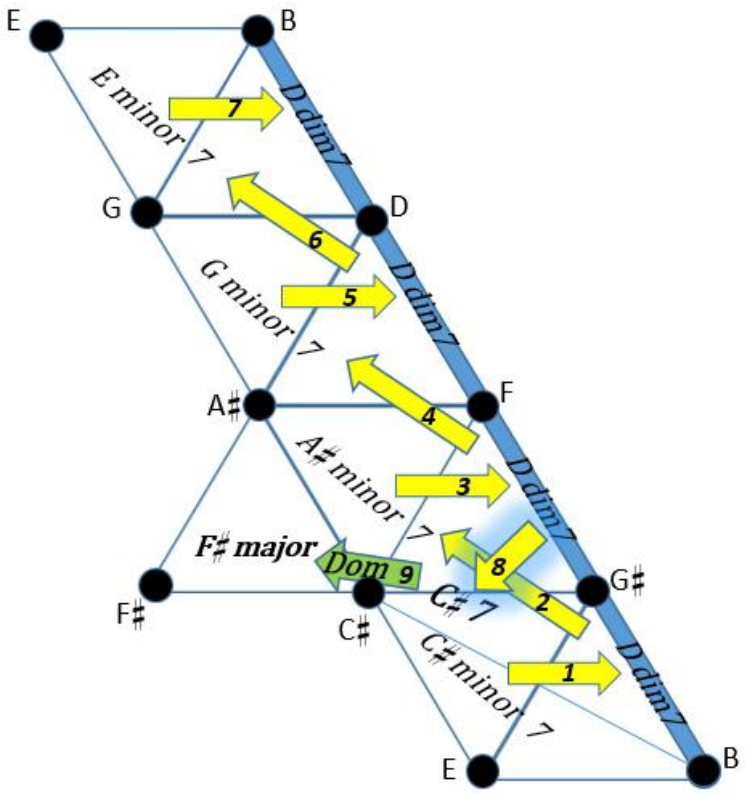


Fig. 5.1. Successive double syntax in bars 1-32 of *Valse oublieé* no. 1. The transition from the introduction into the expository section is highlighted with a blue glow around the corresponding yellow arrow.

expository section and it is in maximally close proximity to its preceding Ddim7, which means that smooth chromatic relations connect all chords until and including the opening of the new section, after which there is an immediate change to dominant-tonic relations.

1.2. *Elegie* no. 1

The use of Liszt's 'no key' key signature and the chromatically inflected repetitions in both melody and harmonic support reveal a similar type of successive double syntax in the introduction of this piece. The most notable difference in comparison to the *Valse oublieé* is the implementation of the A♭ major key signature before the end of the section, which suggests a slightly more gradual transition from harmonic obscurity to clear establishment of a tonic key (see fig. 3.4 – the main ***T*** already arrives in the introduction). Firstly, the maximally close B major and augmented chord on D♯ are uttered in the initial 4 bars (fig. 5.2, step 1 is marked by the lower dark white arrow). Then a melodic ascend towards E minor is suggested, but not clearly affirmed harmonically with the C♯ half-diminished seventh chord in bar 8. The latter chord is prolonged with the descending melody and eventually C♯ is enharmonically reinterpreted as D♭ as soon as the key signature changes to four flats. At this point the music has arrived in the diatonic realm of the forthcoming A♭ major, although Liszt remains faithful to his chromatic semi tonally related chaining of chords until the arrival of the A♭ major in bar 15. After depicting all these harmonies on the *Tonnetz*, a circular clockwise movement becomes visible. More importantly, the use of only two minor-third-distant (***R+P*** related) consonant triads throughout this introduction speaks enough about the lack of diatonic relations or any hints of functionality in it. However, it is interesting to note that the two triads in question turn out to be the two tonics established in the functional skeleton within the *A* sections of the piece (see on fig. 3.4). In summary, the contrast between the chromaticism of the introduction and the later prevailing functionality in *Elegie* no. 1 is clearly manifested, but at the same time the first two sections of the piece employ the same two consonant triads – B major and

A♭ major – which contributes to the harmonic coherence throughout the whole piece.

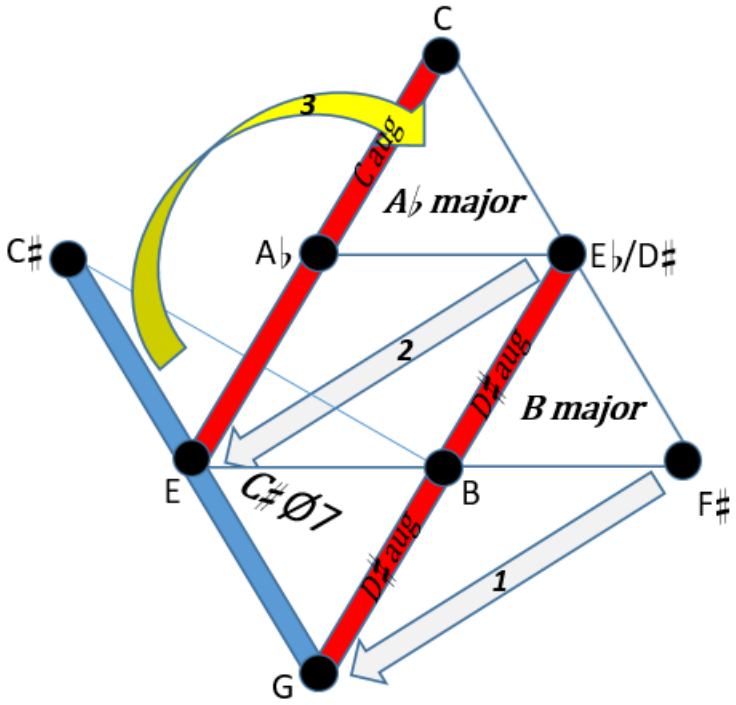
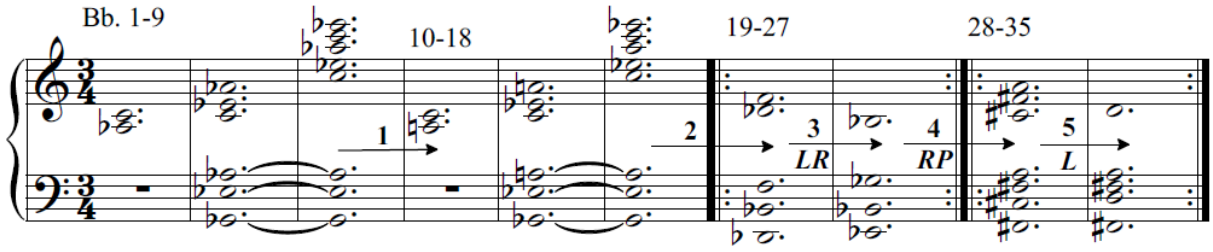


Fig. 5.2. Circular harmonic movement in the introduction of *Elegie* no. 1 (bars 1-19), which leads towards the main tonic A♭ major.

1.3. *Elegie* no. 2

Compared to the first *Elegie*, in no. 2 (S. 197, composed in 1877) the harmony is more sparing and includes only the minimum amount of chords sufficient for claiming that there is successive double syntax in the introduction-main theme alternation of the first 35 bars (see ex. 5.1). The introduction is based on an ascending melodic line, which is repeated with a minor harmonic inflection. Accordingly, the initial accompanying chord – $A♭^7$ – is substituted by

its maximally close diminished seventh chord – G♭dim^7. After that the main theme follows up and the dim^7 chord resolves into one of its possible expected



Ex. 5.1. Harmonic reduction of bars 1-35 of *Elegie* no. 2.

tonics – B♭ minor. The curved arrow on figure 5.3 illustrates the latter harmonic event and the *Dom* designation is written, although the stricter and exclusively functional chord relations are only those between the B♭ minor and E♭ minor in the whole passage under discussion.

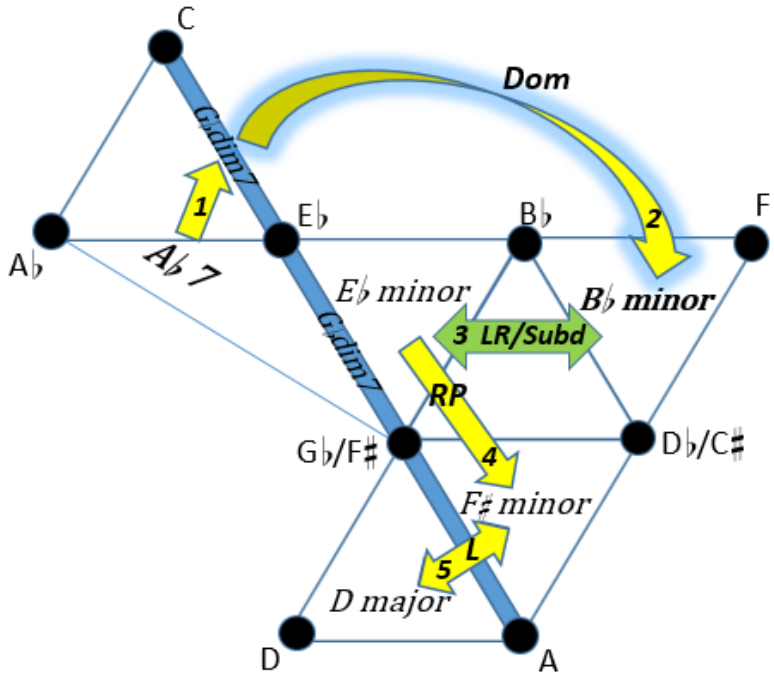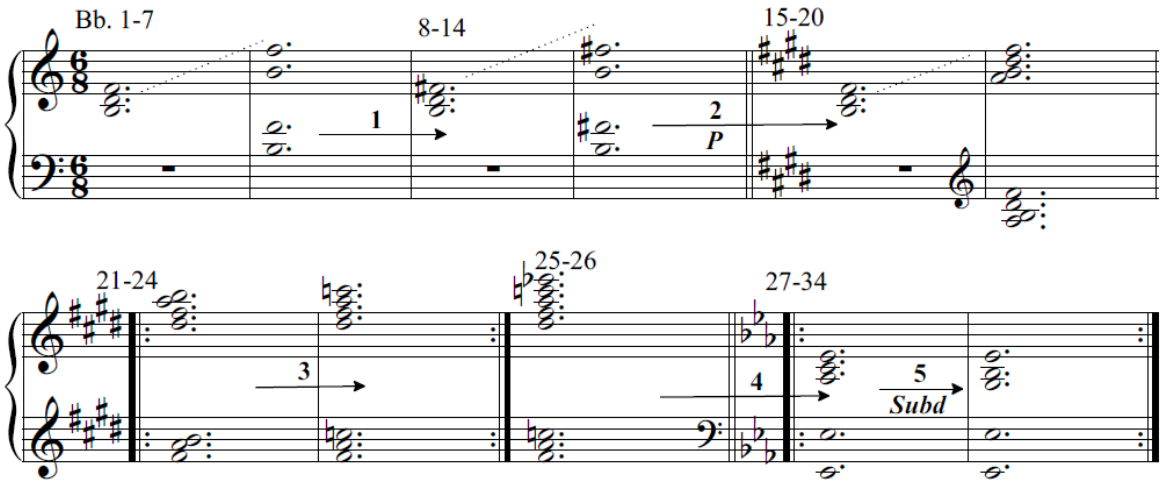


Fig. 5.3. Successive double syntax in bars 1-35 of *Elegie* no. 2.

This clear tonic-subdominant alternation is at the basis of the main theme and is repeated in other keys later in the piece. The following F♯ minor and D major, however, already deviate from the B♭ minor diatonic collection and blur the functional basis of the main theme. Their *Tonnetz* representation illustrates their neo-Riemannian relation to E♭ minor (an ***RP*** is followed by a smoother ***L*** transformation) and the fact that the key of B♭ minor is quickly transitioned through. Nevertheless, for the sake of the current introduction-exposition discussion it should be noted that Liszt amplifies the harmonic contrast between the $A♭^7$ – G♭dim^7 and B♭ minor – E♭ minor couples by a couple of non-harmonic techniques. Firstly, the initial contemplative and recitative-like ascending lines are substituted by a more singable main theme material. Secondly, the rhythmically wandering quality of the introduction is eliminated with the appearance of a more clearly defined rhythmic figure from bar 20 onwards. The fact that the functionality of the main theme is quickly weakened is a secondary event and does not compromise the introduction-main theme harmonic duality.

1.4. Mephisto Waltz no. 2

Although the harmony in this piece (S. 515, first published in 1881) is complex and includes a wide variety of more dissonant chords, there is a main theme in E♭ major, which is clearly differentiated from the chromatic and tonally indeterminate introduction. The latter includes just fragments of the main thematic material, and the key signature of E flat major, used for most of the duration of the piece, is not yet introduced in it. Ramon Satyendra's *inflected repetition* idea can also be a starting point for discussing this introduction,

considering that the subtle changes in the implied harmony result from gradual changes (inflections) of a simple motif.



Ex. 5.2. Harmonic reduction of bars 1-34 of Mephisto Waltz no. 2.

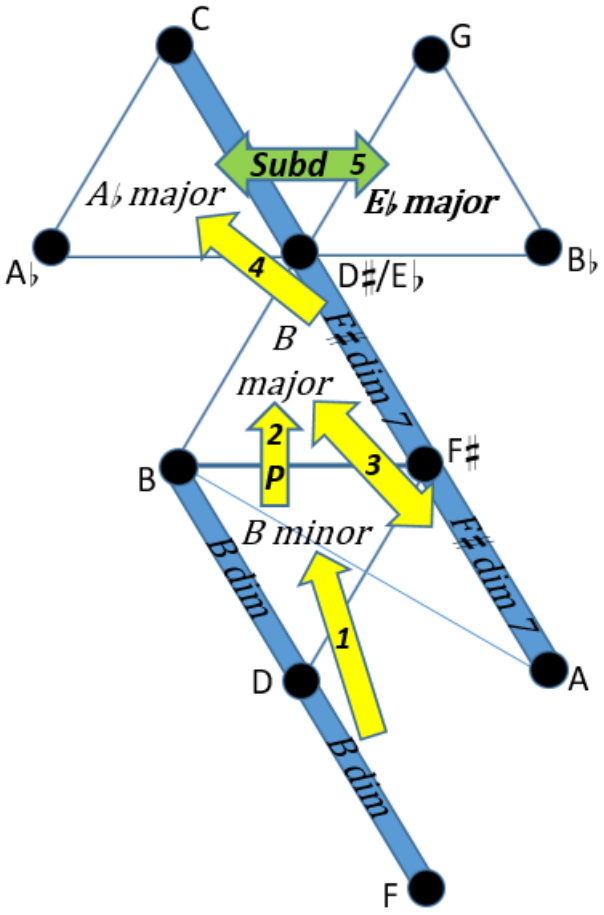


Fig. 5.4. Successive double syntax in bars 1-34 of Mephisto Waltz no. 2.
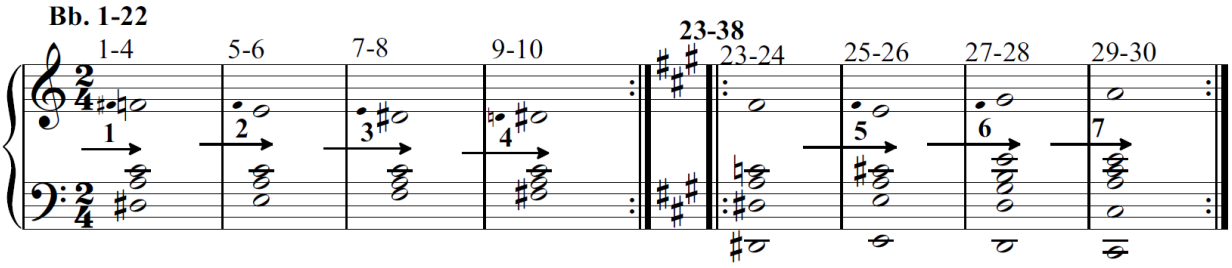
The first 7 bars employ a fragment of the octatonic scale and emphasise the interval of the tritone with the ascending sequence on B and F (see ex. 5.2, which is only a succinct harmonic summary of the passage). Taken on their own, these initial bars do not imply any consonant triad or key whatsoever. It can be claimed that the diminished triad on B (B-D-F) is implied (see at the bottom of figure 5.4). As a contrast, in the next 7 bars each F is substituted for F♯ and this immediately suggests B minor – a single semi tonal shift makes the difference. In bar 14 the D is substituted for D♯ – the harmonic implications of that are B major and the change is shown on the *Tonnetz* as a ***P*** transformation. Another melodic inflection comes in bar 22 – C♯ gets alternated with C♮ several times, with the latter gaining prominence throughout the last three bars of the introduction. Harmonically this is an alternation between B major and the diminished seventh chord on F♯ – hence the introduction concludes with the same type of sonority it has started with – a diminished chord. It is a diminished triad at the very beginning and a diminished seventh chord a semi tone higher in bars 24-26 (the blue stripes on the *Tonnetz*).

The main theme of the piece is introduced in bars 27-34. It is here where the main key of the piece – E♭ major – is established. Upon first listening it may seem that the initial harmony is not E♭ major (it includes the pitches E♭, A♭, C, G and B♭), but it quickly resolves to E♭-G-B♭ and reveals that a melodic formula very typical of waltz music is suggested by these chords – scale degrees $\hat{6}$-$\hat{5}$ motif, here in harmonic thirds within the A♭-C to G-B♭ movement. In short, if we simplify the chords of these eight bars to major triads, a simple subdominant-tonic alternation in E♭ major is revealed and it is shown with a green bidirectional arrow at the end of the harmonic chain in figure 5.4. To sum up, a gradual chromatic ascending from Bdim to the key of E♭ major is at the basis of the successive double syntax at the beginning of Mephisto Waltz no. 2. The

boundary between the chromatic introduction and the diatonic exposition of the main theme is reinforced by the change to E♭ major key signature and the almost complete avoidance of chromatic pitches in the eight bars thereafter.

1.5. *Csárdás I*

The *Csárdás I* (composed together with the *Csárdás obstineé* and catalogued S. 225/1) will close this group of examples, as it exemplifies a subtler contrast between the parsimonious chordal transformations in its introduction and the following dominant-to-tonic relations. Upon listening to the opening 10-bar phrase it becomes audible that the melody comprises a chain of appoggiaturas on all the first beats (ex. 5.3). The F♯ of bar 3 resolves down to F♮, changing the harmony from the diminished seventh chord on D♯ to a German sixth chord on F. Similarly, F♮ resolves down to E to form a cadential $^{6}_{4}$ in A minor. The F$_{Ger6}$ returns in root position in bars 7-8, serving as a subdominant substitute in the key of A minor. However, all the hints of functionality in A minor seem to be rather weak or at least overwhelmed by the chromatic smoothness of the section. The semi tonal ascent of the bass reaches F♯ for the next inversion of the opening D♯dim^{7}. This phrase is repeated unaltered in the next 10 bars – it is the same omnibus progression around the cadential $^{6}_{4}$ chord in A minor. Nevertheless, the melodic F♯ persists, having opened the piece and now closing its first section, which obscures the sense of an A minor tonality. The *Tonnetz* diagram of the passage (see figure 5.5) shows the bidirectional movement between the three harmonies in the introduction, which is followed by a movement upwards towards the diatonic area of A major.



Ex. 5.3. Harmonic reduction of bars 1-38 of *Csárdás I*.

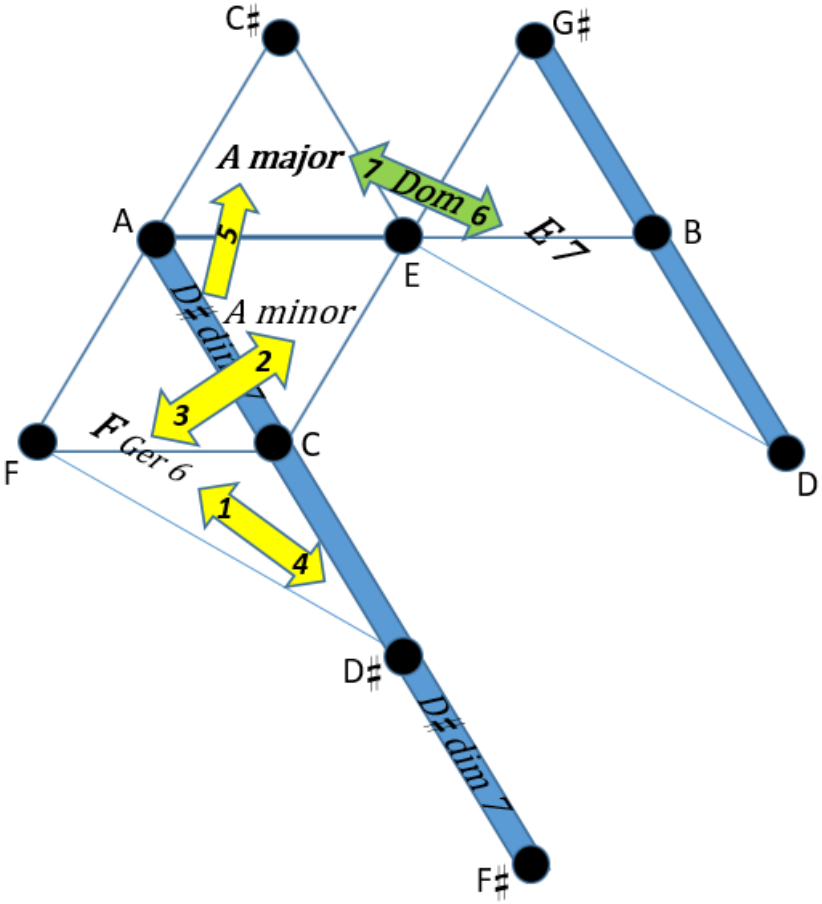


Fig. 5.5. Successive double syntax in bars 1-38 of *Csárdás I*.

The change of key signature from zero to three sharps from bar 23 onwards is significant, because it introduces the key, which corresponds to the

persistent melodic pitch at the beginning – F♯ minor (bars 1-2, 11-12 and 21-22 only include a repeated F♯ in the right-hand part, which is not reflected in the harmonic reduction). Moreover, this key signature does not get altered any more for the remainder of the piece and in retrospect the opening section seems the odd one out if analysing the whole *Csárdás* in functional terms. Looking at the first 16 bars after the introduction of a new key signature, the local tonic of A major is clearly affirmed with the use of its corresponding dominant seventh chord (both shown at the top on figure 5.5). This immediately creates harmonic contrast with the more chromatically conceived introduction and places the latter in the same opposition to the following material, that was present in the other pieces analysed above. However, the difference between introduction and main theme here is less significant, as both sections are based on the inflected repetitions of the same motif. Also, harmonically, the change is subtle and crucial to it is the more diatonic bass movement from bar 25 onwards, which replaces the initial chromatic omnibus progression.

2. Diatonic thematic sections versus more chromatic transitional material

For many decades before Liszt was even born a typical alternation of sections was utilised in instrumental music. The important thematic material was supposed to be signified and reinforced through a certain amount of harmonic stability and clarity. At the same time, the sections of the music, which were having a more developmental or transitory character, needed to be contrasted against the former and that was achieved, among other means, through tonally

more unstable harmony.[3] The evolution of music from the late eighteenth century onwards led to the developmental sections of sonatas and transitory passages throughout all genres and forms becoming harmonically less and less relatable to the main key, while composers were exploring chromatic chord relations with increasing boldness. Often there is no clear distinction between different types of sections to be pointed out in Liszt's music based on harmony alone, as chromaticism is central to his style in general. Nevertheless, the following examples show some instances, in which the harmonic distinctiveness of chord progressions creates sectional subdivision.

2.1. *Valse oublieé 1*

As already shown in chapter III, functionality is strong throughout this piece and it is only in its introduction and short transitional passages that it is fully substituted by smooth chromatic progressions. Such is the case with the transition between the main themes in bars 140-159, the chords in which I described as 'only passing harmonies, which connect the subdominant to the tonic'. A more detailed description of this transition and what precedes and follows it, accompanied by a *Tonnetz* diagram (figure 5.6) will follow here.

Firstly, the reprise of the main theme is based on the alternation between G minor and D^7 chords – a clear dominant-tonic connection. Then the transition starts as soon as the already familiar main melody is substituted by repeated trill-like E♭ and D, which will subsequently be subjected to inflected repetitions until

[3] "Transition", *Grove Music Online*, retrieved 27 Sep 2021, from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000028271.

the main dominant pitch of C♯ is reached in bar 156 for a real trill. There is a chain of the main neo-Riemannian transformations within the transition, constituting a circular movement around the pivot note A♯. The *Tonnetz* diagram shows how the harmony circulates five of the six consonant triads around this pitch, leaving only B♭ major out. Once the section of the second theme has begun, the diatonic area of F♯ major is already reached, and although there is another chain of chromatically related chord here, they all remain subservient

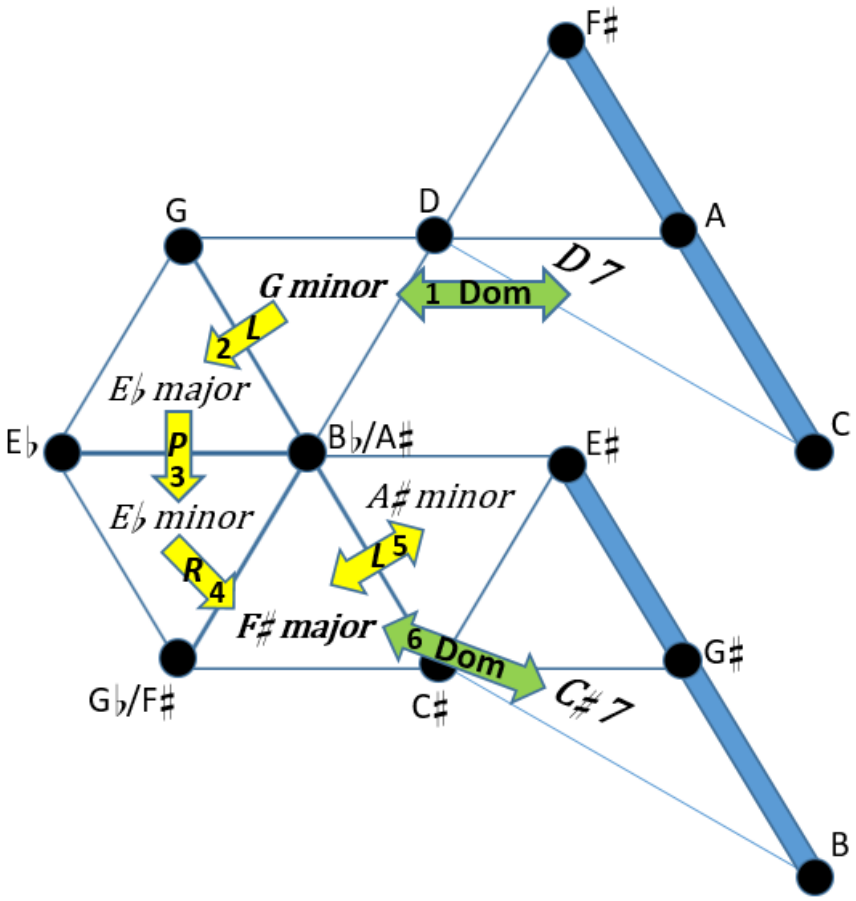


Fig. 5.6. Successive double syntax in bars 124-209 of *Valse oublieé* no. 1.

to the F♯ major – $C♯^7$ polarity, as can be inferred from my functional skeleton reduction of the piece. In short – the *Tonnetz* diagram shows how two tonal areas, which are a minor second apart, are bridged through a highly efficient

triadic progression with the transitional passage of bars 140-159. A typical example of Liszt's successive double syntax is embedded within the *Valse oublieé*, whereby the main themes are accompanied by functional diatonic harmony, but connected by a fully non-functional chromatic transition.

2.2. En rêve

The successive double syntax in this piece includes the use of only four different chords, and the one which is at the basis of the more chromatic section in the middle is actually a modified form of the main dominant F♯^{7}. Firstly, the main thematic material is based on the alternation between the tonic B major and its dominant F♯ major, the latter occasionally extended as a ninth chord, whenever there is a high G♯ in the melody (bars 4 and 8). This simple harmonic structure seems to be disrupted suddenly in bar 9, when the fifth and the seventh of the dominant are raised by a semi tone (see fig. 3.2). The resulting chord, labelled as F♯aug + E♯ on figure 5.7 and highlighted by the red and dark blue lines, not only arrives unexpectedly, but also gets prolonged for four bars in such a way, as to create the impression of harmonic standstill, as if harmony is terminating at that point. This feeling is reinforced by the continuation of the melodic line as a *recitativo* without any harmonic accompaniment in bars 13-18, where the notes of the same dissonant chord are reiterated. James Baker traces the linear resolutions of chromatic notes within this passage and, while hearing a possible resolution of the E♯ to F♯ in bar 18, he admits that 'many aspects of the setting – especially the continuation of the chromatic descent beyond F♯ to

E♯ in bar 19 – weaken the effect of F♯ as a goal of voice leading here.'[4] I would simplify and generalise Baker's observations thus – a chromatically conceived passage (bars 9-20) is inserted within the wider functionally diatonic structure of

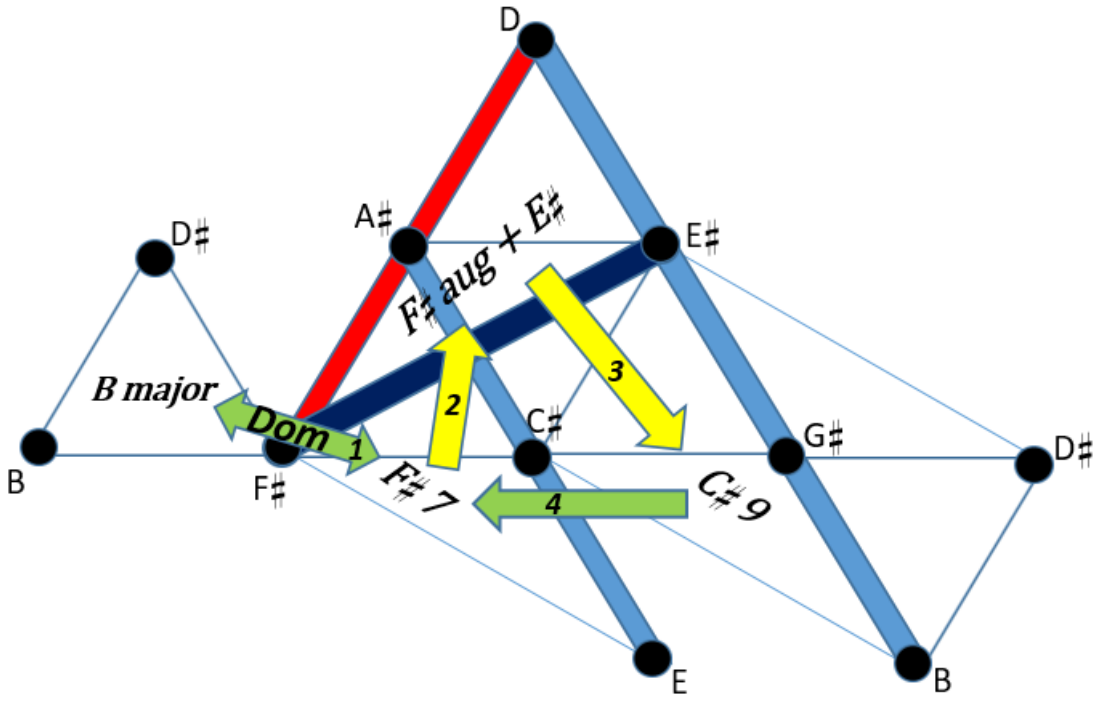


Fig. 5.7. Successive double syntax in bars 1-28 of *En rêve*.

the piece in such a way, as to diminish the sense of tonality for a while and create harmonic contrast within the otherwise simple mostly tonic-dominant alternating syntax of the piece. The *Tonnetz* diagram of the first 28 bars of the piece (before the descending sequence) reveals a slight detour from its horizontal harmonic dimension. The insertion of C♯[9] in bar 21 serves as a subdominant and reinforces the functionality of the piece after the latter has

[4] James Baker, "The Limits of Tonality in the Late Music of Franz Liszt", p. 147.

been abandoned temporary. It also reinforces the harmonic contrast between the sections and makes the boundary between them in bars 20-21 clearer.

3. The secondary thematic area as a chromatic island within the overarching main functional frame

The two examples of successive double syntax, which will follow below, taken from *Elegie* no. 1 and *Csárdás obstineé* respectively, represent a juxtaposition of a first and secondary theme, which is reminiscent of ternary form procedures, although it should be noted that this comparison is loose and only a starting point for my analyses.[5] Firstly, in both pieces there is a prevailing main key area, which dominates the outer functionally diatonic sections. Secondly, in both pieces the middle section arrives suddenly and is based on chords, which deviate significantly from the main key. Thirdly, the middle sections of the two pieces are quite different from one another. There is only a simple horn call accompanied by ***T-D-T*** chords in *Csárdás obstineé*, whereas in the *Elegie* there is a much more sophisticated and diverse chromatic progression of chords, which will be scrutinised below. The little that the two pieces have in common is what relates them to the idea of a ternary form – a stark contrast between the sections, with the middle section going suddenly far from the main key, which eventually returns.

[5] W. Dean Sutcliffe and Michael Tilmouth, "Ternary form", *Grove Music Online*, retrieved 16 Oct 2021, from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000027700?rskey=2FMODs&result=1.

3.1. *Elegie* no. 1

My analysis of this piece in chapter III served to show that the main key of A♭ major dominates the piece and all other chromatic chord relations are subservient to it. Conversely, the below observations will concentrate on the relationship between sections *A'*, *B* and *A''*, going into more detail with the harmony in *B* and seeing the latter independently from the overarching functional skeleton in A♭ major (see table 3.1).

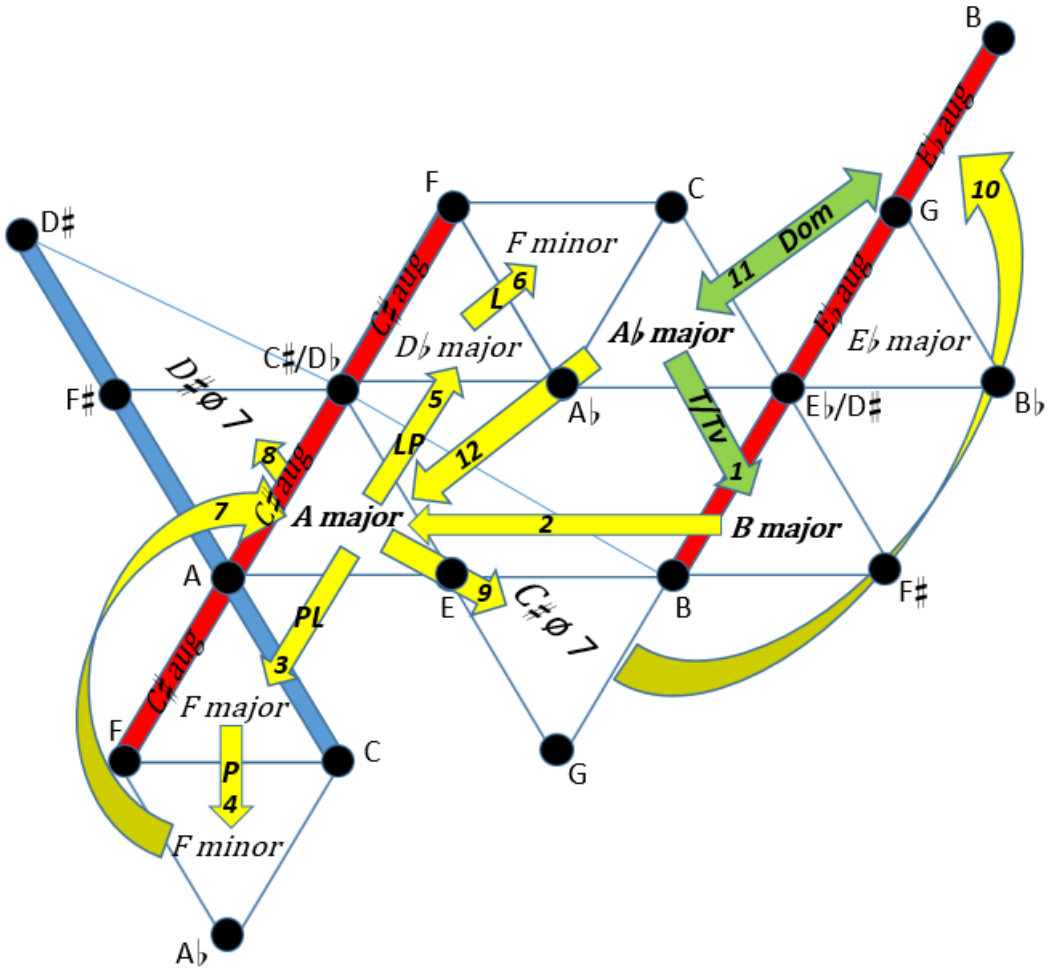


Fig. 5.8. Successive double syntax in bars 52-103 of *Elegie* no. 1.

Figure 5.8 depicts all essential chords within bars 51-103 of the *Elegie* (includes the full sections *A'*, *B* and only the first four bars of *A''*). Chord relations within the *A* sections are reduced to the triads around the pitch of E♭ and shown with green arrows, as these are the essential functional relations of the piece. On the contrary, the largely chromatic chord relations within section *B* are shown in more detail with the yellow arrows. Proceeding from B major to A major unexpectedly in bar 68 and introducing a new theme, Liszt suddenly abandons the functionality of the piece. A major is diatonically very far from the main tonic A♭ major, but also not part of the diatonic collection of the tonic *variant* B major. What follows from there is interesting from a transformational point of view, as the ensuing passage includes four out of the six consonant triads within the Hexatonic region of A major. Firstly, the starting chord – A major – and its Hexatonic pole – F minor – are bridged through a ***PL*** and then a ***P*** transformation (heading down on the figure – steps 3 and 4). The second time around the change is subtle but important – the Hexatonic pole is reached through an ***LP*** and then an ***L*** transformation – inserting D♭ major instead of F major just before the F minor (heading upwards on the figure – steps 5 and 6). The second subtle harmonic inflection bridges the return from F minor to the A major by interpolating the augmented triad on F between them – a red stripe on the figure and uniting F major, A major and D♭ major within its corresponding Weitzmann region (see step 7).

What becomes beautifully visible from the *Tonnetz* representation of the above progression is the fact that Liszt skillfully uses pitch space symmetry to reach the Hexatonic pole of A major (***PL + P*** in bar 69, but then ***LP + L*** in 71). Moreover, the augmented triad is almost imperceptibly included in the predominantly consonant triadic progression, as it is maximally close to the pivot chord in the middle. The passionate second theme is contrasted with a much

more delicate episode in bars 76-81, which includes one half-diminished chord on each side of the pivotal A major (steps 8 and 9). It can be seen on the diagram that Liszt explores chromatic chord relations going in all directions from that chord. And more interestingly, the C♯ø^7 in bars 80-81 transforms into its maximally close E♭aug+D♭, which serves as a dominant to the main tonic. Thus, a small island of functionality marks the middle of the otherwise highly chromatic section *B*. A♭ major is transformed directly into A major in bar 85 (step 12) and from there onwards everything repeats unchanged up to the return of the C♯ø^7 and the following *Dom* progression between E♭aug+D♭ and A♭ major.

The sudden transition to highly chromatic chord relations creates the much needed harmonic contrast in the middle of *Elegie* no. 1. The harmony has been moving more around the left-right axis even with the presence of chromatic pitches in the *A* sections (note the positions of A major and B major within the same horizontal row), whereas in section *B* there is a dominating movement up and down on the *Tonnetz*. This means that the chromaticism (more specifically Hexatonicism in bars 68-74 and 85-91) overwhelms diatonic functionality throughout this contrasting middle section. Moreover, the *Tonnetz* diagram makes it clear that A major is a kind of central chord, around which harmony roams until steadily returning to A♭ major at the beginning of section *A''*. We can claim that there is some kind of pitch centricity around A major even in the absence of clear tonal procedures. At the same time, the distance from the tonics A♭ major and B major is clearly evident – the diatonic row of the former is escaped, while the relationship to the latter is straight-forward on neither transformational nor functional terms.
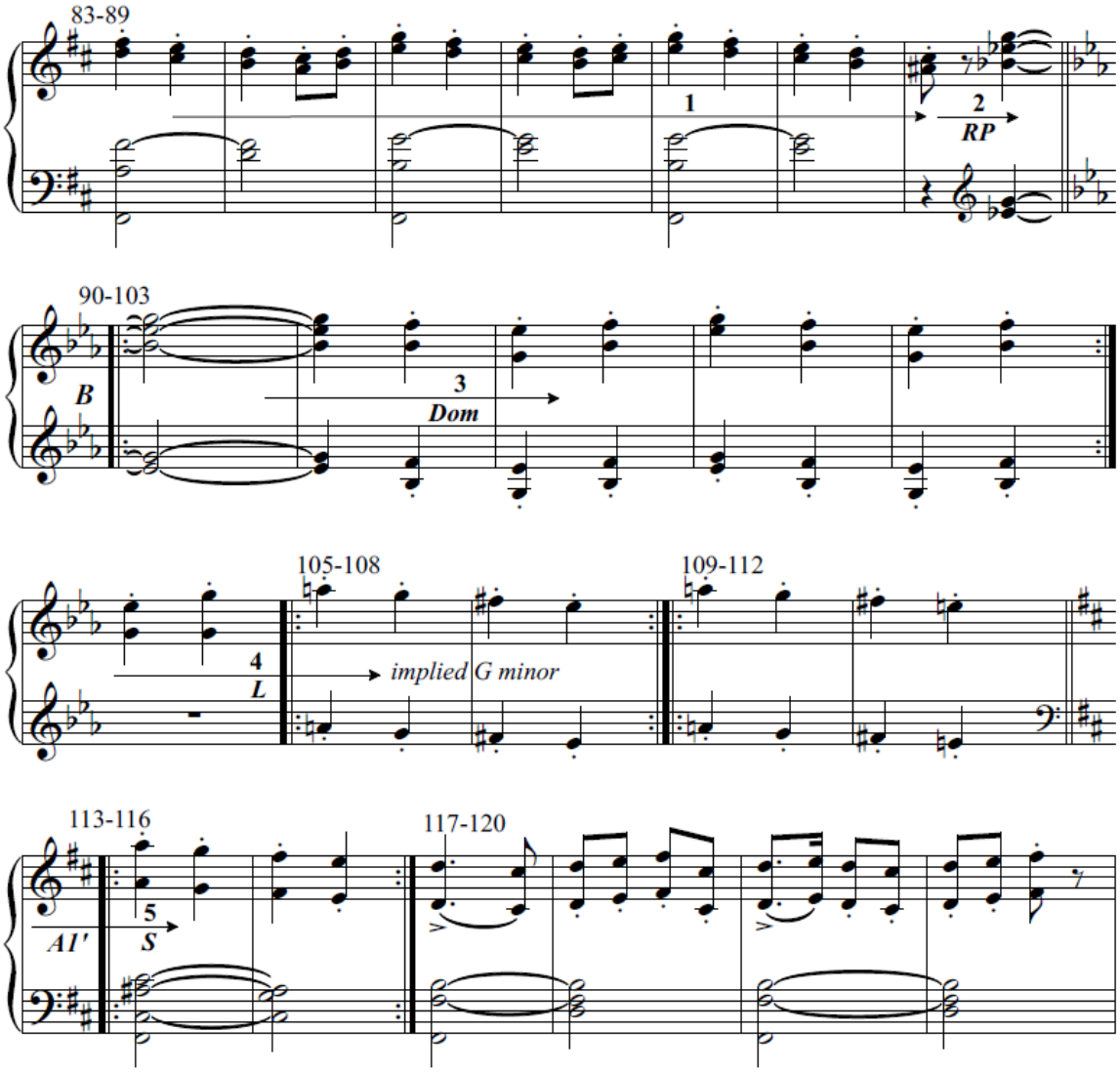
3.2. Csárdás obstineé

As already shown in the previous chapter, this piece employs a subtle balance between functional tonality and semi tonal relations between chords, especially in its *A* sections. Nevertheless, B minor seems to be the main tonic, reinforced by the use of its corresponding key signature and the subsequent implementation of B major key signature, which denotes the move towards the parallel major towards the end of the piece. Table 5.1 outlines the sectional subdivision of the *Csárdás*, which is based on changes of thematic material and the introduction of new chords into the harmonic vocabulary. After the first three sections with their simultaneous double syntax were already scrutinised (up to bar 89), my analysis here will firstly concentrate on the relationship between sections *A2*, *B* and *A1'*, and secondly on the way the final return of the *A* section (*A''*) relates to the coda.

Section	**Bars**	**Dominating harmony**
Introduction	1 – 16	None
A1	17 – 64	B minor
A2	65 – 89	B minor
B	89 – 112	E♭ major
A1'	113 – 160	B minor
A2'	161 – 194	B minor
B' + transition	194 – 209, 210 – 232	E♭ major, G minor
A''	233 – 281	B major
Coda	282 – 334	B major

Table 5.1. The structure of *Csárdás obstineé*, based on changes in harmony and thematic material.

The final phrases of section *A2* constitute an extended build-up, which is based on the alternation between the main tonic and dominant – B minor and F♯ major, although the major mode of the latter is compromised and it gets substituted with F♯m^7 towards the end of the section (ex. 5.4). Still, the functional relations prevail at this point and they have been summarised with a bidirectional arrow at the bottom of figure 5.9. The new section might be rightfully claimed to be just an episode because of its much shorter duration in



Ex. 5.4. Bars 83-120 of *Csárdás obstineé*, including some harmonic reductions.

comparison to *A*. However, its very clear separation from the *A* sections makes it stand out and also be reminiscent of ternary form procedures. Coming straight after the F♯ major at the end of *A2*, the horn calls in E♭ major do not conform to the tonal expectations of the preceding harmonic syntax. An ***RP*** transformation of the main dominant has happened, one that leads to the key, lying a major third above the main tonic. E♭ major alternates with its dominant B♭ major several times in a manner typical of a horn call, before the main motif returns in bars 105-106, implying the scale of G minor. I consider the latter to be the transitional chord between the E♭ major and the returning F♯ major, which initiates the varied repetition of section *A1* from bar 113 onwards (section *A1'*). The move from G minor back to F♯ is labelled as a ***Slide*** transformation (***S***) on the *Tonnetz*.[6]

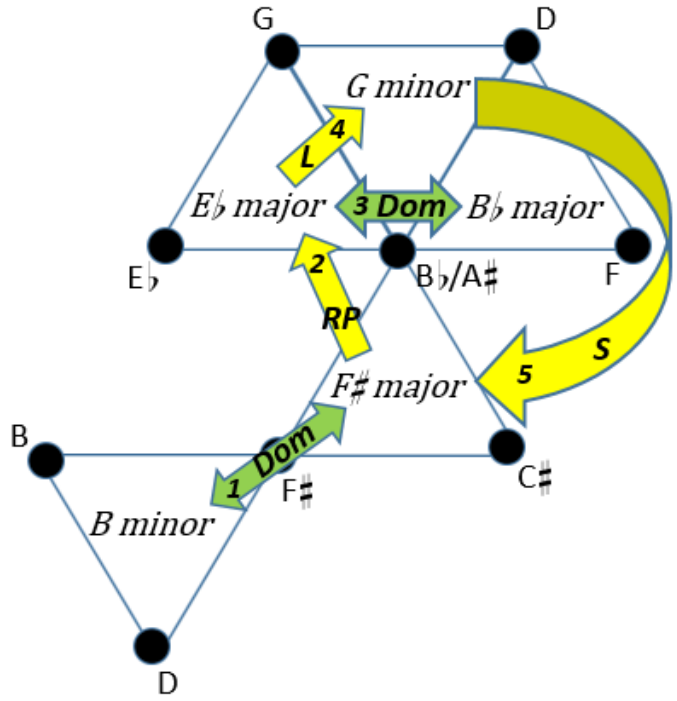


Fig. 5.9. Successive double syntax in bars 73-128 of *Csárdás obstineé*.

[6] The compound ***Slide*** (***S***) transformation connects a major and a minor triad, which share their third, such as F♯ major and G minor in the current case. More ***S***-related chord couples will be shown in chapter IX.

The question that arises here is as follows – what is the contrast between the harmonic syntax of sections *A2* and *B*, considering that there are dominant-tonic relations in both? It is obvious that the successive double syntax in this case is unlike the one explored in the previous examples. However, it was already pointed out that the minor chromatic inflections in the *A* sections are what creates the harmonic interest in them, not the dominant-tonic relations. Such inflections are clearly missing from the horn calls of *B*. Therefore, we can conclude that in the current case an alternation of chords, which are both functional and chromatically related, is suddenly followed by a simple functional dominant-tonic progression. In other words, chromatic inflections are temporarily abandoned, in order to be restored with the return of the main key. On the other hand, the relation between E♭ major and the largely dominating B minor or B major is chromatic, so the current alternation of contrasting sections still conforms to the headline above and the secondary thematic area sits as a chromatic island within the overarching main functional frame of the piece.
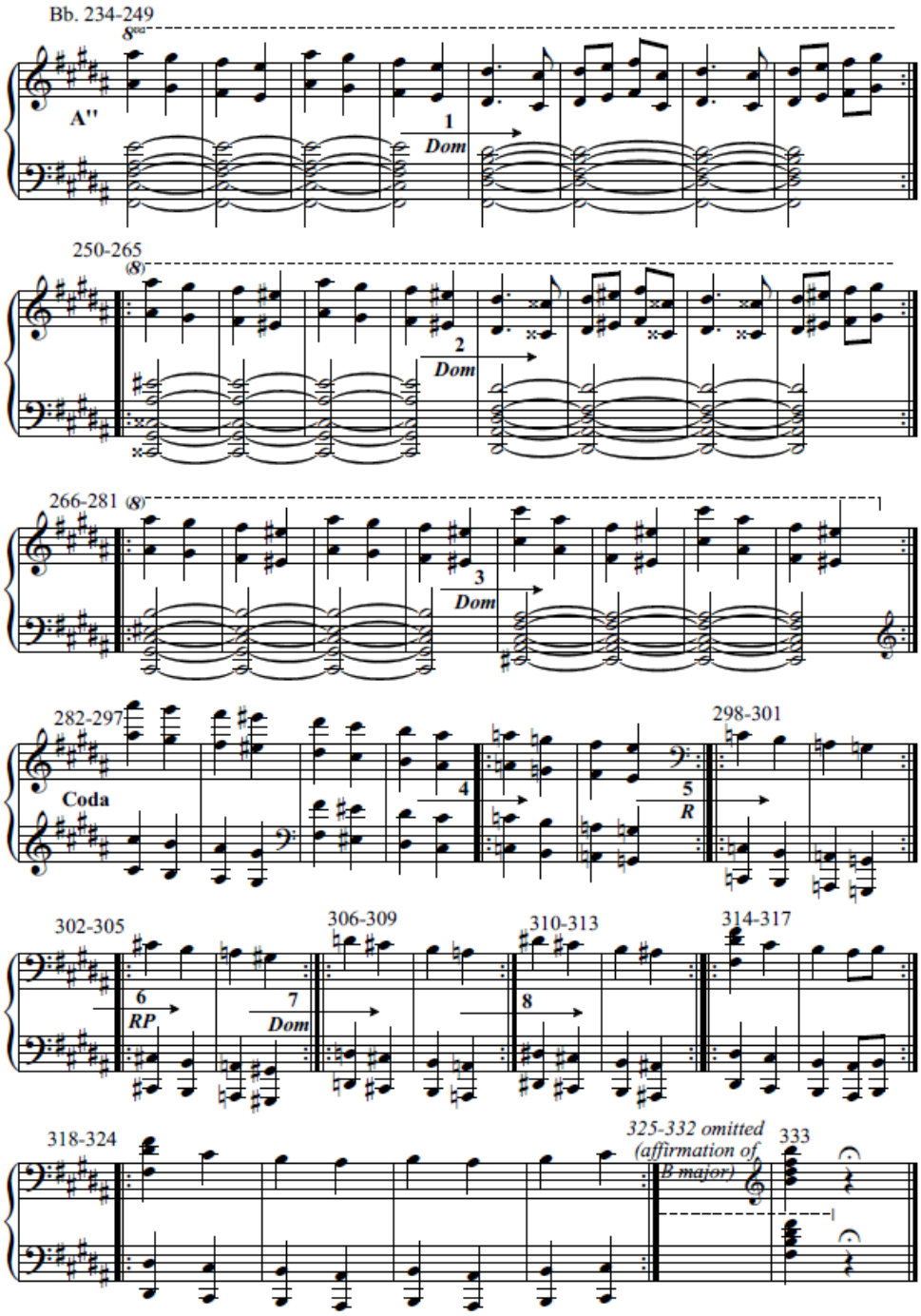
4. More loosely outlined successive double syntax

The final category of successive double syntax, presented in this chapter brings together a selection of analytical examples, which might not have much in common, but are united by one thing – the contrasting harmonic syntaxes are harder to differentiate from one another. The reason for that is the quicker alternation of diatonic functionality and chromaticism within a unified larger section in the cases of *Romance oublieé* and Mephisto Waltz no. 2. In *Csárdás I*, on the other hand, the difference between the two types of syntax is less audible

and consequently the contrast between phrases is rather weak. In *Les Jeux d'Eau* there is a clear sectional subdivision, but the same thematic material is harmonised with both types of syntax, so we cannot talk about a differentiation between a main theme in diatonic functionality and a chromatic secondary thematic material. Before exploring the above pieces once again, I will continue from where I stopped with *Csárdás obstineé*, in order to show that even with the continuous and obsessive repetition of its same four-note motive, the differentiation between diatonic functionality and chromaticism can be made towards the end of the piece.

4.1. The final *A* section and the coda of *Csárdás obstineé*

Throughout section *A''* of *Csárdás obstineé*, the key of B minor is substituted by its parallel major and also the simultaneous double syntax from the first *A* section is abandoned at the expense of three straight-forward dominant-tonic chord couples. Firstly, the main dominant and tonic F♯^{7} and B major are alternated (ex. 5.5). Then the minor chord on the third scale degree of B major – D♯ minor – is reached in bars 250-265. Finally, the double dominant – C♯^{7} – is followed by F♯maj^7 – a varied form of the main dominant. These chord relations are depicted on the *Tonnetz* of figure 5.10, with green arrows showing the dominant-tonic relations and yellow arrows showing the close neo-Riemannian connections between local tonics. The important conclusion here is as follows: all harmonies within *A''* are limited to the diatonic collection of B major and the section is exclusively based on diatonic functionality.



Ex. 5.5. Section *A''* and the coda of *Csárdás obstineé*.

The coda of the piece begins in bar 282, marked by the abandonment of chords and the long lines of parallel sixths (bars 282-297) and octaves (298-333), which are based on the main four-note motif. The process of inflected repetition

culminates here, but still certain harmonies are implied and most importantly B major is affirmed as the main tonic of the piece from bar 310 onwards. There can be different ways of harmonically hearing this passage, but here I present my interpretation, based on how I would harmonise the melodic lines while playing them. Firstly, F♯ major is followed by E minor in the first 16 bars of the coda. On the *Tonnetz* a sudden movement down from the B major diatonic row occurs (step 4). Then all sharps are cancelled for G major to be implied with the first four scale degrees of its corresponding scale in bars 298-301. Following the same logic of inferring the harmony from the last note of the four-note descending motives, I claim that E^7 is implied (bars 302-305) as the dominant of A major (306-309). After that the B major scale is restored and the corresponding key is affirmed with frenetic movement up and down along scale degrees $\hat{7}$ to $\hat{3}$.

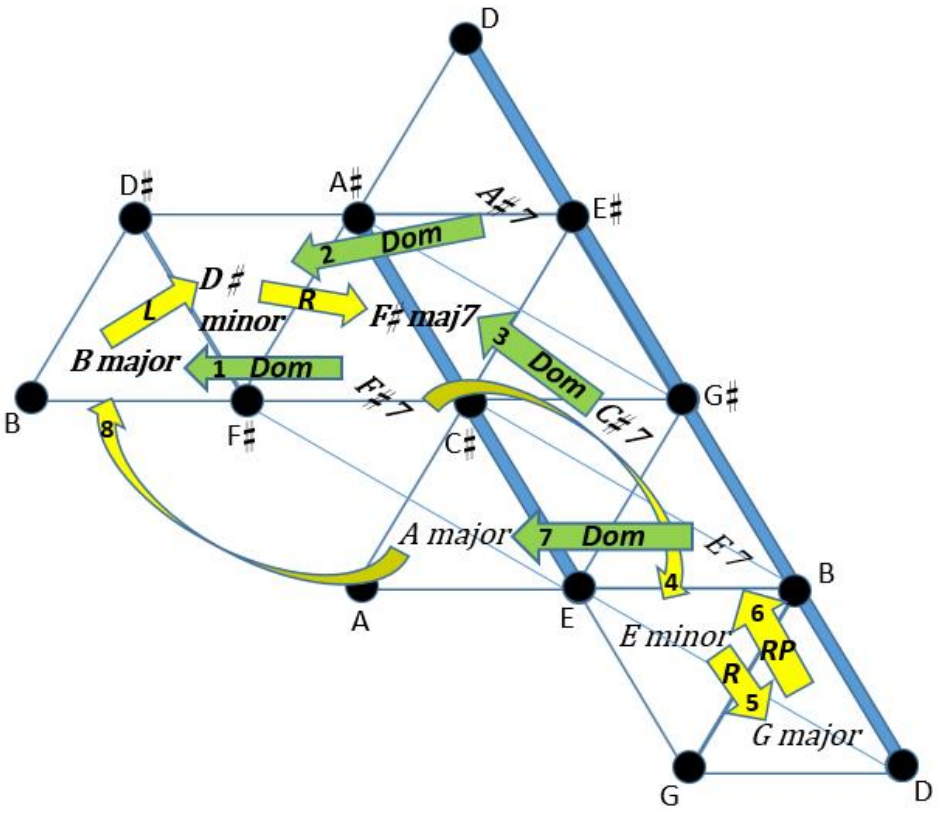


Fig. 5.10. Successive double syntax in bars 234-334 (section *A''* and coda) of *Csárdás obstineé*.

Tracing the chord progression of the coda on the *Tonnetz*, we can see that a downward detour from the B major diatonic region and back to it takes place. As it becomes visible, keys which are very distant on the circle of fifths such as F♯ major (six sharps) and G major or E minor (one sharp) can be reached instantly through a movement two rows down in the chromatic pitch space of the tone grid. More importantly, there is a clear instance of the successive double syntax towards the end of *Csárdás obstineé*, one that substitutes the functionally diatonic chord relations in section *A''* with a swift chromatic detour in the coda, based on inflected repetitions of the main motif.

4.2. Romance oublieé

It was already shown in the previous two chapters that firstly, the *Romance oublieé* is based on the key of E minor, later in the form transforming into its parallel major. Secondly, it was demonstrated how a ***TSDT*** progression can be both functional and built upon chromatically related seventh chords (see bars 8-11). Now I will claim that within the section, which presents the main theme (bars 8-17) there is also an alternation between a more functionally conceived phrase and one that is prevailingly chromatic in its sequence of chords.

Figure 5.11 is an extension of figure 4.3 from the previous chapter. The continuation of the initial functional ***TSDT*** cycle (shown in green lines) is traced in yellow lines. Firstly, the subdominant is reached through the diminished seventh chord on G♯, which serves as its dominant (step 4). From that point onwards functionality is abandoned at the expense of a descending sequence of

chords, which is neither fully diatonic in E minor nor based on parsimonious chromatic transformations. A minor is followed by the vague G major, with Adim^7 serving as a quick passing harmony between them. Then G major descends a semi tone down to F♯ major and finally the phrase is concluded with the parallel of the latter, returning to the diatonic row of the main tonic.

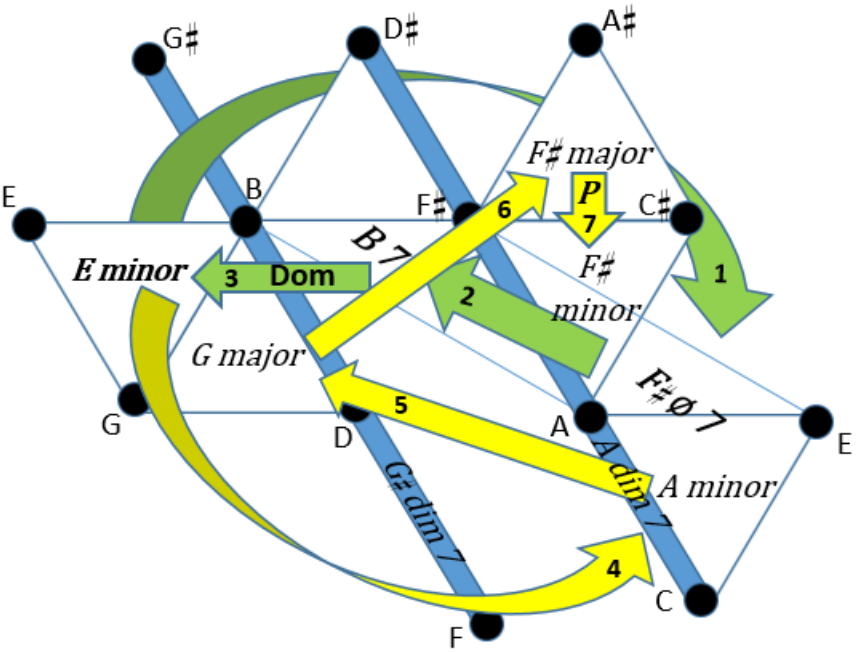


Fig. 5.11. Successive double syntax in bars 8-17 of *Romance oublieé*. The functional *TSDT* cycle (bars 8-11), shown in green lines, is followed by a freely chromatic progression, which is shown in yellow lines.

Unlike the ***TSDT*** progression, which makes a typical clock-wise circle on the *Tonnetz*, the following progression seems to be more chaotic and it connects chords, which are not only on different diatonic rows, but also distant from one another in chromatic pitch space. It can be concluded that Liszt has attempted to disrupt the initial straight-forward functionality of the piece by interpolating the descending chromatic sequence A minor – G major – F♯ major and consequently, another instance of the successive double syntax occurs, although

this time the boundaries of phrases with contrasting types of harmony are less clear. Smooth chord connections are present in the first phrase, while the second starts with a dominant-tonic resolution (G♯dim^7 – A minor) and finishes on one of the subdominants in the main key (F♯ minor).

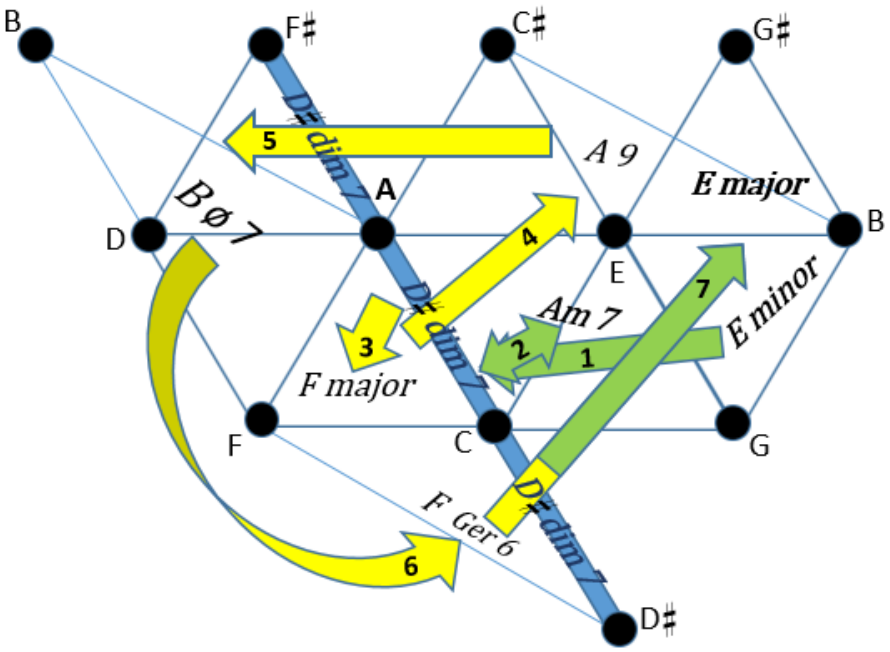


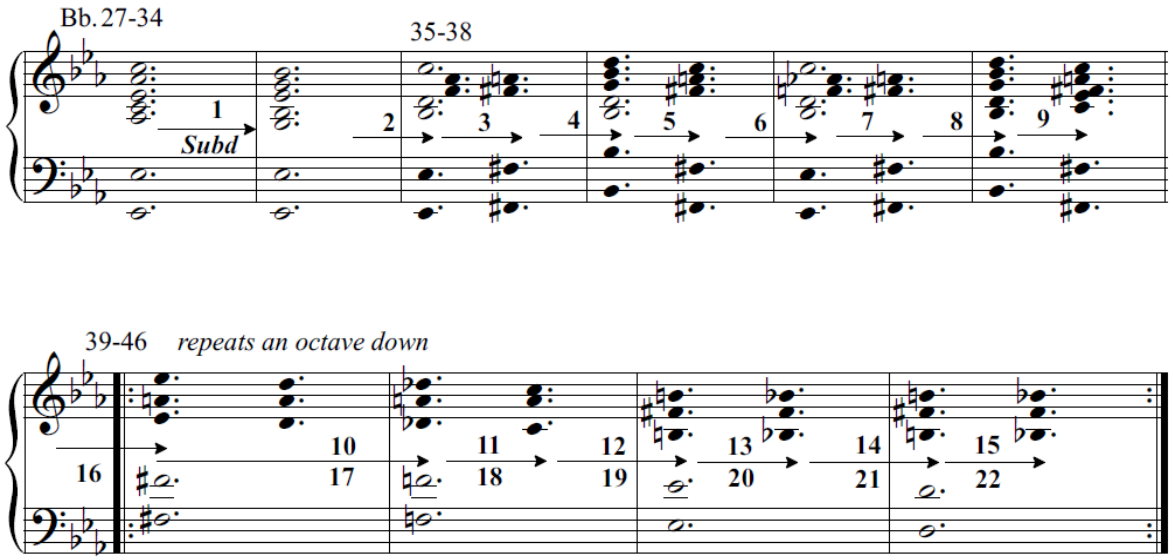
Fig. 5.12. Successive double syntax in bars 18-27 of *Romance oublieé*.

The next couple of phrases up until the transition to E major contain a clearer instance of the successive double syntax (see fig. 5.12). Firstly, the movement in parallel sixths in bars 18-22 suggests movement around the main tonic, subdominant (extended as Am^7 in this case) and diminished seventh version of the main dominant (D♯dim^7). As it is the norm throughout this study, these three harmonies are connected with green arrows, which signify the functional relations. The following four bars (23-26), however, suddenly abandon the diatonic realm of E minor. F major arrives in bar 23 after the dominant-sounding preceding bar, as it is the most overt deviation from the E

minor so far, but under semi tonal voice leading it is actually close to D♯dim^7, sharing two pitches (A and C) with it. The F major transforms into A^9 (A major plus a B) in the second half of bar 24, if we take the F natural just before that as an appoggiatura (see on fig. 3.3). Then the latter is transformed into Bø^7 after only a couple of semi tonal shifts – on figure 5.12 it is conspicuous that all these chords share the pitch of A and turn around it and around the D♯dim^7 chord, labelled with the blue stripe in the middle. The circular anti-clockwise movement on the *Tonnetz* continues with the FGer6 in the next bar, which is maximally close to the D♯dim^7 – only one unit of semi tonal voice leading away. Therefore, it is enough for the melodic voice only to slide up from F to F♯ in bar 26, in order to return this diminished seventh chord, which serves the function of the main dominant again at that moment. The D♯ø^7, which comes just before the major-mode tonic, weakens the dominant and is considered to be a very brief passing harmony, hence it is not included on the figure. In summary, this is one of those smooth chromatic detours, which sometimes occur within a larger functional progression in Liszt's late music and prolongs one or two pitches – this time the A, which is the important seventh of the main dominant and resolves into the raised third of the tonic in bar 27. A clear differentiation between the initial horizontal (diatonic) movement along the E minor row and the following circular (chromatic) movement can be made after observing the progression on the *Tonnetz*. Functionality returns eventually and this is why the last arrow (connecting FGer6 and E major through D♯dim^7) turns green after passing the dominant-functioning diminished seventh chord.

4.3. Mephisto Waltz no. 2

The following analysis will be a continuation of the one in the first part of this chapter, where the harmonic relationship between the introduction of the waltz and the first part of its main thematic group was described. Opening up in bar 27, the main theme transitions through several clearly separated melodic units before the whole section starts repeating from bar 63 (ex. 5.6). The harmony is strictly diatonic at the beginning (bars 27-34), then suddenly becoming highly chromatic (35-46), diatonic again (47-54) and closing the section with a chromatic sequence of diminished seventh chords (55-62).



Ex. 5.6. Harmonic reduction of bars 27-46 of Mephisto Waltz no. 2.

Bars 35-38 are considerably more dissonant and less clear than the preceding subdominant-tonic alternation. This phrase can be interpreted as different layers, developing independently at the same time. The bass line outlines a broken E♭ minor chord, although it is spelled with F♯ instead of G♭.

Meanwhile in the middle layer there are chromatically sliding minor thirds, which move twice up and down between F-A♭ and G-B♭. The high layer in this sequence includes inflected repetitions of a motif, which is the continuation of the main theme. The inflected notes here are the couples A-A♭ and B♭-C. The chords, resulting from putting these three layers together are positioned on the *Tonnetz* of figure 5.13 and connected with yellow arrows (steps 2-9).

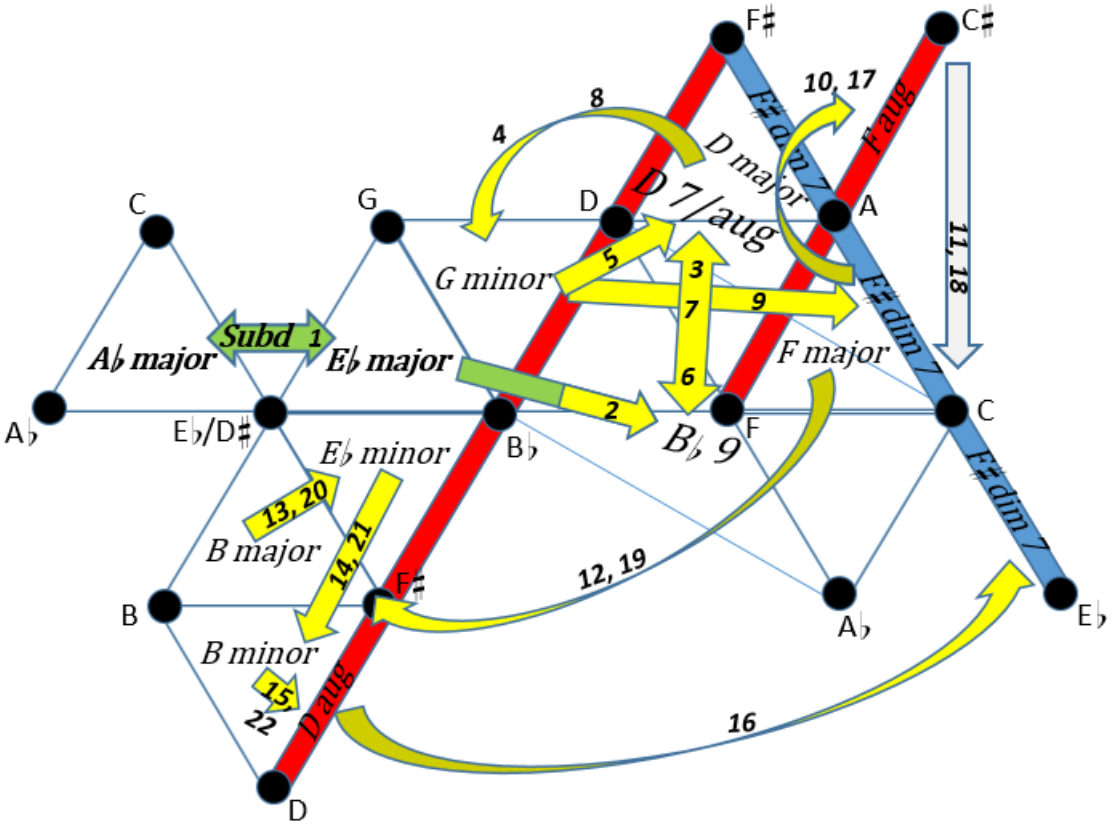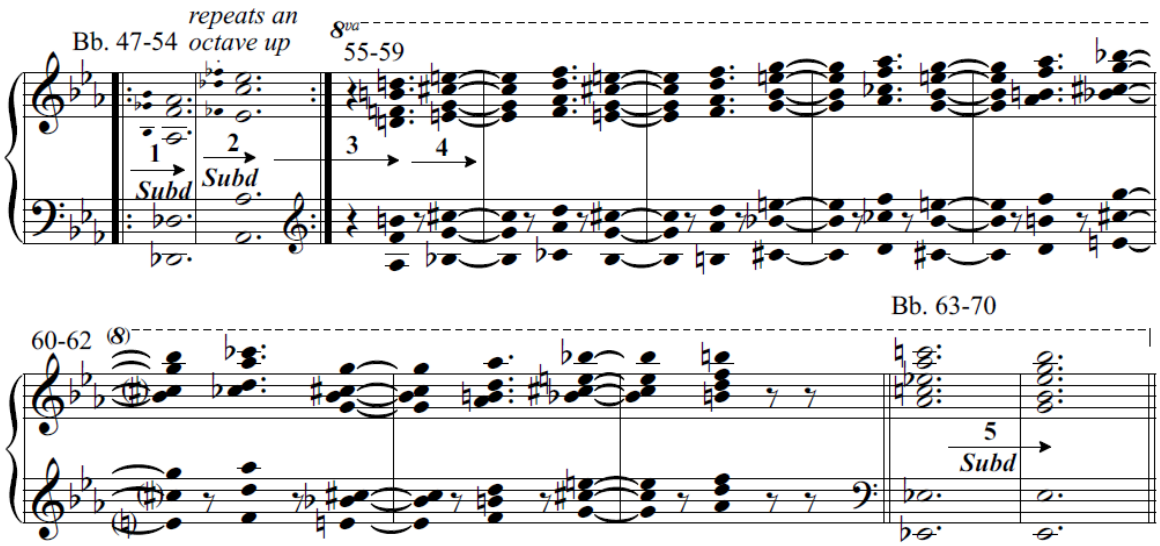


Fig. 5.13. Successive double syntax in bars 27-46 of Mephisto Waltz *no. 2*.

Firstly, the main tonic E♭ major is followed by an extended version of its main dominant – $B♭^9$ (excluding the tonic pedal), which initiates a chromatic sequence and therefore the arrow leading to it is half green (diatonic movement)

and half yellow (chromatic).[7] B♭^{9} quickly transforms into a dissonant chord, which includes both D^7 and Daug. The next bar includes G minor and a return to D^7/aug – a spiralling anti clock wise movement around the pitch of D is completed. The sequence repeats, but the second time G minor is followed by F♯dim^7 instead (step 9). Another highly chromatic sequence, but this time based on a descending chromatic scale segment, follows in the next four bars and also is iterated twice (bars 39-46). As opposed to the previous four bars, the harmonies here are clearer and easier to interpret with neo-Riemannian theory. Firstly, the sliding E♭ down to D connects the diminished triad on F♯ to D major (steps 10 and 17, the arrow reaches the following augmented triad). After that the augmented chord on F is transformed into F major through another single semi tonal displacement (steps 11 and 18). The next two bars of the sequence take us quite far in pitch space, moving as far as the tritone-distant B major, then a basic ***L*** and a compound ***LP*** transformations lead to the inclusion of two of the maximally close to B major triads – E♭ minor and B minor. Finally, the sliding B to B♭ turns a B minor chord into the augmented chord with D at the bottom (steps 15 and 22) and the sequence repeats in the next four bars.

With or without the visual representation of the successive diatonic and chromatic phrases, the contrast between the two is stark. The diatonic opening consists of only two major triads, while the following progressions comprise a number and a wide diversity of different sonorities. Moreover, a movement both above and below the main tonic happens, which counterbalances the initial left-right alternation.

[7] To be more precise, for this chord it should be imagined on the *Tonnetz* that the B♭^{9} has not yet been completely reached, but we are stuck somewhere between it and the preceding tonic E♭ major, experiencing tonic and dominant function at the same time.



Ex. 5.7. Harmonic reduction of bars 47-70 of Mephisto Waltz no. 2.

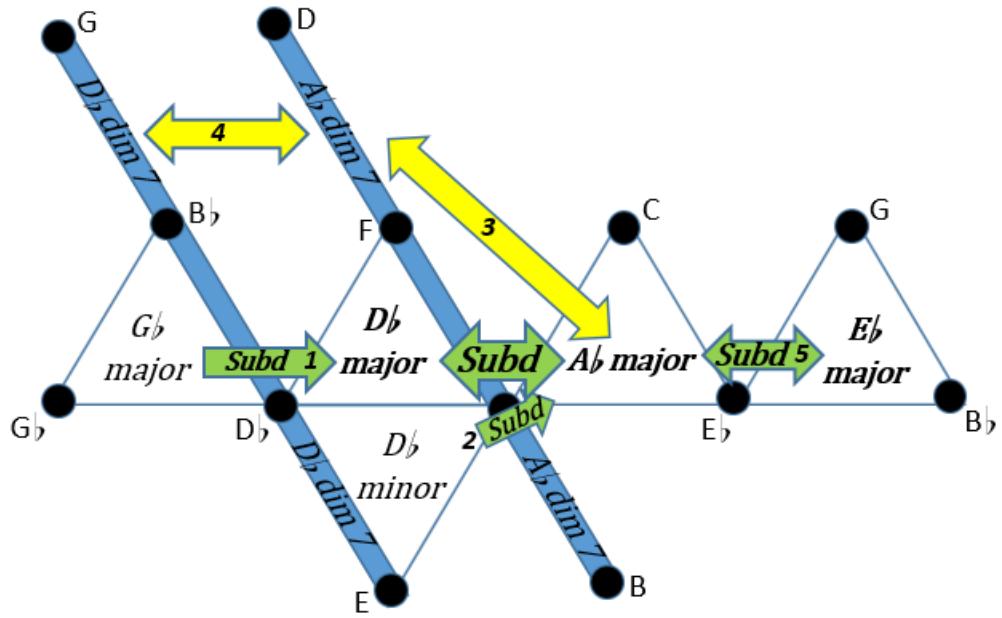


Fig. 5.14. Successive double syntax in bars 47-70 of Mephisto Waltz no. 2.

The next succession of diatonic and chromatic phrases is overall much more economic in its harmonic content, which will also become evident from its corresponding *Tonnetz* representation. Bars 47-54 comprise only a couple of tonic-dominant relations – G♭ major-D♭ major and D♭ minor-A♭ major. If we

consider the first of the chords in this couples appoggiaturas to the second ones, this is actually a tonic-dominant relation between D♭ major and A♭ major, hence the latter is shown with a bigger arrow on figure 5.14. Going back to the idea of the piece being in the key of E♭ major at this point, it is not difficult to relate the harmony back to this tonic. The chromatic sequence of bars 39-42 finished on the augmented dominant B♭ and the next more consonant phrase concluded on the subdominant A♭ major. The following 8 bars (55-62) constitute a transition to the repetition of the main theme and once again the chord relations are contrasted against those in the previous phrase. This time a series of diminished seventh chords harmonises a melodic line, which evolves on an octatonic scale. The use of the latter means that harmonically only two different diminished seventh chords are used, labelled as A♭dim^7 and D♭dim^7 on the *Tonnetz* diagram. With its symmetric structure both harmony and melody here remain tonally neutral, but at the same time increase the tension in preparation for the return of the main theme. Once the latter event happens, the subdominant relation between the same two triads – A♭ major and E♭ major – is reiterated. In short, the successive double syntax in bars 47-70 of the Mephisto Waltz is based on the sonority contrast between consonant triads and diminished seventh chords, clearly marked by the transformation of A♭ major into A♭dim^7 and the return of diatonicism through the inverted sequence of the same two chords.

4.4. *Csárdás I*
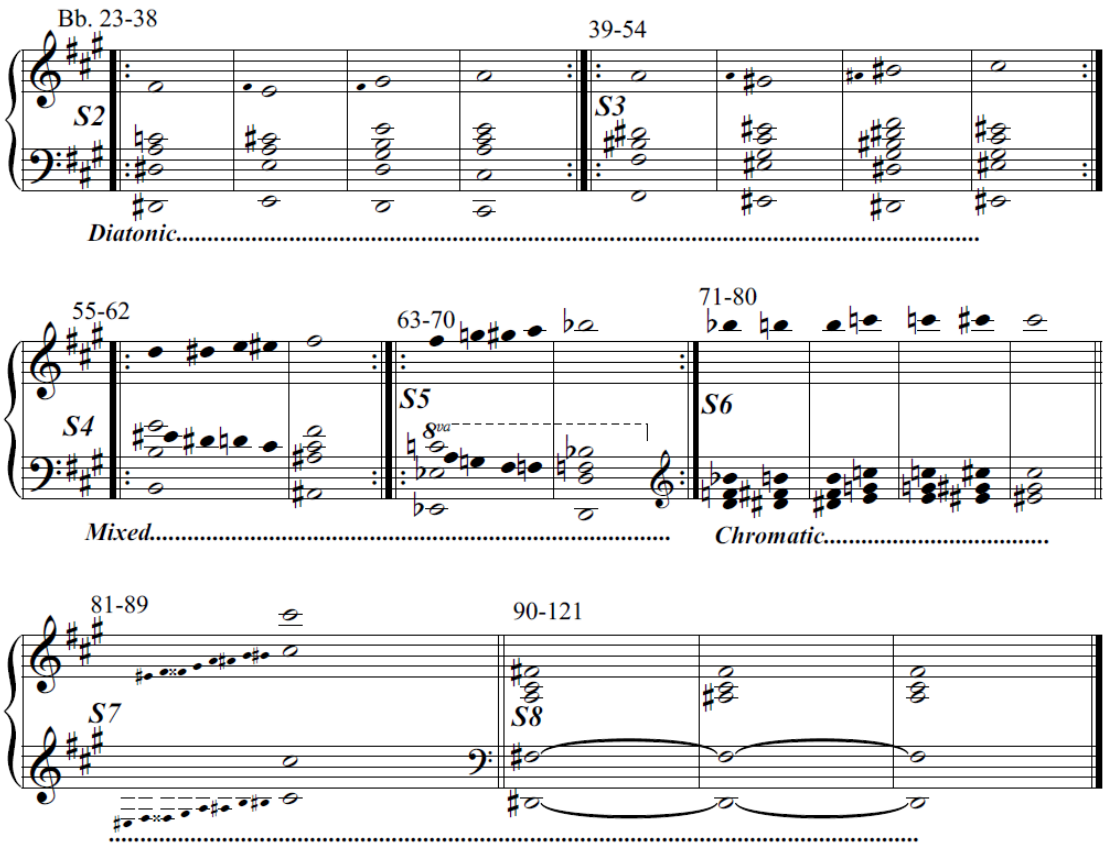
If we cut out the introduction (bars 1-22) and the coda (bars 90-121) of this piece, the main body of it may seem like a single well unified section. However, I will demonstrate with the following analysis and accompanying

Tonnetz diagram that we can divide the piece from bar 23 onwards into three large segments, based on successive double syntax – an explicitly diatonic one (bars 23-54, already considered in the first part of this chapter), a mixture of diatonic and smoothly chromatic progressions (bars 55-70) and a more chromatic segment, which includes the whole coda (bars 71-121).

Table 5.2 partitions the piece into 8 sections, based on the changes of the main harmony, with each section having its own harmonic centre. This subdivision will also be pertinent to my analysis of the *Csárdás* in the next chapter, but the information in the right-most column is only relevant to the following discussion. It shows when and how the transition happens from strict diatonic surface-level chord relations to chromatic such relations.

Section	**Bar numbers**	**Main harmony**	**Surface-level chord relations**
1 (Introduction)	1 – 22	A minor	Predominantly chromatic
2	23 – 38	A major	Diatonic
3	39 – 54	C♯ major	Diatonic
4	55 – 62	F♯ major	Simultaneous double syntax
5	63 – 70	B♭ major	Simultaneous double syntax
6	71 – 80	C♯ major	Chromatic
7	81 – 90	C♯ major	Chromatic
8 (Coda)	90 – 121	F♯ minor	Chromatic

Table 5.2. Sectional subdivision of *Csárdás I*, based on changes of harmonic syntax.



Ex. 5.8. Harmonic reduction of *Csárdás I* (excluding section 1 – introduction).

As already mentioned, the first 16 bars after the introduction (section 2) clearly establish diatonic functionality in A major through the subdominant-functioning D♯dim^7, dominant E^7 and the tonic itself. The equivalent alternation of chords is conducted after that in C♯ major within section 3. What follows in section 4 can be considered a part of the smoother transition from the one type of syntax into the other in the context of what happens before and after it. A mixture of a clear dominant-tonic couple with transformations between some maximally close triads and seventh chords occurs, and it is reiterated a major third higher in section 5. Functionality is abandoned on a surface level from section 6 onwards and a sequence of semi-tonally ascending triads is interpolated instead, including B major, C major and C♯ major. The following

section 7 is very short, but considered as a separate unit because of its clear textural differentiation – chords are abandoned and a chromatic scale segment goes from E♯ all the way up to C♯. After that the coda reiterates some of the main melodic material, including the repeated F♯s, which opened the piece. All that is harmonised with only two maximally close chords – D♯ø^7 and D♯m^7 – both not meant to imply any clear functional relation to the preceding sections.

Showing the above progressions on the *Tonnetz* would result in an overly convoluted diagram, therefore in this case I have opted for another type of graphical representation of the harmony, one that lists all used chords and similarly to the *Tonnetz*, shows functional relations as rightwards movement and chromatic relations as movement down (see figure 5.15). The chords at the end of each section (considered to be harmonic goal chords) are emphasised in Bold.

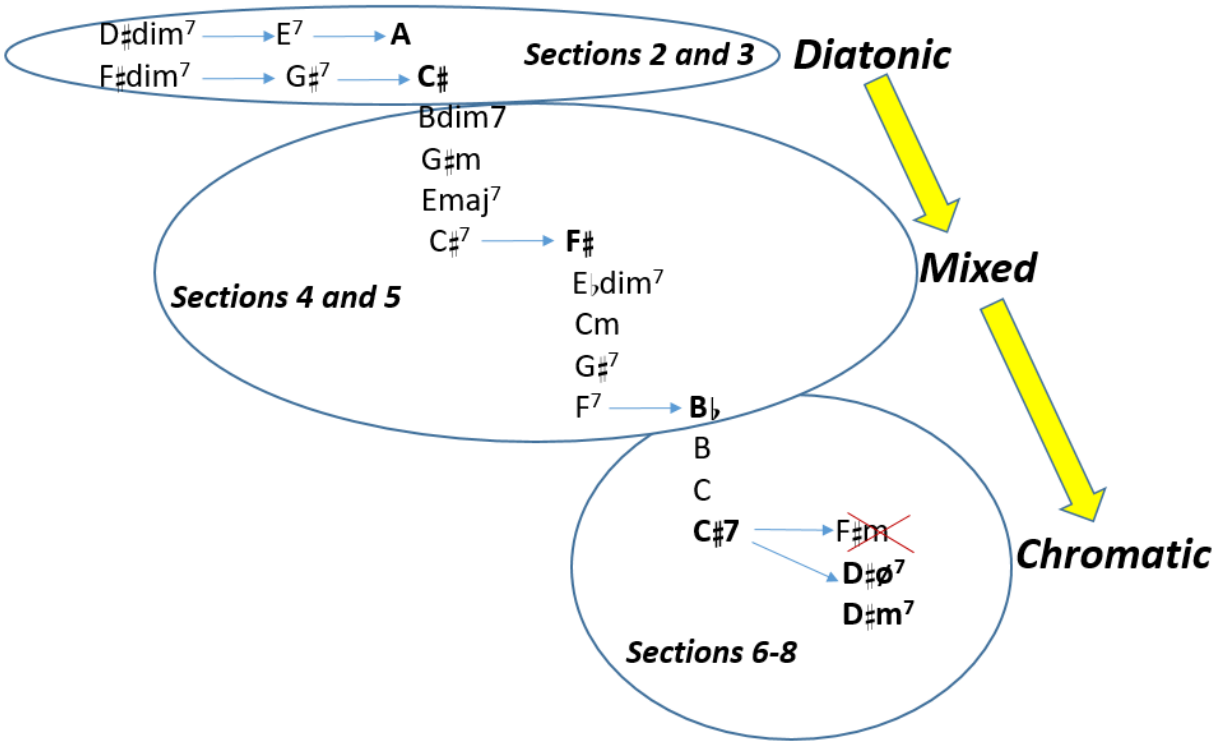


Fig. 5.15. Three-stage successive double syntax in bars 23-121 of *Csárdás* I.

The chords in each of the three big segments are encircled, which serves to illustrate the balance between moving to the right and moving down. Therefore, the initial fully diatonic progressions develop almost exclusively to the right, forming a thin and long bubble. They are followed by the progressions in sections 4 and 5, which are a combination of rightward and downward movement, moving more down than right. The thickest bubble is the one including the harmony of the last three sections. There is only one implied dominant-tonic connection in it – the expectation of F♯ minor being the final tonic is conveyed. However, this expectation is frustrated with the use of D♯ø^7 and D♯m^7, which are closely related to F♯ minor, but never resolving to it or to any other of the previously heard triads. Instead, the parsimonious chromatic relation between the two of them is explored at the end of the piece.

4.5 Les Jeux d'Eau a la Villa d'Este

The functional analysis of this piece in chapter III revealed that there are several instances in it where harmony completely breaks away from the main key. These are the moments, which are described as functionally independent in table 3.2, with chords in it diminished to the status of passing harmonies within the functional skeleton. The alternative analysis below will not imply any hierarchy between the two types of syntax. On the contrary, diatonic functionality in F♯ major and the intermittent chromatic transformations will be seen as a continuous harmonic flow, while special attention will be given to the role of the latter in between the manifestations of the former.

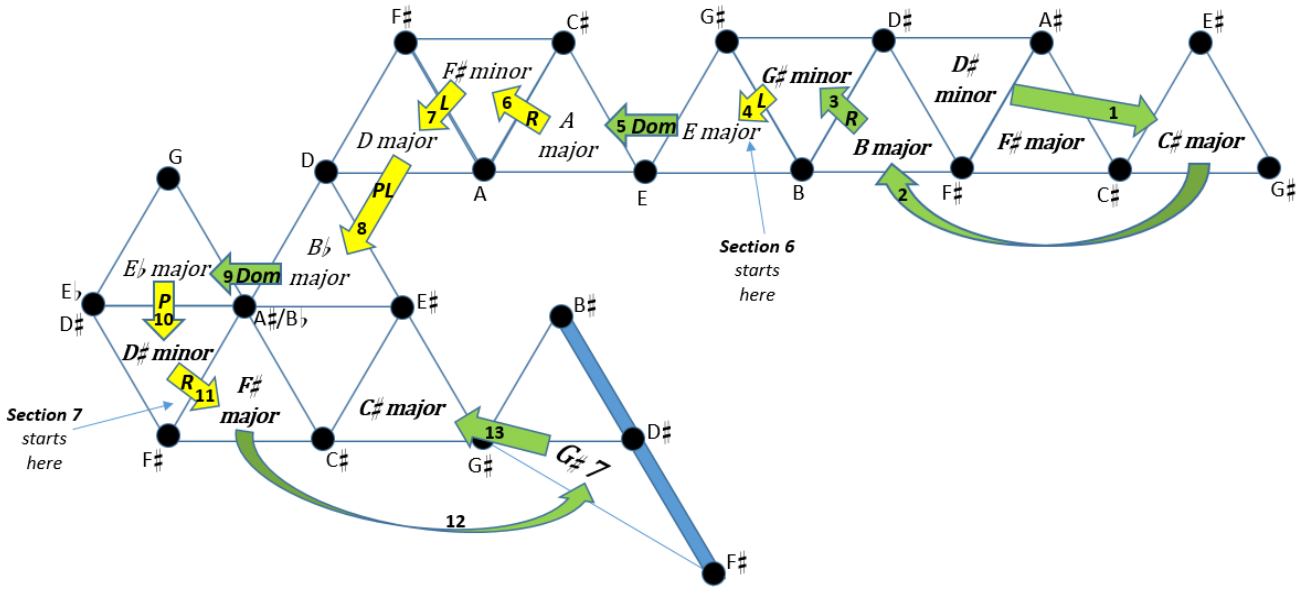


Fig. 5.16. Successive double syntax in sections 5-7 of *Les Jeux d'Eau*.

Figure 5.16 illustrates the harmonic movement within sections 5 (bars 108-131), 6 (bb. 132-157) and 7 (bb. 158-181) of the piece, which are considered to be a diatonic-chromatic-diatonic alternation. The chords within the outer of these three sections are limited to the diatonic collection of F♯ major, with their names emphasised in Bold and movement between them shown in green arrows. As per usual, the chromatic transformations within the inner section 6 are shown in yellow arrows and their neo-Riemannian labelling is provided.

The descending sequence at the basis of section 5 leads to the appearance of the first three chords within the harmonic progression shown on the *Tonnetz* diagram (connected by steps 1 and 2). All chords are closely related to the main tonic and can be interpreted as a minor tonic on scale degree $\hat{6}$, main dominant and main subdominant respectively. Towards the end of the section B major is shown to transform into G♯ minor, but it is actually extended into G♯m^7, which makes the continuation less possible to predict in functional terms. The chromatic proximity between G♯ minor and E major, however, helps for the

smooth entry of the main theme over the latter harmony, while the key signature of F♯ major is abandoned for the first time at the beginning of section 6. Two of the subdominants in the key of E major – A major and F♯ minor – are the other prominent chords before the next change of key signature. These result from an ***R+L*** and then ***R*** transformation, which keep harmony within the same diatonic realm. After that it becomes obvious with the appearance of D major and its corresponding two-sharp key signature in bar 144 (step 7) that a whole-tone descent is taking place, having been initiated by the E major tonicisation. As seen from the figure, there is smoothness in the progression so far, and the diatonically foreign D major is reached through its closest neighbor on the *Tonnetz* from the E major diatonic collection. The crux of this section are the two transformations, which involve the ***Parallel*** operation. Firstly, a ***P+L*** leads towards the sudden B♭ major in bar 149, which is then interpreted as a dominant to the forthcoming E♭ major. The latter chord is subjected to an enharmonic ***P*** transformation, for the diatonic collection of the F♯ major to be reached again with the D♯ minor of bars 155-6. The main tonic returns after that, considering that the more complex sonority in bar 158 is not included in the exclusively triadic diagram of figure 5.16 and relegated to a subsidiary status.[8]

The harmonic content of section 7 is considerably more economic and simpler, confined to the main tonic, the brief double dominant G♯^{7} (still bearing a subdominant function) and the prolonged main dominant C♯ major, which completes the currently discussed segment of the piece. The *Tonnetz*

[8] In the functional context a straight-forward ***S-D-T*** progression is taking place within bars 155-159, but things are more complex in the context of my neo-Riemannian analysis of the passage illustrated on figure 5.16. Firstly, the harmony of bar 158, being a mixture of the D♯Ø^7 chord and C♯aug, cannot be connected to the preceding and following chord effectively, because it is neither a triad, nor a tetrad, let alone the fact that it is hard to pin-point the amounts of voice-leading work in an incontrovertible way. Therefore, I relegate this harmony to a subsidiary status in relation to the triads of the figure. In other words, I interpret the transformational nature of this passage triadically, and ignore any other extra pitches or chords on the grounds of being auxiliary to some of the chords shown on the *Tonnetz*.

representation of it reveals that it is a carefully planned progression, transitioning smoothly out of F♯ major and back into it, but also smoothly traversing through pitch space in the middle. A well balanced combination of diatonic (sideways) and strictly chromatic (downward) motion shapes the varied repetition of the main thematic material within section 6. Also, figure 5.16 shows how the same triad (F♯ major) can be reached again after moving by four perfect fifths to the left (to reach D major) and then by two ***PL*** transformations down along a Hexatonic alley.

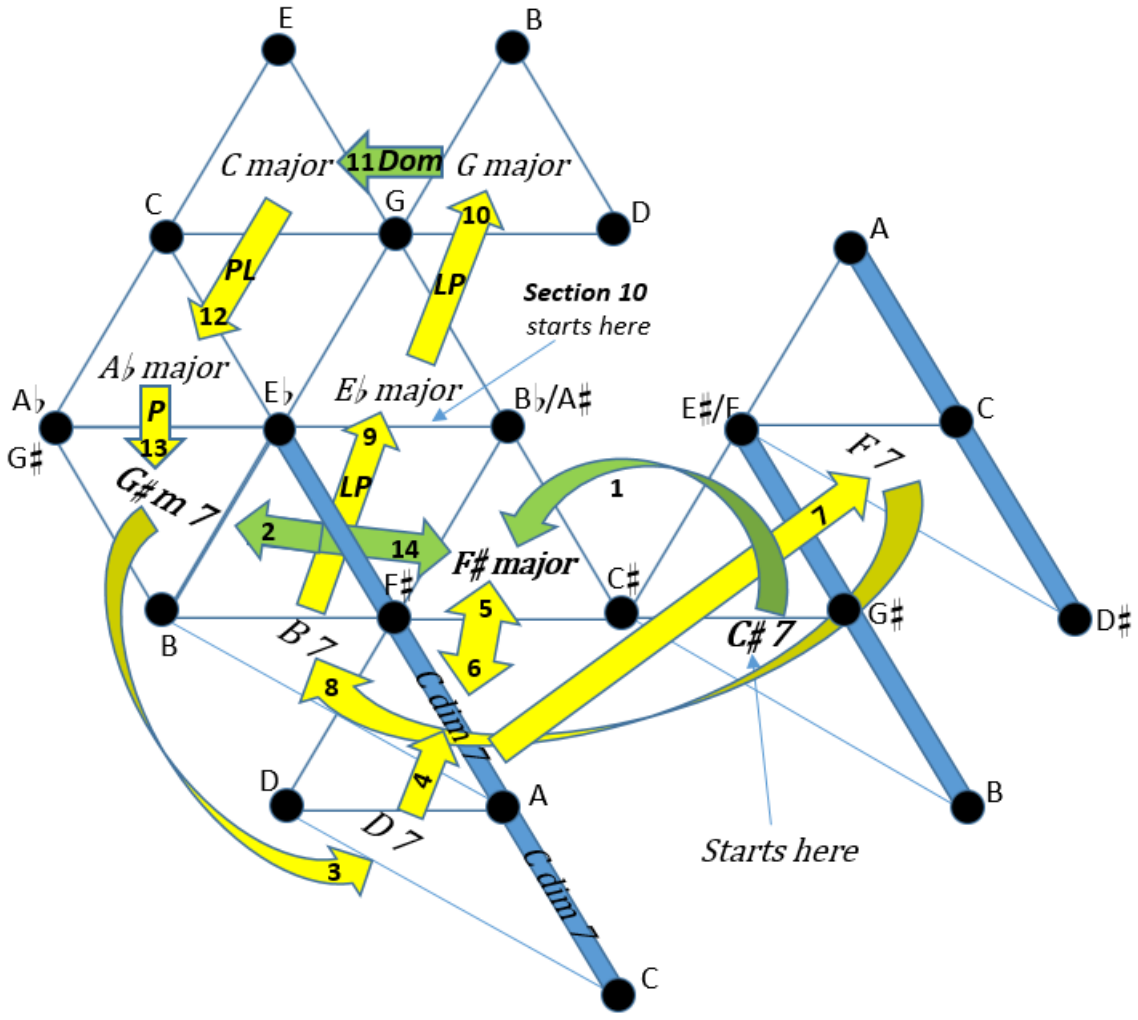


Fig. 5.17. Successive double syntax in sections 9 and 10 of *Les Jeux d'Eau*.

Another conspicuous example of the successive double syntax occurs if we consider the final two sections of *Les Jeux d'Eau* as a whole (from bar 220 onwards). Firstly, section 9 opens similarly to section 1 – with an extended sequence of harp-like arpeggios, which emphasise the main dominant and then the tonic. The subdominant-functioning G♯m^7 is reached and arpeggiated for only two bars in 234-235. This basic functional progression is shown on figure 5.17 with the green lines (steps 1 and 2). The diatonic row of F♯ major is abandoned suddenly with the transformation of the G♯m^7 into the tritone-distant D^7 in bar 236 and the latter seventh chord is prolonged for seven bars and a half – longer than any of the previous three chords, which is enough to take the attention away from the main key.[9] After quickly transitioning through B♯dim^7 (labelled as Cdim^7 on the figure for convenience), harmony returns to F♯ major and we can say that the first small chromatic detour is completed. However, movement outside of the main key continues immediately when stepping back to Cdim^7, which gets connected to two more of its closest dominant seventh chords in quick succession – F^7 and then B^7 (steps 6-8). The latter chord unexpectedly resolves a major third upwards to E♭ major, at which moment one final reiteration of the first part of the main theme is initiated and harmonised with a typical chromatic excursion based solely on major triads. E♭ major is subjected to an ***L+P*** transformation to get to G major with harmonic step number 10 of the progression. C major arrives as the expected tonic of G, but it is then the starting chord of a ***P+L*** transformation, which represents the third mediant step in the progression, bringing A♭ major in bar 264. The latter is prolonged for seven bars, before the enharmonic ***P*** transformation, which returns the sharps and brings about G♯ minor in bar 271. Finally, the main tonic

[9] For convenience of labelling and showing harmonies on the *Tonnetz*, D^7 and F^7, which are in fact notated differently, are interpreted as dominant seventh chords. This is also to make them equivalent to the B^7 in bar 251 and with keeping in mind that enharmonic alternatives do not matter in neo-Riemannian theory.

of F♯ major returns in the next bar and concludes the piece with a plagal cadence involving G♯m^7.

Section 10 (bb. 252-278) is actually the coda of *Les Jeux d'Eau*, in which some of the main thematic material is recycled one final time, but under very different harmonic circumstances. Unlike earlier in the piece, smooth triadic transformations occur a number of times under a short time span here, creating the much needed harmonic contrast, which several times throughout the piece is juxtaposed against the super-diatonic harmony of the majority of its sections. In similarity to other cases of the successive double syntax, a diatonic vocabulary of only three chords is quickly expanded to a chromatic sequence of many more, including triads, dominant seventh and diminished seventh chords. Pitch space both above and below the main diatonic area is explored. However, unlike sections 5-7, here the chromatic movement makes circles and returns to where it has started from, instead of moving on further until reaching the main tonic elsewhere on the *Tonnetz*. This implies a clearer cyclicity towards the end of the piece, one relating to the mid-nineteenth-century practice of chromatically expanding the final tonic.[10]

Conclusions

The examples presented in this chapter do not portray Liszt as someone who has completely renewed the established treatments of harmony in the context of traditional formal procedures. However, it has been fruitful to discuss

[10] A vivid example of such sudden interpolation of a chromatic sequence within a clear diatonic structure can be found towards the end of Chopin's mazurka in C♯ minor op. 50 no. 3 (1842).

the chord-to-chord relations and the paths through the *Tonnetz* pitch space in relation to the chromaticism-diatonicism polarity. As evident from reviewing the above figures, Liszt's use of chord types, chord relations and parsimoniousness varies from case to case and his inventiveness and creative freedom keep resisting strict categorisation.

The introduction versus main theme dichotomy has been presented as a fairly traditional opening formal gesture and yet, the five examples of it all have their individuality when we look at their harmonic content with the aid of the *Tonnetz*. The opening of the first *Valse oublieé* proved to be based on a single diminished seventh chord and its most closely related minor seventh chords, whereas the examples following it showed more diverse harmony in terms of chord types and chord relations, with each case revealing different levels of chromatic proximity to the ensuing functional exposition of the main themes. Similarly, the two examples in the second part of this chapter have been selected for their high level of difference from one another. The transitional material in *Valse oublieé* shown on figure 5.6 is based on a neat triadic circulation around the central pitch B♭ (shared by both preceding and following functional harmonies) whereas figure 5.7 illustrated a brief harmonic freeze on a single unusual sonority in *En rêve*. At the same time a connection can be made between figure 5.6 and the centrality of A in the example from *Romance oublieé* (fig. 5.12) – both these exemplify what Kenneth Smith calls 'pitch tethering' in his recent book on chromatic harmony: 'This protracted binding note is an inner pedal, which acts as a tether, a linchpin that allows restricted explorations of space'[11]. Such uses of a number of chords positioned around certain pitch on the *Tonnetz* recur in several late Liszt pieces and these will be pointed out in due course. A

[11] Kenneth Smith, *Desire in Chromatic Harmony – A Psychodynamic Exploration of Fin de Siècle Tonality* (Oxford, 2020, 234).

perceptual analogy between some of the music Smith analyses and late Liszt cannot escape attention here if one reads about the connections this author makes between harmony and psychology, mentioning Sigmund Freud's essay 'Mourning and Melancholia' in relation to the funeral *Andante* from Josef Suk's *Asrael* Symphony.[12] In short, alternating between a variety of chords which all include the same pitch creates the feeling of being directionless (as opposed to *moving* on the *Tonnetz* and *progressing* towards something else), which logically relates to melancholia – a feeling that can easily be equated to the affective qualities of pieces such as *Romance oublieé*. In the case of *Valse oublieé* such associations are less relevant, however, this issue will be revisited in relation to similar harmonic examples in the following chapters.

The main theme versus secondary thematic material opposition has also been discussed with the aid of two contrasting examples. Firstly, the beauty and harmonic diversity of the *B* section in Elegie no. 1 could only be fully appreciated with the *Tonnetz*, especially the ways in which Liszt has explored pitch space around the central A major in all directions – with Hexatonic triadic relations, octatonically-related half-diminished seventh chords, and the occasional functional relations. In contrast to that, the chord relations in and around the short middle section in *Csárdás obstineé* resulted in a much simpler and more succinct *Tonnetz* figure, but visualising these highlighted the contrast between the functional *Dom* relations within sections and the more chromatic ***S*** and ***RP*** transformations connecting them. On the other hand, the visual analysis in this case fell short of pointing out what needed to be explained verbally – that actually in that case there is a more nuanced version of the successive double syntax, one which juxtaposes a section with the simultaneous species against other based on a straight-forward dominant-tonic horn call. From such analyses

[12] Ibid, p. xiv.

it must be concluded that the *Tonnetz* cannot always be relied on in exhaustively explaining harmony, and while sometimes it can show all the important harmonic events clearly, in other cases it represents only a portion of the analytical efforts.

With the looser examples in the fourth quarter of this chapter my aim was to support the viewpoint that successive double syntax can exist even without clear differentiation and within seemingly unified sections of pieces. My analysis of the ending of *Csárdás obstineé* showed on the *Tonnetz* a gradual transition from clear dominant-tonic progressions towards unaccompanied inflected repetitions of a motif, which imply more parsimonious chromatic chord relations. On the other hand, the discussion and the *Tonnetz* diagram dedicated to bars 8-17 of *Romance oublieé* revealed that the chromaticism in such passages does not necessarily need to be parsimonious and even with the chromatically smooth ***TSDT*** followed by a non-functional sequence of triads the harmonic contrast was present. In the case of Mephisto Waltz no. 2 (fig. 5.13) a complex, harmonically rich progression was depicted on the tone grid and it was reaffirmed that Liszt was not always willing to constrain himself around certain pitch area or to parsimonious chromatic relations only. With *Csárdás I* I took the opportunity to show the gradual transition from more functional to freely chromatic harmony over the course of almost entire piece by using a different, original type of diagram and admitting that at some point the *Tonnetz* stops being capable of accommodating any larger number of chords. However, the two final examples taken from *Les Jeux d'Eau* illustrated two longer harmonic paths and it was interesting to see the recurrence of the main tonic elsewhere on the grid in figure 5.16, while figure 5.17 visualised the final chromatic detours from the main key, which turned out to go both above and below the main diatonic collection towards the end of the piece.

Chapter VI

Structurally differentiated double syntax

'Structural levels' as a theoretical concept has turned out to be useful for looking at harmony in Liszt, and not only in Schenkerian-derived methodologies, but also in functional analyses, meaning that a tonic can function as such not only for the duration of a single chord, but also for whole phrases and even sections of pieces, while there is an alternation of the other functions on a surface level. The latter was already demonstrated in my analysis of *Les Jeux d'Eau* in chapter III, where the uncertain functionality of some chords within the 'super-diatonic' sections was overwhelmed by the bigger and clearer overarching functions.

Despite all the problems with it, which were outlined earlier on, the Schenkerian perspective on some of Liszt's music has been providing commendable analytical results, mainly because of its meticulous treatment of dissonance, passing harmonies and melodic elaborations. In an article from 1987, David Allen Damschroder demonstrates why and how acknowledging the presence of structural levels as opposed to considering harmony in a simple vertical way on a chord-by-chord basis (the way Roman numeral analysis does) is the key to understanding Liszt's use of chromaticism in an overarching functional environment.[1] The author offers examples from a selection of Weimar period works and demonstrates that in some cases harmony can even turn out to be different from what it looks under a straight-forward Roman numeral inspection. I will be bearing in mind the above while presenting my own analyses

[1] David Allen Damschroder, "Structural Levels: A Key to Liszt's Chromatic Art", *College Music Symposium* 27 (1987, 46-58).

in this chapter, but it should be born in mind that my approach again differs significantly. Most importantly, I will be applying a different hybrid methodology – combining elements from neo-Riemannian theory and *Funktionstheorie* – for the same passages of music, similarly to chapter IV, but presently my focus will be on showing how on one level there is a clear functional progression (as usual depicted with green arrows), while on the other level harmonies are best related through semi tonal chromatic voice leading (shown in yellow arrows).

1. Chromatic background structure to diatonic foreground progressions

I will start by considering the cases, which are more typical for the period, to which Liszt's late music belongs. Chromatic relations between chords on a background level have been an exception to the rules until the beginning of the nineteenth century, but from there onwards, with the gradual overall increase of chromaticism in music, the latter also gradually transitions from a mere foreground embellishment function towards a more structural use.[2] This is how by the second half of the century there were a large number of pieces by most of the great composers, in which chromaticism and diatonicism had inverted their traditional relation in the structural levels of the music. The examples below are only limited to presenting clear and indisputable cases of chromatic background progressions underpinning functional diatonic foregrounds, while

[2] Jim Samson, "Romanticism", *Grove Music Online*, retrieved 2 Oct 2021, from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000023751.

there are certainly many more less clearly visible instances of the above throughout Liszt's *oeuvre*.

1.1. *Valse oublieé* no. 1

The functional analysis of this piece already revealed that there are four dominant-tonic connections within bars 17-80. Firstly, the main tonic F♯ major arrives after its dominant seventh chord (bars 17-32). Secondly, the same progression with the same melody (constituting the main theme of the waltz) is reiterated a major third upwards, comprising E♯^{7} and A♯ minor. The next section is based on new melodic material, but still consists of only two dominant-tonic couples. The initial C♯^{7} is this time followed by F♯m^7 and the transposition of this simple progression is by a minor third upwards, with E^7 preceding Am^7. The green arrows on figure 6.1 show all these dominant relations, which occur on a surface level and are labelled as harmonic steps 1 to 4. However, the more interesting to trace on the *Tonnetz* and interpret is the underlying chromatic progression, which is shown with the yellow arrows. At this level, F♯ major is firstly followed by its maximally close and ***L***-related A♯ minor, which is also part of the same diatonic collection. A sudden movement in the opposite direction from the main tonic occurs with the introduction of F♯m^7 – considered as a triad, F♯ minor is an ***LP*** transformation from A♯ minor. Finally, another movement down on the *Tonnetz* is materialised, in order for the Am^7 to be reached and the latter would result from an ***RP*** if we consider the sevenths as added pitches to the F♯ minor and A minor triad.

The structure of this whole passage becomes clear and logical if we take into account several chromatic voice leading considerations. Firstly, bars 17-48 connect two triads, which are a major third apart – F♯ major and A♯ minor. We know from transformation theory that such triads are maximally close and therefore most imperceptibly connectable. In the current case these two are also

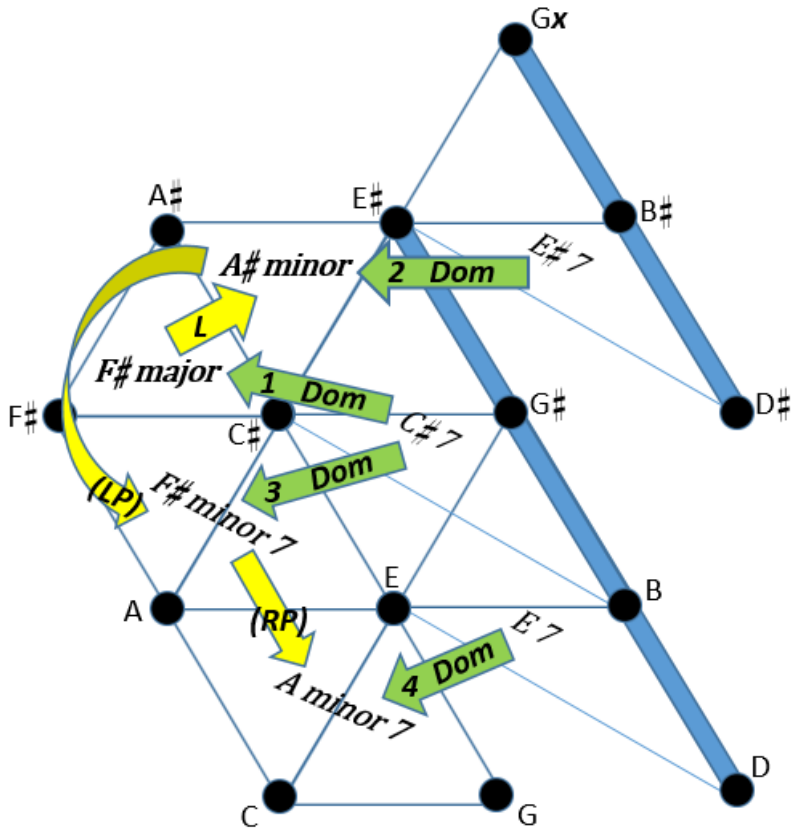


Fig. 6.1. Structurally differentiated double syntax with a background chromatic progression in bars 17-80 of *Valse oublieé* no. 1.

part of the same diatonic collection, which Liszt has exploited by tonicising the chord on scale degree $\hat{3}$. Consequently, the section, in which the main theme is presented, sounds logically and smoothly developing, without any of the harmonies in it appearing in a surprising way. C♯^{7} returns after A♯ minor and it should not be thought of as a coincidence that the two are also maximally close.

The tonic is substituted by its minor (and extended with a seventh) version in bar 57, which provides some sonority variation to the initial dominant-tonic couple. The following transposition by a minor third makes sense if we consider the fact that seventh chords are best connected chromatically when being a minor third apart. Therefore, F♯m^7 transforms into Am^7 through only two semi tonal inflections – F♯ ascending to G and C♯ descending to C. In short, the surface functional progressions and the underlying chromatically related harmonies work together very nicely in shaping the segment of the *Valse oublieé* under discussion. The piece sounds like being composed in the traditional idiom, while at the same time a diatonically distant key area is reached within only a couple of phrases – A minor is the relative of C major, which itself is the furthest possible key area from the main tonic of F♯ major.

1.2. *Csárdás I*

If we trace the change in surface-level chord relations in table 5.2, the foreground successive double syntax of this piece becomes evident. However, comparing the third column (main harmony) to the fourth reveals that the foreground functional diatonic progressions are underpinned by a chromatic shift from A major to C♯ major – a typical major third transposition resulting from an ***LP*** compound transformation. Such is the harmonic content of sections 2 and 3 of the piece and it is depicted exhaustively in figure 6.2. It is interesting to notice that both of the ***SDT*** functional progressions start from the same diminished seventh chord, which constitutes the right edge of the *Tonnetz* diagram. The more conventional use of this chord as a modified II^7 in A major,

preceding the V^7 in this key is followed by the interpolation of its maximally close $G\sharp^7$ as a V^7 in C♯ major the second time around.

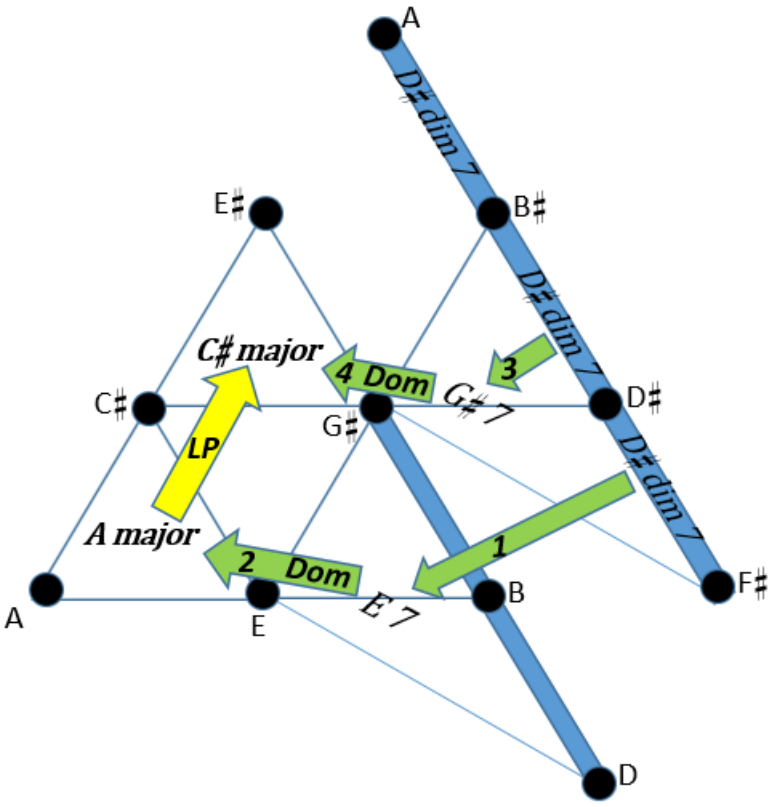


Fig. 6.2. Structurally differentiated double syntax with a background chromatic progression in bars 23-54 (sections 2 and 3) of *Csárdás I*.

It is possible to look at the following sections 4 and 5 of the piece from the same perspective – as surface-level functional progressions underpinned by two ***LP***-related tonics. However, there is a dominant-tonic connection in the background connecting sections 3 and 4, also the final two sections are connected through C♯ proceeding to $D\sharp\emptyset^7$, which is a blurred version of the expected final tonic F♯ minor. Therefore, it cannot be claimed that the structurally differentiated double syntax with a chromatic background is a consistent feature of *Csárdás I*. It would be more credible to say that towards

the end the diatonic functionality and chromatic chord relations switch roles, with the latter being brought to the immediate foreground (see fig. 5.15). Although the implication of the final tonic is never realised overtly, both F♯ major and minor are there as parts of the final two seventh chords. Henceforth we can claim that structurally differentiated double syntax of the other kind is present – the one which will be legitimised through more vivid examples in the second half of this chapter.

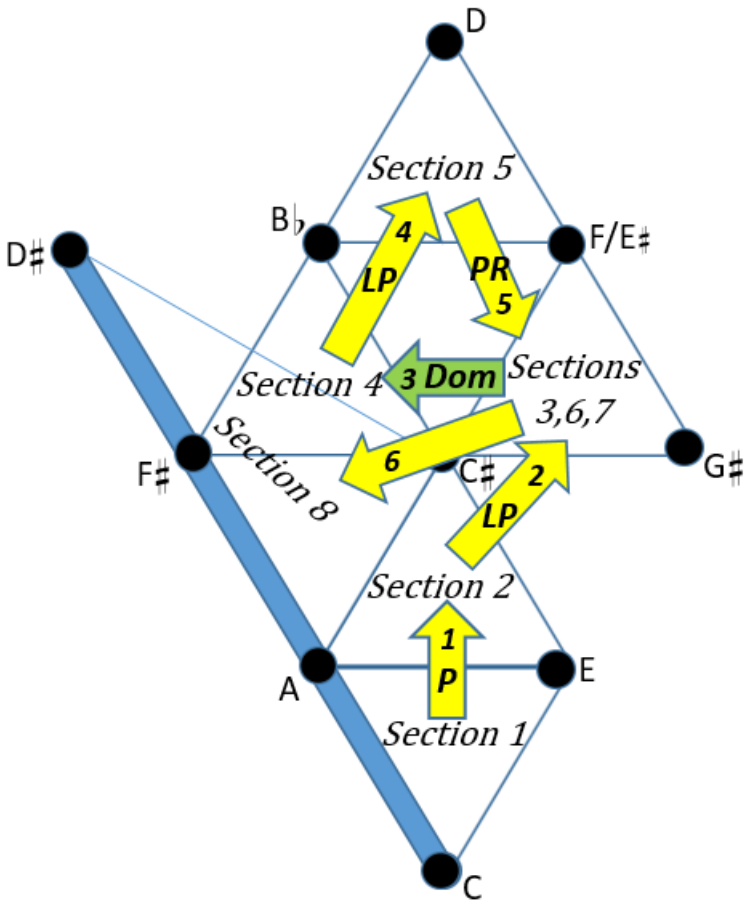


Fig. 6.3. Background-level harmonic progression within *Csárdás I*, which is almost exclusively chromatic.

Figure 6.3 summarises the harmony on a sectional level and reveals that only between sections 3 and 4 there is a clear-cut dominant-tonic progression,

which is signified by the green arrow. The progression from section 7 to 8 is less clear and it initiates the final chromatic parsimonious shifts between D♯ø^7 and D♯m^7, so it makes more sense for it to be labelled with a yellow arrow. All the earlier progressions depicted on the figure connect triads, so these easily receive a designation for a basic or compound neo-Riemannian transformation. Presenting the background harmony in such fashion reveals that around two thirds of it is dependent on chromatic chord relations, while one third is more or less clearly based on diatonic functionality. A similar conclusion can be reached about the balance between the two types of syntax on a surface level. Smooth chromatic chord relations are spread across more than one third of the piece, but if we bear in mind that sections like number 1 and 7 are not fully independent from functionality, the balance 2:1 could again be inferred, this time with diatonicism taking the lead. In short, we can talk about structurally differentiated double syntax in the context of *Csárdás I*, but it should be specified that it does not govern the whole piece and operate the same way throughout, as it is with chromaticism in the background in sections 2 and 3.

1.3. Csárdás obstineé

The classification into different species of double syntax offered throughout part I of this dissertation allows us to re-visit the same sections of pieces and offer alternative interpretations for their harmonic structure. Thus, it can be claimed that section A'' of *Csárdás obstineé*, while being the first part of a segment with successive double syntax, can also by itself exemplify the structurally differentiated double syntax with an underlying chromatic progression between triads (see ex. 5.5). Admittedly, the initial B major, which is

followed by its ***L***-related D♯ minor and by F♯maj^7 are all part of the same B major diatonic collection, with the exception of the pitch of E♯, so the underlying progression cannot be called strictly chromatic. Still, it connects chords through only the basic neo-Riemannian transformations and therefore it can be described as parsimonious or in other words, based on the logic of the smooth chromatic voice leading between chords. Conversely, the three surface-level progressions are exclusively functional and comprise three dominant-tonic

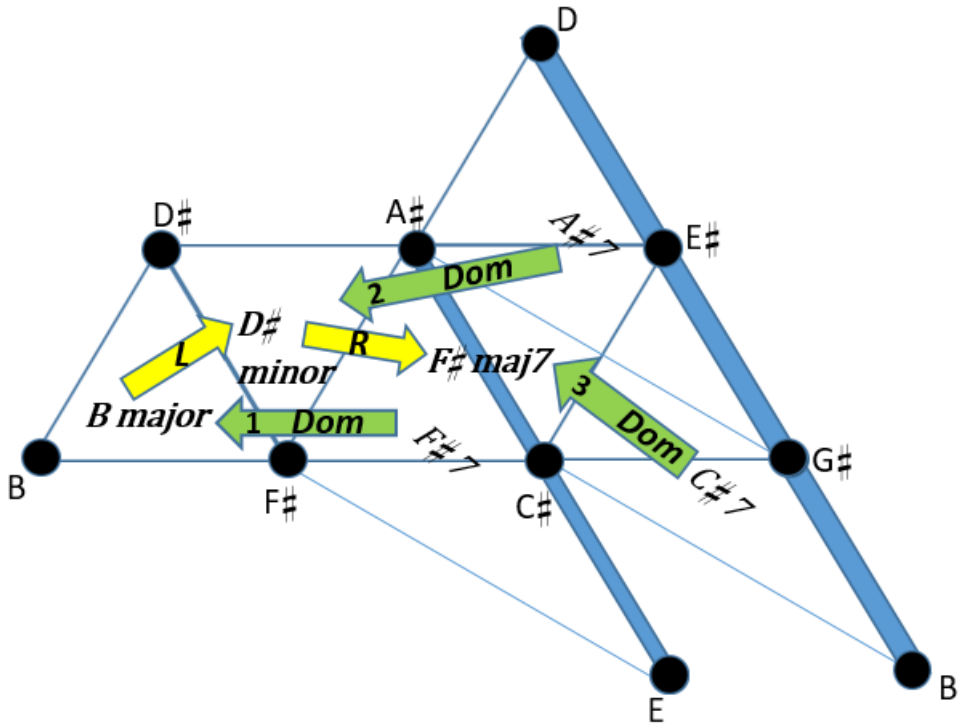


Fig. 6.4. Structurally differentiated double syntax with a background chromatic progression within section A'' of *Csárdás obstineé.*

couples, as can be seen on figure 6.4. In summary, it can be claimed that section A'' of *Csárdás obstineé* exemplifies a simple case of the structurally differentiated double syntax, in which a dominant-tonic progression gets transposed firstly by a major third and then by a minor third upwards.

Consequently, a background movement to the right materialises, one that allows for a quasi-modulation towards the main dominant of F♯ major, while reaching the latter through smooth chromatic shifts.

2. Diatonic background structure to chromatic foreground progressions

A diatonic background structure is at the basis of most music up until the first half of the nineteenth century, when gradually it starts being supplanted by more chromatic relations between keys and key areas. For Liszt, chromatic relations on the foreground level are essential features of his style, but, as Damschroder has pointed out, it has often been overlooked in earlier studies of his music that this surface-level chromaticism is often resting on 'straightforward structures found in earlier music.'[3] My complete analyses in chapter III already showed some familiar tonal structures, which have been extended and elaborated in different ways by the more chromatic foreground. The three analytical vignettes below will only concentrate on certain sections of pieces, in which simple functional background progressions are filled in with chromatically-related chords. Depicting the examples on the *Tonnetz* will allow to trace the logic of the progressions on both levels.

[3] David Allen Damschroder, *The Structural Foundations of "The Music of the Future": A Schenkerian Study of Liszt's Weimar Repertoire* (PhD diss., Yale University, 1981, ii).

2.1. The second theme of *Valse oublieé* no. 1

The main theme of this piece clearly establishes the key of F♯ major and then gradually diverges from it, going as far as C^7 in the transitional bars 80-88. However, the key signature of the main key returns in bar 89 and a dominant

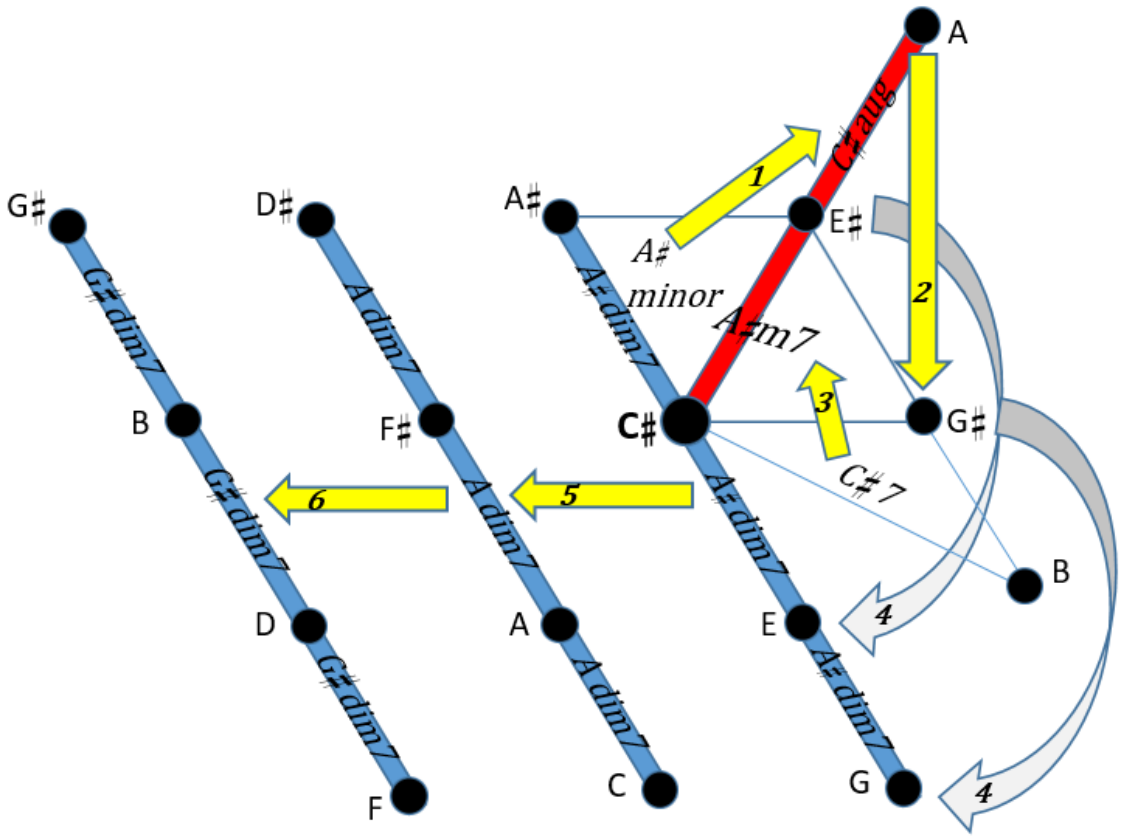


Fig. 6.5. Structurally differentiated double syntax with a background standing on the dominant in bars 89-106 of *Valse oublieé* no. 1.
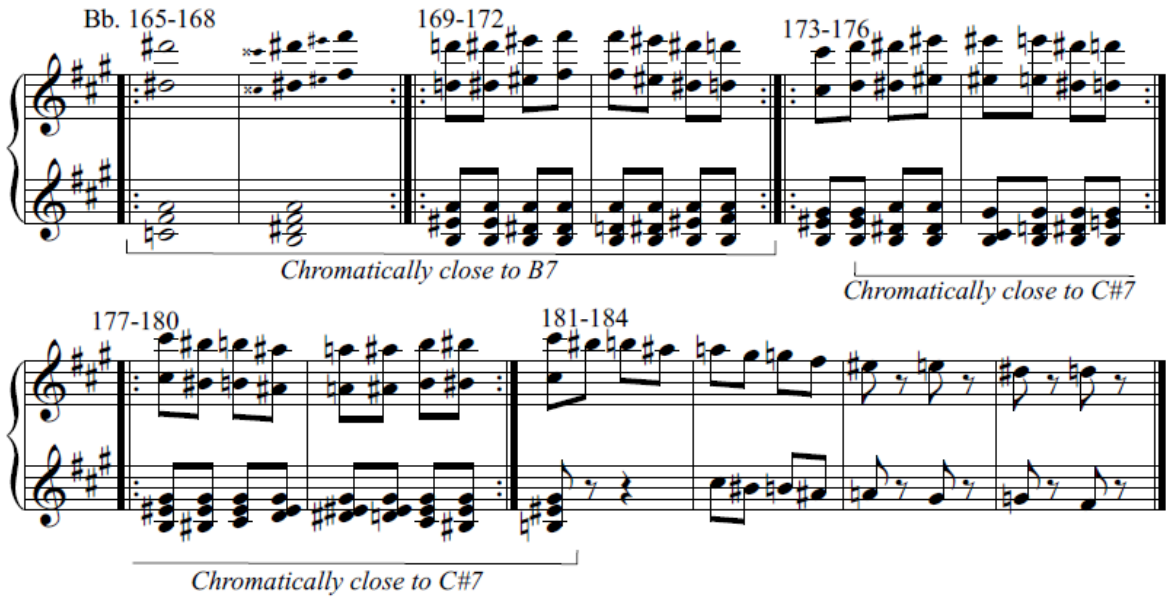
pedal underpins most of the ensuing second theme at this point. This explicit C♯ bass note ensures a strong underlying functional background to the piece, which is later reinforced with the return of the second theme and the ending of the waltz, as already shown in chapter III. However, the intricate chromatic

transformations throughout the second theme's section represent the foreground layer, which elaborates the underlying dominant and contributes to the originality of the passage. There are two things here, which are very typical of late Liszt and are interrelated. Firstly, the melody moves several times in semi tonal steps, from the opening A♯ downwards to the G of bar 94 (see steps 1-4 on fig. 6.5). Secondly, this melodic movement is what causes the harmony to go through several parsimoniously connected chords. It is the earlier heard A♯ minor first, which is transformed into the augmented triad on C♯ with the A♯ sliding down to A, the latter followed by C♯^{7}, A♯m^7 and eventually by A♯dim^7. The progression is repeated and continued with Adim^7 and G♯dim^7, the latter two returning the harmony to the diminished seventh chord of the introduction. A circular movement around C♯aug becomes visible on the *Tonnetz*. The point of C♯ is enlarged, in order to show its bigger importance and dominance within this section. In summary, an elaborate chromatic progression, which involves different types of triads and seventh chords, decorates the standing on the dominant.

2.2. Mephisto Polka

Moving on to a rather short, but harmonically dense passage towards the end of the Mephisto Polka, I will now demonstrate how this segment includes an overtly chromatic foreground progression, while still being loosely dependant on the subdominant-dominant succession beneath it. A recurring chromatic procedure for varying the simple diatonic sequences throughout the piece are the interpolations of different kinds of closely-related seventh chords, including mainly dominant, minor, half-diminished and diminished seventh chords. This

technique comes to full flourish after the main subdominant B major (in its dom^7 version) is reached in bars 165-168 (see ex. 6.1). The following 12 bars (from 170 up until 181) comprise a chromatic melodic movement up and down within a major third, which is accompanied by a variety of closely related chords, almost all within one or two units of voice leading work away from the B^7 or the ensuing main dominant C♯^{7}. Figure 6.6 includes all the chords within this section and puts



Ex. 6.1. Bars 165-184 of Mephisto Polka. Bars 165-168 are reduced to the main harmonies in them, whereas the following passage is shown unchanged from the original score.

them into three groups. The chords of each group are sounded within only a couple of bars while the melody moves up and back down in semi tones, then the sequence is repeated in the following two bars before the next group of chords is introduced. All this happens too quickly for the chords to be perceived as separate entities.

The section is more like a brief chromatic wandering around the main subdominant and dominant chords, each being blurred and then crystallised in a matter of seconds. Moreover, all these chords result from the chromatic

melodic voice leading and it would be impractical to go into too much detail with seeking transformational patterns in the way they are connected. A *Tonnetz* diagram of such a passage could be more confusing than revealing, therefore what figure 6.6 shows bears enough analytical information for illustrating the structurally differentiated double syntax governing the passage.

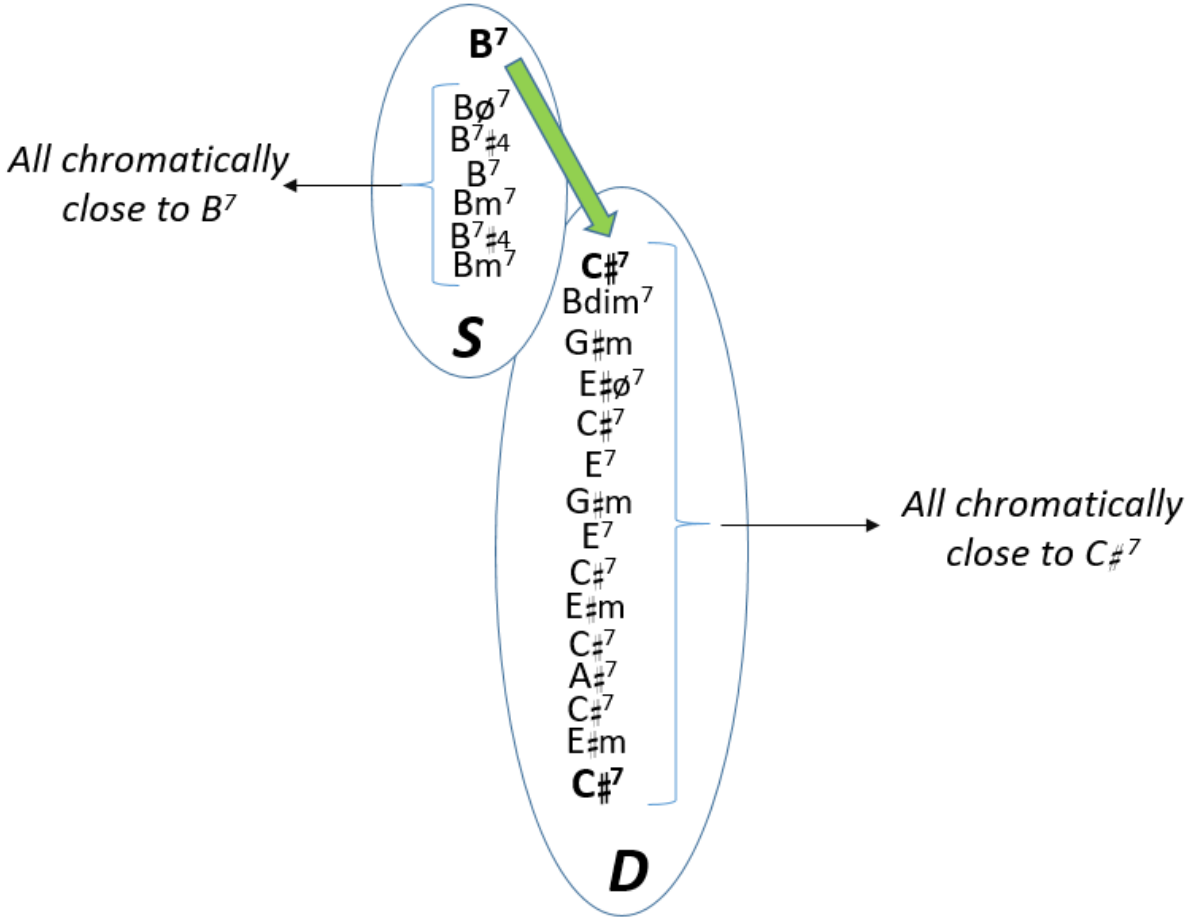


Fig. 6.6. Structurally differentiated double syntax with a background subdominant-dominant progression – bars 169-184 of *Mephisto Polka*.

2.3. *Romance oublieé*

A quick inspection of the previous three chapters, in combination with the current analysis, will reveal that from the ten pieces being analysed, *Romance oublieé* is the only one, which can be claimed to exemplify all four species of double syntax (see table 6.1). Firstly, the overarching functionality of the piece was traced with the aid of a harmonic reduction in chapter III. Secondly, it was shown in chapter IV that the main theme in it is harmonised by a seventh-chord-based ***TSDT*** cycle, which is at the same time functional and chromatically smooth in the way chords transition between one another. Thirdly, it turned out that there is a frequent alternation between more functional and more chromatic

Name of piece	**Species of double syntax found**
Valse oublieé no. 1	1, 3, 4
En rêve	1, 2, 3
Romance oublieé	1, 2, 3, 4
Elegie no. 1	1, 2, 3
Les Jeux d'Eau a la Villa d'Este	1, 3
Elegie no. 2	3
Csárdás I	2, 3, 4
Csárdás obstineé	2, 3, 4
Mephisto Waltz no. 2	3
Mephisto Polka	2, 4

Table 6.1. An overview of the species of double syntax, exemplified in the pieces, which have been analysed throughout chapters III-VI.

segments throughout the piece (chapter V). Finally, anything said about *Romance oublieé* so far does not prevent me from claiming that the double syntax in it is also structurally differentiated, with an overarching ***TSDT*** underpinning the wide variety of more or less chromatic chord relations on the surface within bars 8-27. This larger functional cycle was already pointed out with the boxed-in functional labels in figure 3.3. However, the discussion there only aimed to show functionality as operating on different structural levels. Now, having in mind the later analytical commentaries on this piece, a lot of which focused on the same segment (from the beginning of the main theme to the move to E major), it can be concluded that the background of the latter is fully functional and diatonic in E minor, while the foreground is a mixture of the two types of syntax, with slight prevalence of smooth chromatic chord relations.

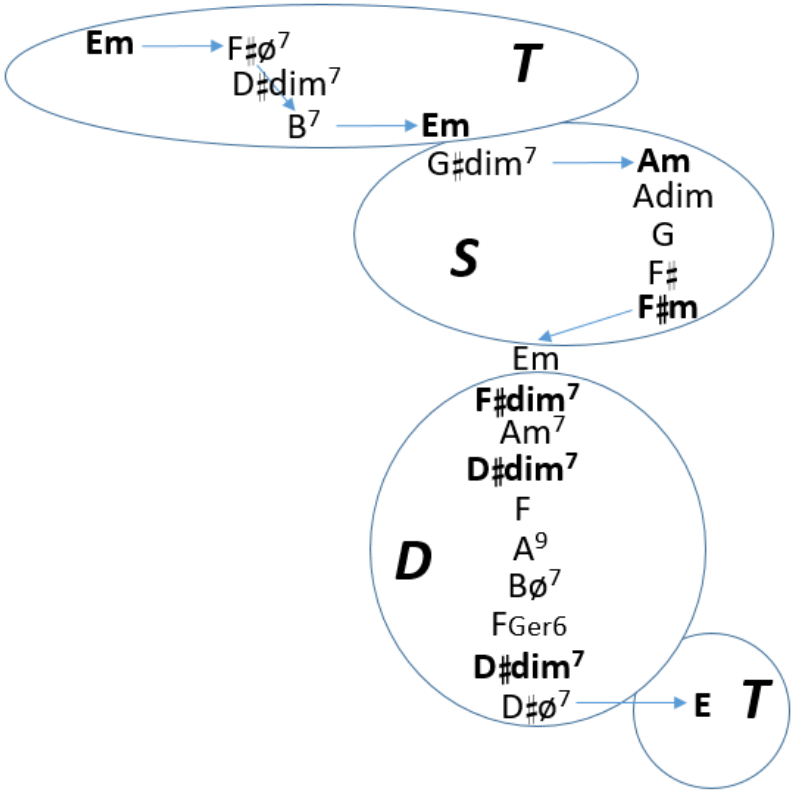


Fig. 6.7. Structurally differentiated double syntax with a background *TSDT* cycle – bars 8-27 of *Romance oublieé*.

Figure 6.7 summarises everything that has already been shown with *Tonnetz* diagrams and the initial functional skeleton reduction in regards to the section in question. In similarity to the previous such figure, movement to the right or left is shown with arrows and denotes functional relations between chords. By contrast, chromatically related chords are arranged below one another. It is clear that after the initial chromatically enriched ***TSDT*** cycle in E minor, the following chord relations up to bar 27 are by a large majority not functional and connected through semi tonal voice leading. The chords, which possess enough structural weight to provide the functional designation for their corresponding phrase are emphasised in Bold.

Some conclusions pertaining to the ongoing analysis of *Romance oublieé* throughout chapters III-VI should follow here. Firstly, it has been demonstrated that the keys of E minor and E major possess structural supremacy over any other harmonic events throughout the piece, which from the onset suggested the possibility of talking about a structurally differentiated double syntax with underlying functionality. Secondly, Liszt's skilful ways of mixing the surface-level functional progressions with chromatically related chords offered the option of looking at foreground harmony as exemplifying both the simultaneous and successive types of double syntax. Thirdly, the changes of syntax from phrase to phrase have made it difficult to clearly distinguish instances of the different species of double syntax from one another. Consequently, it may seem for some readers that there are some contradictions between what has been said when the same pieces were revisited in different chapters. However, I would like to emphasise that putting pieces and sections of pieces into categories the way I have attempted is no easy task at all, especially considering the wide variety of ideas in late Liszt and the harmonic richness of the music. In fact, such stylistically diverse pieces might not be meant to be classified in such ways at all. What I am

trying to demonstrate in this study is rather the fact that, in response to earlier literature, there can be alternative ways to look at this repertoire and establish some categories, in which pieces could be grouped. The use of neo-Riemannian theory and complementing it with functional analysis has proved fruitful in showing a number of new analytical insights about the movements of harmony in 12-tone pitch space, even in cases when the successions of chords have seemed not to follow any strict patterns.

Conclusions

Looking at the two types of harmonic syntax on different structural levels has been a fruitful endeavour throughout this chapter and in the majority of the examples the presence of this fourth species has been shown in comparatively simple *Tonnetz* diagrams. This is particularly true for figures 6.1, 6.2 and 6.4, which show third-related harmonies on a deeper level below the surface level dominant-tonic couples. Similarly, but having diatonic functionality in the background, figure 6.5 illustrated how the second theme of the first *Valse oublieé* is built around a chromatically decorated standing on the dominant. The other examples showed some more complex cases and stretched the capacity of my current neo-Riemannian methodology for analysing longer segments of music. The complete background-level *Tonnetz* diagram of *Csárdás I* (fig. 6.3) revealed that both the more chromatic and the more functional diatonic chord relations can be employed at this level, while at the same time they can also switch between one another at the foreground. This implies more flexibility to

Liszt's compositional techniques than our differentiation of two types of harmony and four species of double harmonic syntax can comfortably account for. As already demonstrated, the same musical passage can be used to exemplify more than one species of double syntax and consequently, the ten pieces which have been discussed throughout part I defy being chopped into strictly determined groups of harmonic situations. In the case of the Mephisto Polka and fig. 6.6 the strict differentiation into an underlying subdominant-dominant progression and surface-level smooth chromatic transformations is clear enough, despite the harmonic diversity and richness of the passage in question. However, my final example, taken from *Romance oublieé*, represents a kind of end point to what we can say and what we can demonstrate with this repertoire, implying that there is a good amount of flexibility in such analytical idea, but also warning about its limits, when it is applied to pieces of music, in which chromaticism and diatonic functionality might be understood as irreconcilably entangled.

Part II

Liszt's non-functional chromatic harmony – a neo-Riemannian analytical perspective

Chapter VII

How the 'Unwelcome Guest' became most welcome – The Story of the Augmented Triad in Late Liszt

Introduction

The stylistic influences throughout Liszt's long life have been numerous and diverse, but some of them deserve a more special attention. One of those important influences results from Liszt's friendship with the prominent German music theorist Carl Friedrich Weitzmann (1808 – 1880). Liszt and Weitzmann were two of the main conceptual advocates of the New German School, which arose in the late 1850s.[1] The best known theoretical treatise of Weitzmann, called *Der übermässige Dreiklang* (the augmented triad) was published in 1853 and soon afterwards sent for Liszt to give his opinion on. Moreover, the composer kindly accepted the dedication of Weitzmann's forthcoming tract on

[1] The term *New German School* was introduced in 1859 by Franz Brendel, editor of *the Neue Zeitschrift für Musik* to represent certain modern trends in German music. It is widely agreed that Liszt was one of the most prominent representatives of the 'school', and that Brahms did not take part, but beyond that, interpretations regarding who was part of it and what were the main aesthetics and objectives, differ. For a more comprehensive picture see Detlef Altenburg (ed.), *Liszt und die Neudeutsche Schule. Weimarer Liszt-Studien, im Auftrag der Franz-Liszt-Gesellschaft* (Laaber, 2006).

the diminished-seventh chord.[2] The two men exchanged letters on the subject of music theory, and Liszt undoubtedly held Weitzmann in high esteem. As will be demonstrated in this chapter, it can be argued that the creation of several original late compositions by the Hungarian master can be related back to this friendship.

Indeed, it is possible that Liszt's fervent advocacy for harmonic innovations was a consequence of the persuasive language used by Weitzmann in his trilogy of treatises dedicated to the augmented triad, the diminished seventh chord and the history of the seventh chords, published in 1853–54.[3] The letters exchanged between the pair on issues relating to music theory certainly show that the two were largely in agreement on theoretical matters, and the direction music should take.[4] Liszt's novel use of symmetrical chords has been a topic of interest for a number of musicologists, with Robert Larry Todd writing on his use of the augmented triad, David Carson Berry's essay on diminished seventh chords in *Bagatelle sans tonalité*[5], and contributions by Dennis Hennig[6]. Todd's study will be summarised a little later, as I see the analyses in this chapter to be a natural continuation of his article, but firstly a summary of Weitzmann's work will follow suit.

[2] David Carson Berry, "The Meaning[s] of "Without": An Exploration of Liszt's Bagatelle ohne Tonart*" 19th-Century Music* 27/3 (2004, 250). The treatise in question is Carl Friedrich Weitzmann, *Der verminderte Septimenakkord* (Berlin, 1854).

[3] Robert Larry Todd, "The „Unwelcome Guest" Regaled: Franz Liszt and the Augmented Triad", *19th-Century Music* 12/2 (1988, 108).

[4] David Berry (2004) mentions these ‚series of letters', in which ‚technical discourse was common' and Liszt's interest in Greek music theory — linked to his compositional use of ‚inflected repetition' — might have been inspired by Weitzmann's text on ancient Greek music (1855). Also, Ramon Satyendra (1997, 249, fn. 29) talks about an encounter between the two in December 1855, when Liszt was conducting his own works in Berlin and Weitzmann was in attendance. They were on friendly terms as whist partners at that time and the composer made a sketchbook entry about Greek music theory around then — a further testimony to their exchange of ideas.

[5] David Carson Berry, "The Meaning[s] of "Without" (2004, 230–262).

[6] Dennis Hennig, "Weitzmann and the Liszt Machine", *Miscellanea Musicologica* 16, (1989, 109–134).

Several features of *Der übermässige Dreiklang* made it significant to Liszt, and these features are what intrigue us today when considering their impact on the composer. Firstly, Weitzmann calls for the unorthodox harmonic features of the augmented triad to be embraced, and used with a degree of boldness and imagination by the young composers of the day. Moreover, Weitzmann is the first theorist to describe the dualist conception of major and minor chords, preceding the better-known work of Arthur von Oettingen[7] and Hugo Riemann.[8] Finally, he expresses his enthusiasm for the smooth, chromatic voice leading between chords, which is today referred to as parsimonious voice leading, and is associated with neo-Riemannian theory. To make the latter a more potent analytical tool, and easier to conceptualise, Weitzmann embraced equal temperament and the enharmonic possibilities that arose from it.[9]

In the introduction to Weitzmann's best known treatise, the augmented triad is called an 'unwelcome guest, whom one believed one must get rid of as soon as possible'.[10] The author emphasises that up to his contemporary age in musical history, this chord had not received the attention it deserves from both theorists and composers alike, that it had been dismissed as inappropriate for a rightful harmonic progression, and that its appearances in music had always been rather brief, or constructed in only a limited (and not too imaginative) number of ways. The brief historical introduction traces the consideration of the augmented triad in music theory from Rameau (1722) to Gottfried Weber (1846) and reaches the conclusion that all we can learn about it if we consider the work of earlier theorists is that 'it has its place on the third degree of the minor scale,

[7] Arthur von Oettingen, *Harmoniesystem in dualer Entwickelung: Studien zur Theorie der Musik* (Dorpat and Leipzig, 1866).
[8] Hugo Riemann, *Musikalische Syntaxis: Grundriß einer harmonischen Satzbildungslehre* (Leipzig, 1877).
[9] Janna K. Saslaw, "Two monographs by Carl Friedrich Weitzmann: Part I: "The Augmented Triad" (1853)", *Theory and Practice* 29 (2004, 133).
[10] Ibid, p. 145.

arises through the raising of the fifth of the major triad and is only capable of two to three regulated progressions'.[11]

Weitzmann has made it clear that he wanted to distinguish himself from those earlier theorists by showing the wide diversity of ways this symmetrical sonority can be connected to more consonant sonorities, by 'demonstrating its inseparable alliance with the long-accepted diminished seventh chord', and by 'giving an exhaustive account of its mysterious and multifaceted character'.[12] It is intriguing that the author likens the dichotomy between the major and the minor triad to the relationship between 'the harsh augmented triad' and 'the sweet diminished seventh chord'. Noticing that the latter of these symmetrical chords had already been used a lot, and been justified, by theorists, Weitzmann wanted to encourage his readers to consider the symmetrical diminished seventh chord as being perfectly capable of forming a very productive pair with its less-favoured cousin, the symmetrical augmented chord.

In Weitzmann's words, the perfect symmetry in the structure of the augmented triad and the diminished seventh chord 'is the cause of the multiple meanings of both and makes them so suited to fast and surprising modulations'.[13] It is precisely these 'surprising modulations' and 'multiple meanings' that are at the heart of Weitzmann's ideas, and he demonstrates these in the more substantial chapters of his treatise under discussion. It is important to note here the derivation of this idea from an older theorist, Gottfried Weber (1779–1839) who, in his major treatise *Versuch einer geordneten Theorie der Tonsetzkunst* (1817–21, published in 1846) defines the so-called *Mehrdeutigkeit* as 'the possibility of explaining musical entities in more

[11] Ibid, p. 151, also see Jean-Philippe Rameau, *Traité de l'harmonie réduite à ses principes naturels* (Paris, 1722) and Gottfried Weber, *Versuch einer geordneten Theorie der Tonsetzkunst (1817-21),* vols. I-II (Mainz, 1846).
[12] Ibid, p. 145.
[13] Ibid, p. 177.

than one way'.[14] Developing this notion in the context of his own treatise, Weitzmann showed how the same augmented triad can be notated in a variety of ways, each notation implying proximity and possible resolution to a different key. Next he clarifies the transpositional limitations of the chord — that it can only be transposed up or down three times before we return to the pitches we have started with. There are shown to be only four different augmented triads, each one having the potential to turn into six consonant triads through only a single semi tonal displacement of one of its pitches. This is shown in more detail via a figure in chapter VII of Weitzmann's treatise, entitled 'Extensive chord and key relations of the augmented triad'.[15] The figure is represented here as fig. 7.1

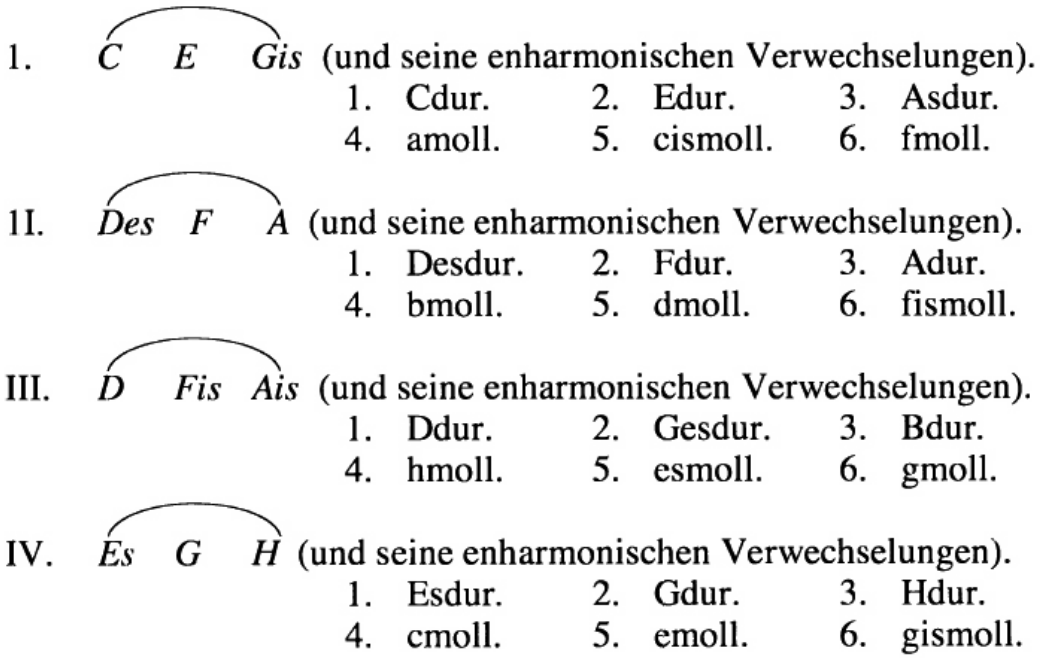


Fig. 7.1. Weitzmann's grouping of augmented triads with their closest consonant triads, *Der übermässige Dreiklang*, p. 188 in Saslaw's bilingual edition for the Journal of the Music Theory Society of New York State, 2004.

[14] Janna K. Saslaw, "Weber (Jacob) Gottfried", *Grove Music Online*, retrieved 2 Oct 2021, from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000029983?rskey=TE86sl&result=1.

[15] Janna K. Saslaw, *The Augmented Triad*, p. 188.

and it encompasses what Richard Cohn would go on to label as 'Weitzmann regions' almost a century and a half later**.**

As evident from the above summary, Weitzmann was a highly imaginative theorist, who not only realised the hidden potential of the augmented triad for new harmonic explorations, but provided the musicians of his time with a plethora of ideas about the novel ways in which it could be incorporated into their music. It was his declared purpose to show that avoiding the use of it, or limiting its function to a mere passing chord, is not necessarily the only way to go. It was arguably Liszt, however, who pushed the ideas of his friend further. He not only started using the augmented triad regularly, and in a variety of ways, but also elevated it to the status of a principal sonority in some of his late piano works, as it will be demonstrated later in this chapter.

It can be argued that the research and writings of music theorists follows in the footsteps of great composers, who themselves learn not as much from treatises on music theory as from the music of other great composers before them. With that being said, it is not easy to evaluate who — Liszt or Weitzmann — was first to deeply think through the unexplored harmonic potentialities of the augmented triad. Robert Larry Todd, in his article subtitled 'Franz Liszt and the augmented triad' gave the subject some attention, and the aim here is to extend his study by concentrating on the final stage of Liszt's life-long creative explorations using the chord.

The core of Todd's article discusses Liszt's use of the sonority during the 1850s, culminating in the famous Faust symphony (completed in 1854). Before analysing this piece, Todd describes the theoretical work of Weitzmann from the same period and claims that the latter has been 'almost certainly influenced by

Liszt's harmonic advances of the 1840s and early 1850s'.[16] A number of earlier pieces written by Liszt therefore already began to make novel use of the augmented triad, which leads us to the conclusion that the composer had already started taking harmony in new directions before being prompted to do so by the theorist.[17]

Nevertheless, it can still be argued that the famous introduction of the *Faust* symphony was inspired by Weitzmann's *Der übermässige Dreiklang*. After all, the former was completed in the year following the publication of the latter. Furthermore, Weitzmann shows, in notation, the four possible augmented triads, which together include all 12 pitches of our equally-tempered harmonic system.[18] Coincidentally, these provide the harmonic basis of Liszt's 22-bar-long introduction to his symphonic poem, which leaves the listener with no clue as to what key the piece will be in. Consonant triads do appear, but these seem to quickly 'resolve' into another augmented triad, providing a stark contrast to the way dissonant and consonant chords usually relate in common-practice harmony.

In his analysis of the Faust symphony, Robert Morgan claims that the C-E-A♭ augmented triad is the referential sonority of the introduction, with the other three augmented triads, and some consonant passing and neighbour chords being used in-between.[19] His dissonant prolongation idea is a neo-Schenkerian method for analysing post-tonal music, but I would like to emphasise that the

[16] Robert Larry Todd, "The "Unwelcome Guest" Regaled", p. 106.
[17] In fact, it was Adolf Bernhard Marx's unfavourable description of a chromatic sequence of augmented triads (1850) that might have incited Liszt to incorporate the same kind of device into his *Pensée des morts* (1853) and in the celebrated opening of the Faust symphony. One thing is sure — by the early 1850s Liszt was already determined to take his style, and more broadly the musical currents of the time, into new and unprecedented directions.
[18] *The Augmented Triad*, p. 183.
[19] Robert Morgan, "Dissonant Prolongations: Theoretical and Compositional Precedents", *Journal of Music Theory* 20/1 (1976, 60).

analyses in this chapter should not be related to Schenker's ideas in any direct way. Neo-Schenkerian analyses of late Liszt have already been offered (most notably by Baker 1990, and even Forte's article 'Liszt's experimental Idiom' from 1987 uses quasi-Schenkerian graphs), but in my opinion these produce some controversial results. This is because the analyst cannot rely on the established principles of tonality for determining which chord is structurally more important than the ones coming before and after it.

Morgan is right to say that 'the structural meaning of consonant chords changes in Liszt's later years, as it is determined entirely by contextual means unrelated to (in fact, running directly counter to) the conventions of the tonal system'.[20] It is able to be argued, therefore, that the neo-Riemannian method is more appropriate to use when discussing the late pieces which have been selected for analysis in part II of this study, as it concentrates more on the issue of how chords relate to each other, rather than seeking the establishment of structural hierarchy in the music.

The idea of the contextualisation of harmonic relationships and independence of the music from established tonal practices will be borne in mind in the following analytical case studies. The above-mentioned analyses of Liszt's earlier works demonstrate that he was working towards establishing the augmented triad as a prolonged sonority which does not necessarily need to resolve to consonant triads, but can have its resolutions extended beyond diatonic functionality. The small, but significant, step towards not at all seeking any resolutions for the augmented triad was taken in some of Liszt's piano miniatures from the 1880s, most notably in *La lugubre gondola I* and in *R. W. – Venezia*. The development of neo-Riemannian theory and more specifically, of

[20] Ibid, p. 62.

Weitzmann regions, as summarised in Richard Cohn's *Audacious Euphony* provides us with some analytical tools which shall prove to be highly suitable for the pieces under discussion.

As already mentioned in chapter II, common-tone retention and minimal voice movement are the basic principles of chord interaction in the 'triadic universe' of Richard Cohn and these are maximised within a Weitzmann region, hence the latter is one of Cohn's two fundamental models for moving chromatically around triads. The basic neo-Riemannian ***R*** transformation moves a voice within a chord a whole tone up or down and thus connects chords from neighbouring Hexatonic regions (compare figures 7.2 and 7.3). A Weitzmann

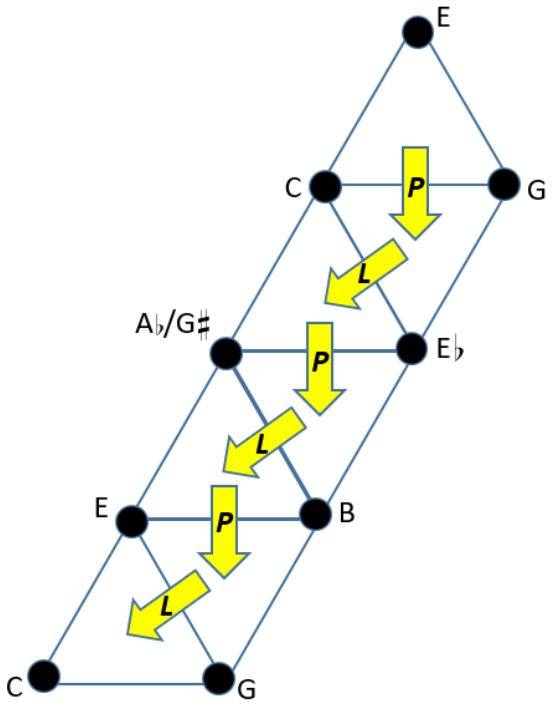


Fig. 7.2. A series of *P* and *L* transformations circling through a Hexatonic region, as depicted on the *Tonnetz*.

region consists of three couples of ***R***-related triads (fig. 7.3). It is the augmented triads that smoothen the whole-tone moves between major and minor triads by

dividing them into two semi tonal transformations. And while the explicit use of an augmented triad has been largely avoided up to the middle of nineteenth century, it should be admitted that there is an overlap between one of the basic neo-Riemannian transformations (***R***) and a traditional tonal relationship, considering that the *Relative* key area is an important part of the tonal plan in the large majority of compositions from the eighteenth and nineteenth centuries.

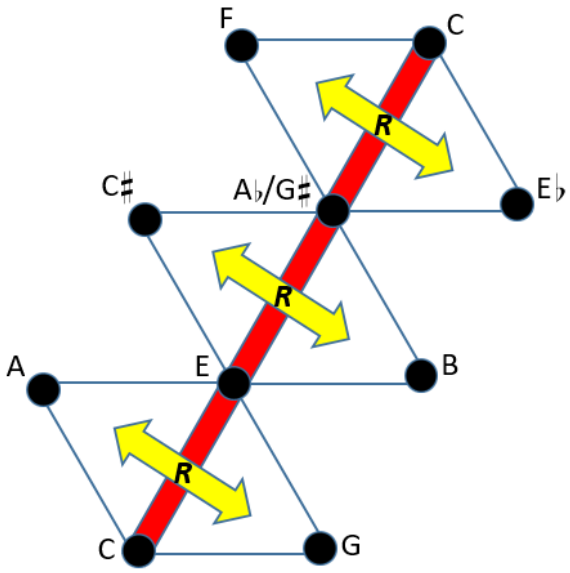


Fig. 7.3. The Weitzmann region of Caug (*WtzR-C*), as depicted on the *Tonnetz*.

Douthett's and Peter Steinbach's Cube Dance, which was reproduced as fig. 2.5 in chapter II, shows how Weitzmann and Hexatonic regions have been united into a geometrical system for voice leading through consonant and augmented triads. Figure 7.4 here represents an adapted version of Cube Dance, whereby all the 28 triads of the four Weitzmann regions are depicted as black dots and labelled. An attempt has been made to simplify Douthett's and

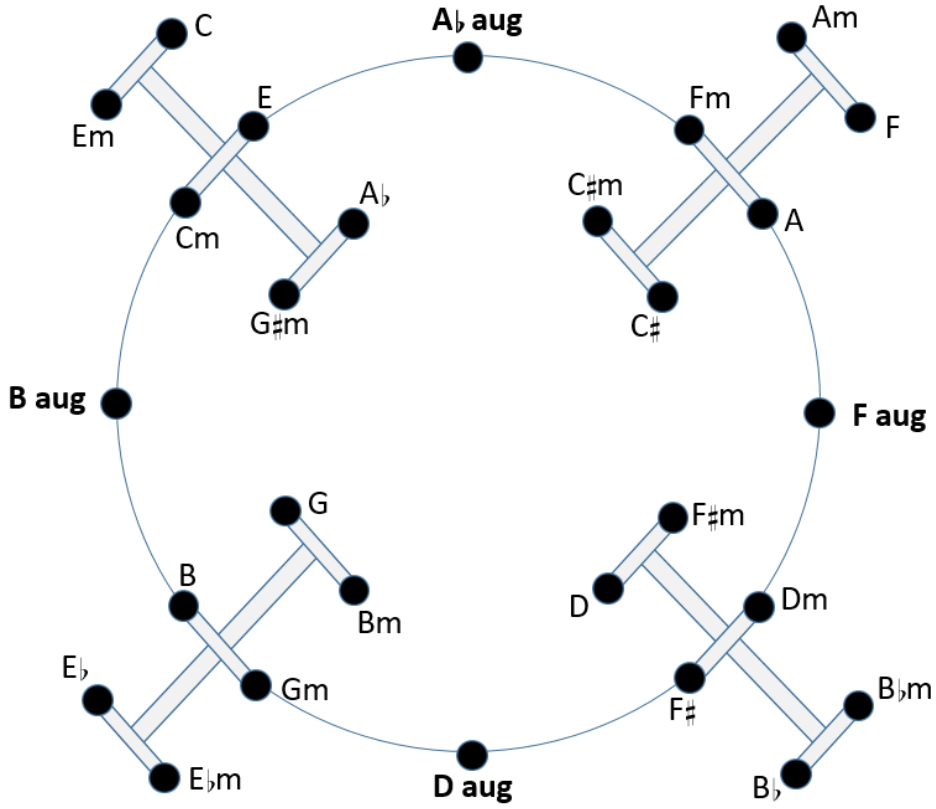


Fig. 7.4. An adapted version of Cube Dance, designed for the current chapter.

Steinbach's invention by omitting some of the lines, which connect chords, and by using the same large dots for all triads. Thus, the arrows, which will connect chords throughout the following analyses will stand out more. They will show the direction of harmonic movement, whereby blue arrows will mostly be used for chord-to-chord progressions on a surface level, and black arrows — for structurally more significant progressions. I see an upwards voice leading in 12-tone pitch space (also called upshifting) as more naturally corresponding to clockwise movement, hence the directions of Douthett's and Steinbach's figure are inverted and consequently Faug and Baug have exchanged positions.

A note about seventh chords

A clarification about my method of interpreting seventh chords in the context of a Weitzmann regions analysis needs to be made here. As has already become evident, in this chapter I am using a transformational model, which is designed for triads only and cannot account for seventh chords in any different way than collapsing them into triads. Kenneth Smith's critique of some of the prominent transformational theorists has pointed out the difficulties encountered by them when trying to integrate triads and seventh chords into a unified model and the inconformity in the ways these can be parsimonious, as already discussed in chapter II.[21] Furthermore, integrating the three Riemannian functions into the neo-Riemannian theoretical framework has caused some discrepancies, but describing these problems goes beyond the purposes of this chapter.[22] For justifying my purely triadic approach in the following analyses it should suffice to claim that interpreting a Gø^7 as an A♯m with an added G (the latter being an extension, which is not accounted for in a basic ***PRL*** triadic chain) is still faithful to the music in the context of a method, which aims to demonstrate that the essential harmonic material in certain pieces consists of augmented and consonant triads only.

[21] Refer to pages 48-50.
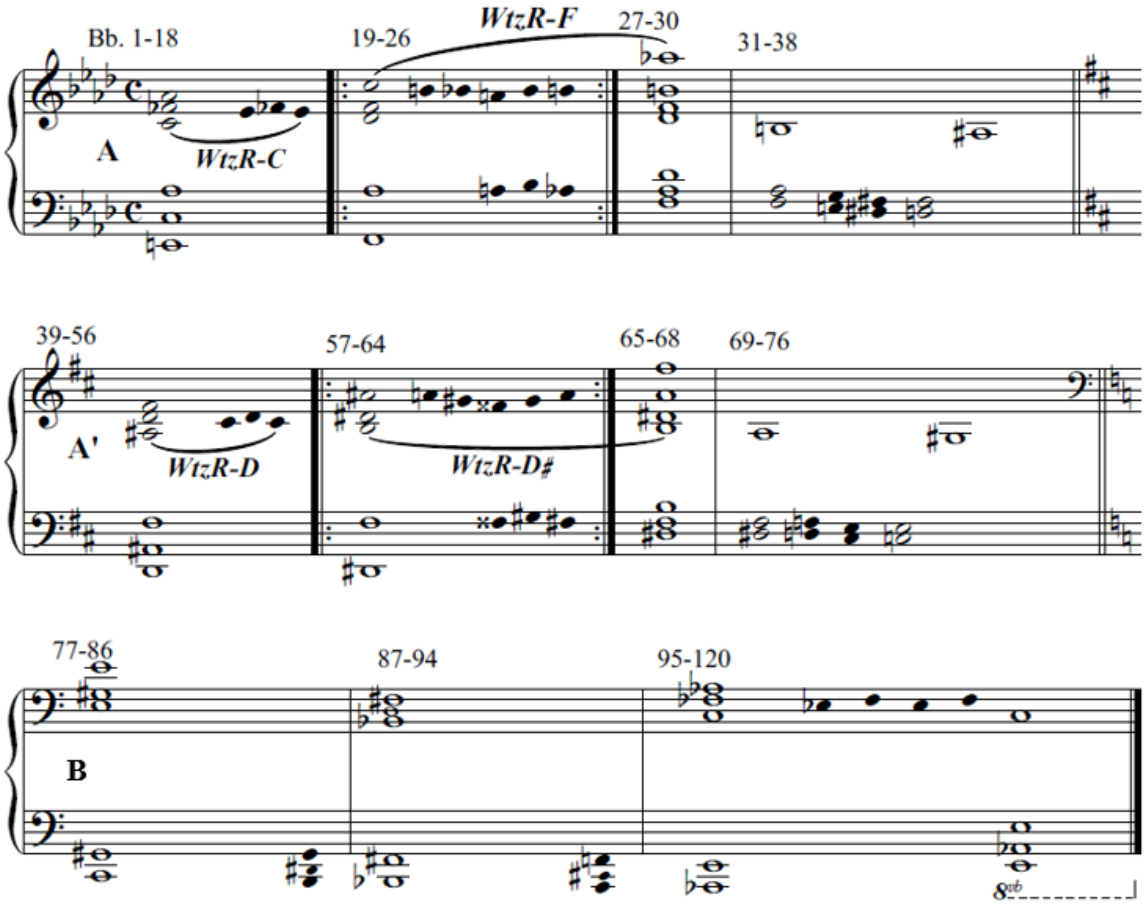
[22] The problem with this is the fact that Riemannian functionality is based on the concept of hierarchic levels in the music, whereas in neo-Riemannian theory chords are understood to be in constant motion, progressions are open-ended and it is hard to fix a function to a chord. For longer discussion on this, with references to the work of David Lewin (1984), Ernő Lendvai (1993), David Clampitt (1998) and Steven Rings (2011) see Kenneth Smith (2014, 23–24).

1. *La lugubre gondola I* (S. 200/1) – The augmented triad on E functioning as a harmonic frame

Many of the harmonic features of this extraordinary piece have been described as ambiguous and open to interpretation in earlier analyses. For example, in his article titled '*Liszt's androgynous harmony*', Zdenek Skoumal interprets the augmented triads as having a tonic and dominant function at the same time and justifies D♭ minor as a tonic chord.[23] In his words, the main augmented chord is an altered dominant rooted on A♭ and it is unfolded down from the E at the beginning, reaching the leading tone C in bar 74 and the root A♭ in 95. The highest point of tonic-dominant ambiguity in D♭ minor is reached from bar 101 onwards, where the left hand notes are E and A♭ exclusively – the third and fifth of the tonic, but also the altered fifth and root of the dominant. This interpretation is certainly logical, and is one valid way in which *La lugubre gondola I* has been analysed tonally. To return to an argument made in the theoretical introduction of this chapter, however, an analysis that shows how augmented triads can function independently of a traditional tonal context would be more sympathetic to Liszt's forward-looking compositional thinking.

Initially, the piece opens with an arpeggiated augmented triad on E and closes with the same chord, if we take into account the final C in the melody and the left-hand tremolo on E-A♭ (see example 7.1). This suggests that the augmented triad in question can be interpreted as a primary sonority. The key

[23] Zdenek Skoumal, "Liszt's Androgynous Harmony", *Music Analysis* 13/1, (1994, 64–67).



Ex. 7.1. Harmonic reduction of *La lugubre gondola I*.

signature, consisting of four flats, does create the expectation that the keys of F minor or A♭ major should be established at some point. The chromatic transposition of the first 38 bars a whole tone lower, however, and the following cancellation of all accidentals in bar 77, destroy these expectations. Liszt deliberately makes any statement of a consonant chord, which might be considered tonic, as obscure as possible. Such is the case in bars 19-20, where there is an ambiguity between F minor and D♭ major, with neither of the two chords being more prominent than the other. This tonal obscurity, combined with the extreme chromaticism of the melody, opens up the opportunity for a transformational analysis of the piece. Another obvious feature of *La lugubre*

gondola I are the parsimonious transformations involving consonant and augmented chords, such as in bars 19-27. These are important to interpret, in order to discover the harmonic logic of the piece beyond the conventional tonal hearing.

Let us continue by listing out all the augmented triads in the piece and evaluating their importance based on their placement and the amount of time they are sounded for. The augmented triad on E opens the piece, and if we consider the D flats as appoggiaturas then the augmented sonority fully dominates for the first 18 bars, with the low E bass note being reiterated no less than nine times. There is an E, but not an F♭, which is suggestive for the D flats – instead of being considered part of clear D♭ minor chords, they can be interpreted as upper neighbour notes of the C. The E flats in bars 9-10, 13-14 and 17 are emphasised rhythmically and are also the longest melodic notes in the first 18 bars, and it can therefore be argued that these are implying a temporal switch from the main augmented sonority to A♭ major. Similarly, in section *A*′ the Daug chord temporarily hints towards F♯ major.

The bass note moves up a semitone to F in bar 19, and the Eaug does not return until it appears in a C-E-A♭ inversion in bar 77, where it is initially only suggested and completed with the melodic E in bar 80. With the registral placement and choice of *tremmolando* for the C and G♯ in the left hand, Liszt has given that dyad a bigger structural weight than any of the melodic pitches in the right-hand part, so that any pitches, which are not part of the Caug harmony are heard as embellishments and the first nine bars of this final section *B* are dominated by that sonority. After some descending semi tonal motion in the bass the same augmented harmony returns in bar 95, although this time it is in the A♭-C-E inversion, and no other chords are used in the remaining 25 final bars of the piece. The original E-A♭-C inversion returns and remains unchanged from

bar 101 onwards, but because inversions do not matter for symmetrical chords as much as for consonant ones, it will be concluded that the Eaug chord with its inversions harmonically dominates the piece for 53 out of 120 bars.

Section *A* of the piece (up to bar 38) concludes with another augmented chord – D-F♯-A♯. The latter is a whole-tone transposition of the main Eaug and plays the same role in section *A*' (bars 39-76), which is a literal transposition of *A*. The Daug is not only the sole harmony for 20 consecutive bars (from 37 to 56), but also returns in a B♭-D-F♯ inversion in section *B* – bars 87-93. The D is actually missing here, but is given in a smaller note head in my reduction, because it should be assumed, after so much of the duration of the piece up to that point has been dominated by the sound of augmented triads. The other two possible augmented triads only briefly appear in the piece, but the way they are placed deserves a mention. The Faug appears in bar 21 as a harmonic goal of the chromatically descending melodic line and after it the harmonic progression is reversed. Similarly, D♯aug appears in bar 59 at the end of the same transposed down descending line. Acknowledging the full dominance of the augmented sonorities throughout section *B*, the two passing chords (again only suggested by the dyads) in bars 86 and 94 should be interpreted as inversions of the above mentioned chords – namely Baug and then Aaug.

Keeping all this in mind, it turns out that there is an augmented triad sound for 85 out of the 120 bars of the piece, which is more than 2/3 of its duration. I would argue that this is more than the use of the tonic chord in a representative piano piece by any of the Viennese masters. In other words, the augmented triad is not only fully emancipated and central to the harmony of *La lugubre gondola I*, but it is also prolonged for large portions of the piece's duration. The next thing to investigate is the way it connects to and relates to the other chords and I will

account for that by using the neo-Riemannian concepts of Weitzmann and Hexatonic regions.

Cube Dance is particularly appropriate for visualising the harmony in this piece. It positions the main augmented triad – E-G♯-C – at the very top. The four Hexatonic regions will be called the Northwest, Northeast, Southwest and Southeast Hexatonic. The essential harmonic movement of bars 1-39 is represented with arrows in figure 7.5, and bar numbers are written on them. The

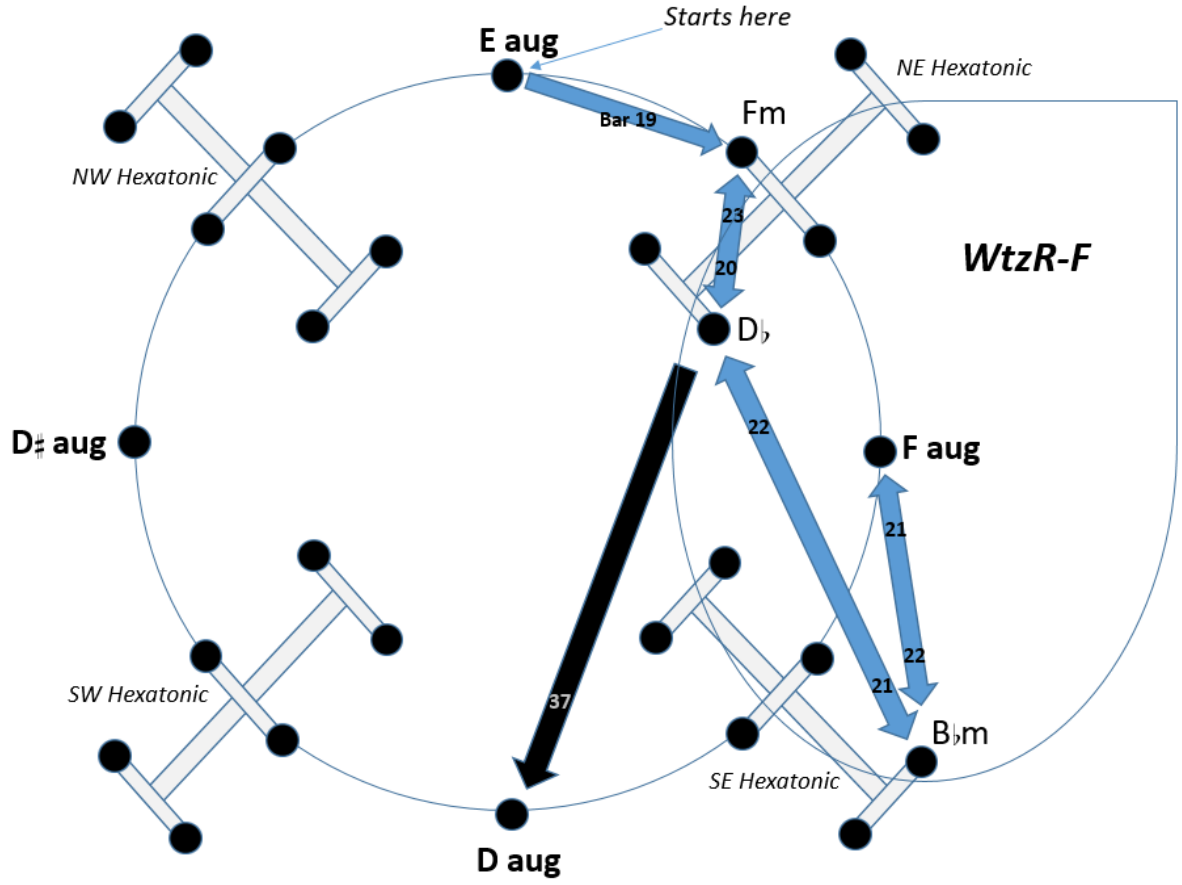


Fig. 7.5. The harmonic movement in bars 1-39 of *La lugubre gondola I*. The transformations of bars 19-22 are represented by the blue arrows, whereas the black arrow indicates the structurally more important transition towards section *B*. The chords in bars 32-37 are not included, because they constitute a less significant detour from the clockwise movement *WtzR-E – WtzR-F – WtzR-D*.

D♭^{maj7} in bars 19-20 creates F minor-D♭ major ambiguity, but both these triads belong to the Northeast Hexatonic. However, the following B♭ minor (with an added seventh) belongs to another Hexatonic region – the Southeast one – but more importantly, all chords in the progression of bars 19-22 are part of the Faug Weitzmann region (enclosed in the teardrop-shaped space and labelled ***WtzR-F***), with the Faug chord being not coincidentally put in the middle of the chromatic progression. Bearing in mind that bars 19-27 are a clearly separated harmonic structural unit, it can be concluded from the observations so far that the piece is organised more around Weitzmann regions than around Hexatonic regions or any other harmonic system.

The chords, which appear briefly in bars 32-37 – Fdim, then E minor, B major and minor – represent a sudden change in direction for the harmonic movement. The upshifting (or moving clockwise on my Cube Dance) from the ***WtzR-E*** to ***WtzR-F*** is followed by the appearance of chords from the D♯aug region – a sudden downshifting, which skips over the initial Eaug region. An identical downshift occurs towards the end of the middle section (*A*′), which is shown on the next diagram. This brief and not very significant detour aside, the Daug chord arrives at bar 37, just before the beginning of section *A*′, and hence the diametrically opposite point on Cube Dance is reached for the middle section of the piece. The black arrow on figure 7.5 represents this structurally significant transformation, which completes the move from ***WtzR-F*** to ***WtzR-D*** and leads towards the repetition of section *A* a whole tone down.

The equivalent smooth chordal transformation in bars 57-65 includes the chords B^{maj7}, B^{7}, G♯m^{7} and most importantly – D♯aug. The consonant triads B major and G♯ minor are derived through single semi tonal displacements from the latter augmented chord and therefore these are members of its Weitzmann

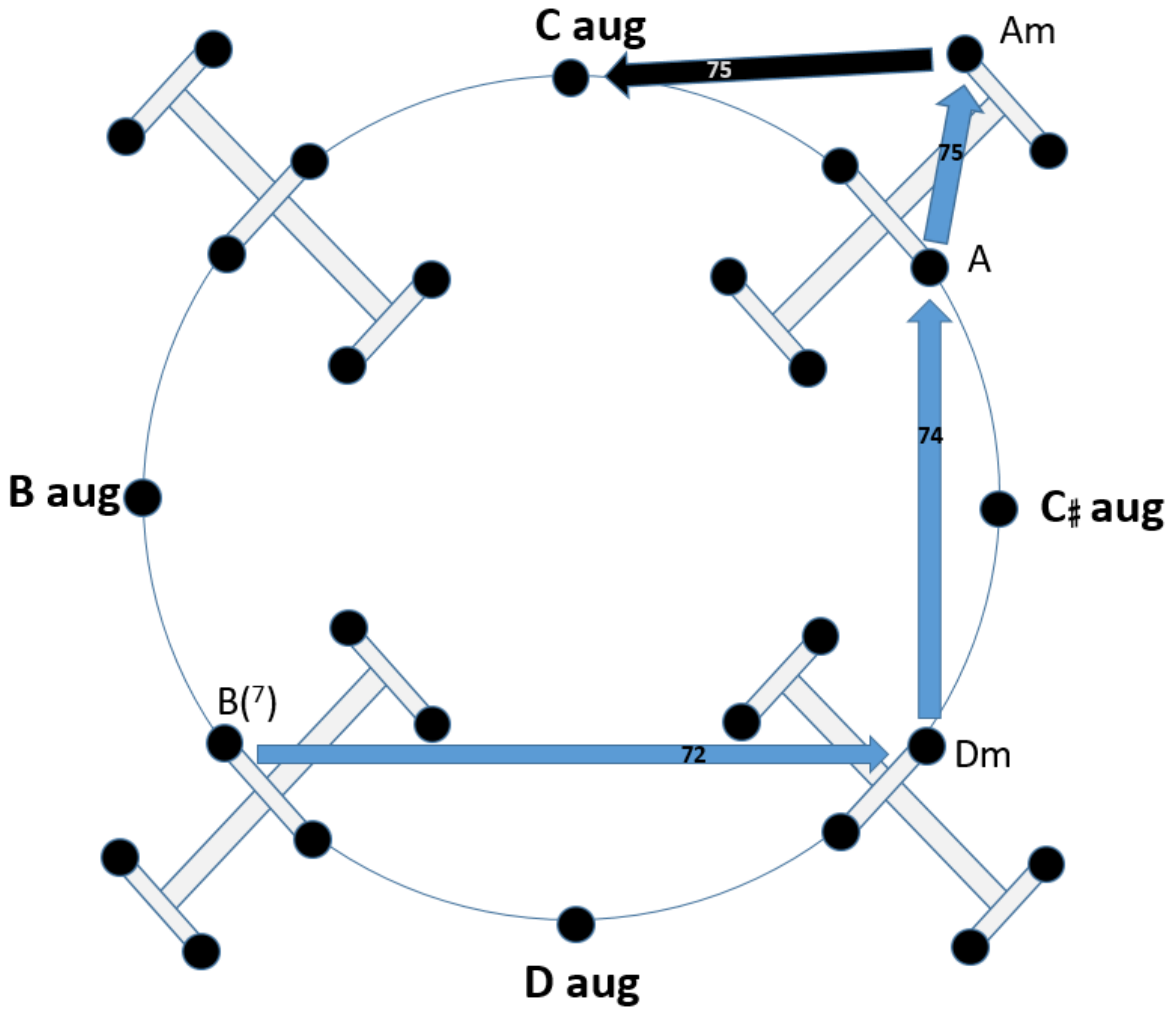


Fig. 7.6. Anti-clockwise (downshifting) harmonic movement in bars 65-76 of *La lugubre gondola I*.

region. In other words – bars 57-68 are composed with chords from the ***WtzR-D♯***. The D minor, A major and minor in bars 69-76 constitute another sudden shift, this time downwards, which enables the goal harmony – Caug – to be approached the longer way, instead of the shorter upward motion (figure 7.6). In similarity to the final transformation on the previous figure, there is a move towards a structurally important augmented triad at the end, and therefore the last arrow is black. In fact, this is the return of the main augmented triad in the piece – C-E-G♯. Section *B* comprises a full anti-clockwise circle on the Cube

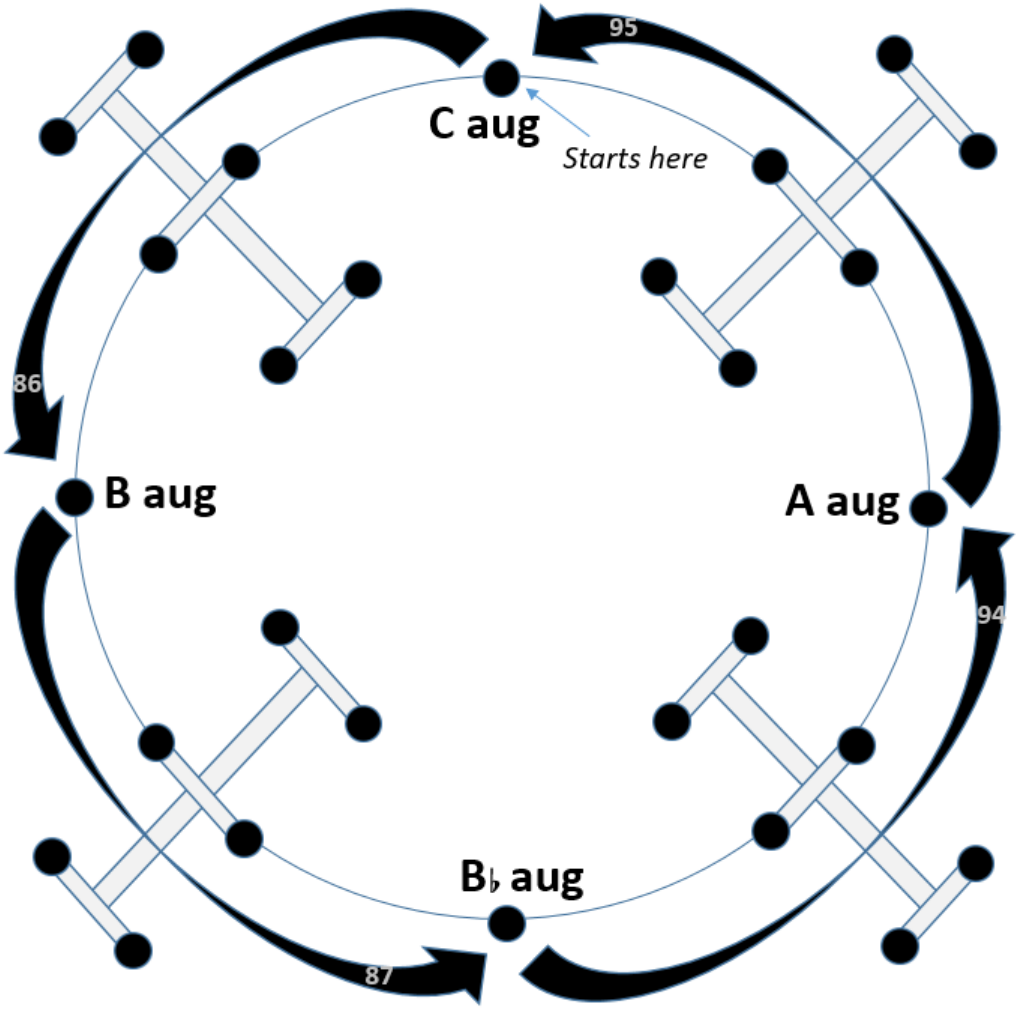


Fig. 7.7. A full circle through the four Weitzmann regions, Section *B* of *La lugubre gondola I*, bb. 77-120.

Dance, starting and ending on Caug (figure 7.7). There are no transitional consonant or any other chords between the four augmented triads, which is similar to the hegemony of the three main consonant triads – tonic, dominant and subdominant – towards the end of a conventionally written piece from the Classical period. Here an important conclusion must be reached. By seeing the augmented triads at the basis of an essentially different new system one can realise that a procedure quite similar to the harmonic procedures in a common-practice ternary form takes place.

Some further elaboration on the above conclusion should ensue. The Caug/Eaug chord undoubtedly dominates the outer sections of the form – *A* and *B*. The middle section (*A*′), however, is composed around the Daug, which is positioned diametrically opposite the Caug in the system, which connects the Hexatonic and Weitzmann regions of 12-tone chromatic pitch space. I would go further still, by likening the Caug – Daug opposition to the tonic-dominant polarity of common practice tonality. On a smaller scale the chromatic fluctuations around the main augmented chord in bars 19-27 can be likened to the harmonic excursions within the tonic region of a Classical sonata form.

The above analysis enables us to hear *La lugubre gondola I* in a new way. The way the two main augmented triads in the piece are juxtaposed can be perceived as fulfilling a role similar to the modulation from the tonic to the dominant and back in a traditional tonal piece. It turns out that Liszt managed to give the augmented triad a new meaning not only by swapping the roles of consonant and dissonant chords, but also by creating a new system of hierarchy between chords – a new one, but inspired by and resembling the traditional system.[24]

[24] After analysing this piece with a more Schenkerian-like reductive methodology, Howard Cinnamon reaches a very similar conclusion, speaking of the *Faust* symphony and the *gondola*: 'Each piece sets up its own hierarchic universe of tonal relationships that is, in some ways, an alternative to the conventional tonal system and employs that system of relationships consistently. See Howard Cinnamon, "Tonic Arpeggiation and Successive Equal Third Relations as Elements of Tonal Evolution in the Music of Franz Liszt", *Music Theory Spectrum* 8 (1986, 24).

2. *R. W. – Venezia* (S. 201) – A sectional level juxtaposition of augmented and consonant triads
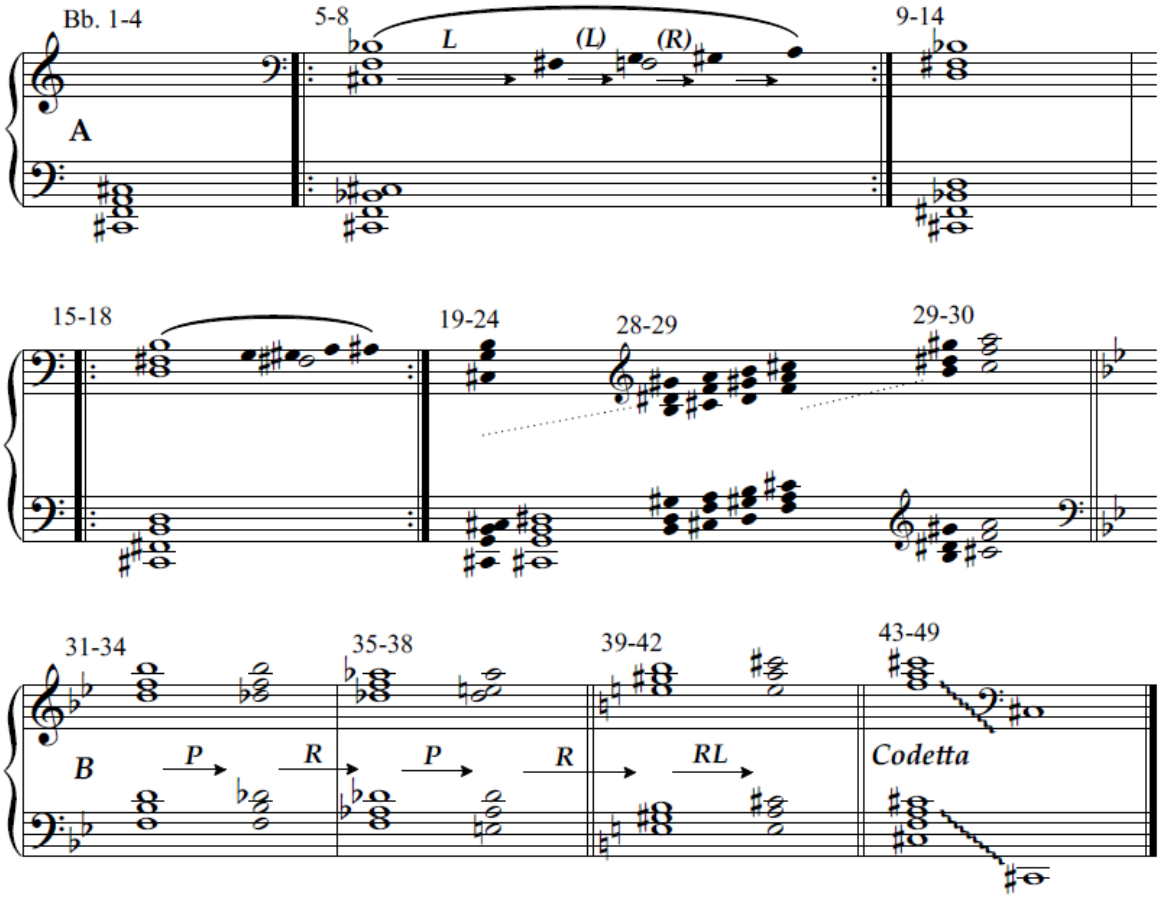
In similarity to the previous work discussed, *R. W. – Venezia* opens and closes with the same augmented triad, only this time on a C♯. The piece is clearly separated into two sections, *A* (bars 1-30) and *B* (31-42), with the final 7 bars (43-49) able to be seen as a codetta. Section *A* is clearly dominated by augmented triads (most importantly the one on C♯), whereas section *B* contains consonant triads exclusively. The return of the C♯aug in the codetta is significant, as it frames the form and concludes the piece in the same way it has opened, with an arpeggiated augmented triad.

Stefanie Dickinson's study on late Liszt takes tonal voice leading as an analytical basis and identifies a tonal prototype even for his most unconventionally written pieces.[25] For *R. W. – Venezia* she interprets B♭ major as the tonic, reinforced mainly by the clear *V aug – I* cadence in the middle. The author admits, however, that it is hard to hear the C♯aug as an augmented dominant to B♭ major, considering that it never appears in root position in the important moments.[26] It is arguably possible to bypass the issue confronted by Dickinson by applying neo-Riemannian theory to the piece and putting the C♯aug chord at the center of the work's harmonic syntax.

An arpeggiated form of this augmented triad constitutes the main motif, which opens the piece in bare unison octaves in the first two bars. A semi tonal

[25] Stefanie Dickinson, *Tonal Voice Leading as an Analytic Basis for Liszt's Late Experimental Works* (PhD diss., University of Rochester, 2002), see the analysis of *R. W. – Venezia* on pp. 164-171.
[26] Ibid, p. 170.

displacement of A with B♭ transforms it to B♭ minor in bar 5. This A to B♭ melodic step turns out to be significant, as it is used several times throughout section *A* (including the transposed form A♯ to B). It also connects it to section *B*, and at the end it is inverted (B♭ to A) in order to bring the harmony back to where it started from. On a smaller scale, the harmony below the chromatically ascending line of bars 5-6 includes two of the basic neo-Riemannian transformations.



Ex. 7.2. Harmonic reduction of *R. W. – Venezia*.

Firstly, B♭ minor slides to F♯ major through an ***L*** transformation; then another ***L*** returns the B♭m, this time with an added sixth (or an inversion of the half diminished chord on G). A *Relative* (***R***) transformation then moves B♭ minor to C♯ major and at the end of the bar the sliding G♯ to A results in the return of the

initial augmented triad on C♯. The same sequence of events repeats in the following two bars before the augmented triad itself slides a semitone up to D-F♯-B♭. This is an upshift in voice leading space and a move to the neighbour Weitzmann region – from ***WtzR-C♯*** to ***WtzR-D***. The progression is shown on the *Tonnetz* of figure 7.8.

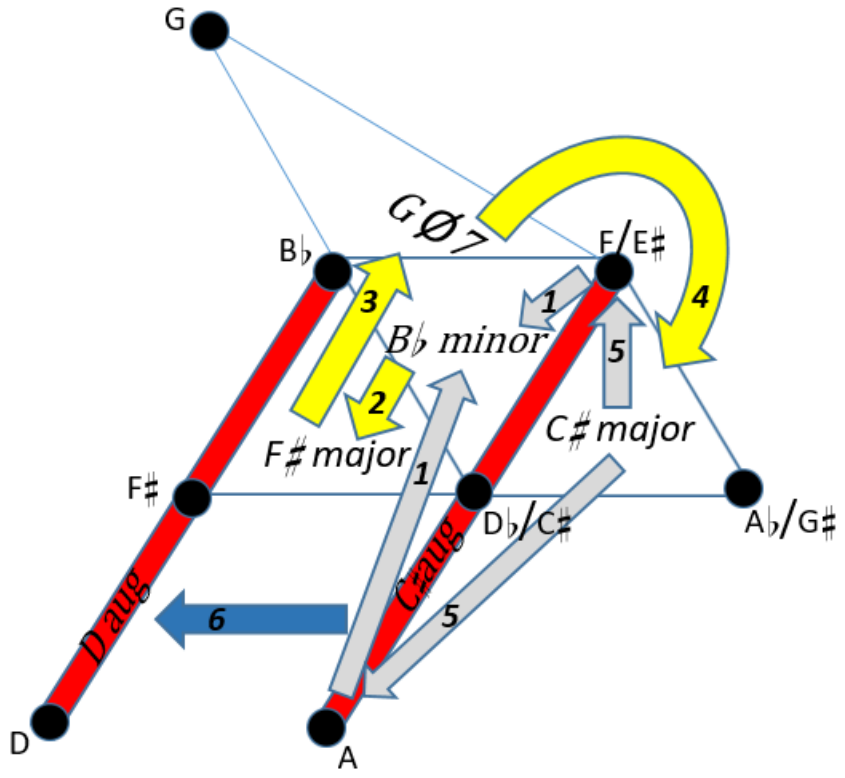


Fig. 7.8. The harmonic progression of bars 4-9 of *R. W. – Venezia*. There is a circular movement starting from the C♯aug, which is followed by a move to the neighbouring augmented triad on D (dark blue arrow) after the second circle.

The pedal tone C♯ does not slide up to follow the change of harmony above it and persists for most of the duration of section *A*. As a result of that some quasi-bitonal sonorities are created by the mixture of the chromatically ascending harmonies and the low C♯, the latter always returning at the bottom of the arpeggiated figures. The 'misspelled' F♯ major clashes against the augmented triad on D in bars 9-10. It is no coincidence that a diminished fourth

(F♯-B♭) is notated for both hands – this interval emphasises the augmented harmony and denies the existence of a consonant chord in the left hand – C♯ is to be heard as a chromatic deviation from the Daug. The ascending semi tonal sliding of the highest voice continues in bar 15, reaching B and resolving the preceding augmented triad into B minor. The progression of bars 5-8 is repeated in 15-18 a semitone up, this time including the chords B minor, G major, G♯ø^7, D major and the augmented triad on D.

A new sonority appears in bar 19 – the triad C♯-G-B. The F♯ and A♯ from the previous bar logically continue the movement up by semi tone, but they are not followed by the D. Instead Liszt keeps the C♯, but omits the D♯, which is expected, in order for a new augmented triad to be formed. The latter is formed with the D♯ appearing at the top of the arpeggiated figure two bars later. Thus, another ambiguous 4-tone sonority is built melodically – namely the chord C♯-G-B-D♯, which is a segment of the whole-tone scale. In this instance, Liszt has utilised the tonal instability and indeterminacy of the whole-tone scale's sound. Although the augmented triad sound is not as clear this time, it becomes apparent that a further upshift in voice leading space has taken place for the ***WtzR-G*** to be reached in bars 22-24.

The main motif is cancelled in bar 24, but the ascending motion continues with a long sequence of chords, most of them being semi-tonally sliding augmented triads. The last three bars in this long sequence are more curious, because there is an alternation between the augmented triad on C♯ (in different inversions) and G♯ minor in them. The central augmented triad of the piece appears once in every 4-chord group in bars 24-27, and then with the addition of a minor chord on every first and third beat in bars 28-29. In other words, it seems to be emerging out of the chromatic sequence and becoming ever more audible towards the culmination of the phrase, at bar 30, where it returns in its

original form with C♯ at the bottom.[27] Using Cube Dance, it would not be practical to include every chord in a sequence which completes more than three full circles, so I have only labelled G♯m (being the odd-one-out) as a transitional chord in the upshift from Gaug to C♯aug on figure 7.9.

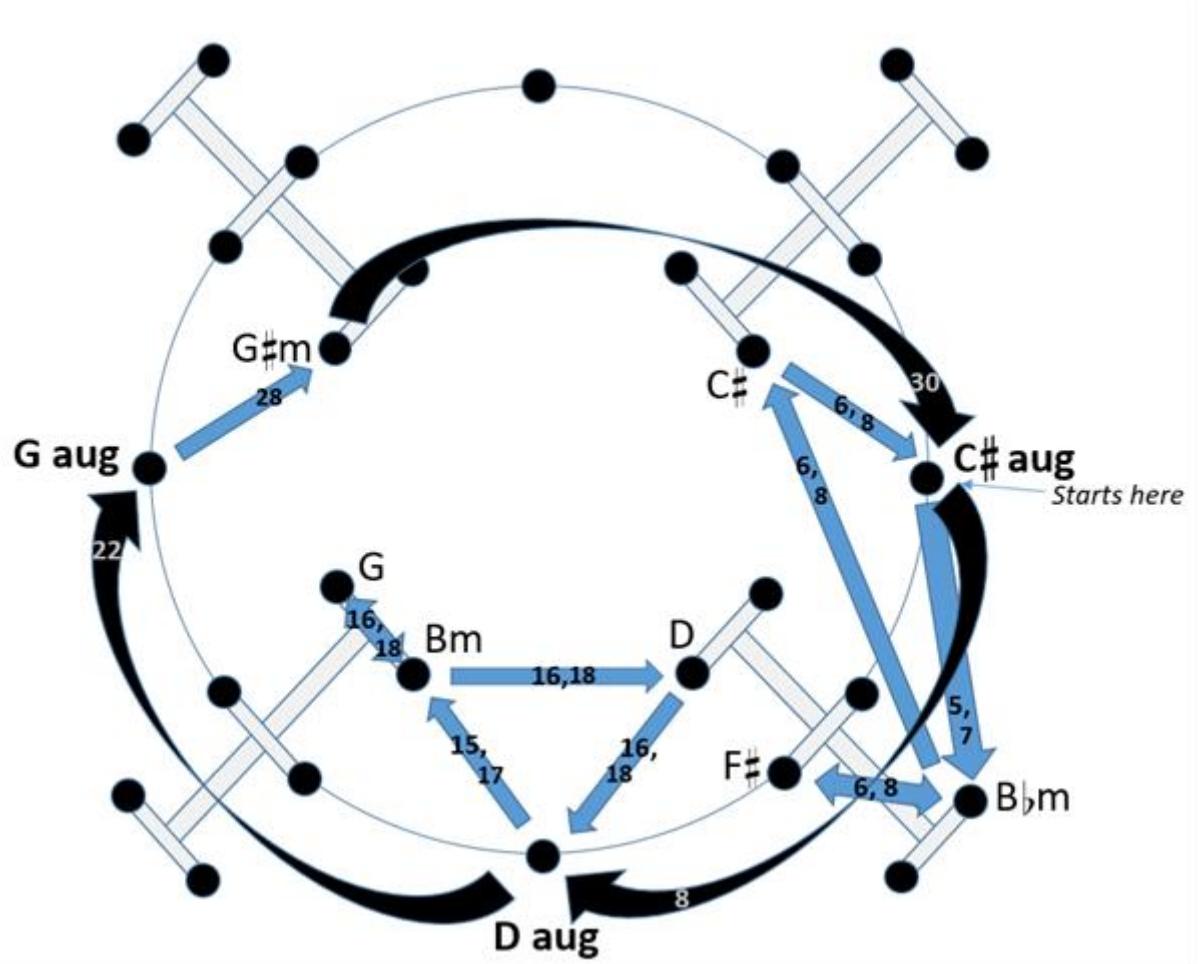


Fig. 7.9. Summary of the harmonic movement throughout section *A* of *R. W. – Venezia*. The black arrows represent the movements to an upper Weitzmann region. The chromatic ascending of bars 24-30 is reduced to Gaug – G♯ minor – C♯aug.

The latter chord resolves into B♭ major in bar 31, being heard retrospectively as an augmented dominant. The appearance of a key signature

[27] Note that some of the chords in this sequence have been omitted in the harmonic reduction, but the most important chord in it – C♯aug – is repeatedly shown, alongside with the recurring G♯ minor around it.

at this point suggests that the following section will be more tonally conceived. A simple four-note motif is repeated triumphantly for three bars, before the harmony undergoes a ***P*** and then an ***R*** transformation, in order to reach D♭ major through B♭ minor. The same fanfare is repeated in D♭ major for another three

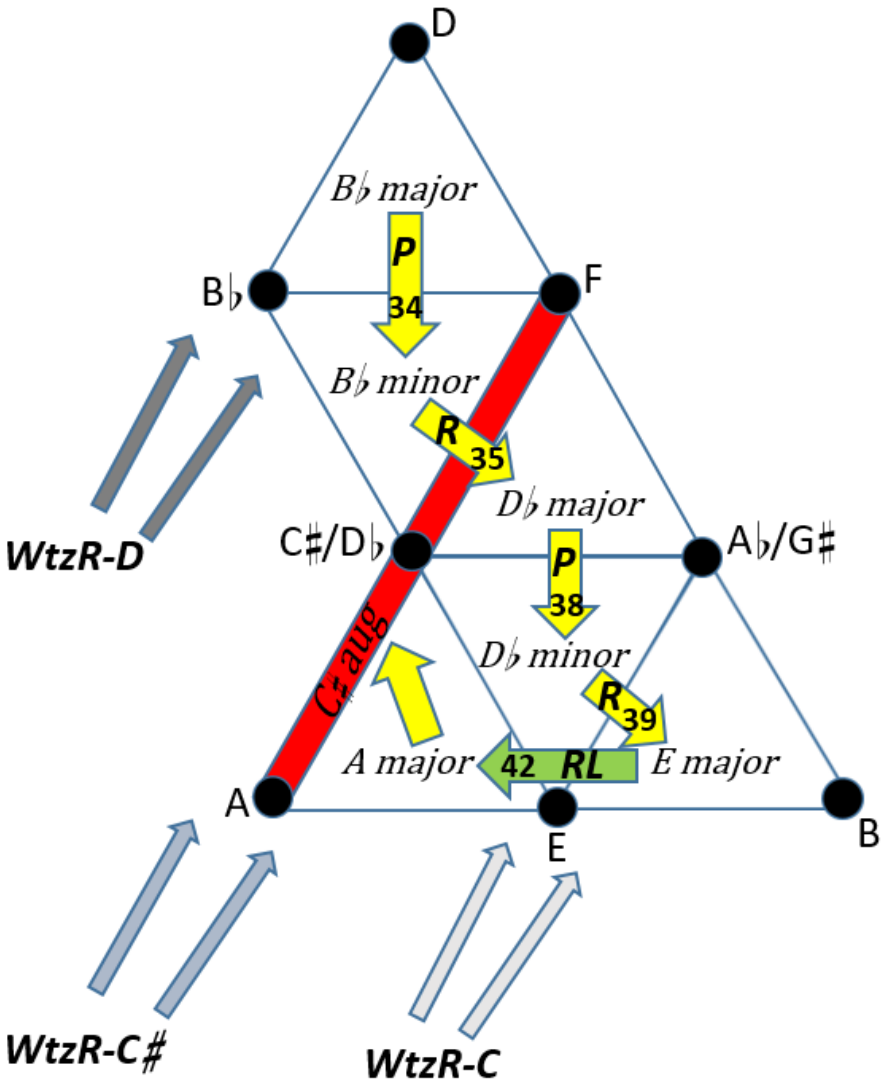


Fig. 7.10. Harmonic movement within section *B* and codetta of *R. W. – Venezia* (bars 31-49). The *P-R* chain is followed by a diatonic movement to the left (dominant-to-tonic = *RL*) and a transformation of the last consonant triad into the main augmented triad on C♯.

bars and then is followed by another pair of transformations, again ***P+R***, to reach E major in bar 39, where also the B♭ key signature is erased. This time the major

chord is not subjected to a ***P*** transformation, but it is followed by A major, in the manner of a functional dominant-tonic relation, which in a neo-Riemannian context can be explained as a combination of the ***R*** and ***L*** transformations. The highest pitch E slides up one last time to form the initially heard augmented triad on C♯. As a contrast to section *A*, a chain of the basic neo-Riemannian transformations between consonant triads prevails in *B*. There are no augmented triads and the main C♯aug only returns in the codetta (bar 43). Therefore, the *Tonnetz* with its neat presentation of consonant triads is used to visualise the chord progression from bar 31 onwards (see figure 7.10). The ***P-R*** chain between B♭ major and E major is followed by a horizontal (diatonic) movement from E major to A major. Finally, the A major triangle 'dissolves' into the Southwest-Northeast blue stripe of the main augmented triad.

The continuous upshift during section *A* is now balanced with a downshift in bars 31-39. The E to A major progression then again reverses direction and a final move from ***WtzR-C*** to the referential ***WtzR-C♯*** takes place. The descending line in the codetta includes B♭, which creates an Faug – B♭m ambiguity, but then the low C sharps, which started the piece, conclude it, demonstrating the inability of the music to escape the tragic and sombre mood which inspired it. The three Weitzmann regions involved from bar 31 onwards are pointed at on figure 7.10. It can be observed that the triangles of B♭ minor, D♭ major and A major share an edge with the C♯aug stripe, therefore those consonant triads belong to ***WtzR-C♯***. Similarly, E major and D♭ minor belong to ***WtzR-C***, whereas the initial B♭ major belongs to ***WtzR-D***.

To summarise, *R. W. – Venezia* acts as another example of Liszt using an augmented triad as the primary sonority of a piece, opening and closing with it, but also contrasting it against consonant triads on a larger scale in the form. The parsimonious transformations in section *B* reinforce the impression that a free

exploration of 12-tone pitch space takes place beyond the confines of diatonicism and common-practice tonality. Moreover, the prominence of the augmented triads in section *A* makes Weitzmann regions an appropriate analytical tool for the piece, with all the chords in it being heard in the context of the upshifts and downshifts from one region to another and back to the referential ***WtzR-C♯.***
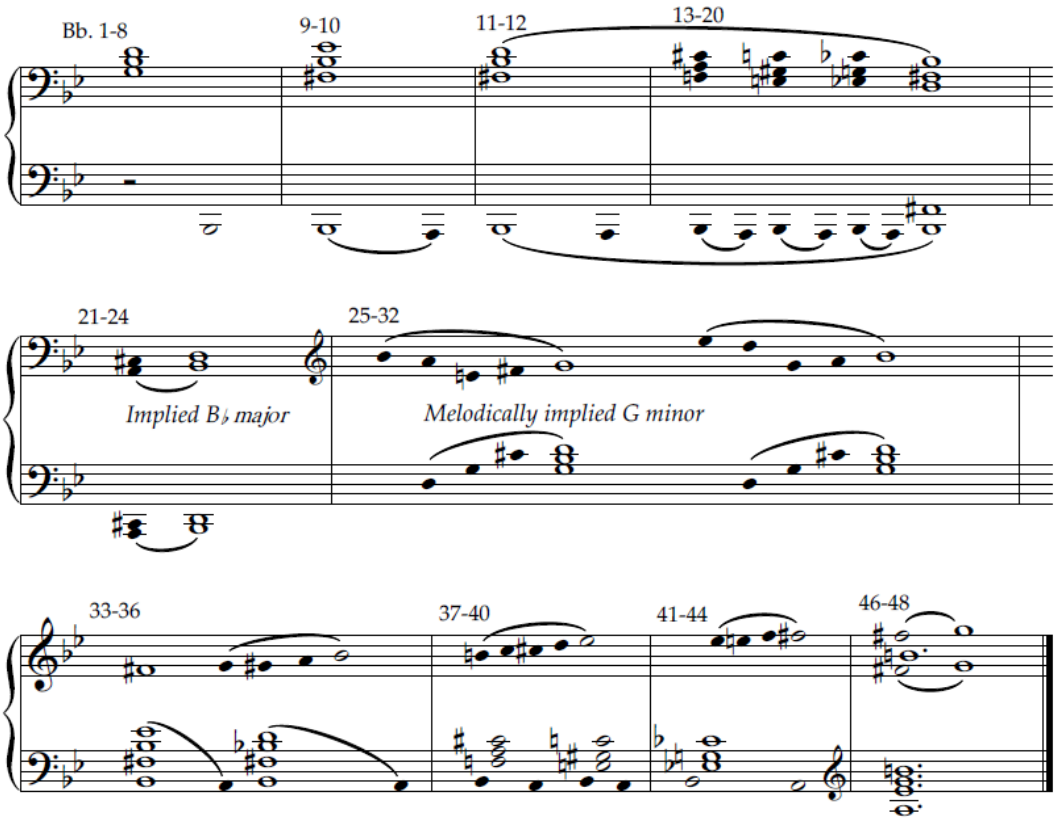
3. *Nuages gris* (S. 199) – A subtle balance between G minor tonality and the structural use of augmented triads

This fascinating short piece has been attracting analytical attention for decades, often being interpreted as opening the gates towards the experimental music of the twentieth century, but at the same time demonstrating Liszt's skilfulness in the use of so-called 'implicit tonality'.[28]

Before starting an analysis of the work focused around Weitzmann regions, it is necessary to outline more briefly its tonal features. In James Baker's words, 'Liszt approaches atonality by diluting the fundamental structure, but the many indications of tonality at levels nearer the surface prevent total dissolution of tonal forces, probably even at the level of overall coherence'.[29] This author's neo-Schenkerian perspective motivates him to seek a structurally melodic descent supported by the bass and to relate all harmonies back to the referential

[28] The term 'implicit tonality' is borrowed from James Baker's article on late Liszt: James Baker, "The Limits of Tonality in the Late Music of Franz Liszt", *Journal of Music Theory* 34/2, (1990, 145-173). See pp. 152-155 for an analysis of *Nuages gris*.
[29] Ibid, p. 155.

G minor. There is no direct evidence for all that in *Nuages gris,* however, but the tonal inclinations of the chords beyond the confines of the piece need to be considered. For example, in regards to the final chords Baker claims that 'one may infer a resolution of the bass A♮ either to B♭ or to G♮'.[30] On the contrary, however, it is arguably more objective to interpret harmony not for what it implies, but for what it actually is, and the following analysis will allow for an alternative interpretation of the piece's unexpected ending.



Ex. 7.3. Harmonic reduction of *Nuages gris*.

First of all, the main motif, which opens the piece, clearly arpeggiates the G minor chord with its final three notes, and the C♯ before that should be interpreted as an appoggiatura. Furthermore, the implied key is G minor. The

[30] Ibid, p. 154.

sense of a G minor tonality, however, soon becomes obscured with the chromatically descending chords of bars 11-20, which are juxtaposed against the B♭ and A *tremmolando* octaves, creating different kinds of dissonant tetrads with each augmented triad (see ex. 7.3). Bars 25-32 are the most diatonic, in essence. The main motif is played in counterpoint against two gestures which contain pitches from the G minor melodic scale only and reaffirm that key further.

It is hard to say what keys are implied (if any at all) by the extreme chromaticism and dissonances of bars 33-44, but the way in which the piece is concluded melodically, with an F♯ resolving to G, is reminiscent of established tonal procedures. In a nutshell – the implicit tonality of G minor is used in *Nuages gris*, but the harmony of the piece is not constrained to that. Other, more dissonant, sonorities are given equal, if not even greater structural weight and importance. The following neo-Riemannian reading of the piece aims to reveal these and evaluate their importance.

The opening G minor, the misspelled E♭ minor in bars 9-10, and the B♭aug in 11-12 all belong to the same Weitzmann region – ***WtzR-B♭*** or ***WtzR-D***. Being in this region for the first 12 out of the 48 bars of the short piece creates the expectation that it will be the harmonic center. The semi tonal descending sliding of the B♭aug in bars 13-20 is a full anti-clockwise circle on Cube Dance (identical to the one in section *B* of *La lugubre gondola I*) and returns the same augmented triad. The harmonic reduction of the piece includes all notes in the left hand, although many are not considered part of the harmony. As already shown earlier in this chapter, augmented triads have been important for Liszt from an early stage of his compositional career and most of the time have appeared as clear harmonic entities, without extra pitches added to them. Therefore, I prefer to say that I do not hear different kinds of tetrads resulting from the overall pitch

content of bars 13-20, but only a circle around the four augmented triads, starting and ending on the so far central B♭aug.

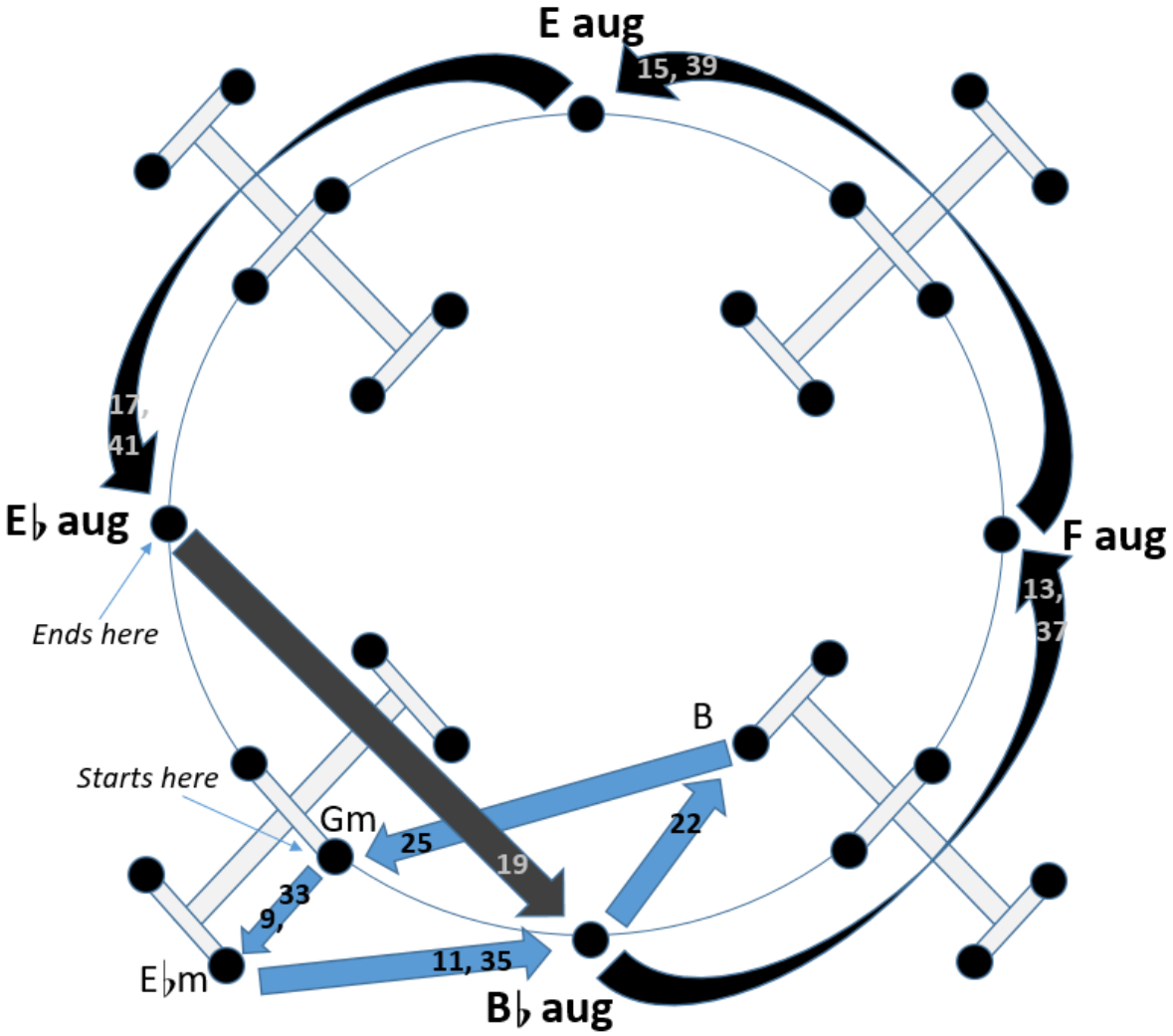


Fig. 7.11. The harmonic movement in *Nuages gris*. Curved arrows indicate the movements between Weitzmann regions, which take place twice, whereas the E♭aug to B♭aug movement only takes place in bars 18-19.

Although there are no real chords in bars 21-32, it can be claimed with confidence that the implied harmonies are B♭ major and G minor, which are both part of ***WtzR-B♭***. I have sought to present the simplest possible reduction of this

passage and for the fine counterpoint in G minor assumed that all the melodic notes before the G of bar 28 and B♭ of bar 32 are appoggiaturas to them.

The sequence of chords and bass line from bars 9-20 is repeated in 33-42. It is juxtaposed against an ascending chromatic scale moving one octave up from F♯. In this elaborated version of the sequence there are three fully independent layers and similarly to its first appearance I prefer to only include the descending augmented triads into my harmonic labelling in example 7.3 and in my neo-Riemannian analysis. Hence, another anticlockwise circle in 12-tone space is executed. More importantly, the circle is not completed this time. The descending line of augmented triads stops on E♭aug in bar 42 and the latter chord is reaffirmed in the final three bars. The chromatic ascending movement finishes not so surprisingly on G (the destination point of the main motive), but the final E♭aug with an added A at the bottom is a movement away from the seemingly more important F♯aug and G minor. The E♭, appearing initially as part of the E♭ minor triad, eventually pulls the harmony towards itself, making it progress away from ***WtzR-B♭***. The Cube Dance diagram of figure 7.11 shows the anticlockwise or downshifting movement across the piece, which stops on ***WtzR-E♭*** just before completing two full circles across the four Weitzmann regions.[31]

In comparison to the previously analysed two pieces, augmented triads are not especially prominent in *Nuages gris*. The implicit tonality here lies in conflict with the extreme chromaticism and there is an alternation between relatively diatonic statements of G minor and the descending sequences of augmented triads. The Weitzmann regions analysis leads to the conclusion that

[31] Lawrence Kramer has offered a thought-provoking analysis of this piece, describing its ending thus: 'Liszt's atonal resolution makes G, the ostensible tonic, the climactic dissonant tone – and fills out the chord as a whole-tone collection, a non-harmonic plenitude.' Then he concludes that 'Liszt disguises a beautifully subversive construction as a sample of coloristic harmony.' See Lawrence Kramer, "The Mirror of Tonality: Transitional Features of Nineteenth-Century Harmony", *19th-Century Music* 4/3 (1981, 206).

overall there is an upshift from ***WtzR-B♭/D*** to ***WtzR-E♭***, which makes the piece open-ended or 'progressive' – producing an analogous effect to progressive tonality. However, the tonal interpretation suggests that there is the tonic G minor chord, established at the beginning and reaffirmed at the end, although the latter event happens only melodically, without the necessary harmonic support. These two contrasting ways of analysing *Nuages gris* lead to two dichotomous ways of understanding it – either as manifesting a total chromatic system free of any diatonic framework or else as an example of late nineteenth-century implicit tonality. But is the choice really binary?

In my view, sympathising with Baker and ‚hearing' the G minor tonality as the only structural basis of the piece cannot be achieved without whittling away or completely ignoring the importance of the augmented triads. As I aimed to demonstrate, the descending passage of bars 11-20 does not solely consist of passing harmonies, but actually opens and closes with the same B♭aug. It sounds as if the latter chord is the harmonic goal, and this interpretation is supported by the fact that no explicit statement of the ‚tonic' G minor chord ensues in the next phrase (bars 21-24).

Whilst bars 25-32, with their stronger emphasis on what can be seen to be more traditional harmonic roles, are the strongest argument in support of the implicit tonality hypothesis, what follows after that immediately compromises what has just been established. Baker deserves credit for claiming that the B natural in the final chord might be interpreted as the Picardy third of G minor[32], but in reality there is a clear statement of the E♭aug chord, combined with a bass A, which is a member of its whole-tone collection.

[32] James Baker, "The Limits of Tonality in the Late Music of Franz Liszt", p. 154.

As has already been conceded, augmented triads are not the only driving force for the harmony of *Nuages gris*, and I do not intend to promulgate my own analysis on the work as being more revealing or more practically useful than someone else's. Instead, I would favor the consideration of multiple analytical perspectives for such transitional late Romantic compositions. As became apparent in the latter case study, no single analytical method can do full justice to the piece, be it the traditional tonal methods (Schenkerian, Roman numeral or Functional analysis), pitch-class set analysis or, for that matter, neo-Riemannian theory. A more critical consideration of analytical results and a willingness to use multiple or hybrid methods for pieces with complex and less systematically defined harmonic syntaxes, would therefore arguably be the most beneficial method of analysis.

4. Hungarian Rhapsody no. 17 (S. 244/17) – A major-minor triadic structure, derived from a single augmented triad

Unlike most of the earlier Hungarian rhapsodies, many of which have been considered emblematic for Liszt's piano writing, number 17 is neglected in both performance and analysis. Even the wave of excitement among analysts from the 1950s onwards for Liszt's harmonic experiments in his late piano music has for some reason bypassed this no less exciting piece.[33] The only considerable

[33] I am referring to the already discussed studies of Forte, Baker, Todd, Dickinson and others, which either not mention the 17th Hungarian rhapsody at all, or only refer to it in passing. Even studies, which concentrate on the 'Hungarian' roots of Liszt's modernity, such as Lajos Bárdos' article from 1975, do not pursue any analysis of the piece.

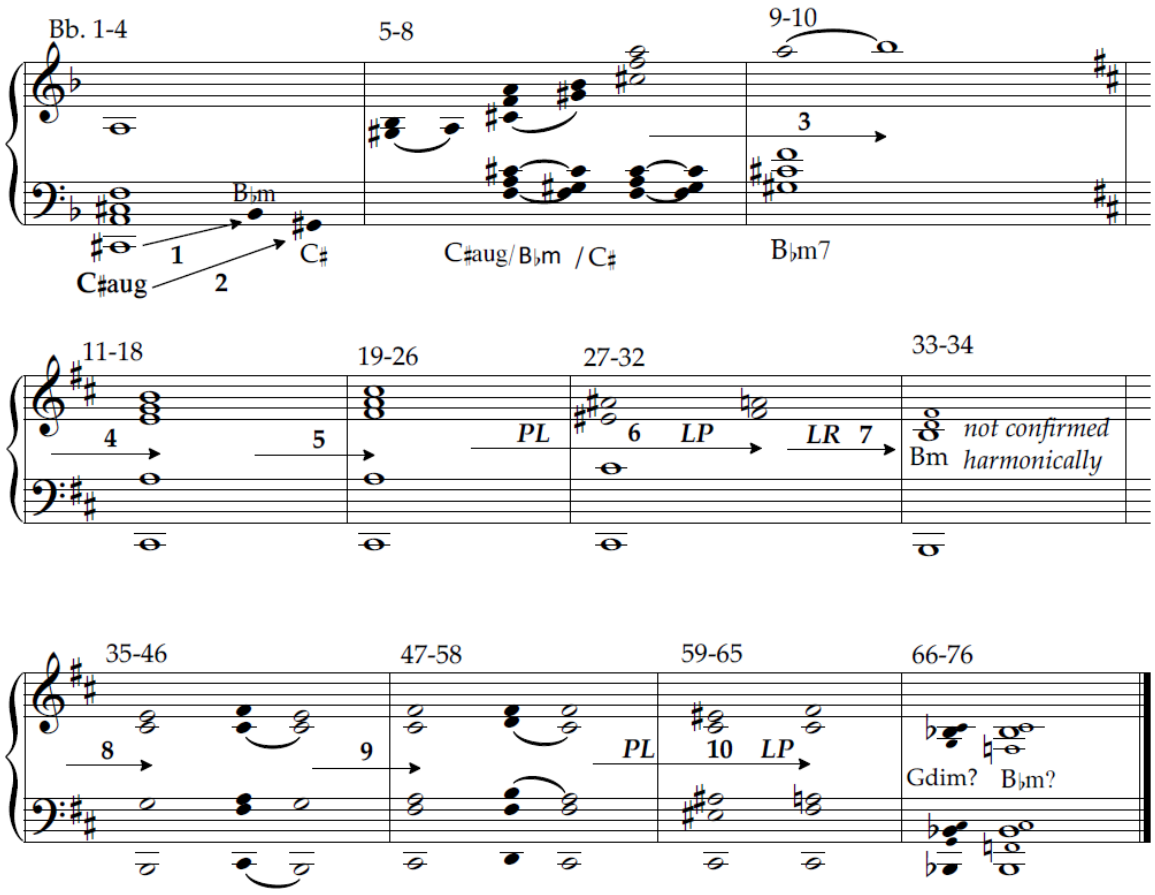
essay on it which I have identified is Shay Loya's article '*The Mystery of the Seventeenth Hungarian Rhapsody*'.[34] In his own words, this piece has not become part of the narrative about 'Liszt the prophet of the twentieth century' because of its 'mostly euphonious harmony and the too earthly genre of a 'Hungarian Rhapsody''.[35] Nevertheless, some important distinctions are made between the earlier 15 rhapsodies and no. 17 – the textural richness and virtuosic piano writing is substituted for a 'new, concise piano style, the content of which is frequently contained within a single voice-part'.[36] Also, the formal proportions have changed dramatically – the late piece is a mere 76 bars long, containing only a 10-bar *Lento* introduction, a 24-bar *Allegretto*, which uses up all thematic material, and is then subjected to some development and an unexpectedly premature ending within a 42-bar *Più animato*.

It is relevant to the purposes of the current study to summarise what Loya says in regards to the harmonic language of the 17th Hungarian rhapsody. In his words, the piece 'falls into the no man's land of tonal theory' by containing to a large extent familiar (and mostly consonant) sonorities on the surface, while at the same time it is very difficult to determine if it is written in a particular key, because 'the most basic thematic and tonal processes are fractured and distorted'.[37] Loya describes the ways in which cadencing and tonal closure are obscured, but also points out the keys, which are hinted at throughout the rhapsody – namely D minor/major, B♭ minor/major, F♯ minor/major and their enharmonic equivalences. These belong to a single Hexatonic cycle and after some investigation of the possibilities for a background harmonic structure the following conclusion is reached: 'surface diatonic progressions prolong a

[34] Shay Loya, "The Mystery of the Seventeenth Hungarian Rhapsody", *Quaderni* (2015, 107-146).
[35] Ibid, p. 107.
[36] Zoltán Gárdonyi and István Szelényi, *Franz Liszt. Ungarische Rhapsodien Nos. X-XIX. Neue Liszt Ausgabe I/4* (Budapest, 1973), quoted in Loya, "The Mystery", p. 108.
[37] Loya, "The Mystery", p. 110.

'Hexatonic background', in a reversal of Liszt's older practice (the normative Romantic practice) of containing local chromatic space within a larger diatonic background.'[38]

Loya's neo-Riemannian perspective on the piece is revealing, indeed, especially in combination with his tonal and prolongational graphs. This comes close to the Hybrid approach to harmony I have developed, which is the basis of Part I of this study. However, I would like to offer an alternative neo-Riemannian reading of this peculiar rhapsody and claim that harmony in it is organised



Ex. 7.4. Harmonic reduction of Hungarian Rhapsody no. 17.

[38] Ibid, p. 134.

around the Weitzmann region of C♯aug, which in my view is the basic building block.

First of all, the piece clearly opens with the augmented chord on C♯ in the first four bars and two of the consonant triads from its Weitzmann region – A♯/B♭ minor and C♯ major (both 'misspelled') are only hinted at through neighbor-note motion in semiquavers. Therefore, I consider that augmented chord to be the sole harmonic basis of the opening and the neighbor tones B♭ and G♯ are subsidiary to it in my harmonic reduction (example 7.4).

Moving on from there, the scalar passage in bars 5-8, which is based on the Hungarian *kalindra* scale (harmonic minor with a raised scale degree $\hat{4}$) suggests both C♯aug and B♭m^7 in the way it unfolds, and as confirmed by the chord accompaniment. Liszt plays with tonal centricity, exploiting particular intervallic properties of this scale, and thus suggests more than one controlling harmony. Also, it is worth noting that the double neighbor note decoration of the initial augmented triad is reversed in bars 5-10, whereby B♭ and G♯ are turned into restive resolutions of A. In short, the piece opens on C♯aug, progresses through a harmonically ambiguous scalar passage and the introduction closes on a B♭m^7 – a seventh chord in maximally close proximity to the opening augmented triad, which includes in itself two triads from the Weitzmann region of C♯aug (these are B♭m and C♯ major; see fig. 7.12 – steps 1-3, which show the oscillations between A, G♯ and B♭).

The first eight bars of the *Allegretto* are based on the half-diminished seventh chord on C♯ – under chromatic voice leading it is slightly further away from the generative C♯aug, but it is worth noting that this is not the only case in late Liszt where augmented and diminished chords on the same root are juxtaposed. In fact, in *Bagatelle sans tonalité* almost the same two chords –

C♯aug with an added B and C♯ø^7 appear one after another in bars 17-20 (to be discussed in the next chapter). It is as if Liszt has been following the creative advice of his friend Weitzmann, who back in 1853 wanted to encourage his composing readers to 'demonstrate the inseparable alliance between the long-accepted diminished seventh chord and the harsh augmented triad'. Whatever

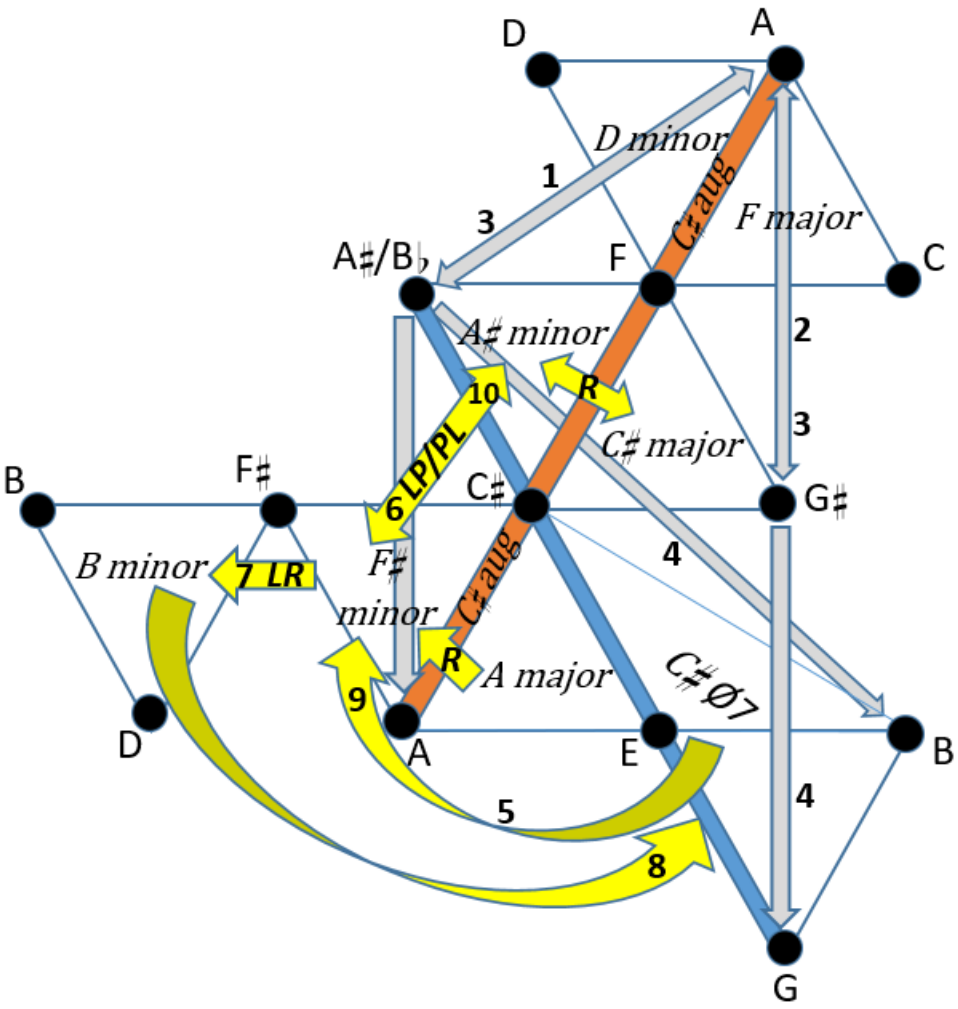


Fig. 7.12. *Tonnetz* representation of the harmony of Hungarian rhapsody no. 17. Grey arrows represent harmonic shifts between pitches, whereas yellow arrows represent transformations between chords. As harmonies beyond the F♯ minor of bar 65 are only speculated in ex. 7.4., these are not included in the diagram.

the initial motivation might have been, it is obvious that Liszt was using diminished and augmented chords extensively and every so often in his later years as main alternatives to consonant triads. However, in the case of bars 11-14 there is actually harmonic ambiguity between C♯ø^7 and A^7, while A major is also part of the Weitzmann region of C♯aug. The A in the left-hand part sounds like a remnant from the C♯aug, but at the same time it will persist and be part of the following F♯ minor, which arrives in bar 19. The next phrase – comprising bars 19-26 – is more clearly based on one chord – the F♯ minor, which is the ***Relative*** of the preceding A major, while the more readily perceived connection between C♯ø^7 and F♯m is more distant and it is marked with a curved arrow on the *Tonnetz* diagram of the piece (step 5, which is repeated later with step 9).

In the next 8-bar phrase (bb. 27-34) there is an oscillation between the already introduced A♯ minor and F♯ minor, which are in an ***LP*** relation to one another (steps 6 and 10). These are two of the minor members of ***WtzR-C♯***, the third one being D minor, which nowhere in the piece appears harmonically, but is suggested by the key signature of the first ten bars, as well as by the scalar passages of the introduction and at the end of the rhapsody. Therefore, it can be argued that the Weitzmann region of C♯aug is almost fully represented in this piece, with the sole exception of D minor's ***relative*** – F major. Admittedly, a couple of harmonies outside of this group of chords are also used – these are the already discussed C♯ø^7 and the melodically implied B minor in bars 33-34 and bars 47-48, so it can be seen on the *Tonnetz* how these are positioned slightly further away from the central pillar of C♯aug.

In a manner typical of Liszt, bars 35-65 provide a textural variation on the material from bars 11-34, while also some minor harmonic changes take place. Firstly, the bass note of the C♯ø^7 is substituted by a B, which implies a second-inversion E minor, while still containing all the pitches of C♯ø^7 and alternating it

with F♯ minor. A transition from the preceding B minor to E minor is reflected at the bottom of my *Tonnetz* diagram (step 8) and it is tonally meaningful in the temporal context of a B minor tonality. However, from there onwards the harmony completes more or less the same path around the main Weitzmann region, reflected by steps 9 and 10 on fig. 7.12. What is analytically notable about the harmonic variation within this section is the fact that the interaction between chords becomes more fluid and some of the harmonies such as the initial C♯ø^7 are purposefully blurred. This is an important part of the aesthetics of Liszt's late music, where harmonic entities can have multiple meanings and do not necessarily have to progress forward or to resolve onto something else.

It is only in the last 11 bars of the piece where something significantly different happens. The scale of D minor harmonic is loosely outlined in emphatic unison octaves, but then suddenly and unexpectedly B♭ is emphasised, which, without any harmonic support, concludes the piece. This is a reference to the twice reiterated B♭, which concluded the *Lento* introduction, not to return in this form until the very last bars. However, it has been shown so far how its enharmonic equivalent A♯ plays an important role in the main body of the rhapsody. In my view, and in the context of this Weitzmann regions analysis, the B flats in bars 9-10 and 71-76 underline the most important harmonic event in this late rhapsody of Liszt – a move from A (seen here as part of the C♯aug chord or as a central pitch within the ***WtzR-C♯***) to B♭ (seen either as part of a B♭/A♯ minor chord or as a move outside the ***WtzR-C♯*** if we hear an implied B♭ major at the end).[39]

[39] In his analysis of the piece Shay Loya supposes that the ending on B♭ implies a move to the major submediant from the initially implied D minor, which makes the rhapsody to seemingly follow the practice of Hungarian gypsy musicians, who could sometimes treat the 6th scale degree as a *finalis*. See Loya, "The Mystery", p. 129.

Since the pitch B♭ is part of one of the triads, which comprise the Weitzmann region of C♯aug, it can be concluded that Liszt's Hungarian rhapsody no. 17 is grounded harmonically within this region. Looking now at my complete harmonic reduction, all chords are part of ***WtzR-C♯*** and the odd one triad in this respect – the B minor of bars 33-4 – is never articulated concretely as a vertical chord. The appearance of B minor can be related to the following vague articulation of E minor, but immediately afterwards (from bar 47 onwards) the same chords from the ***WtzR-C♯*** return. Opening the piece in the low register and being heavily accented on, the augmented triad here, as in other similar and even more unconventional late miniatures of Liszt, bears symbolic significance, embodying the topics of death and mourning.[40]

As for the applicability of the neo-Riemannian analytical apparatus in the context of this piece, it is valuable in showing the potential of augmented triads in generating post-tonal, transformational relationships between chords even when its use is not immediately apparent. While it proves difficult to trace any clear harmonic plan upon observing chords on the 2-dimentional 12-tone pitch space of the *Tonnetz*, the Weitzmann regions concept turns out to be useful in unifying all chords under the idea of being closely related chromatically and originating from a single augmented triad.

[40] Robert Larry Todd, "The "Unwelcome Guest" Regaled: Franz Liszt and the Augmented Triad", *19th-Century Music* 12/2 (1988, 93-115). The author briefly discusses the topical associations of the augmented triad on p. 101.

5. Other cases, in which the augmented triad has a temporal or weaker structural supremacy

5.1. Via Crucis

This study was originally meant to be limited to the solo piano works from Liszt's late years, keeping in line with several factors. Firstly, it is hard to overestimate the importance of the piano in Liszt's compositional career and how many of his creative ideas he expressed and developed in pieces written solely for this instrument. Secondly, in Liszt's late period the piano remains a creative laboratory for his most avant-garde ideas and there are very few important works, which include other instruments or a chorus. Thirdly, the music-analytical literature on late Liszt has been focusing with some small exceptions on his piano repertoire, creating the impression that all those interesting features of his music from the period (or a very large portion of them) were conceived at the piano and for that instrument. One has to admit that some of those most extravagant harmonies would have been too challenging for a choir to sing and too shocking for the operatic or religious audiences of the time. Listening to *Via Crucis* and comparing Liszt's choral and instrumental writing in it proves the latter point. With some minor exceptions, the choir or the soloists do not deviate too far from the conventions of the time throughout the piece. However, the organ part (which alternatively was meant to be and is performed by a piano in some recordings of the piece) encompasses many of his forward-looking ideas, reaching the limits of tonality with some highly chromatic passages and unprecedented dissonances for a choral work. It is no wonder that the piece has been later transcribed for piano four hands (S. 583) and piano solo (S. 504a),
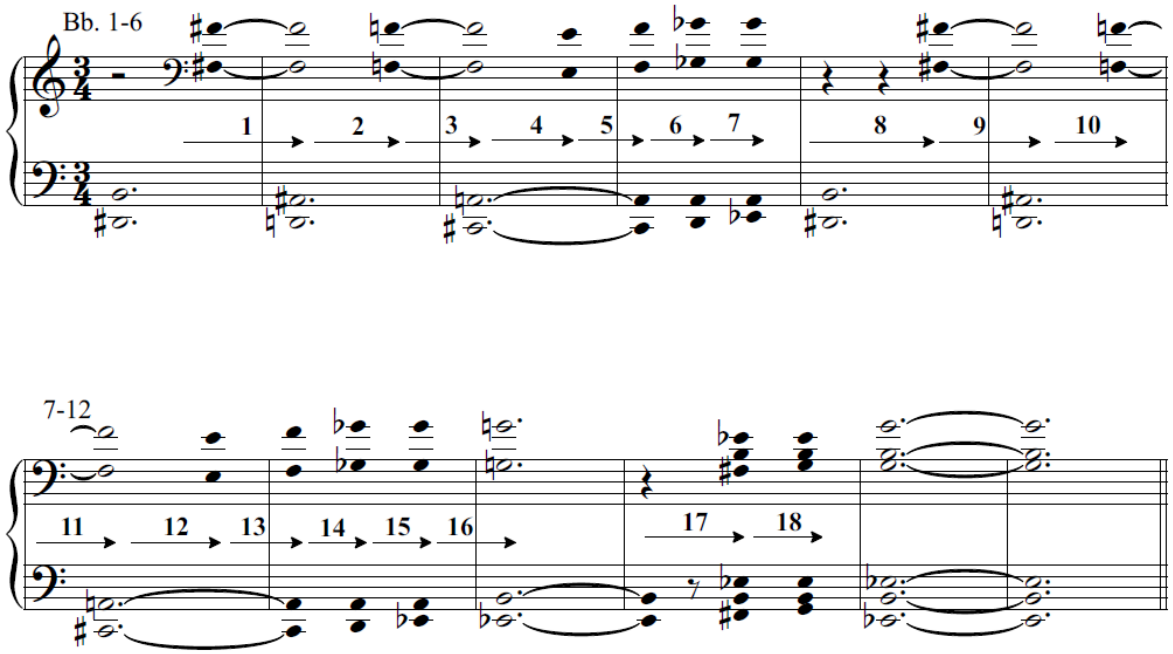
so technically it can be considered as another late piano piece. Considering the above and also the fact that *Via Crucis* is one of the greatest and most important late works by Liszt, it becomes highly relevant to analyse some of the more extraordinary instrumental writing in it for its unorthodox harmony.

Via Crucis (originally completed in 1879 and catalogued S. 53) is inspired by a series of images called *The Stations of the Cross*, which depict Jesus Christ on the day of his crucifixion and his path towards Mount Calvary, where he was crucified. Liszt's devotion to his faith and his extraordinary ability to express the Passion of Christ through music is revealed in a most magnificent of ways in this late *Magnus opus*. The combination of Gregorian chant, Lutheran chorales and Bach-inspired chorales in the vocal sections of the piece have all been commented upon.[41] However, the analytical examples in this chapter and chapter IX will be largely limited to the solo organ sections of the piece, which stand out with their bold use of dissonance and tonal indeterminacy.

Station II is mostly instrumental, divided in two halves by a short baritone solo in the middle (see ex. 7.5 and 7.6). These two halves will be analysed with a separate *Tonnetz* diagram dedicated to each, which will allow for comparisons thereafter.[42] The trilling inner voice in the keyboard part blurs the chords, which are used, however, I assume that the chordal notes remain obvious enough and they will be outlined on figure 7.13. Firstly, a chromatically descending line of 6th chords leading from B major to A major is flavored (through suspensions in the

[41] See James Baker, "Larger forms in the late piano works", in: *The Cambridge Companion to Liszt* (Cambridge, 2005) pp. 120-126 for an overview of *Via Crucis*, its conception history, formal design and harmonic-tonal summary. The author describes the overarching cyclical structure unified by the opening and closing in a D tonality, while central stations (from III through XII) 'generally hover about the dominant'. Conversely, the current analyses will only focus on selected segments from the piece where surface-level chromatic progressions prevail.

[42] The presence of some diminished chords in this station makes the *Tonnetz* a more viable tool than Cube Dance for visualising the harmony.



Ex. 7.5. Station II of *Via Crucis* (first half), presented in its original length, with rhythmic reductions only.

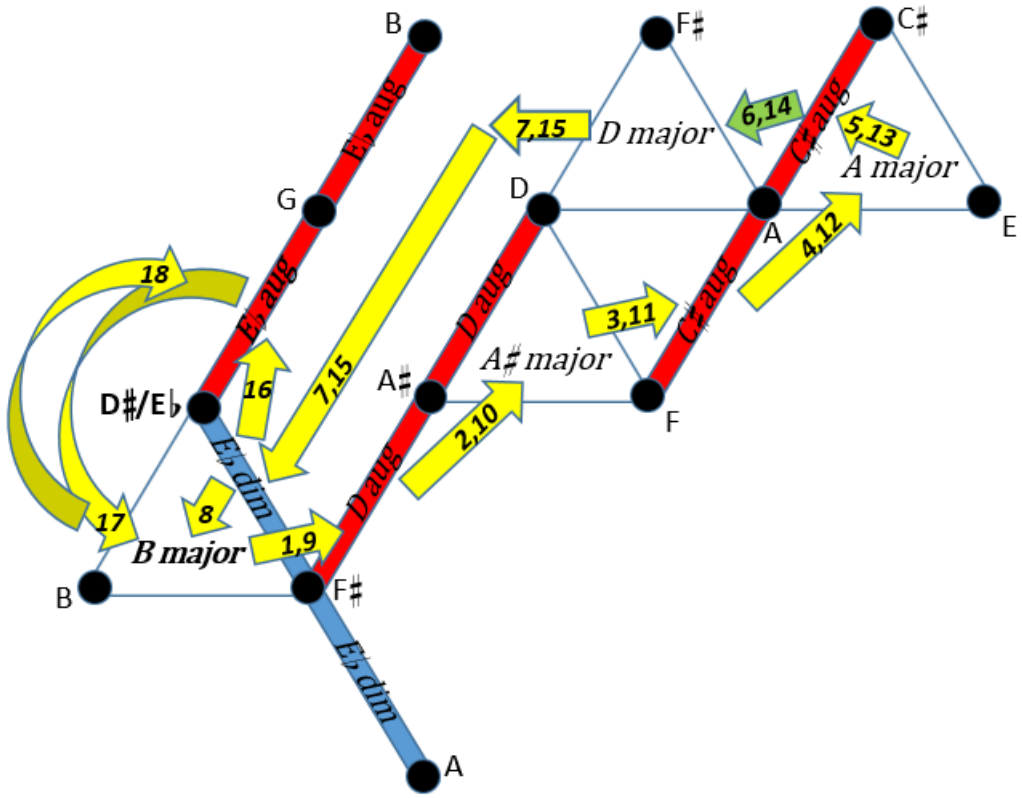
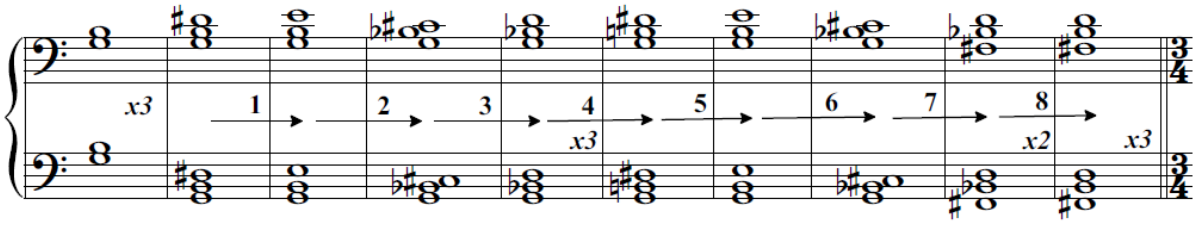


Fig. 7.13. A *Tonnetz* representation of harmony in Station II (first half) of *Via Crucis.*

upper voice) with the augmented triads lying in between them in the pitch space of the *Tonnetz*. From the A major onwards the progression changes course in order to return to the initial B major. A major resolves into its expected tonic D major (going through C♯aug again) and the latter transforms into E♭dim through a minor inflection. It should be born in mind that E♭dim is maximally close to D major on the *Tonnetz*, but on figure 7.13 the blue-stripe chord is shown in its alternative location, next to B major, in order to keep the whole progression within a maximally limited space. D major is actually quite close to B major in chromatic pitch space, needing only an ***RP*** transformation to return the primary chord. In this case E♭dim bridges the two major triads and consequently the anti-clockwise movement on the *Tonnetz* repeats. However, the ending of the progression is different – a third (and final) augmented triad appears (E♭aug) and after a final alternation with B major closes the section with violent *tremmolandi* in the low register (highly reminiscent of the ones at the end of *La lugubre gondola I*). The dark, somber atmosphere of the piece has just begun to be established at this point and it will be continuously reaffirmed later, especially during the instrumental interludes.

The second half of this station is very similar with its chromatic wandering around closely related consonant and augmented triads. As it comes to immediate notice upon looking at figure 7.14, it also includes a diminished, augmented and consonant triad on the same pitch (G in this case), therefore G and G minor are emphasised in *Bold* (corresponding to D♯/E♭ and B major on figure 7.13), operating as a kind of a pivot pitch and chord for the whole section. The closing augmented triad of the previous progression opens this one (although it is with G at the bottom now) and another smaller anti-clockwise movement going through E minor, Gdim, G minor and Gaug (all chords involving G) takes place twice. After that the augmented triad a semitone down arrives

(Daug) and eventually Station II concludes consonantly on B minor, creating the impression of overall tonicity around B major/minor.



Ex. 7.6. A harmonic reduction of Station II (second half) of *Via Crucis*.

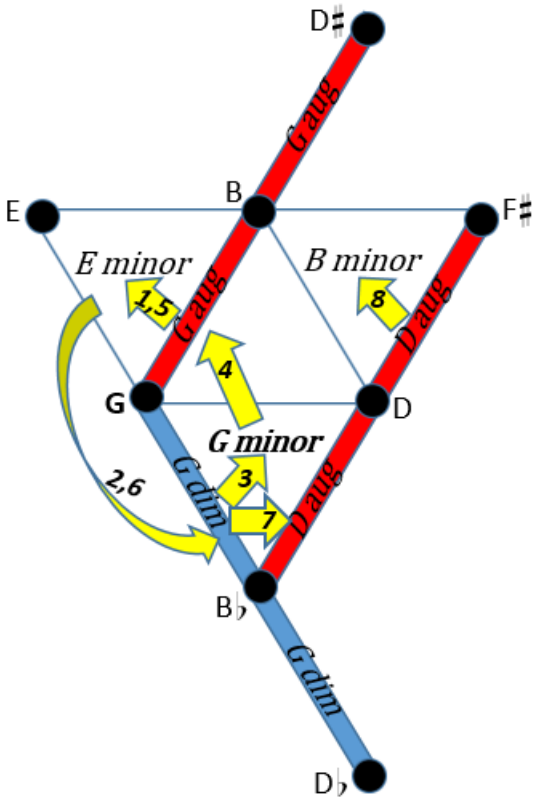


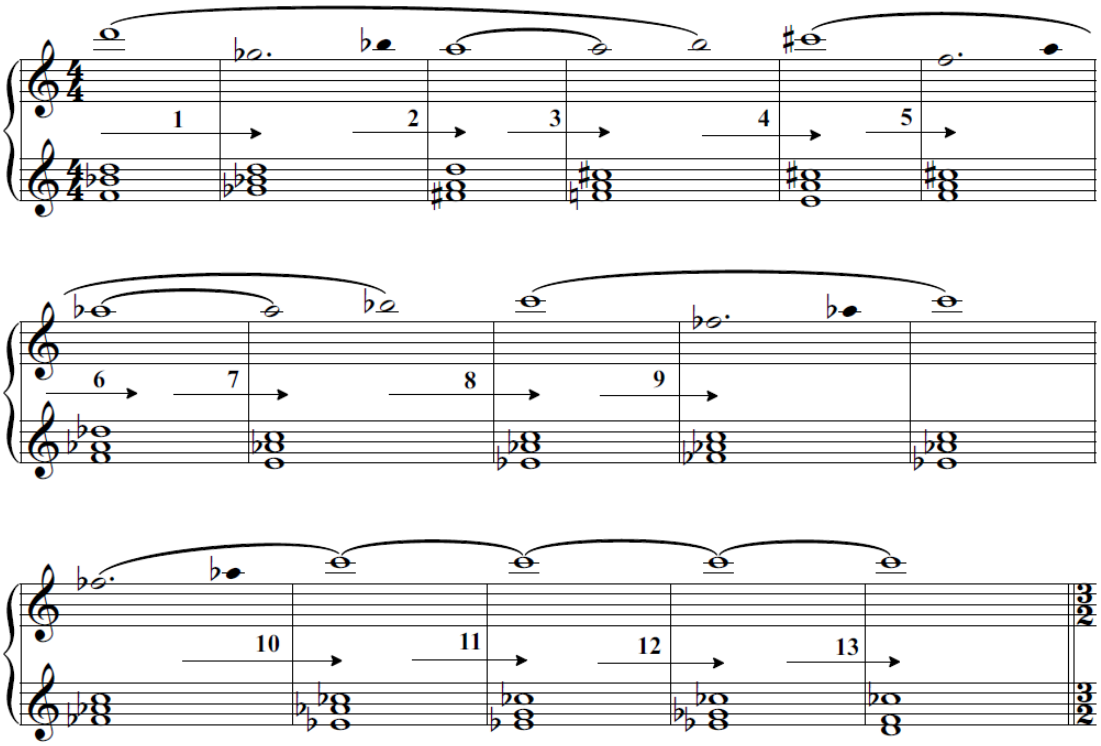
Fig. 7.14. A *Tonnetz* representation of harmony in Station II (second half) of *Via Crucis*.

A few conclusions about the harmony of this station follow from the above commentary and the corresponding *Tonnetz* diagrams. Firstly, the tonality of B

major is compromised from the very first chromatic harmonic moves and later only partially restored with its minor subdominant E minor and the final B minor. Secondly, without any exceptions there is a constant alternation between consonant and augmented or diminished triads throughout the station. Combined with the extensive chromaticism in the melody, often in descending motion – an established rhetoric gesture for depicting suffering – such harmonic language creates a dark, somber atmosphere, most suitable for the passions of the Christ. It should not escape our attention that the circular movement around G on figure 7.14 is reminiscent to the pitch circulations shown in chapter V and should also be included in the group of examples relatable to Kenneth Smith's idea of mourning in music going hand in hand with pitch repetition and lack of directionality.[43] Last but not least, comparing figures 7.13 and 7.14 reveals that both progressions are based on adjacent augmented triads on the *Tonnetz* (firstly three of the possible four, but then only two), which alternate for most part with triads from their corresponding Weitzmann regions. However, overall in the above examples the structural emphasis on the augmented triads is not as substantial as it was revealed to be in pieces like *R. W. – Venezia* or *La lugubre gondola I*.

Moving on to Station IV, it is purely instrumental and serves to illustrate Jesus' encounter with his Holy mother. It can also be divided into two parts, the first of which is striking for its extended chromatic ascending lines and highly diverse, but somewhat sporadic harmonic support. The second half (marked with *pp* and *dolcissimo*) is based on a more systematic harmonic progression, which is reminiscent of station II, therefore it will be considered in some detail (ex. 7.7).

[43] Kenneth Smith, *Desire in Chromatic Harmony*, p. 234.



Ex. 7.7. Station IV of *Via Crucis* (second half), presented with rhythmic reductions only.

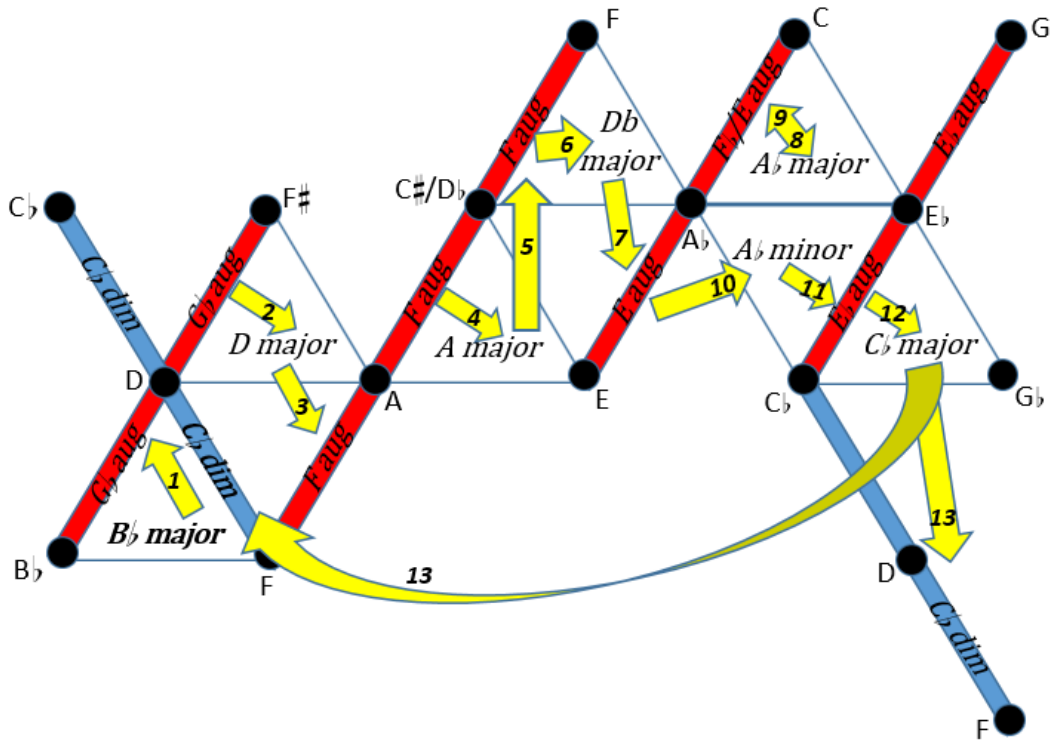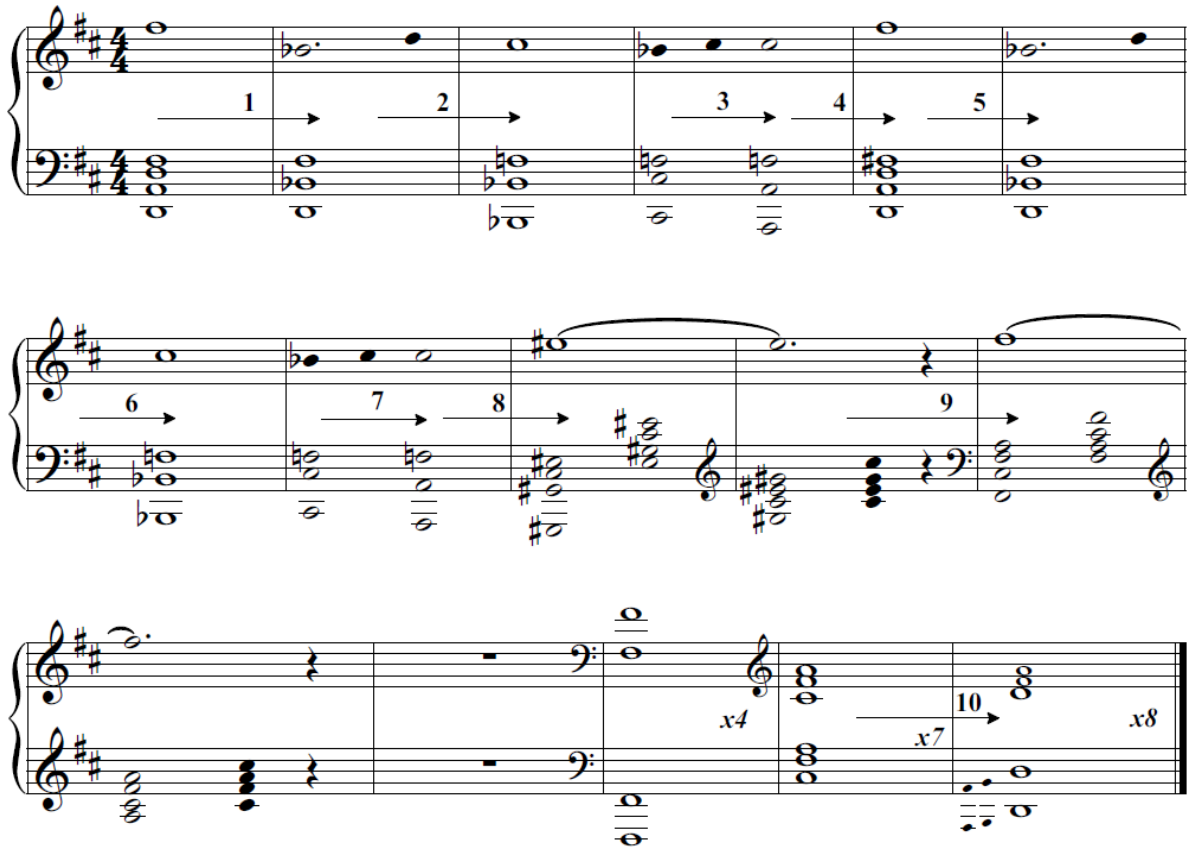


Fig. 7.15. A *Tonnetz* representation of the harmony is Station IV (second half) of *Via Crucis*.

What immediately catches the attention upon looking at figure 7.15 is the almost exclusive alternation of augmented and consonant (mostly major) triads. In comparison to the earlier progressions of this kind, considered above, here the pattern is clearer and the sequence is longer, gradually descending through all four augmented triads. Such a descent inevitably invites comparisons with the first half of *Nuages gris*, although in the current case no less than seven consonant triads from the corresponding Weitzmann regions are interpolated between the augmented triads. Such one-directional movement on the *Tonnetz* leads to the return of the same pitch classes after a while and this is how a diminished chord, maximally close to the initial B♭ major, is reached eventually. C♭dim is shown in its both possible locations on the figure – causing either the continuation of the one-directional movement or a closing of a loose circle.

The progressions described so far may look slightly different depicted on their corresponding *Tonnetz* diagrams, but in fact they are very similar in quality and serve the same purpose in *Via Crucis* – to depict Christ's suffering through constant chromatic intensification with the melodic movements upwards and downwards, the latter being particularly appropriate in depicting weeping. The use of the augmented triads has become symptomatic of the above by the end of station IV, but it should be emphasised that going through more than two of them within a short time span diminishes the potential of any one becoming a central sonority in a progression, which consequently makes a Weitzmann regions analysis dispensable, unlike the first four cases in this chapter.

Via Crucis closes with a majestic coda, which is written in the key of D major, creating the impression that tonal procedures are more prevalent at this point compared to the majority of piece's duration so far (see ex. 7.8). However, a closer inspection of the chord-to-chord progression reveals that it is based on two augmented triads and some of their most closely related major and minor

triads. Firstly, the opening D major transforms into Daug, resulting from a semi tonal raising of the fifth of the former. Next, a B♭ minor (spelled with C♯ instead



Ex. 7.8. A harmonic reduction of the coda of *Via Crucis*.

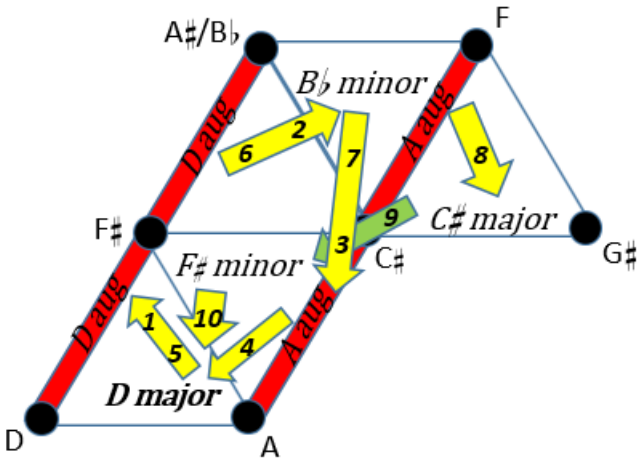


Fig. 7.16. A *Tonnetz* representation of harmony in the coda of *Via Crucis*.

of D♭) appears and it is followed by the augmented triad of its corresponding Weitzmann region – Aaug. The latter serves as an augmented dominant towards the D major, which returns, initiating a repeat of the same sequence (see figure 7.16). However, the second time around Aaug transforms into another chord from its own Weitzmann region – C♯ major. In the only functionally diatonic progression of the passage C♯ major resolves into its expected tonic F♯ minor, which completes the last clearly harmonised phrase in the piece. Typical of late Liszt, *Via Crucis* closes sparsely with unaccompanied Gregorian chant, which eventually reaches the tonic-sounding pitch of D. The melodic progression from A through B to D loosely affirms the key of D, purposefully avoiding a clear-cut

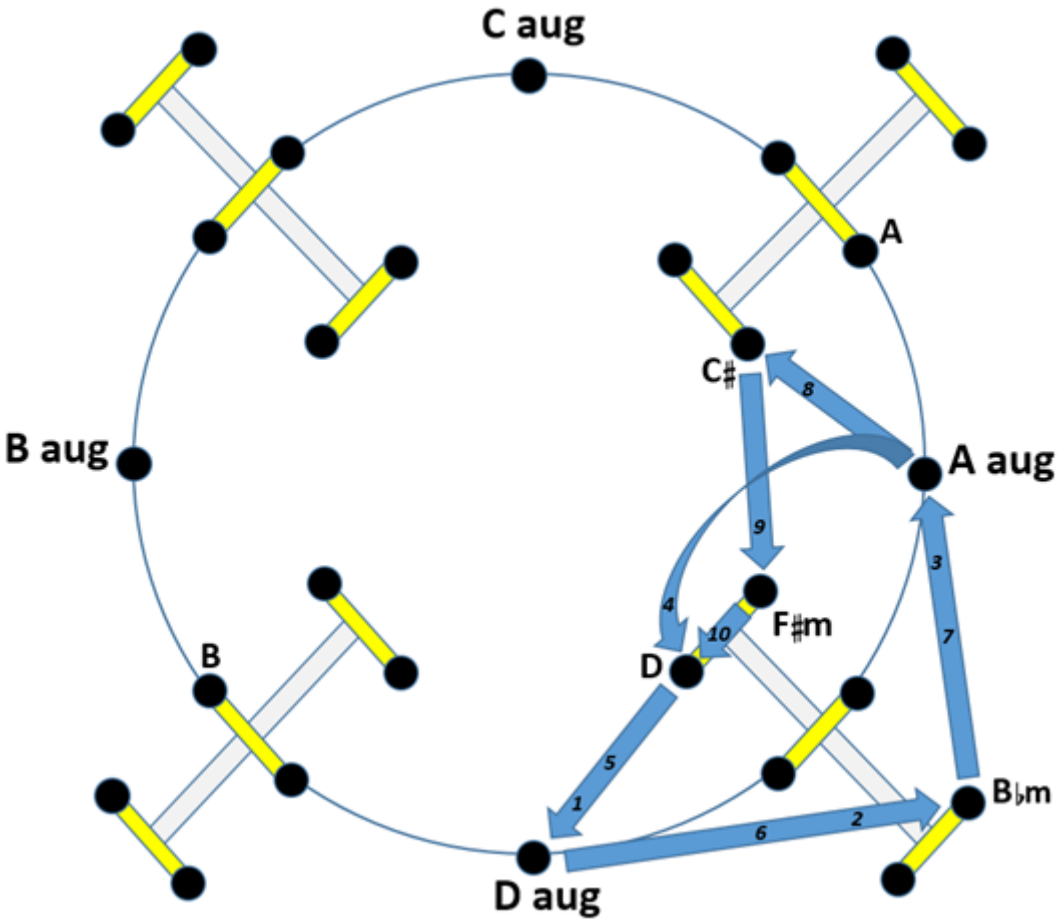


Fig. 7.17. A Cube Dance representation of harmony in the coda of *Via Crucis*.

V-I progression, which has so rarely occurred at the very end of a piece in this repertoire.

The *Tonnetz* representation of the passage clarifies the relationship between the augmented and consonant triads and illustrates the circular movements around ***WtzR-D*** and ***WtzR-A***, which open and close on the same key of D major, although there are no full chords at the end. It is a typical final chromatic detour from the tonic-sounding D major, similar to the one towards the end of *Les Jeux d'Eau*. All the chromatic transformations except the one leading from Daug to B♭ minor are maximally smooth. In contrast to them, the resolving of the C♯ major into F♯ minor is functionally diatonic and is accordingly shown with a green arrow on figure 7.16.
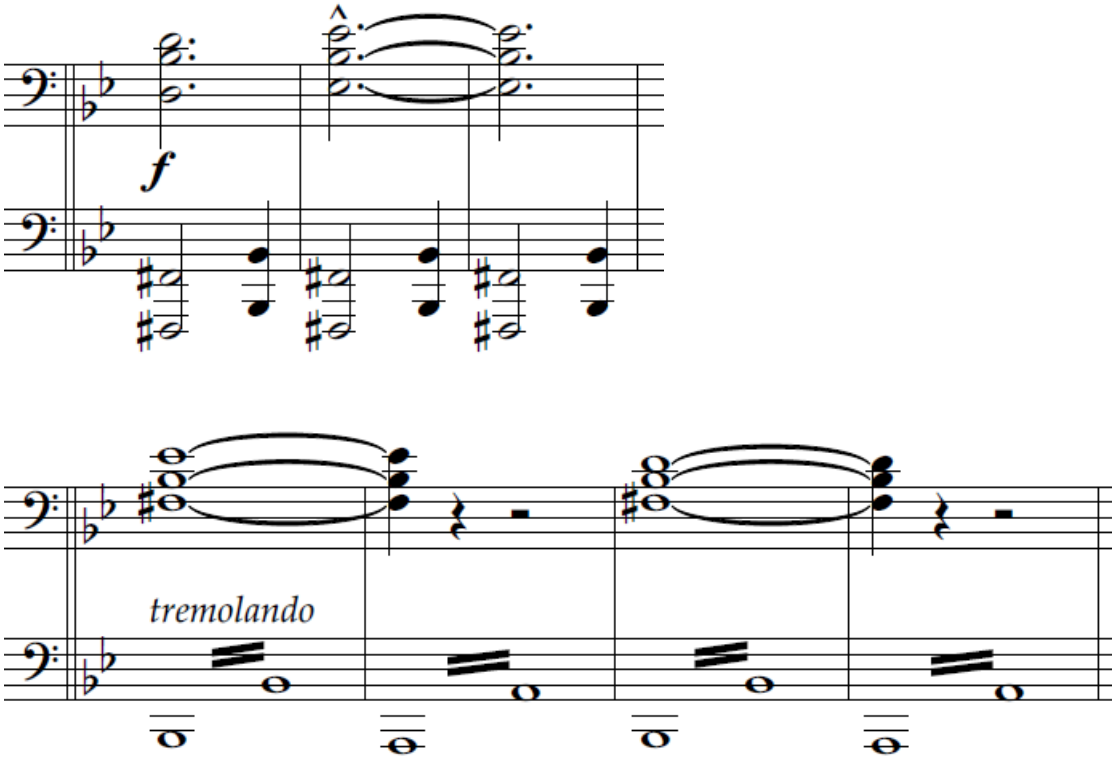
In order to draw comparisons between the two main geometrical tools used in this chapter, the same progression is also depicted on Cube Dance (fig. 7.17). It can be claimed that the latter makes the circular harmonic movement somewhat clearer when both types of triads are depicted by dots instead of the triangles versus stripes juxtaposition. Also, the latter diagram is highlighting the fact that the Southeastern Hexatonic region lies at the center of this progression.

5.2. Aux Cyprès de la Villa d'Este I: Thrènodie

The harmony of this piece (catalogued S. 163/2, composed in 1877[44]) represents a rich mixture of basic triadic transformations, transformations
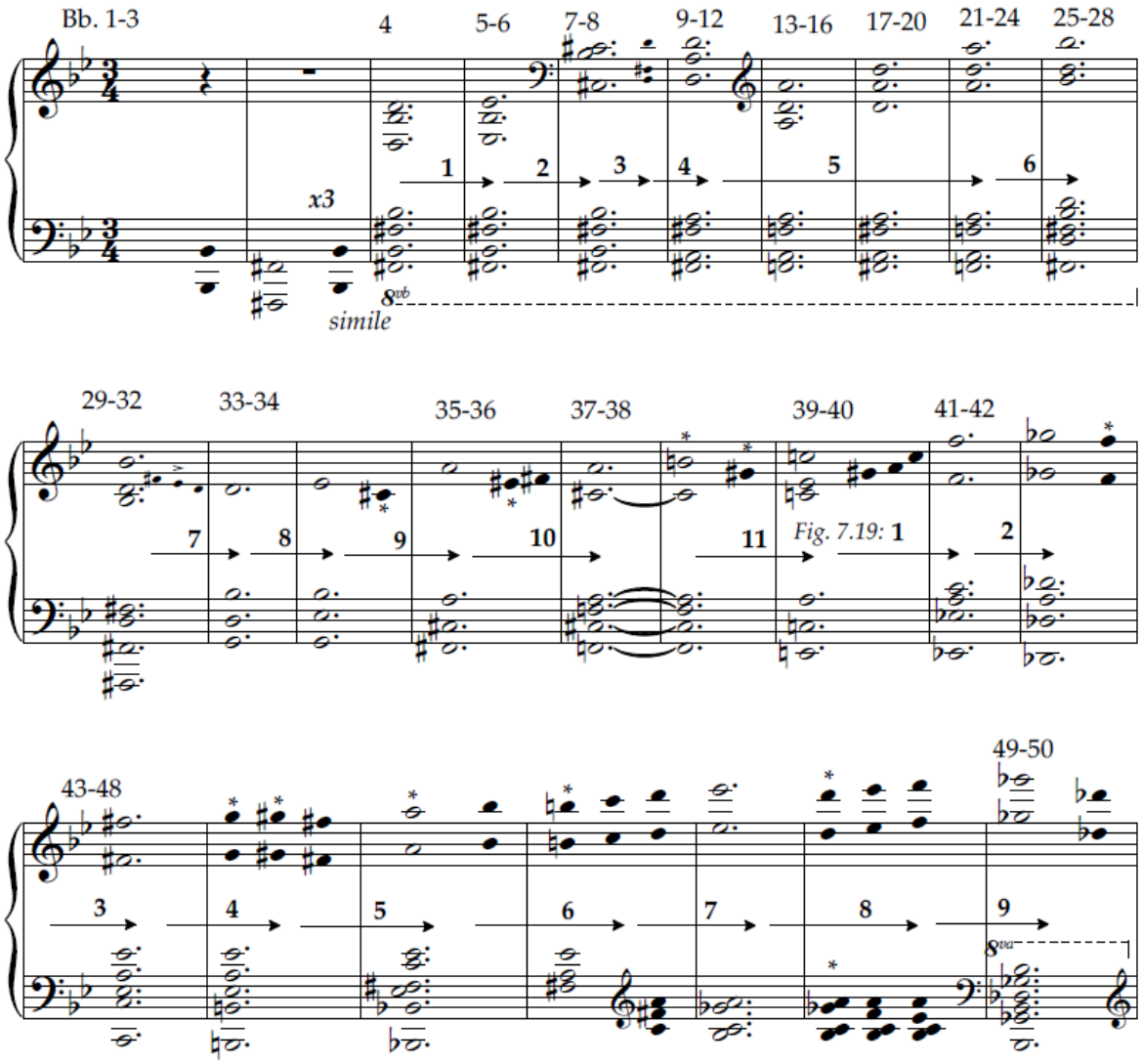
[44] James Baker, "Larger forms in the late piano works", in: *The Cambridge Companion to Liszt* (Cambridge, 2005) pp. 135-136 discusses the conception history of the two *Cyprès* pieces, evident from Liszt's letter correspondence from the summer of 1877. The words 'depressed' and 'tired' are used by Baker, while Liszt himself has written '*Tristis est anima mea*!' [My soul is sad] in one of his letter to Princess Carolyne. This should be born in mind while looking at Liszt's use of the augmented triad in the following analysis.

involving augmented triads, diminished seventh, half-diminished seventh chords and the occasional use of highly dissonant pentads at climactic points, such as the Cdim^7 with added B♭ in bar 47 (see ex. 7.10). Unlike the miniatures explored earlier in this chapter, the harmony here is more diverse in both the use of chords of all types and the types of relations between them with the resulting phrase structures. However, I will be focusing on the first 50 bars of *Aux Cyprès I* and attempting to achieve a new viewpoint over their harmony, while using Cube Dance (for bars 1-40) and the *Tonnetz* (bars 40-50) for visualisations. It will be demonstrated that augmented triads are structurally important in most of the exposition section of the piece (if we take Baker's view of the piece being in a modified sonata form) and they bind together its rich harmonic content. In other words, a large majority of the chords used gravitate around a couple of Weitzmann regions.



Ex. 7.9. A comparison between bars 4-6 of *Aux Cyprès I* (above) and bars 9-12 of *Nuages gris* (below).

The first couple of chords – F♯aug and E♭m – which appear in bars 4-6, are identical to bars 9-12 of *Nuages gris*, although they appear in the reverse order in the latter piece (see example 7.9). The registers used are exactly the same, which creates the impression of a very similar sonoric effects at the beginning of both pieces. It could be inferred from this observation that Liszt has taken his sonoric setting from the opening of *Aux Cyprès I* further and decided to develop



Ex. 7.10. Harmonic reduction of bars 1-50 of *Aux Cyprès I*. All melodic notes from bar 33 onwards have been included, whereby the non-harmonic ones are marked with an asterix.

a whole piece based on it four years later in 1881. The narrative of this chapter so far has revealed that such uses of the augmented triad (accented in the low register) have been one of the conspicuously recurring motives of his late works, most suitable for expressing the inner torments of his soul in music.

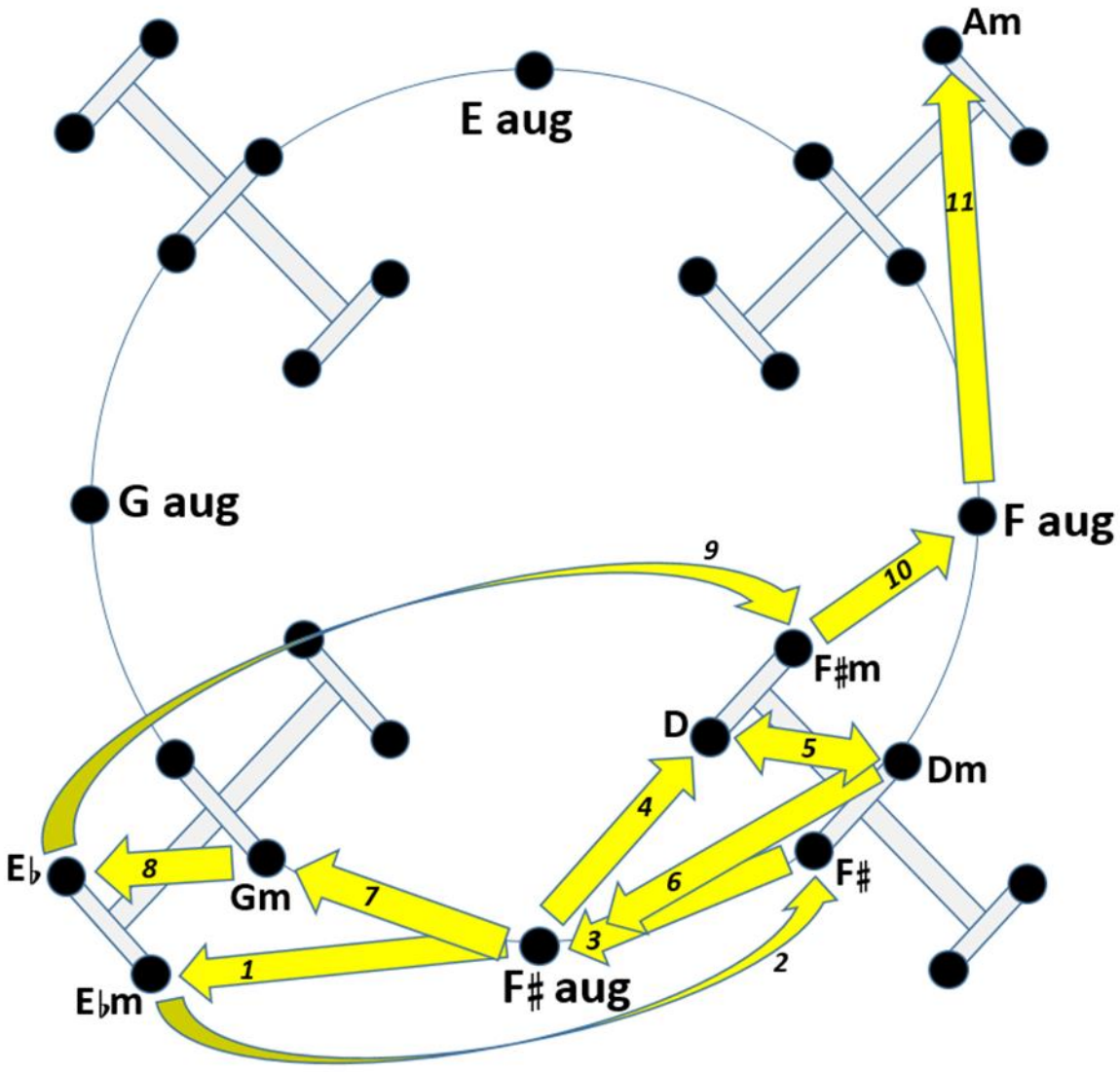


Fig. 7.18. A Cube Dance depiction of the harmony in bars 1-40 of *Aux Cyprès I*.

After the F♯ major in bar 7 and D major in bars 9-12 have occurred, half of the content of ***WtzR-F♯*** has been used. In fact, the first 40 bars are limited to augmented in consonant triads only, therefore visualising them on Cube Dance

becomes most appropriate (see fig. 7.18). Next in the introduction of the piece (up to bar 32) D major is twice substituted with its ***P***-related D minor and the initial F♯aug returns also twice, but in a more accented manner (with *reinforzando*). A fourth chord from the already established ***WtzR-F♯*** – namely G minor – arrives with the change of texture in bar 33, beginning the exposition of the main theme. The latter is itself highly chromatic and never settles within a single diatonic collection for more than four bars. There is a downshift to ***WtzR-F*** and its constituents Faug, F♯ minor (enharmonically substituted for G♭ minor a bit later) and F major. The A minor from the yet lower ***WtzR-E*** also occurs within the first 10 bars of the main theme.

As there are more seventh chords from this point onwards, it would be more suitable to use *Tonnetz* for bars 40-50, but firstly some comments about the Cube Dance depiction of bars 1-40 shall come in place here. As it can be seen from figure 7.18, the harmonic transformations are primarily concentrated at the bottom, within ***WtzR-F♯*** or maximally close to it, while several bars within the new section (bars 36-40, which include the last two steps on the figure) there is a clearer movement further away from F♯aug. These observations lead me towards considering this augmented triad and its corresponding Weitzmann region as being at the harmonic center at the beginning of the piece. However, as in many other cases throughout this repertoire, a strictly predetermined path through pitch space cannot be inferred, and the harmony looks as if it is in search of some center to lean on, while in the process it gradually shifts from one loosely defined pitch area to another. I consider such harmonic meandering an indirect consequence of Liszt's strive towards denying tonal expectations and compromising most cadence preparations in this kind of pieces.

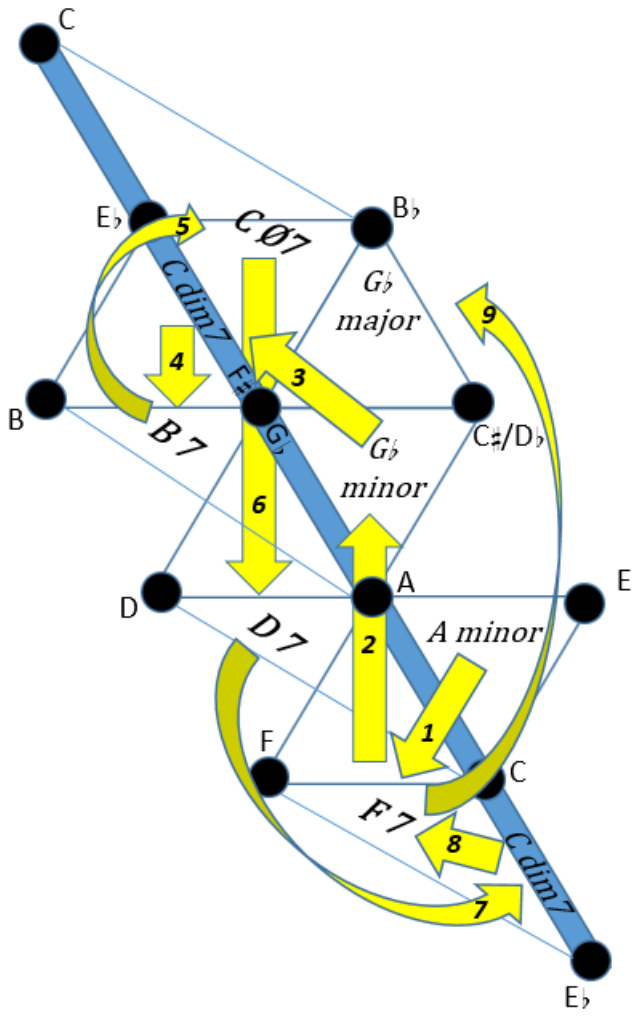


Fig. 7.19. A *Tonnetz* visualisation of the harmony in bars 40-50 of *Aux Cyprès I*.

Once the harmony diversifies through the use of tetrads from bar 40 onwards, it becomes more appropriate to position chords on the *Tonnetz* and figure 7.19 reveals another meandering movement through pitch space, with a binding element in the face of the centrally positioned Cdim^7. From all the chords on this figure, only the eventual G♭ major is not maximally close to Cdim^7 and the current analysis stops with it in bar 50, after which it is reaffirmed as a weak tonal center throughout the middle section of the piece, which sounds even more turbulent harmonically. However, my focus is on what has been depicted on figure 7.18, while figure 7.19 demonstrates where Cube Dance seizes to be useful

and should give way to the *Tonnetz*. At the same time, a switch from chromatic harmony, which gravitates around certain augmented chords, to such harmony, that develops around a diminished seventh chord, is exemplified.

The circular chromatic movement in the melody, combined with the persistent ostinato pattern in the very low register, create the dark atmosphere of a threnody at the beginning of *Aux Cyprès de la Villa d'Este I*. The impression that there is no escape from the elegiac mood of the introduction is reinforced by the explicit use of augmented triads with consonant triads from their corresponding Weitzmann regions. Different textures, higher registers and different harmonic patterns later develop the main theme in a manner typical of Liszt (think of his elaborate thematic transformations in his large-scale one-movement works such as the B minor sonata), so the effect of the opening remains temporary. As often with the chromatic harmonic devices explored in this study, Liszt seeks a small-scale, flashing effect and therefore the harmonic patterns in use cannot persist and govern large stretches of extended forms or whole pieces. Therefore, unlike the more representative miniatures analysed earlier in this chapter, the use of Weitzmann regions is only one of the modern harmonic features of this threnody. Last but not least, the above analysis has been useful in demonstrating the capabilities of Cube Dance, their limits and the points, at which a *Tonnetz* visualisation becomes more useful.

Conclusions

As it has already been suggested by Todd's article and it was demonstrated in this chapter, the process of emancipating the augmented triad is naturally brought to its final stage in Liszt's music from his final decade. In miniatures such as *La lugubre gondola I*, *R. W. – Venezia* and *Nuages gris* the methodical simplification of the texture to its barest essentials has allowed the composer to emphasise his most innovative harmonic techniques, the most notable of which are the smooth chromatic transformations with the augmented triads at their center. By reconceptualising the traditional roles of augmented (dissonant) and major-minor (consonant) triads through the Weitzmann regions concept, we could free ourselves from the need to seek the implied tonality, which chords should resolve to. The augmented triads can and were meant by Liszt to perform the role of the consonant ones by framing the form of pieces like *La lugubre gondola I* and *R. W. – Venezia*. *Nuages gris*, on the other hand, represented another case of Liszt's original harmonic procedures, where the implicit tonality of G minor is in dialogue with the 'modulation' from one augmented triad to another. Furthermore, the grouping of consonant triads around C♯aug in the case of the 17th Hungarian rhapsody showed that the Weitzmann regions can be a fruitful analytical tool even in cases in which a more traditional treatment of harmony may seem to be at work upon first listening. Finally, the examples taken from *Via Crucis* and *Aux Cyprès I* illustrated how Liszt was shaping segments of his large scale works to sound dark, tonally indeterminate and directionless through frequent recurrence of different augmented triads.

Seeing this chapter in perspective, its disproportionately long theoretical and historical introduction together with its overall size should not come as a

surprise. My own impression after scrutinising the harmony of this repertoire for several years is that Liszt's uses of the augmented triad are most systematically employed, conceptually prepared and consistent throughout this body of music. Understandably, there are further instances of augmented triads recurring in similar ways throughout the examples in other chapters, however, the subsequent shift of focus on other types of chords and chromatic chord relations will be an attempt to demonstrate that Liszt's highly imaginative ideas do not end here, while the neo-Riemannian apparatus will keep being tested.

Chapter VIII

Gravitating around the 'sweet' Diminished Seventh Chord

Unlike the augmented triad, the use of which is quite specific for Liszt and has made an impact in relation to his compositional development and his search for more forward-looking harmonic means of expression, it seems that the importance of the diminished seventh chord has not been that crucial to defining his styles, late or earlier. To the best of my knowledge, there is no study similar in concept to Todd's, which focuses on Liszt's use of the diminished seventh chord and traces any possible stylistic evolutions based on this particular sonority. Indeed, it is the other important symmetrical chord, which divides the octave into equal parts and closely relates to the octatonic scale, all that being highly relevant to the late harmonic vocabulary of the composer. However, the use of the diminished seventh chord has not been that much conceptually restricted and unusual already at the time when Liszt was growing into compositional maturity in the 1830s and 40s. This is an important music-historical distinction between the two most common symmetrical chords and how they were used, which Weitzmann already points out in 1853.[1]

It would not be an overstatement to say that diminished seventh chords thrive and flourish throughout Liszt's output and are used in numerous and

[1] As already discussed in the introduction of the previous chapter, Weitzmann describes the two most familiar symmetrical chords as 'the harsh augmented triad' and 'the sweet diminished seventh chord', noting that the latter had already been used a lot, and been justified by theorists, unlike the former. See Janna K. Saslaw, "Two monographs by Carl Friedrich Weitzmann: Part I: 'The Augmented Triad' (1853)", *Theory and Practice* 29 (2004, 145).

imaginative ways, sometimes even overshadowing consonant triads on the surface of the harmonic syntax. And yet, it is only in a handful of late pieces that the chord is exploited in ways similar to the ways the augmented triad was shown to be used in the analyses of the previous chapter. The forthcoming examples will not claim to be an exhaustive account of the 'Liszt and the diminished seventh chord' issue, neither will their selection mean that other original uses of this harmonic device cannot have occurred in works from earlier decades. Instead, in line with the rest of Part II, a limited number of hand-picked pieces will serve to demonstrate how the diminished seventh chord could be put at the center of harmonic syntax in a transformational sense – looking at chords in the pitch space of the *Tonnetz* and evaluating their relations independently from the concepts of tonality and functionality. The neo-Riemannian apparatus will be tested on pieces, which have already been analysed with other theories and it will be checked whether some new insights about Liszt's compositional choices can be reached.

I will be starting with *Bagatelle sans tonalité*, which over the years has remained most attractive for analysts and Liszt scholars. Both its bold concept, stated in the title itself, and more specifically the use of the diminished seventh chord in it, invite a more in-depth analysis, which is provided not only for the sake of the current chapter, but in relation to the broader aims of this thesis as a whole. Following on from there, comes another detailed analysis of a piece, which has the diminished seventh chord at the center of its highly chromatic syntax. Unlike the *Bagatelle*, *Trauervorspiel und Trauermarsch* has received far less analytical attention and presently this astonishing piece will be compensated with a thorough neo-Riemannian analysis.

The two extensive case studies will be supplemented by a couple of shorter analytical vignettes, which only focus on certain sections of pieces.

Firstly, it will be demonstrated how the diminished seventh chord, while being outlined by a memorable three-note motif, frames the form on both sides of the main thematic sections of *La lugubre gondola II*. Finally, an analysis of a transitional section of *Polonaise I* based on the oratorio *St Stanislas* will show the sonority in question to fully dominate it and have other intermittent chords chromatically 'gravitating' around it.

On the choice to use the *Tonnetz* for visualising seventh chords

As it has been clarified in chapter II, from all the readily available neo-Riemannian tools that I have considered and tried applying to late Liszt (mainly derived from Richard Cohn's book), only the *Tonnetz* remains reliable and versatile enough, able to accommodate progressions between a variety of triads and tetrads, including a mixture of the two within unified progressions. Therefore, concepts such as Boretz regions, meant to show progressions between seventh chords, whereby the diminished seventh chord is at the center of the syntax, remain not flexible enough for the pieces considered below and accordingly, the remainder of this thesis will focus on exploiting the *Tonnetz* to its limits.

1. *Bagatelle sans tonalité* and the hidden structural backbone of Fdim[7]

This piece (catalogued S. 216a, composed in 1885, but not published until 1956) remains one of the most distinctive emblems of Liszt's late piano music, and as such deserves a more thorough scrutiny. The harmony in it has been interpreted in different ways throughout the relevant literature and it will be curious to see if my neo-Riemannian methodology can bring anything fresh to an already diverse analytical landscape. Before starting my own analysis of the *Bagatelle* I will discuss three other accounts of it, which I have considered of primary importance to its understanding. After evaluating these and taking a side in the debate about Liszt's harmonic implications I will check if neo-Riemannian theory can allow us to see some of the surface-level progressions of the piece in a new way and reach different conclusions. Moreover, this is one of Liszt's late pieces, which might expose the limits of this theory and show where and how it fails.

The earliest of the three important analytical studies of the *Bagatelle*, which I take into account here, is part of Robert Morgan's article *Dissonant prolongation: Theoretical and compositional precedents* from 1976. The author claims that the diminished seventh chord comprising the pitches F, G♯, B and D is prolonged, but 'the chord is not stated explicitly at the opening: it unfolds only gradually during the course of the first half of the piece'.[2] By using neo-Schenkerian graphs Morgan demonstrates how the diminished seventh chord gradually gains structural importance by its four pitches being approached from either side in a more and more easily audible manner. Indeed, the first

[2] Robert Morgan, "Dissonant Prolongations: Theoretical and Compositional Precedent", *Journal of Music Theory* 20/1 (1976, 76).

appearance of the main motive in bar 13 hints towards a G^7 harmony, whereas at the identical point in the second half of the piece (bar 95) the A♭ in the melody completes the aforementioned diminished seventh chord. There are more such examples provided by Morgan, which aim to demonstrate that the F-G♯-B-D chord becomes increasingly easier to hear over the duration of the piece. The culmination of that process is the codetta, which concludes the piece with a series of diminished seventh chords, the last one being namely the one with F at the bottom.

Published in 2004, David Carson Berry's article *The meaning of "Without": An exploration of Liszt's Bagatelle ohne Tonart* pursues a historical and theoretical investigation of the factors, which have influenced Liszt's composition practice, in order to answer the question 'In what way is the piece without tonality?' Two possible analytical approaches to the piece are compared and contrasted – octatonic set-classes and Morgan's dissonant prolongation method. The first one shows how an extensive use of a non-diatonic scale in the piece can 'contribute to the sense that [it] operates outside the realm of tonality', whereas the second one 'demonstrates a broader way in which the *Bagatelle* circumvents tonality, namely by prolonging a sonority that is dissonant and unstable in tonal terms.'[3] Berry offers his own perspective on the piece by using the notion of *Mehrdeutigkeit* (multiple meanings), originating in music theory from the writings of Gottfried Weber (1779-1839).[4] It turns out that the *Bagatelle* is purposefully designed to create expectations of progressing towards more than one key from its very beginning until the end. To reinforce his claim about Liszt's conscious realisation of this idea, in the second half of his article

[3] David Carson Berry, "The Meaning[s] of "Without": An Exploration of Liszt's Bagatelle ohne Tonart", *19th-Century Music* 27/3 (2004, 238).
[4] For a more detailed discussion of Weber's concept of *Mehrdeutigkeit* in English, see Janna Saslaw, "Gottfried Weber and Multiple Meaning" *Theoria* 5, (1990-91, 74-103).

Berry provides a thorough overview of composer's association and cross-influencing with two of the major progressive theorists of his century, namely Karl Friedrich Weitzmann and François-Joseph Fétis.

The third and most extensive study of the *Bagatelle*, which I am considering here, is Federico Garcia's doctoral thesis from 2006, which includes a thorough harmonic, motivic and formal analysis of the piece, an overview of Morgan's and Berry's perspectives with criticism of the latter.[5] To write a summary of the whole dissertation is beyond the scope and objectives of the current chapter, but I only need to emphasise Garcia's main point when it comes to the criticism of Morgan, Berry and the understanding of the word 'without' from the title of the piece. He writes that 'the chords of the *Bagatelle* are, in effect, tonally meaningless: they do not have 'multiple' meanings, but directly no meanings at all. There is an absolute difference – of essence and not of degree – between the *Bagatelle*'s harmonic behaviour and the procedures of *Mehrdeutigkeit*.'[6] My personal experiences with the *Bagatelle* – performing it and analysing it – have lead me towards a similar conclusion. However, I do not want to dismiss all the tonal associations that are inherent by default in chords such as the dominant seventh, of which there are quite a few throughout the piece. Instead, I would like to stress that all these debates about the potential controlling tonality have side lined the internal logic of the harmonic progressions at phrase level, which my neo-Riemannian analysis will focus on. Without worrying about the overarching key, I will demonstrate the relationships between dim[7] chords and other closely related seventh chords and

[5] Federico Garcia, *Liszt's Bagatelle without Tonality: Analytical Perspectives* (PhD diss., University of Pittsburgh, 2006).
[6] *Ibid*, p. 48.

triads under the premises of semi tonal voice leading and proximity on the *Tonnetz*.
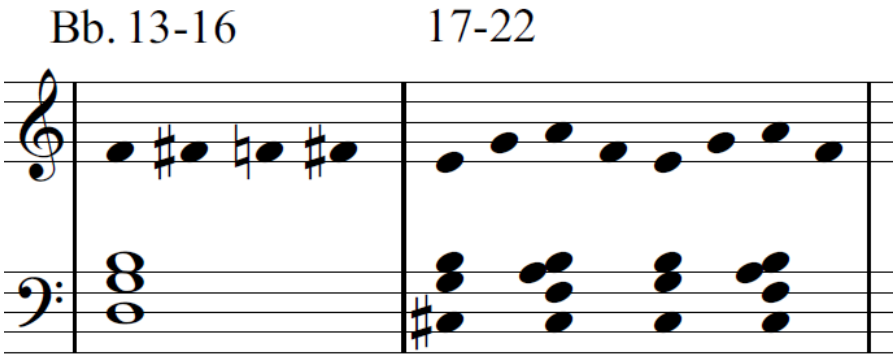
My neo-Riemannian take on *Bagatelle sans tonalité* will consist in putting segments of the piece on the *Tonnetz* and showing that the smooth semi tonal changes on both harmonic (vertical) and melodic (horizontal) level are a main driving force in it. Through such diagrams I will visualise the chordal diversity of the piece, which consists of consonant triads, augmented triads, diminished

Sections	**Subsections**	**Bar numbers**	**Main chord oppositions at phrase level**
Intro		1 – 12	Monodic
A	*a*	13 – 36	G^7 – $Gmaj^7$; $C\sharp ø^7$ – $C\sharp aug$
	b	37 – 56	$C\sharp dim^7$ – Daug; Cm – $C\sharp dim$
B		57 – 85	$C\sharp^7$ – $C\sharp aug$; D^7 – Daug; $E\flat^7$/aug – E^7 – **$Fdim^7$**
Cadenza		86	**$Fdim^7$**
Intro		87 – 94	Monodic
A'	*a'*	95 – 118	$A\flat dim^7$ – $B\flat maj^7$; $Gø^7$ – $B\flat m$; $F\sharp^7$ – $F\sharp maj^7$; $Cø^7$ – Caug
	b'	119 – 148	$C\sharp dim^7$ – Daug; Cm – $C\sharp dim$; $C\sharp$ – **$Ddim^7$**
B'		149 – 176	$C\sharp^7$ – $C\sharp aug$; D^7 – Daug; $E\flat^7$/aug – E^7 – **$Fdim^7$**
Codetta		177 – 183	**$Fdim^7$**

Table 8.1. Sectional subdivision and essential harmonic content of *Bagatelle sans tonalité*.

tetrads and other dissonant sonorities. The fact that any tonal expectations in this piece are denied means that the analysis of it would be more fruitful and meaningful if concentrating on the chord-to-chord progressions, instead of looking for Liszt's large-scale planning.

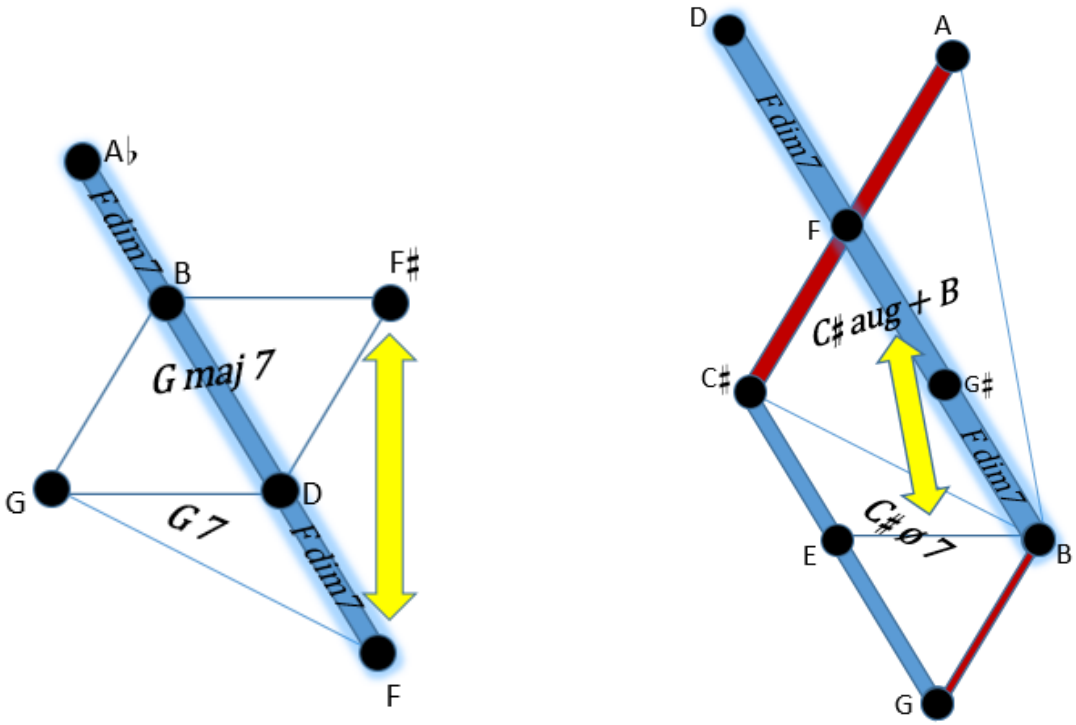
The *Bagatelle*'s form is binary and the second half of the piece is an elaborated repetition of the first. Table 8.1 outlines its sectional subdivision and lists only the most essential chords in it, which are labelled as chord oppositions, because most of the time phrases are based on an oscillation between two chords, with the occasional interpolation of other passing harmonies. The present examination will focus on the relation of any chord to the diminished seventh chord on F or C♯, with C♯dim^7 being more prevalent in the *b* sections.



Ex. 8.1. Harmonic reduction of bars 13-22 of *Bagatelle sans tonalité*.

The main melodic idea of the piece is presented at the beginning of section *A* (bars 13-16) and it is based on the oscillation between G^7 and Gmaj^7 when the sextuplets get reduced to their most essential pitches (see ex. 8.1). This chord couple includes one of the dominant sevenths maximally close to Fdim^7 and another seventh chord, which is slightly more distant (two units of voice leading work away), as it can be seen on the corresponding *Tonnetz* diagram (fig. 8.1a).
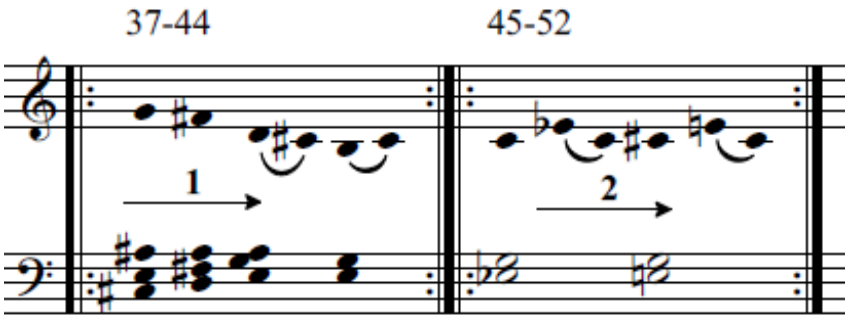
The next phrase (bars 17-24) oscillates between other two chords, has its slightly varied repetition in bars 29-36 and, in similarity to the whole *b* sub-section (bars 37-56), keeps chords relatively close to C♯dim^7. This can be observed on figure 8.1b. Firstly, looking at the first beats of bars 17-20, there is



8.1a **8.1b**

Fig. 8.1. *Tonnetz* representations of bars 13-16 (a) and 17-22 (b) of *Bagatelle sans tonalité*.

an alternation between C♯ø^7 and a whole-tone scale segment, which includes C♯aug and B. The *Tonnetz* representation of this couple reveals that there is a movement towards the neighboring dim^7 chord, while each of the new chords still includes one pitch from the previously suggested and later strengthened Fdim^7 (underlined with a glow again).



Ex. 8.2. Harmonic reduction of bars 37-52 of *Bagatelle sans tonalité*.

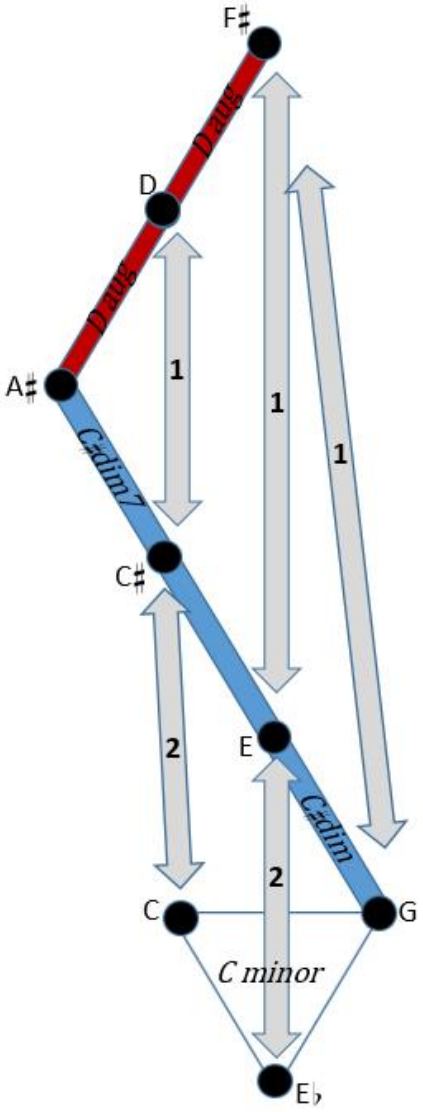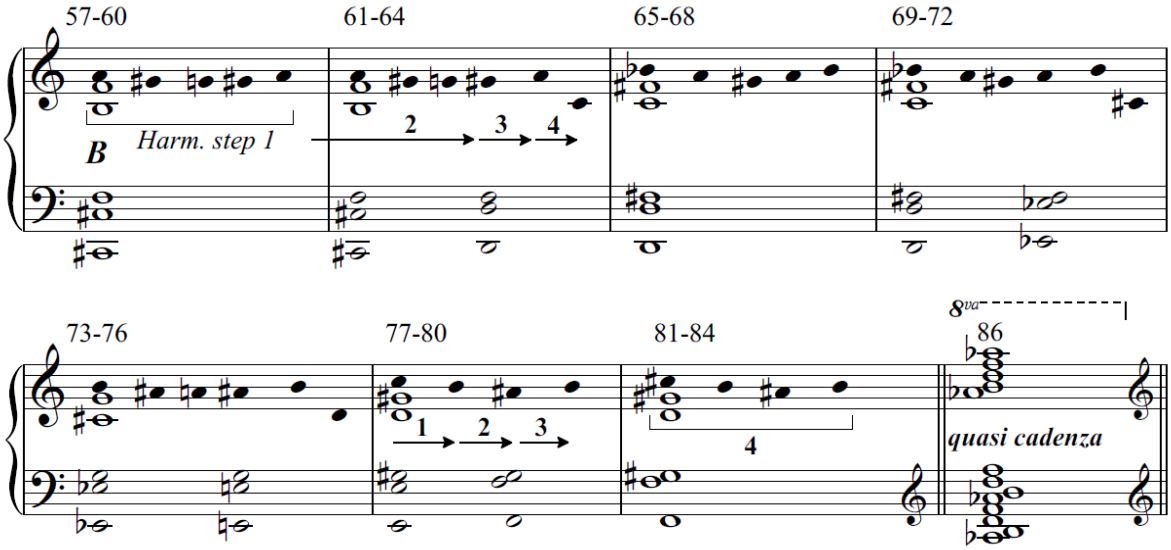


Fig. 8.2. *Tonnetz* representation of bars 37-52 of *Bagatelle sans tonalité*.

A new melodic idea initiates section *b* and my reduction of bars 37-44 (ex. 8.2) implies that on the *Tonnetz* there should be an oscillation between two stripes (fig. 8.2). The arrows indicate voice leading as opposed to pointing at the whole chords. This figure also includes the harmony of the following phrase (bars 45-52), where C minor and C♯dim are alternated between. The predominance of straight vertical bi-directional lines means that section *b* is based on semi tonal movement up and down between couples of chords. In each phrase the centrally-positioned C♯dim^7 has the final say and it is restated with the monodic tail of the section, which corresponds to Morgan's analysis of the piece. In regards to the whole *A* section it can be summarised that there is a movement from the chromatic pitch space around Fdim^7 to the pitch space around C♯dim^7 and the diminished seventh chords get affirmed as referential (or central) sonorities. It is the same conclusion that came from Morgan's neo-Schenkerian reductions, but presently we can observe chord proximity on the *Tonnetz* and seek to find patterns that recur throughout the piece.



Ex. 8.3. Harmonic reduction of section *B* and the *quasi cadenza*.

Unlike section *A*, the harmonic patterns in *B* are much more rigorously organised and consist exclusively of semi tonal transformations between chords. If we extract only the essential chords of each phrase (as is the case in table 8.1), a juxtaposition between dominant seventh chords and augmented triads is revealed. The augmented triads can actually be considered a segment of the

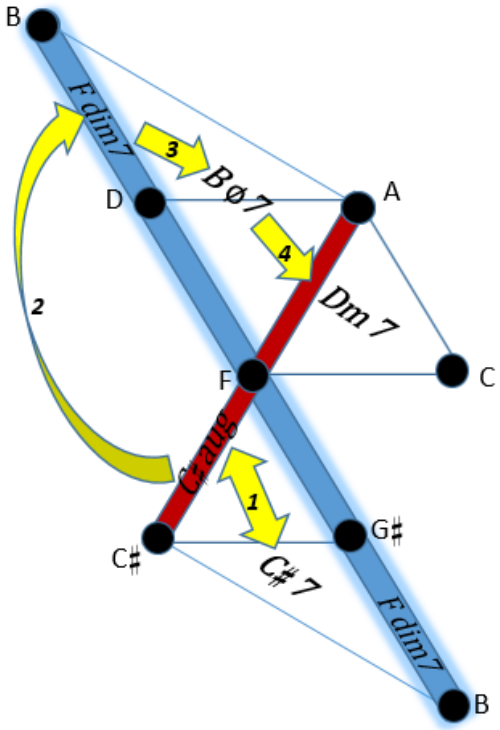


Fig. 8.3. *Tonnetz* representation of bars 57-64 of *Bagatelle sans tonalité*.

whole-tone scale, which in bars 57-60 includes the pitches C♯, F, G, A and B. The latter could be described as gravitating around C♯^{7} in a more tonal context (if a tonic F♯ minor is to follow), but such tonic expectations never materialise in the *Bagatelle*. Instead, the relationships between chords would better be described as non-hierarchical, except when it comes to the diminished seventh chords (and especially Fdim^{7}), which will prove to have a more structural role. The move of the bass C♯ to D leads to the brief appearance of some other seventh chords,

which are all depicted on the *Tonnetz* figure 8.3. Even though Fdim^7 does not yet seem to be important at that point, it is positioned centrally on this figure, which visually leaves the impression that harmony evolves 'around' it. The next 8-bar phrase (bars 65-72) is a literal transposition upwards by a minor second of the first, and accordingly a *Tonnetz* representation of it would look the same, but

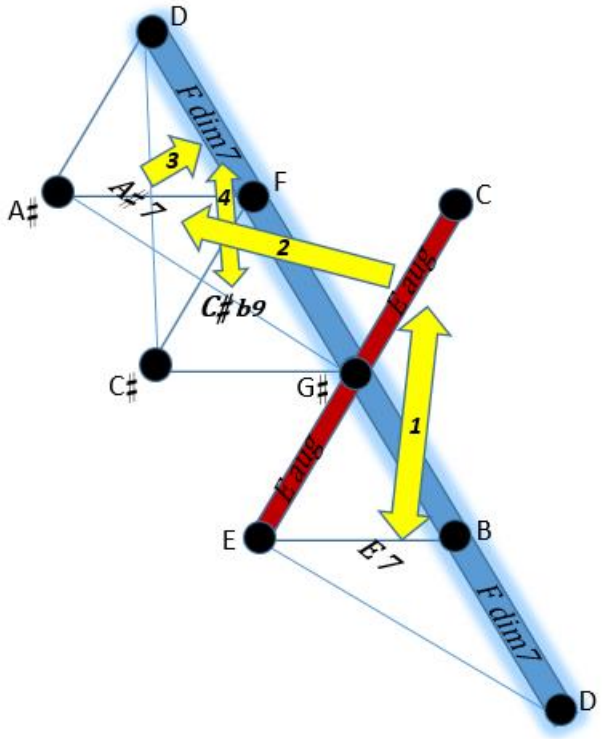
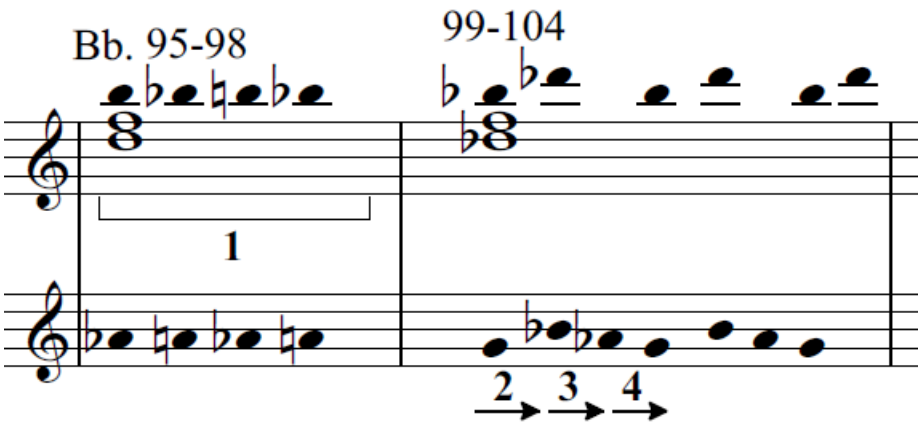


Fig. 8.4. *Tonnetz* representation of bars 77-86 of *Bagatelle sans tonalité*.

having Cdim^7 at its center. After that the harmonic rhythm accelerates and the same sequence of chords repeats another semi tone higher within only 4 bars (73-76). The final eight bars of this sequence differ and they are represented on a separate *Tonnetz* diagram for comparison (figure 8.4). As it stands, there is an augmented triad again (as part of a whole-tone scale, which cannot be satisfactorily shown on the grid) and three other seventh chords, all of which are maximally close to the eventual Fdim^7. The 'central' diminished seventh chord of

the piece is explicitly stated at this moment (the culmination of the first half of the piece) and then prolonged throughout the cadenza, which itself is based on the octatonic scale, which combines Fdim^7 and C♯dim^7.



Ex. 8.4. Harmonic reduction of bars 95-104 of *Bagatelle sans tonalité*.

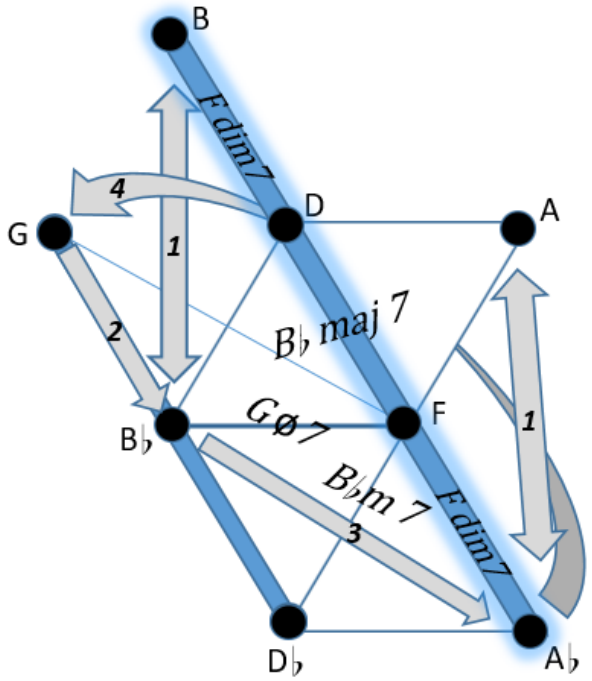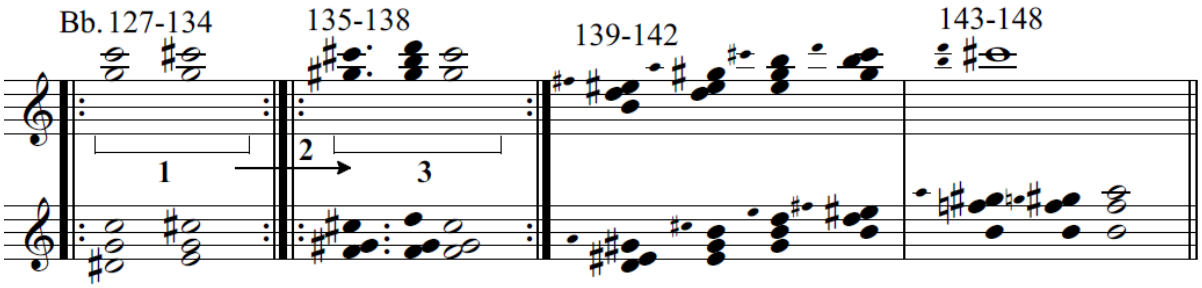


Fig. 8.5. *Tonnetz* representation of bars 95-104 of *Bagatelle sans tonalité*. Voice leading between pitches is shown instead of transformations from chord to chord.

Coming to the second half of the piece, it is important to point out how it harmonically diverges from the first half, while being nearly identical structurally. Firstly, let us compare bars 13-22 with the corresponding two phrases in section *A'*. When the main motif returns it is transposed up a minor third, so the oscillation F-F♯ changes to A♭-A. It can be seen on the corresponding *Tonnetz* diagram (fig. 8.5, step 1) that now the first chord in the couple is the final dim^7 chord instead of a dominant seventh, and it transforms back and forth with the B♭maj^7. Unlike bars 13-16, the accompanying chord also changes, so there is a second oscillation between B and B♭ at the very top voice (see also ex. 8.4). In the second phrase of *a'* the change is even bigger compared to bars 17-22. Instead of juxtposing diminished and augmented harmonies, Liszt here alternates between GØ^7 and B♭m^7 by sliding G up to B♭ and back through A♭. Judging from comparing these two segments of the *Bagatelle* (bars 13-22 and 95-104) it seems that the composer has been more willing to disrupt patterns than to reinforce them and by making small semi tonal changes he has been able to change harmony sometimes more subtly, sometimes drastically.



Ex. 8.5. Harmonic reduction of bars 127-148 of *Bagatelle sans tonalité*.

A comparison of bars 107-116 to their equivalents in section *a* reveals a literal transposition downwards by a semi tone, which comes surprising after the preceding varied repetitions. Still, after that in bar 118 the music arrives at the

melody and exactly same pitch level where it has been at the beginning of the *b* subsection. From 127 onwards the repetitions get melodically elaborated in the typical Lisztian virtuoso manner and a quick glance at the rest of the piece might show that harmonically nothing changes significantly until the very end. However, instead of going from the Cm – C♯dim phrase directly into the *B'* section, Liszt inserts one additional phrase at this moment of greatest tension. A C♯ major (with F instead of E♯) quickly alternates with $Ddim^7$ and foreshadows

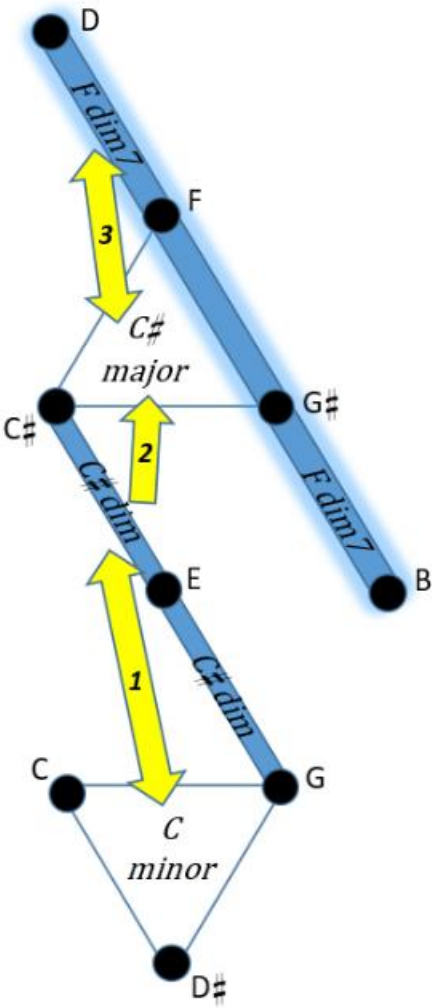


Fig. 8.6. *Tonnetz* representation of bars 127-138 of *Bagatelle sans tonalité.*

the eventual prominence of the latter chord. On the *Tonnetz* the progression seems to connect a series of disjunct chords, which only share one pitch with one another, while only C♯ major is maximally close to the Fdim^7 (fig. 8.6). Unlike the other figures presented so far, on this last diagram dedicated to *Bagatelle sans tonalité* there is a one-directional movement heading upwards and representing the semi tonal upshifts. Most closely resembling is figure 8.2, on which the movement is also one-directional and vertical, but heading downwards on a phrase-to-phrase (or arrow-to-arrow) level.

The melodically elaborated section *B'* is based on the same sequence of chords as *B* and leads into the short *codetta*, which is exclusively filled with diminished sonorities. Movement is not restricted to the same octatonic collection this time, but instead of that all three possible diminished seventh chords are included. At the end, the 'main' Fdim^7 is reiterated in the high register and concludes the piece in a manner highly unusual even for the forward-looking composers and musicians of the time.
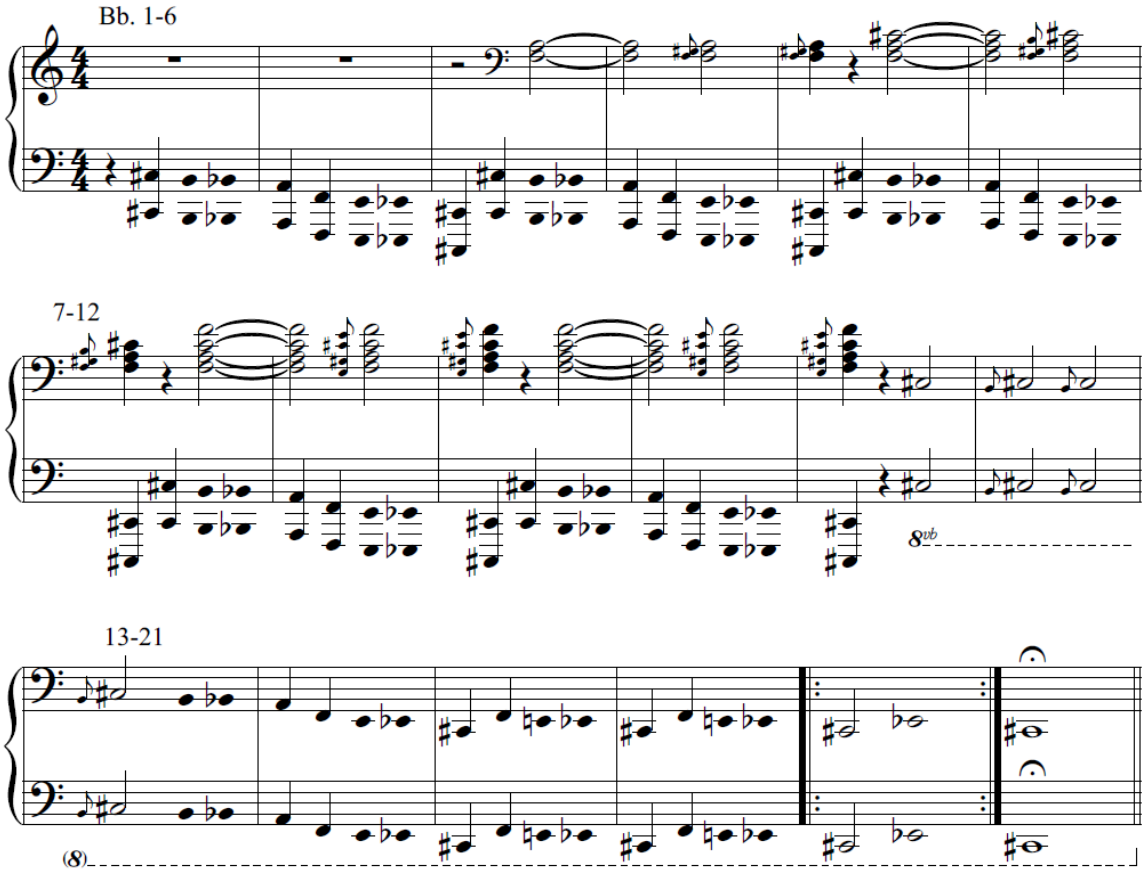
The above observations do not discover something completely new about the piece, which has not been pointed out in earlier studies. However, I would like to stress the advantages of neo-Riemannian theory in the current case. *Bagatelle sans tonalité* is almost exclusively based on semi tonal chromatic voice leading between a variety of chords, none of which seem to form even a single diatonically coherent phrase. Therefore, the issues of overarching tonality or smaller-scale 'tonal meanings' can be overlooked at the expense of focusing on the types and logical continuations of chord-to-chord relations. Morgan's analysis of the piece has been excellent in showing how Fdim^7 gradually gets affirmed as some kind of a central sonority for the piece, but my neo-Riemannian analysis is better in illustrating small-scale chord proximities and movement in pitch space, which would be harder to pin point on a loaded Schenkerian

reduction. For the current analytical inquiry reductions are only means to extracting the essential chordal content of the music, which is then followed with tracing paths through pitch space on the *Tonnetz*. By laying out chords in the geometrical plane of the latter we can see how in some passages harmony evolves 'around' certain centrally positioned chords, such as in figure 8.3 or stays chromatically close to them (fig. 8.4).

In summary, diminished seventh chords play an important role in the *Bagatelle sans tonalité* and can be observed as chromatic neighbors to the chords in use a lot of the time when they are not directly used, as evident from all of the above *Tonnetz* diagrams. Therefore, the harmony of the piece can be described as having a hidden structural backbone in the face of the diminished seventh chord, which eventually becomes clearly exposed at the end of the *B* sections, throughout the cadenza and the codetta. My analysis confirms Morgan's claim about the Fdim^7 gradually gaining prominence (compare ex. 8.1 with ex. 8.4 and fig. 8.1 with fig. 8.5), while the importance of C♯dim^7 has also become evident on the *Tonnetz* (ex. 8.2 and fig. 8.2). Moreover, the above *Tonnetz* diagrams confirm that throughout the piece there aren't many recurring strict patterns of moving through pitch space except of the 8-bar model, which is at the basis of section *B*. Also, voice leading parsimony has not been strictly sought after and often there is an alternation between closer and more distant chords being connected on the tonal grid. In short, this piece seems to have been conceived freely, without a strict pre-planning when it comes to its harmonic syntax, and therefore it remains one of the most striking examples of Liszt's experimentations in his latest years.

2. *Trauervorspiel und Trauermarsch* –
C♯dim^7 as a central sonority
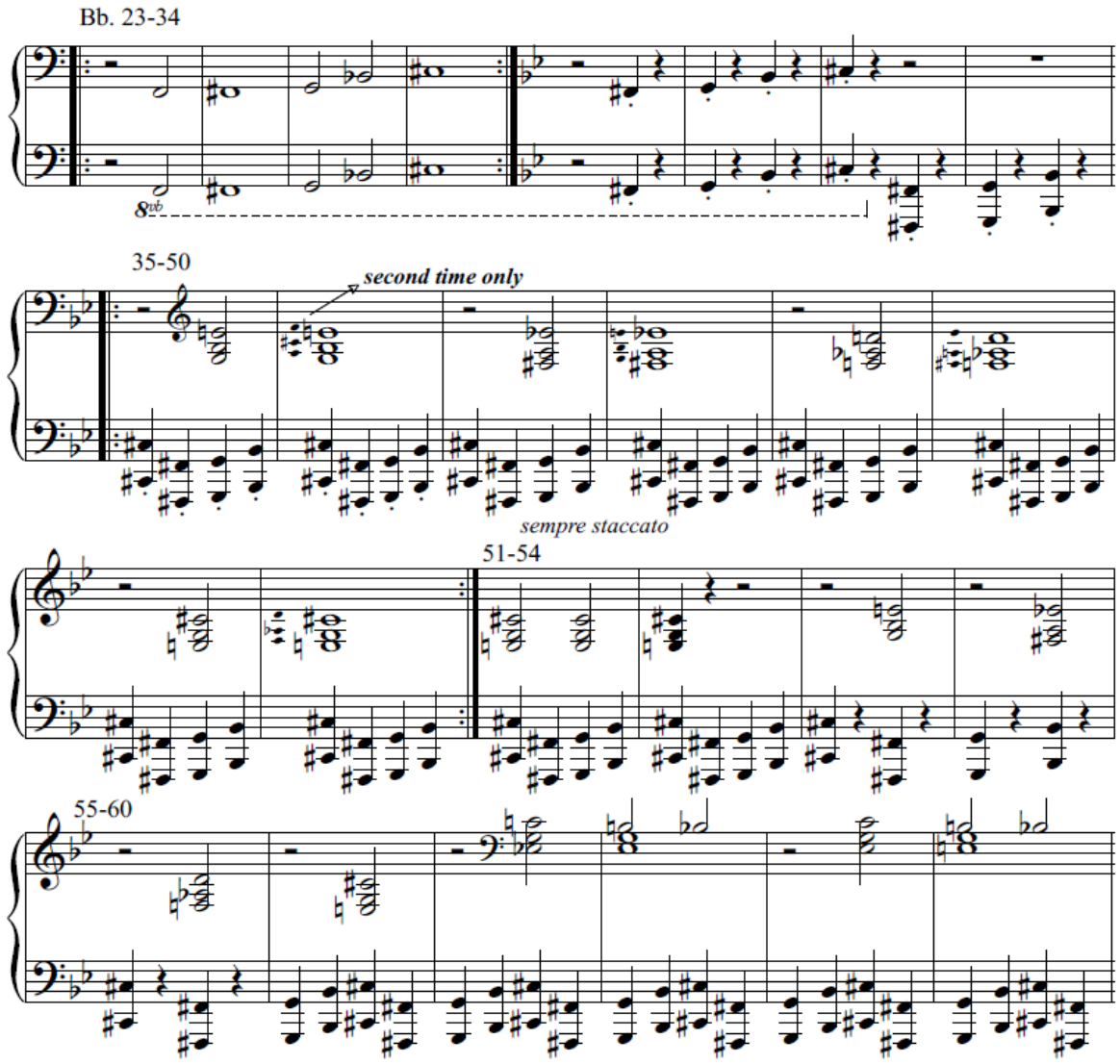
This piece (catalogued S. 206 and composed in 1885) divides into two sections, separated as movements – funeral prelude and funeral march – and represents Liszt's most dissonant and sinister nature, typical of only a handful of late piano works. The harmony rarely demonstrates a coherence between the right-hand and left-hand parts. In fact, the lower part is almost entirely limited to the repetition of the ambiguous four-note motif F♯-G-B♭-C♯, while above it various sequences of tonally indeterminate chords (the majority of them being diminished sevenths) unfold.



Ex. 8.6. *Trauervorspiel*.
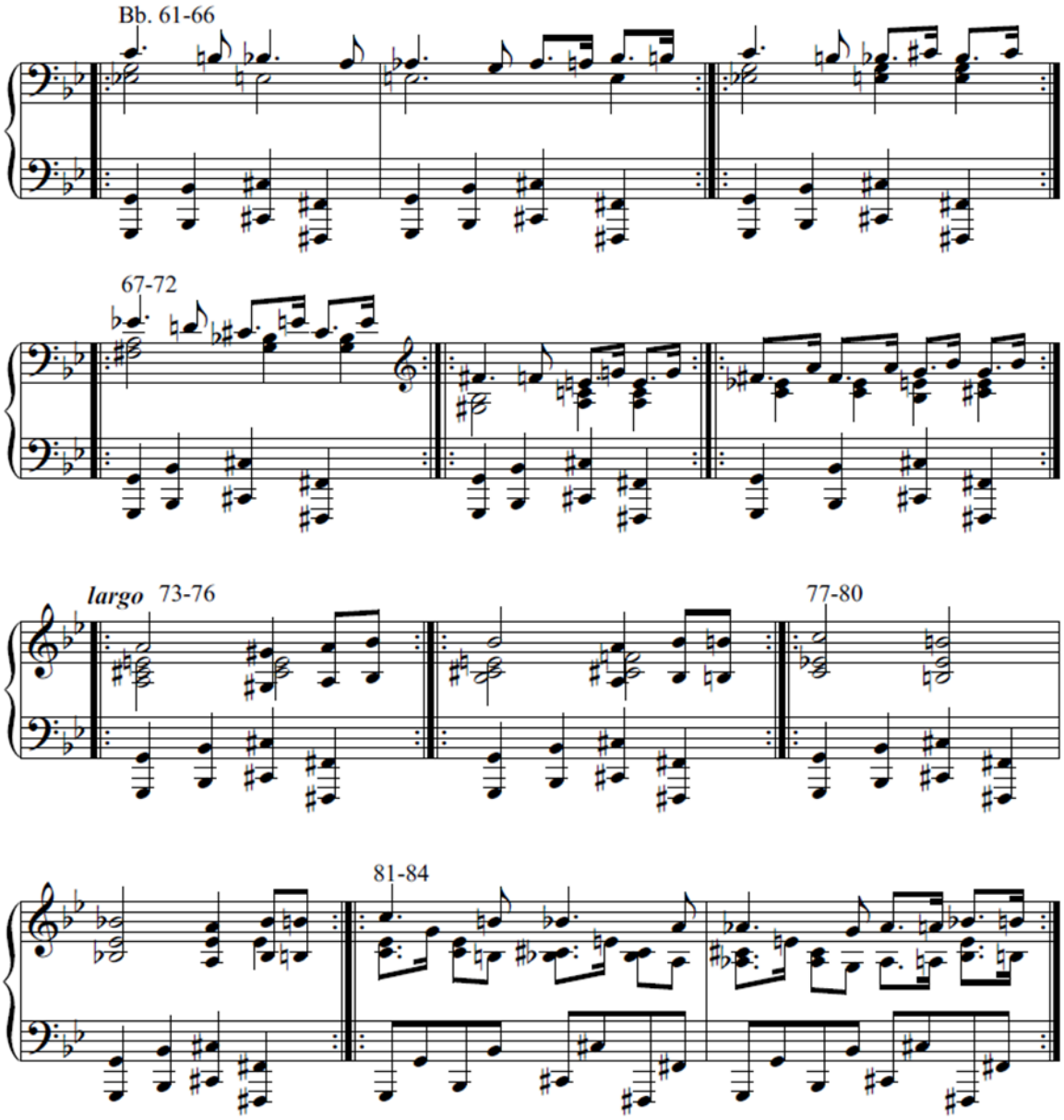
The short prelude is based on a descending bass line, which goes through an unusual combination of semi tones, whole tones and the major triad between A and F. A closer inspection reveals that this line is a melodic palindrome, consisting of the following combination of intervals: tone, semi tone, semi tone, major triad, semi tone, semi tone, tone. After being superimposed against the chords above it, it becomes obvious which of its pitches are structurally more important (see ex. 8.6, only stemmed notes in left hand are part of the structural C♯aug). The sequence of chords in the prelude (and we can only talk of one within bars 3-11) emphasises Faug and all the other sonorities, which briefly appear as quavers, can be brushed away as appoggiaturas to it. In other words, both the Fdim in bar 6 and the C♯ minor in bar 8 have a subsidiary status in respect to the Faug, which dominates the prelude on both harmonic and melodic level. It turns out that the B, B♭, E and E♭ in the bass line are passing notes between the pitches of the C♯aug, which is continuously affirmed and reduced to its root note at the end of this section.

As soon as the march begins, a new bass line is introduced, one which will not be substituted with anything else for the remainder of the piece. It is hard to find an analogue to the persistence of this F♯-G-B♭-C♯ motif across Liszt's *oeuvre*. It would have been very hard to get the right impression about the nature of the piece, with its clashing lines and dotted rhythms, from a harmonic reduction, and therefore most of it is shown in an almost unchanged form, with only minor reductions and omissions (ex. 8.7-10). Considering both the repeated bass line and its harmonic accompaniment it can be inferred that G-B♭-C♯ (being a broken Gdim triad) is a thematic kernel for the *Trauermarsch*. The first chord appearing after the bass ostinato has gradually gained rhythmic momentum is a first-inversion Edim, which later gets reinforced as a complete dim^7 chord. Edim



Ex. 8.7. Bars 23-60 of *Trauermarsch*.

descends down in semi tones and reaches C♯dim in bars 41-42, while the bass line inevitably clashes with the intermittent diminished triads, in similarity to the dissonant clashes occurring with the chromatically descending augmented triads in *Nuages gris*. The repetition of this sequence of chords (bars 43-50) involves quick neighboring motions to other diminished and augmented chords, which begins the process of gradually exacerbating the dissonantness of the piece. C minor, E♭aug and E♭ major are added to the harmonic mix in bars 57-60,
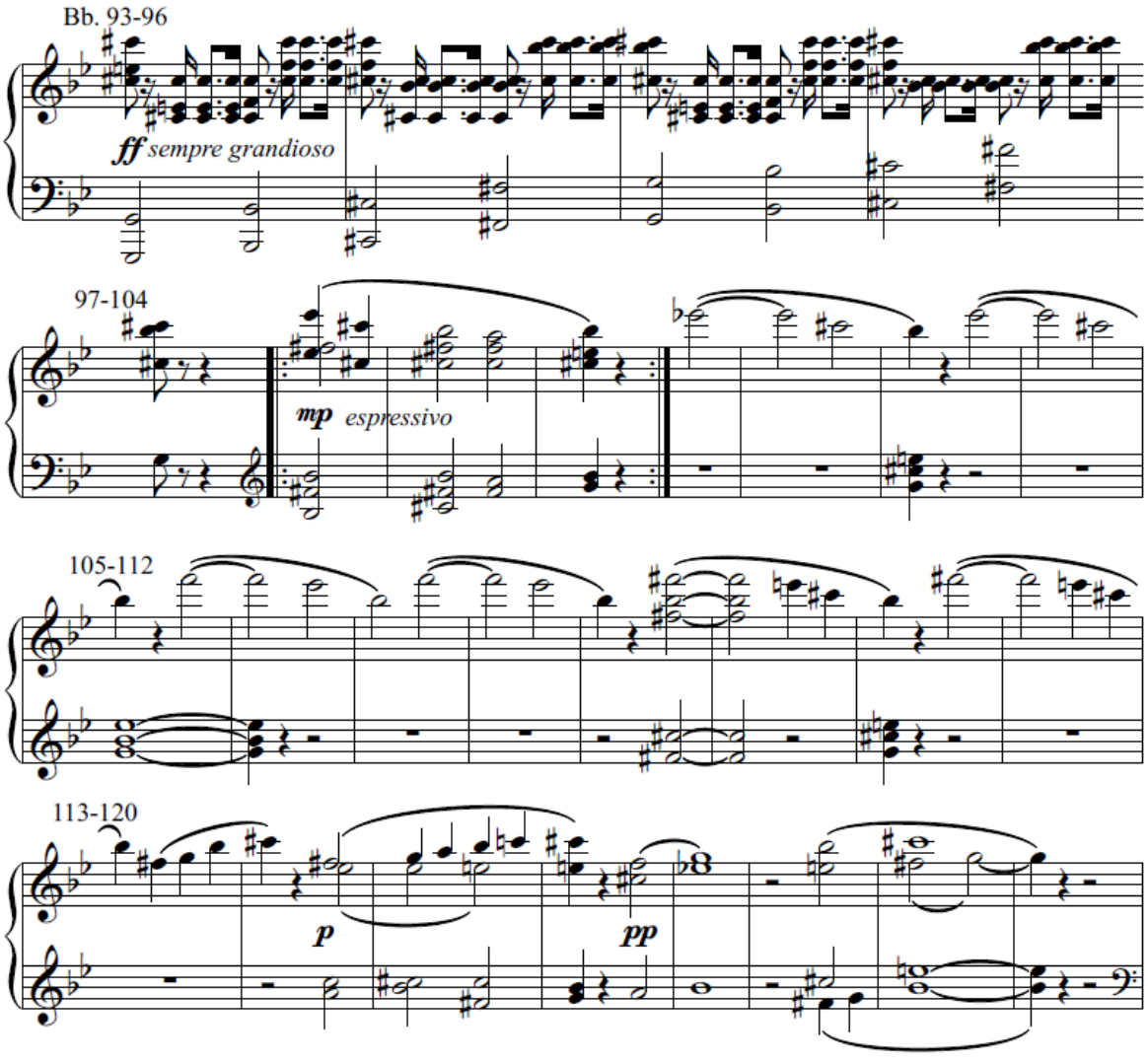


Ex. 8.8. Bars 61-84 of *Trauermarsch*.

constituting a preparation for the main theme of the march, which unfolds from bar 61 onwards.

The already conspicuous Gdim^7 becomes more and more frequently recurring in all of its inversions throughout this theme (that is bars 61-72) and creates the impression alongside the other chords of its type that the diminished

seventh sound is exploited to its limits. The phrase titled *largo* (bars 73-80) is supposed to offer a break from that by including some consonant chords and longer note values, but the contrast is insignificant. Moreover, the main theme repeats in a texturally expanding form, which further intensifies the tension throughout bars 81-92.[7]

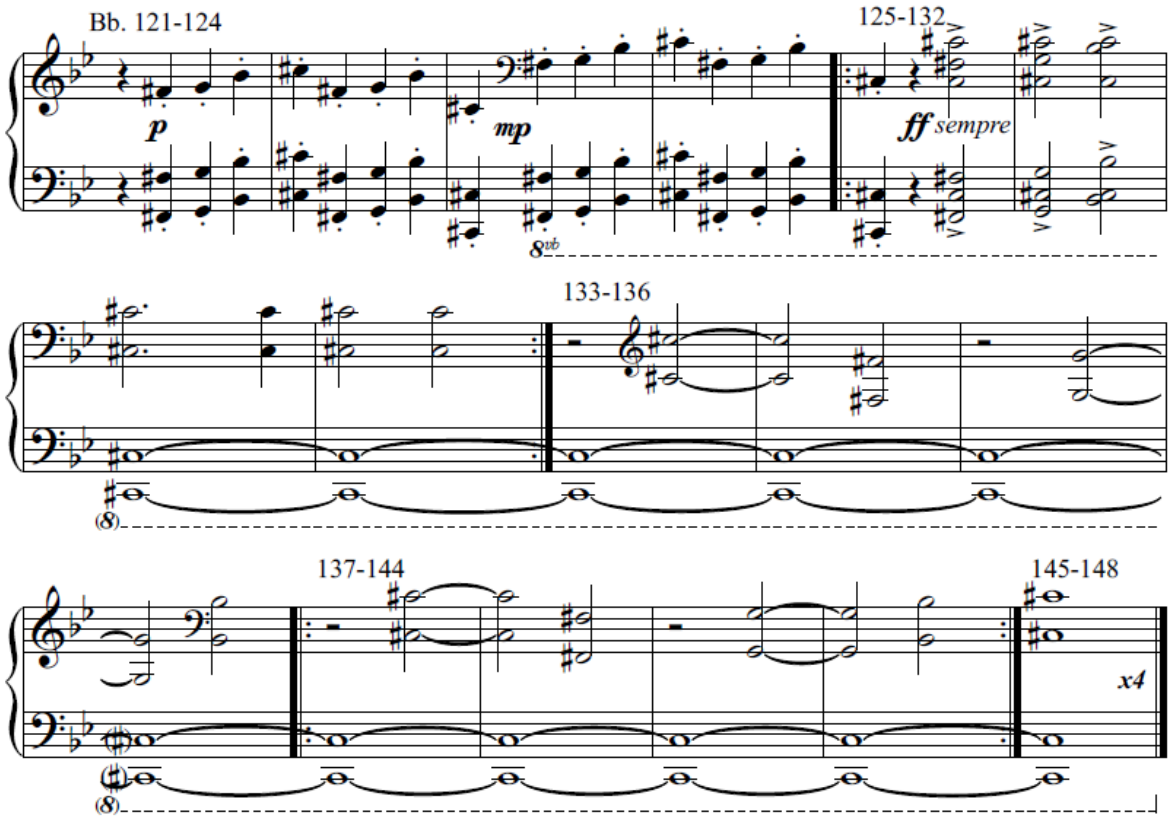


Ex. 8.9. Bars 93-120 of *Trauermarsch*.

[7] Only the first 4 of bars 81-92 are included in example 8, in order to show the textural expansion. The rest repeats bars 65-72 without any harmonic and phrasal changes until the culmination from bar 93 onwards.

The first major culmination of the piece is reached in bars 93-97, where Gdim^7 alternates with a misspelled B♭ minor and F♯ major – both maximally close to the former, resulting from minor chromatic inflections (see ex. 8.9). The following contrasting section (bars 97-120) is the only oasis of consolation in the piece, but harmonically little changes – a few more consonant triads, such as E♭ major, E♭ minor and F♯ minor appear, but the emphasis on Gdim^7 and the main motif in the bass line remains highly conspicuous.

A final intensification over the main four-note motif happens in the last 27 bars of *Trauermarsch*. Gdim^7 is surrounded by F♯ major and C♯ major, before the bass abandons the motif and reaches a final climax on a low C♯ octave *tremmolando.* Meanwhile, the ostinato is transferred to the higher voice and repeated invariably until the very final long C♯.



Ex. 8.10. Bars 121-148 of *Trauermarsch*.

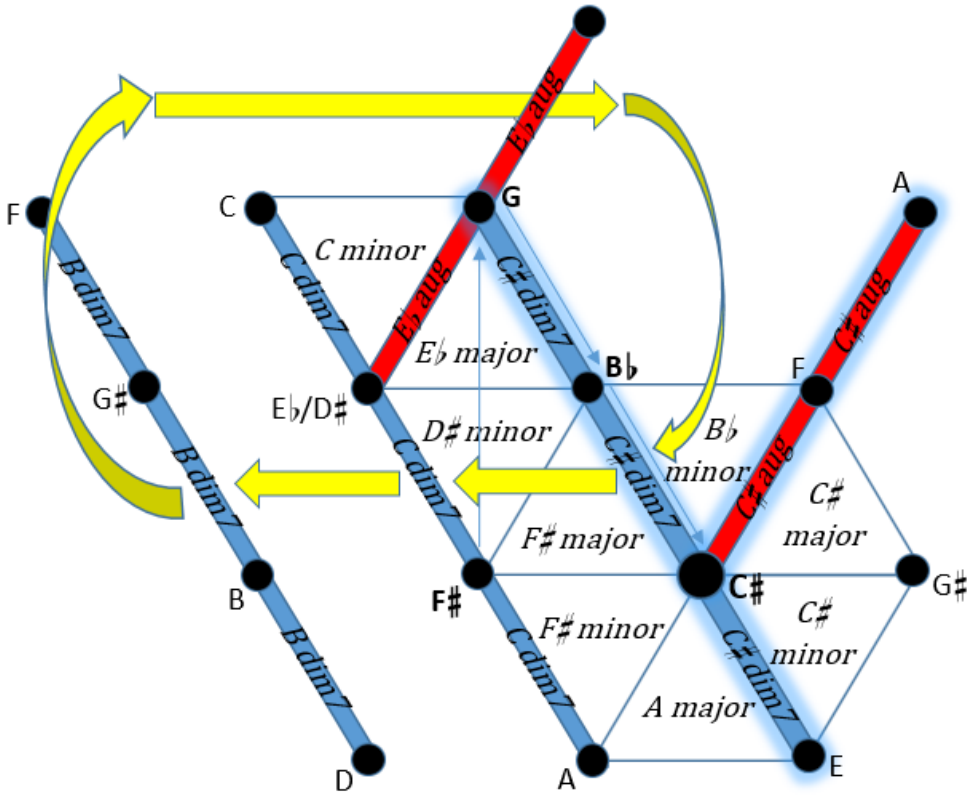


Fig. 8.7. The essential harmonic content and harmonic movement of *Trauervorspiel und Trauermarsch*.

Without tracing the harmony on a chord-to-chord level, which would be impractical in the current case, figure 8.7 positions the main chords on the *Tonnetz* and divides them into two groups of importance. The two most important chords in the piece are C♯aug for the *Trauervorspiel* and C♯dim^7 for the *Trauermarsch* and accordingly these are emphasised with a blue glow. The other two diminished seventh chords, which are transitioned through several times in the march, are shown to the left of the main one, while the circular descending movement through them is depicted with the yellow arrows. The smaller blue arrows show the movement between the pitches of the main motif of the march. Clearly, a movement upwards by a semitone (from F♯ to G) is followed by a movement in minor thirds along the pitches of the C♯dim^7 (excluding E).

All the consonant triads, which occur sporadically throughout the piece, are shown on the diagram. It becomes conspicuous that all their corresponding triangles are neighboring one another (hence being maximally close to one or two other consonant triads). Moreover, of the nine major or minor triads depicted on the figure, five are maximally close to C♯dim^7, four are part of the Weitzmann region of C♯aug and only two (C minor and D♯ minor) are slightly more distant, but still share a pitch with C♯dim^7. This eloquently leads to the conclusion that smooth chromatic voice leading around the most prominent two chords of the prelude and march is very effectively explored in this late elegiac piece of Liszt. The other important conclusion arising from the diagram is the fact that C♯ is an overtly emphasised central pitch, taking the role of tonic triads in such post-tonal pieces. Its location on figure 8.7 is as central as it could possibly be, lying at the intersection of the two main chords and being surrounded by the maximum six consonant triads, which share it. Throughout the piece it occurs conspicuously at all the important moments, opening and closing the *Trauervorspiel*, being an integral part of the main motif of the *Trauermarsch*, and eventually closing the piece by itself.

Looking beyond the above analysis, the pitch of C♯ is emphasised in very similar ways in the low register in other late dirges of Liszt, including *R. W. – Venezia*, *Am Grabe Richard Wagners* (to be discussed in next chapter) and *Aux Cyprès de la Villa d'Este I.*[8] It is as if the composer was trying to draw some points of reference, on which the attentive listener and Liszt himself could lean and feel some security in the absence of clear tonal procedures.

[8] In *Aux Cyprès I* the low accented C♯s occur more briefly but again with *fff* and *tremmolando* during a large culmination in the middle of the piece.
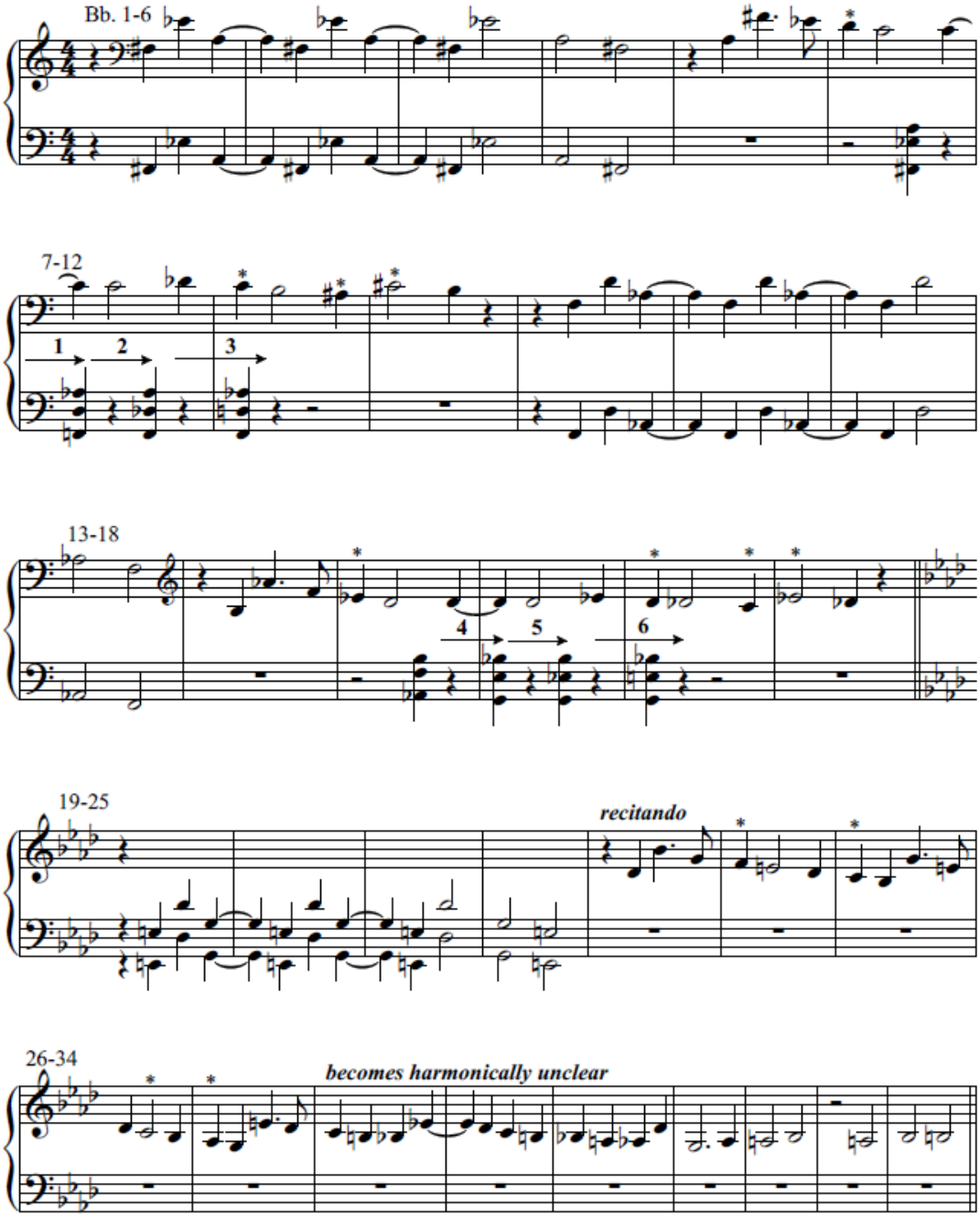
3. *La lugubre gondola II* – A frame made of diminished seventh chords around the main thematic sections

While the common origin of the main themes of the two funeral gondolas is obvious, a single listening of number 2 (completed earlier in 1882 and catalogued S. 200/2) is enough to reveal a different formal subdivision and different harmonic underpinnings. Table 8.2 shows my sectional division of the piece, whereby the *A* and *B* sections contain the main thematic material and are based on consonant triads, while the introduction and the transition have the diminished seventh chords on E and F♯ as central sonorities.

Section	**Bar numbers**	**Key signature(s)**	**Main structural chord(s)**
Introduction	1 – 34	None → 4 flats	F♯dim^7 → Edim^7
A	35 – 68	4 flats → 1 sharp	Fm → Em
B	69 – 108	2 sharps	B → A
A'	109 – 124	4 flats	Fm
Transition	125 – 139	4 flats	Edim^7
Coda	140 – 168	None	G♯m?

Table 8.2. Sectional subdivision and main structural harmonies in *La lugubre gondola II*.

A quick inspection of the table might lead to the conclusion that dim^7 chords are not too important for the harmonic structure of the whole piece, because they are heavily emphasised only in the introduction and the similar to it transition, which combined together comprise less than a third of its duration.



Ex. 8.11. The introduction of *La lugubre gondola II*.

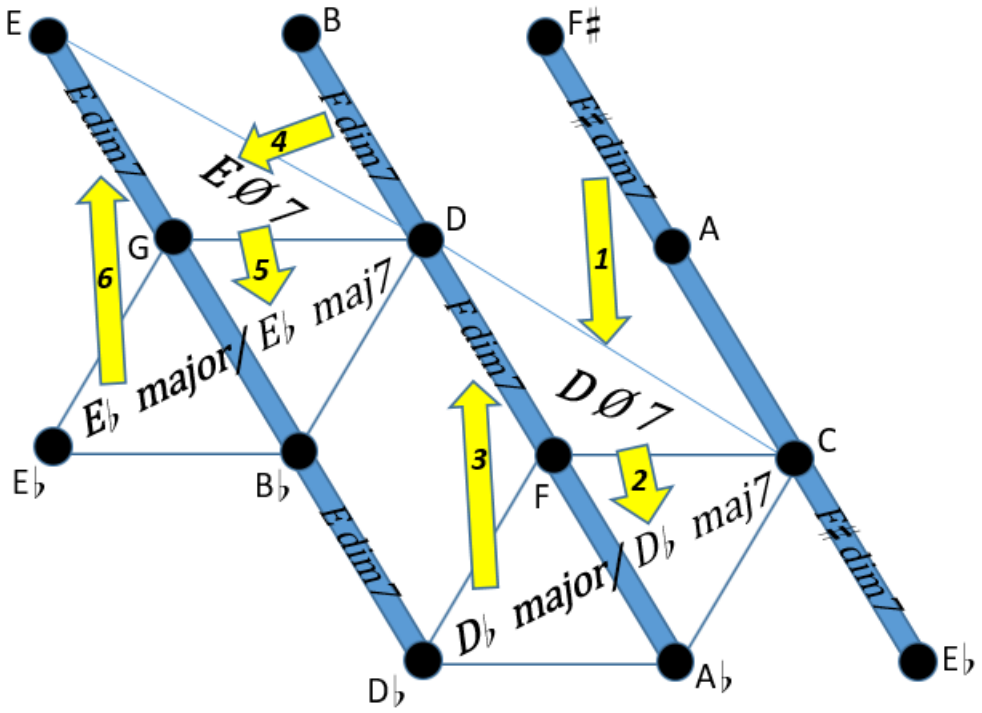


Fig. 8.8. The harmonic progression within the introduction of *La lugubre gondola II*.
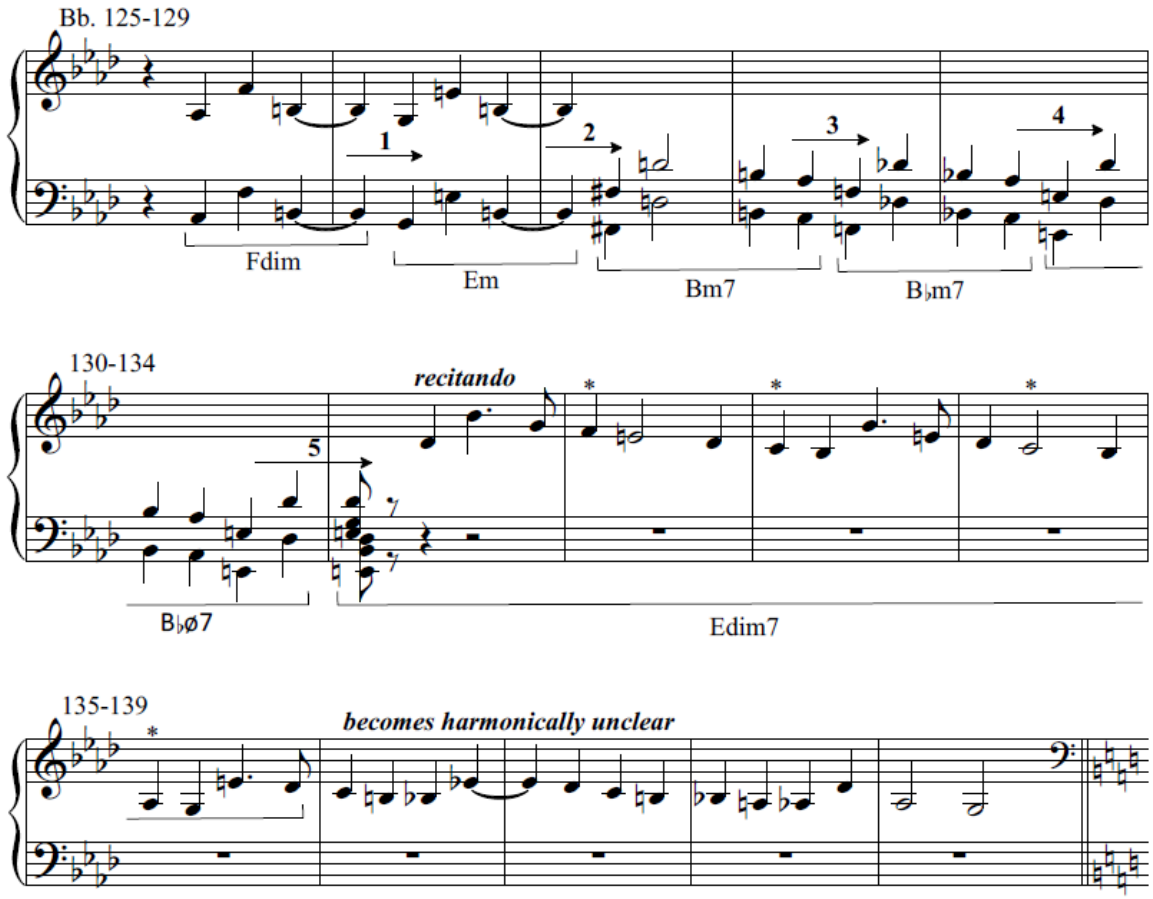
However, these chords are employed in a very overt way from the very beginning, not only becoming the main harmonic pillars for these two sections, but also being the main building blocks of the melody.

The opening three-note motif encapsulates the essence of the piece, imitating the leaning of the funeral gondola in the waters of Venice in a grim way through the use of the pitches of the E♭dim triad. This simple melodic idea will be repeated obsessively throughout the introduction and transition and sketchily reappear in different harmonic guises throughout the other sections. The fourth pitch from the F♯dim^7 chord is added in bar 6 (see ex. 8.11) and a little later it becomes clear that the whole introduction is based primarily on diminished seventh chords. Because of the importance of the opening motif and the presence of a number of non-harmonic notes and extended melodic lines in this introduction, it is shown almost entirely unchanged from its original score

version in example 8.11, with non-harmonic tones being marked with an asterix. Three closely related chords of other types follow after the initial 6-bar standing on F♯dim7 and these are all depicted on the *Tonnetz* figure 8.8. As it becomes visible on the diagram, the first three of these transitional chords are actually chromatically closer to the forthcoming Fdim^7, so most of the voice leading work towards the second 9-bar phrase is already done in bar 7. Two semi tonal downshifts bring Dø^7, which is then followed by D♭maj^7, and the latter is quickly reduced to D♭ major. D♭ breaks down into D and B in bar 8 and the second diminished seventh chord – Fdim^7 – is reached before the end of the first extended phrase. Depicting this progression on the *Tonnetz* reveals the symmetry between the first and the second such phrase and the fact that the latter is only a transposition down a semi tone of the former. Therefore, one more half-diminished, one maj^7 chord and a major triad transition toward the third possible dim^7 chord – Edim^7, which arrives in bar 17 and completes the circle around the 12 pitch classes of the *Tonnetz*. The latter dim^7 chord is then reaffirmed in a long unaccompanied *recitando*, which strengthens the supremacy of this symmetrical sonority in this relatively long introduction. In the final 7 bars of this section (28-34) the monodic passage is considered to become harmonically unclear, representing one of Liszt's highly chromatised monodic transitions, whereby the notes in use lose attachment to any particular chord.

A few words about the transition section with its similarities and differences from the introduction follows suit here. Firstly, and most obviously, only two of the three diminished seventh chords are used in this briefer section. Secondly, the sequence of transitional chords differs, this time including a minor triad, two minor seventh chords and a half-diminished seventh chord (see ex. 8.12, bars 126-130 and fig. 8.9). Thirdly, the *recitando* from the introduction is repeated in a very similar form, prolonging the Edim^7 again and leading towards

the next section. Last but not least, unlike the opening section, everything here is outlined melodically and left unaccompanied, consisting of unison octaves or a single melodic line only. This blurs the perception of the transitional chords, while the diminished sevenths remain conspicuous through the repetitions of the haunting opening motif.



Ex. 8.12. The transition of *La lugubre gondola II*.

With their positioning the introduction and transition build a frame around the main thematic sections of the piece. It can be argued that their importance is bigger than their labelling implies, because a memorable three-note motif is repeated a number of times. Moreover, the two sections in question do not have an equivalent in the first *Lugubre gondola,* and they are

the main markers that distinguish the currently analysed piece from its counterpart on both formal and harmonic level. As for the main theme of the *A* section, it is similar to the *A* theme of the other gondola, while bearing some

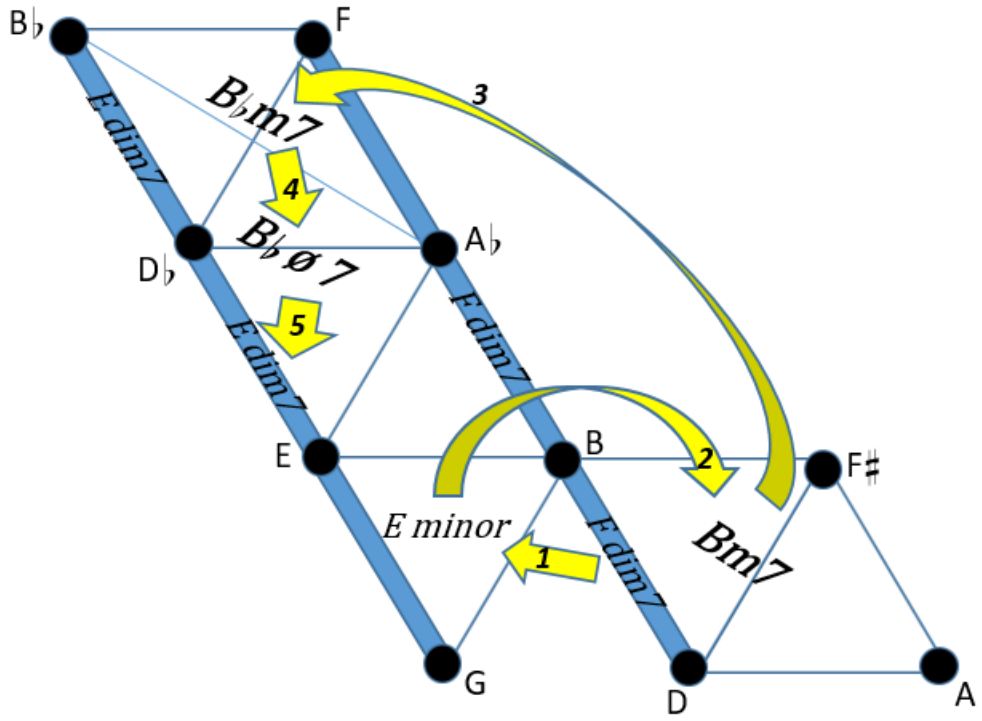


Fig. 8.9. The implied harmonic progression within the transition of *La lugubre gondola II*.

similarity to the initial three-note motif in the ascending sixth and the following descending motion. Such observations justify the importance of the two framing sections of the piece, while the importance of the diminished seventh chords within them has been proven through noticing their durational emphasis and the fact that other chords appear only very briefly and serving to smoothen the chromatic transition between them.

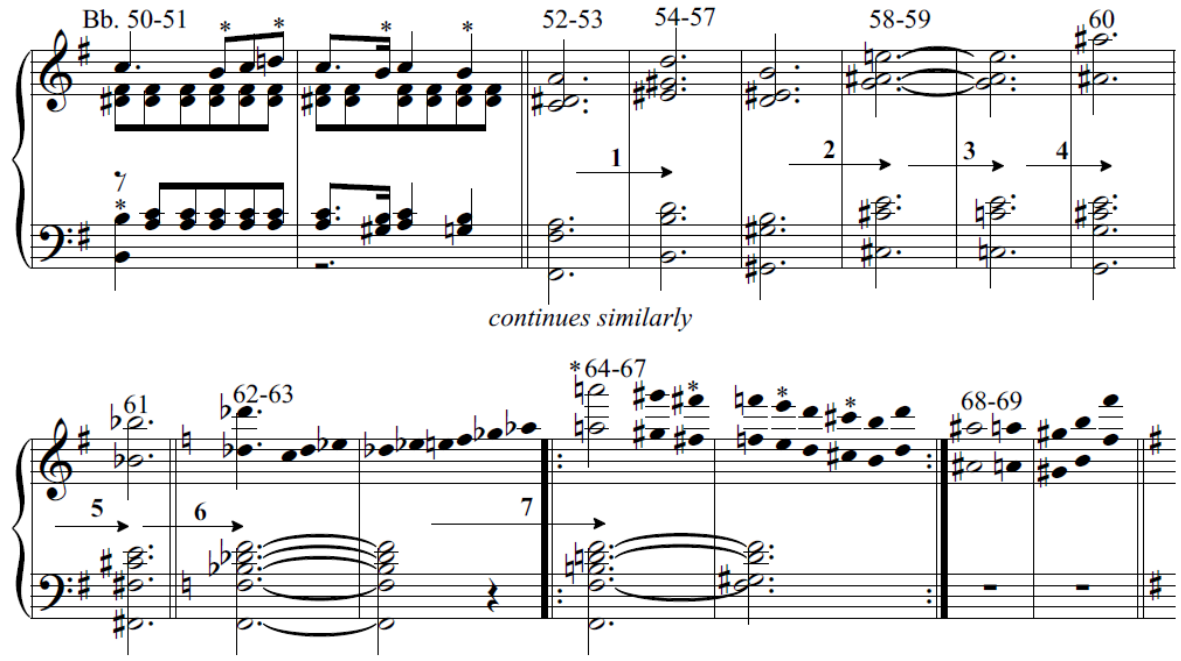
A discussion of the *A* sections of *La lugubre gondola II* remains pertinent to the analytical discourse in the next chapter. It will show Liszt's usage of a variety of seventh chords within a more tonal environment.

4. *Polonaise I* from the oratorio *St Stanislas* (bars 50-69) – A harmonically unstable section, dominated by Diminished seventh chords

This rarely performed late piece (S. 519, composed in 1875) employs the key signature of E minor for a significant portion of its duration and the latter is substituted by the four-sharp signature of the *Parallel* E major for a concluding *Adagio* section. The tonality of E minor is suggested at the onset of the main theme, but functional and diatonic chord relations within it are systematically avoided and substituted by the basic and compound neo-Riemannian transformations on a triadic level, while Liszt's favorable seventh chords and augmented triads are occasionally interpolated in between the consonant triads.[9]

The section of the piece, which will be taken into account here includes a 20-bar long episode of developmental character, which brings the main motif through all possible diminished seventh chords and clearly has them as main harmonic pillars (ex. 8.13). The other three sonorities, which appear briefly, are still shown on the corresponding *Tonnetz* diagram (fig. 8.10), but they do not have the capacity to draw too much attention on themselves. They all are of a different kind and chromatically very close to A♯dim^7, which creates the impression that they gravitate around the latter and remain subservient to that chord.

[9] A discussion of the two sections from bar 70 onwards will be relevant to the analytical inquiry of the next chapter.



Ex. 8.13. Harmonic reduction of bars 50-69 of *Polonaise I*.

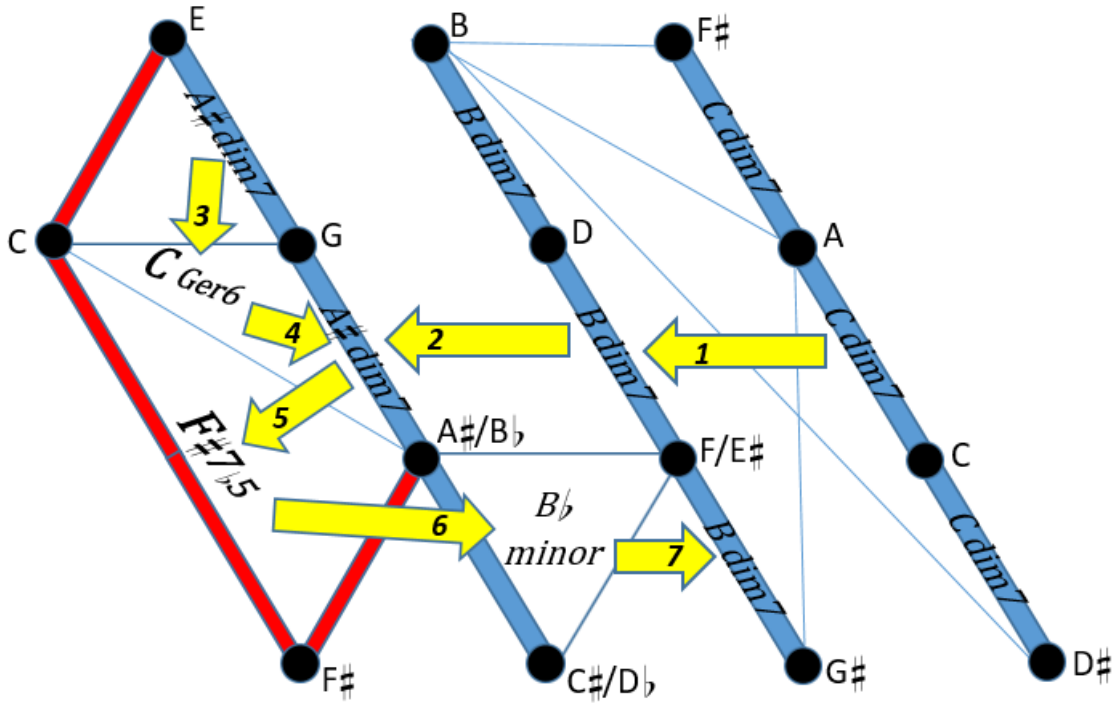


Fig. 8.10. The harmonic progression within bars 50-69 of *Polonaise I*.

First of all, it should be clarified how the harmonic reduction of this section is to be understood. The first two bars are given in their original form, in order for the melody and texture to be shown. From there onwards, the soprano voice motif (identical to the initial motif and repeated throughout a large portion of the piece) is reiterated no less than five times until bar 62, so only the harmonic content of each couple of bars is shown in dotted minims. The melodic notes from bar 62 onwards are shown in stemless note heads, while the harmonic ones on the strong beats among them are notated as per usual. It is of primary importance here to clarify the chord at the beginning of the section (bars 50-51) and in bar 64. As reflected on fig. 8.10, the section begins with a $Cdim^7$ and dismissing the bass B as a non-chordal tone facilitates a neat neo-Riemannian reading of the passage, whereby a couple of such foreign notes on the strong beats (the other one being the A of bar 64) can be considered subservient to a structure, based on pure diminished seventh chords. However, listening to the whole piece with functional ears leads to hearing the harmony in bar 50 as $B^{7}{}_{\flat 9}$ - an altered dominant in the key of E minor, which is still being suggested by the key signature at this point (initiated, but systematically avoided earlier). To reflect that, the B from the $Bdim^7$ chord is connected to the $Cdim^7$ on the *Tonnetz* diagram. Next, harmony progresses through the neighbouring diminished seventh chord – $Bdim^7$ – which arrives in a clean form, without any non-chordal tones on the strong beats within bars 54-57. To reflect the already started movement downwards in semi tones, the next chord of the same type is labelled as $A\sharp dim^7$ and, unlike its predecessors, it only lasts for a bar, before being substituted by its maximally close $C_{Ger6.}$ The latter can be understood as a passing chord between the appearances of $A\sharp dim^7$ firstly in a $^{6}_{5}$ and then as a ^{2} (third inversion) and especially in the context of the current passage it makes

sense to elevate the diminished seventh chords to a higher status.[10] Similarly, the following F♯^{7}♭5, which is depicted on the *Tonnetz* as a broken red stripe, is transitioned through within only a bar and does not carry much structural weight. Such a chord consists of four pitches, which are relatively distant on the tone grid and therefore, it is not shown as covering certain area between its constituting pitches, but as a tripartite thickened line. The only triad of the passage – B♭ minor – arrives in bar 62, sounding as a structurally meaningful cadential $^{6}_{4}$ chord, arriving in *ff* as a result of a 12-bar long gradual build-up. However, it quickly becomes clear that the build-up does not end here and only two bars later an ambiguous Bdim^{7} with an accented A marks the culmination of the section. In the same way as at the start of the passage, one of the diminished sevenths is blurred through a note of its corresponding octatonic collection. While the first time the ambiguity was between C♯dim^{7} and the functionally loaded B^{7}, here it remains debatable whether the main harmony is Bdim^{7} or BØ^{7}. Remaining faithful to a hearing of the passage, which focuses on the diminished seventh sound, I have labelled the final step of the sequence on figure 8.10 as leading towards Bdim^{7}, but the octatonic intersections between Bdim^{7} and Cdim^{7} are also acknowledged through the thin lines between them.

After all, diminished seventh chords frame this section and are used in 80% of its duration (16 out of 20 bars if we count bars 50-51 and 64-67). The smooth chromatic transition through them is diversified through the interpolation of a small number of other chords in close proximity, but overall their significance is clearly stated by Liszt. The function of the section in question is to intensify the

[10] Richard Cohn distinguishes between hearing dim^{7} chords as dissonant sonorities in tonal contexts and as perfectly even chords, which in more chromatic environments, like currently, invokes putting them at the center of harmonic syntax, with other seventh chords seen as displacements of them and gravitating around them in the pitch space of the *Tonnetz*, see *Audacious Euphony*, pp. 148-155.

harmonic instability of the piece and keep the momentum, which has already been gained in the earlier exclusively chromatic passages.

Conclusions

The above analyses demonstrate Liszt's willingness to prioritise the diminished seventh chord over the consonant triads in the harmonic structure of some of his late piano pieces. This characteristically sounding sonority has been used extensively throughout his *oeuvre*, but it is only in his late style, and especially in such forward-looking pieces as the ones discussed presently that chromatic voice leading around the dim^7 chords supplants conventional tonal syntax. The neo-Riemannian approach to such harmony, coupled with *Tonnetz* representations of selected surface-level progressions, revealed that Liszt has been striving to constantly stay harmonically close to the diminished seventh chords and relate other harmonies back to them, especially in the *Bagatelle sans tonalité* and in the analysed section from *Polonaise I*. With all the variety of dissonant sonorities in *Trauermarsch*, diminished seventh chords remain at the center of the pitch space, which is covered, while in *La lugubre gondola II* these are emphasised and prolonged both harmonically and melodically at important moments of the form. However, the limited number of late pieces, which employ this chord in such systematic ways cannot be sufficient for drawing wider conclusions about Liszt's late style and the next chapter will demonstrate how his use of chromatic harmony and unconventional chord relations could be conceptualised in at least two other ways, proving the point that the modern

ideas in his late repertoire cannot be encapsulated into a small number of categories.

Chapter IX

Chromatic transformations based around consonant triads and seventh chords

In the previous two chapters the most common symmetrical dissonant triad and seventh chord have been shown as main organising entities for Liszt's harmonic practice. In contrast to that, this chapter will serve to demonstrate that even in the cases, in which the composer has not chosen an unconventional background structure for his harmonically adventurous late piano pieces, there could be a variety of non-functional chromatic progressions involving the familiar major and minor triads, as well as seventh chords.

Firstly, a category of harmonic progressions, based only on chromatically related consonant triads, will be established. Starting from *Am Grabe Richard Wagners* – a most representative piece for Liszt's late 'music of death', while at the same time being devoid of harsh dissonances – a selection of pieces will be presented, in which the basic and compound neo-Riemannian transformations involving only triads, prevail. As it will become evident, neo-Riemannian theory and more specifically the *Tonnetz* are most suitable for pointing out chord relationships and proximities in such pieces. After all, the *Tonnetz* has been designed to show how major and minor triads relate in a non-tonal harmonic environment, which certainly deserves to be investigated in pieces such as the ones discussed in the first part of this chapter.

Admittedly, numerous neo-Riemannian transformations involving triads have already been shown in the previous chapters. However, the focus in chapters III-VI was on the interactions between diatonic functionality and non-

functional chromaticism, whereas in chapters VII and VIII I have accented on showing how the augmented triad and the diminished seventh chord get affirmed as central sonorities. Conversely, in the current chapter I will investigate what the combinations of transformations are, what kinds of harmonic chains they build, to what extent Liszt adheres to more or less parsimonious chord connections and last, but not least – how and why my neo-Riemannian methodology brings a fresh analytical perspective on Liszt's late chromatic harmony, which can be considered distinct from the numerous other existing analytical studies of this repertoire. In short, instead of focusing on the role of a particular chord or on a particular feature of Liszt's harmonic writing, I will be aiming towards a broader view of the multifaceted harmonic situations, which have been selected for study due to their originality.

Some further clarifications about the different types of neo-Riemannian transformations should be made here. Keeping in mind that the three ***basic*** transformations are the simplest to show in a progression and illustrate on the *Tonnetz*, while also the ***P*** and ***L*** represent the most parsimonious triadic chord relations, I have aimed to show as many of these as I have discovered in late Liszt, especially in the first part of this chapter. However, it will be revealed that even in text-book examples such as *Am Grabe Richard Wagners* Liszt has not restricted himself to only chaining together chords, which are in maximally close proximity and there is always a smaller or larger number of ***compound*** transformations. In relation to his analysis of the Consolation no. 3 Richard Cohn claims that for him the ***LP*** transformation connecting A major and D♭ major is 'a unitary *Gestalt'* and it can be considered as such, not just as a sum of two basic transformations.[1] In fact, compound transformations, such as ***LP***, ***PR*** and ***RL*** lead to chord juxtapositions with a distinctive harmonic flavor and these should be

[1] Richard Cohn, *Audacious Euphony*, p. 30.
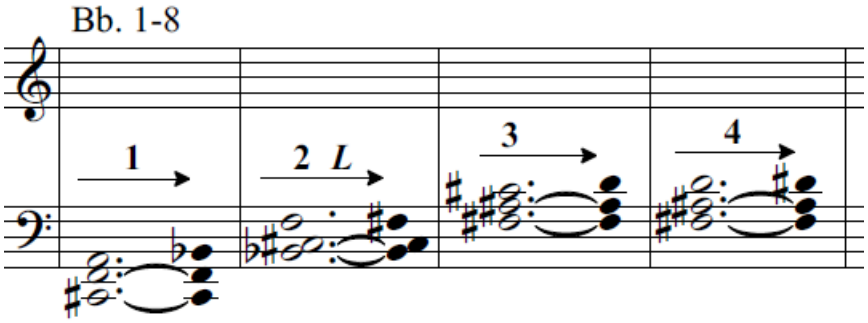
acknowledged as no less important part of Liszt's harmonic vocabulary. Moreover, these actually lead more easily to diatonically more distant chord relations, which in a way makes the non-functional chromaticism of a passage more immediately obvious. There are further two distinctive compound triadic transformations, which will be shown to have appeared in late Liszt and deserve to be introduced here. The *Hexatonic pole* (***H***) transformation results from a ***L+P+L*** or a ***P+L+P*** within a Hexatonic region and it is easily recognisable with the semi tonal move of all three tones of the initial triad in it. Furthermore, the *Slide* (***S***) transformation connects a major and a minor triad which share their third (such as C major and C♯ minor) and it is also aurally appealing in its own way, why being able to be represented as an ***R+P+L***.

Last but not least, I would like to term a third kind of transformation in this chapter, which I will call ***mixed***, as it will involve a combination of triads and seventh chords and embrace a variety of potential chord couples, while being more suitable for the harmonically more diverse progressions analysed in the second part of this chapter. To make it clear – by diverse progression I mean one that includes a wide variety of chord types, including consonant and augmented triads, diminished, half-diminished, dominant, minor seventh and German sixth chords. These are the most common chord types in nineteenth-century music and to a large extent – in late Liszt, but it should be admitted that the repertoire considered in this study includes some further (occasionally more dissonant) chord types. Classifying all possible chord relations involving the types of chords in late Liszt involves a number of potential couples, but for my current purposes I have considered it sufficient to describe the large last group as *mixed transformations*, while discussing the particularities of each such chord relation on a case-by-case basis.

1. Surface-level triadic progressions, involving the basic and compound neo-Riemannian transformations

1.1. Am Grabe Richard Wagners – A dominance of the ***R*** and ***L*** transformations flavored with some augmented triads

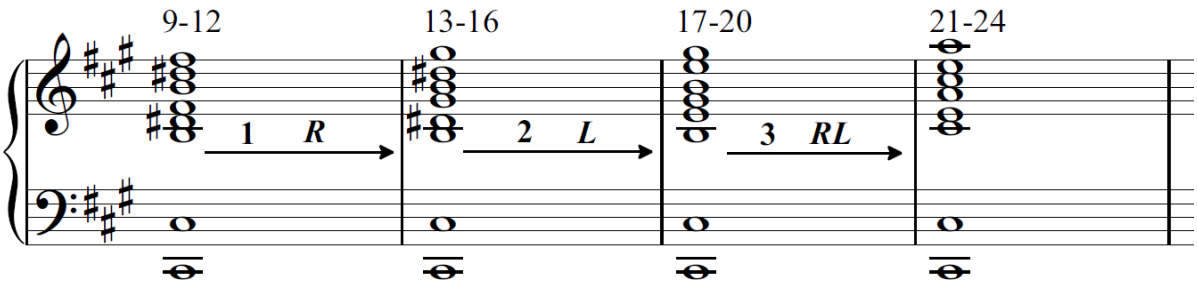
As the title of this piece suggests, it is an elegy dedicated to Wagner's death and it was composed originally for a string quartet and a harp in May 1883, shortly afterwards arranged for solo piano (S. 202). Unsurprisingly in the context of Liszt's late compositions, this miniature opens and closes with monodic passages. While the opening motif is noted by Liszt himself to resemble Wagner's Parsifal-motif and the opening of *Die Glocken des Strassburger Münsters cantata* (S. 6), it loosely outlines a harmonic progression, which I have summarised in my harmonic reduction of the 8-bar introduction (ex. 9.1).



Ex. 9.1. Harmonic reduction of the introduction (bb. 1-8) of *Am Grabe*.

In similarity to *Richard Wagner – Venezia*, a melodic unfolding of C♯aug in the low register opens the piece. The A of this chord resolves upwards into B♭, meaning that an augmented dominant on F seems to resolve into B♭ minor, even

though the latter is misspelled, consisting of the ever important augmented second as opposed to a minor third.[2] This is in similarity to *Nuages gris*, where the 'misspelled' E♭ minor chord served to highlight the E♭-F♯ augmented second of the G minor scale.[3] In the introduction of *Am Grabe* further semi tonal upshifts lead the implied harmony through F♯ major, Daug and finally D♯ minor is reached. At this point I have assumed the smoothest possible transition from the fully outlined F♯ major of bar 5 towards the clear B major, which opens the main body of the piece in bar 9 (see ex. 9.1 and 9.2). The *Tonnetz* representation of the introduction (fig. 9.1) reveals the presence of two neighboring augmented triads, three transformations, which connect them with a consonant triad, and an ***L*** transformation between B♭ minor and F♯ major. Overall there is a movement to the left, which will be continued from bar 9 onwards.



Ex. 9.2. Harmonic reduction of bars 9-24 of *Am Grabe*.

[2] Augmented seconds have always been important for Liszt, especially in such melodic contexts, when his favorable Hungarian scales are either clearly outlined (as in the Hungarian rhapsodies for examples), or only suggested (currently and in many other late pieces).

[3] Also, with the Faug resolving to a misspelled B♭ minor there is a striking similarity between *Am Grabe* and *R. W. – Venezia*. Cannata has investigated such motivic links between late Liszt pieces and for the connection between these two Wagner threnodies he reaches the following interesting conclusion, based on their chronology: 'Liszt had not avoided tonal closure in *R. W. – Venezia*, he had merely postponed it – for three months.' See David Butler Cannata, "Perception and Apperception in Liszt's Late Piano Music", *The Journal of Musicology* 15/2 (1997, 185).

Based on a change in rhythm and texture, the main body of the piece can divide into two parts – bars 9-24 and 25-45, while I consider the final 10 bars (46-55) a *codetta*. The first of these segments is marked by a persistent C♯ *tremolo*,

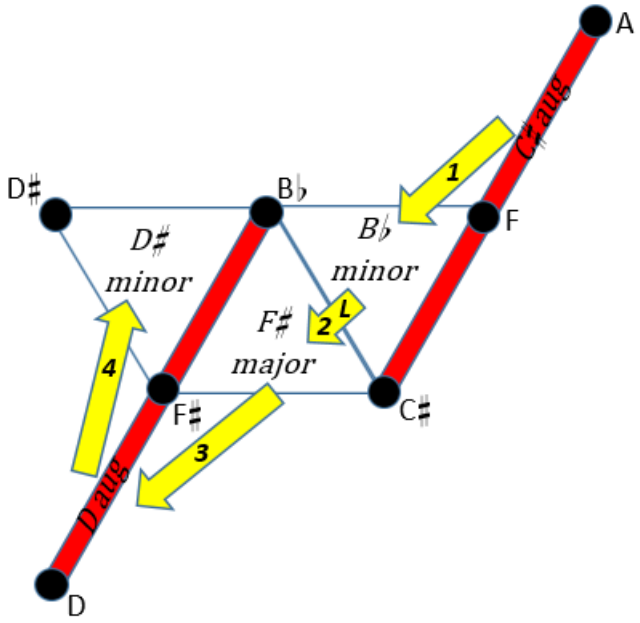


Fig. 9.1. A *Tonnetz* representation of the introduction of *Am Grabe*.

which blurs the ***R-L-RL*** triadic chain above it, if heard as an independent layer to it. However, if we consider this pedal to be part of the harmony above it, then a more complex progression, involving three tetrads and finishing on a first-inversion A major ensues. A B^9 with C♯ at the bottom is followed by a $C♯^9$ (the third E omitted) and then by $C♯m^7$ and A major. While the connection of this bass pedal note to the more distant pitches B and D♯ is reflected with curved lines on figure 9.2, I hear the triadic transformation above it as perceptually clearer and separate from it, therefore the *Tonnetz* depiction of the passage prioritises the triadic relations, while acknowledging the C♯ as an extension to the first three triads. The role of this bass note becomes obvious upon its arrival at the very end

of the piece. It binds the miniature together by opening it, sounding persistently and independently of the harmonic changes in bars 9-24 and then closing it after the affirmation of the C♯ major harmony in the codetta.

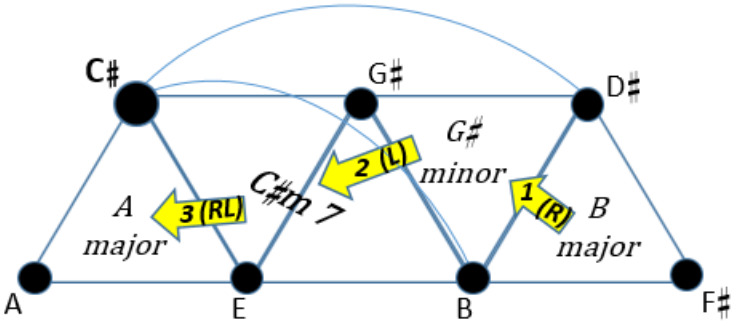
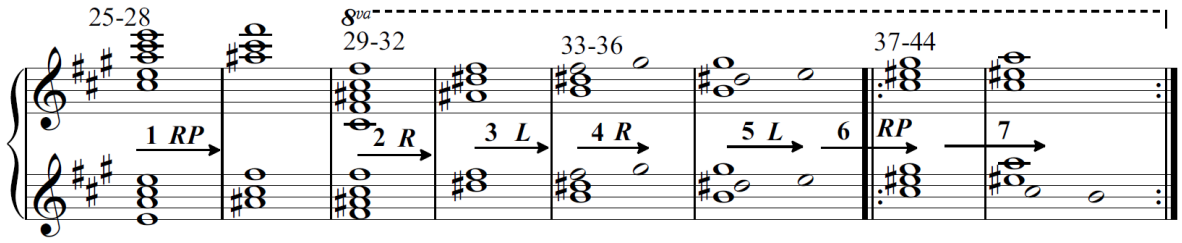


Fig. 9.2. A *Tonnetz* representation of bars 9-24 of *Am Grabe*.



Ex. 9.3. Harmonic reduction of bars 25-44 of *Am Grabe Richard Wagners*.

The pedal tone disappears and the texture confines to the high register in bars 25-45. A new type of chord relation occurs in bar 28, when the A major harmony transforms into F♯ major. This compound (***RP***) transformation forms a minor third relation, which is very typical of late Romantic music and, as explained in the introduction of this chapter, it is a most potent device for exploring chromatic space, while diluting the sense of tonality. The rhythm of the motif from the introduction is restored in bars 25-32 (not reflected in ex. 9.3, which only highlights the harmony) and is subjected to an augmentation. It disappears from 33 onwards, but the neo-Riemannian transformations are

continued in a clearer and simpler way, almost as if taken from a neo-Riemannian theory textbook. The basic ***R*** and ***L***, together with the compound ***RP*** are annotated in the harmonic reduction, while also depicted on the *Tonnetz*

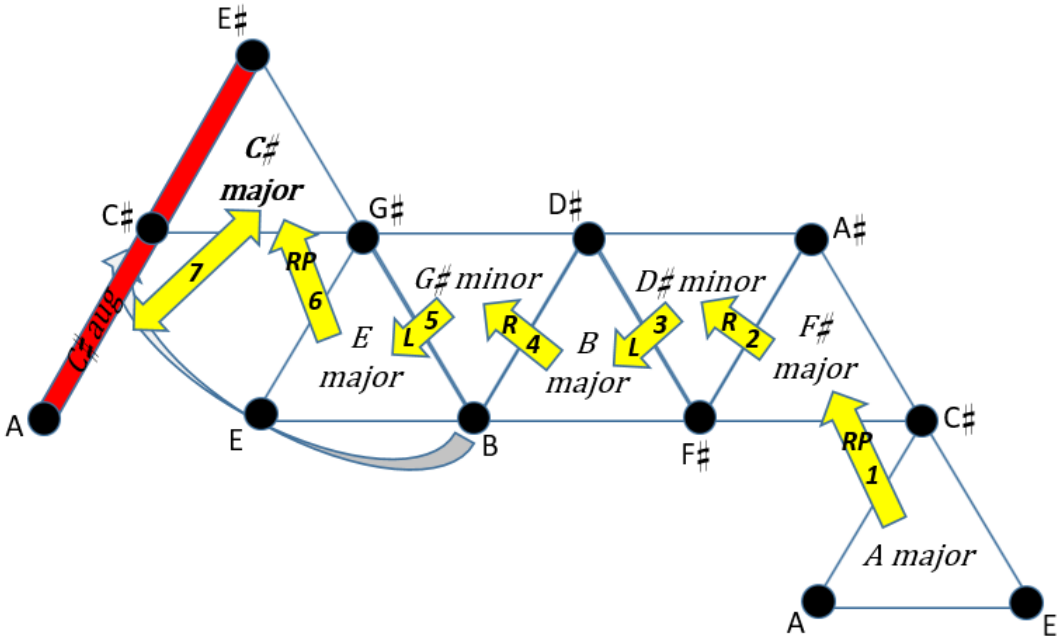
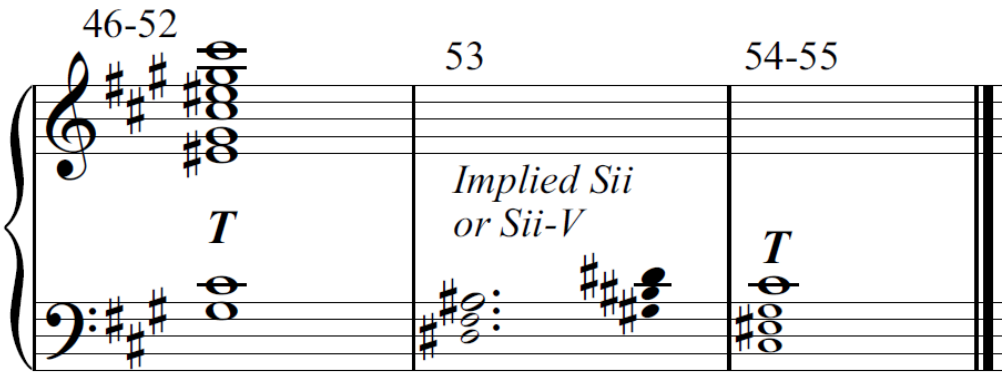


Fig. 9.3. A *Tonnetz* representation of bars 25-55 of *Am Grabe*. The implied D♯ minor of bar 53 is not part of the overarching movement to the left and it is not included.

figure 9.3. From bar 38 the harmony returns to the fluctuation between a consonant and augmented triad, which was the driving force of the introduction. The high G♯ slides up to A and back two times, thus substituting the C♯ major with the augmented chord on C♯, which is situated at the extreme left of the figure. The movement of the C♯ to B in bars 39-40 and 43-44 is marked with the curved background arrow pointing towards the augmented triad, as I consider B a neighbour tone of the C♯, which inevitably returns to it and mirrors the G♯-A fluctuation in the upper voice. In other words, the final prolonged harmony of the piece – C♯ major – is reaffirmed melodically in both outer voices.

A lone C♯ semibreve in bar 45 signifies the final harmonic destination. After that the C♯ major chord is clearly outlined by the ostinato melodic line of bars 46-52. The appearance of A♯ and D♯ after this long and clear C♯ major affirmation



Ex. 9.4. Harmonic reduction of bars 46-52 (codetta) of *Am Grabe Richard Wagners*.

is the harmonically most obscure moment in the monodic sections of the piece. Considering it through the lens of functionality, I have inferred a subdominant-functioning D♯ minor for the harmonic reduction of the coda (ex. 9.4), in which the smaller note heads are only assumed. Alternatively, a full ***TSDT*** circle could be inferred at the end of the piece (*I-ii-V-I* in Roman numerals), with the D♯ crotchet being heard as the fifth of a G♯ major chord, although it should be admitted that such harmonisation of the codetta is perceptually more far-fetched. In relation to all the previous smooth triadic transformations, such final classically tonal gesture would have sounded quite surprisingly if articulated more clearly, especially in the wider context of this repertoire. Instead, Liszt remains faithful to his aesthetics of creating harmonic obscurity and closing pieces in a subtle, texturally economic way.

The above transformational analysis of *Am Grabe* revealed that the whole piece is based on a one-directional mostly horizontal movement to the left in the

pitch space of the *Tonnetz*.[4] A couple of augmented chords occur throughout the miniature, but their appearance can be considered accidental, while the large majority of the chords in use is limited to consonant triads. Moreover, there is clear patterning of transformations and putting the above three figures in perspective shows two extended ***RL*** chains, each one followed by an ***RP,*** which underpins the whole piece. An alternative analysis (functional or Roman numeral) of such a work would prove to be problematic, as the constant use of mediant harmonies is exploited to its fullest by Liszt for avoidance of functional directionality.
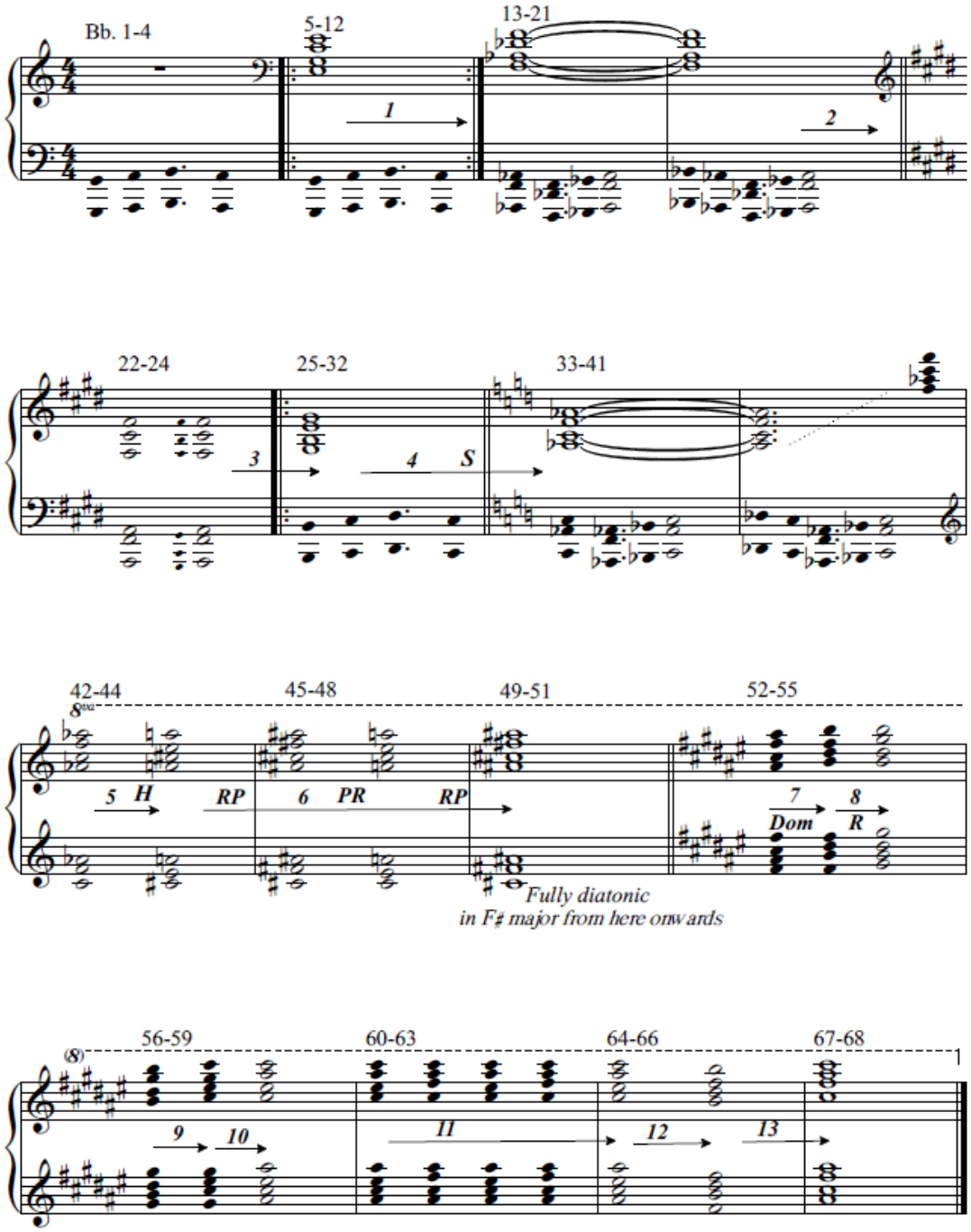
1.2. In Festo Transfigurationis Domini Nostri Jesu Christi

This piece (catalogued as S. 188, composed in 1880) is one of the stand-alone late piano miniatures, which reflect Liszt's devotion to his Christian faith, strikingly simple with its texture and mostly triadic harmonies. The analysis of Dickinson seeks to identify a tonal structure to the piece, and based on some relatively weak evidence (such as the dominant-tonic progression from D♭ major to F♯ minor in bars 19-22) infers that 'despite the lack of structural cadence and the fact that only one root-position tonic appears throughout, there is no question that the key is F♯ major'.[5] The author admits that a structural cadence cannot be forced upon the piece and the sense of harmonic progression in it is restricted by its slow tempo, slow harmonic rhythm and incremental motion in

[4] Such movement is equivalent to moving anti-clockwise on the circle of fifths, whereby each chord turns out to be the dominant of the following.

[5] Stefanie Dickinson, *Tonal Voice Leading as an Analytic Basis for Liszt's Late Experimental Works* (PhD diss., University of Rochester, 2002, 152).

all voices, all favorable devices by Liszt in his later years. While conducting her quasi-Schenkerian analysis and pointing out some semblances of tonal structure, Dickinson lists the reasons why an analysis, which is more independent of tonal



Ex. 9.5. Harmonic reduction of *In Festo Transfigurationis*.

considerations would be more faithful to Liszt's compositional thinking at this point of his life.

Through positioning the chords used in *In Festo Transfigurationis* on the *Tonnetz* I will attempt to reveal the balance between different types of chromatic and diatonic motions, observe the smoothness of progressions and chord proximity in 12-tone pitch space and potentially reach some new conclusions about Liszt's late harmonic writing. First of all, the piece opens with a broken C major chord, accompanied by a simple bass line, the dissonating pitches of which are not reflected on the diagram of figure 9.4 (A and B initially), as these are considered subsidiary to the large-scale harmonic structure. So, listening in straight triads only, C major transforms into D♭ major for the first varied repetition of the main motif in the bass (bars 13-20, harmonic step 1, illustrated by an upwards movement on the *Tonnetz*). After that the key signature of four sharps is introduced suddenly and D♭ major seems to resolve to one of its expected tonics (enharmonically interpreted as F♯ minor) – a movement, which correspondingly is shown with a green line, implying a functional connection (step 2). The G♯m^7 of bar 23 is not depicted on the diagram, as I consider it to harmonise a brief neighbor-tone motion between two iterations of the F♯ minor chord (reflected as an appoggiatura in the chord reduction).The following E major continues melodic motions from the previous bars, but harmonically it is just a step down from F♯m in its own diatonic area, neither representing a clear functional connection, nor being in close chromatic proximity to it, as evident from the distance between the two triads on the *Tonnetz*.

Another change of key signature (back to no sharps/flats) in bar 33 facilitates the appearance of F minor – a ***Slide*** transformation from its preceding chord. Unlike step 1, where the initial major triad was transposed upwards by a

minor second, here we proceed to the minor triad lying a semi tone higher and the harmonic effect is certainly stronger – instead of a simple transposition, a

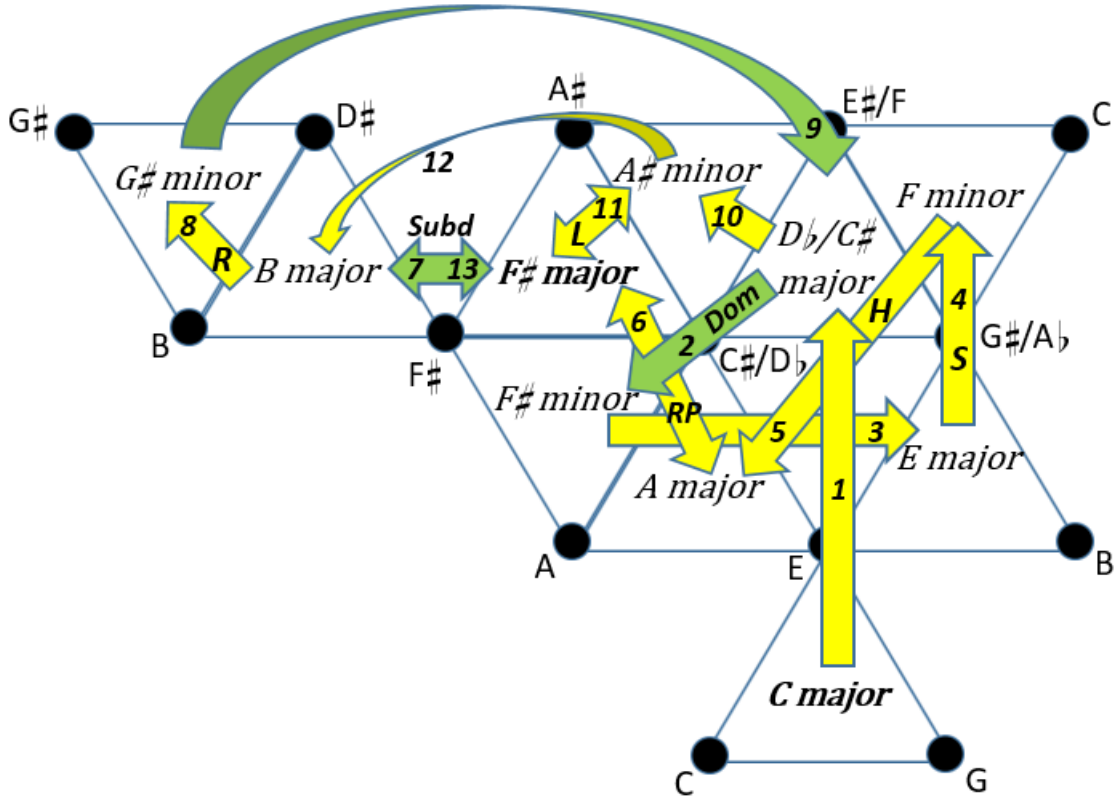


Fig. 9.4. The harmonic progression of *In Festo Transfigurationis*. Yellow arrows represent chromatic transformations, while green arrows show functionally diatonic chord connections.

highly specific transformation takes place. Arguably not by coincidence, the other most characteristic triadic transformation is chained after that and F minor is followed by its Hexatonic pole – A major – in bar 43. Perhaps this is the point in the piece where Jesus' transfiguration can be perceived most directly with the aid of the ***S*** and then ***H*** compound transformations. As the broad view of harmony in this repertoire is acquired at the end of this study, it might be necessary to conclude that these two transformation are not as frequent as it had been expected initially, considering Liszt's never-ending willingness to

experiment with harmony, and in fact it could be inferred that an ***S*** followed by an ***H*** does not occur elsewhere in the works under consideration.

The final chord of the piece – namely F♯ major – follows after that, and from the second iteration of A major onwards is succeeded only by chords from its own diatonic collection. However, as can be seen from the color of arrows on the *Tonnetz* – only the tonic-subdominant connection between F♯ and B major and the subdominant-dominant connection between G♯ minor and C♯ major are clearly functional in the key of F♯ major. This confirms that *In Festo Transfigurationis* exemplifies Liszt's systemic avoidance of dominant-tonic connections in the main key.

The initial C major and the final F♯ major are maximally distant on the circle of fifths, meaning that under the premises of diatonic functionality they are as far as they can possibly be. However, the very first transformation (shifting the whole C major a semitone up to D♭ major), already reaches the enharmonic dominant of the final chord, in support of Dickinson's argument that despite all chromatic chord relations the piece may be claimed to be in the key of F♯ major. The chords between harmonic steps 2 and 6 are connected through an anti-clockwise movement on the *Tonnetz*, which revolves around C♯ minor – a chord, which is not explicitly used, but lies somewhat in the middle between the opening and closing harmonies. Overall there isn't a very rigorous pattern becoming apparent from the visualising of the harmony, but it is evident that the chords in use remain within a relatively tight space and more or less between C major and F♯ major. In fact, if we exclude the slightly more distant F minor, all other chords up to the G♯ minor in bar 54 remain within two basic neo-Riemannian transformations from either of the two framing harmonies. In summary, *In Festo Transfigurationis* exemplifies Liszt's combining of both chromatic and functionally diatonic harmonic progressions, which, while being
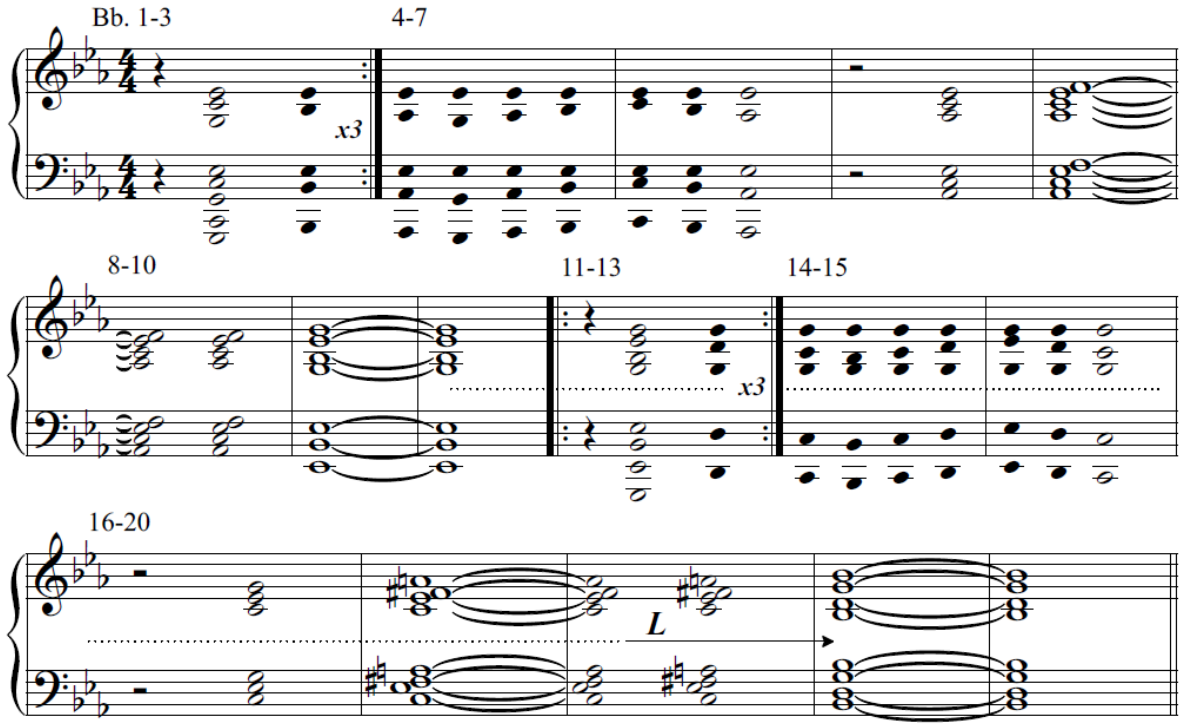
diverse in the types of transformations between chords, remain exclusive to consonant triads, making the *Tonnetz* a most useful tool in charting out such progressions. Moreover, the lack of clear tonal procedures makes other more traditional methods (such as Schenkerian or Roman numeral analysis) less viable alternatives.

1.3. In Domum Domini Ibimus

This sacred piece was written in 1884 for a chorus with an organ and brass accompaniment, but during the same year Liszt transcribed it for solo piano (catalogued S. 505). Dictated from the original choral texture, the piano version is limited to a chordal structure, which lacks any significant melodic or rhythmic elaborations and hence it is texturally similar to the harmonic reductions, which have been presented throughout this dissertation. For that reason, I have kept the score of the piece largely unchanged in examples 9.6, 9.7 and 9.8, while the important points of chord transformation have been signified with arrows. The key of E♭ major opens and closes the piece, with its corresponding key signature being maintained throughout, but a tonal analysis would only confirm that the basic tonal procedures (including the use of the main subdominant and dominant plus perfect cadences in the tonic) remain obscured or to say the least – peripheral to the harmonic syntax of the piece. Instead of commenting any further on these, I will focus on the types of chromatic triadic relations, which occur extensively, and analyse the piece by dividing it into three sections, as outlined in table 9.1.

Section	Bar numbers	Harmonic syntax
A	1 – 20	*I* and *iii* in E♭, almost entirely diatonic
B	21 – 56	More dynamic transition through a number of non-diatonic triads; most suitable for a neo-Riemannian analysis
C	57 – 95	Return of E♭ with many ***S-T*** cadences, stays mostly diatonic

Table 9.1. Sectional subdivision of *In Domum Domini Ibimus*.



Ex. 9.6. Bars 1-20 of *In Domum Domini Ibimus* (rhythmic reductions only).

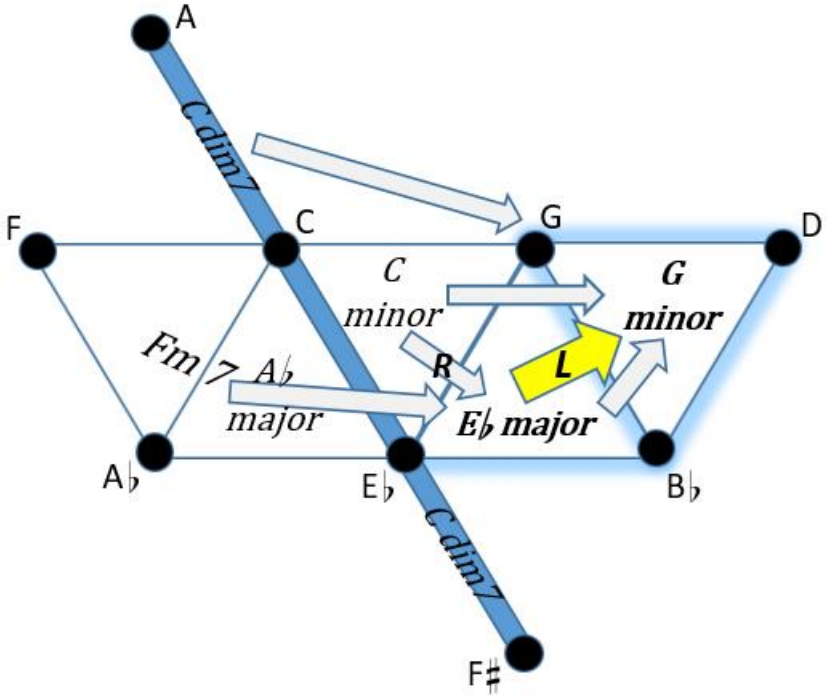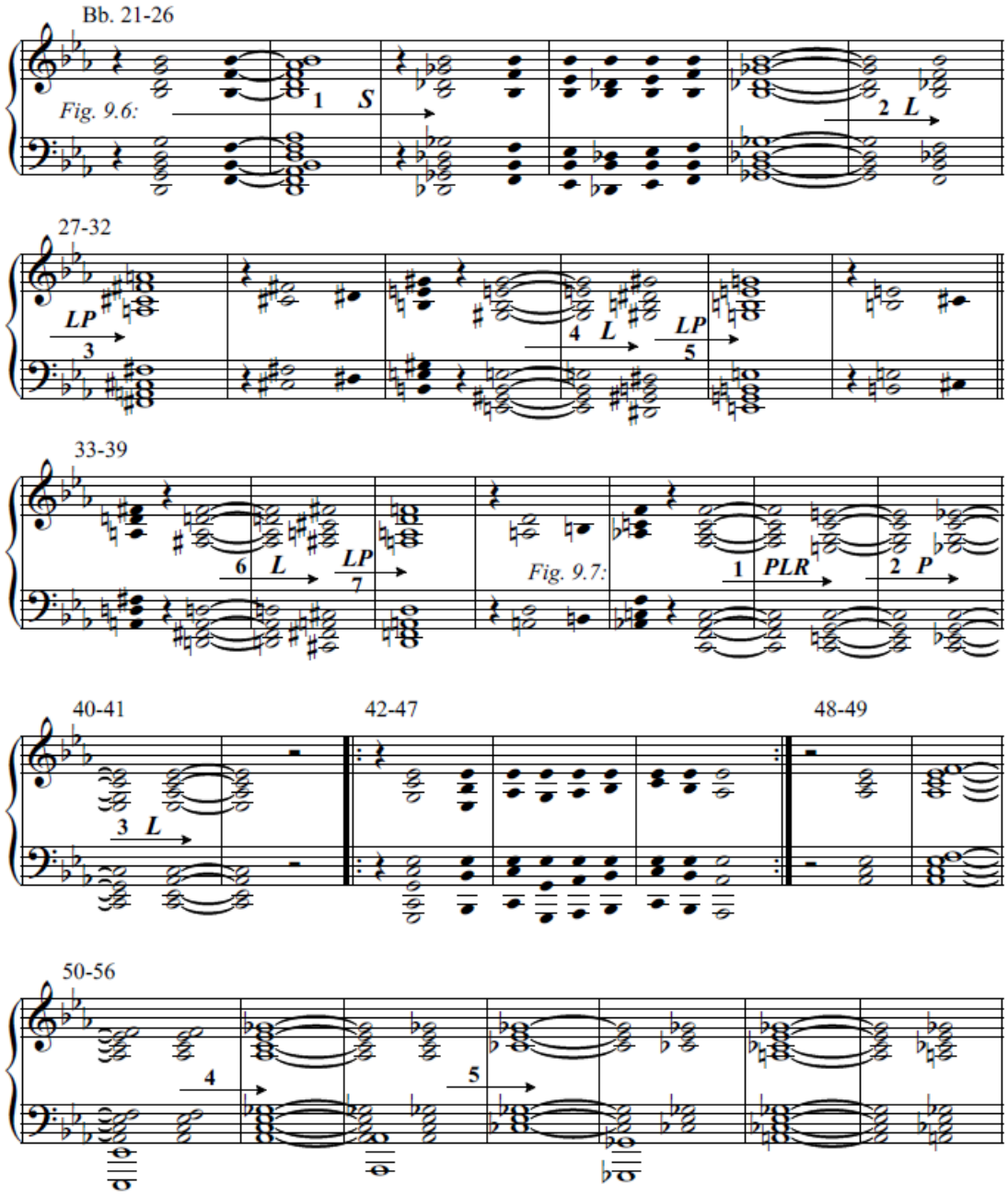


Fig. 9.5. A *Tonnetz* representation of the harmony in section *A* of *In Domum Domini Ibimus*.

Although the first 20 bars (section *A*) seem to involve a variety of sonorities (see ex. 9.6), these can be summarised with a simple *Tonnetz* diagram (fig. 9.5). E♭ major has its main subdominant – A♭ major, the extension of the latter – Fm^7, and its ***R***-related C minor gravitating around it in the first 10 bars. In the following segment of the same length (bars 11-20) G minor is at the harmonic center, having E♭ major, C minor and $Cdim^7$ gravitating around it. It should be clarified that 'gravitating' in the current case implies going through other closely related chords in quick succession, while the more important chord (the two marked in Bold on the figure) keep being reiterated, while often opening and closing such phrases as the two halves of section *A*. Accordingly, the quickly appearing chords and their relations to the two more structural chords are marked with the thinner dark white arrows on the figure, while the more important ***L***-relation is shown with the usual yellow. The latter is also reflected in example 9.6 with a

longer-ranging arrow connecting the two phrase-ending chords in bars 9-10 and 19-20.



Ex. 9.7. Bars 21-56 of *In Domum Domini Ibimus*. Essential neo-Riemannian transformations are labelled in correspondence to *Tonnetz* figures 9.6 and 9.7.

Section *B* is much richer in its harmonic content, while still almost entirely limited to consonant triads. It can be considered to be among the progressions

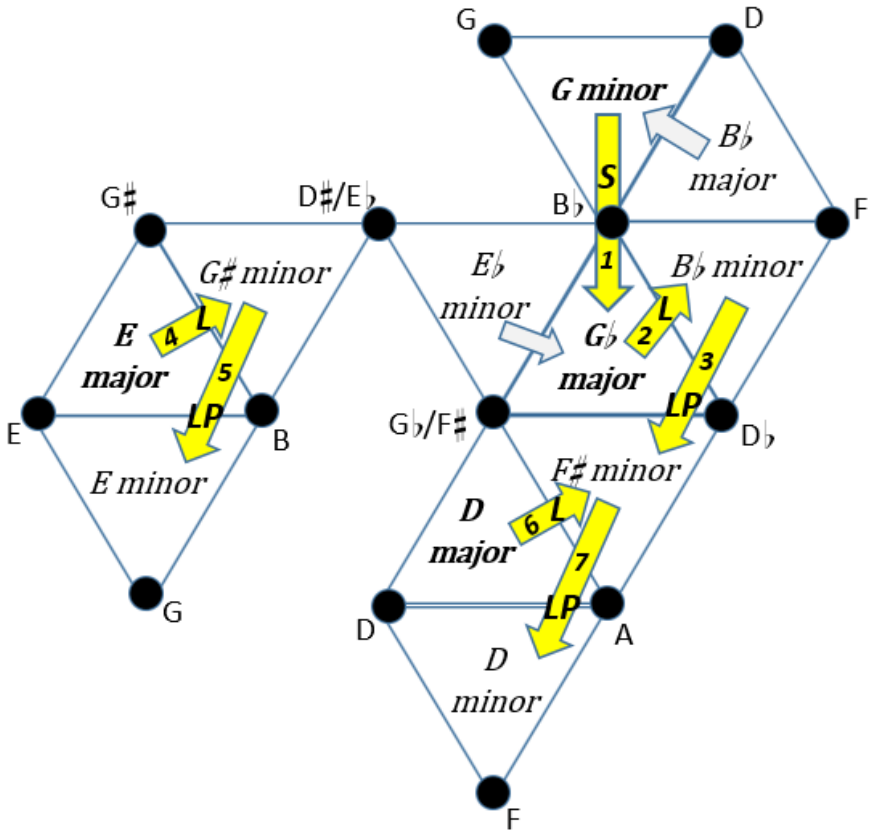


Fig. 9.6. The essential neo-Riemannian transformations in bars 21-35 of *In Domum Domini Ibimus*.

analysed in this study, for which the main-stream neo-Riemannian theory with its basic and compound triadic transformations is most appropriate to apply. In order to show clearly the succession of events for sections *B* and *C* and depict the essential harmony on the *Tonnetz* these are divided into two diagrams as follows: figure 9.6 summarising bars 21-35 and figure 9.7 accounting for the remainder of the piece. This specific partition has to do mainly with clarity of presentation on the *Tonnetz*. Firstly, in similarity to the opening 20 bars, B♭ major gravitates around G minor in bars 21-22 and both B♭ minor and E♭ minor gravitate around G♭ major in the next couple of bars. The ***S*** chromatic relation between the two essential chords is shown on both the corresponding figure and

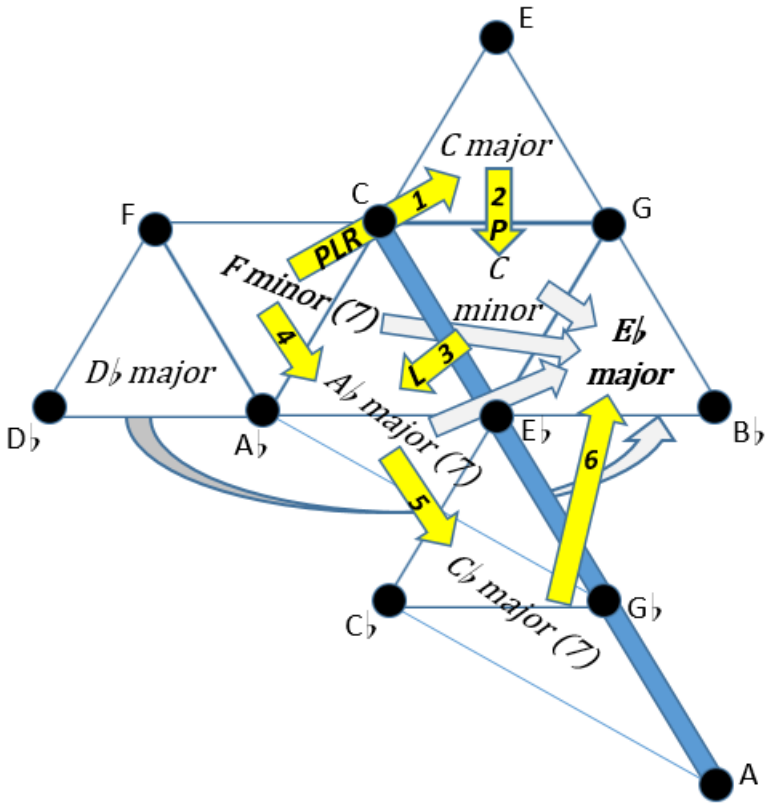
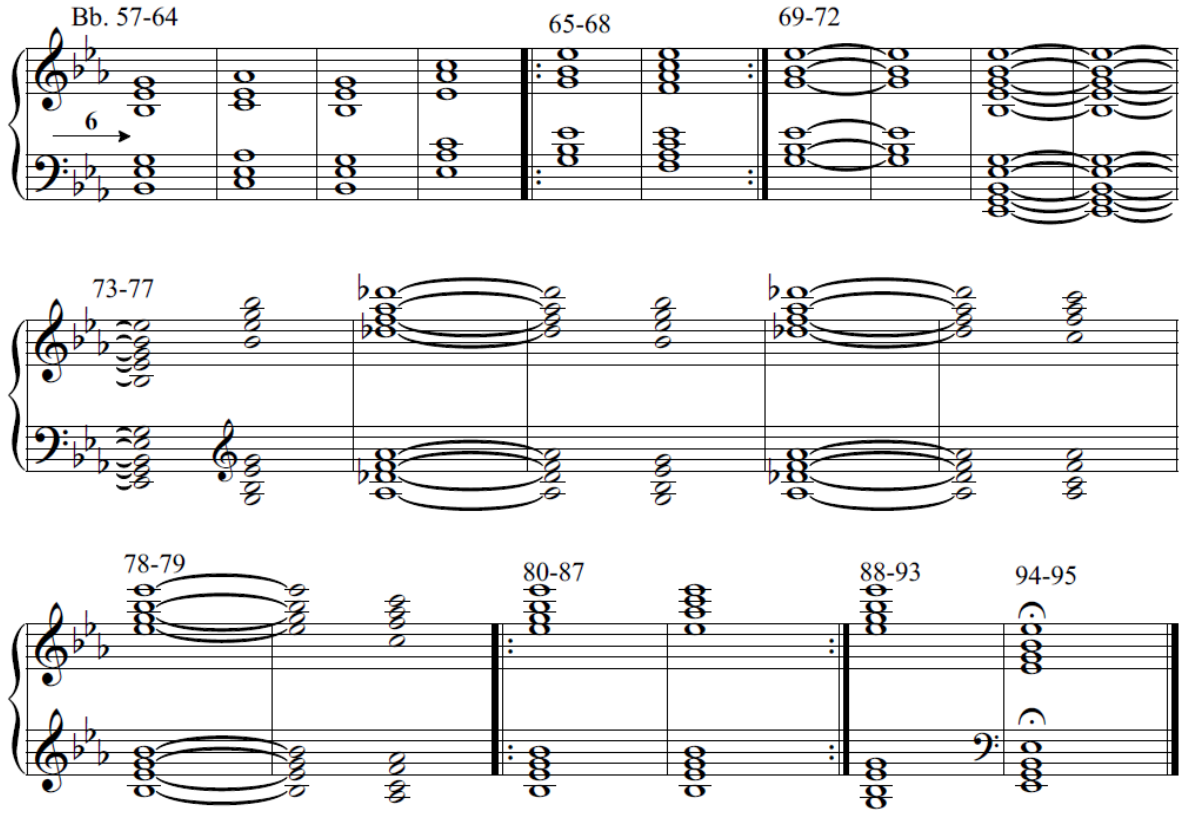


Fig. 9.7. The essential neo-Riemannian transformations in bars 37-57 of *In Domum Domini Ibimus*.

score example. After that, the quickly alternating chords are avoided for a while. Instead, a three-chord progression, involving an ***L*** and an ***LP*** transformation is repeated three times, starting from G♭ major, and then down a whole tone from E major and finally from D major, reaching D minor in bar 35 for the end of this subsection (see steps 2-7 on fig. 9.6).

The next chord succession appears on the *Tonnetz* as a circular motion, starting from F minor, going through C major after a ***PLR***, and then through C minor and A♭ major after the basic ***P*** and ***L*** (see steps 1-3 on fig. 9.7). The diatonic realm of the main tonic is reached and after that only one more significant deviation from it will occur in a most important moment – the final build-up



Ex. 9.8. Bars 57-95 of *In Domum Domini Ibimus* (section *C*).

towards the definitive return of E♭ major at the beginning of section *C*. A♭ major and C minor gravitate around E♭ major again similarly to the beginning in bars 42-47. However, this time the Fm^7 breaks away and a succession of minor-third related seventh chords ensues. Going down on the ***RP*** (octatonic) alley of the *Tonnetz*, $A♭^7$ and $C♭^7$ follow. Finally, a sudden Hexatonic (major-third related) turn brings the E♭ major again and the explicit chromatic relations are completed at this point. All four chords, which gravitate around E♭ major throughout section *C* – namely C minor, A♭ major, F minor and D♭ major – are connected to the main tonic with dark white arrows, emphasising the centricity around the latter in the last and longest third of the piece (ex. 9.8).
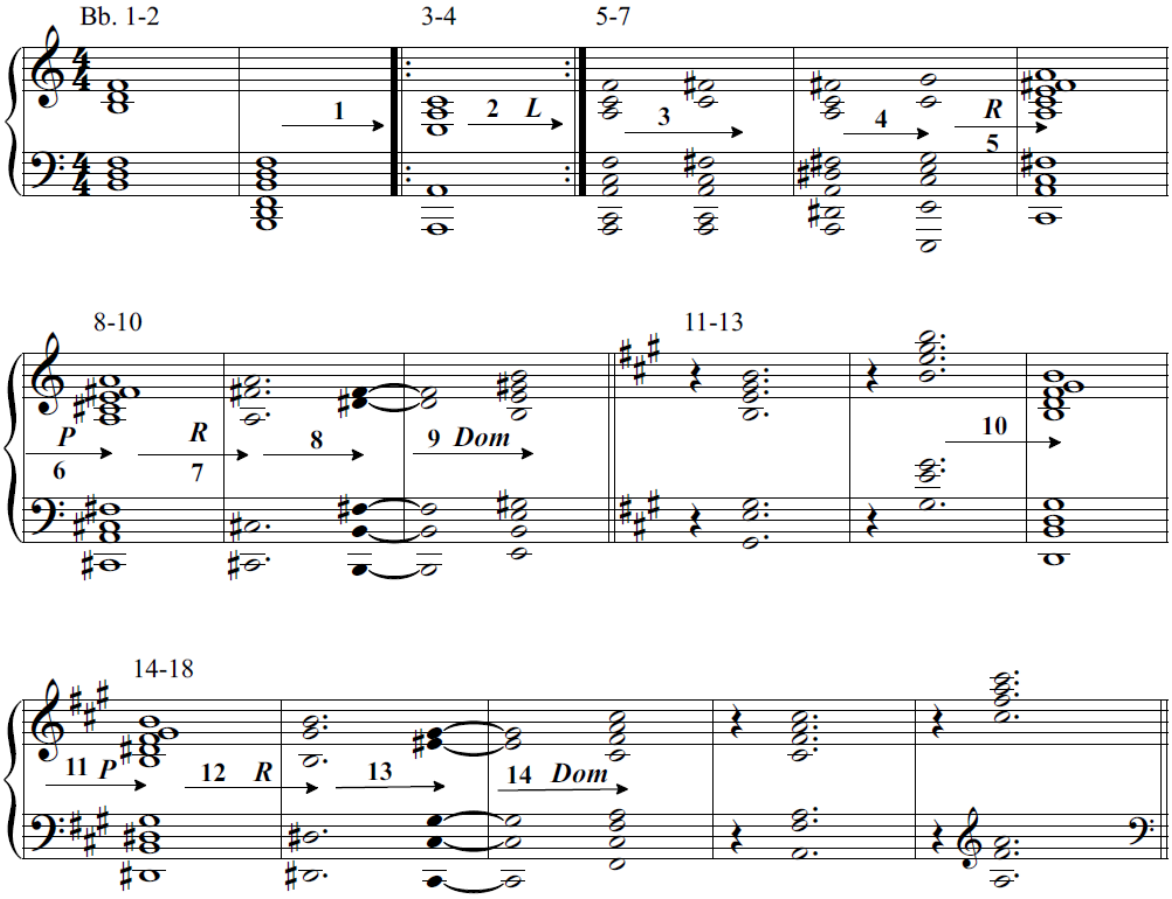
It is evident that Liszt was interested in exploring chromatic third relations between triads in this late composition of his, while largely limiting his harmonic vocabulary to consonant triads and excluding the more dissonant sonorities, familiar from other late works. The piece is written in Liszt's 'religious' key of E♭ major, even though a structural perfect cadence is deliberately avoided, as it happens almost everywhere throughout this late repertoire. Instead, a series of plagal (subdominant-tonic) cadences permeates the more diatonic sections *A* and *C*. Another typical occurrence for the late miniatures of this kind is the gradual harmonic expansion further and further away from the tonic, which at a certain point leads to a series of fully-fledged neo-Riemannian motions, such as the ones in bars 25-35 (the ***L+LP***) and bars 49-56 (octatonically-related seventh chords).

1.4. *Ungarns Gott* – An abundance of consonant triads in close chromatic relation

Ungarns Gott is a relatively little known late work, which was composed in 1881 for a male chorus with piano accompaniment and arranged for solo piano (S. 543) during the same year. The analysis here will focus on the latter version.

It is immediately obvious from the score that the piece establishes the key of A minor at the beginning and soon transitions into the key signature of the parallel A major. The latter is maintained from bar 11 onwards (with the exception of bars 23-28) and the corresponding key is perceived as more stable in the final *Animato* section, which includes the main dominant E major, its dominant B^7 and a couple of perfect cadences in A major. Finishing with a clear

and triumphant *V-I* in the main key is something unusually conventional for late Liszt, which makes *Ungarns Gott* stand out from the other pieces considered in



Ex. 9.9. Harmonic reduction of bars 1-18 of *Ungarns Gott*.

the current study.[6] However, most of the time it is chromatic (mostly third-related) triadic connections that govern the harmonic syntax – a series of progressions, which are particularly suitable for visualising on the *Tonnetz*. In similarity to the previous analyses, by tracing these with the neo-Riemannian

[6] It should be pointed out, however, that a perfect cadence at the end is not so unusual for this nationalistic genre, which has remained peripheral to this study. Other more harmonically conventional late Hungarian pieces include *Revive Szegedin* (S. 572), *Ungarisches Königslied* (S. 544), *Ungarischer Geschwindmarsch* (S.460) and *Siegesmarsch* (S. 233a).

toolkit I will seek to identify repeating patterns and interconnections between phrases.

The opening unison motif is the melodic basis of the first self-standing section (bars 1-18, see ex. 9.9) and outlines the diminished triad on B. As soon

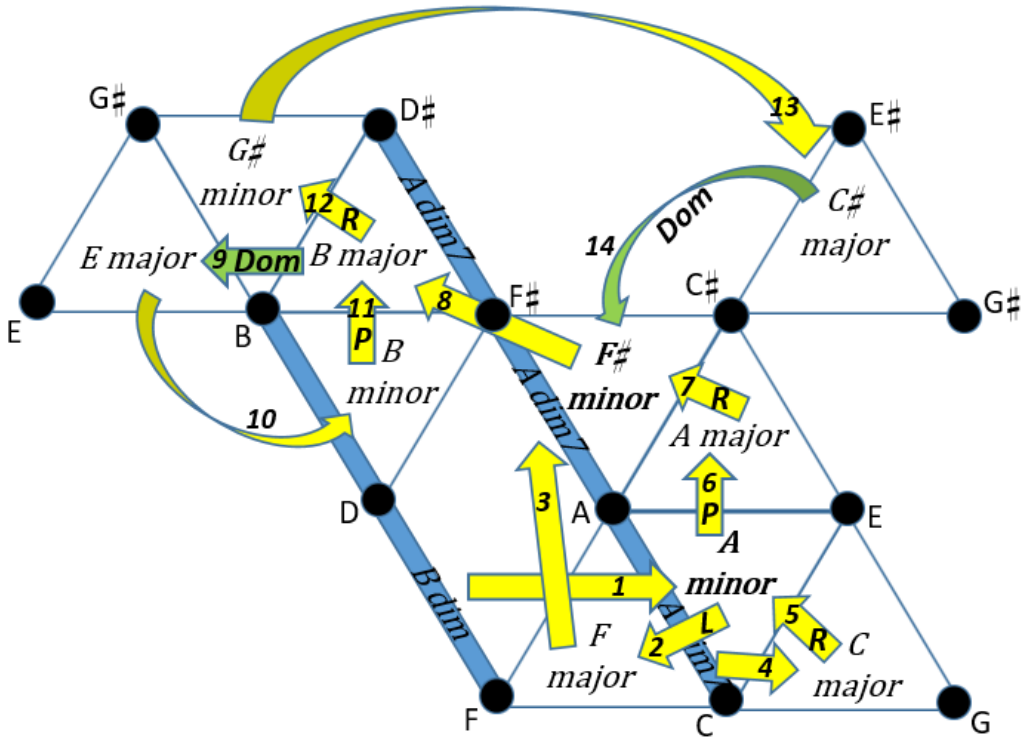
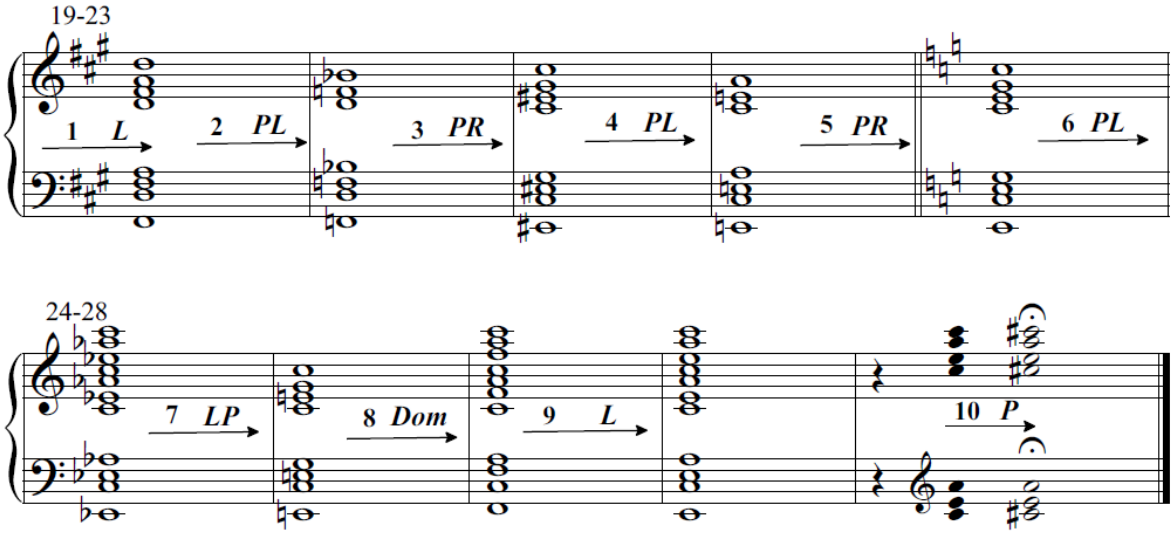


Fig. 9.8. A *Tonnetz* depiction of harmony in bars 1-18 of *Ungarns Gott*.

as a chordal texture is added in bars 3-4, A minor is established as some kind of a structural chord, which should be taken as a starting point for the essential harmonic path of the piece. It is quickly followed by a series of chromatically close chords, which are all depicted on the *Tonnetz* of figure 9.8. As evident from the diagram, the elaborate harmonic progression goes through no less than nine major and minor triads and a couple of diminished chords before settling on F♯ minor in bars 17-18. The initial Bdim can be considered to be an auxiliary chord to the A minor, since the piece is dominated by consonant triadic harmony and

in their very rare appearances diminished chords can only be perceived as brief passing harmonies. In fact, it is only the initial Bdim and the Adim[7] in bars 5-6 that disrupt the entirely consonant harmonic narrative of this composition. An initial permeating of the triadic space around A minor (see transformations 1-6) happens in bars 3-8. After that a one-directional movement to the left reaches the main dominant (E major) relatively far on the *Tonnetz* (steps 7-9).[7] Naturally, the quick linear movement is then balanced with smoother and circular motion around the pitch of B, which involves a couple of the basic neo-Riemannian transformations (10-12). In another sequence of chords, which lacks chromatic parsimony, a *ii-V-I* in F♯ minor completes the section under discussion (13-14).



Ex. 9.10. Harmonic reduction of bars 19-28 of *Ungarns Gott*.

Even with its relatively neat *Tonnetz* diagram, it is hard to identify repeated patterns and logical continuations in this progression. Among the few notable events are the repeated ***P*** and ***R*** transformations both in steps 6, 7 and

[7] Note that E major can alternatively be shown right next to A major on the *Tonnetz*, but the steady movement to the left, going through F♯ minor and B major necessitates showing the main dominant at the extreme left of the figure.

11, 12. Also, it has become visible that four of the six possible triads around the pitches of A and B are used. A couple of clear dominant connections (steps 9, 14) and some less functionally clear diatonic couplings (steps 7, 8, 12 and 13) diversify the harmonic syntax and achieve a nice balance between third- and fourth-related triads.

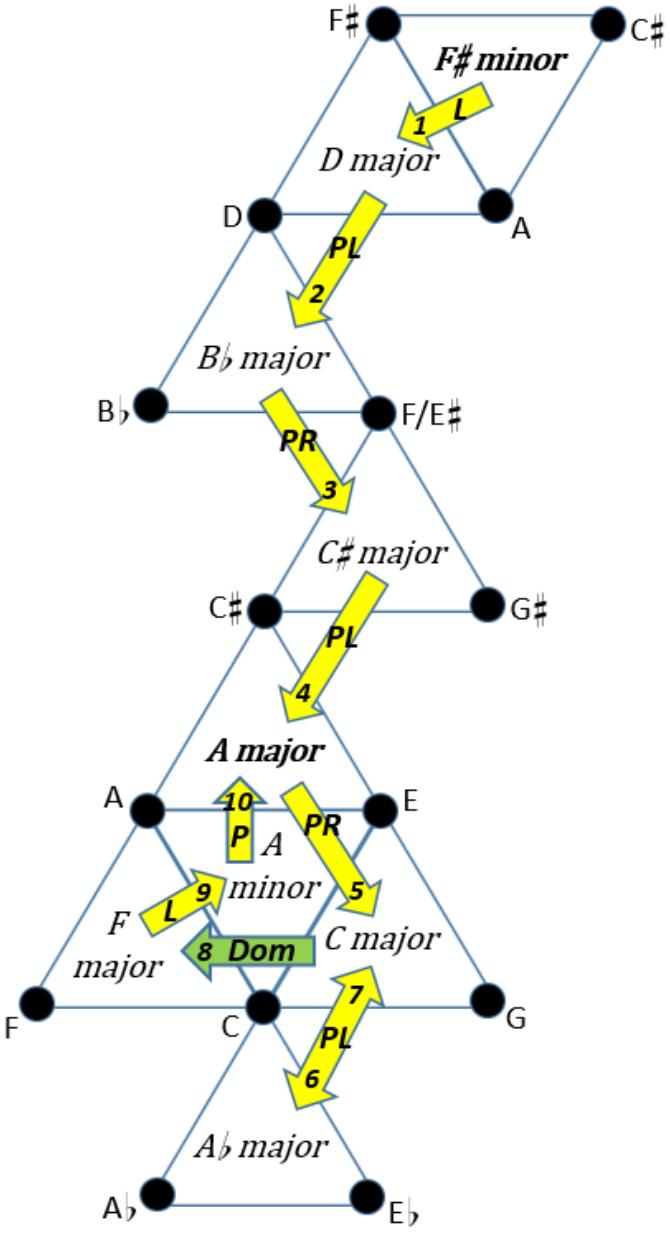


Fig. 9.9. A *Tonnetz* depiction of harmony in bars 18-28 of *Ungarns Gott*.

A new more lyrical theme is introduced in bar 19 and the ensuing new 10-bar section goes through a series of major and minor triads. In contrast to the opening section, the sequence of transformations here is more systematic, as it can be discovered from its geometrical representation (fig. 9.9). The ***L***-transformation from the F♯ minor at the end of the previous figure into the D major, which opens this section, is shown at the very top as step number one. From there onwards the progression of the new section is revealed and it turns out that an alternation between the ***PL*** and ***PR*** compound transformations is executed until A♭ major is reached within only six bars. Such one-directional movement downwards on the *Tonnetz* results in an unusually long diagram and means that in this case Liszt has immersed himself in jumping through major triads and alternating major and minor third steps for a little longer than the usual two or three steps. As a result, a diatonically distant key area such as A♭ major can be reached quickly, but also a return to the main key of A major materialises within only four harmonic steps from its lower mediant F♯ minor. As it always happens after such extended sequences of the same transformations, a counter-balancing movement backwards follows. C major returns immediately after the A♭ major and is followed by its subdominant F major. Eventually, the return upwards reaches the A major, which has already been suggested as a main key area and in the final section of the piece it is affirmed much more clearly as a tonic.

What is more important to note at this point is the fact that non-functional and overtly chromatic triadic chord relations significantly outnumber the functional ones throughout *Ungarns Gott* and even with the perfect cadence at the end the impression of a chromatic harmonic structure remains. Harmonic steps are not only independent from the constrains of diatonicism in A minor or A major, but they are also based on some clear chromatic paths through pitch-

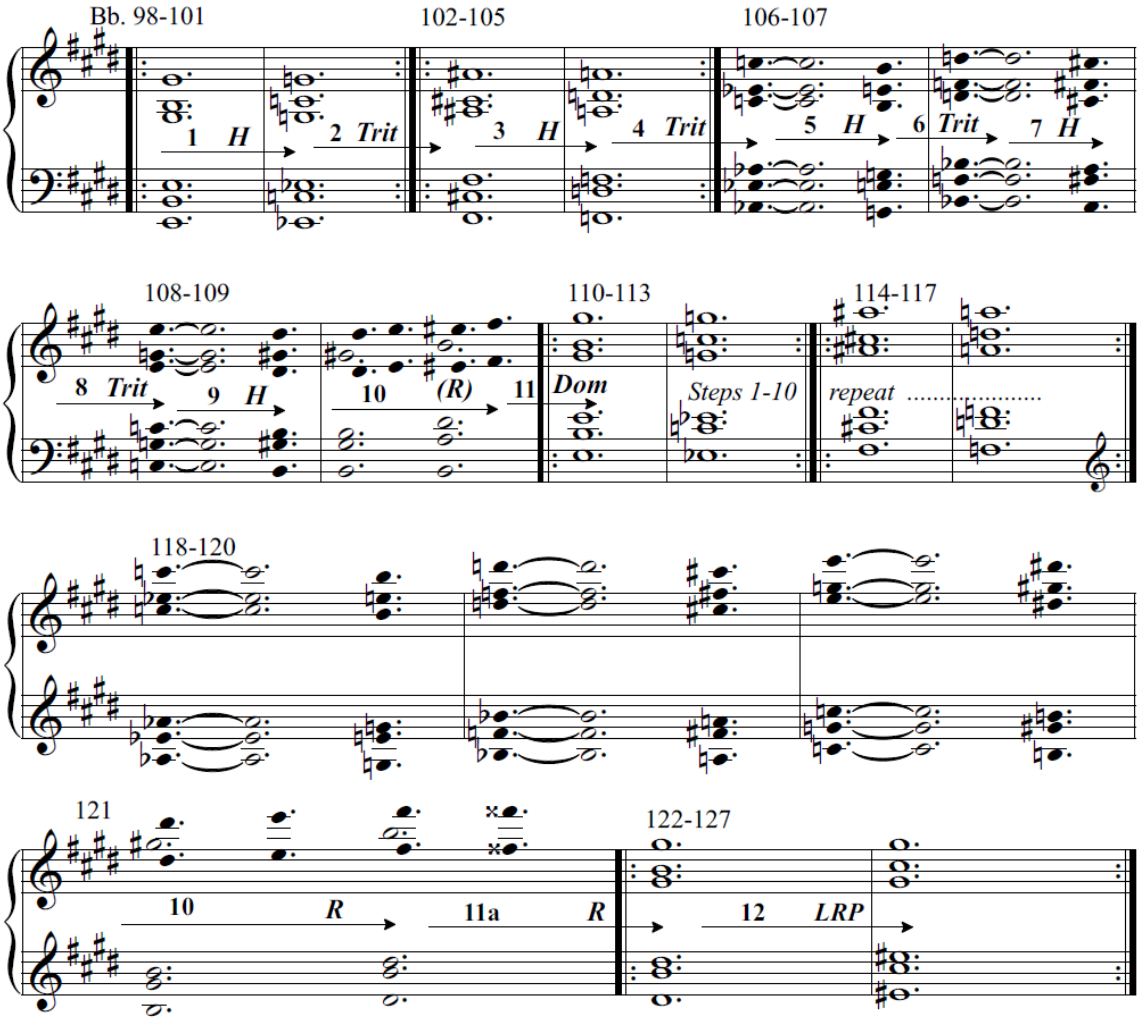
space, especially in bars 19-24. The *Tonnetz* proves to be an indispensable tool for revealing the non-functional harmonic logic and the zig-zagging downwards movement on figure 9.9 clearly reveals Liszt's chaining of triads lying major or minor thirds apart. Such harmonic movement is particularly effective in disrupting the sense of tonal centricity and in quickly, while rather unperceptively bringing about diatonically distant chords.

1.5. The closing section of *Polonaise I* from *St Stanislas* – exclusively triadic transformations involving Hexatonic poles and tritone-distant chord couples

The closing *Adagio* section of *Polonaise I* from *St Stanislas* is based on one of the most astonishing sequences of triads in all of Liszt's music (ex. 9.11). The sheer number of major and minor triads, which the progression goes through, is surprising, as much as is the complete lack of any other types of chords or diatonic relations, save for a single B^7 and its dominant relation to the initial E major. This passage has already been discussed by Richard Cohn and Ramon Satyendra.[8] Cohn acknowledges Liszt's use of two Hexatonic cycles in a T_2 relation to each other (the chords of the second cycle result from transposing the chords of the first by a whole tone), which fits nicely in his collection of examples with Hexatonic systems in late-Romantic works of different composers. Satyendra also mentions the Hexatonicism of the progression, but he balances his analysis a little more towards a tonal interpretation, using Roman numerals. In an attempt to expand what has already been said about this

[8] See Richard Cohn, "Maximally Smooth Cycles", pp. 28-30 and Ramon Satyendra, *Chromatic Tonality and Semitonal Relationships in Liszt's Late Style*, pp. 80-81.

beautiful *Adagio* section, I will offer a more visually appealing analysis and seek to explain its harmonic logic by looking at the progression on the *Tonnetz.* Depicting such a sequence on the tone grid is a challenge by itself, because of the consistent non-directional motion, including mostly compound triadic transformations based on three or more basic transformations each. However, a close inspection of figure 9.10 will reveal a clear pattern, which is at the basis of the whole *Adagio*. First of all, a direct juxtaposition of Hexatonic poles opens



Ex. 9.11. Harmonic reduction of bars 98-127 of *Polonaise I*.

the section, resulting from ***LPL*** compound transformations between E major and C minor, and shown with light blue arrows on the figure.[9] These two chords introduce a highly mysterious new theme in bars 98-101. Next, C minor is subjected to an ***RPR*** compound transformation, which brings the tritone-distant F♯ major and the latter is part of another Hexatonic pole alternation with D minor (step 3). Described differently, the second 4-bar phrase repeats the theme of the first a whole tone higher. D minor is then itself followed by a chord, lying

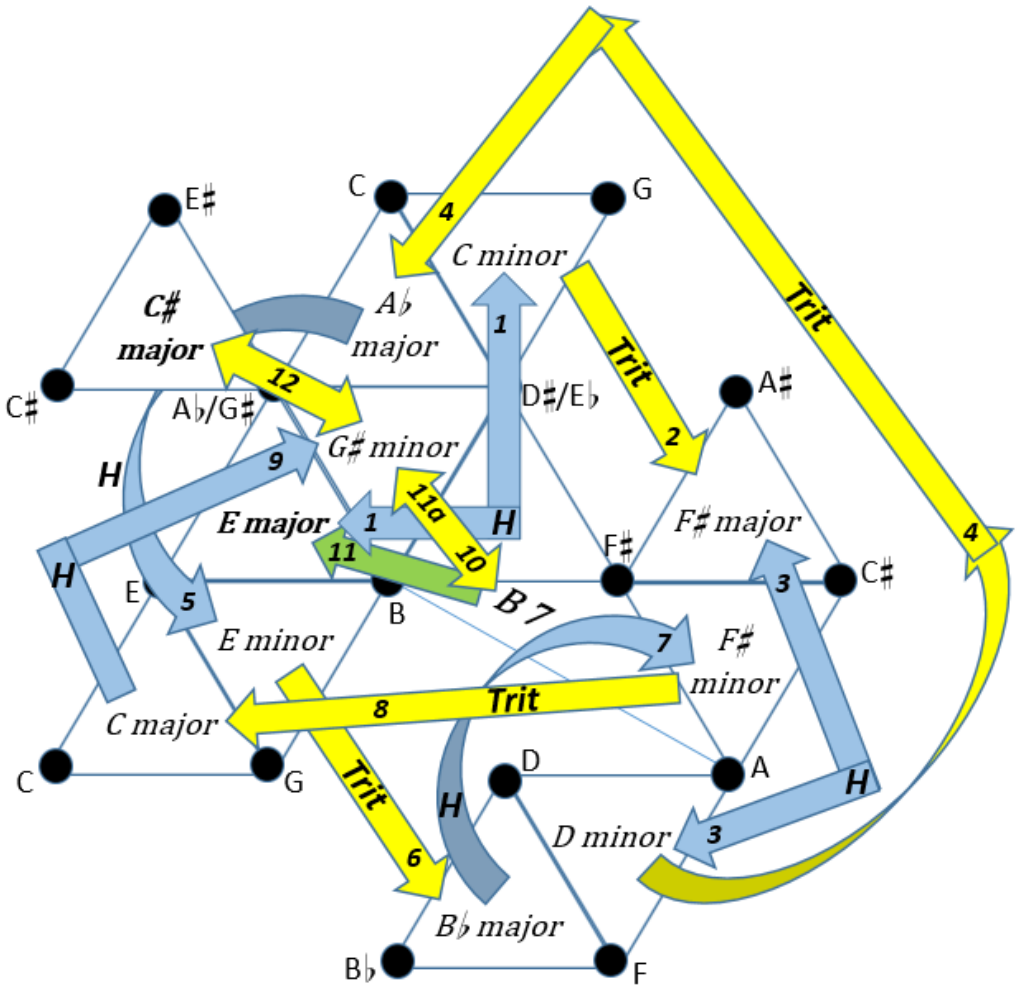


Fig. 9.10. A *Tonnetz* representation of harmony in bars 98-127 of *Polonaise I*.

[9] As already suggested in the introduction of this chapter, the juxtaposition of Hexatonic poles has its very characteristic sound, resulting from the semi tonal shift of all three pitches at the same time – in the case of the current step 1 the root and the third of the E major slide down, while its fifth ascends a semi tone up to the root of C minor.

a diminished fifth away, and it is visually obvious that the ensuing A♭ major is a rather distant relation in chromatic pitch space. A clear pattern is revealed when we follow through the next harmonic steps (nos. 5 to 9) – a chain of Hexatonic poles and tritone-distant couples (the corresponding transformation labelled with ***Trit***), while the latter enables switching between the two Hexatonic regions, involved in the progression. In a concluding more tonal gesture G♯ minor is followed by B^7 and E major for the return of the same sequence in bars 108-110, while at the end of the polonaise G♯ minor unexpectedly alternates with C♯ major and the piece closes on the latter chord (steps 11a and 12). There is nothing about the appearance of the final chord that could have been predicted earlier in the piece, considering that it has not been used at all at any earlier point.

The mysterious sound of juxtaposing triads, which are ***H***-related or positioned tritones away from each other has complemented very well the dark atmosphere of this polonaise when appearing several times in several different transpositions in its final *Adagio* section. These distant compound triadic transformations, while being quite distinct from one another, work to similar effects and make the closing of this piece quite memorable. In all of the steps labelled and numbered on figure 9.10 there are at least three units of voice leading work between the chords and at the same time there is a constant movement around different diatonic collections. The harmony is exclusively chromatic, but not based on parsimonious chord relations. This is quite unlike a lot of the other highly chromatic progressions considered in the current study, where:

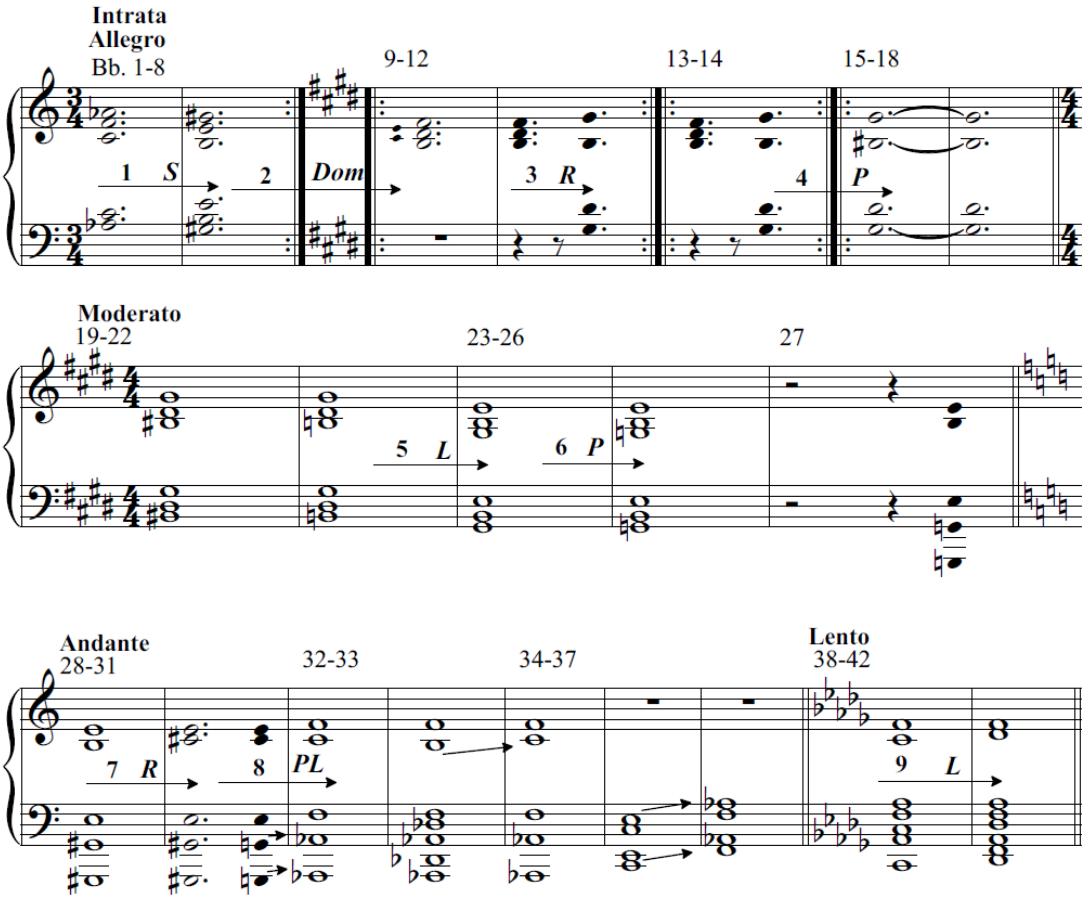
1) There is a wider variety of chord types, often including a mixture of triads and seventh chords.
2) The harmony moves within a smaller pitch space and is limited to a smaller number of chords.

3) There is often an alternation between more or less parsimonious chromatic transformations or between diatonic and chromatic motion.

In short, Liszt has managed to achieve a different kind of sound with chromatic harmony towards the end of this polonaise, by changing some of the more established principles of his harmonic writing thus: a larger number of different major and minor triads as opposed to a diversity of chord types (there is only a single dominant seventh), chromatic jumps instead of smooth connections, and use of a large number of chords from two Hexatonic regions instead of proceeding with clearer linear or circular motion on the *Tonnetz*.

1.6. *Der blinde Sänger* – a complete occupation of the triadic space around a central pitch

Der blinde Sänger was originally written in 1877 as a melodrama, based on a poem by Aleksey Tolstoy. Its solo piano version dates from 1881 and is catalogued S. 546. The below analysis will focus on the first 42 bars of the piece – from the beginning to the moment when the eventual key of D♭ major is reached for the first time. It is the most triadic portion of the piece, which remains relevant to the current overview of works containing basic and compound triadic transformations. What follows from bar 42 onwards includes transpositions of phrases by semi tones, more exclusively diatonic and more dissonant phrases – in short, Liszt's harmonic devices, which will be discussed as less appropriate for a neo-Riemannian analysis in chapter X.



Ex. 9.12. Harmonic reduction of bars 1-42 of *Der blinde Sänger.*

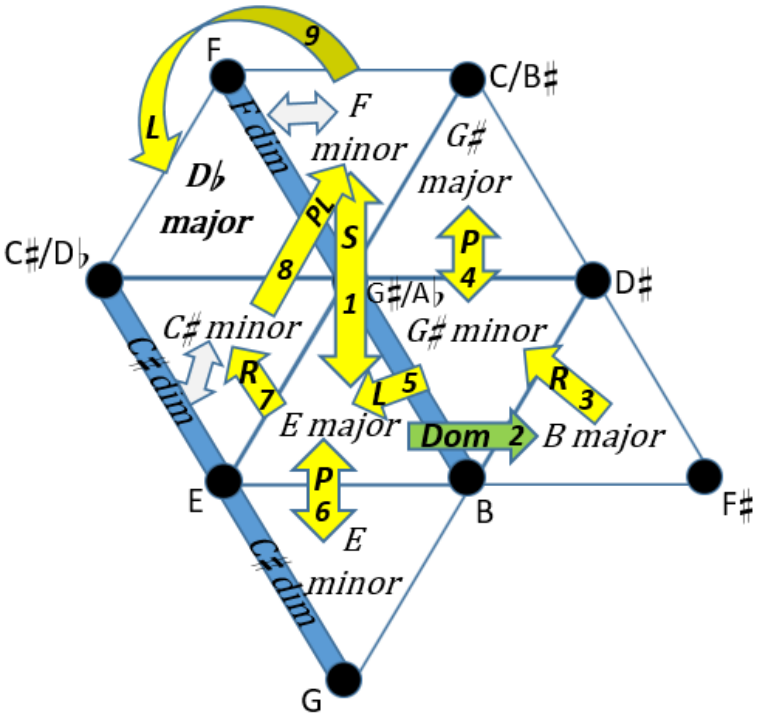


Fig. 9.11. The triadic harmonic progression in bars 1-42 of *Der blinde Sänger.*

The opening horn call is based on an overt juxtaposition of two ***S***-related triads – F minor and E major. This immediately strikes the listener and creates the expectation for a chromatically-conceived harmonic structure[10] (see example 9.12). Tonic-dominant relations are not completely absent, as it can be seen from the green-colored step 2 on figure 9.11, but it is also evident that the vertical transformations (most of them being basic) prevail in the portion of the piece in question. The other most striking fact about the figure is how tightly organised it is – no chord is completely detached from the others (non-parsimonious to them) and all the chords around A♭ or G♯ are used. It is interesting to notice that an anti-clockwise circle, which involves four different types of transformations – ***S***, then ***Dom***, ***R*** and ***P*** – constitutes the harmony of the opening section (bars 1-18). As a result of it, the *Intrata* ends very close to where it has started from – on a G♯ major, which is the *Relative* neighbor of the initial F minor. The following very brief *moderato* involves several transformations along the Hexatonic alley, which lead towards G♯ major's Hexatonic pole E minor. Then the agitated *Andante* returns the E major and substitutes it with its *Relative* C♯ minor. The remaining essential transformations include the return of F minor after a ***PL*** and the arrival of D♭ major shortly after the beginning of the *Lento* section, which bears its key signature. The incidental appearances of C♯dim and Fdim are deliberately shown with smaller arrows as inferior to the consonant triadic progression on the figure, because they are sounded only very briefly and seem to decorate the more prolonged C♯ minor and F minor in bars 30-40, to which they are also connected through arrows in the harmonic reduction.

[10] As already mentioned, the ***Slide*** transformation has a more characteristic and more striking sound then the basic (***L, P, R***) ones and Liszt has certainly wanted to exploit that at the very beginning of his melodrama.

It can be concluded that the triadic progression in the first 42 bars of *Der blinde Sänger* is based on eight major and minor triads, which are maximally tightly positioned on the *Tonnetz*. That means that there can hardly be any bigger concentration of maximally smooth triadic progressions within this configuration of consonant triads. The filling of the pitch space around the central G♯/A♭ can be interpreted as another instance of Kenneth Smith's 'pitch tethering', although in this case there is no straight-forward circular motion and a couple of 'outside' triads are included. Moreover, Liszt has used the full variety of transformations, including not only the three basic ones, but also some compound transformations (such as the ***LP*** and ***PL***), a single ***Dom*** relation, and most importantly – the piece opens with the most characteristically sounding of all chord relations in it – a ***Slide*** between F minor and E major. With the absence of diatonic functionality and while not maintaining any sense of the piece being in a particular key, the composer has dedicated his creative endeavors to using all the kinds of chord relations that he has been fond of and exploring their abilities to make up new harmonic structures.

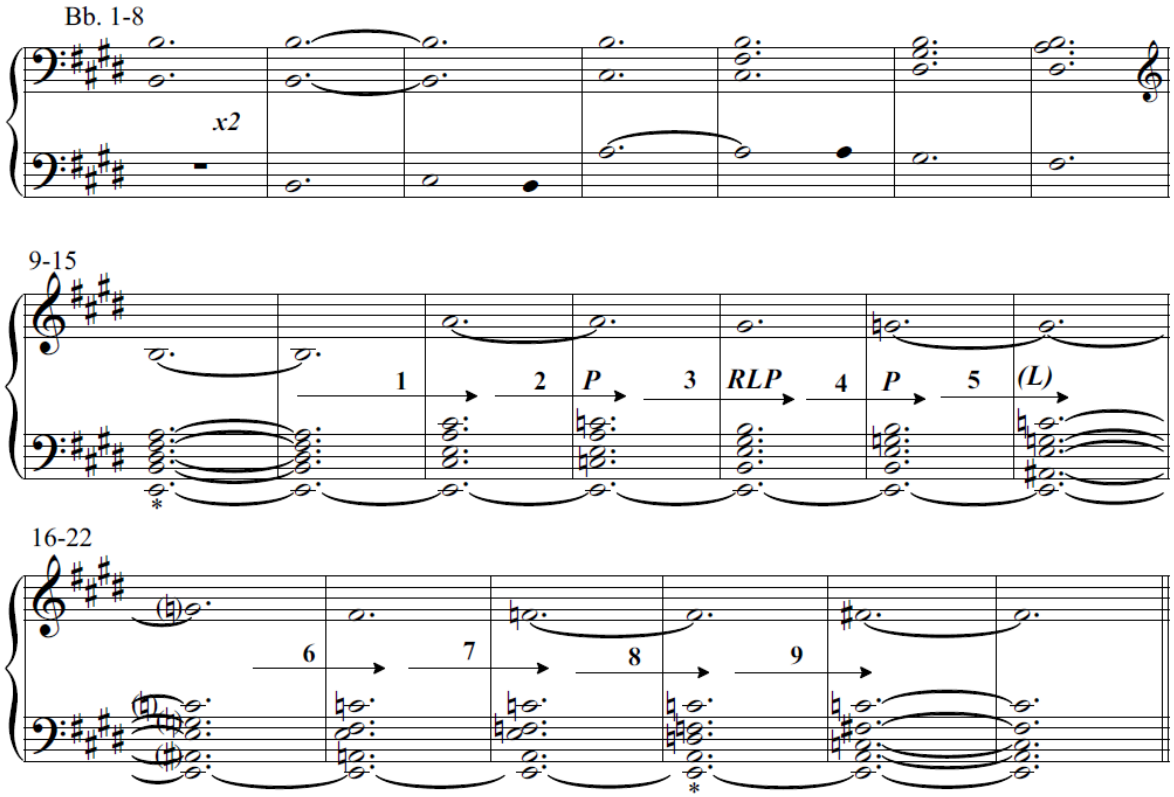
2. Mixed neo-Riemannian transformations involving triads and seventh chords

2.1. *Sursum Corda*

Sursum Corda (translating as 'Lift up your Hearts' from Latin) is the last piece from the third book of *Années de Perelinage* (S. 163). Although it is written in E major and Liszt has kept the corresponding key signature throughout, an extended chromatic digression from the main key area, based on a number of secondary dominants, occurs in the middle of the piece (roughly within bars 37-70). My analysis here will concentrate on the first 70 bars (until the passionate return of the main theme), dividing these into three harmonic units: initial presentation of the main theme (bars 3-22, see ex. 9.13), varied repetition (23-36, ex. 9.14) and extended developmental episode (37-70, ex. 9.15).

The melodic contour of the main theme is already introduced in the bass voice within the first eight bars, but it is fully developed and closed within the following more extended phrase (bars 9-21), the harmony of which is summarised on the *Tonnetz* diagram of figure 9.12. It becomes visible from this figure that the main functions in E major are used, but extended with a variety of seventh chords, which lie in close proximity to the main subdominant.[1] The *Parallel* substitutions coming straight after the subdominant and the tonic are a most characteristic feature of the harmonic language of the piece, and in fact not that common in late Liszt. They initiate the chromatic descents, which result

[1] It must be noted that with the mixture of functionality and chromatic chord relations in it *Sursum Corda* would fit into part I of this dissertation and accordingly there is some functional language in the current commentary. However, the focus here is on the nature of the surface-level chromatic progressions and how a neo-Riemannian analysis can bring a new perspective to it, as opposed to its larger-scale interaction with the key of E major.



Ex. 9.13. Harmonic reduction of bars 1-22 of *Sursum Corda*.

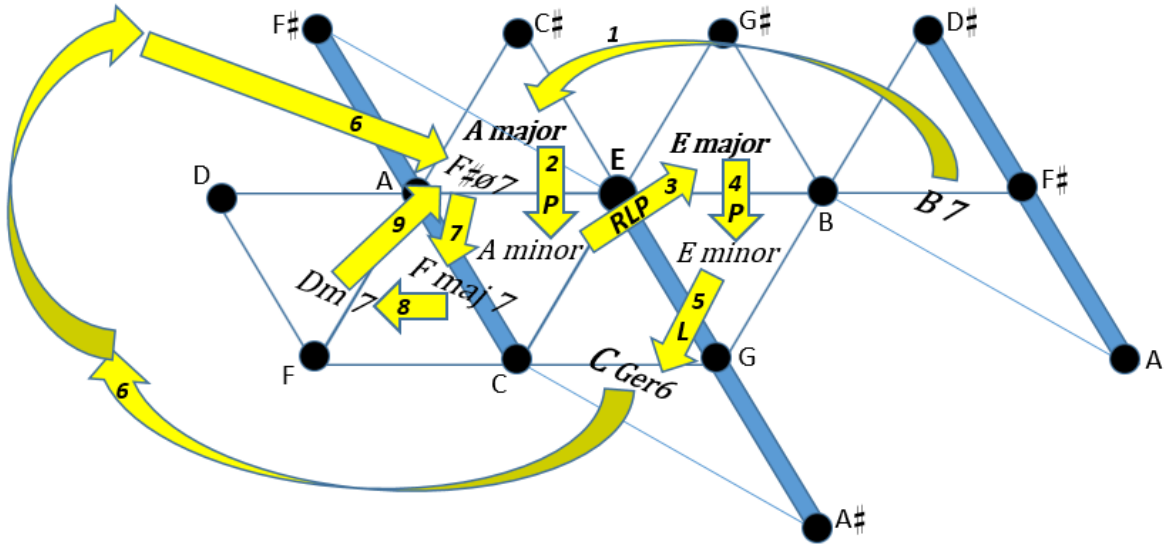
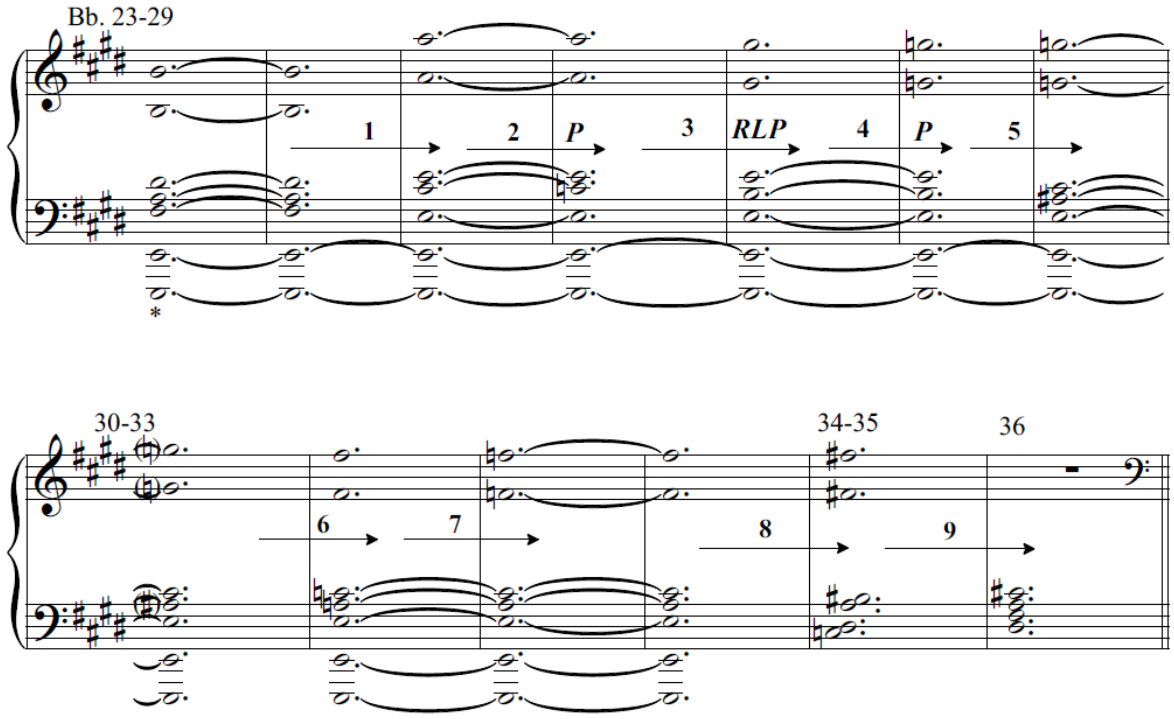


Fig. 9.12. A *Tonnetz* representation of the harmonic progression of bars 9-22 of *Sursum Corda*.

in the circular clock-wise movement on the *Tonnetz* – from E minor all the way around A minor and finishing on the distant subdominant substitute F♯ø^7.

It should be noted here that appoggiaturas in the form of upper neighbor tones are motivic in this piece and in fact they are part of its affective pathos. However, my reductions from bar 9 onwards (after the opening gesture where this main motivic block is introduced and reflected at the beginning of ex. 9.13) only extract the chords, which are at the basis of this analysis and therefore depicted on my *Tonnetz* diagrams. While it can be argued that such harmonic reduction cannot do full justice to all the harmonic intricacies of this piece, especially when it comes to non-chordal tones, it serves to crystalise the essential chords and allow me to discuss their relationships and proximities after putting them on the *Tonnetz*. The other important harmonic device, which may seem not to have been fully accounted for, is the pedal tone E, which persists with almost no interruptions throughout bars 9-65. It is marked with an asterix in my harmonic reductions, whenever it is not part of the essential harmonic progression above it. However, this unarguably important pitch is reflected as such on my *Tonnetz* diagrams by being emphasised and its point being enlarged, and it can be followed what its relation or proximity is to all the chords depicted on these figures. Still, I hear it as sounding as a separate layer to the progressions that unfold above it and therefore to me it remains foreign to chords such as the Dm^7 of fig. 9.12.

The varied repetition of the main theme brings diminished seventh chords into the harmonic mix, but it is similar to its first iteration in going through F♯ø^7 again, although this time the final chord is D♯ø^7. A comparison between figures 9.12 and 9.13 may reveal that a very similar chromatic space is explored, while the second time around the sequence of seventh chords is altered.



Ex. 9.14. Harmonic reduction of bars 23-36 of *Sursum Corda*.

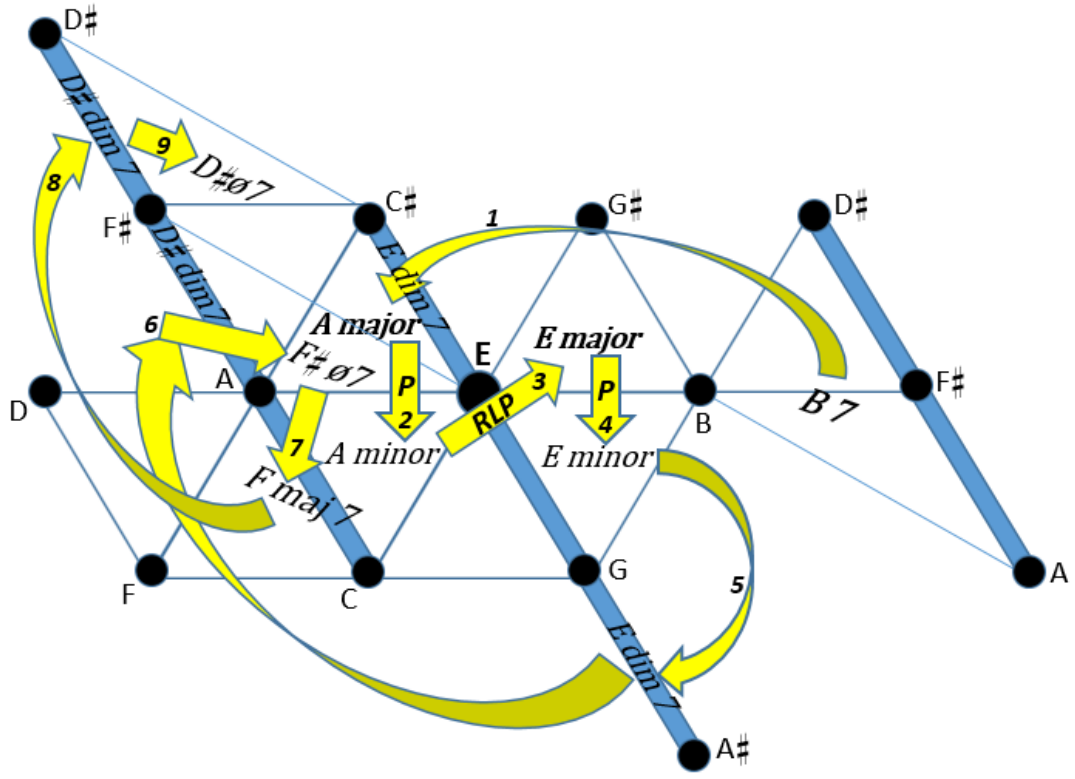
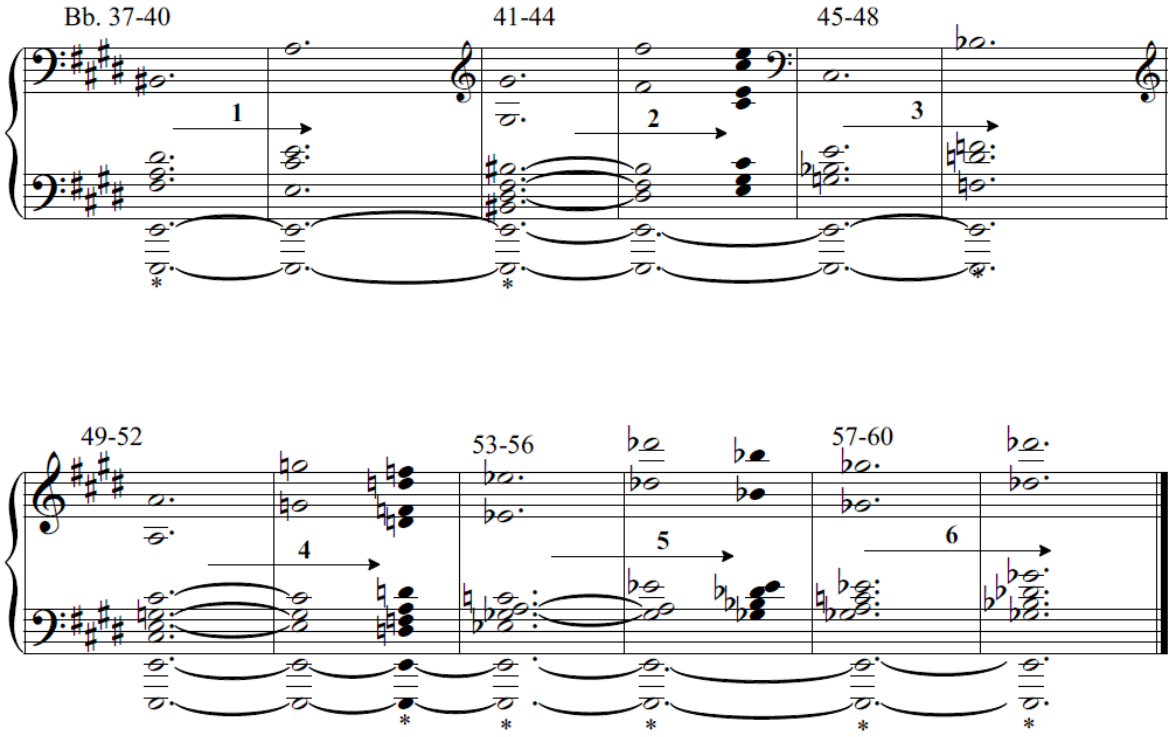


Fig. 9.13. A *Tonnetz* representation of the harmonic progression of bars 23-36 of *Sursum Corda*.

The developmental following section is based on a 4-bar sequentially treated unit, which remains closely linked to the main theme, while traversing more freely through pitch space and abandoning the key of E major for a while. After omitting some inessential passing harmonies, I have reduced this whole segment to only six chord couples in example 9.15 (foreign E pedal notes marked with an asterix), while on figure 9.14 the main tonic is also shown for tracking its distance from the chords in use. Firstly, B♯dim^7 transforms into the main subdominant A major. Then a maximally close neighbor to the same dim^7 chord – G♯^{7} – resolves into one of its expected tonics (and *Relative* of the main tonic) – C♯ minor. Note that the diminished seventh chord in question is depicted twice on the *Tonnetz* for the purpose of showing all progressions within the smallest possible area. Moreover, the pitches of this chord are notated firstly with sharps (steps 1 and 2 on figure 9.14), but then with flats (steps 5 and 6), which is revealing about Liszt's enharmonic and chromatic flexibility in hearing chords.



Ex. 9.15. Harmonic reduction of bars 37-60 of *Sursum Corda*.

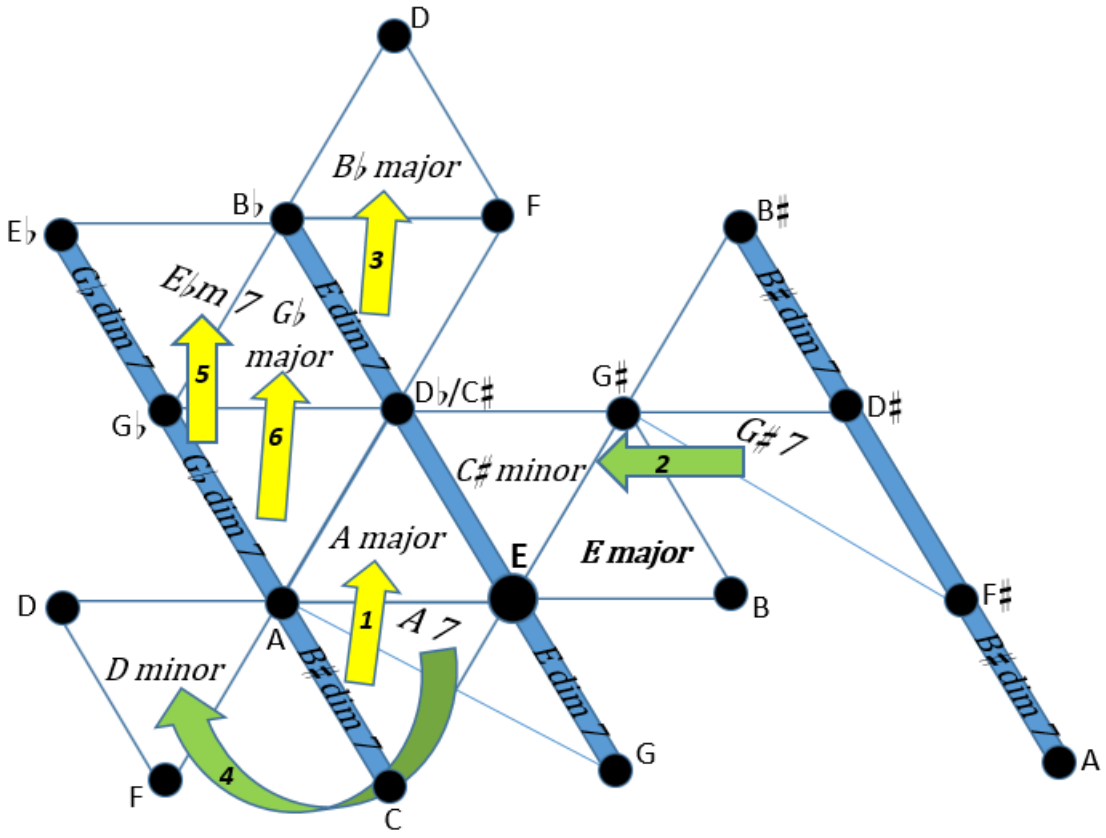


Fig. 9.14. A *Tonnetz* representation of the harmonic progression in bars 37-60 of *Sursum Corda*.

He uses flats and almost no sharps throughout bars 45-64, while keeping the 4-sharp key signature of E major. The third chord couple is similar to the first one and the last two in consisting of a dim^7 chord resolving into a triad rooted on one of its pitches. This time B♭ major is reached – the chord, which lies a tritone away from the main tonic. There are no direct tritone juxtapositions in this piece, such as the ones in the final section of *Polonaise I*, however, the wider view of Liszt's harmonic practice (both late and earlier) reveals frequent usage of chords or key areas in such chromatic relation. Another dominant-tonic progression occurs next on fig. 9.14 and its relation to the previous one is clear under the premises of chromatic voice leading – A^7 resolves into D minor, both chords being maximally close to the previous couple. Finally, G♭dim^7 is used for longer and

resolves into E♭m^7, then into G♭ major and then again into E♭m^7, which is one of its maximally close minor seventh chords. The scalar passage on the whole tone scale in bars 66-70 (not included on the figure) further increases the harmonic tension towards the powerful reprise of the main theme and obliterates all the tonal pushes and pulls from the previous phrases.
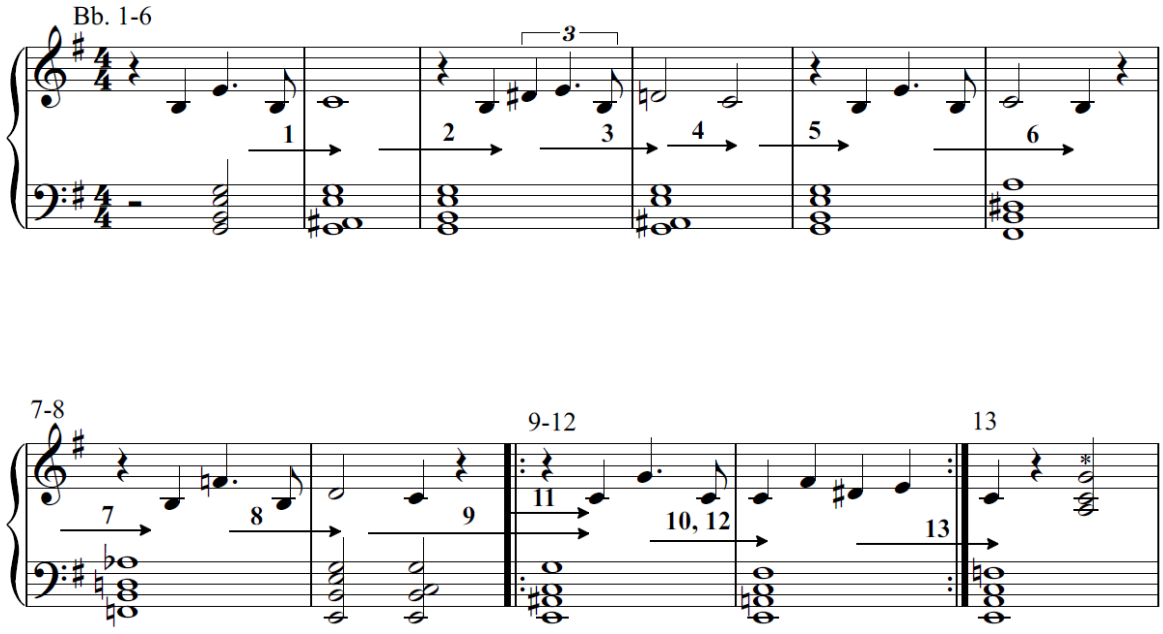
The feeling of losing tonal direction is reaffirmed with the latter event, although it was already present with the harmonically diverse progression, which is depicted on figure 9.14. No clear harmonic pattern can be pointed out upon looking at the *Tonnetz* diagram. However, a couple of interesting observations must ensue. The A major from the first step is in an ***L***-relation to the C♯ minor from the second. Then one of the chords a minor third apart – B♭ major – follows, before another ***L***-relation brings the D minor with step number four. The G♭ major within the last two steps (being also a part of the E♭m^7) lies a major third above D minor and a minor third below the initial A major. In short, diatonic or perfect fourth chord relations on a phrase-to-phrase level are avoided throughout this section and substituted by the more chromatic maximally close or major/minor third progressions. Clearly, chromatic harmony completely overwhelms the diatonic relations in E major in one of the most freely conceived developmental episodes of a tonal piece in late Liszt. Still, it was shown that the whole segment is based on two types of chord progressions – dominant-tonic (as in steps 2 and 4 on figure 9.14) and common-tone diminished seventh progressions (as in numbers 1, 3, 5 and 6).

2.2. Schlaflos! Frage und Antwort

This short nocturne, written in 1883 and catalogued as S. 203, consists of two highly contrasting sections, the first one representing the question, while the latter is the much awaited answer from the title of the piece. The second section (bearing the tempo designation *Andante quieto*) is much clearer from the viewpoint of functional diatonicism and limited to the key of E major, thereby it remains outside the focus of the current analytical discourse. The first section, however (up to bar 41) is representative of Liszt's late harmonic vocabulary, combining a variety of seventh chords and triads under smooth chromatic voice leading, while the melody from bar 13 onwards becomes increasingly dissonating with the unchanging harmonic accompaniment.

The following analysis will focus on only the first 12 bars of the piece, as these contain all the chords used throughout the *A* section (see example 9.16). The arpeggio-like accompaniment reaches a third-inversion $Fmaj^7$ chord in bar 13 and lingers on it all the way until the unrest is suddenly brought to a halt in bar 41. The melodic line becomes highly chromatic meanwhile and moves completely independently from the accompaniment, therefore it would be impractical to trace harmony bar-by-bar. Consequently, it can be claimed that the piece opens in E minor and goes through a series of chromatic transformations before lingering on $Fmaj^7$ from bar 13 onwards.

The harmonic path from what seems like a tonic E minor to $Fmaj^7$ is depicted in 13 steps on figure 9.15. Firstly, the opening chord is followed by the German sixth chord on C – a very smooth connection, in which the B is substituted by the two pitches lying a semi tone upwards and downwards from



Ex. 9.16. Bars 1-13 of *Schlaflos* (left-hand accompaniment is reduced to chords).

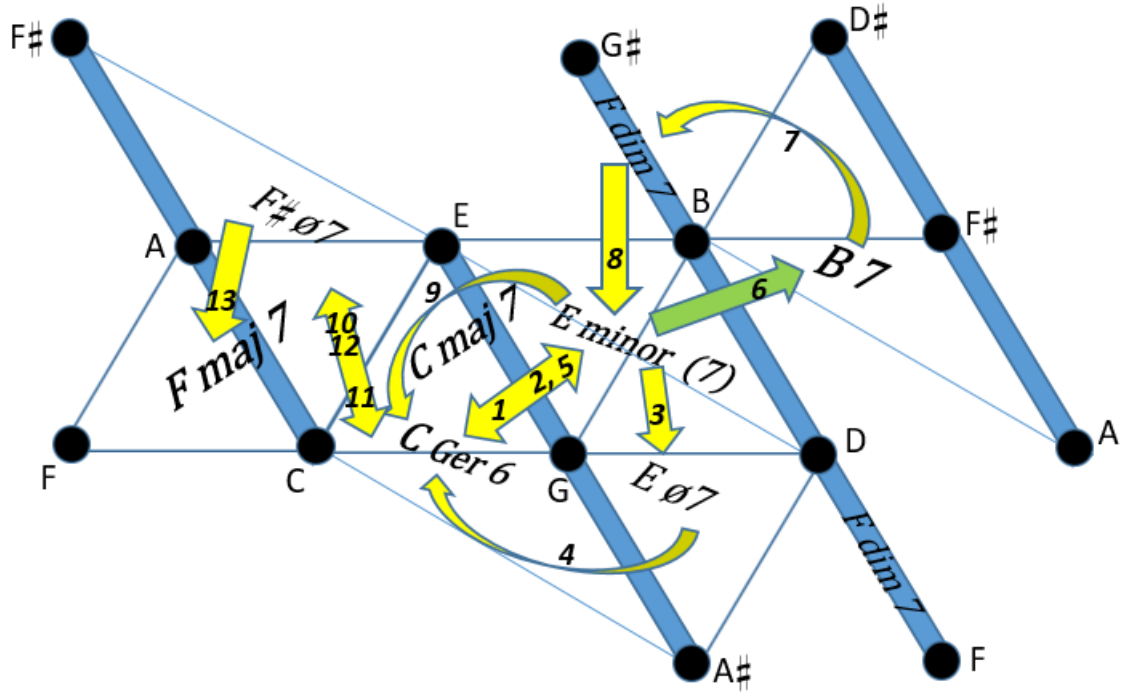


Fig. 9.15. The harmonic progression in bars 1-13 of *Schlaflos*.

it. After the E minor is returned it transforms into Eø^7 – the root is kept, while on a triadic level an ***RP*** compound transformation occurs.[2] Eø^7 is then followed by C$_{Ger6}$ through only one shifting pitch – D moving to C. E minor returns with transformation number 5, being reaffirmed as a tonic, although the two seventh chords in between have failed to gain functional momentum. The main dominant – B^7 – arrives after that in the only indisputably functional chord relation within the whole *A* section. A semi tonal descent of the whole broken chord afterwards leads to the appearance of Fdim^7 upon the seventh harmonic move of the passage. E minor inevitably returns after that, although this time it is used as a seventh chord (Em^7). Typical of such highly chromatic passages in late Liszt, a chord that has already been used – C$_{Ger6}$ – returns, but is approached through different voice leading (hence from another side on the *Tonnetz*), this time through Cmaj^7. Such harmonic subtleties allow the composer to vary a seemingly static or wandering passage, while exploiting certain pitch space (in this case the space around G) to its limits.

Upon the tenth harmonic move of the section the space to the left of the initial tonic is reached – namely the version of the main subdominant F♯ø^7, counterbalancing against the earlier B^7. Note the perfect symmetry in the way the triangles of F♯ø^7 and B^7 hang around E minor, the latter being a turned around version of the former. I maintain that such pitch symmetry is not coincidental and even with all the chromaticism of the passage, which blurs its possible functionality to the extreme, the subdominant and the dominant hanging at the two sides of the tonic E minor can still be observed on the *Tonnetz*. A two-fold alternation between F♯ø^7 and C$_{Ger6}$ is eventually followed by Fmaj^7 – the chord, which will not be substituted by another one for more than 25 bars afterwards.

[2] Hidden basic and compound triadic transformations are not labelled on fig. 9.15, as this progression is almost entirely tetradic and discussing ***RP***s or ***L***s (see steps 1, 2, 5) loses relevance.
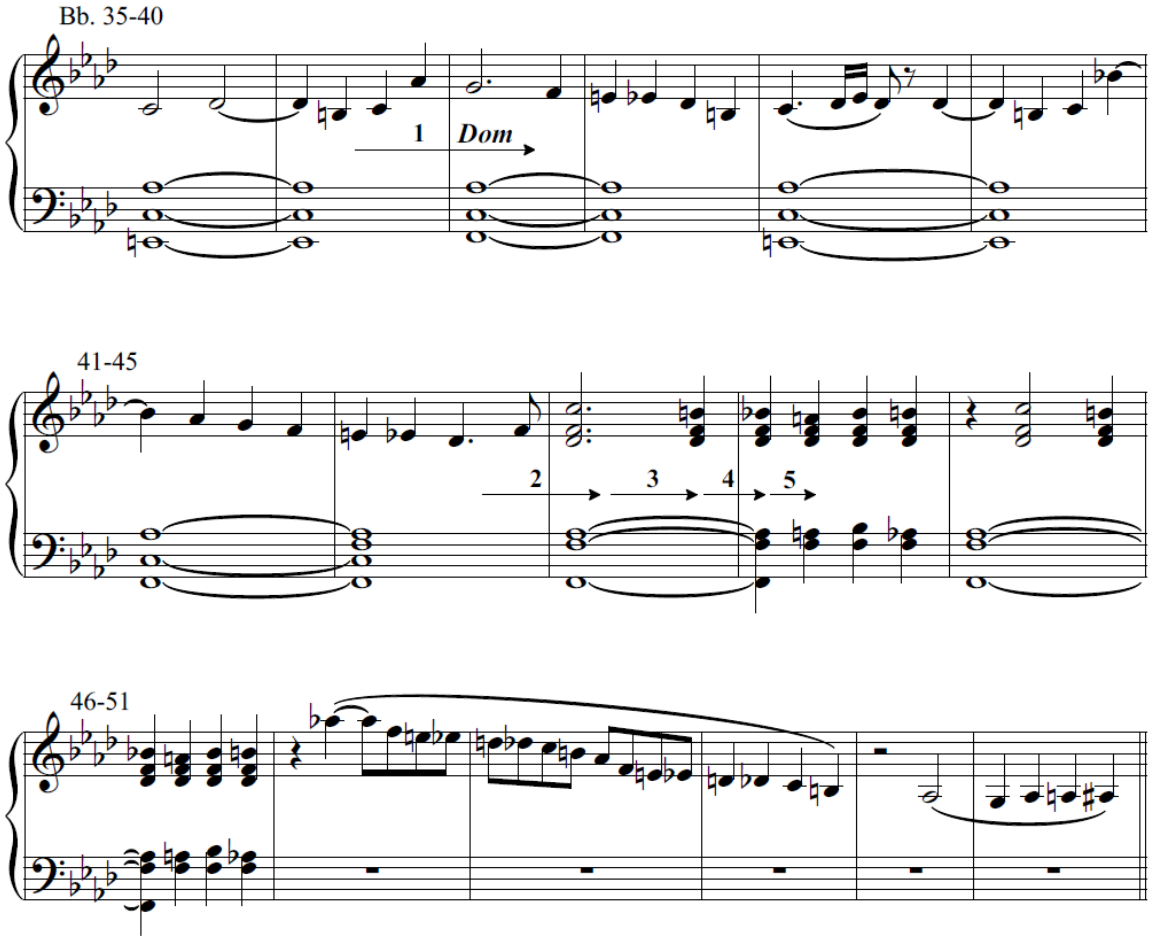
It contains the main subdominant (A minor) and the flattened scale degree $\hat{2}$ in the key of E minor.

In conclusion, the first 13 bars of *Schlaflos* contain a harmonically rich and highly chromatic sequence of mixed transformations, which evolves within a relatively tight space on the *Tonnetz*. The visual representation of the passage allows us to notice that all harmonies in use are either versions of the main three functions in E minor or very close to them under semi tonal voice leading. At the end of the progression a varied form of the main subdominant occurs. The piece exemplifies Liszt's experiments in denying functionality and exploring smooth chord relations, while at the same time remaining chromatically very close to those chords, which he pretends to avoid at all costs. While on the surface such a work may seem quite extravagant and dissonant, a closer inspection reveals that it still firmly remains grounded in the tonality of E minor, which becomes very clearly confirmed with the later change to E major key signature and the diatonic progression in that key.

2.3. The main thematic (*A*) sections of *La lugubre gondola II*

While in chapter VIII it was demonstrated how diminished seventh chords play a leading role in the harmonic progressions of the introduction and coda of the second *Lugubre gondola*, here the central thematic sections will be depicted on the *Tonnetz*, in order to show the interactions of seventh chords, consonant and augmented triads in them. First of all, it should be noted that the first half

of section *A* (bars 35-51, ex. 9.17) is repeated a semi tone down in the next 17 bars and reprised in section *A'* with only a textural expansion, which serves to



Ex. 9.17. The first half of section *A* (bars 35-51) of *La lugubre gondola I*.

make the return of the main theme more powerful and dramatic. Therefore, a neo-Riemannian analysis of bars 35-51 will be sufficient in accounting for the harmonic progressions of both *A* and *A'*. Even though some harmonic ambiguity is interpolated within the accompaniment through the use of a D♭, nothing more than an alternation between Eaug and F minor is most readily perceived in the first phrase of this section (bars 35-42). It is a simple dominant-tonic couple in this case, considering that the main dominant is substituted by its augmented

version. The next phrase is subtler from a transformational point of view and it involves the chords from the second harmonic step onwards, which are depicted on the corresponding *Tonnetz* diagram (fig. 9.16). A movement towards the neighbouring Faug and backwards materialises, while all voice leadings throughout this sequence are minimal. Finally, a monodic line completes the subsection and seems to prolong the last chord of the harmonic progression – D♭^{7}, which closes the movement back and forth through steps 3, 4 and 5 on the figure, therefore it is underlined.

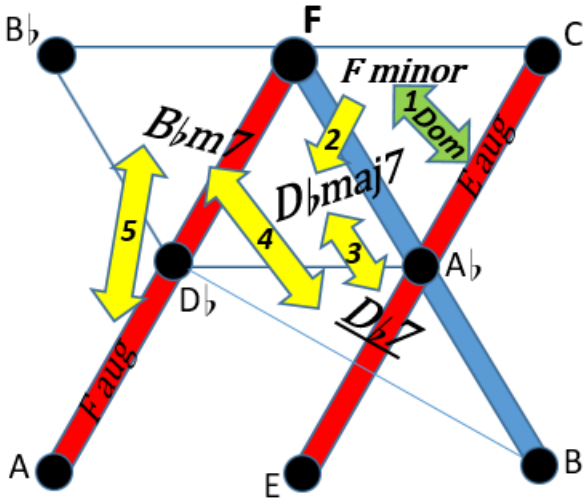


Fig. 9.16. The harmonic progression within bars 35-51 (section *A*) of *La lugubre gondola II*.

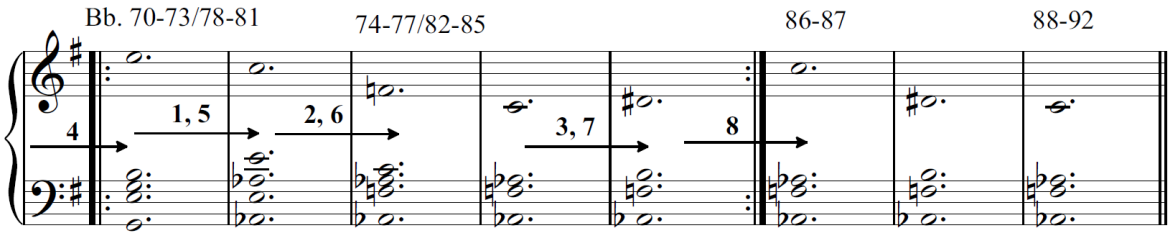
Figure 9.16 stands out from most of the other diagrams in this study as comprising a wide variety of chords within a very short segment of a piece. It is diverse while being maximally tightly organised. All the six chords involved are neighbours to one another and all harmonic steps but number 4 involve chords, which lie in maximally close proximity. Another notable event is the fact that the first phrase, shown as step number 1, exemplifies a micro-case of simultaneous double syntax, being a dominant-tonic relation and a maximally smooth

transformation at the same time. If we are to talk about any chord being central to this progression, it should definitely be F minor, considering that the bass remains static as F throughout steps 3-5, even though F minor is seemingly abandoned at that point. However, we can speak of F being a central pitch more convincingly, pointing out the fact that it is part of every chord within this subsection. Accordingly, F is shown as a slightly bigger point on the *Tonnetz*. It can be concluded that, while the smooth chromatic progression in the *A* sections seems to abandon any functionality in the implied local key (be that F minor or E minor upon the repetition of the segment), the root of this key does not disappear and keeps some tonal control over the section. A parallel can be drawn to the C♯ dominant pedal in *Valse oublieé* no. 1, considering that in both pieces a descending chromatic melody unfolds over a static bass.

2.4. Bars 70-97 of *Polonaise I*

The segment from *Polonaise I* on the *St. Stanislas* oratorio, which will be discussed here, is based on a circular movement between four chords of three different kinds – two minor triads, an augmented triad and a half-diminished seventh chord (see ex. 9.18). As it can be noticed on the corresponding *Tonnetz* diagram (fig. 9.17), there is a fine balance between maximally close proximity of chords and transformations involving two units of voice leading work, which allows the composer to easily connect two minor triads lying a semi tone apart – E minor and F minor. A♭aug and F minor are maximally close, being part of the same Weitzmann region, while E minor is one step further in pitch space (the *Parallel* of E major, which is also part of ***WtzR-A♭***). Also, Fø^7 shares two tones with

F minor and smoothly connects to it and only its connection to E minor sounds as more distant at step number four, but arguably this is why such less smooth transformation serves to transition back into the initial chord and connect the first 8-bar unit to its varied repetition. Another factor contributing to the apparent lack of directionality in the passage is the bass voice, which only oscillates between G and A♭, remaining on the latter note for no less than 9 bars from 80 onwards.



Ex. 9.18. Harmonic reduction of bars 70-92 of *Polonaise I*.

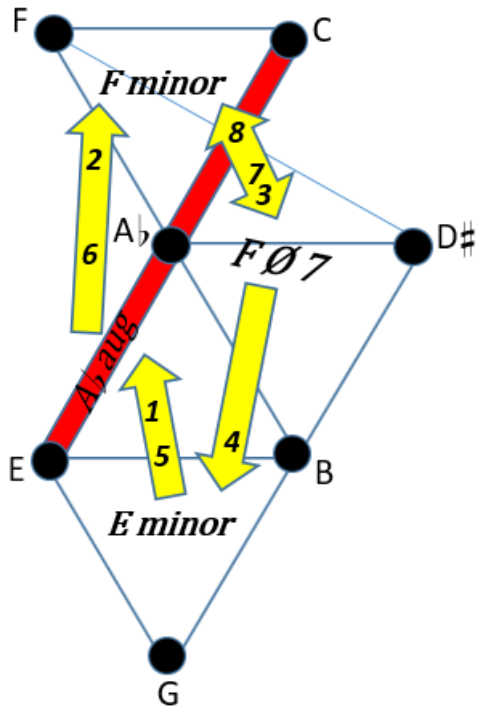


Fig. 9.17. The circular harmonic progression in bars 70-92 of *Polonaise I*.

The clockwise circular movement on the *Tonnetz* completes one circle and a half before getting stuck between F minor and Fø^7 and eventually completing the section with a monodic prolongation implying F minor. The tendency is towards limiting the harmonic scope of the music, which is already limited at the beginning of this section and the movement between the four chords has the typical wandering quality, which encapsulates the late Lisztian aesthetics, related to the troubled mind of the composer.

A tonal analysis of this entire polonaise may seek to find relations between the different key areas, which are passed through. It would certainly point out the correspondence between the initial E minor and its parallel E major at the beginning of the closing *Adagio*, while describing the final C♯ major as an altered lower mediant of the alleged main tonic. In contrast to that, my scattered analytical commentaries on segments of this piece reveal the variety of chromatic chord relations in it without seeking a reconciliation between Liszt's various compositional decisions taken throughout this relatively short work. The neo-Riemannian approach proves suitable to the fragmentary nature of pieces such as *Polonaise I* in that it can focus on a specific segment irrespective of the whole and reveal a non-hierarchical circular progression, which does not seem to have a clear beginning or ending, nor a specific goal harmony it is developing towards. Nevertheless, the chromatic proximity of the chords in it, combined with the presence of three distinct types of chords within a 4-chord progression, make it another one of those hidden harmonic gems in Liszt's late piano music.

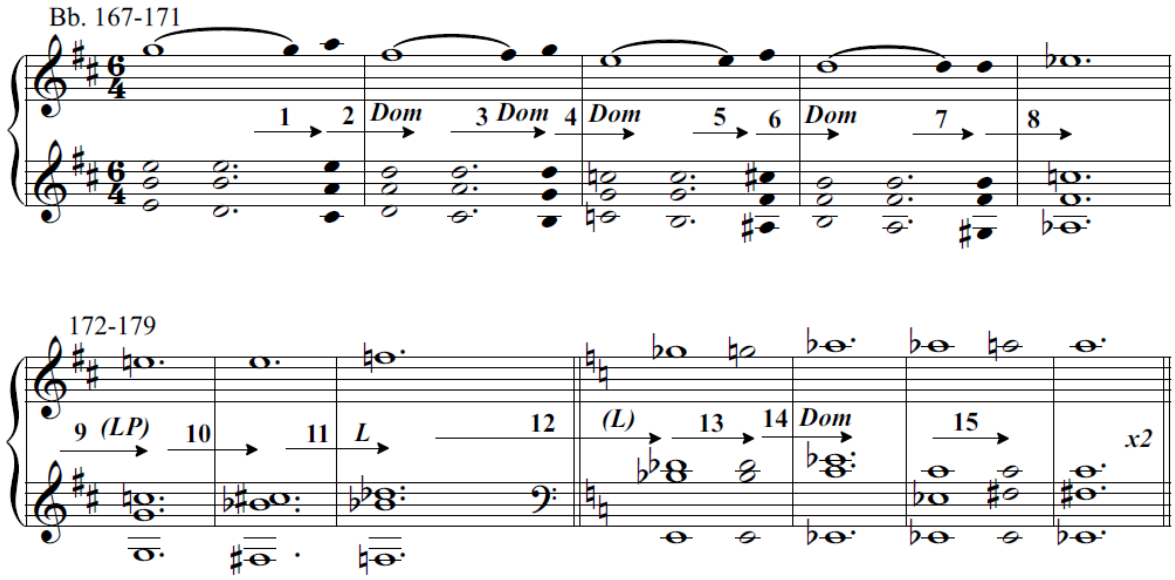
2.5. The ending of the *Sarabande* transcription based on Handel's *Almira*

It is timely to point out here that the current study was initially meant to be limited to Liszt's original piano compositions and exclude the numerous transcriptions or more broadly the 'music based on works of other composers', which in fact is the largest category of works completed from 1869 onwards.[3] Despite the adherence to more established harmonic practice in the majority of these pieces, some of them contain the types of chromatic chord relations, which have been in the focus of the current study and one such transcription cannot escape attention here. A future study on harmony in similar mature and late transcriptions would allow for comparisons with the original music, that inspired them, and would reveal to what extent Liszt has been eager to recompose harmony and cast it under his own stylistic traits.

First of all, the piece based on the *Sarabande* from Handel's opera *Almira* (S. 181, composed in 1879) is hardly a transcription in the wider sense, but more like a re-composition of Handel's inspirational thematic material. It is the only setting of a Baroque piece dating from Liszt's late period and the original piece has been freely expanded with the addition of introductory, transitional, and developmental material.[4] Moreover, when it comes to the harmonic language of the *Sarabande*, it is not hard to recognise Liszt's penmanship. There is a curious interplay between Baroque and Lisztian harmony, which comes to full flourish

[3] See James Baker, "Music based on works of other composers", in: "Liszt's late piano works: a survey", chapter V in *The Cambridge Companion to Liszt* (Cambridge, 2005, 99-103). Baker emphasises that unlike the original late works, 'the transcriptions and paraphrases were published within a year of composition, in marked contrast to compositions in other categories, which Liszt often withheld from publication for years.' This is revealing about the style of such compositions and implies that most of them are tied to the musical conventions of their time or to Liszt's earlier practices and the composer has refrained from his most daring experiments in them.
[4] Ibid, p. 103.

towards the end (bars 167-179) and this section will receive its due attention below.



Ex. 9.19. Harmonic reduction of bars 167-179 of the *Sarabande* based on Handel's *Almira*.

As it can be noticed on ex. 9.19, a traditional descending sequential tetrachord progression starts from bar 167 and a series of secondary dominants leads through scale degrees $\hat{7}$, $\hat{6}$, and $\hat{5}$ in E minor, in order to reach B minor after step 6 on the *Tonnetz* figure 9.18. The descending movement in whole tones leads to horizontal movement to the left on the tonal grid, which is initially completely diatonic in the key of E minor, but suddenly turns into downwards (hence chromatic) movement with the harmonisation of B minor a semi tone below C major. From there onwards the progression becomes more tetrachordal and its diatonic underpinnings become increasingly hard to follow. In chromatic space the Bm^7 of bar 170 is maximally close to the following $G\sharp\text{ø}^7$ and the latter transforms into $A\flat Ger6$ through two units of voice leading work. The

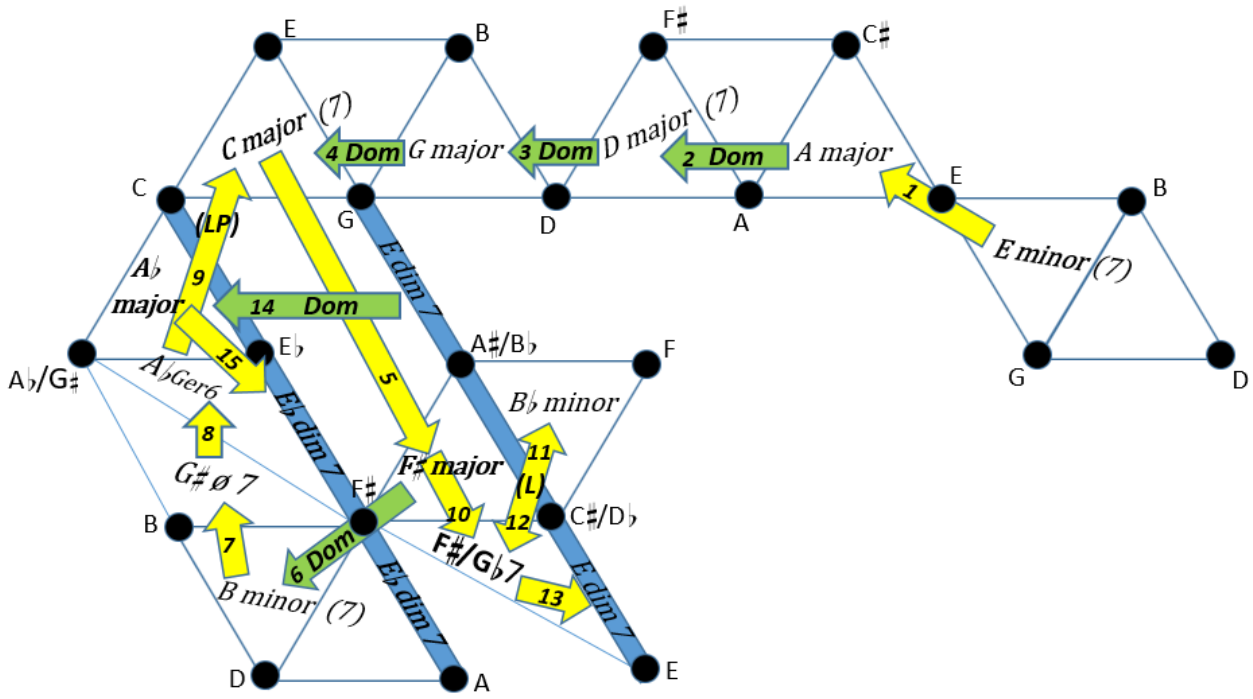


Fig. 9.18. The harmonic progression in bars 167-179 of the *Sarabande* based on Handel's *Almira*.

latter seventh chord is then smoothly connected to a cadential $^{6}_{4}$ chord in C major, which represents an already established practice of evading the expected cadence in the chromatic music of Schubert, Chopin and Liszt himself. Another F♯ major chord follows from the C major with harmonic step number 10, but this time extended to a dominant seventh with a deliberately misspelled A♯, written as a B♭ instead. Perhaps the most conspicuous peculiarity of the passage comes at this point, when the latter misspelled F♯^{7} resolves like an F♯Ger6 to another cadential $^{6}_{4}$ chord – B♭ minor, but the outwards-leading chromatic lines do not end here and lead through some more chromatic twists. F♯^{7} returns as a G♭2 and is followed by its maximally close Edim^{7}, which itself serves as a dominant in A♭ major. Finally, the closest diminished seventh chord of the latter triad arrives and concludes the *Sarabande*, aiming to resolve to G minor at the beginning of the following *Chaconne*.

The *Tonnetz* representation of the passage reveals several important features of it. Firstly, as so often in Liszt, there is a combination of dominant-tonic functional relations and chromatic transformations, but the smooth transitioning through chords (mainly due to the quick harmonic rhythm and the very efficient voice leading) makes it difficult to distinguish the two. Secondly, once the progression becomes more chromatic from bar 171 onwards there is the full variety of chord relations – non-parsimonious connections between triads (such as the one connecting C major to its tritone-distant F♯ major), 'hidden' basic or compound triadic transformations (labelled on the figure with ***(L)*** and ***(LP)*** respectively), progressions between closely related seventh chords (such as G♯ø^7 and A♭^{7}), or a dominant-substituting progression between a diminished seventh chord and a major triad (connecting Edim^7 and A♭ major at step 14).

Several of the triads in this progression seem to stand out from the rest. F♯ major is used three times with different enharmonic spellings during the short duration of the passage, first as a triad, and then twice as a seventh chord, which can efficiently lead in different directions under chromatic voice leading. In fact, it can be observed that a lot of the pitch space around this triad is conquered and it serves as a pivot chord for touching on new harmonic areas.[5] Another chord which gets reiterated is C major and what is notable around its use is the direct connection to the tritone-distant F♯ major, which is actually part of a conventional sequence of descending secondary dominants, while the more unconventional chromatic sequence of seventh chords coming later is represented by a smoother movement between these two triads in the pitch space of the *Tonnetz* (steps 7-9). Last but not least, A♭ major sits at an important

[5] I understand that a term like 'pivot chord' is loaded from a traditional tonal perspective and admittedly, traditional elements remain strong in this passage. However, I would like to suggest a more abstract, spacial usage of it, reflecting the fact that the F♯ major is followed by chords in all directions from it on the *Tonnetz*.

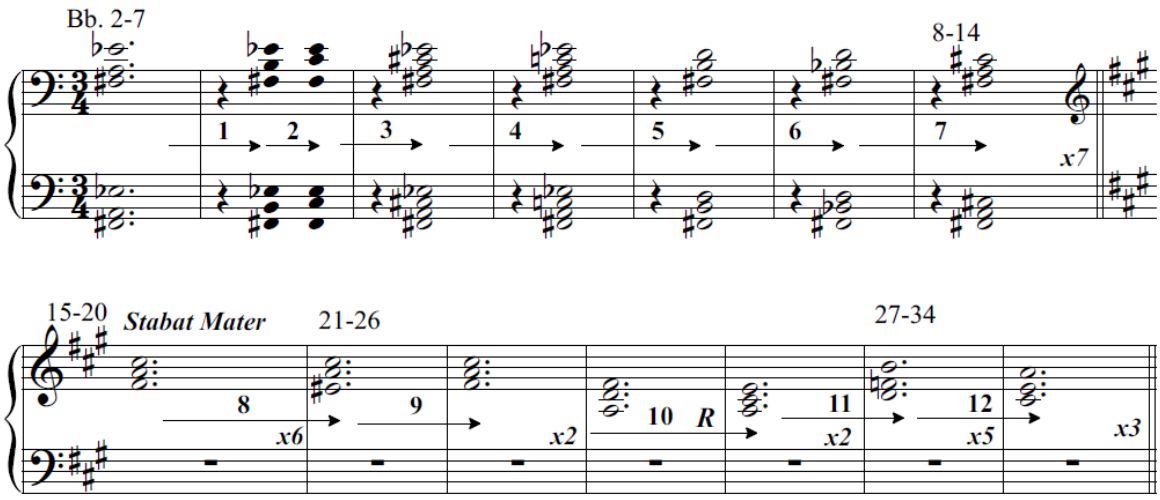
location on the *Tonnetz* diagram – firstly being a transitional chord between G♯ø^7 and C major (used as A♭Ger6), then returning as a triad in a very different context – in between the two dim^7 chords, which are used several times throughout the passage.

In summary, the final bars of the *Sarabande* transcription include one of those most Lisztian passages, in which there are no boundaries to where harmony can develop towards – both diatonic and chromatic spaces are explored, while the kinds of chord connections include almost everything considered in this study – from basic neo-Riemannian transformations to much freer chaining of triads and seventh chords, which I term mixed transformations. It was demonstrated above that a traditional understanding of such a passage is possible. However, there comes a point where the tonal relations between chords become increasingly difficult to follow and an alternative analytical system becomes desirable. The *Tonnetz* has allowed to trace the rather long and winding path of harmony through pitch space and to acknowledge both the functional and the less conventional chromatic chord relations, which Liszt seems to have combined in a unified whole. In such cases observing the harmony as moving in different directions on the paper is an invaluable addition to the listening experience – allowing a different kind of comprehension and the option of perceptually subdividing the progression into several phases based on changes of direction on the *Tonnetz*.

2.6. Station III of *Via Crucis*

The harmonic ambiguity, textural and dynamic intensity remain of primary importance in Station III of *Via Crucis* (ex. 9.20). The first falling of Jesus is expressed with dramatic falling sevenths in the male voices, accompanied by accented chords, which transform around F♯dim^7. The latter is alternated with B major (spelled with E♭) and D♯ø^7 initially, before progressing downwards on the *Tonnetz* through B minor and F♯aug, in order to reach F♯ minor for the pitiful *Stabat mater* female chorus (see fig. 9.19, steps 1-7). Admittedly, a tonal reading of this station in F♯ minor is also possible and within such an interpretation this key never changes from beginning to end. A plagal cadence distorted by F♯aug is present around steps 6 and 7, while the ending on a first-inversion A major chord can be heard as an unresolved III^6, or heard through modal ears, this is a possible *finalis*. Nevertheless, I argue that a neo-Riemannian reading of this section gives more credit to the two diminished and the two augmented chords, while allowing us to more easily trace their positioning in voice leading proximity to the consonant triads.

In similarity to the previous station (see fig. 7.13 and 7.14 in chapter VII), adjacent augmented triads are involved here, but in this case there are also two adjacent diminished chords, which are crossed with the former within a maximally tight pitch space. This implies that Liszt has explored chromatic proximity of chords, while also balancing the stability of consonant triads with the intensity of the dissonant chords. Moreover, F♯dim^7 is given a certain amount of structural emphasis at the beginning and, as can be observed on figure 9.19, it remains in close proximity to all the chords used later, lying in the middle of the occupied space.



Ex. 9.20. Harmonic reduction of Station III of *Via Crucis*.

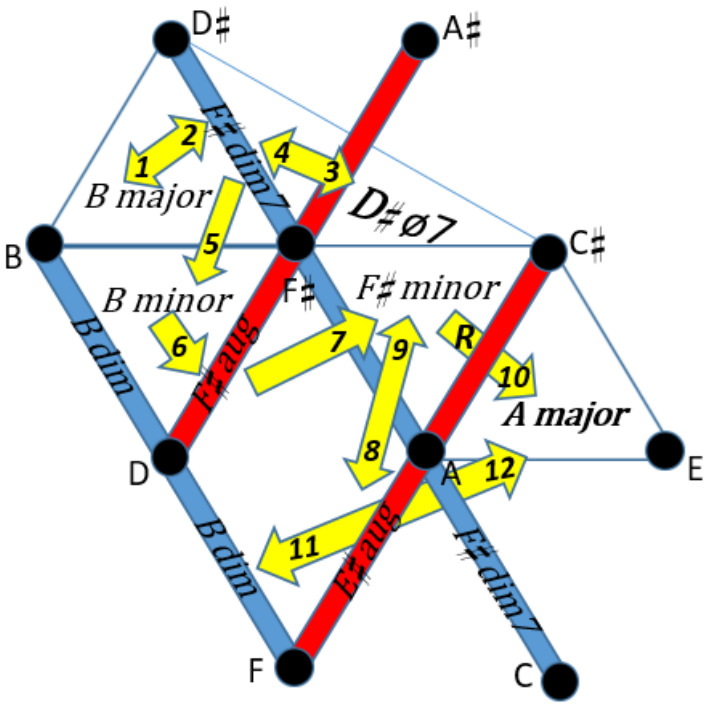


Fig. 9.19. The harmonic progression in Station III of *Via Crucis*.

A comparison between the instrumental first half and the choral second half of this section may also reveal something else, which will consequently turn out to be the case for the whole work. Instrumental sections are dominated by

dissonant chords, with major and minor triads appearing in them only sporadically or by accident, while in the choral sections this relationship between consonant and dissonant sonorities is inverted and the harmonic syntax creates the impression of being more conventional. Thus, it is only in 6 of the 21 bars of the *Stabat mater* that the dissonant E♯aug and Bdim are used. However, the suffering of the Holy mother is masterfully and subtly expressed by the interpolations of these two chords in between the two consonant triads (steps 8-9 and 11-12 on the figure), which greatly contributes to the emotional depth of this chorus. Visualising this station on the *Tonnetz* reveals chord proximities, which transcend the boundary between the 'dissonant' instrumental opening and the 'more consonant' *Stabat mater*. Bdim, which only appears towards the end is actually maximally close to the B minor even though there is great distance in harmonic steps between the two. Also, there is more or less a descending pitch shifting from the B major to the eventual A major – something that may remain hidden in a tonal analysis. I will sum it up here by reiterating what I have been trying to demonstrate throughout this chapter – that whenever such subtle balance between consonant and dissonant sonorities, as well as between diatonic and chromatic chord relations is in place, a neo-Riemannian reading should be considered, bearing in mind that it could reveal something, which the more traditional perspective on harmony omits.

Conclusions

The primary purpose of this chapter has been to fill some of the gaps for further research with this methodology that have been left at the end of the

previous chapter and to demonstrate that non-functional chromatic chord relations can be an analytical basis for this repertoire without necessarily focusing on just one type of chords, as was the case in chapters VII and VIII, nor considering the potential presence or absence of a large-scale tonal plan. Unlike the earlier presentation of case studies, in which the uses of harmony are more similar and united in categories, the two groups of examples above showed more harmonic diversity than recurring harmonic motives and themes. This is a further testimony to Liszt's unwillingness to stick to specific ways of composing with chromatic harmony and his constant strive for exploring and dispersing a range of ideas for the future generations.

The sequence of pieces analysed as exemplifying basic and compound triadic transformations progressed from the neatest possible extended ***R-L*** chains of *Am Grabe*, which keep moving forward on the *Tonnetz*, towards the tightly organised progression in *Der blinde Sänger*, which employs a variety of chord relations around a centrally positioned pitch. On the other hand, the figure dedicated to the harmony of *In Festo Transfigurationis* demonstrated that a whole piece can be analysed with neo-Riemannian theory, provided that all essential harmonies in it can be reduced to consonant triads. Furthermore, my analysis of *In Domum Domini Ibimus* served to show that within such a triadic miniature there can be a hierarchical subdivision into more and less structurally important chords, which can correspondingly be depicted and connected with different kinds of arrows. As for the chromatic harmony of *Ungarns Gott*, it was presented as divided into two extended progressions – one apparently more chaotic and one more directional, both having their own internal logic. And yet unique in its own right, the final *Adagio* of *Polonaise I* inspired one of the most complex diagrams in this dissertation, with harmonic moves that seem to randomly move around the *Tonnetz* at first sight, but actually representing Liszt's

most systematically organised highly chromatic sequence of triads, almost limited to the hauntingly sounding Hexatonic poles and tritone-distant chords.

Moving on to the full variety of chords in the second half of this chapter, a further diversification of examples and a yet bigger test for my *Tonnetz*-based method of analysis was sought. Firstly, in similarity to my successive double-syntactic examples in chapter V, my analysis of *Sursum Corda* showed how chromatic relations can overwhelm an otherwise tonal piece in an extended developmental episode. Next, in *Schlaflos* the *Tonnetz* representation of harmony showed a smooth and tightly organised tetradic progression around the main functions in E minor, which unfolds within a limited amount of time. The similarly tightly organised progression taken from *La lugubre gondola II* was a further example with a pivot note, in which a static pitch seems to prevent forward momentum. Such a lack of directionality was demonstrated even without a focus on certain pitch with the brief, but diverse harmonic wandering in the middle of *Polonaise I.* As a contrast to these short progressions with rather fleeting effects, the more extended sequence taken from the *Sarabande* on Handel's *Almira* traced movements in all directions between all types of chords, which gradually transitions from more predictable diatonic relations to surprising chromatic shifts, in which the continuous chromatic descent in the bass voice leads through a series of evaded cadences. Finally, the example from Station III of *Via Crucis* was another testament to Liszt's highly individual use of the augmented triad and the diminished seventh chord, highlighting their role more than it would become apparent in a traditional analysis of such a progression.

Chapter X

A late-Liszt challenge to neo-Riemannian theory

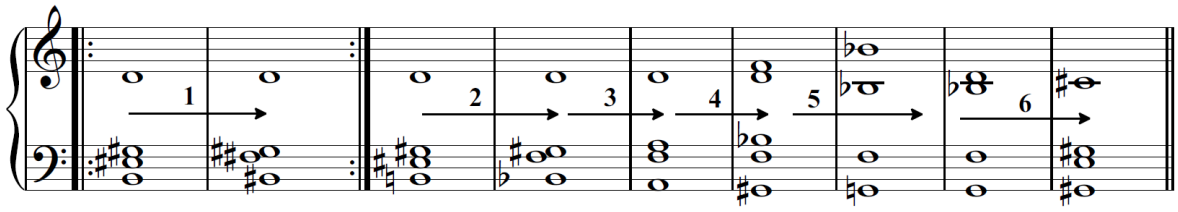
From the early stages of this analytical survey it has become clear that it cannot be as exhaustive as it has been originally planned. Neo-Riemannian theory may have been developed with the highly chromatic late Romantic music in mind[1], but that does not mean that it provides the most appropriate analytical apparatus for all of Liszt's adventurous ideas of his last decade. Despite my attempt to systematise the repertoire as much as possible throughout both parts of this thesis and to put pieces in categories based on looking at their harmony exclusively from a neo-Riemannian angle in part II, it must be stressed again that my methodology was primarily limited to transformation-based neo-Riemannian analysis inclusive of the most common triads and tetrads of Liszt's time, but exclusive of some other more uncommon, or more dissonant sonorities. Positioning chords on the *Tonnetz* has proven to be most beneficial whenever the voice leading steps in a harmonic progression consist of one or two units of semi tonal voice leading work and hence chords on the tonal grid are neighbors. Also, the types of chords which can be clearly seen on it is limited to a large, but not exhaustive portion of the most common sonorities used throughout the nineteenth century. These include consonant and augmented triads, as well as tetrads, which have consonant triads as their subsets and therefore could be depicted in most cases as a combination of an equilateral triangle and another multifaceted triangle. Consequently, it could easily be observed when chords

[1] So claims Richard Cohn in his article "Introduction to Neo-Riemannian Theory: A Survey and Historical Perspective", *Journal of Music Theory* 42/2 (1998, 167-8).

share one, two or more pitches, and how this contributes to the smoothness of movement in pitch space.

1. The visualising limitations of the *Tonnetz*

In some cases, however, Liszt may insert another, less familiar tetrad in between the above mentioned chords. For instance, Station V of *Via Crucis* opens with an alternation between E♯dim and the whole-tone scale segment B♯-D-F♯-G♯ (see ex. 10.1 and fig. 10.1). The latter could be described as a misspelled French sixth chord on D (D$_{Fr6}$), but a more problematic question is how it could be depicted on the *Tonnetz* and geometrically related to the chords preceding and



Ex. 10.1. Harmonic reduction of the first 13 bars from *Via Crucis*, Station V.

following it. This sonority includes two couples of major thirds from two separate augmented triads and does not include a consonant or diminished triad as a subset. Therefore, its tones are some distance away from each other and the parallelogram they form embraces eight consonant triads, while in fact the chord in question only includes four of their nine pitches. In other words, the chord geometries, proximities and tracing of common tones, which were explored throughout this study, cannot be considered in the same way if we include a

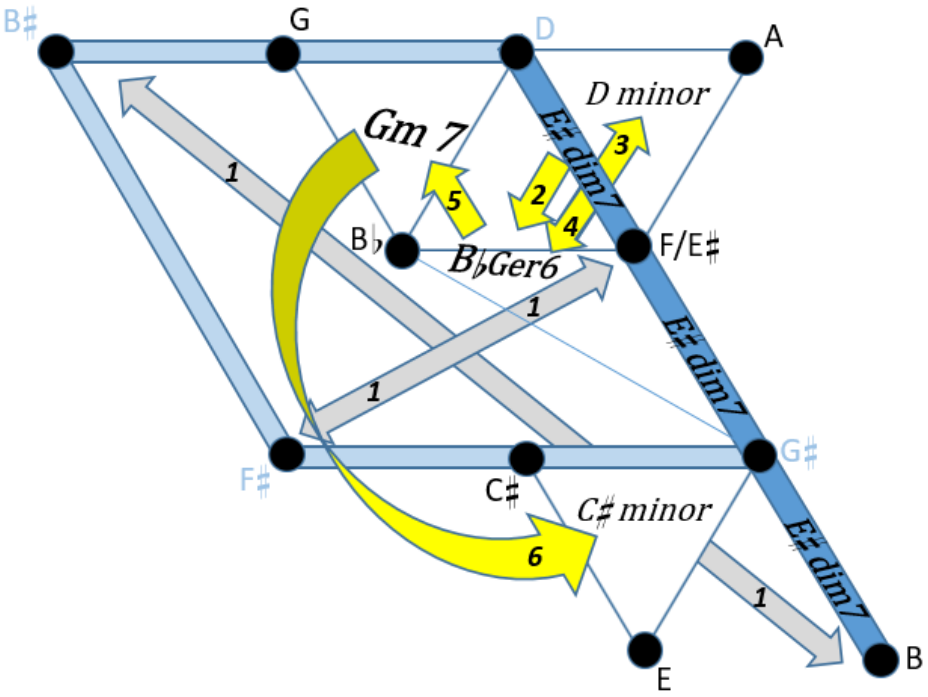


Fig. 10.1. *Tonnetz* representation of the progression within the first 7 chords of *Via Crucis*, Station V.
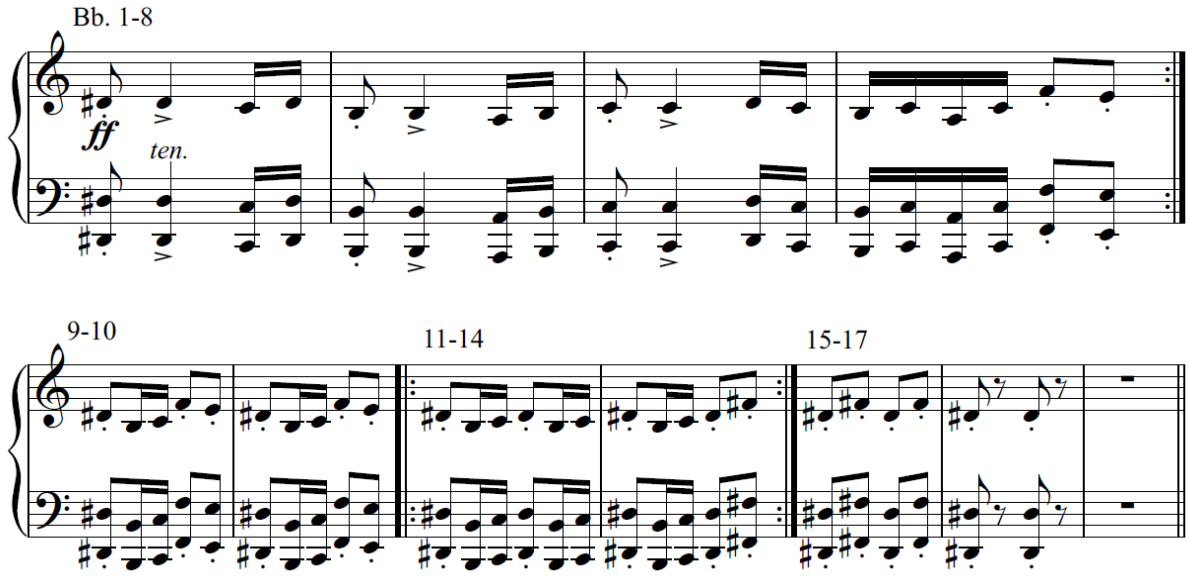
chord such as the D_{Fr6} into the harmonic mix. Following through the progression from example 10.1, we can see that Gm^7 and $B♭_{Ger6}$ share the B♭ major triad (three common tones) and that they both are adjacent to D minor, while the initial E♯dim7 is maximally close to all these chords. Conversely, it is harder to imagine how the above relates to D_{Fr6} and the main difference lies in the fact that such a chord does not contain all the pitches that it encloses on the *Tonnetz*. This is where a visual confusion may come from and in an attempt to make such a chord more distinguishable, I have colored its pitches and their corresponding parallelogram in light blue, which is only a partial solution to the problem and does not directly deal with it. With this example we return to the issues pointed out towards the end of chapter II and what is problematic about analysing such a passage on the *Tonnetz* had been summarised thus: 'We have no guarantee that graphs whose edges refer to musical motions of a particular type will give

rise to an intuitive or familiar notion of 'distance' between nonadjacent chords.'[2] Still, it would be fair to claim that for a significant portion of the repertoire discussed presently such a visual methodology involving mostly the *Tonnetz* has proven to be effective. Following through to the end of Station V reveals a large variety of seventh chords, but they are all of the familiar types already visualised in previous examples, so the unusual D_{Fr6} turns out to be an exception.

2. Giving chords a break – on Liszt's use of monody

In a variety of late piano works Liszt has experimented with disrupting the harmonic syntax and dispensing with both the functionally diatonic progressions, and with the chromatic ones, which are based on closely-related triads and tetrads of different types. A number of examples can be given of such so-called 'sparse textures', which are deliberately left with minimal or no harmonic support, often including tonally indeterminate chromatic lines such as in bars 28-34 of *La lugubre gondola II* (see ex. 8.11 in chapter VIII).[3] Example 10.2 shows the opening of Hungarian rhapsody no. 16, which has its distinct melodic character, but does not clearly establish a key. Only later in the form A minor is confirmed as a main tonal area, which retrospectively implies that the beginning is based on the A-*verbunkos* minor scale, with the characteristic sharpened scale degree $\hat{4}$ (D♯) and the augmented triad between it and the C having been emphasised emphatically.[4] Similar passages in unison octaves, which are
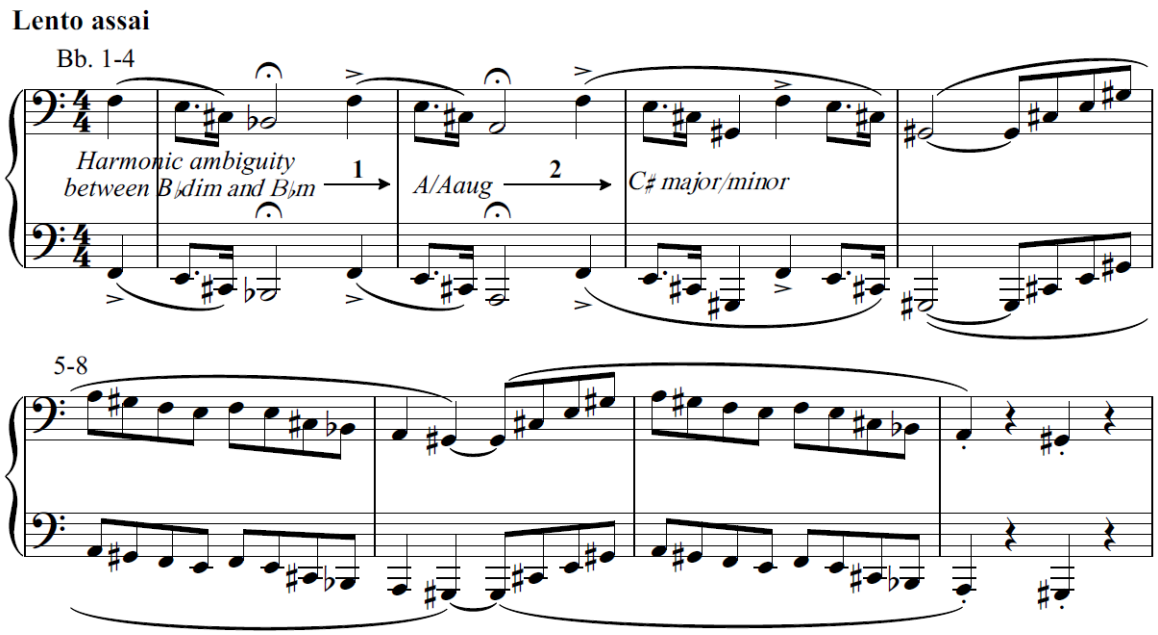
[2] Dmitri Tymoczko, "Geometrical Methods in Recent Music Theory", *Music Theory Online* 16/1 (2010, 1).
[3] The textures of some of Liszt's late compositions have been described as 'sparse' by Lym (1999) and Loya (2011), resonating with Humphrey Searle's much earlier categorisation of Liszt's 'stark and austere style' (1952).
[4] See Shay Loya, *Liszt's Transcultural Modernism*, pp. 54-55 for a categorisation of Liszt's 'folkloristic scales', which he has been using for 'polychordal and bimodal effects'.



Ex. 10.2. The opening of Hungarian rhapsody no. 16.

representative of Liszt's Hungarian style and his frequent use of such minor scales with two augmented seconds for creating tonal ambiguity, can be discovered across a number of late pieces, including *Stephen Széchenyi* and *Franz Deák* (nos. 1 and 5 from *Historische Ungarische Bildnisse,* S. 205), also in *Sunt lacrymae rerum* and *Marche Funébre* (nos. 5 and 6 from *Années de Perelinage* III).

However, I would like to point out that such moments in Liszt's music should not be dismissed hastily as not being relevant to the issues of harmonic syntax discussed at present, because in some cases such as the opening of *Sunt lacrymae rerum* (ex. 10.3) an interesting chromatic interplay of implied chords may be revealed. B♭ minor and A major (***S***-related triads), as well as C♯ minor (***L***-related to A major) are suggested in these opening 8 bars and some hidden neo-Riemannian transformations between these may be revealed upon putting those chords on the *Tonnetz* (fig. 10.2).



Ex. 10.3. The opening of *Sunt lacrymae rerum*.

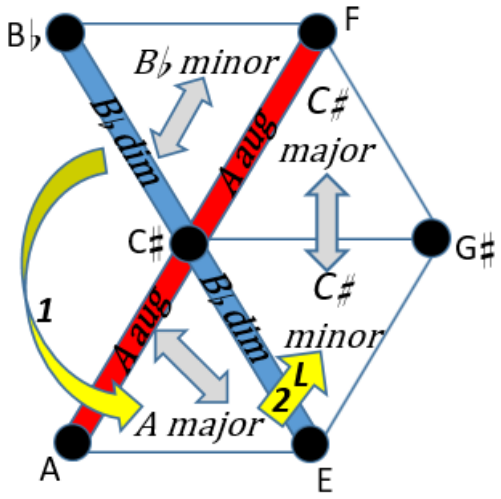


Fig. 10.2. Implied harmonic relationships in the opening of *Sunt lacrymae rerum*.

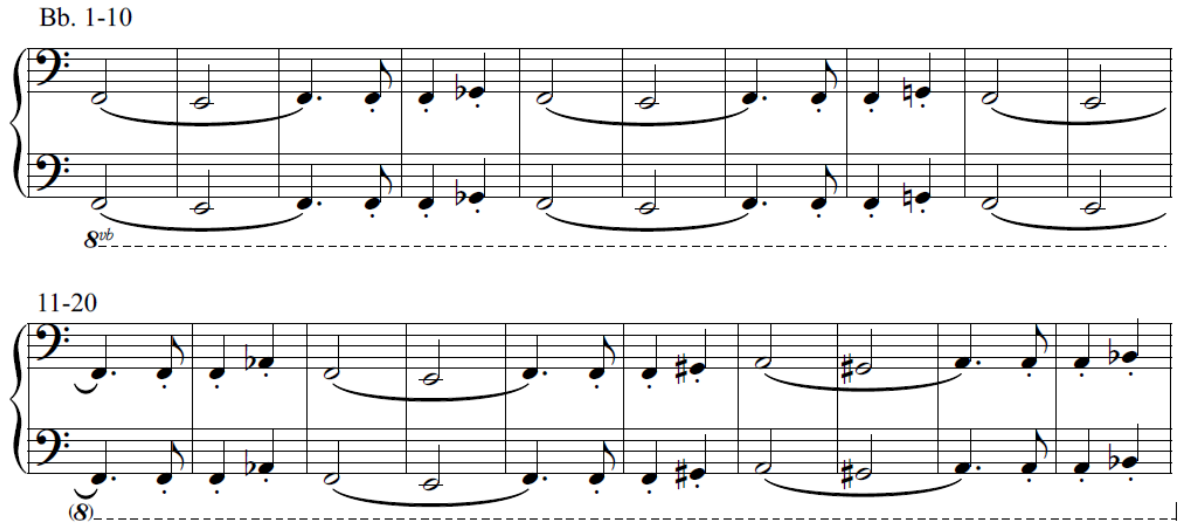
The same passage has been discussed by Shay Loya and his more linear analysis (pointing out the common tones between the different *verbunkos* scales employed) is particularly revealing about Liszt's exploration of chromatic

harmonic relationships through his highly idiosyncratic scalar techniques.[5] In similarity to some more strictly chordal passages in Liszt, his main purpose is to create harmonic ambiguity, which happens through the juxtaposition of several closely related scales and the interplay between E and F. The latter results into three couples of chordal ambiguities, reflected on the *Tonnetz* with smaller bi-directional arrows – firstly between B♭dim and B♭ minor (bar 1), then between A major and Aaug (bar 2), finally between C♯ major and C♯ minor, the last of these chords being outlined more clearly in bars 4 and 6. The harmonic closeness of these implied harmonies is evident on the tonal grid, as well as the shared pitches of the scales in use are highlighted in Loya's corresponding example. Admittedly, such instances are more about the tonal ambiguities of Liszt's Hungarian scales than they are about directly evident harmonic ambiguities between chords. Therefore, it remains questionable whether my current purely chordal methodology would be the most preferable analytical tool for such passages. I will sum it up by saying that I would not necessarily advocate for the application of such methodology for cases, in which there isn't an immediately apparent chordal progression, which contains some of the common neo-Riemannian transformations, and other, supposedly more linear perspectives, are capable of providing more substantial analytical results.

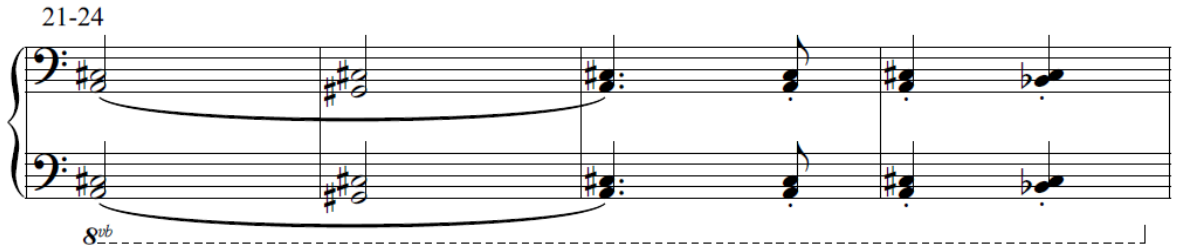
[5] Ibid, pp. 169-170.

3. Liszt's other idiosyncratic non-chordal textures – The case of *Csárdás macabre*
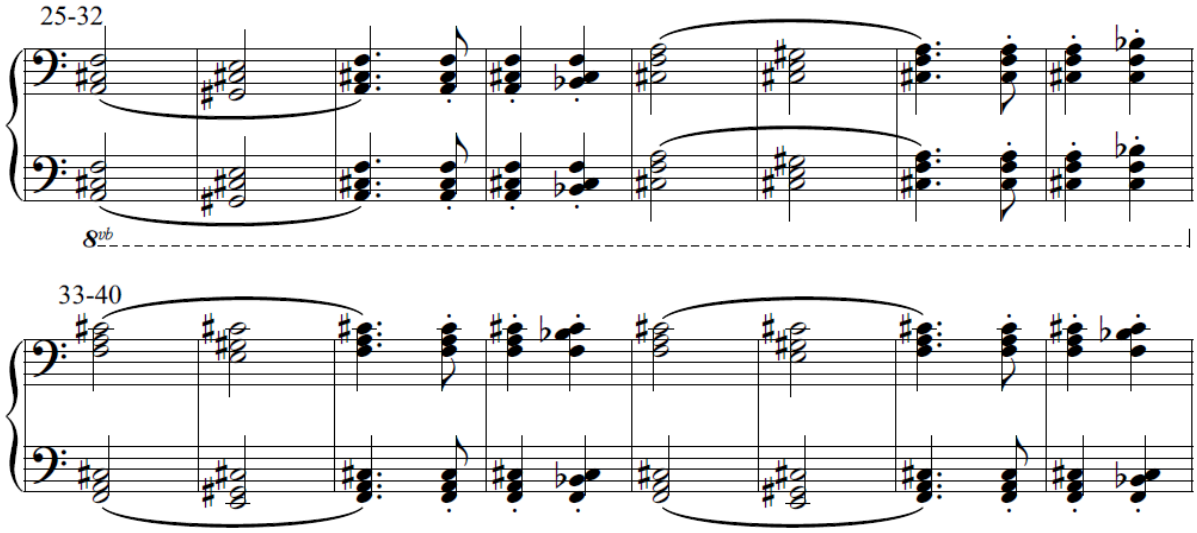
While monodic passages are one of the characteristic features of Liszt's economic late style, it is not only single melodic lines that cause difficulties for the mainstream neo-Riemannian toolkit. In some cases, such as the *Csárdás macabre* (S. 224, composed in 1881), these are doubled into parallel fifths, sixths or tenths, and extended into long melodic lines with no or little harmonic support. Following through the first 162 bars of this highly original late work, we come across a chromatic passage in unison octaves (bars 1-20, ex. 10.4a), which is then extended into double notes (21-24, ex. 10.4b) and triads (25-40, ex. 10.4c). The appearance of the latter brings with itself some curious chromatic relations, namely Aaug-C♯m-Aaug-B♭m (almost identical to the opening of *Sunt lacrymae rerum*!), however, these chords seem to only extend and highlight the ascending movement over the A *kalindra* scale, which, in similarity to *Sunt lacrymae rerum*, is the generative idea of this introduction. Moreover, there are no further chords in use in these 15 harmonised bars and what follows is a new motif introduced without harmonic support (bars 41-48). Next, the initial melodic line reappears and is doubled in parallel fifths (bars 49-75, ex. 10.4d) – a highly unusual texture for its time, which defies adherence to any of the then existing rules of harmony. Fast forward to bars 117-124 (ex. 10.4e) and the gradual build-up has grown into parallel movement in thirds and sixths. All these textures are devoid of the chromatic harmonic progressions, which were investigated throughout previous chapters and the *Tonnetz* would not be useful in illuminating the pitch relationships inherent in them. Instead, an analytical perspective, which traces the scalar origins of such extended sequential passages
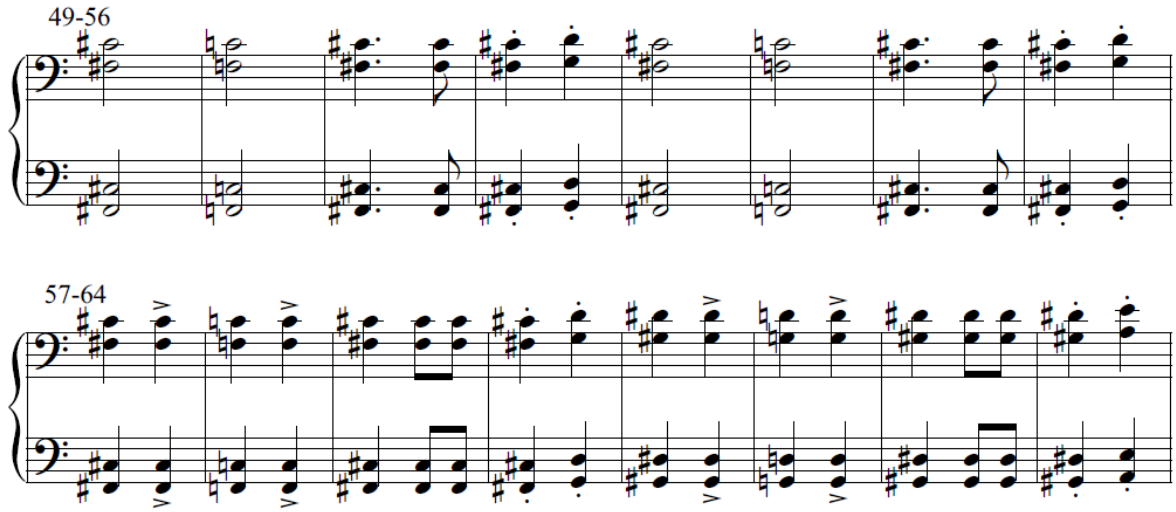


Ex. 10.4a. The monodic opening of *Csárdás macabre*.



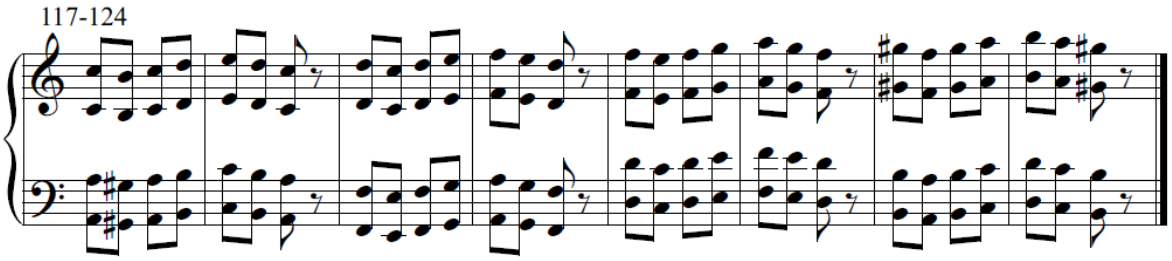
Ex. 10.4b. The monody develops into double notes.



Ex. 10.4c. Double notes grow into triads (bars 25-40 only).



Ex. 10.4d. Triads are followed by parallel open fifths.

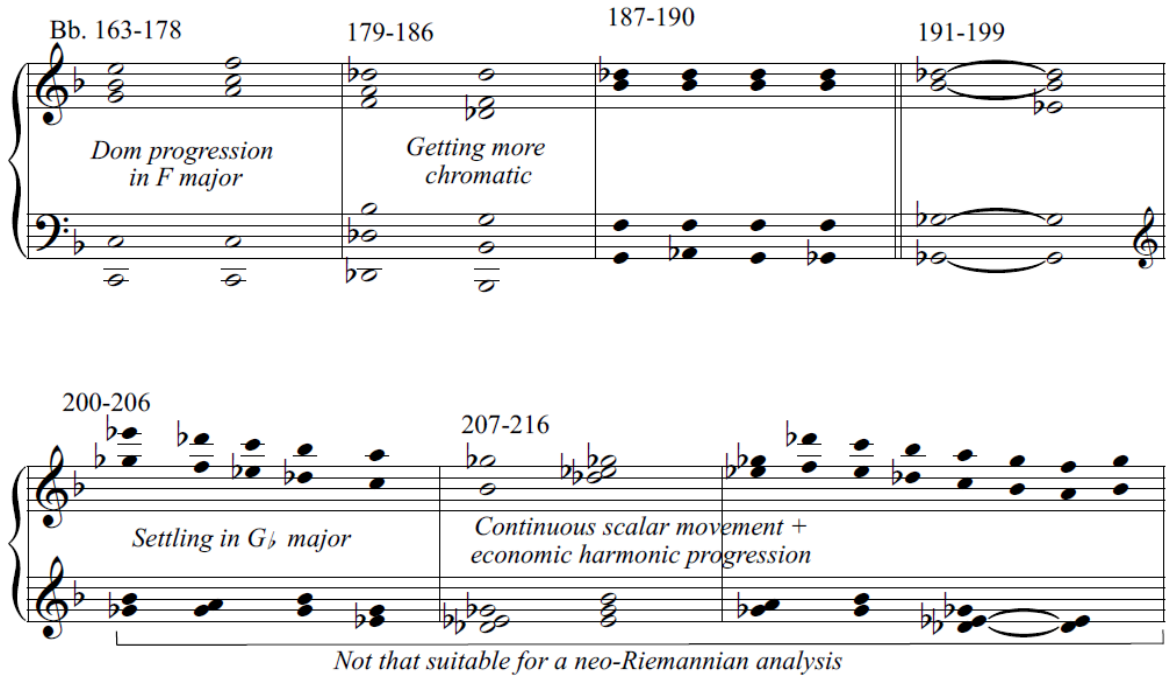


Ex. 10.4e. Open fifths are followed by parallel thirds and sixths.

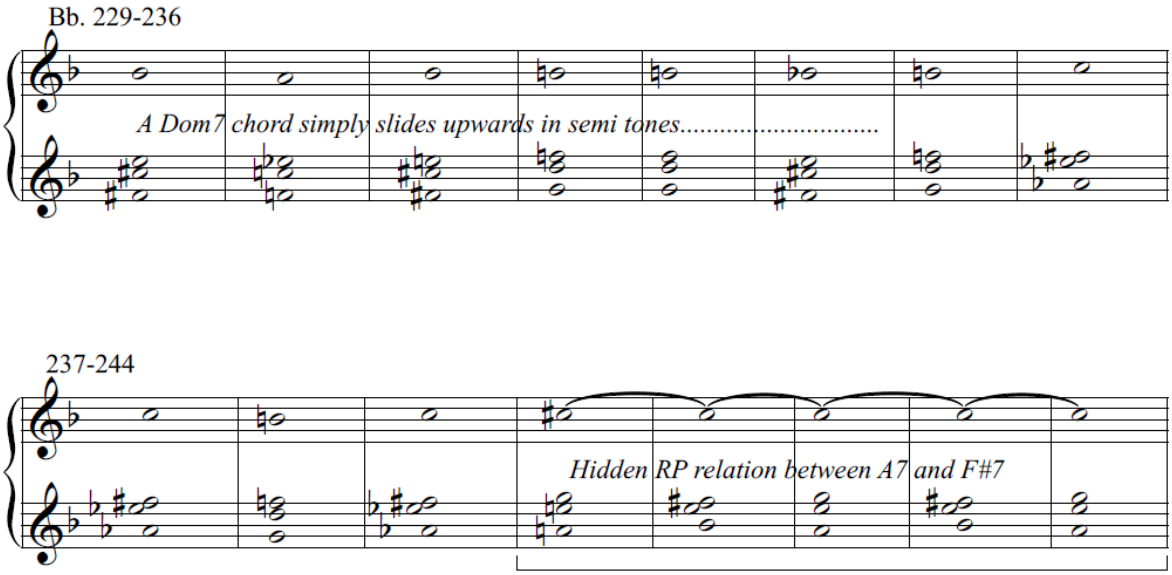
would be more appropriate to consider and more generally, this should be the case whenever a small number or chords (or only implied harmonies) is at the basis of a prolonged melodic development.

After the above mentioned introductory material the texture of *Csárdás macabre* becomes more consistently chordal and in fact, some passages would benefit from a neo-Riemannian perspective, which can highlight the gradual transition from fairly traditional functional to smoother chromatic harmonic syntax, such as in bars 163-191 (see ex. 10.5). However, such sections, discussed

at length in previous chapters of this study, do not prevail in this *Csárdás* and what follows a little later in bars 229-244 (ex. 10.6) exemplifies Liszt's fondness of sliding a chord by semi tones upwards or downwards. Such progressions based on semi tonal transposition of the same chord can be voice-leading efficient yet



Ex. 10.5. Harmonic reduction of bars 163-216 of *Csárdás macabre*.



Ex. 10.6. Harmonic reduction of bars 229-244 of *Csárdás macabre*.

outside the explicatory scope of neo-Riemannian theory and more specifically, exceeding the capacity of the *Tonnetz* to explain harmony through visualising it. The point of the matter here is that from a transformational point of view there is a fundamental difference between a chordal progression such as the ones, which this dissertation has been focusing on, and a semi tonal transposition of any chord, such as it happens in ex. 10.6. Shared pitches and different kinds of transformations (often non-functional) create the harmonic interest in the former, whereas these are lacking in the latter. Having this in mind, it becomes evident that Liszt's late harmonic practice can be highly original, chromatic and surprising without employing maximally smooth chromatic voice leading between a variety of triads and seventh chords. Once again, and not surprisingly so, we are left with the impression that this music is much more multi-faceted and stylistically diverse than our theories are flexible in accounting for all of its audacities (to borrow the term from Richard Cohn).

4. The emancipation of the whole-tone scale and the dim/aug polychord – *Unstern! Sinistre, disastro*
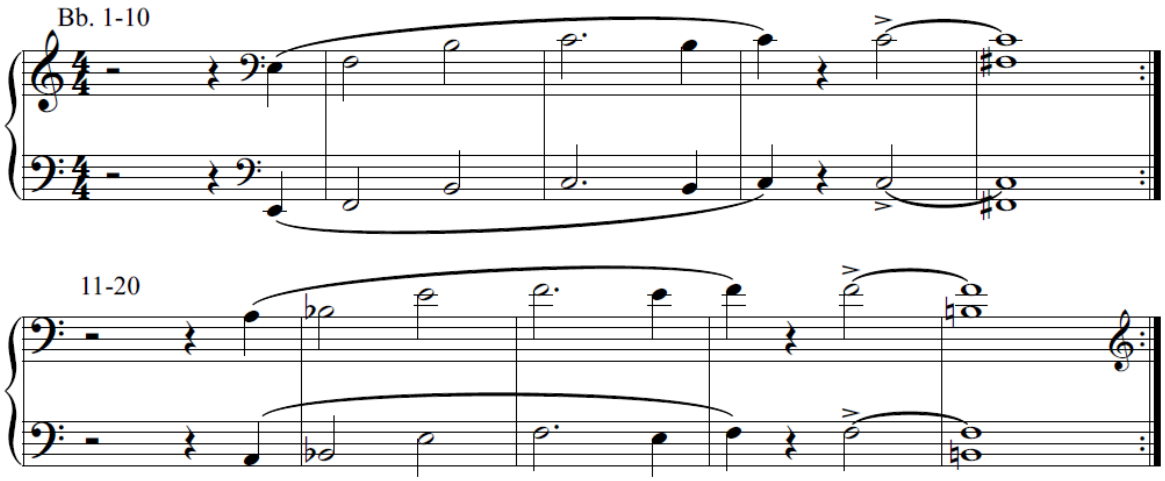
It must be acknowledged at this point that the large majority of analytical case studies throughout this dissertation included a harmonic language and harmonic buildings blocks that, with all the originality in the ways they were used, were not unheard of in the broader realm of nineteenth-century music. However, in a piece such as *Unstern* (S. 208, composed in 1881, but not published until 1927), some of Liszt's most personal and imaginative ideas reach

full fruition and not only serve as generative materials for a whole piece, but do so in a highly structuralised and apparently well planned manner. This has not escaped attention throughout the years and in fact, *Unstern* is well known in Liszt scholarship for its quasi-expressionistic dissonances and post-tonal harmonic language. Lajos Bárdos has listed the piece as representative of the composer's use of dissonance through the overt employment of major sevenths (when Caug and Fdim clash at the moment of greatest tension), as well as exemplary of his systematic use of the whole-tone scale.[6] Thompson's dissertation on the latter culminates with a detailed analysis of *Unstern,* in which the author claims that the whole work is generated from one basic pitch set, namely G♯-B-C-D-E-F, which includes in itself the wide variety of possibilities for symmetrical (hence non-tonal) harmonic organisation – an augmented and diminished triad, as well as minor seconds, tritones, major and minor thirds.[7] Furthermore, Alan Forte's article, which points at some of the most common pitch-class sets of twentieth-century music in late Liszt, cannot escape consideration of such a forward-looking piece, and in his view, the monodic opening 'is remarkable and novel even in Liszt's innovative works because it exhibits a highly structured pitch-class set hierarchy'.[8] For Forte, of particular note are sets 5-7 (E-F-F♯-B-C in the first bars) and 7-7, which embraces the two 5-7s of the first 20 bars (see ex. 10.7). Evidently, unlike some other late miniatures, *Unstern* has not escaped attention throughout the years and its non-tonal harmonic devices have been acknowledged. The question that needs to be addressed here is what alternative analytical perspective on such a piece can be offered through a more purely

[6] Lajos Bárdos, "Ferenc Liszt, the Innovator", *Studia Musicologica Academiae Scientiarum Hungaricae* 1/4 (1975, p. 23 and p. 32).
[7] Howard Thompson, *The Evolution of Whole-Tone Sound in Liszt's Original Piano Works* (PhD diss., The Louisiana State University and Agricultural and Mechanical College, 1974, 262-269).
[8] Allen Forte, "Liszt's Experimental Idiom and Music of the Early Twentieth Century", *19th-Century Music* 10/3 (1987, 221).

chordal (and to a large extent limited to more traditional chords) method and what obstacles will consequently arise for the neo-Riemannian apparatus.

To begin with, the opening of the piece is not only monodic, but unlike cases such as *Sunt lacrymae rerum*, its harmonic underpinnings are vague, to say
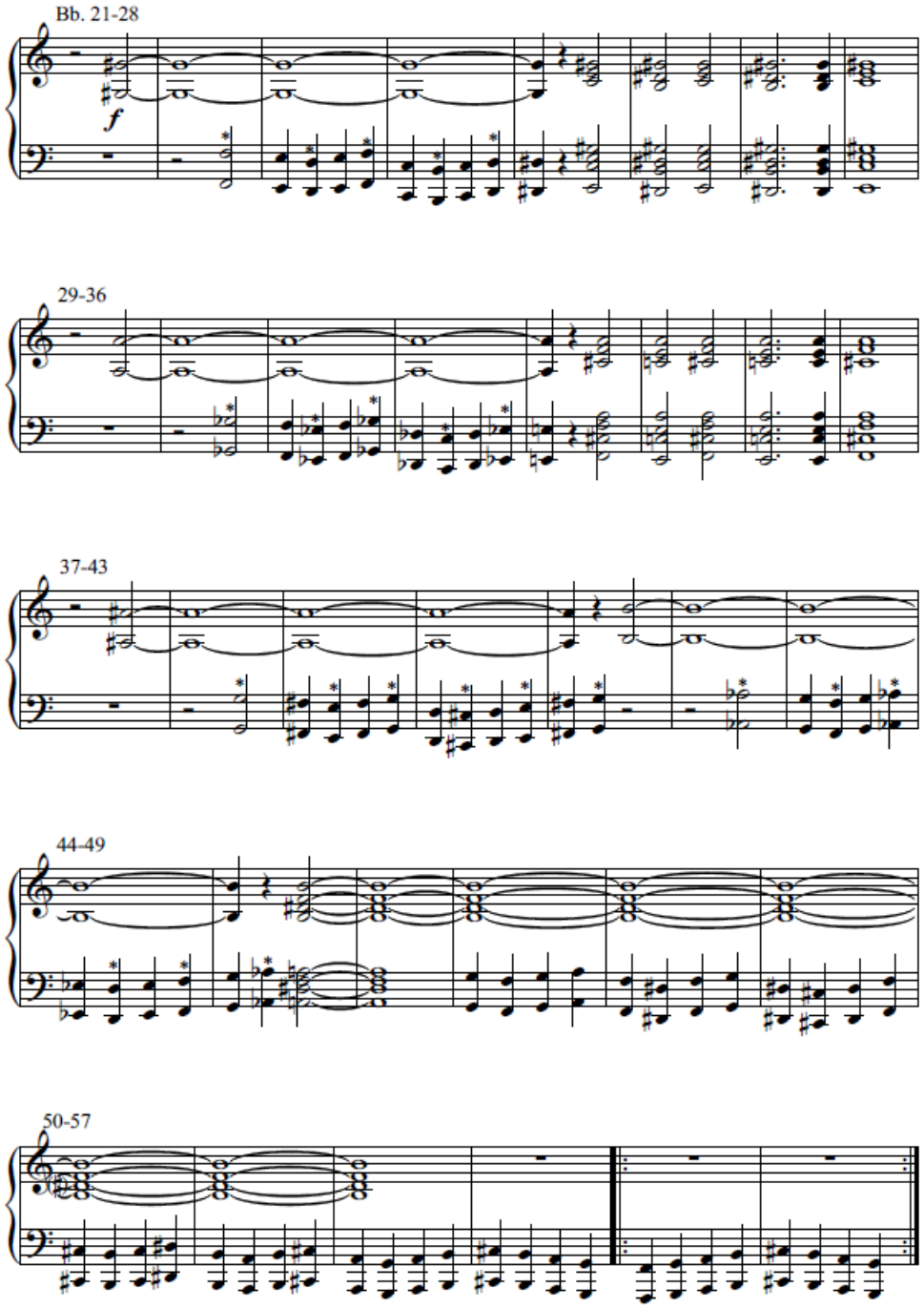


Ex. 10.7. Bars 1-20 of *Unstern*.

the least. A symmetrical pitch organisation centered around the tritones in use has been investigated in detail by authors such as Forte and Thompson and I do not think that neo-Riemannian theory in the form it has been applied presently has anything further to contribute to such a section. It is most relevant to the headline above to focus on bars 20-83, in which the use of all possible augmented triads and the two possible whole-tone scales is as extensive as it could possibly be in any Liszt composition. At any rate, this will allow comparisons with Liszt's use of the augmented triad in pieces such as the ones analysed in chapter VII.

An 8-bar phrase first establishes the sinister mood of the piece and its essential harmonic content (ex.10.8). The Caug is firstly melodically suggested

(see the appearance of C and E on the first beats of bars 23 and 24 and the repeated G♯ above that) and then harmonically confirmed, whereby there is an alternation between Eaug and G♯ minor, reminiscent of the similar (C♯aug - G♯m) couple towards the end of the first section of *R. W. – Venezia*. The repeated accenting on Eaug and the fact that it closes the phrase make it sound like a main
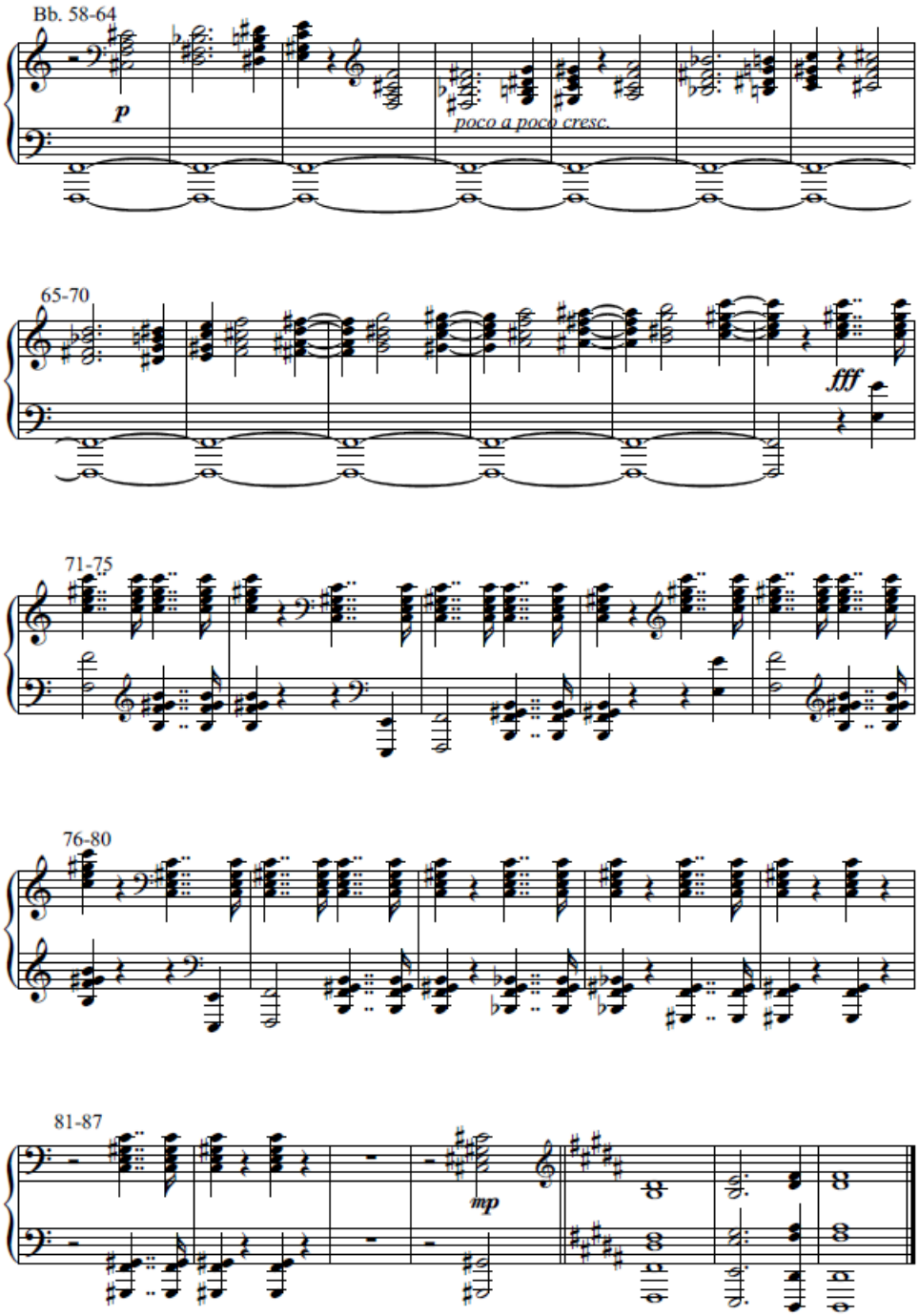


Ex. 10.8. Bars 21-57 of *Unstern*.

harmony, while the more consonant G♯ minor is perceived as a passing chord. The next 8-bar phrase is a literal transposition of the former upwards by a semi tone and accordingly the chords at the end are C♯aug and A minor. The rising of this phrase does not end here and the inevitable intensification is coupled with shortening of the phrase upon the next two transpositions of it. A French sixth chord on B brings some harmonic variety in bars 45-53 and, while reinforcing the whole-toneness of the section (the BWT is fully completed and prolonged by the bass movement in bars 47-57), it poses the same problem for a potential *Tonnetz* analysis as the one illustrated with fig. 10.1.

A new, and much stronger phase of intensification starts with the low-register *tremolos* and chromatically rising augmented triads from bar 58 (see ex. 10.9). This may bear some similarities to the texture and harmony of other pieces discussed throughout this study, but the culmination here with the *fff* sounds much more intense. Suddenly, the Caug, which is reached at the top voice, gets clashed against an Fdim triad in a most violent of ways. Six chromatic circles through all the augmented triads, accompanied by an F pedal lead to the most acutely dissonant apotheosis in Liszt's late works.

This 5-note polychord is subjected to repetition for no less than eight straight bars. In Forte's pitch class set nomenclature it is labelled 5-22 and according to him this is 'one of only two pentads that contain both 3-10 (the diminished triad) and 3-12 (the augmented triad).'[9] Also, 3-5, identical to the melodic opening of the piece (E-F-B), is another subset of 5-22, which suggests a high level of pitch integrity throughout the piece. In the bars after this culmination the dissonance is made milder through the substitution of B for a B♭ in the lower voice (hence Caug is clashed against a B♭^{7} with a missing D) and then the B♭ is cancelled, leading to a Caug/F minor ambiguity at the end of the section.

[9] Ibid, p. 222.



Ex. 10.9. Bars 58-87 of *Unstern*.

A second-inversion C♯ major, which is only a couple of semi tonal shifts away, follows from there and introduces a much more diatonic and functional contrasting section in B major, which will remain outside of the focus here.

The above short progression, which represents the culmination of this section (bars 71-84), involves the preservation of some pitches and some economic voice leading. Therefore, a *Tonnetz* representation of it is possible and will serve to show to what extent a neo-Riemannian analysis of such a piece is viable (see fig. 10.3). Firstly, the initial clashing Caug/Fdim polychord is represented by a large **X**, the center of which is the G♯ – a shared pitch for all the chords within the progression. Next, the sliding of B down a semi tone is shown with the curved arrow (step 1) and it leads into another polychord, the depiction

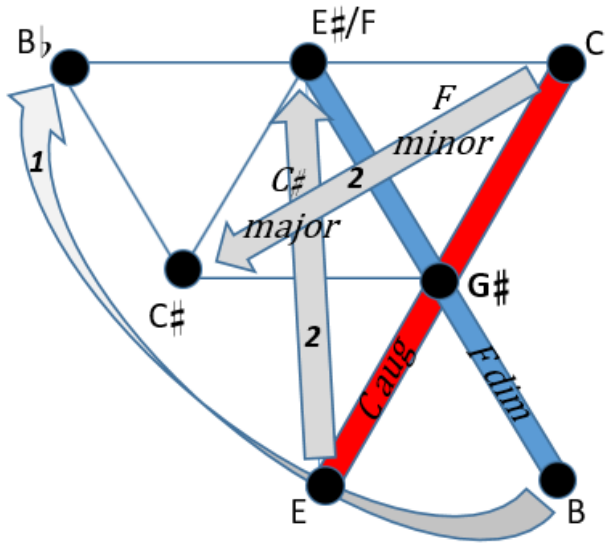


Fig. 10.3. A *Tonnetz* representation on harmony in bars 71-84 of *Unstern*.

of which on the *Tonnetz* becomes more confusing than revealing, as it forms the big equilateral triangle between E, C and B♭, thus misleadingly encompassing four consonant triads (from the enclosed pitches only C♯ is not part of the chord). The disappearance of the B♭ in bars 79-80 reduces this pentad to the Caug/Fm tetrad, which is, correspondingly, easier to see and conceptualise on the *Tonnetz*. Finally, the diagram makes it obvious that the C♯ major, which opens the following much more tonally conceived section, is in fact maximally close to the F minor from the preceding tetrad (***L***-related to it) and two units of voice

leading work away from the so important Caug. This insight, reached through the *Tonnetz*, is significant, as this is the point of dissonant resolution, which can hardly be described as functional, but apparently bears its transformational nature in similarity to the examples discussed in chapter IX.

In other words, Figure 10.3 highlights the fact that between the Caug/Fdim pentad and the C♯ major of bar 84 there are only two moments of voice leading and both are smooth in the sense this word has been used throughout this study. The first one is the sliding of B down to B♭ in bar 78 and the second one consists of two units – C ascending to C♯ (facilitating the ***L***-transformation between F minor and C♯ major) and E ascending to E♯. This draws a rather simple picture of what is happening between the moment of greatest harmonic tension and the moment of its resolution and initiation of a different (because of being much more functional) syntax.

Despite the above insights it must be concluded that parsimonious chordal transformations are a scarcity in *Unstern* and therefore my methodology cannot be heavily relied on for analysing larger portions of this piece. Moreover, even in the short progression above, which includes some common-tone preservation and some semi tonal voice leading, a sonority occurs, which compromises the capacity of the *Tonnetz* to visualise in a meaningful way the chromatic chord relations. As for Liszt's use of the augmented triad in this work, it has proven to be different from the cases in chapter VII, because the focus here has been on the melodic unfoldings of the whole-tone scale, which happens in the absence of parsimonious transformations between a variety of chords.

Concluding remarks and areas for future research

Arriving at the finish line of my analytical journey through late Liszt, I would like to point out that with my hybrid methodology in part I and with the more strictly transformation-centered approach in part II my main aim was to focus on Liszt's forward-looking compositional thinking and to demonstrate how it manifests itself in different contexts, regardless of the fact that his particular treatments of chromatic harmony might not always be easily codifiable. In other words, this dissertation highlights many of the idiosyncratic harmonic features of Liszt's late music without a comprehensive attempt to position these into exhaustive categories. On the other hand, the application of neo-Riemannian theory has proven to be highly viable in showing the musical logic within a wide variety of chromatic harmonic situations and beyond. Moreover, combining the contemporary transformational approach with the Riemann-derived traditional Functional analysis in chapters III-VI illuminated Liszt's double harmonic syntax, acknowledging both the more functional and the more parsimoniously chromatic aspects of it, while allowing the fluidity between the two to be discussed with a high degree of analytical flexibility.

The four species of double syntax conceptualised in part I have been useful in showing the different ways, in which diatonic functionality and non-functional chromaticism can interact with and complement each other. The sheer diversity of harmonic situations within the ten pieces selected for double-syntactic analyses demonstrated a multitude of configurations, from the overarching functional skeleton of *Valse oublieé 1* with only a few fleeting chromatic

excursions, to the much more intricate exchange of roles of the two types of syntax in the case of *Csárdás obstineé*. My analyses portrayed Liszt as a highly imaginative creator, who could keep in line with the traditions of his early days, while at the same time he was able to pull out of his sleeve a number of tricks for distorting and denying these. As for the *Tonnetz* diagrams, which I used for visualisations, these were equally good in showing both the functional and the transformational aspects of harmony, but most importantly – translating the interactions between the two as horizontal-vertical dichotomy of movements in pitch space.

The discoveries of chapter VII have been central to the fuller picture of this repertoire, which has been drawn currently. It would not be an overstatement to claim that Liszt's treatment of the augmented triad was his biggest contribution to the history of harmony. The transition from the extended music-theoretical and historical introduction of this chapter towards my analyses traced the development from an abstract idea to concrete musical manifestations of it. The unique character of miniatures such as *La lugubre gondola I* and *Nuages gris* makes them incomparable to any other piano pieces of their time and my analyses of these works revealed a meticulously structured, highly idiosyncratic harmonic structure. Cube Dance proved to be a most potent visual tool for conceptualising harmonic progressions with augmented triads in their core. It has been particularly appropriate whenever triadic progressions were grouped around Weitzmann regions, however, with the appearance of a wider variety of chords and with the weakened centrality of augmented triads in some cases it was demonstrated how this more specialised device stops being effective and we should keep relying on the *Tonnetz* for showing chord relations.

Liszt's uses of the diminished seventh chord, as revealed in chapter VIII, were perhaps not as unique and out-of-their-time as his treatment of the

augmented triad. However, my analysis of *Bagatelle sans tonalité* confirmed what has already been claimed by other authors – that the whole structure and conception of that piece were ahead of their time, demonstrating how familiar chords can lose their tonal meanings if employed in particular ways. Coming in as an extension to what has been believed to be suitable for visual representations on the *Tonnetz*, my figures in this chapter demonstrated that harmonic progressions involving a variety of seventh chords and triads (centered or not around the diminished seventh chord) can be effectively depicted and explained with this visual tool, occasionally leading to new and surprising results. Considering the vast amount of music, which includes similar chromatically rich progressions involving the most common seventh chords of the nineteenth century, further such neo-Riemannian studies are yet to accumulate and allow for comparative surveys of Liszt's and other contemporary composers' non-tonal treatments of chromaticism. What the *Tonnetz* is indispensable for in such contexts is its ability to zoom in on the surface details and represent the voice leading relationships between chords and the patterns of chord progressions in a more visually appealing way that is fundamentally different from standard notation.

Chapter IX was an attempt to put harmonic progressions in late Liszt into categories firstly based on adherence to the more established function of the *Tonnetz* – to visualise triads with the basic and compound neo-Riemannian transformations between them – and then to test its ability to account for a wider range of triads and tetrads. It has been surprising to see how extensive, distinct from one another and revealing the purely triadic analyses have been, considering that Liszt's chromatic harmony (and more broadly the music of the nineteenth century) is more tetradic than triadic. Admittedly, pieces that can be easily and fully analysed with neo-Riemannian theory such as *Am Grabe Richard*

Wagners, are a rarity throughout this repertoire, so we should bear in mind that the current methodology might not be versatile enough for this historical period and it might need to be further developed. However, I would like to suggest that some of my diagrams such as the ones dedicated to *La lugubre gondola II* and *Polonaise I* (in both chapters VIII and IX) are reminiscent of Wagner's *Tristan* phase, so this composer's extensive chromatic usages of different seventh chords are yet to receive a more extensive neo-Riemannian scrutiny, which will consequently invite comparisons with Liszt or with other contemporary composers.[1]

Having some fairly uncontroversial and perhaps less original premises as a starting point for part I, I have tried to develop a new and more detailed way of understanding Liszt's double syntax. The four species of it have shown that neo-Riemannian input can reveal several levels of tonal-post-tonal interactions. Beyond this dissertation, such theoretical distinctions can be useful and widely applicable to other repertoires in the 'long' nineteenth century. I see my hybrid methodology in part I as able to be extended to earlier Romantic composers, whose music is still largely dependent on tonal procedures, while non-tonal chromatic elements play an important role. Without the need to mention particular pieces, large amounts of the music of Chopin, Schumann, Mendelssohn and Schubert can be conceptualised with the four species of double syntax. Without doubt, many of Beethoven's harmonic experiments also invite a *Tonnetz* consideration with the horizontal-vertical balance able to be

[1] Just the opening 40 bars of the famous *Prelude* from *Tristan and Isolde* put on the table a plethora of harmonic relationships for discussion for the neo-Riemannian analyst. The extended parsimonious progressions running through half-diminished, diminished, dominant seventh and French sixth chords, coupled with frequent minor third transpositions on a phrase-to-phrase level lead to constant tonal ambiguity and invite a transformational analysis. Functionality operating in highly chromatic harmony has recently been exemplified with this piece by Kenneth Smith (2020, 69-75), however, I wonder what further insights can be reached for such works by using my version of the *Tonnetz* and focusing on the paths that are charted on it, with the aim of later drawing together diagrams for comparative study of Liszt, Wagner and other composers, who use the same kinds of chords in similar harmonic contexts.

traced and even in some pieces of Mozart a double-syntactic analysis along similar lines would be fruitful (think of the celebrated opening of the so-called 'Dissonance' string quartet for example). As for my purely neo-Riemannian approach in part II, I see it more logically extending to later composers, with the potential to be developed to better account for other more dissonant tetrads and pentads.[2] From Debussy and Ravel to Scriabin, Bartók and even early Schoenberg – a lot about their music can be revealed on the *Tonnetz*, while also some lines of continuity and evolution from the early nineteenth towards the twentieth century can be traced, having Liszt late piano music as an important step in the process.

[2] Joe Argentino, "Serialism and Neo-Riemannian Theory: Transformations and Hexatonic Cycles in Schoenberg's Modern Psalm Op. 50c", *Intégral* 26 (2012, 123–58) offers a hybrid methodology for atonal music, which combines Cohn's hyper-Hexatonic system with elements from pitch-class set theory in order to explain Schoenberg's use of hexachords. A parallel is made between Schoenberg's use of the set class 6-35 and Liszt's 'tonal' usage of it in *Polonaise I*, bars 98-110. See p. 148 in Argentino and fig. 9.10 in this study. This is just a small but suggestive example for the multitude of parallels that could be made between the late music of Liszt and a number of other later pieces of more atonal nature, not to mention the potential affinities to later repertoires that are stylistically closer.

Bibliography

Literature on Liszt's Music

Altenburg, D. (ed.). *Liszt und die Neudeutsche Schule*. Weimarer Liszt-Studien, im Auftrag der Franz-Liszt-Gesellschaft, Laaber: Laaber-Verlag, 2006.

Arnold, B. *Piano Music: 1861–1886.* In: *The Liszt Companion*, ed. Ben Arnold. Westport, CT: Greenwood, pp. 139–77, 2002.

Baker, J. M. *Liszt's late piano works: a survey.* pp. 86-119. *Liszt's late piano works: larger forms*, pp. 120-151. In: *The Cambridge Companion to Liszt*. Ed. by Kenneth Hamilton. Cambridge: Cambridge University Press, 2005.

Baker, J. M. *The Limits of Tonality in the Late Music of Franz Liszt.* Journal of Music Theory 34, no. 2 (Autumn), pp. 145-173, 1990.

Bárdos, L. *Ferenc Liszt, the Innovator.* Studia Musicologica Academiae Scientiarum Hungaricae, T. 17, Fasc. 1/4, pp. 3-38, 1975.

Berry, D. C. *The Meaning[s] of "Without": An Exploration of Liszt's Bagatelle ohne Tonart.* 19th-Century Music 27, no. 3 (Spring), pp. 230-262, 2004.

Cannata, D. B. *Perception & Apperception in Liszt's Late Piano Music.* The Journal of Musicology 15, no. 2 (Spring), pp. 178-207, 1997.

Cataldi, M. *Franz Liszt: Prophecy in the Late Piano Works.* Ph. D. diss. Indiana University, 2014.

Cinnamon, H. *Tonic Arpeggiation and Successive Equal Third Relations as Elements of Tonal Evolution in the Music of Franz Liszt.* Music Theory Spectrum, Vol. 8, pp. 1-24, 1986.

Damschroder, D. A. *The Structural Foundations of "The Music of the Future": A Schenkerian Study of Liszt's Weimar Repertoire.* Dissertation: Yale University, 1981.

Damschroder, D. A. *Structural Levels: A Key to Liszt's Chromatic Art.* College Music Symposium 27, pp. 46-58, 1987.

Dickinson, S. C. *Tonal Voice Leading as an Analytic Basis for Liszt's Late Experimental Works.* Diss. University of Rochester, Rochester, New York, 2002.

Forte, A. *Liszt's Experimental Idiom and Music of the Early Twentieth Century.* 19th-Century Music 10, no. 3 (Spring), pp. 209-228, 1987.

Garcia, F. *Liszt's Bagatelle without Tonality: Analytical Perspectives.* Ph. D. diss. University of Pittsburgh, 2006.

Gárdonyi, Z. *Liszt Ferenc Magyar stílusa/Le Style hongrois de François Liszt.* [Joint Hungarian/French edition.] Budapest: Orsz. Széchényi Könyvtár, 1936. Originally published as *Die ungarischen Stileigentümlichkeiten in den musikalischen Werken Franz Liszts.* Berlin: Walter de Gruyter, 1931.

Gárdonyi Z – Szelényi I. *Franz Liszt. Ungarische Rhapsodien Nos. X-XIX.* Neue Liszt Ausgabe I/4. Budapest: Editio Musica, 1973.

Hennig. D. *Weitzmann and the Liszt Machine.* Miscellanea Musicologica, 16, pp. 109–134, 1989.

Kim, J. *A study of Liszt's concepts of changing tonality.* Ph. D. diss. University of North Texas, 1999.

Lee, R. *Some Little-Known Late Piano Works by Liszt (1869-1886): A Miscellany.* Ph.D. diss., University of Washington, 1970.

Loya, S. *Liszt's Transcultural Modernism and the Hungarian-Gypsy Tradition.* Rochester: University of Rochester Press, 2011.

Loya, S. *The Mystery of the Seventeenth Hungarian Rhapsody.* Quaderni, pp. 107-146, 2015.

Loya, S. *Lateness in Context*, pp. 271-281. In: *Liszt in Context*. Cambridge: Cambridge University Press, 2022.

Lym, Sang-Hee. *Aspects of compositional technique in the late original solo piano pieces by Franz Liszt.* Diss. The University of Texas at Austin, 1999.

Móricz, K. *The Ambivalent Connection between Theory and Practice in the Relationship of F. Liszt and F.-J. Fétis.* Studia Musicologica 35, pp. 399–420, 1994.

Pesce, D. *Liszt's Final Decade.* Rochester: University of Rochester Press, 2014.

Richardsen, P. J. *The Late Piano Works of Franz Liszt and their Anticipation of Musical Ideas of the Twentieth Century.* Diss. University of California, Santa Barbara, 2007.

Rosen, C. *The Romantic Generation.* Cambridge, MA: Harvard University Press, 1998.

Saffle, M. *Franz Liszt: A Guide to Research.* 3rd ed. New York & London: Routledge Music Bibliographies, 2009.

Satyendra, R. *Chromatic Tonality and Semitonal Relationships in Liszt's Late Style*. Diss. 2 vols. University of Chicago, 1992.

Satyendra, R. *Conceptualising Expressive Chromaticism in Liszt's Music.* Music Analysis 16, pp. 219–252, 1997.

Satyendra, R. *Liszt's Open Structures and the Romantic Fragment*. Music Theory Spectrum, Vol. 19, 2, pp. 184-205, 1997.

Searle, H. *Liszt's Final Period (1860-1886).* Proceedings of the Royal Musical Association, 78th Session, pp. 67-81, 1952.

Searle, H. *Liszt and 20th-Century Music.* Report of the Second International Musicological Conference, Budapest, pp. 277-281, 1963.

Searle, H. *The Music of Liszt.* New York: Dover Publications, 1966.

Searle, H. 'Liszt'. In: *New Grove Dictionary of Music and Musicians*, edited by Stanley Sadie, 11:49-51. London: Macmillan, 1980.

Skoumal, Z. *Liszt's Androgynous Harmony.* Music Analysis 13, no. 1 (March), pp. 51-72, 1994.

Szabolcsi, B. *The Twilight of Ferenz Liszt.* Budapest: Publishing House of the Hungarian Academy of Sciences, 1959.

Thompson, H. *The Evolution of Whole-Tone Sound in Liszt's Original Piano Works.* Ph.D. diss., The Louisiana State University and Agricultural and Mechanical College, 1974.

Todd, R. L. *The "Unwelcome Guest" Regaled: Franz Liszt and the Augmented Traid*. 19th-Century Music 12, no. 2 (Autumn), pp. 93-115, 1988.

Walker, A. *Franz Liszt: The Final Years, 1861-1886*. New York: Cornell University Press, 1997.

Neo-Riemannian and other music-theoretical studies

Argentino, J. *Serialism and Neo-Riemannian Theory: Transformations and Hexatonic Cycles in Schoenberg's Modern Psalm Op. 50c.* Intégral, vol. 26, pp. 123–58, 2012.

Boretz, B. *Meta-Variations: Studies in the Foundations of Musical Thought.* PhD diss. Princeton University, 1970.

Boretz, B. *Meta-Variations, Part IV: Analytic Fallout (I).* Perspectives of New Music 11, no. 1, pp. 146-223, 1972.

Childs, A. P. *Moving beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords.* Journal of Music Theory, 42/2, pp. 181-193, 1998.

Clampitt, D. *Alternative Interpretations of Some Measures from Parsifal.* Journal of Music Theory, 42/2, pp. 321-334, 1998.

Cohn, R. *Maximally Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions.* Music Analysis 15/1, pp. 9–40, 1996.

Cohn, R. *An Introduction to Neo-Riemannian Theory: A Survey and Historical Perspective.* Journal of Music Theory, 42/2, pp. 167–180, 1998.

Cohn, R. *Audacious Euphony – Chromatic Harmony and the Triad's Second Nature.* New York: Oxford University Press, 2012.

Douthett, J. and Steinbach, P. *Parsimonious Graphs: A Study in Parsimony, Contextual Transformations, and Modes of Limited Transposition.* Journal of Music Theory 42, no. 2, pp. 241-264, 1998.

Forte, A. *The Structure of Atonal Music.* New Haven and London: Yale University Press, 1973.

Gollin, E. and A. Rehding. *Oxford Handbook of Neo-Riemannian Music Theories.* New York: Oxford University Press, 2011.

Hostinský, O. *Die Lehre von den musikalischen Klängen: Ein Beitrag zur aesthetischen Begründung der Harmonielehre.* Prague: H. Dominicus, 1879.

Hyer, B. *Reimag(in)ing Riemann.* Journal of Music Theory, 39/I, pp. 103-138, 1995.

Hyer, B. *Tonality*. Grove Music Online, Oxford University Press, 2001. [Accessed 27 September 2021]. Available from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000028102

Kopp, D. *Chromatic Transformations in Nineteenth-century Music.* Cambridge: Cambridge University Press, 2002.

Kramer, L. *The Mirror of Tonality: Transitional Features of Nineteenth-Century Harmony.* 19th-Century Music, Vol. 4, No. 3, pp. 191-208, 1981.

Lendvai, E. *Symmetries of Music.* Kecskemét: Kodály Institute, 1993.

Lewin, D. *Amfortas's Prayer to Titurel and the Role of D in Parsifal: The Tonal Spaces of the Drama and the Enharmonic C♭/B.* 19th-Century Music 7, no. 3, pp. 336-349, 1984.

Lewin, D. *Generalized Musical Intervals and Transformations.* New Haven, CT: Yale University Press, 1987.

Marx, A. B. *Allgemeine Musiklehre: Ein Hülfsbuch, 4th edn.* Leipzig, 1850.

Morgan, R. *Dissonant Prolongations: Theoretical and Compositional Precedents. Journal* of Music Theory 20/1, pp. 49-91, 1976.

Oettingen A. V., *Harmoniesystem in dualer Entwickelung: Studien zur Theorie der Musik.* Dorpat and Leipzig: W. Gläser, 1866.

Proctor, G. *Technical Bases of Nineteenth-Century Chromatic Tonality: A Study in Chromaticism.* PhD diss., Princeton University. 1978.

Rameau J. P., *Traité de l'harmonie réduite à ses principes naturels.* Paris: J. B. C. Ballard, 1722.

Ratner, L. *Romantic Music: Sound and Syntax.* New York: Schirmer, 1992.

Rehding, A., *Tonality between Rule and Repertory; Or, Riemann's Functions – Beethoven's Function.* Music Theory Spectrum, 33/2, pp. 109-123, 2011.

Riemann H., *Musikalische Syntaxis: Grundriß einer harmonischen Satzbildungslehre*. Leipzig: Breitkopf und Härtel, 1877.

Riemann, H. *Katechismus der Harmonielehre.* Berlin: Max Hesse, 1890.

Riemann, H. *Ideen zu einer Lehre von den Tonvorstellungen*. In: *Jahrbuch der Musikbibliothek Peters 1914-15*, ed. Rudolf Schwartz, vols. XXI-XXII. Leipzig, 1916.

Rings, S. *Tonality and Transformation. Oxford Studies in Music Theory.* Oxford and New York: Oxford University Press, 2011.

Samson, J. *Romanticism.* Grove Music Online, Oxford University Press, 2001. [Accessed 2 October 2021] Available from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000023751

Saslaw, J. K. *Gottfried Weber and Multiple Meaning.* Theoria 5, pp. 74-103, 1990-91.

Saslaw J. K., Weber (Jacob) Gottfried. Grove Music Online, Oxford University Press, 2001. [Accessed 2 October 2021] Available from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000029983?rskey=TE86sl&result=1

Saslaw J. K., *Two monographs by Carl Friedrich Weitzmann: Part I: "The Augmented Triad" (1853).* Theory and Practice, 29, pp. 133-228, 2004.

Smith, K. M. *The transformational energetics of the tonal universe: Cohn, Rings, and Tymoczko*. Music Analysis, 33/2 (June), 2014.

Smith. K. *Desire in Chromatic Harmony – A Psychodynamic Exploration of Fin de Siècle Tonality.* Oxford Studies in Music Theory. Oxford: Oxford University Press, 2020.

Sutcliffe, W. D. & Tilmouth M. *Ternary form.* Grove Music Online, Oxford University Press, 2001. [Accessed 16 October 2021]. Available from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000027700?rskey=2FMODs&result=1

Tilmouth, M., & Budden, J. *Introduction (i).* Grove Music Online, Oxford University Press, 2001. [Accessed 27 September 2021]. Available from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000013872

Transition (i). Grove Music Online, Oxford University Press, 2001. [Accessed 27 September 2021]. Available from: https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000028271

Tymoczko, D. *Three Conceptions of Musical Distance.* In: Mathematics and Computation in Music, ed. Elaine Chew, Adrian Childs, and Ching-Hua Chuan. Heidelberg: Springer, 2009.

Tymoczko, D. *Geometrical Methods in Recent Music Theory.* Music Theory Online, 16/1 (March), 2010.

Tymoczko, D. *A Geometry of Music: Harmony and Counterpoint in the Extended Common Practice.* Oxford Studies in Music Theory. Oxford and New York: Oxford University Press, 2011.

Weber, G. *Versuch einer geordneten Theorie der Tonsetzkunst (1817-21),* vols. I-II. Mainz: B. Schott's Söhne, 3rd ed., 1846.

Weitzmann, C. F. *Der übermässige Dreiklang.* Berlin: T. Trautweinschen, 1853.

Weitzmann, C. F. *Der verminderte Septimenakkord*. Berlin H. Peters, 1854.

Weitzmann, C. F. *Geschichte des Septimen-akkordes.* T. Trautweinschen, 1854.

Weitzmann, C. F. *Geschichte der griechischen Musik.* Berlin: H. Peters, 1855.