ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

ΠΑΝΕΠΙΣΤΗΜΙΟ ΜΑΚΕΔΟΝΙΑΣ

Σχολή Κοινωνικών, Ανθρωπιστικών Επιστημών και Τεχνών

Τμήμα Μουσικής Επιστήμης και Τέχνης

ΠΑΝΕΠΙΣΤΗΜΙΟ ΜΑΚΕΔΟΝΙΑΣ

MAKAMPEDIA

From taksim mastery to makam theory

Ethnographically informed transcription and analyses
of celebrated taksim performances, presented in
Real-time audio-synced and annotated video scores

PhD Dissertation

Michail Cholevas

Supervising professor: Sokratis Sinopoulos

Academic Advisory Committee members:

Dimitra Kokotsaki, Lelouda Stamou

Rotterdam, 2022

Preface – Acknowledgments

Reaching the concluding point of this body of work and thinking in retrospect, if I had to name one driving force behind its creation, I would argue that is keeping the jackanapes in me content.

I love learning by doing, without having first understood the mechanisms behind the process. I guess this is what Richard Feynman called *the pleasure of finding things out*. Throughout my years of contact with music I have been lucky enough to interact with an overwhelming number of inspiring teachers, colleagues and students. With some of them I had and still have the pleasure and honor to co-perform or teach side by side, figuring the whats, the whys and hows on the way.

There is another part in me that loves learning and understanding by reading (or understanding with the aid of visual material, from text to videos) and figuring mechanisms before trying anything out. I am especially fond of those pieces of work that decode seemingly complex phenomena in a concisely manner or those that will generate a pool of ideas and possibilities out of a very basic one. *Things should be as simple as possible but not simpler* in the words of Albert Einstein. I find this approach and the toolbox it brings along (such as reasoning, parametrization, correlations and hypotheses testing) especially useful and valuable, albeit rare, in the realm of music making and education where, in my humble experience, emotion-based simplifications often overshadow or dominate argumentation and reasoning in the process.

And, apparently, there is a third, quite persistent part of me, that will only learn through the power of metaphorical language; through parables, metaphors and their products, those abstract examples that storytelling employs to convey ambiguity, and then, magically, it helps us make sense out of them.

If my background studies in natural sciences have played a role in the analytical approaches used, and if my need for using the three abovementioned learning mechanisms are the pillars of the work to be presented in the following chapters, they could also help the reader form an understanding on the struggles a musician and educator is dealing with, in the pursuit of development. From the art of performing to the science or epistemic approaches of investigating music phenomena, we are in the infinite loop of Sisyphean action of learning, understanding and passing over what we think has been shaped in our minds, to the next one in line.

One of the realizations I had during my latest years of working with music was that the cultural wealth of classical and folk aural music traditions is slowly but surely heading to oblivion, due to a number of social, economic and political reasons. The same could be said for the size of quality time in current era's lifestyle, that is asymptotically approaching zero. Contemplating these observations, the idea of *Makampedia* slowly took shape in my mind as a multifaced, multipurposed construction. An attempt to create a safekeeping space of historical performances, a library of educational material and an excuse for self-developing musical elements in the Makam genre, using each analysis of a music performance as an absent teacher. A library, that could furthermore help in generating curiosity about the subject and in introducing people to the makam idiom quicker than the current institutional educational approaches.

The pursuit of forging that construct took longer than I had initially anticipated but during its course, I was lucky enough to encounter or rebond with a number of people who left their stamp on me and this work.

I would like to thank: the Academic Advisory Committee members, Mrs. Lelouda Stamou for advising me during the initial steps of the research, Mrs. Dimitra Kokotsaki for her assistance with the first article, her support, guidance throughout the process, and for our first discussion, on that flight from Athens to Amsterdam that led to our friendship, mutual respect and her supervision, my *unofficial* supervisor Mrs. Liesbet Van Zoonen for her guidance, trust, support, and for believing in me during challenging times in Rotterdam, Mr. Sokratis Sinopoulos for being a continuous source of inspiration with his mastery since the early 1990s, for his friendship, for sharing olives, tsipouro and our personal stories during our PhD related discussions, my long-term friend Anna Apostolidou for her thoughts, suggestions, overall support and for still understanding me 33 years after our gazes met. Parts of this research have been reworked and submitted to academic journals, which are currently under consideration. Finally, I would like to thank Ara Dinkjan for sharing his thoughts on Makam music and for sending me his taksims that along with others, let to the most important finding of this work, the rhythmic and metric rendering of elements in *rhythm-less* taksim. Last but not least, I am in gratitude to my teacher and friend Kudsi Ergüner, for innumerable things he has openheartedly offered me since we first met in Venice for his makam masterclass that spring of 2008.

Dedication

This work is dedicated to to my parents, Christos, Poulheria, to my siblings Nikos and Nasia, to Ariadni and Rallou, to all close friends and to my lathe, for the time this lonely endeavor has deprived us of. We will meet again.

And to the teachers who have devoted their lives to developing and polishing student's minds and training their hearts. To all these lineages of unwritten and unpublished mastery who has shaped the cultural mountain on which we are walking.

Table of Contents

Dedication ..... *vi*

List of video examples ..... *xii*

Introduction ..... *xxvii*

Chapter 1 ..... *1*

Rhythm in Taksim (?): Unveiling temporal characteristics in free-rhythm Taksim. *1*

Leonardo Da Vinci **1**

1.1 Introduction **1**

1.2 Educational, historical, political context of the theoretical framework and its inconsistency with praxis **3**

1.3 Staff notation and Westernisation **4**

1.4 Transformation of ensembles and introduction of staff notation **5**

1.5 Literature review: Transcription and analysis of Taksim, current practices and research **7**

1.6 Methodology: Computer-aided ethnographically informed transcriptions **11**

1.6.1 Transcription and analysis process 11

1.6.2 Material selection for transcribing 13

1.6.3 Elements of focusing in the transcription process 14

1.7 Early findings. From transcription accuracy to temporal characteristics: rhythmic syllabication, grammar and synthesis **16**

1.7.1 Rhythmic Syllabication 18

1.7.2 (Odd) rhythm groupings - Rhythmic Grammar 20

1.7.3 Elements of disguise, from rhythmic grammar to synthesis 21

1.7.4 Rhythmic intonation - accentuation of the phrase 26

1.8 The impact of temporal characteristics to taksim styles and idioms. Quantifying style? **29**

1.9 Synopsis - Generalization **30**

1.10 Limitations of the temporal rendering of taksim performances 33

1.11 Arguments for the temporal characteristics of *free-rhythm* taksim performances 34

Chapter 2 40

Visualizing Synaesthesia? Digital layered score and the cultural-educational qualities of makam 40

Ben Schneiderman 40

2.1 Introduction 40

2.3 Experimenting with layered visualization 42

2.4 The necessity for developing a visually dynamic score 44

2.5 Educational properties and re-training the eye 58

2.6 Tentative conclusions 62

Chapter 3 66

A protocol for the transcription and performance analysis of taksim with complementary graphic representations 66

Niels Bohr 66

John Wheeler 66

3.1 Introduction 66

3.2 Transcription and representation Protocol 70

3.2.1 Transcription 70

3.2.2 Extracting Melodic Contours 73

3.3 Animating melodic contours 76

3.4 Syncing Staff transcription with Audio on iAnalyse 79

3.5 Blending Score and melodic contour 80

3.5.1 With the use of video editing software 80

3.5.2 Both videos are imported 81

3.5.3 The video can be exported 81

3.6 Adding layers of analysis on iAnalyse 81

3.7 Exporting data for further analysis 83

3.8 Conclusion 83

Chapter 4 85

Affective affinities in Eastern Mediterranean poetry and music: An online performance 85

Wim Van der Meer 85

4.1 Introduction 85

4.2 Translation (in) process 86

4.3 Preparation and analytic course 89

4.4 Performance Context 90

4.5 Crafting Melodic Promenades 92

4.6 Distinctive Intensity Curves I: Easter at Olympia 94

4.7 Distinctive Intensity Curves II: All Souls' Day 97

4.8 Tracing affinities in performative ways 101

Chapter 5 103

Examples of modal music mapping and audio-syncing applications 103

Will Mcavoy, The Newsroom 103

5.1 Introduction 103

5.2 Alternative notation syncing 103

5.4 Implementation of byzantine style scale steps in commas 108

5.5 Syncing long rhythmic cycles of classical compositional forms 110

5.6 Conclusion 114

Chapter 6 115

Discussion - Conclusions - Epilogue 115

Joseph Campbell..... 115

6.1 Discussion..... 115

6.2 Conclusions – Contribution to the field 121

6.2.1 Time 123

6.2.2 Pitch and visualizations..... 126

6.2.3 Protocol..... 131

6.2.4 Affective affinities, seyir as a generator of tension 133

6.2.5 Generalization..... 134

6.3 Epilogue..... 135

References 136

Appendices 154

Appendix 1 154

Scores – Transcriptions – Tables – Analysis layers 154

1. Ara Dinkjan – Uşşâk Taksim New York City 2014 (private archive of Ara Dinkjan)..... 154

2. Kudsi Erguner Uşşâk Taksim 182

3. Ulvi Erguner Uşşâk Taksim (archive or Kudsi Erguner) 188

4. Kani Karaca Beyati Beste Uri-Uri (comp. by Moşe Cordova) 195

5. Antonis Dalgas: Manes tis Avgis - Αντώνης Νταλγκάς: Μανές της Αυγής 199

6. Fahrettin Çimenli Kurdilihicazkar Pesrev (comp. Cemil Bey) 205

7. Fahrettin Çimenli Taksim introduction before Kurdilihicazkar Pesrev (Private archive of Kudsi Erguner)..... 208

8. Hüseyni Küll-i Külliyat by Aron Hamon 214

Directed by Kudsi Erguner, Performed by Ensemble Bîrûn 214

Venice, 2013 214

9. Isak Algazi Efendi Beyati Gazel..... 220

10. Feyrouz Great Friday Orthodox Hymn Η Ζωή Εν Τάφω (Yassouh El hayat Nouazimak) 221

11. Şükrü Tunar - Uşşak Taksim 227

12. Dede Suleyman Erguner Rast Taksim (Archive of Kudsi Erguner)..... 228

13. Lingua Franca Ensemble – Inception 235

Appendix 2 238

Transcriptions of Interviews..... 238

1. Interview/Discussion with Sokratis Sinopoulos, 26 February 2016 on the starting point of the research 238
2. Email discussion with Ara Dinkjan March 16-17 2016 261
3. Kudsi Ergüner Inteview/discussion on the findings on the first chapter: Rhythm in Taksim (?), 27 february 2018 265

Appendix 3 282

List of conference presentations 282

Appendix 4 283

List of submitted articles for publication 283
1. Rhythm in Taksim? 283
2. Makam Synesthesia? Digital layered score and the cultural-educational qualities of Makam 283
3. Affective affinities in Eastern Mediterranean poetry and music: 283
An online performance 283
Taksim 1: a protocol for transcription and performance analysis with complementary graphic representations. 284

Appendix 5 285

Video List 285
Ara Dinkjan 285
Kudsi Erguner 285
Ulvi Erguner 285
Dede Suleyman Erguner 286

Appendix 6 289

Original modal compositions created during the PhD trajectory 289
1. Exileosis: 289
2. 19 Steps of Separation: 300
3. Aurora Borealis: 305
4. The Lonely lighthouse: 341
5. I will never say goodbye: 345

List of video examples

Video example 1.1 6

Şükrü Tunar Dynamic Intervals on Uşşak Taksim 7

Video example 1.2a 13

Kudsi Ergüner Uşşak Taksim Transcription Synced With Melodic Contour staff version 13

Video example 1.2b 13

Kudsi Ergüner Uşşak Taksim Transcription Synced With Melodic Contour (N-Gram Makam Map Version) 13

Video example 1.3 19

Ara Uşşak Two First Phrases 19

Video example 1.4 21

Ara Dinkjan Uşşak 1st Page Groupings 21

Video example 1.5 24

Tempo shifts 24

Video example 1.6 24

Relaxation – Tempo Change 25

Video example 1.7 26

Ara Dinkjan Uşşak Groupings of 3 Beats 26

Video example 1.8 29

iAnalyse video of Ara Dinkjan Taksim with Annotations 29

Video example 1.9 30

ianalyse Video of Dede Suleyman Ergüner Rast Taksim 30

Video example 2.1 50

Example of dynamic pitched note in Uşşâk taksim by Şükrü Tunar on staff notation *50*

Video example 2.2 ..... *54*

Projection and animation of the audio synced melodic contour on the n-gram map *55*

Video example 2.3 ..... *55*

Audio synced melodic contour with 2nd layer marking phrases *55*

Video example 2.4 ..... *56*

Combined staff score and melodic contour on n-gram map *56*

Video example 2.5 ..... *57*

Annotations layer on Makam flavours *57*

Video example 2.6 ..... *57*

Layer of annotations on Çarpma techniques *57*

Video example 3.1 ..... *76*

Melodic contour projected on staff *76*

Video Example 3.2 ..... *78*

Melodic contour projected over a makam map *78*

Video example 3.3 ..... *80*

Transcription on staff synced with audio *80*

Video Example 3.4 ..... *83*

Ara Dinkjan Uşşâk Taksim all layers of annotations (phrasing, makam flavors, phrases speed, rhythmic groupings *83*

Video 5.2.1 ..... *104*

Synced score and makam map for Η Ζωή εν Τάφω *104*

Video 5.3.1 105

Lingua Franca Ensemble, performing Inception by Giannis Koutis 105

Video 5.4.1 110

Video example scale intervals added to makam map on 110

Kudsi Ergüner's taksim on makam Uşşâk) 110

Video 5.5.1 113

Uri Uri Audio-score syncing in ianalyse 113

Video 5.5.2 114

Uri Uri Audio-score and melodic contour on makam map synced 114

List of audio examples

Audio example 1.1 18

Opening Uşşak Taksim Ara Dinkjan 18

Audio example 1.2 25

Şükrü Tunar Speed Layers.....25

Audio example 1.3 30

Uşşak Taksim Şükrü Duyek 30

Audio example 1.4 35

Ulvi Ergüner Uşşak Taksim 1st Phrase.....36

Audio example 1.3 37

Uşşak Taksim Şükrü Duyek 38

List of figures and tables

Figure 1.1 ..... *16*

Pitch Curve (green) and Onsets Detection Function (purple) *16*

Table 1.1 ..... *17*

Measurements from onsets layer of Figure 1. ..... *17*

Figure 1.2 ..... *18*

Opening Uşşak Taksim Ara Dinkjan *18*

Figure 1.3 ..... *19*

First two Phrases Uşşak Taksim Ara Dinkjan *19*

Figure 1.4 ..... *21*

(Odd) Rhythm Groupings *21*

Table 1.2 ..... *22*

Exported Annotations Groupings Layer From ianalyse *22*

Figure 1.5 ..... *23*

Ara Dinkjan Uşşak Taksim Variations of Groupings *23*

Figure 1.6 ..... *23*

Ara Dinkjan Uşşak Taksim Tempo Shifts *23*

Figure 1.7 ..... *24*

Relaxation – Tempo Change *24*

Figure 1.8 ..... *25*

Speed Layer Changing in Şükrü Tunar's Uşşak Taksim *25*

Figure 1.9 ..... *25*

Repetition of 3 Beats Groupings and Accelerando as a mean of Intensification 25

Figure 1.10a 28

İnce Giyerim İnce on a 2+2+2+3 Variation 28

Figure 10b 28

İnce Giyerim İnce on a 2+2+3+2 Variation 28

Figure 1.11 32

Rhythm-less feel as a combination of temporal elements.....32

Figure 1.12 35

First Registration of Ulvi Ergüner's Uşşak Taksim Opening 35

Figure 1.13 35

Correct Registration of Ulvi Ergüner's Uşşak Taksim Opening.....35

Figure 1.14 36

Şükrü Tunar Uşşak taksim opening 36

Figure 1.15 36

Ara Dinkjan Uşşak taksim opening 37

Figure 2.1 46

The maqam Iceberg.....46

Figure 2.2 47

Analysis of a taksim using staff notation and stemless notes. 47

Figure 2.3 48

Transcription/analysis of Aka Gündüz taksim performance by Simms 48

Figure 2.4 48

Transcription/analysis of Dede Suleyman Ergüner's Rast taksim performance by Cholevas 48

Figure 2.5 49

Pesrev (prelude composition) example from scores archive Neyzen.com 49

Figure 2.6 50

Example of dynamic pitched note in Uşşâk taksim by Şükrü Tunar on staff notation 50

Figure 2.7 51

Commas division of the whole tone in Ottoman Makam music 51

Figure 2.8 52

Accidentals of Ottoman Makam music in commas 52

Figure 2.9 53

Example of Makam scale n-gram map, used as a background layer for the projection of melodic contour 53

Figure 2.10 54

Melodic contour extracted with Sonic Visualiser. 54

Figure 2.11 54

Projection and animation of the audio synced melodic contour on the n-gram map 54

Figure 2.12 55

Audio synced melodic contour with 2nd layer marking phrases 55

Figure 2.13 56

Combined staff score and melodic contour on n-gram map 56

Figure 2.14 57

Annotations layer on Makam flavours 57

Figure 2.15. 57

Layer of annotations on Çarpma techniques 57

Figure 3.1 67

Example of transcription from the Makam Guide (Aydemir, 2010) 67

Figure 3.2 69

Example of dynamic pitched note in Uşşâk taksim by Şükrü Tunar on staff notation transcribed by the author 69

Figure 3.3 69

Example of dynamic pitched note in Rast taksim by Dede Suleyman Ergüner on staff notation transcribed by the author 69

Figure 3.4 70

Rast perde on staff noted by the G clef 70

Figure 3.5 71

Phrase without and with Çarpma 71

Figure 3.6 Notating Glissandi 72

Figure 3.7 72

Connect stems according to the metric groupings on a 2+2+3 phrase 72

Figure 3.8 73

Notating groupings on metric phrases 73

Figure 3.9 73

Adding bar lines and marking seconds 73

Figure 3.10 74

pYin Transform inside Sonic Visualiser Transforms menu 74

Figure 3.11 74

pYin Plugin Parameters window *75*

Figure 3.12 ..... *75*

pYin Layer parameters *75*

Figure 3.13 ..... *75*

Exporting the melodic contour as a png image *76*

Figure 3.14 ..... *77*

Melodic contour projected on staff. *77*

Figure 3.15 ..... *77*

Makam Scale map *77*

Figure 3.16 ..... *78*

Melodic contour projected over a makam map *78*

Figure 3.17 ..... *79*

Double melodic curve *79*

Figure 3.18 ..... *80*

Complementary staff score and melodic contour *80*

Figure 3.19 ..... *81*

Example of score with multiple layers of annotations *81*

Figure 4.1. ..... *92*

Three types of melodic development (seyir) in makam modes directly rendered as intensity *92*

Figure 4.2. ..... *94*

Introductory musical phrase for "Easter at Olympia" *94*

Figure 4.3. ..... *95*

Second musical phrase for "Easter at Olympia" *95*

Figure 4.4 ..... *95*

Third musical phrase for "Easter at Olympia" *95*

Figure 4.5. ..... *96*

Fourth musical phrase for "Easter at Olympia" *96*

Figure 4.6 ..... *96*

Fifth musical phrase for "Easter at Olympia" *96*

Figure 4.7 ..... *97*

Concluding musical phrase for "Easter at Olympia" *97*

Figure 4.8 ..... *98*

Opening musical phrase "All Souls'' Day" *98*

Figure 4.9 ..... *99*

Second musical phrase for "All Souls'' Day" *99*

Figure 4.10 ..... *99*

Third musical phrase for "All Souls'' Day" *99*

Figure 4.11 ..... *100*

Fourth musical phrase for "All Souls'' Day" *100*

Figure 5.2.1 ..... *104*

Synced score and makam map for Η Ζωή εν Τάφω *104*

Figure 5.3.1 ..... *105*

Percussion (red bubbles) *105*

Figure 5.3.2 ..... *106*

Oud sound rendered as blue onion rings *106*

Figure 5.3.3 ..... *106*

Tarhu sound rendered as a green melodic contour *106*

Figure 5.3.4 ..... *107*

Violin sound rendered as a purple melodic contour *107*

Figure 5.3.5 ..... *107*

Ney sound rendered as a black melodic contour *107*

Figure 5.4.1 ..... *108*

Martyria and phthongoi of byzantine mode Ἦχος πλάγιος του Πρώτου (plagal first mode) *108*

Figure 5.4.2 ..... *109*

intervals scale makam Uşşâk *109*

Figure 5.4.3 ..... *110*

Scale intervals added with a bar next to note names *110*

Figure 5.5.1 ..... *111*

Score in use for Uri Uri Beyati Beste *111*

Figure 5.5.2. ..... *112*

Transcription of Kani Karaca's version of Uri Uri *112*

Figure 5.5.3 ..... *113*

Uri Uri Audio-score syncing in ianalyse *113*

Figure 5.5.4 ..... *114*

Uri Uri Audio-score and melodic contour on makam map synced *114*

Figure 6.1.1 ..... *115*

The effect of music reform (based on Modernization, Nationalization, Staff Notation, Conservatory education and Westernization) in the theory and praxis of Makam Music *115*

Figure 6.1.2 ..... *118*

Music characteristics from the aspects of practice-based and theory-based approaches 118

Figure 6.1.3 119

The structure of makam as a combination of n-chords (Aydemir, 2010)..... 119

Figure 6.1.4 120

Microtonality seen from the sides of theory and praxis, fixed pitches vs attraction..... 120

Figure 6.2.1 123

Transcribing approaches on taksim version 1, rhythmically oversimplified (Aydemir, 2010) 123

Figure 6.2.2 123

Transcribing approaches on taksim version 2, rhythmically complex (Cholevas, 2016)..... 123

Figure 6.2.3 124

Rhythm-less feel as a combination of temporal elements..... 124

Figure 6.2.4 126

Annotated, rhythmically and metrically transparent transcription 126

Figure 6.2.5 128

Combination of score, melodic contour and layered annotated visualisations 128

Figure 6.2.6 129

Combination of Melodic contour and transcribed score from Fahrettin Çimenli's performance of Kurdilihicazkar Pesrev by Cemil Bey..... 129

Figure 6.2.7 132

Protocol for the creation of Makam scale maps as background for melodic contours *132*

Figure 6.2.8 ..... *133*

Introductory musical phrase for "Easter at Olympia" *133*

Figure 6.2.9 ..... *134*

Polyphonic modal composition melodic contours *134*

Figure 6.2.10 ..... *134*

Rhythmic cycle, pentagram score and melodic contour synced *134*

Περίληψη

Η παρούσα εργασία επιχειρεί να γεφυρώσει το εμπειρικό και μεθοδολογικό χάσμα μεταξύ πράξης και θεωρίας στον εκπαίδευση της τροπικής (Μακάμ) μουσικής, χρησιμοποιώντας ως όχημα την ανάλυση ηχογραφήσεων τροπικών αυτοσχεδιασμών και συνθέσεων. Με αφετηρία την (μη αυτόματη) μεταγραφή και ανάλυση αναγνωρισμένων ηχογραφήσεων και ακολουθώντας τη διαδρομή από την πράξη στην θεωρία, η εργασία αποκρυπτογραφεί ιδιωματικά και ιδιοσυγκρασιακά στοιχεία μουσικών εκτελέσεων τα οποία αναπτύσσονται σε εργαλεία για την μουσική εκπαίδευση του Μακάμ. Το αποτέλεσμα κάθε ανάλυσης χρησιμοποιείται ως ένας *Απών Δάσκαλος*. Συνεντεύξεις με δασκάλους στο πεδίο, φέρνουν στο προσκήνιο πολύτιμες πληροφορίες και υπογραμμίζουν τη σημασία της μεταφορικής γλώσσας για την μεταφορά της γνώσης από δάσκαλο σε μαθητή (Meşk). Επιπλέον, μέσω της έρευνας αναπτύχθηκε ένα σύστημα αναπαράστασης μελωδικών γραμμών, το οποίο οπτικοποιεί την μελισματική φύση του συγκεκριμένου μουσικού είδους, συμπληρώνοντας τις (συγχρονισμένες με ήχο) εθνογραφικά ενημερωμένες καταγραφές. Με αυτόν τον τρόπο δημιουργείται ένα δυναμικό σύστημα παρουσίασης της τροπικότητας, αποφεύγοντας τις παρανοήσεις που εισήγαγε η χρήση του πενταγράμμου. Η εργασία υπογραμμίζει τη σημασία της χειροκίνητης μεταγραφής και ανάλυσης για την εξατομικευμένη ανάπτυξη μαθητών, δεδομένου του περιορισμένου χρόνου και της αλληλεπίδρασης μεταξύ δασκάλου και μαθητή στο σύγχρονο πλαίσιο της πανεπιστημιακής μουσικής εκπαίδευσης.

Η έρευνα βασίζεται σε καταγραφές εκτελέσεων διάσημων μουσικών του 20ου-21ου αιώνα και μαζί με τις πληροφορίες που συλλέχθηκαν μέσω συνεντεύξεων με αναγνωρισμένους δασκάλους του χώρου, αποτελούν το πλαίσιο μέσα στο οποίο παρουσιάζονται τα πρακτικά και θεωρητικά συμπεράσματα. Το κείμενο είναι οργανωμένο σε κεφάλαια, ακολουθώντας τις εργασίες που υποβλήθηκαν προς δημοσίευση κατά τη διάρκεια της έρευνας.

Το πρώτο κεφάλαιο *Rhythm in Taksim*, ασχολείται με το υποερώτημα του **τρόπου καταχώρησης χρονικών και μετρικών χαρακτηριστικών των (*χρονικά ελεύθερων)* αυτοσχεδιασμών** στην παρτιτούρα για περαιτέρω ανάλυση. Τα σημαντικά ευρήματα αφενός επιτρέπουν την δημιουργία ευδιάκριτων, επαναχρησιμοποιούμενων μεταγραφών αυτοσχεδιασμών στο πεντάγραμμο, αφετέρου αποκωδικοποιούν την χρονική δομή των ελεύθερων αυτοσχεδιασμών. Στηριζόμενο σε αυτά τα ευρήματα, το κεφάλαιο ολοκληρώνεται με τη δημιουργία ενός συστήματος βασισμένο σε ρυθμικά χαρακτηριστικά για την ανάπτυξη φρασεολογίας στον τροπικό αυτοσχεδιασμό, κάνοντας παραλληλισμούς με στοιχεία της γλώσσας όπως η ρυθμική ορθογραφία, η γραμματική και η σύνταξη.

Το δεύτερο κεφάλαιο χρησιμοποιεί τα ευρήματα του πρώτου και προτείνει μια λύση για την **απεικόνιση των διαστηματικών χαρακτηριστικών** μελισματικότητας και μικροτονικότητας των τροπικών μουσικών εκτελέσεων. Ένα ιδιαίτερα σημαντικό εύρημα για την ανάλυση, παρουσίαση και την κατανόηση στοιχείων όπως η μελωδική εξέλιξη και η μελωδική βαρύτητα, που αντιμετωπίζουν το πρόβλημα της απώλειας πληροφοριών κατά τη μεταγραφή στον (σύμφυτα κβαντικό) χαρακτήρα του πενταγράμμου. Το κεφάλαιο καλύπτει τη δημιουργία λογαριθμικά διαστηματικών χαρτών και την χρήση τους στο φόντο των μελωδικών γραμμών, ως ένα επιπρόσθετο στοιχείο παρουσίασης στην σημειογραφία του πενταγράμμου. Ακολουθεί συζήτηση, επιχειρηματολογία και τεκμηρίωση της λεπτομερούς γραφικής παρουσίασης της μελισματικής και διαστηματικής κίνησης σε χάρτες μακάμ, τα διάφορα επίπεδα ανάλυσης καθώς και το αποτέλεσμα συνδυασμού πενταγράμμου, χάρτη μακαμ, σχολιασμών, συγχρονισμού ήχου σε πραγματικό χρόνο και κινούμενων μελωδικών καμπύλων. Το κεφάλαιο κλείνει με την τοποθέτηση της έρευνας στο πεδίο των ψηφιακών ανθρωπιστικών επιστημών και τη διδακτική σημασία της συγκεκριμένης δυναμικής αναπαράστασης στον τομέα της μουσικής εκπαίδευσης του μακάμ.

Συνδυάζοντας τα ευρήματα των δύο πρώτων κεφαλαίων, το τρίτο εισάγει **το πρωτόκολλο μεταγραφής και ανάλυσης** και προσφέρει μια εργαλειοθήκη βήμα προς βήμα για τον τρόπο μεταγραφής, ανάλυσης, σχολιασμού και παρουσίασης παραστάσεων που βασίζονται στο taksim και το makam. Το πρωτόκολλο μπορεί να χρησιμοποιηθεί από άλλους ερευνητές που ενδιαφέρονται για τον τομέα της μουσικής ανάλυσης ταξίμ και τροπικών συνθέσεων. Με βάση το συγκεκριμένο πρωτόκολλο δημιουργήθηκαν τα βίντεο που αποτελούν το μεγαλύτερο κομμάτι της έρευνας και βρίσκονται συγκεντρωμένα σε παράρτημα της έρευνας καθώς και στον ιστότοπο www.makampedia.com.

Στο τέταρτο κεφάλαιο παρουσιάζεται η ανάλυση ενός διαλόγου ποίησης και μουσικής (στο πλαίσιο παρουσίασης συνεδρίου). Το κεφάλαιο ασχολείται με την **χρήση της μελωδικής ανάπτυξης** (seyir ane melodic development) **ως γεννήτρια δυναμικής** σε εκτελέσεις τροπικής μουσικής. Η προετοιμασία του συγκεκριμένου διαλόγου μεταξύ μουσικής και ανάγνωσης ποίησης και ο ρόλος της μελωδικής ανάπτυξης αναλύεται και παρουσιάζεται με βάση το πρωτόκολλο που αναπτύχθηκε στο τρίτο κεφάλαιο.

Το πέμπτο κεφάλαιο εισάγει μια σειρά παραδειγμάτων, επιχειρώντας την γενίκευση του φάσματος των δυνατοτήτων για την παρουσίαση της τροπικής μουσικής με την πρόσθεση χαρτών makam (, την εφαρμογή της σε μουσικο-συγχρονισμένες παρτιτούρες σε πραγματικό χρόνο, χειροκίνητη ανάλυση, σχολιασμούς και απεικονίσεις. για εκπαιδευτικούς σκοπούς.

Λέξεις-κλειδιά:
Χειροκίνητη μεταγραφή Taksim, άρρυθμος αυτοσχεδιασμός, ανάλυση τροπικής μουσικής, χάρτες μακαμ, ψηφιακές ανθρωπιστικές επιστήμες, σχολιασμένη παρτιτούρα με συγχρονισμό ήχου, πρακτική και θεωρία τροπικής μουσικής, πολυεπίπεδοι σχολιασμοί, οπτικοποιήσεις, τροπική μουσική εκπαίδευση, ανάπτυξη αυτοσχεδιασμού.

Abstract

The essay at hand attempts to narrow the empirical and methodological gap between praxis and theory in the field of makam music education, using taksim (improvisation) and composition recordings as its vehicle. Departing from manual transcription and analysis of celebrated performances and taking the route from praxis to theory, the essay deciphers elements of performance and develops those to tools for makam music education. The output of each analysis serves as an *absent teacher*. Interviews with masters in the field, added valuable insights and emphasized the significance of metaphorical language, and the transmission of knowledge in the master-apprentice (Meşk) educational model. Furthermore, the developed animated melodic contours, visualize the melismatic nature of the genre complementing the audio-synced ethnographically informed transcriptions. Hence, the work attempts to create a dynamic system for the representation of modality, avoiding the misunderstanding introduced with the use of pentagram notation. The essay highlights the significance of manual transcription and analysis for individual development, given the limited time and interaction between tutor and student in the contemporary context of makam education at the conservatory level.

This research is based on recordings of celebrated makam masters of the 20th-21st century and along with the insights from interviews with masters of the field, constitute the framework on which, the practical and theoretical conclusions are presented. The structure of the essay is organized in chapters, following the four papers submitted for publication during the course of the research.

The first chapter *Rhythm in Taksim,* deals with the part of the question of how to register ***free-rhythm taksim*** **temporal characteristics** on the score for further analysis. The surprising findings not only allow for comprehendible and reusable pentagram taksim transcriptions, but, furthermore, the chapter decodes temporal structure of taksim performances. Based on those findings, the chapter concludes with the machining of an apparatus for developing taksim phrasing, drawing parallels with elements of language such as *rhythmic spelling, grammar and syntax*.

The second chapter *Visualizing Synesthesia* uses the findings of the first one and offers a solution on how to present makam performances' **spatial characteristics of melismaticity and microtonality**; an element especially important for analysis, presentation and comprehension of melodic gravity, due to the loss of information when transcribing taksim or compositions to the quantized character of pen`tagram notation. The chapter covers the creation of (logarithmic intervallic) makam maps and their use as a background on graphic representations of computer-generated melodic contours. It is followed by a discussion, argumentation and documentation of the detailed graphic presentation of melismatic and intervallic movement on makam maps, the layers of analysis as well as the outcome of combining pentagram, makam map, annotations, real-time audio synchronization and animation. The chapter closes with the placement of this research in the field of digital humanities and the didactic importance of this particular dynamic representation in the field of makam music education.

Combining the findings of the first two chapters, the third one presents the *Protocol of Transcription and Analysis* and offers a **step-by-step toolbox** on how to transcribe, analyze, annotate and present taksim and makam based performances. The protocol may be used by other researchers interested in the field of taksim and modal compositions music analysis.

The fourth chapter *Affective Affinities* presents the analysis of a poetry and music dialogue (for the context of a conference presentation). The chapter deals with the question of how melodic development (seyir) can be seen and may be used as **the generator of intensity** in makam-based performances. The thought process of this dialogue between music and poetry reading is analyzed and presented using the protocol developed on the third chapter.

The fifth chapter introduces a series of examples, discussing how to **generalize and widen the spectrum of possibilities for presenting modal music** with the addition of makam maps (following the development of the first two chapters). The examples include: the syncing of alternative notational systems such as the Byzantine music notation of Parasimantiki, multicolored pitch contours for polyphonic modal compositions, audio/score/map-syncing of long rhythmic cycles compositions and implementation of comma values in makam maps.

Keywords:

Taksim manual transcription, free rhythm, modal music analysis, makam maps, digital humanities, audio-synced annotated score, modal music praxis and theory, layered annotations, visualizations, modal music education, taksim development

Introduction

Since this investigation begun, it has served me as a vehicle for further understanding and developing elements of Makam music; an effort to bridge aural educational practices with current formats of music education at conservatory BA and MA level programs. On my initial PhD proposal, the intoductory paragraph stated the following about the expected outcome of Makampedia:

a database of fully annotated, synchronized with audio/video transcriptions of celebrated Makam improvisations and performances, with the addition of analysed interviews and the insights of ethnographic data collection will offer insights on individual approaches. The accumulating data of the (perpetually growing) collection will enrich our insights on the characteristics of the Makam phenomenon and help investigate and juxtapose the music praxis to the existing theoretical framework of Makam music, which is often misleading. Subsequently, the database will be used both for theoretical and practice based development as well as for educational purposes, bridging the gap of inconsistent theoretical models, teaching and music practices.

Looking back to that moment, it is my assessment that the apple does not fall far from the tree, although the completed work has brough unexpected insights and developments I couldn't foresee at the moment of the proposal submission.

The one, notable difference between my approach back then and now is the expected educational function of Makampedia's database. My initial hypothesis was that a database of analyses, using annotations, real-time audio/score syncing and graphic representations, would form the basis of makam phenomena explanations for learners and researchers.

Functioning as a *multilayered digital instructor* that utilizes visual stimuli to enhance the auditory experience part of music education. After having conducted a series of transcription and analyses on taksim myself and after using the database media for teaching purposes at conservatories and during conferences, I now believe that principal function is different than what I initially aimed for. It can serve as an extra tool for explanations but more importantly as a source of inspiration, a starting point if you will, for promoting curiosity and helping people engage with the field. In my experience, the reactive media stimulation is no substitute for proactive interaction with the material via transcription and analysis and I hope that the media created will encourage Makam afficionados to spend the time and effort in analyzing themselves performances in the desired layers of analysis which will serve their own needs. It is my wish that the protocol for analysis, its various layers and visualizations presented in this work will be of use and value for other colleagues suffering from similar to mine musical and educational disquiet.

The outcome of this research is twofold, shared between text and videos. The first one is the written part, organized in five chapters, following the four (submitted for publication) articles that were developed throughout this research. A final chapter with practical examples for extended applications of the analyses in videos, generalizing the findings of Makampedia, has been added. The second part is the collection of videos, uploaded on makampedia.com as well as on the Makampedia youtube channel which forms the visualized, practical and educational outcome of this work.

The first chapter, Rhythm in Taksim (?) was the most important turnaround of this work. The initial intention when I started researching taksim was to investigate spatial phenomena of attracted pitches and their relation to melodic gravity and direction. However, the need to accurately measure, depict on score, and monitor pitch durations led to the investigation of

temporal phenomena in taksim and to the unexpected result of rhythmically and metrically rendering of *free rhythm* taksims. The chapter starts from the examination of certain temporal characteristics of music phrases in the classical form of Ottoman taksim. Taksim is discussed here in its non-metric form as an idiomatic, structured, modal *improvisation,* in the repertoire of classical Ottoman music and this study draws on recordings of the 20th- 21st century in order to introduce a temporal-based analytical approach. This musical form is hitherto taught, presented and analysed with a focus on melodic properties, the use of concepts such as *melodic development* and *melodic gravity* and it takes place without the presence of an underlying pulse; thus, considered to be *rhythm-less, non-rhythmic and meter-less.* Nonetheless, results from this study articulate a counter view to such conceptualizations by making systematic use of manual transcription and analysis of Taksim performances from masters of the field, combined with interviews and material collected through an ethnographic methodological orientation. The analysis unravelled patterns of temporal characteristics on Taksim phrases, which were investigated and juxtaposed to one another in an effort to get insights on their mechanics and function. Subsequently, the findings were generalised, modelled with the use of basic music theory and utilised in the transcription and analysis process of other Taksims and their score representation. This study aims to widen our perception of musical phrasing and melodic flow, to bridge the gap between non-rhythmic, rhythmic and metric terms in taksim performances and to provide additional tools for Makam (modal) comprehension, performance, improvisation development and music education. This work aspires to illuminate certain simplifications-mistranslations that resulted from the imposition of eurogenetic staff notation, the shift to conservatory education that followed the Meşk system, and to contribute to the discourse on the inconsistency of praxis and theory in the Makam research field.

The second chapter, Makam Synesthesia, deals with the extraction of pitch contours, graphic representations of makam analyses, real time audio score syncing and their utilization as a basis of presenting characteristics and intricacies of Makam performances. The chapter is arguing the need for such representations in education as well as its value in the emerging field of digital humanities. The outcome of this chapter, combined with the information found in the following one, is probably the most used and usable feature of Makampedia, today, judging by the engagement of the Makam community through social-media.

The third chapter presents the choices, development and final shape of the transcription and analysis protocol. This chapter could be useful for the reproducibility and scalability of this work but for other ones to follow as well, either independently developed or as additions to the Makampedia collection.

In the fourth chapter follows the presentation of an online performance of makam music, for the purposes of a research conference. In that performance, the buildup of the music in a dialogue with poetry reading, was based in the findings of previous chapters. The most important element of the discussion in that chapter is the use of *seyir* (melodic development) as the generator of tension and the direct translation of pitch contour curve to intensity and its application in taksim performances.

In the final, fifth chapter, there follows a display of practical applications, in the form of case studies, based on the elements developed in the previous chapters, generalizing the possibilities of Makampedia's outcomes.

Chapter 1

Rhythm in Taksim (?): Unveiling temporal characteristics in *free-rhythm* Taksim.

In time and with water, everything changes
Leonardo Da Vinci

1.1 Introduction

Makam is the word used for modal music genres of Mediterranean and middle eastern music cultures. The term encompasses both the melodic-based musical systems of those cultures and all the information that constitute the character of each mode (also called *the Makam*): the set of guidelines for melodic development, the hierarchy between its degrees, stylistic characteristics, stereotypical or idiosyncratic phrasing (Feldman 1996) and more elements that shape the identity and Ethos (Öztürk, 2018b) of each Makam. In the words of Öztürk (2018b) “Makam cannot be considered separately from the concepts of space and motion” and as Ederer (2011) argues “a Makam is in effect a heuristic device for creating (or analysing, or in some senses appreciating) the structure of a piece of classical Turkish music”. Each Makam has specific characteristics which outline its own distinct character, and though it cannot be unambiguously delineated, it is quite often described with the use of terms such *flavour, colour, feeling, emotion* or *soundscape* by musicians and aficionados of the genre. In the genre of Makam music, a rather crucial territory in the whole performance is t*aksim* (Turkish plural *taksimler*, in this document the plural will be presented as taksims), an improvisational performance

(Ederer, 2011) on an instrument (the term for its vocal equivalent is *gazel*)[1].

Taksim, in the context of Classical music of the Ottoman court (also mentioned as classical music of Istanbul, Turkish music of the Ottoman period or Turkish Classical Music) and the Mevlevi ceremonies, is mainly used either as a prologue, an epilogue of a composed piece or as a bridge between two compositions composed on the same or different Makams (Turkish plural *Makamlar*, in this document the plural will be presented as Makams)**.** Taksim is considered a non-metrical, flowing rhythm performance (Feldman, 1993) the rhythm of which develops without the underlying template of a meter or continuous organized pulsation (Holzapfel, 2013). An ephemeral performance genre, which it is not readily taught but must instead be intuitively learned, taksim is carried around in the heads of individuals and it is spontaneously recomposed in every performance (Stubbs, 1994). The word translates to *division* or *distribution* and the musical concept behind the term is that through a taksim one (or more people) can share (present) the structure of a specific Makam (K. Ergüner, personal communication, June 18, 2018). Taksim is functional and can be considered as a pre-structured improvisation since it is developed around an outlined melodic promenade, the *Seyir* (*motion/progression/walking*) *(*Öztürk, 2018b; Feldman, 1996; Stubbs, 1994) and uses a configuration of *Zemin - Miyan - Karar* (introduction or exposition, exploration or development, conclusion or ending or decision or to sit or to rest) (Öztürk, 2018b). The tradition of taksim education in

[1] Since it is not in the objectives of this work to enter the discourse of the problematic of Taksim nomenclature, I will use the word improvisation freely in this work as an English equivalent to Taksim. Although contentious, in my point of view the use of any other alternative term such as extemporaneous (Ederer, 2011), performance generated (Feldman, 1993), spontaneous musical performance (Limb & Braun, 2008), freely generated choices (Bengtsson et al., 2007) do not really solve the issue of nomenclature. Taksim seems to be the *Lernaean hydra* of Makam terminology, since tackling issues from one perspective often generates new ones on another. In my opinion, the most interesting investigation of the term improvisation and its boundaries has been discussed in works in the field of cognitive sciences (Goldman, 2016).

that context follows the model of master-pupil, known as the Meşk system (Öztürk, 2018b; Poulos 2011; Akkoç, 2008), where pupils submerge themselves in the learning process by duplicating, internalising and assimilating the idiom and its elements through a listen and repeat process. A similar teacher-pupil relationship can also be traced in classical north-Indian music (Sanyal & Widdess, 2004).

1.2 Educational, historical, political context of the theoretical framework and its inconsistency with praxis

As the educational process was based (until the beginning of the 20th century) on the traditional context of Meşk, the technical and stylistic elements of the music were passed on and assimilated by students in a slow, organic manner. That method reinforced students' memory and encouraged the embodiment of a large part of the repertoire in the specific style (*tarzı*) of that school (*ekol*) (Stubbs, 1995). All intricacies were passed on through a system of training which focused both on the art and its craftsmanship, and which generated perpetual chains of master-pupil relationships. As a result, musicians developed specific aesthetic criteria on the performance of compositions and taksims; not only with directions on the technicalities of the musical elements but with the application of metaphorical language as well, by means of metaphors, parables, anecdotes and analogies in order to create mental models for the intangible intricacies of the art. Furthermore, music was seen as part of a larger family of arts, such as poetry and calligraphy (K. Ergüner, personal communication, June 18, 2018) The above-mentioned elements combined, played an important role on the cultivation of a musician's identity and character in a specific style and provided a powerful toolbox. This process enabled musicians to build up capacity and enhanced their creativity in the field of performance of compositions and taksim.

1.3 Staff notation and Westernisation

The shift from Meşk system to the education based on staff notation (and its effect to music interpretation based on static intervals and representations[2]) had a huge impact on Makam music (Wright, 1990). And this was but one important changing factor of music education and performance. The diminishing of musical education from being a part of a multidimensional artistic one (Feldman, 1996), to that of the production of professional music performers, in conjunction with the change of context in which music was performed at - from *teke*, the sultan's court and Mevlevi hane to music halls and Gazinos (Stubbs, 1994) - played a significant role as well. Moreover, the political decisions to nationalize music genres after the dismantling of the Ottoman empire (Öztürk, 2015; Öztürk, 2018b, O'Connell, 2000; Feldman, 1990), brought radical changes both in the character of music and the establishment of music education in the Makam field. The new-born states heavily rested on music as part of their national agendas and while this fact played a part in the creation of identity, it had catastrophic effects in music. An example of that is the aftermath of the Cairo conference in 1932 (Atzakas, 2012; Poulos, 2015; Mavroidis, 1999). The straightforward projection of a eurogenetic (Srinivasamurthy et al., 2014; Bozkurt et al., 2014) theory music system on the Makam system and the radical simplifications that came along (Öztürk, 2018b; Wright, 1990), resulted in a compact yet problematic theoretical representation and didactic model of Makam music which was inherited to the academic institutions and has been in use ever since. As Öztürk states (2018b) "[i]t is also clear that the main priorities of 'the modernizers' were not to understand better the old theories. On the contrary, they gave more importance to modernizing the Makam theory without wasting time". As a result of an elaborate yet hasty project of

[2] For recent work on tuning systems of Turkish Classical Music using static intervals see also Akkoç, 2008; Akkoç et al, 2015; Bozkurt et al., 2014; Yarman, 2007; Yarman, 2008

‘modernization’, musical and stylistic elements important not only for the character of music but also for their role in various musical phenomena have been underestimated or not taken into account by such processes (Wright, 1990).

1.4 Transformation of ensembles and introduction of staff notation

The typical setup of ensembles performing Ottoman classical compositions until the beginning of the 20th century consisted of small groups of musicians, performing on instruments of distinct colour and functionality: a tanbur or/and oud and a kanun (plucked instruments of recognizable sound character and registers), a ney (in latter times of that era replaced often by a clarinet) and a yayli tanbur or kemençe (a blown and two bowed instruments, all of continuous sound but contrasting timbres) and a percussion alongside a singer (Stubbs, 1994). On the one hand, that formation could sufficiently perform all aspects of music and project a colourful ensemble sound and on the other hand it was flexible enough to perform with respect to the composition, yet allowing for colouring and interpreting heterophonically stylistic elements at will, within the boundaries of the style.

The imposition of large, conducted ensembles resembling symphonic orchestras and the performance of Makam compositions in unison (Öztürk, 2015), which gradually became the canon after the establishment of the republic, eliminated or minimised to extremity the role of elements of idiosyncrasy and idiomaticity (Öztürk, 2018b). As a consequence, the character of Makam music was violently transformed from heterophonic to homophonic; music freedom as well as elements of interpretation such as dynamics, ornamentation, articulation etc. were obliterated, therefore devaluing and compressing the art of the genre to that of static, often perceived or criticized as boring, *educated but soul-less* interpretations (Kallimopoulou, 2006). To put this in context, an analogy could be the

unison performance of a jazz piece by a conducted western classical symphonic orchestra reading a *Real Book*[3] score.

Additionally, the transcription and archiving of compositions with the use of staff notation by musicians trained in western music, was lacking insights on fundamental characteristics and their functionality in a melismatic genre[4]. Alongside that, inaccuracies or errors during the transcription process had an impact on the translation of the music and its registration on a staff score which has since served as the point of reference of the music.[5]

That static representation of staff notation has since then served as a rigid framework, a *holy bible* in educational institutions, resulting to its institutionalisation, and minimising the significance of plenty of expressive elements. The common practice of describing Makam as a scale compiled by a combination of n-chords to an octave (Öztürk, 2018a), following imposed models of traditional eurogenetic music theory, ousted from the music discussion a number of phrasing and melodic development elements and quantised elements of dynamic pitch movement to static, fixed intervals. The following example from the performance of an Uşşak Taksim performed by Şükrü Tunar (Video example 1.1).

Video example 1.1

[3] https://en.wikipedia.org/wiki/Real_Book

[4] Alternative systems used in the past by musicians of the field such as the neumatic notational systems of Hamparsum (Ederer, 2011; Yarman, 2008; Ayangil, 2008) and the Byzantine system of Parasimantiki (Skoulios, 2005), although static representations, seemed to be far more suitable for the description/depiction of Makam music.

[5] A few examples of those errors or simplifications are: a) the invention of Makam scales, homologous to European ones, not because of their musical properties but rather for their political significance (Wright, 1990), b) degrees that although are performed differently in different modes (such as pitches in the Acem-Eviç, the Kürdi-Segâh and Hicaz clusters) are noted in the same manner (Atzakas, 2012), c) the misinterpretation of long rhythmic cycles presented as 4 beat bars on the score. For an example on the last case see the difference between the original rhythm and its representation on a contemporary score here: https://bit.ly/3Au96Ld

Şükrü Tunar Dynamic Intervals on Uşşak Taksim

While on the score the 2nd degree is always depicted as a static interval 8/9ths of a whole tone over the tonic, the extracted melodic curve demonstrates a dynamic interval, covering a span of a larger cluster as an effect of the attraction force that the tonic is creating and which gradually pulls down the pitch of the 2nd degree.

1.5 Literature review: Transcription and analysis of Taksim, current practices and research

Although transcription of Makam compositions comes with challenges, the transcription of Taksim performances comes with one additional layer in the problematic; that of luck of bar or even pulse underlining the performance (Clayton, 1996). The transcription, registration and analysis of taksim has been traditionally conducted and presented with a focus on melodic development (Stubbs, 1994), neglecting possible rhythmical aspects (Aydemir, 2010) perhaps due to challenges registering them and under a prevalent consent that there is no underlying rhythmical presence (Fitch, 2011) and other temporal characteristics (or, perhaps, value in investigating those) in the music phrases that synthesize the taksim.

Exceptions for that approach in the literature are references to recurring, idiosyncratic or stereotypical phrases (Simms, 2017; Ederer, 2011; Feldman, 1993; Signell, 2008) either to the performer or to the Makam, respectively, elements which could imply rhythmical similarity (Stubbs, 1995). A common approach in the presentation of Taksim through scores is the use of whole notes and stem-less notes. Those indicate, respectively, pitches on which the cadence is concluded and notes that are considered passing ones or of lower level in the melodic hierarchy (Aydemir, 2010; Stubbs, 1995). Although this approach provides information about melodic movement and direction in terms of degrees, it

is nevertheless limited in its representation of the music, organizing music phrases and compressing music modes in spans of static n-chords (tri, tetra and pentachords) (Cholevas 2014). In addition, the absence of data on the relative duration of the performed degrees in the score results to an almost mystic narration of the character of music phrases (Simms, 2018) as it fails to convey any information of how those actually sound. More specifically, such representations offer insufficient information on how melodic gravity is created towards a specific pitch or tonal centre, what are the differences between phrases that express various nuances of completeness (from incomplete, half complete to complete), suggesting anticipation or conclusion, creating expectations, direction etc.

Simms introduced an improved model on his taksim transcriptions of Aka Gündüz Kutbay. He used note-values throughout the transcriptions, though he calls timbre and rhythmic control “intuitive and unteachable facets of the taksims…they are truly sufistic qualities” (Simms, 2018). He refers to the notation of the transcriptions as qualitative and relative and he occasionally denotes “noticeable tempo shifts in the transcriptions by simply indicating *faster* or *slower* than the previous phrase”. Although he calls the rhythmic pacing “magical and must remain hidden from any discursive analysis”, the paper is presenting certain aspects of Kutbay’s idiosyncratic motivic vocabulary, an observation which could imply that elements of phrasing are rhythmically recursive.

In the last decade, presentations without the use of staff notations have been introduced, utilising annotated videos of taksim performances (Ederer, 2011, DVD 1 Track 1; Sinis, 2007). This method offers the possibility of a real-time description of various music phenomena. The audio-visual material, synced with the annotated description of the taksim gives an actual impression and its function resembles the traditional system of Meşk, where a teacher would perform, describe and reflect along with the students on different elements of the taksim. So far, the use

of taksim audio-visual presentations has a focal point on melodic, intervallic and sometimes melismatic elements, providing no information on temporal elements of the performance.

Recent research from the fields of music analysis (Arnon, 2008) has opened the discussion on the subject of the impact of time related elements in shaping the character of *free-rhythm* Taksim. Arnon uses manual transcription and focuses on the role of pauses in between phrases and their function in taksim. Deploying an argument that the pauses act as punctuation marks in the artist's musical verbalisation this work is opening the discussion on the significance of temporal attributes of taksim performances.

On the field of computational analysis Holzapfel utilized signal processes in order to map pulsation patterns (2013), concluding that "a taksim cannot be based on a music meter" (2013). On another paper co-authored by Holzapfel (Srinivasamurthy et al., 2014), the discussion of automatic rhythm analysis is restrained to the field of composition excluding taksim performances due to the challenges present.

From another perspective, the work of Akkoç attempts a bridging of the gap between theory and praxis with the help of statistical analyses and the application of mathematical models on recordings of masters of the field. An approach shifting the theoretical significance of exact pitch tuning of various perdes (Akkoç, 2008) to that of pitch clusters (Cholevas, 2009) or, how the makam virtuoso Necdet Yaşar puts it (Feldman, 1996) on the "heavy traffic areas". An important step towards the investigation of pitch related elements of Makam analysis such as the seyir (Akkoç, 2015), without however opening the discussion on the implication of temporal characteristics.

The work of Lartillot and Ayari (2012) attempts an analysis based on the visualisation of temporal properties of elementary musical events, such as notes, with a very interesting graphic representation of the transcribed material. This approach could be a big step in the endeavour of makam hermeneutics.

Öztürk (2018a) sets the focus of makam analysis on the realm of melodic motion and highlights the melodic and pitch particularities of makam character. An approach, that when combined with temporal characteristics of taksim will constitute a strong basis for a deeper comprehension of modality in that context.

In the coterminous genre of Alap in North Indian classical music, the significance of rhythm and meter in parts of the Alap and the difficulties on transcribing those elements has been discussed (Sanyal & Widdess, 2004; Widdess, 1994). The publications discuss the general effect of the rhythmic as (basically linear) rhythmic intensification layer or concurrent process in the development of the Alap in Dhrupad (Sanyal & Widdess, 2004). On their book, they present insights on rhythmic elements of the Alap in the part that the rhythmic background has been established by a percussion instrument and presents the problematic of transcribing the slow part of Alap where “there is seldom any obvious pulse” (Widdess, 1994). An element that is quite similar in the case of taksim (in its classical solo form) where the whole improvisational part is conducted without the companionship of any pulse held by the same or any another instrument in the background. Although the work of Widdess and Sanyal is on a coterminous genre with that of Taksim that has its own characteristics and particularities, the methodology followed by involving performers in the process of analysis is quite similar to a part of the work presented here.

1.6 Methodology: Computer-aided ethnographically informed transcriptions

An eagerness to widen my perception and further develop the level of my taksim performances, motivated me to follow an approach that would combine research activity with musical practice. In my experience, transcription has been a powerful tool in offering insights on music phenomena that can be transferred to the instrument and vice versa. Having started practicing makam in the ‘90s, I worked my way by listening, transcribing, copying and applying technical and musical elements from ney, tanbur and kemençe performances to my daily practice. Every recording had become an *absent teacher*, giving me the possibility to speculate, reflect on and, on a good day, get insights on the value and role of various aspects of the performance. By scrutinizing my performances and interpretation of phrases, I was able over time to develop my taksim vocabulary both subconsciously or consciously. The experience of teaching at a conservatory level for the last decade and the great opportunity to perform with, and learn from, some of the great Makam masters of our time gave me the idea of combining transcriptions with ethnographic data. Having memories from discussions with great performers and teachers where they use metaphorical language to convey elusive elements of music performance, I decided to include interviews, discussions, lessons and participant observation ethnography, both at the beginning of the transcription process, in order to get a clear direction, as well as during the rest of the steps, as a parallel peer reviewing process of the findings. A process that was labeled as “Ethnographically informed transcriptions” by my colleague Philip Ciantar in one of our discussions (P. Ciantar, Personal communication, November 3, 2018).

1.6.1 Transcription and analysis process

Interviews and discussions with masters were initially conducted so as to define the body of improvisations to be used. After the conclusion of the analysis process the results were further discussed with the interviewees in an effort to cross-check and further validate the findings. The registration of Makam based improvisations comes with challenges; on the one hand the static character of eurogenetic notational systems is far from a convenient system to depict elements (and allow their prompt use by musicians) such as: melismatic melodic development, dynamic pitch, *free-rhythm* (Wright, 1990). On the other hand, staff notation is widely used in conservatories and other institutions of music education worldwide for registering music of various music genres. A novel model for transcription and analysis was proposed so as to enable synchronization of the audio, the transcribed score and its layers of annotations. With that protocol, other researchers would be able to contribute with their transcriptions and analyses to a single database. The aim was the creation of a framework, which would allow: a) re-usability of the material, b) organization of the findings into a database for investigations on a larger scale and examination of correlations between different layers of analysis (Cholevas & Abramovay, 2018) and c) easy access for students, performers and researchers. Transcriptions have been made on a comprehensive level for most of the users and have been combined with synchronized visualization of the melodic curve and its nuances, exported with the use of proper software such as Sonic Visualizer with pYin and Melodia (Cannam et al., 2006; Mauch & Dixon, 2014; Salamon & Gómez, 2012) or Praat (Boersma & Weenink, 2018). The following step is synchronization of the transcribed score with the audio and the exported melodic contour with the use of iAnalyse (Couprie, 2008). The third step is adding annotations on the desired layers. Finally, the fourth step of this process is exporting annotations on a database for comparative and large-scale analysis. An example of a transcription synced with the melodic contour is presented on the following link (Video examples1.2 and 1.2b).

Video example 1.2a

Kudsi Ergüner Uşşak Taksim Transcription Synced With Melodic Contour staff version

Video example 1.2b

Kudsi Ergüner Uşşak Taksim Transcription Synced With Melodic Contour (N-Gram Makam Map Version)

Projecting the melodic curve on the staff version was the initial step. That approach allowed the connection of melismatic movement to its corresponding place of the Makam scale, something useful especially for musicians that are introduced to Makam concepts. Although useful, the staff version is inaccurate since on a staff, the distances between tones and semitones are equal. The n-gram version was introduced later to allow the representation of melismatic elements on a more accurate measurement, respecting the theoretical description of the Makam intervals[6]. The distances of intervals on that 2nd version have been calculated according to the theoretical scheme of Ottoman Classical music, with 53 equal commas per octave.

1.6.2 Material selection for transcribing

As discussed earlier, the entanglement of various elements of westernization-modernization, the sociopolitical context and the idiomatic, melismatic character of taksim, resulted to conflicting theoretical approximations of praxis. The methodological approach to such a diverse music subject both in terms of time and space started as a combination of ethnographic and music-analytical methods for the purposes of this work.

[6] For a more detailed account of the rationale and theoretical elaboration of this approach you may refer to chapter 2

Those, combined in a form of a manageable case-study could be the first step, a special case that could suggest further investigation in an attempt to generalise arguments and make the shift to a general one. For that purpose, and given the direct access to a number or acclaimed Makam masters, the data collection started with interviews aiming on the selection of acclaimed Taksim performances that could serve as the starting point of the research. The UNESCO artist for peace and ney master, Kudsi Ergüner was selected for his deep knowledge of Makam music practices throughout its history, his rich private collection of unpublished recordings and documents on Makam music as well as his extremely diverse record of performing Makam music, ranging from spiritual and secular to contemporary music settings. The oud master, Ara Dinkjan was proposed by Sokratis Sinopoulos and was selected for his quite distinctive musical style, his unique musical background both as a folk and a classical Makam music performer and his international experience. Both artists are considered as two of the elite Makam music ambassadors of our era.

1.6.3 Elements of focusing in the transcription process

Music analysis of taksim performances was employed with an objective to decipher and obtain a deeper understanding of various elements of taksim performances. Those could then be encoded to mechanisms of taksim practices and adopted for personal development and educational activities at the domain of taksim performance. Given the fact that the list of elements under investigation is long and the necessity of a procedure allowing comparative analysis and possible modification of analysed transcriptions is of major importance, there was a concern about the choice of the transcription strategy. That had to be able to control the rate of loss of information, the “reverse musical decoherence” if you will, due to the transition from a spatial and temporal continuum to the quantised staff representation, and ensure that fundamental properties would be registered for further investigation. Another prerequisite was the

(re)usability of the transcribed and analysed material, since part of the work has educational implications and should be, in a latter point, accessible by students, tutors and researchers interested in the Makam field.

As discussed earlier, probably the most challenging aspect of accuracy when transcribing a taksim is the inclusion/incorporation of the temporal properties of each pitch, which consequently affects the balance between accessibility and accuracy of the score. For the needs of the current research, the outcome had to be transparent for musicians, avoiding complex representations such as those found, for instance, in compositional works of contemporary music.

Contemplating on the balance between accuracy and usability, a choice had to be made on how to register and depict music phrases on a score. An alternative approach on the visualisation of such elements has been developed in the contiguous field of North Indian Classical music, where Sargam notation was traditionally used. The work of Suvarnalata Rao (2014) and Wim Van der Meer (Rao & Meer, 2006) on monophonic performances offered the possibility of investigating and comprehending elements of temporal and spatial, melismatic micro-movement in a crystal-clear manner[7]. As the project progressed the idea emerged to combine the two representations in a complementary score that would use staff notation as a basic layer of pitch movement in time, offering as well the visual representation of the melody contour projected on a staff or a Makam map n-gram. Hence, the visualisation of micro elements of melodic movement could come to life. The analytical presentation of this approach is described on chapter 2.

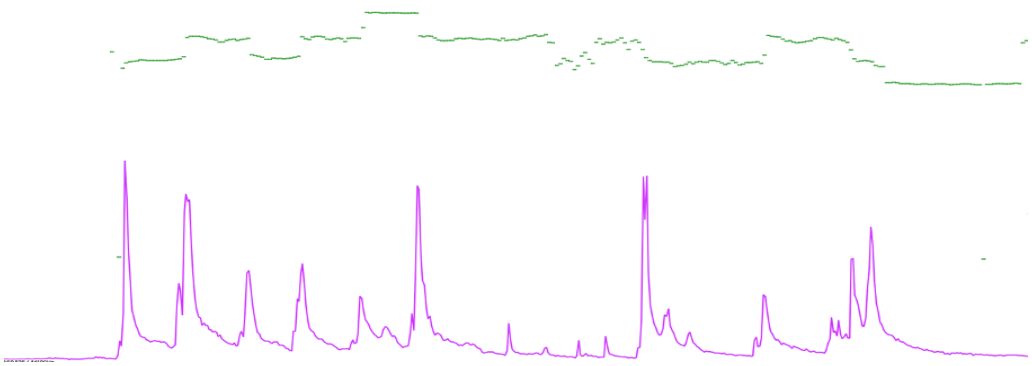
[7] The project was realized with the assistance of Praat software and presented beautifully on AUTRIM (Miramon-Bonhoure, 2014; Rao & Meer, 2013)

1.7 Early findings. From transcription accuracy to temporal characteristics: rhythmic syllabication, grammar and synthesis

The transcription process with the aid of onset detection function of the Aubio plugin and pYin in Sonic Visualiser led to measurements of the duration of every pitch transcribed as show in Figure 1.

Figure 1.1

Pitch Curve (green) and Onsets Detection Function (purple)



Extracted with Sonic Visualiser, Green colour – Notes Pitch (pYin), Purple Colour Notes onsets (Aubio). In this diagram the x axis corresponds to time and the y axis to Pitch (Hz) for the green curve and to intensity (dB) for the onsets (purple curve).

In the beginning of the process, every pitch would be measured in milliseconds and its corresponding rhythmical value was transformed in staff notation as seen in Table 1.1.

Table 1.1

Measurements from onsets layer of Figure 1.

The 2nd column corresponds to the time of the peak of each onset (note plucking) whereas the 3rd column is the measurement between two consecutive peaks (n+1)-n.

Notes	Sec	Length
si	1,748	0,192
do	1,94	0,202
si	2,142	0,177
do	2,319	0,186
re	2,505	0,188
do	2,693	0,212
si	2,905	0,08
do	2,985	0,121
si	3,106	0,107
si	3,213	0,087
do	3,3	0,128
si	3,428	0,072
la	3,5	0,071
si	3,571	0,237
do	3,808	0,202
si	4,01	0,152
la	4,162	

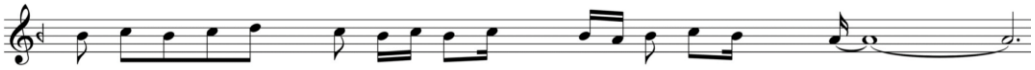
As we can see from Table 1 from the first five notes (that were used to define the bpm of the phrase) there are small fluctuations between the length of each note. These fluctuations are limited within a 10% of the length average. At the end of every musical phrase of the taksim a time mark in seconds was added on the score so as to index the phrase inside the total timeline of the taksim. With the completion of the first two transcriptions (Uşşak taksim by Ara Dinkjian and Rast taksim by Dede Suleyman Ergüner) and the writing of staff notation scores a pattern was recognised (Cholevas, 2017).

1.7.1 Rhythmic Syllabication

The first phrase, though having a *free-rhythm* character, contained a nucleus that appeared to be rhythmically consistent, or it was performed in such a way that could be noted as a melody played over a steady pulse. This was a Eureka moment! It allowed the definition of a metronome mark and the estimation in beats (bpm) of the rest of the phrase that seemed to have no reference to any pulse (those are in the vast majority the starting and ending points of the phrase). Additionally, the phrase could be presented on the score (for most of its part) with the use of values of three rates, that of 1, ½, 1/3 (which can be seen as dotted quarter, quarter and eighth note values)[8] as shown in Figure 1.2 and Audio example 1.1.

Figure 1.2

Opening Uşşak Taksim Ara Dinkjan



Audio example 1.1

Opening Uşşak Taksim Ara Dinkjan

The phrase now appeared as one having a rhythmical consequent core, surrounded by parts of no obvious rhythmical cohesion, or completely lacking rhythm. As the registration and analysis of the second phrase started, so were the challenges. This phrase seemed to move on an altered speed layer and the registration of its rhythmical shape (if present) on a score would require the use of tuplets (triplets, quadruplets,

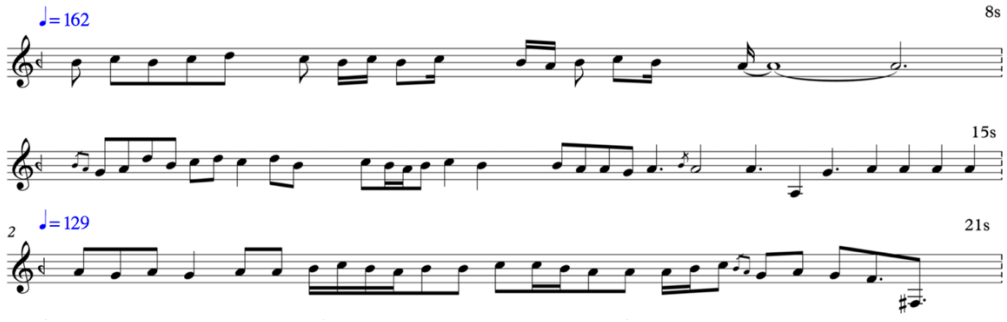
[8] Or 16ths, 8ths and dotted 8ths with a different metronome mark. Additionally, there is no distinction between couples of 8th notes and couples of dotted 8th notes with 16th notes. Those cases are treated as similar entities for the time being, as an analogous to the idea of swing performance of 8th notes in jazz music.

quintuplets etc.) in order to keep it on the same speed layer with the first one.

That approach instantly raised the level of complexity on the score and it would consequently reduce its ease of use, readability and functionality (tuplets of higher number beat subdivision are much more difficult to comprehend and perform and they are seldom present on scores of Ottoman classical music). By investigating the analogies of time values though, another observation led to the following argument: as was the case for the first phrase, the second one seemed to have a rhythmically cohesive nucleus as well. From that second core, a new metronome mark could be deduced for the specific phrase. Following the strategy applied on the first phrase, this metronome mark could be now used to measure and register on score both rhythmic and (seemingly) non-rhythmic parts of the second phrase. With the definition of a different metronome mark, the phrase looked on staff notation as comfortable as the first one as shown in Figure 1.3 and Video example 1.3.

Figure 1.3

First two Phrases Uşşak Taksim Ara Dinkjan



Video example 1.3

Ara Uşşak Two First Phrases

That process was followed throughout the transcription of the two taksim performances, a system that worked flawlessly for all the remaining

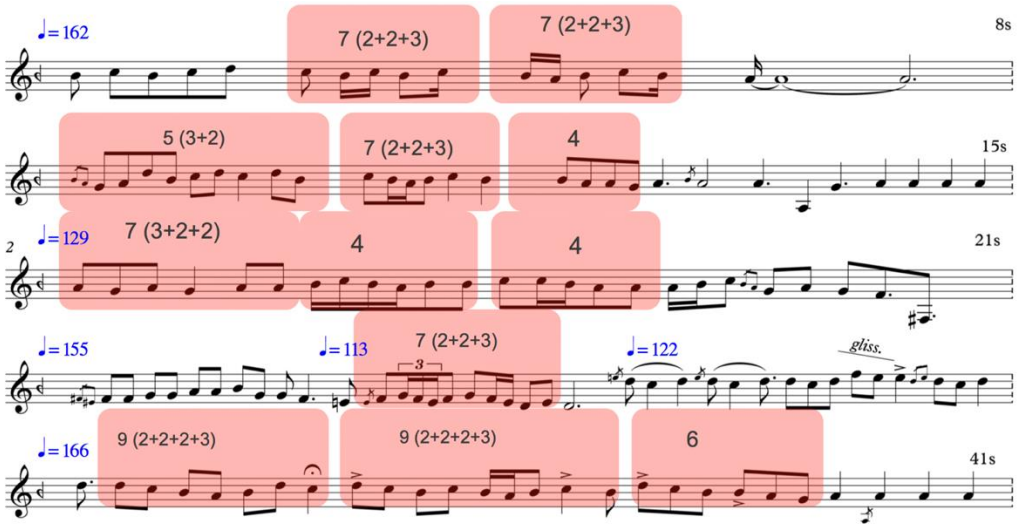
phrases. Not only were the music phrases possible to register with their temporal characteristics but, furthermore, the plethora of those phrases could be written by mainly utilising three rhythmic values and no tuplets in most of the cases (although triplets appear in performances occasionally). The outcome is easily comprehendible which makes the reading of the score and the following of taksim phrases easily accessible.

1.7.2 (Odd) rhythm groupings - Rhythmic Grammar

Having the full score of the taksim the next step of the music analysis could be then conducted. The phrase-by-phrase comparison and analysis unveiled yet another temporal element. These 1, ½ and 1/3 groupings of rhythmic syllables were not just arranged in random combinations but a number of them were rather grouped in small sequences of actual odd rhythm structures. Under this scope, the element of metricity seems to function as a higher-level ordering of temporal organisation of the phrases. If the first step of rhythmic decoding can be seen as syllabication, this one would be the grammar (Figure 1.4, Video example 1.4).

Figure 1.4

(Odd) Rhythm Groupings



Video example 1.4

Ara Dinkjan Uşşak 1st Page Groupings

1.7.3 Elements of disguise, from rhythmic grammar to synthesis

If the nucleus of each phrase is not just stable over a pulse but can be codified as a sequence of (odd) rhythm blocks, then why is it that we perceive those taksim performances as *rhythm-less, free-rhythm, meter-less*? What is it that cloaks their temporal characteristics? After analysing the transcription of Ara Dinkjan's Uşşak taksim a fresh set of insights surfaced.

a. Lack of repetition of similar odd structures

Although in many parts of the Taksim, phrases sound as if they are organised in consecutive blocks of odd rhythms, there is hardly any place where a specific odd meter will be repeated for more than two times. The following table (Table 1.2) shows that in the performance of motifs or phrases that can be written as metric blocks at Ara Dinkjan's Uşşak

taksim. One exception is the repetition of short, three-beats motifs (27-35) leading to the intensification of the phrase (see later in this chapter).

Table 1.2

Exported Annotations Groupings Layer From ianalyse

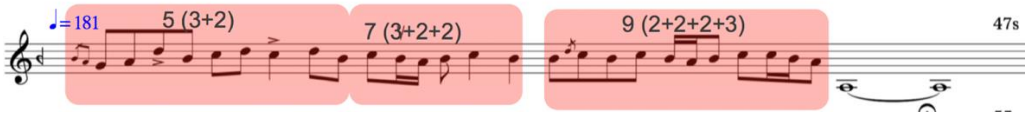
Ara Dinkjan Ussak Metric Groupings					
Bars	start (sec)	end (sec)	Bar	Groupings	D+E
1	2.73	6.3	7 beats	2+2+3	7 (2+2+3)
2	3.365.011	6.3	7 beats	2+2+3	7 (2+2+3)
3	7.4	15	5 beats	3+2	5 (3+2)
4	9.75	15	7 beats	2+2+3	7 (2+2+3)
5	10.5	15	4 beats		4
6	15.39	21	7 beats	2+2+3	7 (3+2+2)
7	17	21	3 beats		
8	18	21	5 beats	3+2	5 (3+2)
9	23.7	27	7 beats	2+2+3	7 (2+2+3)
10	32.11	39.2	9 beats	2+2+2+3	9 (2+2+2+3)
11	34	39.2	9 beats	2+2+2+3	9 (2+2+2+3)
12	36	39.2	6 beats		6
13	42.5	47.6	9 beats	2+2+2+3	9 (2+2+2+3)
14	40.9	47.1	7 beats	2+2+2+3	7 (3+2+2)
15	54.4	58.5	7 beats	2+2+2+3	7 (3+2+2)
16	64.2	71.4	beats	2+2+2+3	3
17	64.8	71.4	9 beats	2+2+2+3	3
18	65.4	71.4	9 beats	2+2+2+3	3
19	66	71.4	3 beats		3
20	71.3	79.6	10 beats	3+2+2+3	10 (3+2+2+3)
21	69.6	71.4	7 beats	2+2+3	7/8 (2+2+3)
22	68.1	71.4	11 beats	4+3+4	11 (4+3+4)
23	66.5	71.4	9 beats	2+3+2+2	9 (2+3+2+2)
24	73.6	79.6	4 beats		4
25	75.8	79.6	3 beats		3
26	39.4	47.1	5 beats	3+2	5 (3+2)
27	91.4	98.8	3 beats		3
28	919.817	98.8	3 beats		3
29	92.6	98.8	3 beats		3
30	93.2	98.8	3 beats		3
31	93.9	98.8	3 beats		3
32	94.6	98.8	3 beats		3
33	95.3	98.8	3 beats		3
34	95.9	98.8	3 beats		3
35	96.5	98.8	3 beats		3
36	103.5	108.8	5 beats	3+2	5 (3+2)
37	104.5	108.8	4 beats		4
38	106.9	108.8	5 beats		
39	109	114	7 beats	4+3	7 (4+3)
40	115	117.6	10 beats	3+3+2+2	10 (3+3+2+2)
41	121.3	127.3	4 beats		4
42	127.6	131.6	6 beats		6/8 feel
43	132	137.14	7 beats	3+2+2	7 (3+2+2)
44	144.7	150.1	9 beats	2+2+2+3	9 (2+2+2+3)
45	146.9	150.1	9 beats	2+3+2+2	9(2+3+2+2)

b. Breaking metric symmetry and periodicity (by intermingling varied rhythmic blocks with long notes of unequal values)

Rhythmic blocks of different time signatures are intermingled and surrounded by long notes of unequal values, usually in the beginning or/and the end of each phrase. Those blocks can be perceived as (mainly odd) rhythm structures compiled by combinations of short and long pulses, 2 and 3 beat groupings respectively as shown in the following figure (Figure 1.5).

Figure 1.5

Ara Dinkjan Uşşak Taksim Variations of Groupings

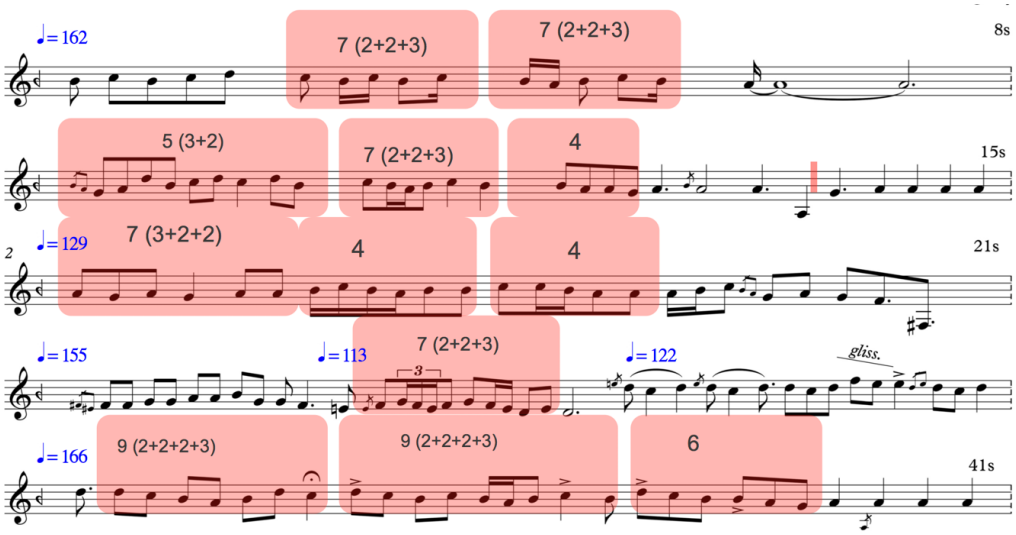


c. Tempo shifts

As noted on the score, every phrase has its own metronome mark, the tempo shifts are in some cases sudden whereas other times they seem to follow a more gradual evolution. In a few cases there were tempo shifts inside the same phrase as shown in the following examples (Figure 1.6 and Video example 5), whose possible impact of in the shaping of a style is discussed later.

Figure 1.6

Ara Dinkjan Uşşak Taksim Tempo Shifts



Video example 1.5

Tempo shifts

d. Prosody

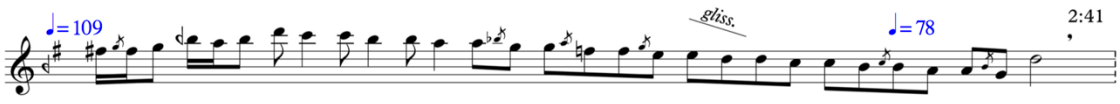
Inside every phrase, elements related to prosody (Holzapfel 2013) were identified.

i. Intensification-relaxation by means of tempo change with the use of accelerando-ritardando.

The use of accelerando and ritardando is frequent. It often signals the intensification of the phrase from a slower to a high speed and vice versa. In the following example the melody is relaxed with the speed falling to present a half cadence phrase on the 4th degree before concluding on the tonic with another phrase (Figure 1.7 and Video example 6).

Figure 1.7

Relaxation – Tempo Change



Video example 1.6

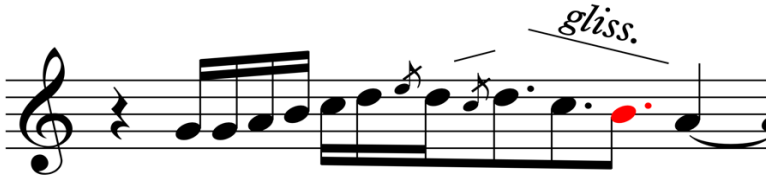
Relaxation – Tempo Change

ii. Intensification-relaxation by means of speed layer changes, shifting from dotted quarter notes to 8th notes and vice versa.

This refers to an element that has been discussed in the field of Indian music (Sanyal & Widdess, 2004) and was described by Ara as "getting into and out of the lane" (Ara Dinkjan, personal communication, March 17, 2016). In the following example (Figure 1.8, Audio example 2) from Şükrü Tunar's Uşşak taksim the phrase is played on the intense high-speed layer, followed by a part on the low-speed layer that prolongs the phrase and gives a breath (1->3) and shifts back to the high-speed layer, giving a feeling that the intensity is raised once again (3->1).

Figure 1.8

Speed Layer Changing in Şükrü Tunar's Uşşak Taksim



Audio example 1.2

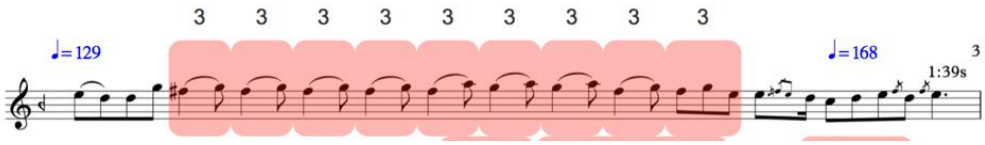
Şükrü Tunar Speed Layers

iii. Combination of i) and ii) elements are also present

The following example (Figure 1.9, Video example 7) shows intensification by means of speed layers (from long to short pulses, 3->2) combined with accelerando

Figure 1.9

Repetition of 3 Beats Groupings and Accelerando as a mean of Intensification



Video example 1.7

Ara Dinkjan Uşşak Groupings of 3 Beats

Perhaps the combination of all abovementioned elements in phrases of rather short length functions as a disguise over temporal characteristics, thus challenging our ability to recognize any repetitive patterns. In a similar manner to that of verbal communication every phrase has its own temporal characteristics. In a discussion with K. Ergüner (personal communication, February 27, 2018) he stated that as with speech which has a certain dynamic, in Taksim (which he likens to an abstract speech without words) we use punctuation and we keep the metricity of the poetry on which the taksim is built around. He states that we rarely use multiple and sudden tempo shifts inside one sentence but on the other hand keeping an exact metronomic speed throughout a full speech becomes monotonous and cannot communicate any ideas.

1.7.4 Rhythmic intonation - accentuation of the phrase

Another challenging element to identify and register on the transcription of Taksim performances is that of rhythmic intonation (Herasymenko, 2016,). Although transcriptions made with the use of SV give us insights on phrasing by correlating pitch intensities and lengths, there are heated debates about the formation of the phrase and how the subdivisions of groupings are perceived. During our group sessions with students, this element generated strong arguments between the participants who were

perceiving phrases in different ways[9]. The different approaches emerged not only because of varying depths in analytical procedures followed but due to the different music backgrounds of the researchers and their perception of phrase construction as well. This could be related to what Justin London refers to as *metrically malleable* (London 2012, 12), *imposition of a meter even in the absence of any salience surface articulation* (2012, 13-15), *the differentiation of expectation that gives rise to different degrees of metric accentuation, the subjective sense of a pattern of strong versus weak beats* (2012, 16) and that *even though temporal relations from 100 ms to 5 to 6 seconds are "accessible to the senses," we do not perform or perceive all durations and durational patterns within this range in the same way* (2012, 33). The function, place and relevance of the taksim to certain compositions, the cross-reference of the phrase with other phrases of the artist, bibliographic data on the stylistic approaches, onsets (intensity) analysis with sonic visualiser as well as the interviews with masters on the subject have been helping us contextualise and finalise the score representation of taksim phrases. During our email correspondence with Ara Dinkjan (personal communication, March 17, 2016), this notion was presented in a tactile manner. Even though the question and Ara's answer was on the discourse about melodic gravity of the phrase and the focus was on pitch-related phenomena, his example seemed to be a great one for the rhythmic organisation and one's perception and interpretation.

"Another very useful lesson I give in phrasing is the following. Here is a six-word sentence:

I am going to the park.

We think we know what that means. However, by emphasizing different words in that sentence, it completely changes the meaning:

***I** am going to the park.*

[9] A part of a phrase that was coded as a 7/8 beats one, was perceived as a 2+2+3 from certain participants while it was perceived as 2+3+2 by others.

*I **AM** going to the park.*

*I am **GOING** to the park.*

*I am going **TO** the park.*

*I am going to **THE** park.*

*I am going to the **PARK”**.*

A well-known example of a rhythm that is often perceived and performed in different manners is that of Karsilamas (*karşılama*), a folk dance found in areas of Balkans, Greece and Turkey. Although the rhythm is most commonly written as a combination of groupings 2+2+2+3 it often sounds as a 2+2+3+2 combination. One composition that demonstrates successfully this phenomenon is that of İnce Giyerim İnce which is traditionally notated as a 2+2+2+3 (karsilamas) while often phrased as 2+2+3+2 (both on percussion and from instruments performing the melody) as shown in the following examples (Figure 1.10a, Figure 1.10b).

Figure 1.10a

İnce Giyerim İnce on a 2+2+2+3 Variation

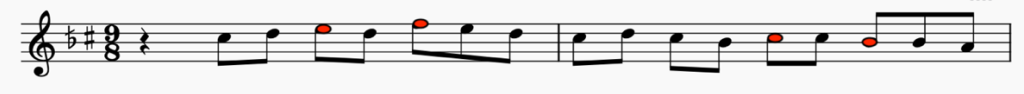
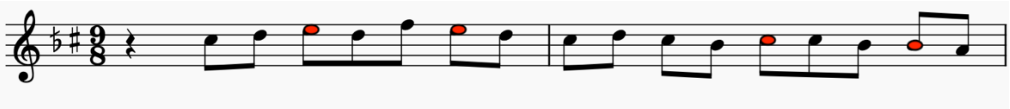


Figure 10b

İnce Giyerim İnce on a 2+2+3+2 Variation



Since I first performed this composition in the mid 90s and until today, I find myself in the middle of debates on whether this is composed and should be performed as a 2+2+2+3 or 2+2+3+2 9-beats structure. In my point of view not only both are possible but, furthermore, the interplay between them breaks the feeling of rhythmic stability and has a playful result. My experience is that its performance is related to the geographical,

ethnic background of the performer as well as the context of the performance.

1.8 The impact of temporal characteristics to taksim styles and idioms. Quantifying style?

The treatment of rhythm in taksim phrases and its impact on the style of a specific performer or a specific school is yet to be discussed. Although analyses of uncorrelated improvisations have shed some light on the personal preferences or patterns in improvisations of masters, we are still on the embryonic state of the investigation. The construction of a large database which could allow us to shed light in such characteristics, their correlations and clarify the possible effect of rhythmic patterns to the style or their emergence from the style has just started. Nevertheless, it is interesting to reflect on certain elements of those taksims and contemplate the role of other parameters (such as performers' background, learning tradition, context of the performance, etc.) to the temporal characteristics of constructed phrases. For instance, the analysis of improvisations of Ara Dinkjan and Dede Suleyman Ergüner revealed different patterns. While the first one often uses speed layer changes and organizes phrases by grouping them into odd rhythms structures as shown in the following video (Video example 1.8),

Video example 1.8

iAnalyse video of Ara Dinkjan Taksim with Annotations

the second one is staying in one layer for the largest part of the improvisation, building phrases that can be coded with the use of the 1x,2x,3x, values but has an unambiguous rhythmic intonation throughout the taksim (metronome marks on phrases) (Video example 1.9).

Video example 1.9

ianalyse Video of Dede Suleyman Ergüner Rast Taksim

The phrasing characteristics in Taksim performances of Dede Suleyman Ergüner (stable rhythm, with no speed layer change) are very much related to the construction of phrases in Saz Semaisi, Peşrev and longer compositional forms of Classical Ottoman music. That seems a logical consequence of the fact that classical repertoire was the area of his specialization. The phrasing habits of Ara Dinkjan are very much related to the shorter phrasing of traditional songs and folk dances, notably present in the singing style of his father, whom he used to accompany as a young musician. Tunar often insists on performing reoccurring rhythmical patterns (Audio example 1.3)

Audio example 1.3

Uşşak Taksim Şükrü Duyek

with a reference to dancing motifs, a quite idiosyncratic element much related to the context of his clarinet outdoor performances in Gazinos, outdoor performances and the accompaniment of popular music singers. Based on the schema of temporal coding mentioned above and having just started focusing on transcribing recording from Cemil Bey, it doesn't seem unreasonable to conjecture that one of the reasons he is considered such an ingenious taksim performer was his ability of radical tempo shifts within a phrase, an element that most of the musicians in the field find particularly challenging. Assuming the previous arguments are valid, the discussion could lead to the parametrisation and quantification of notions that are hitherto discussed qualitatively, such as idiomaticity and idiosyncraticity.

1.9 Synopsis - Generalization

During the process of transcribing improvisations of Ara Dinkjan, Kudsi Ergüner, Suleyman Ergüner, Ulvi Ergüner and Şükrü Tunar the following observations have emerged:

a) Although the general feeling of the total improvisation was that of time-less or free rhythm, there was a core on the first phrase of the improvisation that could be identified rhythmically. That rhythmical core allowed generating a metronome mark for that phrase which was used to define the length of its non-rhythmical values as well. Consequently, the scheme of that phrase could be seen as:

***Long non-metric values -> rhythmical cohesive part (definition of the metronome mark) -> long non-metric values*.**
The same was observed on the following phrases of the Taksim performances. Each phrase contained one or more rhythmical cores from which a metronome mark could be defined. With the use of those marks both the rhythmical and the non-rhythmical parts could be measured and written on the score.

b) Using observation (a) the registration of the music on the score and reading/recognizing phrases became quite comprehensive as in an overwhelming amount of the phrases
There are (mainly) three values needed to register the largest part of the music performed: 8^{ts}, 4^{er} and dotted 4^{er} values (or 16^{ths}, 8^{ths} and dotted 8^{ths}).
This fact simplifies the whole process as tuplets are rarely needed.

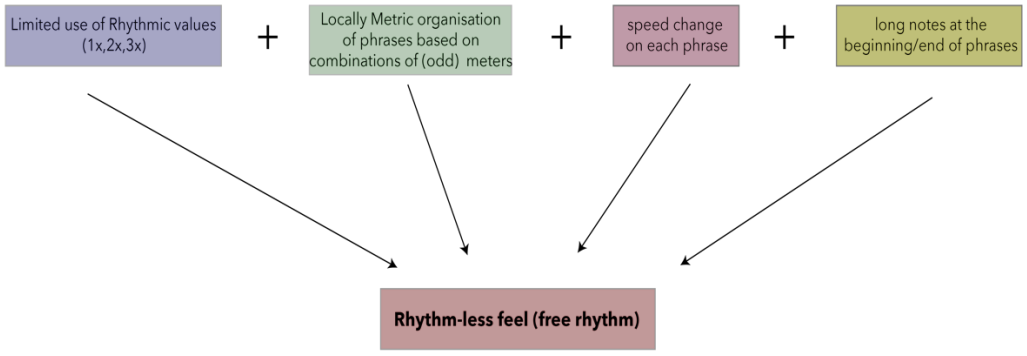
c) The combination of (a) and (b) with the melodic analysis of the score led to another finding: a lot of the phrases are not just possible to register rhythmically but moreover, metrically. It seems that

the organization of the phrases can be projected on actual rhythmical schemes of meters such as 3, 4, 5, 6, 7, 8, 9, 10 and 11 beats
which are vastly used in compositions of Ottoman music and coterminous genres.

d) The meters used in phrases, vary and do not appear consecutively (more than twice) and their combination with longer notes in the beginning and the end of a phrase leads to a *free-rhythm* feeling according to the following schema (Figure 1.11):

Limited use of Rhythmical values (1x,2x,3x) +
Locally Metric organisation of phrases based on combined meters +
Change of tempo for each phrase +
long notes at the beginning/end of phrases +
= Rhythm-less feel (free rhythm)

Figure 1.11
Rhythm-less feel as a combination of temporal elements



This temporal modelling of taksims extracted from the taksim performance of Ara Dinkjan was used to transcribe and analyse improvisations of other masters of the field such as: Kudsi Ergüner, Ulvi Ergüner, Dede Suleyman Ergüner and Şükrü Tunar. The results were surprisingly consistent. All

those improvisations could be transcribed and analysed with the use of the same model although they vary in instrument, period, Makam mode and context.

1.10 Limitations of the temporal rendering of taksim performances

Although the first steps of this endeavor have been encouraging ones, in any attempt of investigating a variety of elements that result to specific practices, it seems inevitable that the background of the researcher as well as other limitations will influence the outcome (Widdess, 1994). Thus, my background on western music and Makam music studies, studies in natural sciences and my work at a conservatory was reflected on the involvement of staff notation and the axiom that the transcription and analysis process is not only valid but also useful for a handful of reasons. One important restricting factor was the constraint of time, which led to the inclusion of a limited number of experts and taksims used. Based on that, the current work can only serve as a starting point of what could well turn into an odyssey. Another limitation was the use of recordings which is very often problematic for the purposes of this work. Not only are many recordings of masters of low quality, especially from the beginning of the 20th century (such as the recordings of the makam master Cemil Bey) but furthermore, random pitch shifting and tempo shifting (due to mechanical defects of recorders of that era) makes them difficult to handle for melodic extraction software. Alongside that, the limitations of the existing software on the representation of melodic contours of plucked instruments (an element that becomes of importance on the following chapter) resulted to the selection of taksims played on instruments of continuous sound (with the exception of Ara Dinkjan's taksims on oud). Furthermore, there is a number of parameters that should be added to the analysis in the future such as motivic analysis that takes into account the taksim structure as a whole, possible correlations and balance of spatial and temporal elements (such as the correlation of speed to ornamentation and articulation) as

well as various contexts of performances, musical and cultural background, historical trends etc.

1.11 Arguments for the temporal characteristics of *free-rhythm* taksim performances

The temporal organisation of phrases in Taksim performances has been seldom discussed and seems to go unnoticed for good reasons. According to this work, the periodic activity of even a single phrase seems to be far from a trivial repetition of structures. The rhythmic ambiguity is not merely a consequence but rather a systemic condition, a desired and maybe pursued objective in the context of taksim performances. There is, nevertheless, a decisive factor of cardinal importance for the success of the taksim phrases during live performances. That is the response of the audience, their engagement and *verdict* which I like to call the "Mashallah effect"[10].

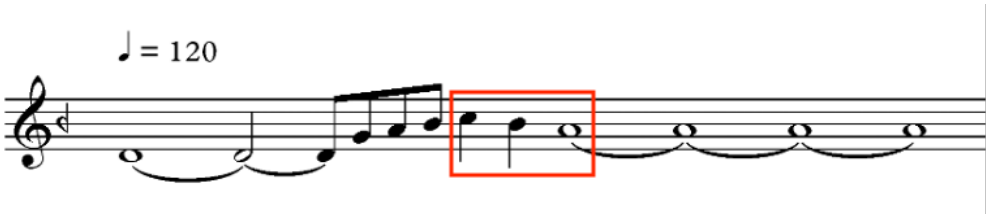
One example of how important the role of the temporal side of taksim is, follows here. The Uşşak taksim of Ulvi Ergüner was transcribed on the 7th of March 2016. Reviewing it a few days after, I noticed that there was something peculiar on the score. The opening phrase of the taksim seemed to have no direction, it didn't seem to be able to create melodic gravity the way it was written. In Uşşak Makam, the degree that generates most gravity is that of Dügâh (2nd degree of the system, 1st degree of the mode, La or A on the score). The equal distribution of time between

[10] Having followed a number of Makam based performances and performing for audiences next to great masters of the field I many times encountered emotional responses from audiences and colleagues. Especially in the area of middle east and Turkey, that reaction is often expressed with a "Mashallah" and a feeling of euphoria when a phrase is perceived as successful. Not only because of its melodic characteristics but for the right momentum it carries and the manner with which it is delivered, fulfilling the expectations (or leaving those unfulfilled), elements that are strongly connected with temporal characteristics. Apparently, to arrive at the destination is not only a matter of where (spatial, melodic characteristics) but how and when (temporal characteristics) as well. And as the audience is such settings is oftentimes (consciously or unconsciously) educated in the field of Makam, it is quite familiar with its characteristics and has certain expectations from the created soundscape.

Çârgâh and Segâh before the conclusion (Do – Si quarters on the score before the conclusion on La) can't generate that movement and subsequently there is no feeling of gravity towards Dügâh as shown in the following figure (Figure 1.12).

Figure 1.12

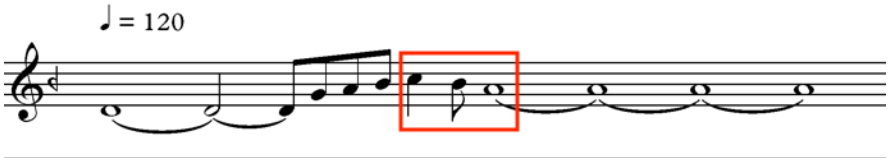
First Registration of Ulvi Ergüner's Uşşak Taksim Opening



Just by looking at the score I was betting against the fidelity of my transcription. I thought that Segâh must have had a shorter value and according to what was observed in the taksims transcribed until that point, I would argue that the phrase was played in the following manner (Figure 1.13):

Figure 1.13

Correct Registration of Ulvi Ergüner's Uşşak Taksim Opening



The shorter values (half) of the notes before Çârgâh and the one of the Segâh after it, in comparison to that of Çârgâh, were now creating a movement towards Dügâh which seemed not only consistent with the playing of Ulvi Ergüner, whose phrases are invariably directional, but with the need to create gravity in general towards the long value of the first degree in such an opening phrase (Audio example 1.4).

Audio example 1.4

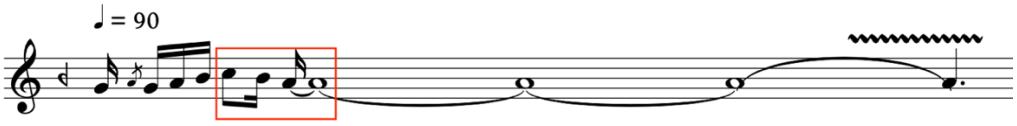
Ulvi Ergüner Uşşak Taksim 1st Phrase

Checking back the recording I was happy to see that this was exactly the case! I decided to have a small testing session so I took the phrase written in the first form and presented it to musicians and students of the field. The kemençe master Sokratis Sinopoulos spotted it directly. He played from the score and after overruling that as a possibility, I asked him to change the duration of only one note of his choice in order to make the phrase functional (S. Sinopoulos, personal communication, September 14, 2016). He immediately played Segâh shorter and everything fell into place. In my discussions with the students at the conservatory, the same process took place although in this case it lasted longer. On my question whether the phrase sounded complete, people would react in a positive manner. Asking them to play it and change one note so as to make it more efficient, though, consistently changed the results. The shortening of the duration of Segâh so as to restore the direction of the phrase was the choice for them as well.

To strengthen the argument, it is worth mentioning that the same exact phrase, with the exact temporal characteristics is used by Şükrü Tunar on the opening on his Uşşak Taksim on clarinet (Figure 1.14)

Figure 1.14

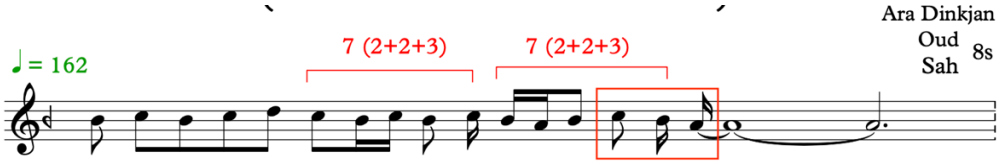
Şükrü Tunar Uşşak taksim opening



and, checking back the transcribed material, the same conclusion of the phrase was as well spotted on the introductory phrase in the Uşşak taksim performance of Ara Dinkjan (Figure 1.15).

Figure 1.15

Ara Dinkjan Uşşak taksim opening



Looking back to that event, my argument is that not only the involvement of temporal characteristics is helpful for the understanding and comprehension of phrases but there is additionally value for predicting or detecting mistranslations and mistakes during the process of transcribing. The hierarchy be means of metric accents (London 2001, 12-13) and its visual representation can function as an auxiliary tool in the process of assessing the validity of phrases in a musical text.

Finally, when I decided to transcribe that Uşşak taksim of Şükrü Tunar that was proposed by Ara Dinkjan, I was stunned by a comment Ara made, something that I recalled quite some time after thinking and writing on the temporal characteristics in taksim. In our email correspondence A. Dinkjan wrote (A.Dinkjan, personal communication, March 7, 2016):

…the second is Şükrü Tunar's famous Uşşak Taksim. I remember playing with the great Epirus clarinet player Petro-Loukas Halkias here in New York in 1985, and he (Şükrü) played this taksim ***note-for-note****, certainly (I think) an unusual thing to do. Of course, we are so moved by Şükrü's gorgeous sound, perfect intonation, great technique, and most of all, his feeling*.

Except for the surprising observation that the taksim (an improvisation) was performed exactly, note-by-note as in a previous recording, the transcription and analysis of Şükrü's Taksim, showed that he is probably the most *rhythmically persistent taksim player* among the ones I analysed. His extensive use of motifs and the building up of phrases, as though he plays over a steady rhythmic pattern of 4 beats, is noticeable in the audio example 1.3 presented earlier for different purposes.

Audio example 1.3

Uşşak Taksim Şükrü Duyek

The idea that one can repeat a taksim performance in exactitude is an additional strong indication of the importance of temporal elements in taksim. It cannot just be the repetition of the same pitches in the two improvisations that led Ara to perceive as identical but also their indistinguishable arrangement in terms of temporal progression, “the congruence of temporal understanding”, as London comments (London 2006).

1.14 Conclusion

By utilizing manual transcription and analysis of celebrated taksim performances, it has been possible to observe and identify rhythmical and metric structures in their musical phrases. Using those rhythmical cores, it became possible to portray all phrases with rhythmical values on a genre that has until today been considered *rhythm-less*. On a higher level of temporal hierarchy, phrases can be depicted with the use of existing (odd) rhythm structures and the research draws parallels between elements of language such as orthography, grammar and syntax with their rhythmic analogies in phrasing. Although there are differences in the personal styles of the performers, the same model was used successfully to register taksim performances of others. The following stages of the same study have been designed in order to illustrate those differences as an aftereffect of their idiosyncraticity. Moreover, the method will undoubtedly require calibration as more taksim performances of other masters will be added to the analysis and more layers of analysis as well as possible correlations between those layers will presumably become of essence. Finally, the temporal rendering of taksim allows a comfortable and detailed transcription of taksim with the use of rhythmic values. That result to comprehendible pentagram transcriptions for the further study of taksims.

If this chapter can be considered the time-based or temporal part of the transcription and analysis, the next one deals with pitch or spatial elements. Utilizing the findings of this chapter, the second one focuses on pitch and style, in the microtonal character of makam music. The output of this chapter with be combined with the addition of animated graphic representation of melodic contours.

Chapter 2

Visualizing Synaesthesia? Digital layered score and the cultural-educational qualities of makam

Visualization gives you answers to questions you didn't know you had

Ben Schneiderman

2.1 Introduction

This chapter adopts the outcome of chapter one and seeks the value of educationally utilizing ethnographically informed digital transcriptions of taksim performances. More specifically, it focuses on the necessity of developing a dynamic music score that places emphasis on the idiosyncrasies of Makam performances and their graphic visualizations both as a means of deeper learning engagement as well as a historically appropriate representational vehicle. In combining a critique of transcriptions that heavily rely on the restrictions of the pentagram, and inscribed in the emerging experimental orientation of digital humanities, the chapter seeks to unravel the technical and practical properties of visually-aided transcription-analysis and discuss the pedagogical and epistemological repercussions of semantic experimentation. To that end, the involvement of creative, instructional and performative properties of the score are discussed in the context of synesthesia, an approach that does not prioritize sight (based on static representations) over other corporeal functions and supports a holistic viewpoint of understanding and reading makam music, with respect to its cultural and historical connotations.

2.2 Introducing the problematic

The contemporary transcription and teaching of Makam music stumbles in a series of representational and epistemic obstacles that to a large extent alter or obscure the principal characteristics of the genre. In contrast to other semantic traditions, such as the Byzantine parasimantiki, which uses a set of symbols (neumas) that transcribe analytically the advisable way for performing (Spyridis & Politis, 1990; Paris et al., 2017) and place their emphasis in melismatic movement, the proposed score uses the basic graphic properties of staff notation and generates an annotated audio-synced score, which allows for a holistic appreciation of taksim. As it will be argued, this score manages to render melismatic movement, temporal gravitation and other elements of idiosyncrasy, such as phrasing habits, concurrently legible and accurately represented, both in their musical and cultural-historical sense. Additionally, the possibility of real time score-audio syncing and layered annotations allow for explanations in different areas of technical stylistic and expressive parameters as well as different (and often contrasting) descriptions or analyses on a given parameter. In dealing with a predominantly traditional style, which has historically rested on oral transmission, developing a score that incorporates the flexible and dynamic characteristics of this tradition may be construed as a gesture towards the sustainability of a style that is speedily threatened by historical oblivion. This has immense repercussions in teaching, since the teacher may be absent or even completely inexistent, hence all the elements required for analysing and performing music are incorporated in the visually composite score.

Moving away from software-driven approaches that promulgate an automated and statistical description of the music, the proposed approach defends the elegance of a simply written, manually transcribed score, supplemented by an automatically extracted melodic contour and annotated with descriptions found in metaphorical language. The chapter contends that style cannot be considered as invariable to its

representation and, in order for a consistent rendering of stylistic qualities in a score format, there is a notable necessity for the semantic encouragement of a grounded musical memory (K. Ergüner, personal communication, June 18, 2018) in the part of practitioners (and/or transcribers), which cannot be imparted to fully automated systems, however elaborate the database of examples or refined the processing algorithm may be. Makampedia was designed as a token of cultural of cultural creativity,[11] as it has recently been afforded by melodic extraction and annotation software, and as a contribution to the wider discussion of tampering with form, as advocated by the emerging field of digital humanities (Svensson, 2010; Spiro, 2012; Lam, 2012).

2.3 Experimenting with layered visualization

Visualization in digital humanities occupies a considerable space in the discussion around tools, prototypes and auxiliary techniques and not only as a research process in its own right. With roots in cartography, statistics, graphic design, and computer science, visualization is an inherently interdisciplinary research field “concerned with showing quantitative and qualitative information, so that a viewer can see patterns, trends or anomalies, constancy or variation, in ways that other forms—text and tables—do not allow” (Friendlyas cited in Hinrichs, Forlini and Moynihan 2019:).

As Jänicke (2016) notes, visualization scholars are rarely involved in collaborations that produce valuable digital humanities results, thereby pointing to an understanding of visualization as an algorithm-based application domain and not as an integral form of raising questions and

[11] Here the term is borrowed from the interesting discussion on creolization and the expressive forms that emerge from cultural encounters. These forms inherently embody multiplicity, render multivocality, and negotiate contestation while also serving as means of national identity and creative expression (Baron & Cara, 2011). In this work’s view, the restructuring of existing languages, symbols and cultural signifiers of the colonizers and colonized endeavored in various contexts of colonial encounter (Chaudenson, 2002; Stewart 2007) appears to coincide with recent concerns about the decolonization of knowledge (Mingolo & Walsh 2018) and the multifaceted critique of Eurocentric ‘episteme’.

interpreting phenomena. Moreover, recent views profess that visualization provides a holistic approach to cross-disciplinary knowledge generation in three distinctive ways (1) visualization as an aesthetic provocation to elicit critical insights, interpretation, speculation, and discussions within and beyond scholarly audiences, (2) visualization a dynamic process wherein speculation and re-interpretation advance knowledge within all disciplines involved, and (3) visualization a mediator of ideas and theories within and across disciplines (Hinrichs et al., 2019). According to the authors, who introduce the metaphor of “sandcastle visualization” as a lens to practically, creatively, and critically engage with visualization, these approaches are tailored, unique, transient and interactive visualizations as opposed to more pragmatic, functional, and transferable visualization tools. Based on their transient properties, they foreground valuable insights as a mindset, methodology, and praxis within humanities research.

Even though attempts of visualization, involving amplitude (Dynamic Plan) and pit (Melodic Plan) of a sound object, have been recorded, especially in the field of electronic music (Holmes, 2015), these are rarely imprinted on the musical score and thus treated as worthy of special research and educational attention. The approach introduced here uses a semantic code that comes from typical sound visualising-editing (Cannam et al., 2006; Mauch & ,Dixon 2014; Salamon & Gómez, 2012) software designed to play, edit, and record sounds using a visualization of the sound as a guide.

On the other hand, score representations have been shown to maintain strong ties with disciplinary restrictions (Schwarz et al.,1997) and historical narratives. Attempting an analogy with the partiture as a token of visual culture, the development of dynamic digital score for makam music points to the direction of making these cultural and epistemic conditions known and creating space for pedagogical orientations that subvert dominant understandings of ‘reading’ and ‘writing’ music.

The current research combines computer-aided analysis and visualization of large cultural data with qualitative methods in order to achieve a close reading of both data and underlying assumptions about human knowledge. The work adopts a generative definition of visualization, one that is integral to maintaining a critique and developing analytical prototypes that place emphasis on the qualitative merging of semiotic genres and cultural perceptions of music. What is in fact at stake in such endeavors is the route forged for creating knowledge; "[r]ather than seeing the humanities as a data source, we must begin to think of them as partners in a new hybrid epistemology" (Bradley et al., 2018).[12]

2.4 The necessity for developing a visually dynamic score

In considering the standard training of contemporary musicians in formal education institutes of western Europe, such as conservatories, one cannot fully escape the pentagram and the conventions of standard notation. Nevertheless, in makam music genres, where the borders between performance, improvisation, composition and teaching are thin, the transition from oral tradition and its memory-based educational approach to the staff score as the main referent of music has come with more problems than solutions. The trend of compressing modality in the eurogenetic idea of scales with ascending and descending versions (Aydemir 2010; Özkan 1994), projected on static staff notation has had devastating effects in music and has brought a number of considerable complications in music education (Ayangil, 2008; Öztürk, 2018b). The problem of approaching makam modes as scales, and the limited amount of information that is therefore contained, has been beautifully presented by the Arabic maqam teacher Sami Abu Shumays during his lessons at Labyrinth Music Online (Fig. 2.1), as well as by Timucen Tanrikorur (2008) during his lecture series at the New England Conservatory in 1994, when

[12] It is worth noting that certain attempts to create hybrid, rich notation environments, have offered interesting results. For a combination of global and stuff notation see http://globalnotation.org.uk/hybrid-global-staff-notation/ (Killick, 2020)

he argued that scale carries less than 10% of the melodic information, the other 90% being elements of melodic development.

Figure 2.1

The maqam Iceberg

(*Image source: Sami Abu Shymays instagram account*)

The shift from the slow and organic Meşk system (Ayangil, 2008) to a highly systematized conservatory education based on score notation is distinctly conflicting with the fundamental functions of Classical Makam traditional training, which prioritizes music memory over score reading and emotional training over precise reading. This perspective considers technique not merely as a prerequisite but rather a consequence of musical expression. The principal difference to western music lies in the view of technical training as an opportunity of acquainting skills through the effort of mimicking and gradually assimilating the stylistic qualities of a certain school/individual, which comes in contrast with building an elaborate technical toolbox which will later allow the student to perform

practically anything. This perspective encourages small ensembles performances where idiosyncrasy is strongly encouraged against large ensembles with more than one instrument per section (Öztürk, 2018b), and places music in a framework of culturally relevant activities such as calligraphy, poetry and other performative enterprises.

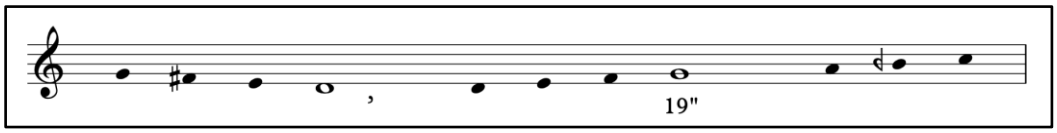
In an effort to bridge the gap between contemporary conservatory and traditional makam education, *Makampedia* focuses on providing a combination of visual stimuli that stretch from the parallel presentation of pentagram and melodic contour. There is optional access to annotation(s), which are prepared based on observations and arguments of ethnographic data to more abstract representations that entail colouring for instrument separation and width of stroke as a function of intensity.[13]

In the past, staff notation has been mainly used in two ways for the presentation of taksim. The first one is a score using stemless notes and containing no information on temporal or stylistic characteristics such as those found in the widely used book Makam Guide (Aydemir, 2010) (Fig. 2.2).

Figure 2.2

Analysis of a taksim using staff notation and stemless notes.

The notes are divided into two categories, marked with black and white filling.



Although this representation can give basic information on melodic direction and creates hierarchy between conclusive and passive notes, it cannot offer any information on the phrasing, its mechanics and stylistic

[13] For an example see https://youtu.be/PqoH0-1Gw1w

properties of phrasing. In that sense, this system can serve as a reminder for someone who is trained in the field but fails to allow a newcomer to fully grasp the requirements of style and phrase achievement. The second one is the detailed transcription of a score (Simms, 2018; Cholevas, 2021) (Figures 2.3, 2.4).

Figure 2.3

Transcription/analysis of Aka Gündüz taksim performance by Simms

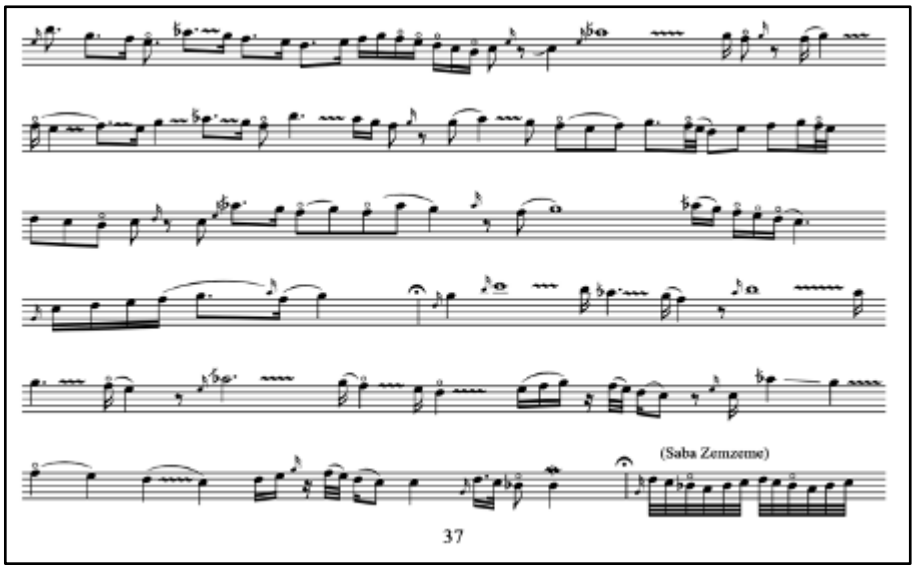
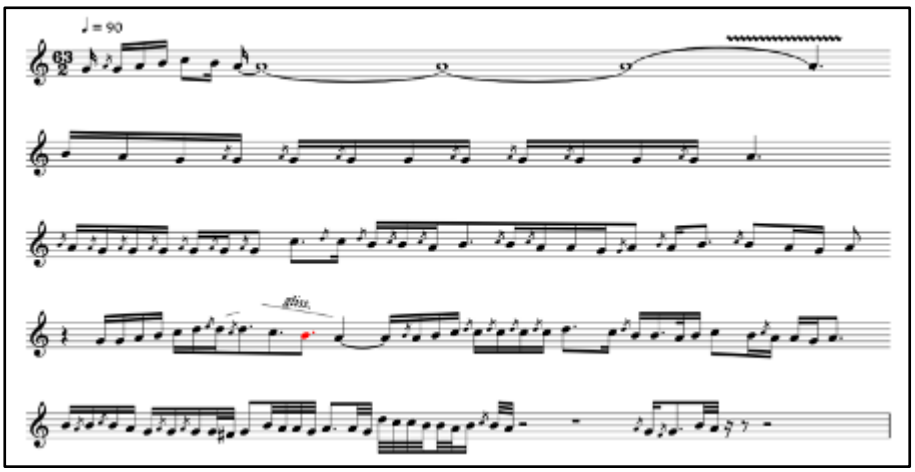


Figure 2.4

Transcription/analysis of Dede Suleyman Ergüner's Rast taksim performance by Cholevas

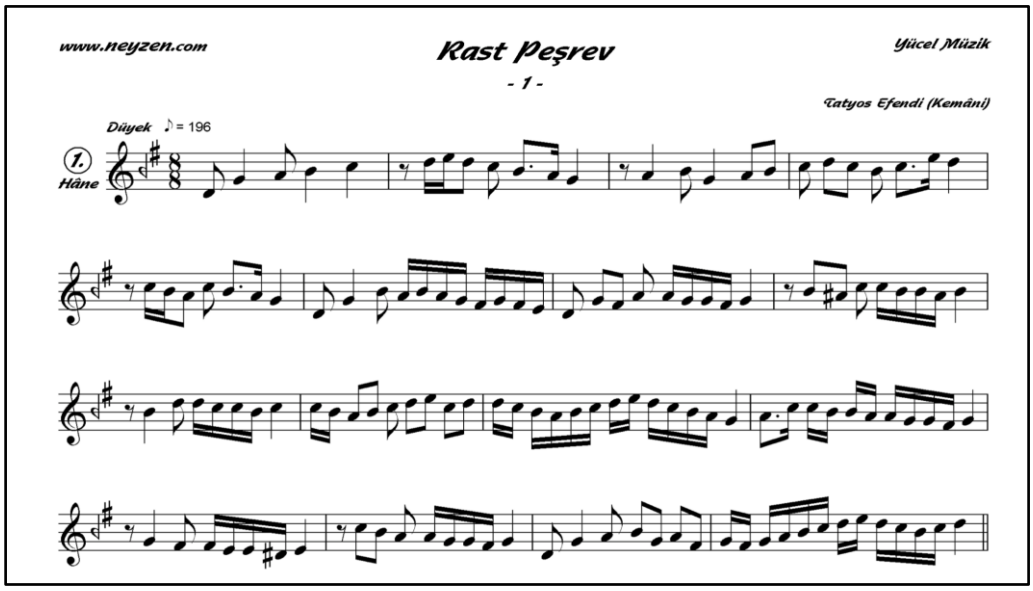


Although that approach represents more accurately the length of each note compared to the previous approach, it nonetheless becomes unusable by most musicians for various reasons. Namely:

a) the complexity of the score is inversely proportional to its usability; this representation differs a lot from the typical scores Makam music students are trained on at conservatories (Figure 5)

Figure 2.5

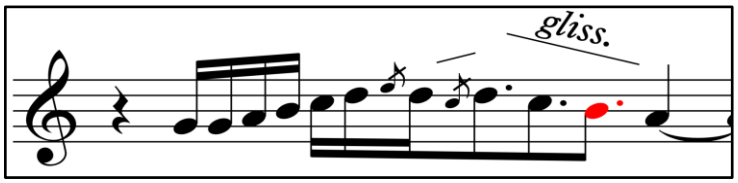
Pesrev (prelude composition) example from scores archive Neyzen.com



b) the projection of melodic gravity and stylistic elements cannot be fully described with the static and fixed character of the pentagram (e.g. depiction of specific vibratos, glissandos and their speed, direction and distance in pitch from the main note); for instance, degrees that are looking as static on staff notation have a role of creating melodic gravity and often will be performed dynamically, sliding within a cluster of frequencies (Figure 2.6; see also Video example 2.1).

Figure 2.6

Example of dynamic pitched note in Uşşâk taksim by Şükrü Tunar on staff notation



Video example 2.1

Example of dynamic pitched note in Uşşâk taksim by Şükrü Tunar on staff notation

In an interview with Walter Feldman (1996: 210), the tanbur master Necdet Yasar calls these "*heavy traffic areas*" instead of notes, highlighting the fact that approaching these as static notes of a fixed frequency is far from the actual practice.

c) the quantized character of intervals in semitones, in conjunction with the equation of half and whole tone notes on the staff (e.g. e-f and g-a have the exact same distance on the staff) fails to depict the exact (logarithmic) difference in pitch.

With the emergence of melodic extraction software such as the Sonic Visualizer and Praat programs (Meer, Boersma, Mauch) the possibility of visualising pitch contours to describe certain elements of heterophonic modal music became possible. The example of AUTRIM (Rao & Meer, 2013) has been a quite successful one for the registration of North Indian Classical music, where melismatic elements of Raga performances have been projected on an n-gram of Sargam notation. That project was quite successful as a tool for teaching music and it has a unique starting point due to the fact that North Indian Classical music education uses Sargam

notation, even in the context of European conservatories (such as the Indian Music department, Rotterdam Conservatory, Codarts University for the Arts) (Rao et al. 1999), and hasn't hitherto used staff notation as a reference point. One important element of AUTRIM representation is that the intervals are kept on distances of 100 cents for semitones and 200 cents for whole tones, something quite different from the contemporary theoretical system used in Classical Makam music. According to the current system, the makam system octave is divided into 53 commas (the whole tone into 9 commas) and the division of the whole tone as well as the corresponding accidentals can be seen on the following figures (2.7 and 2.8).

Figure 2.7

Commas division of the whole tone in Ottoman Makam music

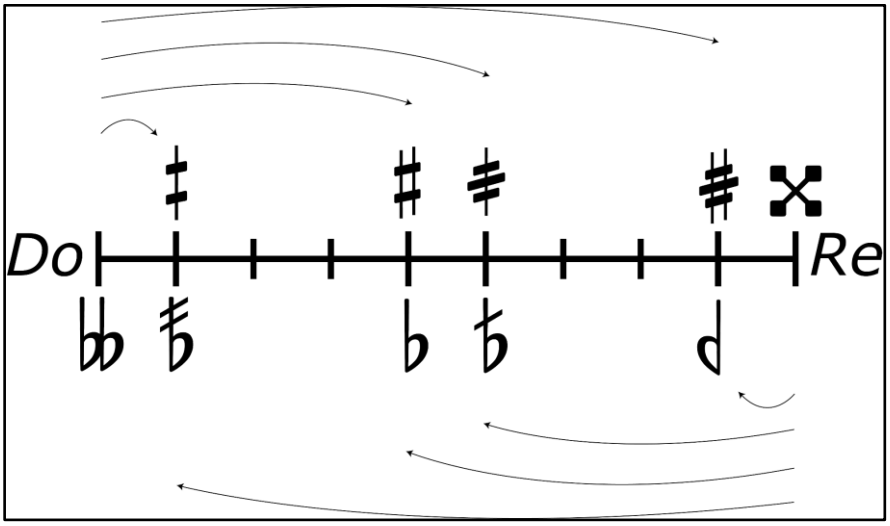
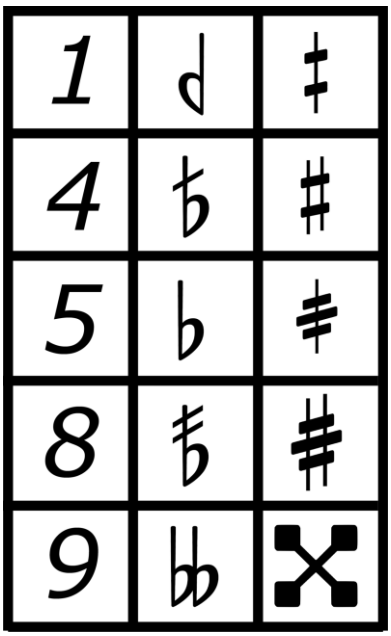


Figure 2.8

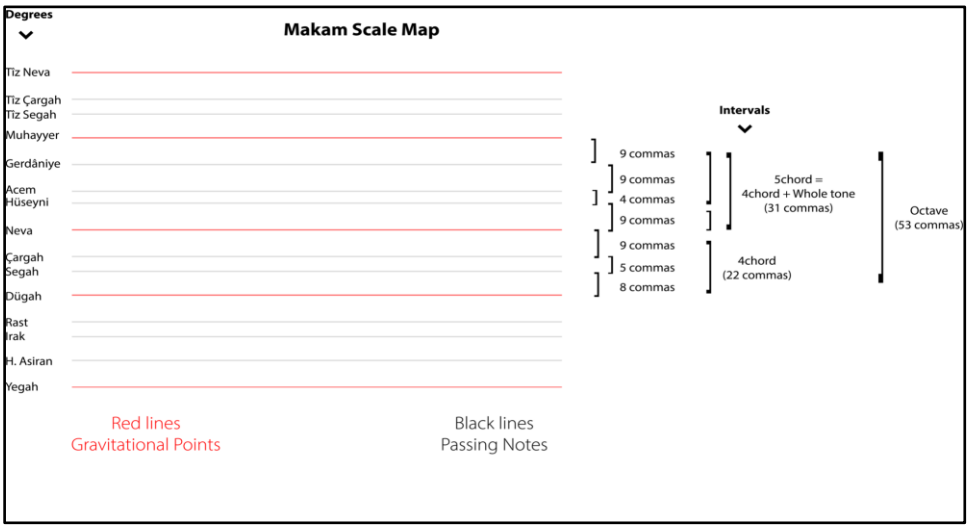
Accidentals of Ottoman Makam music in commas



Those two observations and the challenges of teaching Makam modules for BA and MA students at a conservatory level, lead me to the creation of a system which would combine staff notation to map the basic properties of melodic movement and an n-gram, similar to that used by AUTRIM but with their corresponding comma distances, to accommodate the contemporary theoretical description of classical music of the Ottoman period. With such a representation it becomes possible not only to follow melodic gravity and elements of idiosyncrasy, but moreover, to highlight the discrepancies of praxis and theory as it is described with the use of staff notation (Fig. 2.9).

Figure 2.9

Example of Makam scale n-gram map, used as a background layer for the projection of melodic contour

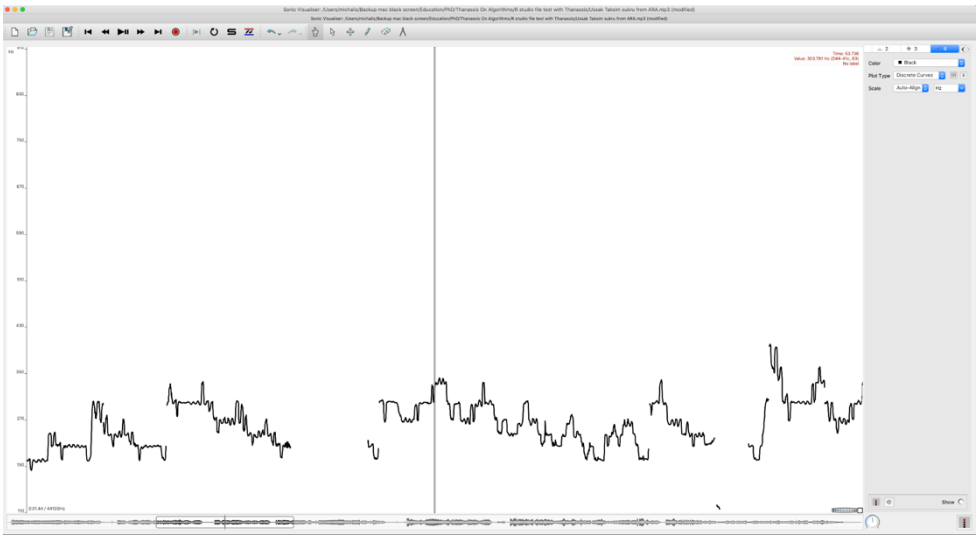


The pitch contour of the melody can be extracted from recordings with the use of Sonic Visualiser, on which, melismatic characteristics of taksim performances could be registered and presented in a comprehensible and usable manner (Fig. 2.10).

Figure 2.10

Melodic contour extracted with Sonic Visualiser.

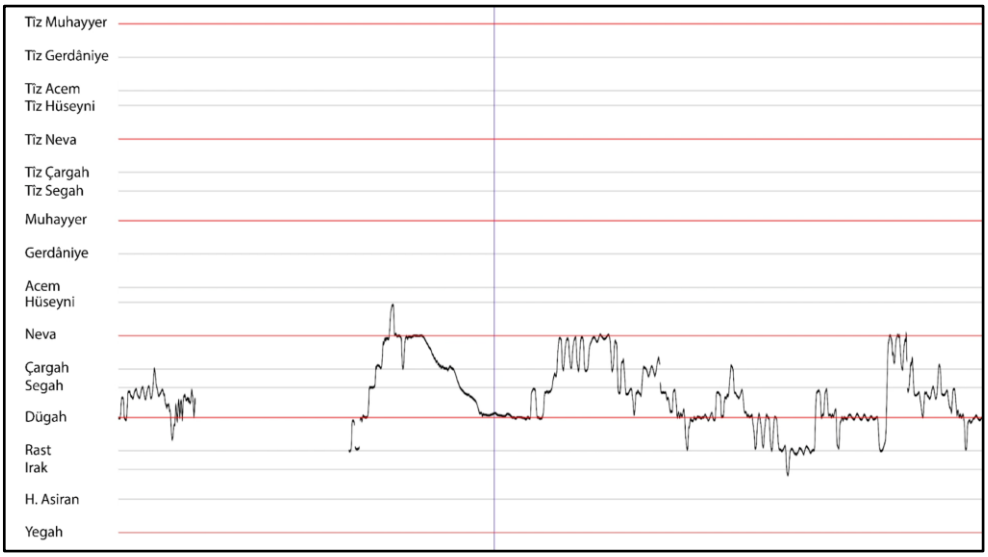
The x axis corresponds to time in seconds and the y axis corresponds to pitch in Hz (log scale).



With the use of animation software, the melodic contour can be projected, animated and synced with audio using the corresponding n-gram makam map (Fig. 11 and Video example 2.2)

Figure 2.11

Projection and animation of the audio synced melodic contour on the n-gram map



[Video example 2.2]

Projection and animation of the audio synced melodic contour on the n-gram map

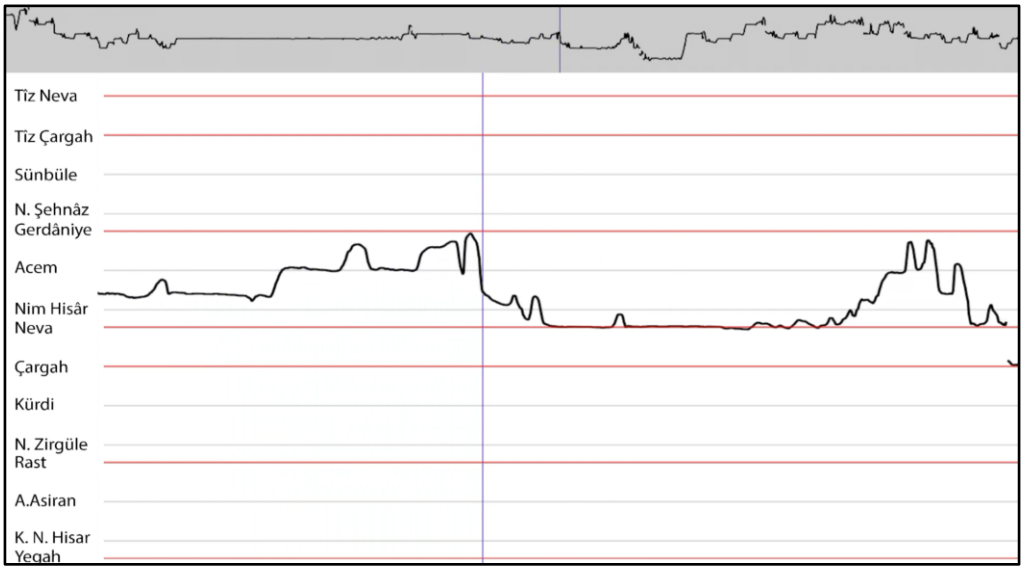
The audio synced melodic contour can be used to highlight idiosyncratic elements on domains of stylistic and expressive elements (vibrato, glissandi etc.) as well as characteristics of phrasing (such as rhythmic patterns and sequencing). Nevertheless, for dividing and marking phrases of the improvisation or composition another layer of melodic contours that moves much slower can be added on the top of the representation (Figure 2.12, Video example 2.3).

Figure 2.12

Audio synced melodic contour with 2nd layer marking phrases

Video example 2.3

Audio synced melodic contour with 2nd layer marking phrases



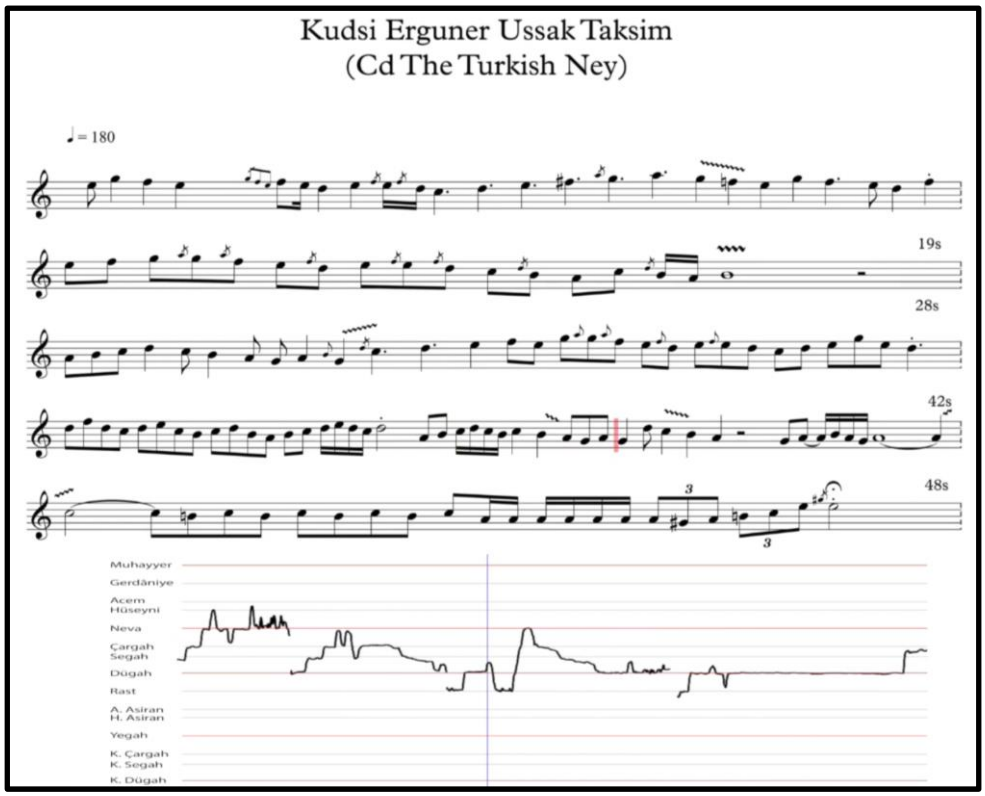
The manually transcribed score is added and synchronized with the Pitch contour resulting in the combined score (Figure 2.13, Video example 2.4).

Figure 2.13

Combined staff score and melodic contour on n-gram map

Video example 2.4

Combined staff score and melodic contour on n-gram map



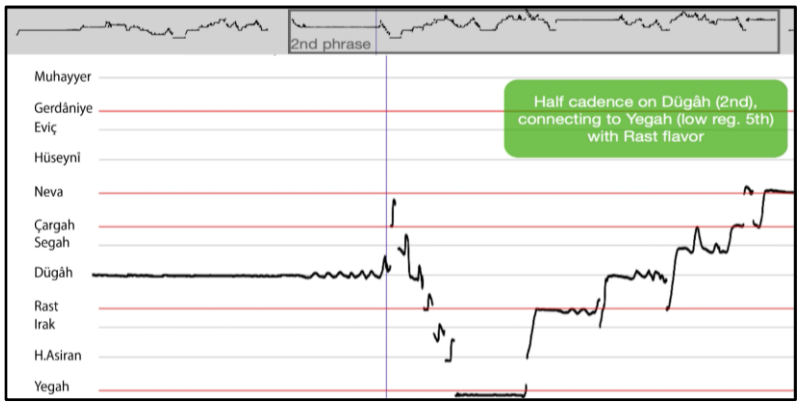
The final step is to add the layered version with annotations on the desired domain. The following figure and video demonstrate this approach on a taksim with the addition of Makam flavours (sub-scale structures on which a melodic phrase is built) and information of melodic development and gravity (Figure 2.14, Video example 2.5). For better resolution, the staff score is omitted on this example.

Figure 2.14

Annotations layer on Makam flavours

Video example 2.5

Annotations layer on Makam flavours



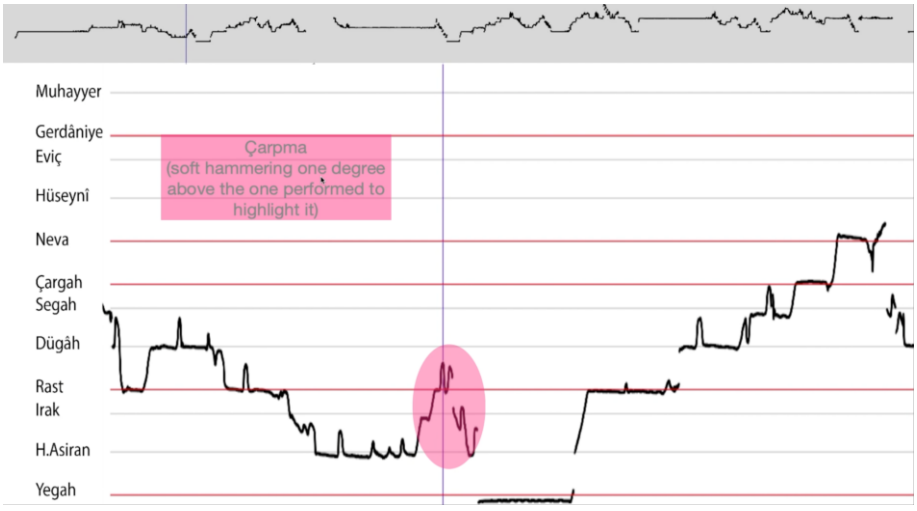
In this representation, annotation layers on other elements of interest can be added. In the following example, Çarpma (hammering technique to highlight the degree performed and to keep a legato feeling without breaking the sound) is annotated (Figure 2.15 and Video example 2.6).

Figure 2.15.

Layer of annotations on Çarpma techniques

Video example 2.6

Layer of annotations on Çarpma techniques



2.5 Educational properties and re-training the eye

As discussed earlier, the combination of a simple, easy to comprehend score with the pitch contour projected on an n-gram serves various purposes. While the staff notation part gives the basic information of notes movement and values, the n-gram notation offers a more vivid representation and insights on a number of idiosyncratic and stylistic elements with real time audio synchronization.
In our view, the fundamental functions performed by the combination of Score - contour graphic annotated representations are:

a) They promote engagement through a strong bond and transitions between the auditory and visual stimulus. The hypothesis behind this proposition, is that the fully articulated pitch curve can be gradually projected to the simplified score and embedded by musicians. Eventually, the score may be instantaneously used for the learning and memorisation of the repertoire (concurrent understanding of various layers in prima vista); and vice versa, i.e. the fully articulated performance can be simplified and sketched-transcribed on the pentagram.

b) They can create or accelerate the construction of (music) memory. This is especially important in the context of contemporary conservatory education where the contact time between teacher and student has been limited to an hour per week in contrast with the 6-8 hours daily contact between master-pupil in the traditional context of Meşk education. Performing in the idiom of Makam music and its idiosyncrasies demands the preexistence of music memory and can't be based on the score (K. Ergüner, personal communication, June 18, 2018).

c) They offer a basis for further explanations with the use of annotations, which include technical elements as well as metaphors, paradigms, parables drawn from the metaphorical language of teaching and its storytelling, one of the strong elements of the master-apprentice system.

In that line of thinking, every annotated score-graph representation becomes an *absent teacher* (Haar, 2019)

d) They are used as the visual basis for decoding and promoting the idiosyncratic characteristics of each performance in terms of ornamentation, pitch movements and articulation, and highlight the wealth of this music which is rooted in its diversity.

e) They promote different angles of explanations on different or the same layer of analysis. Since the videos can be annotated on an infinite number of layers, different explanations of a number of elements and according to different master lineages can be projected on the same transcribed score and melodic contour presentation.

The aforementioned functions have potentially significant implications for the reception and, more importantly, the educational features that surround Makam music today. The score system discussed in this paper may also be argued to train the eye -especially the eye imbued in western music score- in fresh semiotic modalities that seek to upset the single-layered reading of the pentagram and render complexity transparent in music notation. The dynamic score presented here manages to shorten the gap between this metaphysics of viewing and music performance, as it signals a recognition of the holistic character of Makam music, which motivates sensory, emotional and kinesthetic properties of the performer. What is more, standard pentagram fails to acknowledge and portray the moving comma distances while the proposed dynamic score fulfills this in a satisfactory manner, placing an emphasis on the importance of micro in the context of this music. One of the most significant features of the proposed approach is the synchronization of sound and image in real time, which is kinesthetically radically different to the static score and the process of locating different sets of information in different spaces as for example in a book. In contrast to experimental approaches that attempt to

challenge the dominant representational paradigm, yet maintain a static representation where sound and melody evolution are not correlated in real time[14], we suggest that, on the level of music education, this proposition may find its more appreciable application. The unencumbered tuning of eyesight and hearing when reading music score may accelerate grasping, analyzing and re-playing the transcript to a considerable extend, thus enabling not only the quicker and richer access to the various layers of the score but also an immediate recognition/comprehension of its history, context and scope. As Ergüner (K. Ergüner, personal communication, June 18, 2018) maintains the paramount role of memory that is unique in this tradition is intrinsic to performing and we believe that it ought to be somehow incorporated and visually approximated in the score. This research proposed that graphic representation is not merely an illustrative component of music education, but has a deep impact in questions of power and recognition.

The significance of certain elements in Makam, such as melodic gravity, pitch clusters, articulation and ornamentation, require transparent tailor-made representational modalities principally because they are considered as identifying idiosyncratic elements and secondly because they may not be adequately described -and pictorially captured- in standard pentagram score.

Even in western music, the act of reading staff notation, which requires several simultaneous processes including coding of visual information, motor responses and visual-motor integration, is viewed as an important albeit neglected field in music education research (Gudmundsdottir, 2010). “Evidence suggests that skill development in music reading is not simply a matter of refined mechanical accuracy but rather a process requiring the development of highly specialised levels of musical understanding” (Scripp as cited in Gudmundsdottir, 2010).

[14] See for example https://www.researchcatalogue.net/view/643189/643357 and https://www.researchcatalogue.net/view/388872/388873

In this vein, neurocognitive approaches to music reading have demonstrated that there are physical traces of melody reading and rhythm reading on the human brain, largely corresponding to the spatial and featural properties of notation (Stewart, 2005), which "reveal that music reading (...) requires coordinated sensorimotor translation between a set of vertically organized stimuli and a horizontally organized set of responses. These spatial mappings, which are likely to relate to the decoding of pitch from notation, develop in the early stages of skill acquisition and are associated with functional changes in the superior parietal cortex. The ability to decode the rhythmic elements of notation, by contrast, appears to depend upon a visual discrimination process subserved by the fusiform gyrus. These "what" and "when" aspects of music reading seem to map onto the what and when occipitoparietal and occipitotemporal streams, respectively" (Stewart, 2005; Goldman, 2016).[15]

Furthermore, in tackling music and visual cultural converge, Shaw-Miller's work on synesthesia suggests that "looking may be biologically grounded in the same way as hearing, but as visuality, that is, as a screen of social constructs and discourses through which we have no choice but to look, it is also fundamentally grounded in culture" (2013). In his view, music is always framed, affect-driven and cognitive.[16] This makes hearing and looking (and other sense-based activities) permeable, subject to infection from neighbors. What we see is not just sights, but textures and sounds (Meer & Rao 2006). According to Shaw-Miller this is "not only the case in multimedia or mixed media; it is more fundamental than that. Looking and

[15] Examples from the field of mathematics are illuminating as to the extent that seeing directs cognition and the arrangements of symbols sustains specific ways of thinking while suppressing others. Especially in music, where communities of practice are pivotal in engaging with the object of study, research has shown how particular (engineering) communities have particular ways of sharing and developing knowledge, based upon linguistic and symbolic code and graphic representation (Bissell & Dillon 2012).

[16] Following recent findings from cognitive neuroscience of vision Jacob and Jeannerod (2003) support a dualist picture of human vision, according to which the semantic processing of a visual stimulus yields a visual percept, whereas basic pragmatic processing yields a visuomotor representation of a target for action.

hearing are inherently and unavoidably synesthetic. Music *is* visual" (2013: 22; our emphasis).

Synesthesia is manifest at two principal levels of signification: neurological and cultural. Synesthetic metaphors are extremely common, perhaps because they are simply special cases of the general rule of metaphor and understanding itself: "The essence of metaphor is understanding and experiencing one kind of thing in terms of another." If every sensation, and human perception in general, is inevitably synesthetic, this means that there does not exist any primary isolation between the different senses. Developing representational tools that make use of this multi-perceptual mechanism not only engulfs layered cultural and musical information, but also appeals to the listener's neurological as well as cultural synesthetic constitution.

2.6 Tentative conclusions

Much like the disruptive technology of the invention of the camera, before which "perspective organized the visual field as though that were indeed the ideal" and "proposed to the spectator that he was the unique centre of the world", when later "the camera – and more particularly the movie camera – demonstrated that there was no centre" (Berger, 1985), attempts to challenge the centrality and totality of inscription incurred by the dominance of the pentagram may be indeed revealing of more nuanced understandings of music, irrelevant of the style one practices or acknowledges, thus considerably enlarging the domain of cultural inscriptions. As a token of cultural representation, which has various repercussions on the ways of understanding, categorizing and hierarchizing musical genres, the partiture/score also has a grave significance as a cultural artefact in its own standing.

It is largely established that eastern countries use ecphonetic notation, which are symbols added to text, as an aid to chanting or singing, while Western countries use neumatic notation for plainchant for their music (Hodges & Nolker, 2011). However, the idiosyncrasies of Makam in regard

to phrasing and memory-driven performance render existing notations not only short of their purpose but also culturally misleading. Ethnomusicology, much like sociocultural anthropology, assumes the stance of an outside observer that collects data and reports on the musical practices of non-western other(ed) music cultures. From this vantage point, interrogating the disciplinary division of academic knowledge about music and the 'natural' status of this organization becomes imperative and could be well addressed by creating broader anagnostic routes on the music score itself and not through elaborating polemics and critiques through verbal academic argumentation.

Such endeavors may be useful in collapsing the orthodox triptych between musicology, ethnomusicology and music theory and propel an understanding of theory, as *theoria* (from the verb *theoro,* meaning, to inspect, observe, consider), suggesting that all rational contemplation of music -whether practical, historical, or analytical -could in a broad sense be regarded as theory (McCreless, 1997). It is crucial in this respect to acknowledge the active role of the performer, who is involved via music analysis (Widdess, 1994). While theoreticians and musicologists remain somewhat external to the performance, the proposed approach safeguards an insider's view for the performer, who is granted the agency to critically apply their interpretational take to the piece and is not indirectly and invisibly instructed by the 'experts' on theory and/or musicology. This particular viewpoint on the performer draws its genealogy from the recognized polyptych of the musician as an improviser, composer, performer and master, a compound figure that comes in diametrical opposition to the standard understanding of the contemporary virtuoso as unable to perform all these roles at once, during the timespan of one performance. Especially the function of teaching while performing is inherently imbued in the cultural role of the traditional musician. The lack of institutional compartmentalization at the sociohistorical environment of their emergence and the context of performance itself made it imperative for the above pedagogical, creative and performative aspects to be

merged and performed as an inseparable whole; so, if the genealogy of this music is to be continued into the future this multifaceted role ought to be maintained and, what's more, supported by pertinent representational vehicles.

A key question that arises from the aforementioned discussion is whether the dominance of the semiotic code of the score in contemporary eurogenetic music may be unproblematically applied to other genres, or if an alternative view of the score as a guide might in fact be epistemically and culturally more appropriate. That is to say that the malleability of temporal and melismatic characteristics in Turkish music/Makam are not only omitted from standard transcription but furthermore lead to a historical misunderstanding in obscuring the performative affordances and circumstances of this particular. Drawing a parallel between soft and hard technologies of sound, or their counterpart epistemic paradigms, the present research places emphasis on the visual and semiotic imprint of the cultural histories and the archaeology of knowledge (Foucault, 2013 [1969]) imprinted on various score variations. Such moves may hold the potential to challenge the organizing principles (such as the pentagram) by which discourses in different disciplines constituted and regulated themselves. According to Foucualt, the language of discourse would control the practice of the discipline and therefore knowledge in 'the disciplines of man' is never pure but conditioned by power, expressed in specific manifestations in the social practices of the disciplines and their interrelation with disciplinary knowledge.

The very ideology of 'writing down' music on a 'music sheet' has had grave repercussions in the act of composing, performing and disseminating classical music (Haddon & Potter 2016; Schafer, 1976) and is well inscribed in a cultural horizon that grands predominance in the written word, in closed immobile forms and in the ensuing requirements of performance. In that sense, framing Classical Ottoman taksim in a restricting trope that contradicts its historical and performance-related

connotations is not only an unfinished script but, maybe more crucially, a serious misconception of a whole socio-ideological system into an entirely different, and often antagonistic, one.

Through a critical convergence of 'technical' elements and cultural-historical accuracy, by viewing the score both as information and as artifact,[17] the proposed thick multi-layered visualization of information might be considered as a visual way of highlighting the relationship between selected pivotal characteristics of taksim performance and Makam's historic genealogy as imprinted in a score that is directed to differently address the teaching of Makam music in contemporary educational settings.

The combined findings from the first two chapters and the video outcomes of the score and melodic contour, highlighting the temporal and spatial characteristics of makam music, can form the basis of explanations for a variety of phrasing phenomena in taksim and makam performances. The following chapter presents a step-by-step guide on transcription and analysis, the user manual of the concepts presented in the previous chapters.

[17] For an example, see https://youtu.be/PqoH0-1Gw1w?t=162

Chapter 3

A protocol for the transcription and performance analysis of taksim with complementary graphic representations

Truth and clarity are complementary,
the more truthful you try to be, the more unclear will be your statements and vice versa

Niels Bohr

I'd rather be clear and wrong than foggy and right

John Wheeler

3.1 Introduction

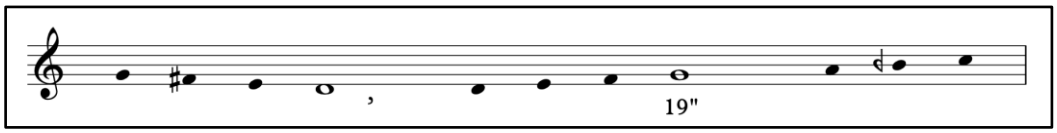
Based on the main conclusions of the previous chapter, namely the temporal mapping of taksim elements and the graphic representations developed, this chapter draws from those two main conclusions, in order to develop a comprehensive protocol for transcription and analysis. The protocol can generate a number of possibilities for researching in and learning from recordings of taksim masters in the field of Makam music. The transcription and analysis protocol was applied on recordings of the twentieth and twenty-first century and the aim behind its creation is to form a cohesive and consistent tool which different users may use in order to contribute, exchange, reuse transcriptions for further annotations and analysis on various elements of taksim performances. Uniformity, reproducibility and scalability of the database will become of importance as the volume of database grows and in the case of comparative analysis, correlations and large data sets processing.

As discussed in the previous chapter, the static character of staff notation underrepresents elements such as melismatic melodic development and dynamic pitch clusters (Cholevas, 2014; Wright, 1990,) while, on the other hand, the element of *free-rhythm* (Clayton, 1996) introduces an additional layer of complexity in the transcription process using staves. The absence

of time signature or underlying pulse has resulted to basic taksim representations lacking information on time values of pitches and their possible role in phrasing. The transcription, registration and analysis of taksim has been traditionally conducted and presented with a focus on the basic direction of melodic development (Stubbs, 1994) at the expense of possible rhythmical aspects (Aydemir, 2010). This neglect could possibly be due to the challenges defining and depicting the taksim, as well as to the tacit consent that there is no clear, underlying rhythmical presence or other temporal characteristics in the musical phrases. The few studies that do discuss rhythm usually either attribute recurring, idiosyncratic or stereotypical phrases to the performer or to the makam, respectively, (Cholevas, 2021) or they locate elements which could imply rhythmical similarity (Stubbs, 1995). A common approach in the presentation of taksims through scores is the use of whole notes and stem-less quarter notes (Figure 3.1).

Figure 3.1

Example of transcription from the Makam Guide (Aydemir, 2010)



The stemless whole and quarter notes indicate, respectively, pitches on which the cadence is concluded and notes that are considered passing or of lower order in the melodic hierarchy (Aydemir, 2010; Stubbs 1995). Although this representation offers basic information on melodic direction and creates hierarchy between conclusive and passive notes, it won't offer insights on the mechanics of phrasing.

Over the last fifteen years, annotated videos of taksim performances without the use of staff notation have been introduced (Ederer, 2011; Çimenli, 2007). The advantage of explanations in videos is that they offer the possibility of real-time description of various melodic phenomena and

the description of taksim elements such as the preparation of makam modulations with the use of intervallic changes gives vivid impressions resembling the traditional system of Meşk (Poulos, 2011). In that master-apprentice education model a teacher would perform, describe and reflect along with the students on different elements of the taksim by utilizing metaphoric language. So far, the main approach of taksim audio-visual presentations focuses on melodic, intervallic and sometimes melismatic elements; they seldom offer information on temporal elements of the performance.

As shown in the previous chapter, the correlation of intensity and pitch, extracted with the use of onset and pitch tracking layers in Sonic Visualiser led to the measuring of exact time values of every note in taksim performances. That part of the study shed light on temporal characteristics of taksim phrases which allows a new format of taksim transcription. There, each phrase can be accurately depicted and it is possible to avoid complex representations, while, on the same time, keep all the important information of time values in the transcription.

Using the previous findings, this chapter focuses on the creation of a transcription protocol, one that allows the exchange of transcriptions between peers for further analysis on various domains of interest. Once completed, a transcription can serve as a basis for the analysis of various elements such as: right hand (picking or bowing) techniques, left hand positions, ornamentation, articulation, phrasing, improvisation structure, phrasing strategies and so on. Such elements can be further encoded into mechanisms of taksim practices and adopted for individual development and educational activities. Furthermore, the annotation layers offer space for lengthy explanations that can be extracted from ethnographic data and the metaphoric language used in the Meşk model.

Aim of this protocol is to create a common way of thinking and acting as far as transcription is concerned. Given that various performances will be transcribed by different people and, furthermore, the transcribed material will be further annotated, the need for a common ground on transcribing

and analyzing seems essential in order to reach exchangeable - reusable scores where a transcription could serve as a basis and encourages the addition of annotations layers. Since a) the list of elements under investigation is long, b) there is a necessity of a procedure which will allow comparative analysis and c) possible modification of analyzed transcriptions are of major importance for the educational purposes of this research, the transcription strategy would have to ensure:

1) control of the loss of information due to the transition from a spatial and temporal continuum to staff representation;

2) that properties such as pitch length and dynamic pitch (moveable or attracted degrees that notated as fixed on staff) (Cholevas, 2014) would be registered for further investigation (Fig. 3.2 and 3.2) ; and

Figure 3.2

Example of dynamic pitched note in Uşşâk taksim by Şükrü Tunar on staff notation transcribed by the author

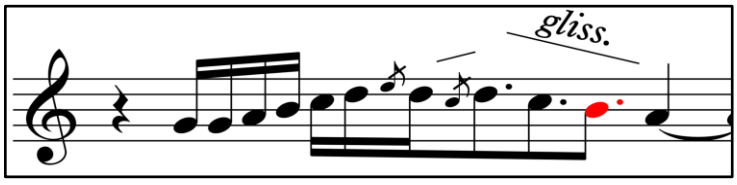
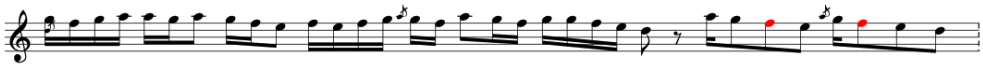


Figure 3.3

Example of dynamic pitched note in Rast taksim by Dede Suleyman Ergüner on staff notation transcribed by the author



3) the (re)usability of the transcribed and analyzed material, since the work should be accessible to students, tutors and researchers interested in the taksim field.

4) that the outcome will be transparent for performers and music students of makam music (of advance BA and MA conservatory level using as reference the level of students of the Turkish Department music at Codarts, Rotterdam), avoiding complex representations.

3.2 Transcription and representation Protocol

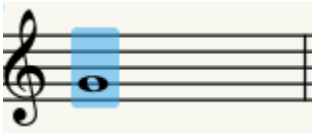
3.2.1 Transcription

Music notation program: The musical notation program used for the transcriptions is Musescore (current Version 3.6.2) since it is open source, multi-platform and contains all the accidentals used by the contemporary Turkish music theoretical system.

Makam staff Notation: The notation system used for transcription will be the notation system that is being used since 1930's in Turkey and it is the one established by Hüseyin Sadeddın Arel and Suphi Ezgi (Aydemir, 2010). In this system (TSM), all the notes are written and read on the pentagram using the G clef, taking into account that the actual pitch of the note read could be different than the actual note played. G in the pentagram stands for the root note of the makam system, the Rast perde and not a specific frequency (Figure 3.4).

Figure 3.4

Rast perde on staff noted by the G clef



G on the 2nd line => Rast Perde (root of the makam system)

Actual Pitch: The actual pitch of the Rast degree of the transcribed recording should be notated on the upper right corner of the first page the transcription according to the terminology of the contemporary TSM system. There are 12 keys, the most common ones are:

Şah →Rast on F
Mansur → Rast on G
Kız → Rast on A
Müstahsen → Rast on B
Süpürde → Rast on C
Bolahenk → Rast on D

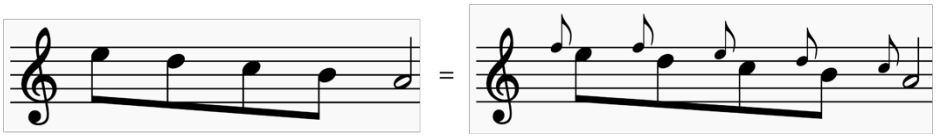
Time values: Following the strategy of combining layers of melodic contour and audio onsets (aubio plugin) in SV as described in the previous chapter, consecutive bits of notes in the main part of a phrase can be used to precisely measure durations of the pitches transcribed. The measurements in SV are shown in milliseconds, can be converted in BPM and used for time values of the notes transcribed.

Ornamentation: The following are considered important and should be depicted on the transcription:

Çarpma (soft hammering on the string, one, two or three degrees above the degree performed). For example, on the performance of a Ottoman classical repertoire piece the score will show the first version and the phrase will be performed in the second version (Figure 3.5)

Figure 3.5

Phrase without and with Çarpma



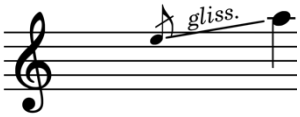
Trills (with the symbol *tr.* above the note)

Vibratos (with the symbol *vib.* above the note)

Grace notes ( )

Glissandi (add Gliss. + Grace note from the pitch the gliss. starts + a gliss. line) as in Figure 3.6

Figure 3.6 Notating Glissandi

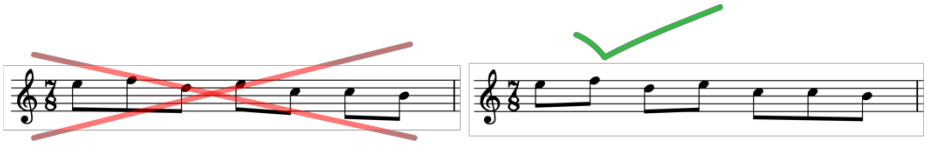


Phrasing: Groupings/Marking phrases:

a) **Groupings**: The stems of notes should be connected according to the rhythmic groupings of the phrase. Assisted by the onsets layer on Sonic Visualizer (SV) to analyze the relative intensity of the degrees performed, the phrase should be notated accordingly. For instance, the following phrase was performed with a 2+2+3 feeling of the groupings and should be noted such as in the following Figure (Fig.3.7)

Figure 3.7

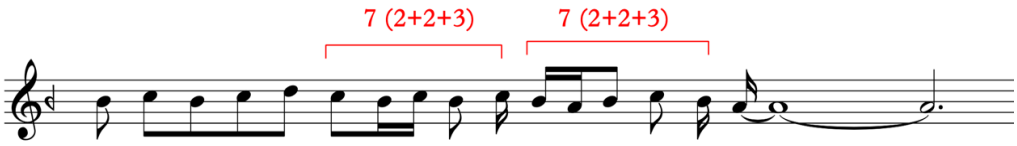
Connect stems according to the metric groupings on a 2+2+3 phrase



In case there are (parts of) phrases performed with a clear odd rhythm feeling keep track of those structures (they may be added later as an annotation layer) (Figure 3.8).

Figure 3.8

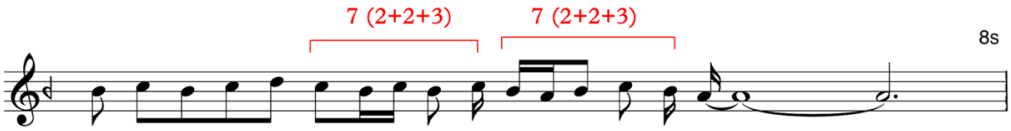
Notating groupings on metric phrases



b) Phrases indication: An end line should be used when the phrase notated is concluded. At the end of the phrase, above the bar line, the corresponding second of the recording should be added for indexing (Figure 3.9).

Figure 3.9

Adding bar lines and marking seconds



Bow and plectrum movements: For simplicity reasons we may use

a) ↑↓ = Up/down for upward and downward strokes for plectrum instruments

b) ←→ = Inward/outward movement for bowed instruments

Once the transcription is completed a pdf version can be extracted.

3.2.2 Extracting Melodic Contours

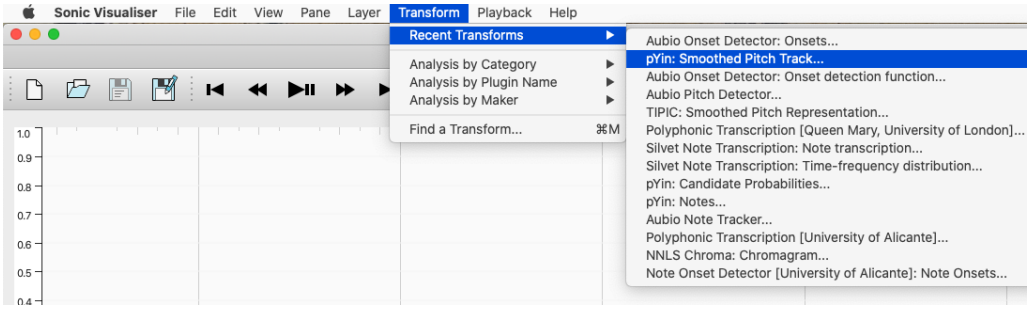
While staff notation offers basic information on the direction and movement of Makam degrees, elements such as microtonal dynamic pitch, attraction and melismatic micromovement are quantized or compressed on a staff representation. Moreover, since the staff in not arranged logarithmically and we tend to perceive accidentals as static

places where a pitch should be performed18, we may use pitch contours as a complementary layer to that of a staff score in order to depict both melismatic and microtonal elements of a performance.

a) download and install Sonic visualizer (SV) and the pYin (Mauch and Dixon, 2014) plugin
b) open a wav or mp3 file of the recording with SV. Insert a pYin transform (Figure 3.10)

Figure 3.10

pYin Transform inside Sonic Visualiser Transforms menu

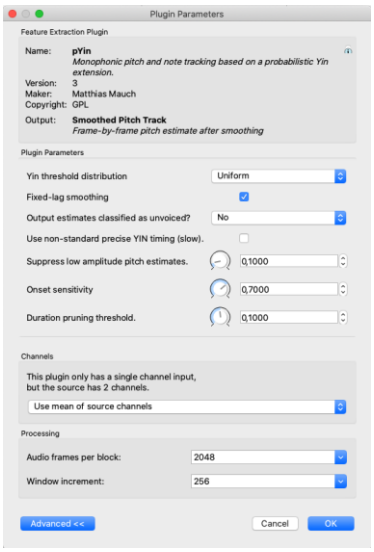


c) on the plugin parameters window, you can choose different settings according to the timbre of the instrument, the noise in the recording e.t.c so as to have a clean melodic contour (for more details on the preferences of the pYin plugin check the authors' notes here). A good starting point is to set a Uniform Yin threshold distribution and 2048/256 audio frames per block and window increment respectively (Figure 3.11).

Figure 3.11

[18] In Makam music, an attracted degree will be often performed either on a different comma than the one dictated by the accidental or with a glissando passing from a number of commas. This can be both in ascending and descending directions (although the phenomenon is stronger in the descending case) and the range of the fluctuation from the noted comma depends on a number of factors such as: the role of the degree inside the phrase (leading or dominant note), the character of the phrase (half cadence, cadence), the distance of the note from the gravitational point (root or dominant degree) as well as stereotypical or idiosyncratic preferences.

pYin Plugin Parameters window



d) hide the *ruler* and *waveform* layers and on the *smoothed pitch track* layer use the following settings (Figure 3.12)

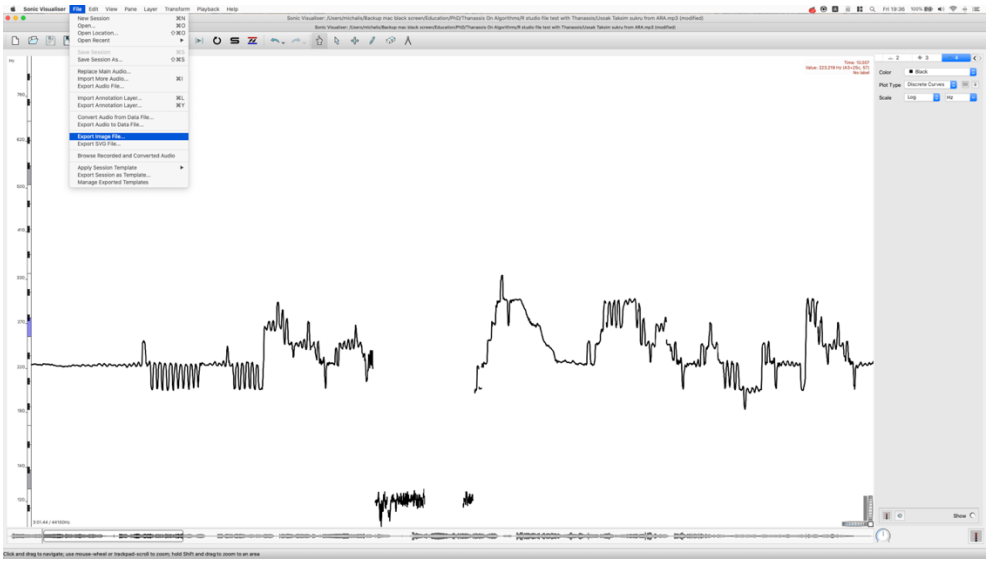
Figure 3.12

pYin Layer parameters

e) You may export an image (png) file of the pitch contour from the file menu. Using the zoom wheels, you can set the resolution of the width of the image (Figure 3.13).

Figure 3.13

Exporting the melodic contour as a png image



f) You can now open and the png file on an image editor, crop to extract unnecessary parts of the image and remove the white background to leave it transparent (e.g. on MacOs open with *Preview* → *Show markup toolbar* → Choose *Instant Alpha* → Click and drag on whit background → hit delete → save).

3.3 Animating melodic contours

The following step is animating and syncing melodic contours and audio. The initial idea was to animate melodic contours of taksim performances over a staff. An example of this first attempt can be found on Video 3.1

Video example 3.1

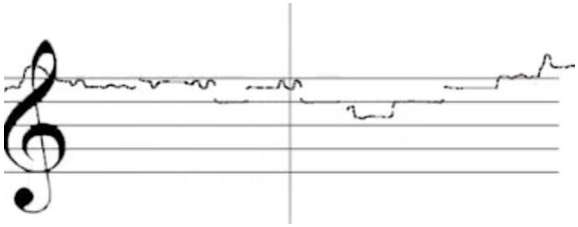
Melodic contour projected on staff

(the playlist containing all 26 staff projected contours can be found here). The melismatic movement can be easily followed in these videos, something especially helpful for musicians with a background in western music who are comfortable with staff notation. Nevertheless, due to the incompatibility of staff and the logarithmic melodic contours (e.g. e-f and

f-g, a semitone and a whole tone respectively have the same distance on staff representation), the intervals are not shown correctly, thus the melodic contour has to be stretched between two distant notes (for instance one or two octaves) and projecting on a staff will be an approximation of the intervals between the two extremes (Figure 3.14).

Figure 3.14

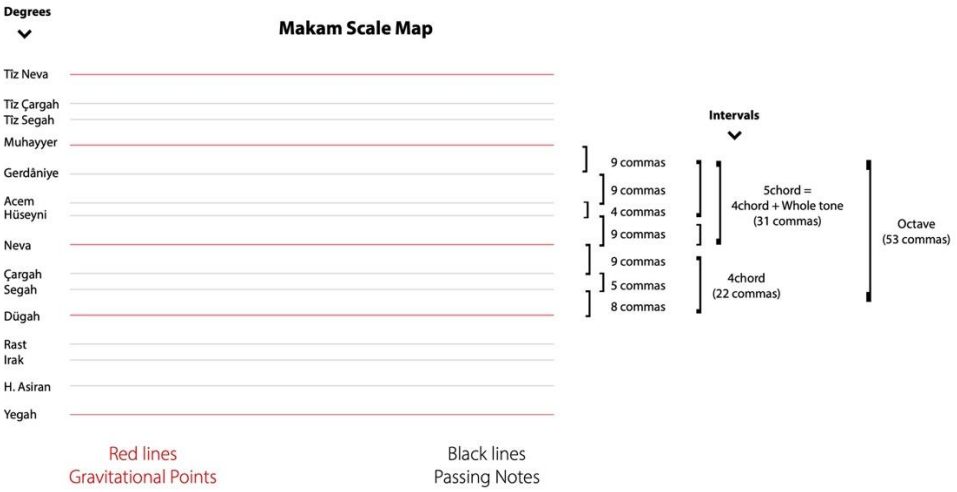
Melodic contour projected on staff.



Thus, in the updated version, inspired by similar work for North Indian Classical music at AUTRIM (Rao & Van den Meer, 2013) the contour is projected on makam maps as shown in the following Figure (Fig. 3.15)

Figure 3.15

Makam Scale map



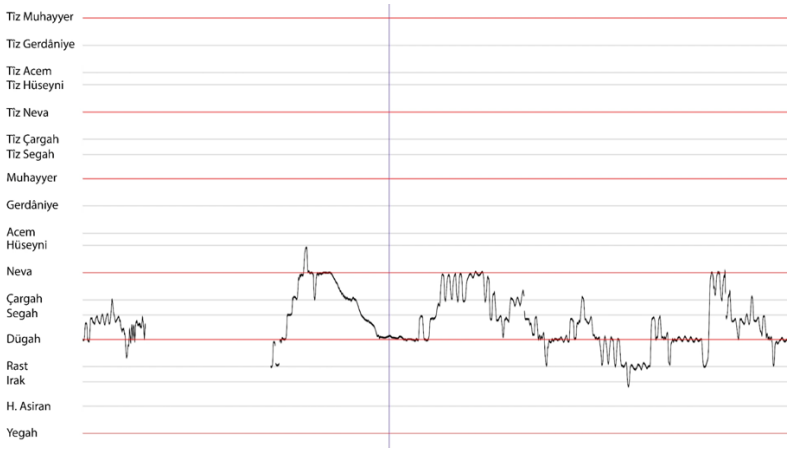
Contrary to the raga maps shown in AUTRIM, where the distances of the intervals are kept in semitones and tones, here the distances between

each degree are calculated according to the theoretical scheme of modern Turkish makam music (Aydemir 2010) which sets 53 commas for one octave.

a) Create the map for the corresponding makam. The distance between two consecutive degrees should follow the number of commas according to contemporary Turkish makam theory. The background should be set to transparent and the main and dominant degrees of the makam (gravitational points) should be marked in red colour.
b) The projection of the melodic contour on a makam map and its animation can be achieved with the use of any animation program such as Adobe Animate, Hype e.t.c. Place the layer of the contour over the layer of the makam map. The result is showing on the following figure (Figure 3.16) and Video Example 3.2 (the technical explanation of the animation falls outside the scope of this paper).

Figure 3.16

Melodic contour projected over a makam map



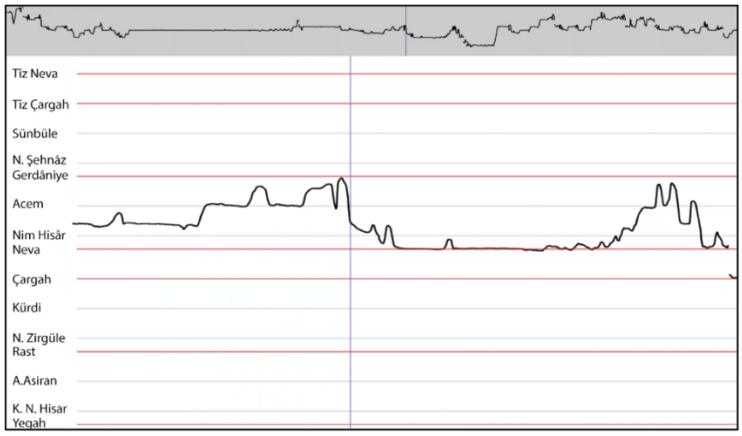
Video Example 3.2

Melodic contour projected over a makam map

c) A 2nd layer of the melodic contour may be added on the top of the page as a zoomed-out version. The purpose of this 2nd contour is to show the (separation of) phrases and offer a longer impression of the melodic direction and its development, outlining the seyir (Ozturk 2018, 1772) (Figure 3.17)

Figure 3.17

Double melodic curve



3.4 Syncing Staff transcription with Audio on iAnalyse

With the use of a program such as iAnalyse (Couprie, 2008) or any animation/video editor, the pdf transcription can be synced with audio. In the following example iAnalyse 5 has been used for syncing.

a) Create a new iAnalyse file on landscape orientation. Import pdf and mp3 files and add manual cursor points (for more details and tutorials check the video guidelines of the author of iAnalyse here as well as the manual in the help menu of iAnalyse)
b) Hit playback and use the spacebar to sync the audio with the cursor points.
c) Save an export video to the desired resolution (1080p is more than enough for the purposes of the video)

A video example can be found in the following

Video example 3.3

Transcription on staff synced with audio

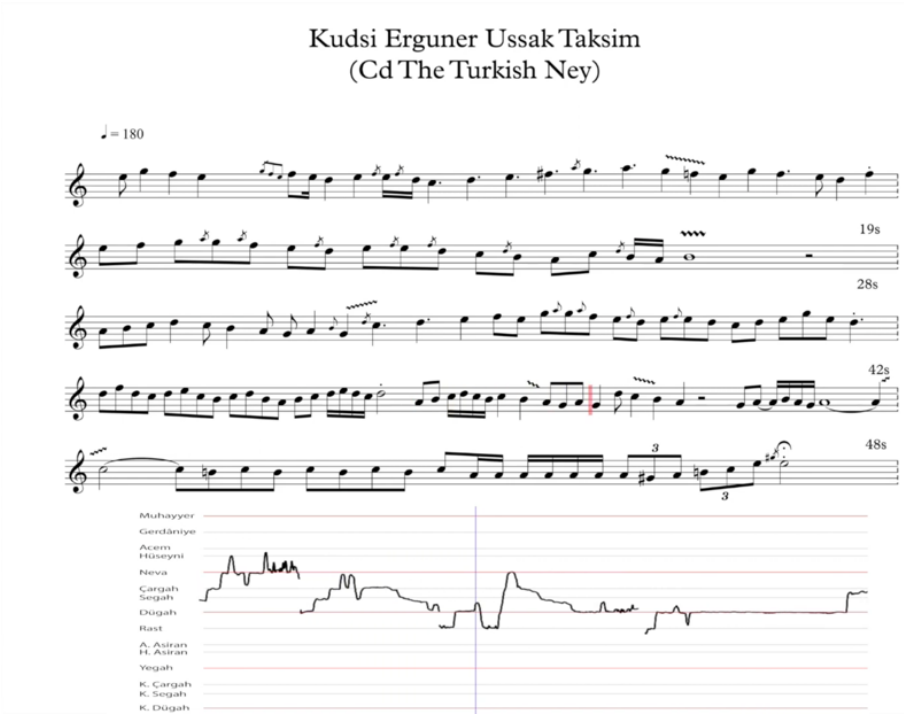
3.5 Blending Score and melodic contour

The score and the melodic contour can be put together and synchronised offering a complementary representation; while the staff score offers easy and fast reading of the degrees and their time values, the melodic contour complements the score with clear graphic representations of the stylistic and idiosyncratic elements of the performance.

3.5.1 With the use of video editing software such as Final Cut Pro or Adobe Premiere pro, the videos of melodic contour and audio synced score can be imported. The videos can be then repositioned and cropped to the desired position (Figure 3.18)

Figure 3.18

Complementary staff score and melodic contour



3.5.2 Both videos are imported with the same audio track. The one of the two tracks can be deleted.

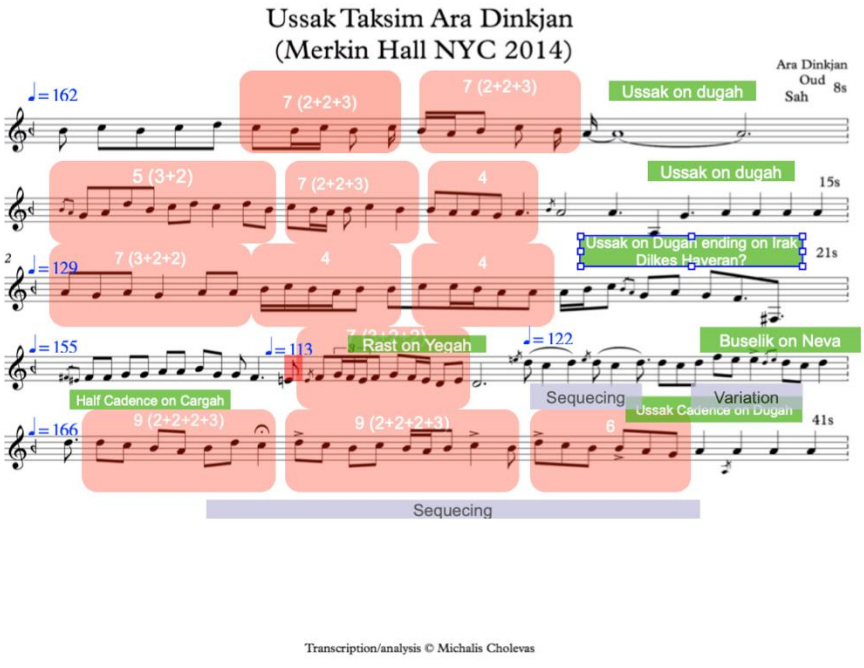
3.5.3 The video can be exported on the desired resolution. 1080p is sufficient for personal use or use in classrooms.

3.6 Adding layers of analysis on iAnalyse

With the transcription process and syncing having being completed, the analysis of the piece can start. Depending on the domain of interest, the analysis can focus on different parts of the performance. The annotations can be added with video editing software or iAnalyse. The advantage of using iAnalyse is that it offers an infinite number of layers which can be exported on csv or text files with their corresponding time marks. This can be helpful for building large data base sets in the future. For the annotation possibilities, schemes, colour e.t.c in iAnalyse please refer to the user manual under help menu.

Figure 3.19

Example of score with multiple layers of annotations



The following layers of commenting on the transcription are proposed and could be pointed out (different colours are used for each layer):

a) Modulations/Colours – Flavours: Whenever a modulation of a Makam flavour (geçki) or a colour/flavour (çesni) is introduced, we indicate the name of that *makam* or *çesni*.
b) Commas, intervallic information and melodic attraction: attractions and subsequent changes in gravitational centres may be notated. Unstable notes that follow the attraction phenomenon are notated with a different colour. The exact pitch fluctuation can be extracted with the use of SV if needed.
c) Metronomic indications: metronome in BPM, changes in tempo for every phrase or inside the development of the phrasing if needed.
d) Rhythmic structures: grouping of phrases that have a clear reference of existing metric entities can be noted.
e) Stereotypical or Idiosyncratic phrases and phrasing habits: Similar to other artists (Stereotypical) of the genre or non-similar to other artists (idiosyncratic) phrases can be annotated.
f) Sequencing: The restatement of a motif or a longer phrase on the same or other pitch and/or modulation of the same phrase on another part of the improvisation (that can include mirroring, reversing e.t.c.). If the sequencing process is clearly following any of the following schemes, those can be annotated as well:
   i. Opening phrase
   ii. Closing phrase
   iii. Rhythmic: The restatement of the rhythmic pattern with free use of pitches
g) Expressive details such as changes in dynamics, density and other use of expressive means can be noted.
h) Çarpma (hammering), glissandi function in melodic attraction and trills maybe annotated either on the staff or the melodic contour, depending on the focus of analysis (e.g. for the exact pitch of

çarpma, trills or glissandi, annotating on the melodic contour could be more helpful while if the focus is on how often trills are used in the piece, the staff score may give a wider perspective)

i) Bow and plucking movements can be annotated and explained if needed. For example, if the bow movement in conjunction with a stylistic element such as çarpma appears in numerous versions which result in different characters or functionality, those can be shown and marked with annotations.

Video Example 3.4 shows a fully annotated synced score and melodic contour from the transcription of Ara Dinkjan's Uşşâk Taksim

Video Example 3.4

Ara Dinkjan Uşşâk Taksim all layers of annotations (phrasing, makam flavors, phrases speed, rhythmic groupings

3.7 Exporting data for further analysis

In case it is necessary to export the data for further analysis, comparative analysis, the investigation of correlations or the construction of databases, ianalyze allows that in the form of csv or text files. From the menu File>Export>Data it is possible to choose the desirable parameters and annotations to be exported with their corresponding time stamps.

3.8 Conclusion

The transcription and analysis protocol presented in this chapter was developed and shaped after the needs of the specific research. The number of graphic layers as well as the design, depth and focus of the layers created and presented has served the research concept of this paper but is by no means an exhaustive scheme. On chapter five, there follows a presentation of examples for extending the applications of audio-syncing non melodic information with the score, the introduction of color-coded melodic contours, used there for the rendering of polyphonic performances, as well as the introduction of variable width melodic contours, corresponding to the intensity of sound. The combination of this

chapter's findings and the examples found at chapter five, will hopefully serve as the basis for the extension of the application, by others interested in the field of makam analysis.

The following chapter discusses a performance performance of poetry and music in dialogue using the tools developed and demonstrated in chapters two and three for the presentation and analysis of the performing concept. The chapter introduces the role of seyir (melodic promenade of the makam) not in its definition of melodic direction but in creating tension in music. The choices for creating tension based on the meanings, structure and context of the poetry are discussed.

Chapter 4

Affective affinities in Eastern Mediterranean poetry and music: An online performance

What you hear is not what you see
Wim Van der Meer

4.1 Introduction

The chapter discusses the conception and preparation of the performance that took place on the opening day of the 2021 conference "Performance in Late Antiquity and Byzantium" organized by Harvard University, where we presented two poems by Giorgos Gotis ("Easter at Olympia" and "All Souls' Day"), as translated by Andrew Watson, who also recited his rendering of the poems. The author set the poetry of Gotis within the musical language of the Eastern Mediterranean makam modes (the equivalent of *ήχοι* in byzantine music), and used the modality of improvisation in reflecting the traditions of Late Antiquity and Byzantium in their hybrid character and multicultural exchanges. In Gotis' poetry we capture glimpses of ancient sculptures and monuments, as well as symbolic landmarks of Byzantine piety around death rituals, which are inscribed and still traceable in practices of faith in modern-day Greece. In this conjunction of words and music, the artists attempted to illustrate the underlying performative qualities of poetry and musical (pre-structured) improvisation as it arises from the long and diffused tradition of lands, where the civilization of the ancient worlds was transformed into what we have come to see as the various cultural idioms of Byzantium.

Transporting the experience of a live performance into text is a rather awkward matter. The event itself, as informed by the co-existence of performers and audience, music and verse, within a specific disciplinary context, such as an academic conference, cannot be replicated or ever rendered in adequate exactitude. Therefore, we have chosen to offer the

multimedia content of the performance for interested viewers (**Video Example 4.1 Easter at Olympia, Video Example 4.2** All Souls' Day) and limit this paper's discussion to a description of the rationale and process that proceeded the preparation of our participation in the conference.

Our approach was inspired by the poetic work of Giorgos Gotis and the emotional environment his poems initiate, both in Greek and in English. Following the content and the emotive route of each poem, the two performers, Andrew Watson and Michalis Cholevas, attempted to create a shared space wherein both language and sound would stand as equal components in the proposition of a narration.

4.2 Translation (in) process

Andrew Watson first translated the two poems by Giorgos Gotis for a conference given in Oxford in July 2018, where the poet himself read the originals and Andrew read his own translations. Later that year they also read a selection (in both Greek and English) at an evening of music and poetry in Athens. Thus Andrew had an opportunity to review his translations on more than one occasion, and did so again for the online conference "Performance in Late Antiquity and Byzantium" in April 2021. Though we had a number of Gotis poems to choose from, the two we finally settled on presented themselves as the most appropriate, both in theme (the fusion of ancient and Christian Greek worlds in "Easter at Olympia", the more private Orthodox spirituality evoked in "All Souls' Day") and in the powerful, restrained emotion of both poems, which lent themselves naturally to musical accompaniment.

In the case of "All Soul's Day", Andrew had originally translated the title (Σάββατο των Ψυχών) literally as 'Saturday of Souls' – the name of day appointed by the Greek Orthodox Church for the remembrance of departed loved ones. The day is marked by many traditional rituals and practices, such as visiting and cleaning graves, weeding the surrounding earth, lighting candles, reciting prayers, possibly renewing photographs

that have deteriorated over time.[19] In most respects it is equivalent to the feast of All Souls in the Western Church, though celebrated on a very different date of the year. When Andrew came to consider the poem again for the present conference he reconsidered his original translation: though exact, the term ‘Saturday of Souls’ gets little recognition among a non-Greek audience, whereas most people would make appropriate associations with the term ‘All Souls’ Day’ – it provides a corresponding emotional introduction to the content of the poem.

Both poems are pervaded by the sense of loss. In Olympia it is in the passing of gods, ancient and present, each yielding in turn to the one who follows. The poem opens with a reference to the Epitaphios funeral procession on Good Friday, the self-sacrifice of the Christian God, and follows with allusions to other more ancient gods that have passed from the earth, though preserved in stone and marble.[20] The poem is infused with the sense of melancholy reflection, of a world filled with shadows and ghosts, and this lent itself naturally to interrupting the reading with musical interludes that give expression to the deep emotion the words evoke – emotions that are in many ways beyond the expressive power of words alone.

In “All Souls’ Day” the loss is more personal – the loss of loved ones who passed on to the next world, and the fleeting, elusive contact we can perhaps make with them. In fact, the suggestion in the poems is that the rituals we employ to make sense of loss and to maintain our connection with the departed perhaps only have meaning to us, because to the dead ‘these days...mean nothing’. In Olympia the gods’ presence is felt everywhere, but perhaps they now only exist in our imaginations – in the feelings a place like Olympia arouses in us. The musical investment of

[19] For an ethnography of ritual practices in the lived everyday context of Greek Orthodoxy, see Dubisch, 1983, 1988.

[20] Our interpretation heavily rests on the syncretic character of Greek orthodox religion, as has been broadly discussed by ethnographers of the region. See more Shaw & Stewart, 2003; Roussou, 2017.

both poems gives expression to this world of god's and spirits that the poet imagines around him, but never actually sees. In fact, both poems end not with gods or souls but with the natural world: in Olympia (which begins with wild flowers) the poem ends with trees and the flowing river – concrete realities in this world of remembered deities. At the end of All Souls Day the souls of the dead have departed and we are left only with the earth and the blackbird's song: the supernatural world in only a sonic manifestation.

It is notable that both poems separately refer to the possibility that both gods and souls of the dead may simply be ideas that respond to human need, and have no concrete existence in themselves.[21] In "Olympia" there are the following lines toward the end of the poem:

Old gods bring new gods
and the old world brings a new one
on the path laid by
each man's need.

In "All Souls' Day" a similar point is made:

Though we need these days
to them they mean nothing.

Perhaps the only purpose of these myths of divinities or souls of the departed is to bring comfort to human beings who suffer a sense of abandonment in this natural world.

[21] cf. Danforth, 1982; Du Boulay, 2009; Håland, 2014.

The haunting melancholy sounds of the yayli tanbur perfectly express the uncertain presence of the gods and spirits who hover around our world, always elusive and intangible. It is their presence that the tanbur seems to convey as it weaves in and out of the lines of poetry. Thus Andrew deliberately chose to make his own reading of the poetry as undramatic as possible – simply reciting the lines in a restrained, meditative but unemotional manner. The emotional charge in the performance was to be conveyed by the musical accompaniment which thus gives expression to the profound feelings both poems allude to.

4.3 Preparation and analytic course

The joint performance was composed along the two axes of time and intensity and the two collaborators worked towards locating the appropriate points of alternation between word and sound, thus triggering consecutive sections of emotional experience. Departing from the concepts of connotation and togetherness of music and lyrics, which can also be traced in other examples of makam-oriented symbolism, as in the works of Kemal Batanay (Karadeniz, 2019), we strived to create an intermediate space between music and text and allow the audience to find multiple entries into the emotional process offered by Gotis' poetry.

First we read the poems in Greek, so as to get a grip of the content as well as the rhythmic and structural elements of the verse and then we focused exclusively on the English translation in order to identify the movement of the emotional intensity of each poem. After identifying the overall emotional curve, we then broke down each poem into smaller entities, so as to render this curve legible to the audience through an interchange between recitation and musical improvisation.

If the recitation of poetry alone engaged the audience in a sentimental curve, we found that the addition of music could potentially intensify this curve and create both the precondition of a fuller immersion into the performative experience as well as a subtle layer of narration regarding

the content and progress of the poetic imagery - an alternative and multisensory storytelling device.

The main element that the sound added to the reading of the poems is a melismatic kinship with the cultural texture of the lyrics with the employment of makams and the instrument yayli tanbur on the one hand, and an emotional navigation of the audience on the other hand. We paid special attention to keep the duration and intensity of the performance at a level that would not manipulate, or drive the listener swiftly to a state of exaltation; equally, we struggled not to create a guided hearing that would predefine the audience's perception and experience. Our goal was to provide different listening entry points into our understanding of Gotis' poetry, while remaining tuned to the movement of the poems' intensity.

4.4 Performance Context

The fact that this staging of the poems was generated in the context of a conference, and not a musical performance per se, had an impact on the reflexive character of the process. Being aware that we would at some point engage in a discussion with the audience, and other musicians and/or academics, we paid particular attention to keeping track of our own emotional ruminations and to recording our mutual analytic process. Moreover, the fact that the performance would take place online and the two performers would not be physically present in the same place made us think about the physical space that each of us would occupy and the material surroundings of the performance.[22] Drawing concepts from the work on online collaborative learning, we staged our joint effort according to the model of a community of inquiry (Annand, 2011), which is based on

[22] Taking into account the technical limitations of a live zoom recording (such as the automatic prioritization of the louder sound over the rest of the speakers, the over-compression of the sound and its consequence on the limitation of dynamic range and the delay between the two performers' interaction, it is also worth noting that there was a process that followed the live online performance, during which Michalis Cholevas recorded a mixed stereo channel and he later edited to clean up the sound and add depth (reverb) and equalization to the performance.

mutual respect, trust and commitment to a common goal, but without sacrificing the autonomy and individuality of participants, and we attempted to enhance the component of 'social presence' that is paramount in this approach. For example, Michalis Cholevas' choice to record in a living room filled with icons of etchings of orthodox saints (oeuvres of the celebrated engraver Giannis Gourzis), in a candle-lit room in a notably evocative atmosphere, aimed at enhancing his emotional preparation and attain fuller immersion into the process of improvisation. Attending to the matching of the two performers' physical surroundings and ambiance we attempted to minimize geographical distance between London (UK) and Athens (Greece) and forge a notional space that coincided more with the atmosphere of the poem and its long notional genealogies and less with the "actual" material spaces that the performance set off. In this sense, it could be argued that the pursued intersubjectivity of this specific performance is inscribed in recent discussions about performativity, denoting all "the describable and analyzable aspects of a performer's or group's competence or accomplishment while performing, including the sounds, movements, and gestures that the artist(s) produce (Kartomi, 2014).

In addition, the selection of *πρώτος ήχος* (makam Huseyni) as the soundscape for the poem "Easter at Olympia" was intentional so as to express the connecting lines that Michalis Cholevas drew between the poem and his own experiences and memories from the Easter period in Greece, echoing the orthodox hymns of Good Friday, the epitaph mourning hymn *Η ζωή εν τάφω* and other musical tokens of what Delaney terms the efficacy of an 'embracing context', when referring to the cultural potency of religion, even among self-proclaimed agnostics, in cultures where religiosity and national ideology often overlap (Delaney, 1991).

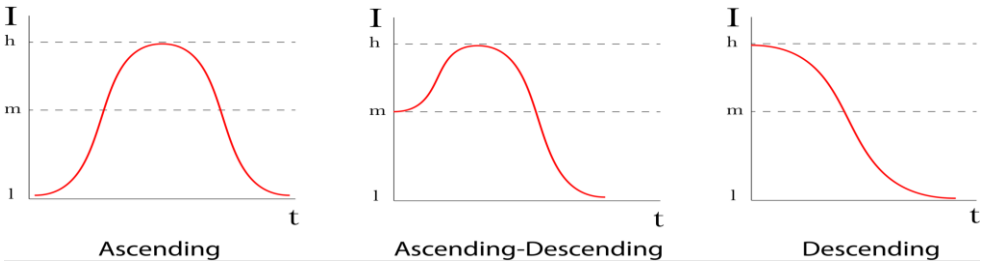
4.5 Crafting Melodic Promenades

The concept of movement was paramount in preparing for the improvisation in two distinct ways. The poems and their recitation were emotionally moving on their own standing and our intention was to trace the unfolding of this particular motion in each poem. Equally, we acknowledged the movement of each makam seyir. We found that the interaction between music and verse allowed for a subtle subtext to emerge, on the basis of a mutual complementarity and not just a musical "illustration" of the reading. The specific makams were deliberately selected by Michalis on account of their customary melismatic unfolding (Öztürk 2018a). The aim was to use the inherent emotive properties of each seyir, both in the sense of its sound color as well as its particular movement, intervallic structure and its corresponding melodic gravity properties.

In the makam tradition, largely developed in the Ottoman empire and maintaining powerful affinities with arabic *maqams* and byzantine *ήχοι*, there are three predominant shapes of melodic development found in the melodic shape of both compositions and taksim (improvisation) performances: a) ascending, b) ascending-descending, c) descending (Figure 4.1).

Figure 4.1.

Three types of melodic development (seyir) in makam modes directly rendered as intensity



An interesting common property of those melodic development curves is that their epilogue is always on the bottom of the pitch range. “What goes up must come down”, that is to say that the audience should depart with a feeling of gratification but not over-excited.

These three types describe the pitch range and direction (the horizontal axis corresponds to time and the vertical to pitch). Since the character of this musical genre is heterophonic and the range of melody is limited to 1-2,5 octaves, melodic direction and distribution play a significant role in the organization of music phrases into a full piece. With no harmony to create vertical alternations of dissonance and consonance, music uses melodic mechanisms to generate movement: the buildup of phrases which explore small sub-octave structures, interwoven in an elegant manner (the emotional continuity through slow and gradual modulations in makam structures is an important prerequisite of the style). The slow exploration of a limited amount of pitches through the seyir constitutes the backbone of music storytelling. In that limited span, the top part of the range usually signals high intensity while phrasing in the low end of the makam pitch spectrum marks the preparation for a conclusion. Although other elements such as dynamics, speed, ornamentation, dynamic pitches and articulation play a role in the creation of melodic gravity, phasing and its direction are the main factors of melodic development.

Therefore, the choices that informed our performance were made on the basis of our position that the function of modal microtonality in makam music, with its strong affinities with Byzantine music traditions (including the dominant and celebrated ones as well as those historically and culturally obscured), greatly coincides with the affective impact of Gotis’ poems. Nonetheless, there were evident differences in the ways that we approached the performance of each poem, allowing for the liberty that is inherent in the contingent genre of makam taksim.

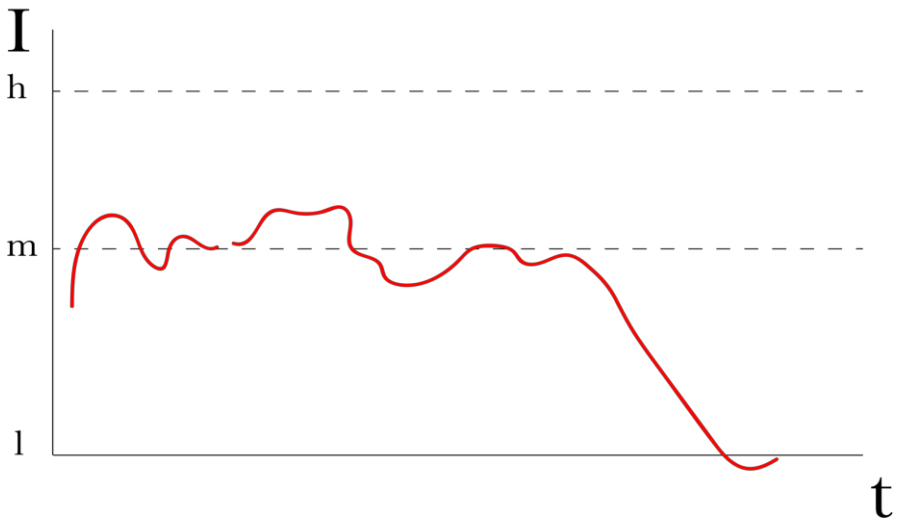
4.6 Distinctive Intensity Curves I: Easter at Olympia

In the case of “Easter at Olympia”, the music has a rather principal role at the beginning of the performance and the introductory improvisation is intended to a) introduce the soundscape of the specific makam (Huseyni) and convey the atmosphere of the first stanzas of the poem in their powerful iconography of Mediterranean springtime, which coincides with the Easter period; and b) lay the groundwork for Andrew Watson’s recitation and prepare the audience for the emotional route that the poem foregrounds. According to the analytical process described above, the overall curve of the poem was identified and a suitable structure of the music performed was generated.

Following these steps, a flexible sequence was defined, which, much like the seyir, would pave the way for the unfolding of the improvisation. Note in this example how the first phrase introduces the middle and low tonal part with the intention to bring Andrew Watson to the lower part of the emotional curve for the beginning of the recitation of the poem, in accordance with the Ascending-Descending character of Makam Huseyni (Figure 4.2).

Figure 4.2.

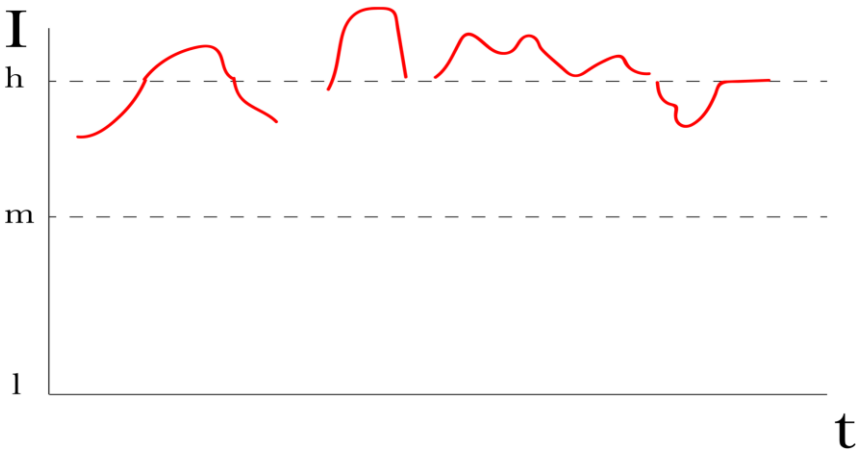
Introductory musical phrase for “Easter at Olympia”



The second phrase moves the intensity to the highest part of the spectrum, in an attempt to capture the high intensity of what the performers identified as a point of great emotional and imagery concentration in this particular poem (Figure 4.3).

Figure 4.3.

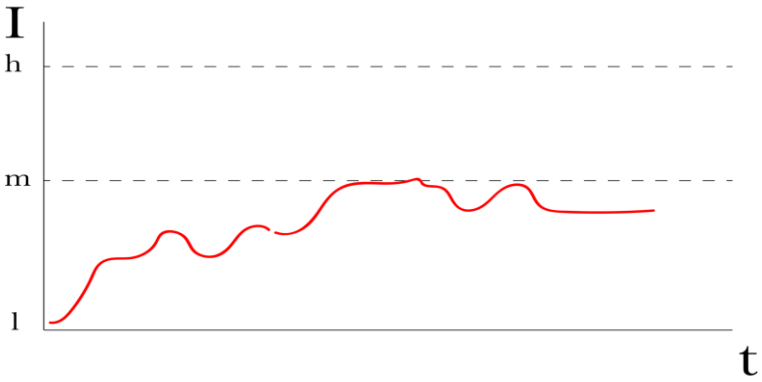
Second musical phrase for "Easter at Olympia"



The second phrase is followed by an interplay between poetry and music, signifying a need for the voice and the taksim soundscape to coexist in a common aural space. The third yayli tanbur phrase is maintaining that middle level of intensity and prepares for the elevation that follows immediately after (Figure 4.4).

Figure 4.4

Third musical phrase for "Easter at Olympia"

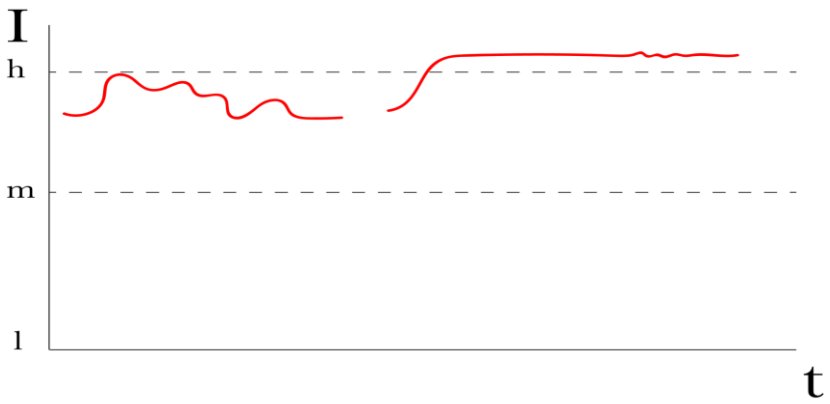


Here the performers try to accentuate the phrase "raise them [the gods] up onto the pediment in the sky", so the intensity curve gradually ascends

and stays up resonating with the poem's iconography with the 4th phrase (Figure 4.5).

Figure 4.5.

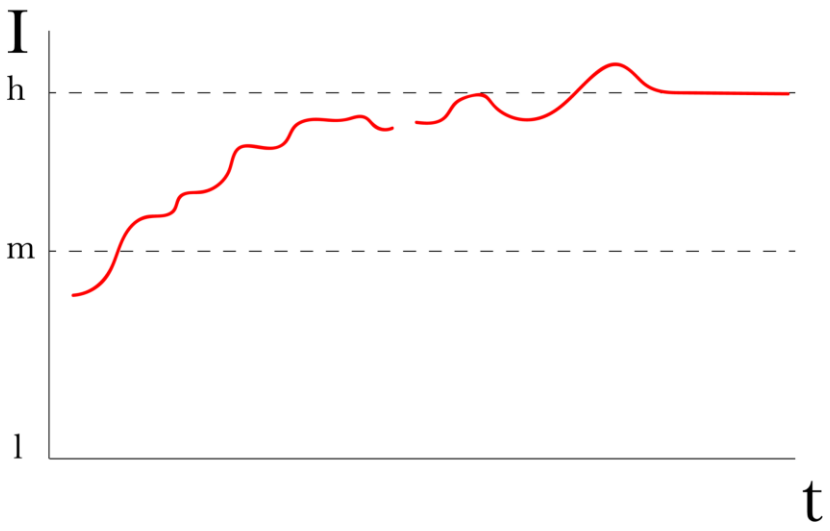
Fourth musical phrase for "Easter at Olympia"



The following phrase is a half cadence on the highest part of the spectrum, sustaining the intensity from the previous one (Figure 4.6).

Figure 4.6

Fifth musical phrase for "Easter at Olympia"

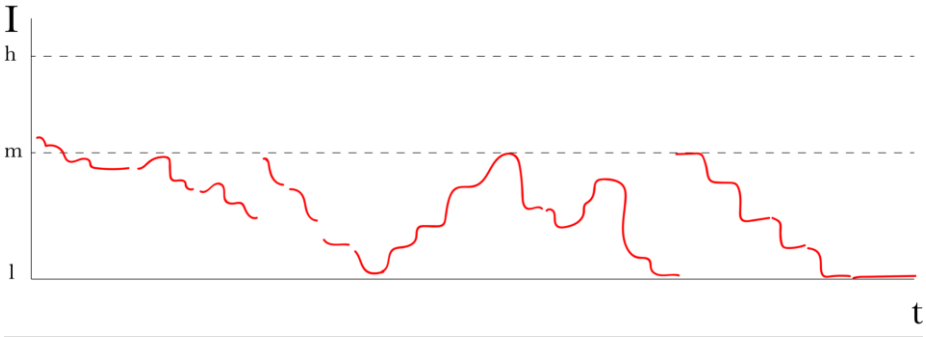


The concluding phrase is performed in order to prepare for the closing with a feeling of relaxation, even relief and regeneration, as the last

stanzas imply, and therefore the music is gradually descending to the tonic, the lowest part of the intensity curve (Figure 4.7).

Figure 4.7

Concluding musical phrase for "Easter at Olympia"



4.7 Distinctive Intensity Curves II: All Souls' Day

In the performance of the poem "All Souls' Day", we have a clear antiphony between musical sound and language, which results in a dialogical form wherein one sound form enhances the content of the other in a climactic sequence. It is worth noting that the length of phrases was carefully attended to; musical phrases were large enough to introduce a certain feeling, but no larger, to avoid breaking the sense of continuity in Andrew Watson's recitation.

In this performance the short opening musical phrase sets the tone for the verbal narration with a gentle introduction that remains in the background; the taksim stays present in the background and intensifies the experience of the listener through a gradual ascendance. In the intervals between verses or large pauses that the staged narration allows for, it is the yayli tanbur that occupies a leading role. This dialogue marks the transition from a gradual culmination towards a tranquil closure, which enfolds the completing stanzas of the poem.

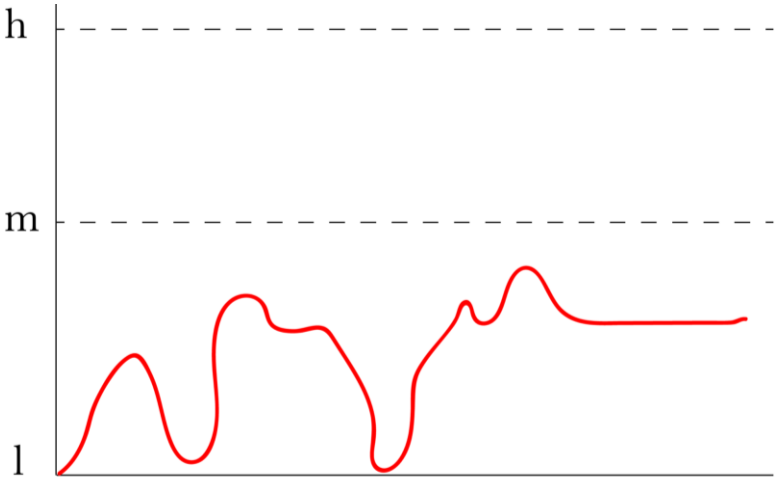
In this case, Makam Segah is in Michalis' view a bridge between the two large makam families, diatonic and chromatic (Cholevas, 2014) which

constitute two seemingly distinct families of colors. Depending on the use of its intervals it can convey the feelings of a bright music color or it can transmit the power of a dark and strong one. Moreover, its ascending character offers the possibility of a musical journey with equally ascending and descending parts. This fluctuating element and the ability of Segah's character to function as a pontifex between distant entities resembles the connection between the living and the dead, which felt like a suitable choice for the specific theme. The route we followed for this recitation is indicated in the following graphic representations.

Specifically, the opening phrase had the intention to set a suspended mysterious feeling that leaves a lot to the listener's imagination, introducing the main gravitational center of the section's mood (Figure 4.8).

Figure 4.8

Opening musical phrase "All Souls'' Day"



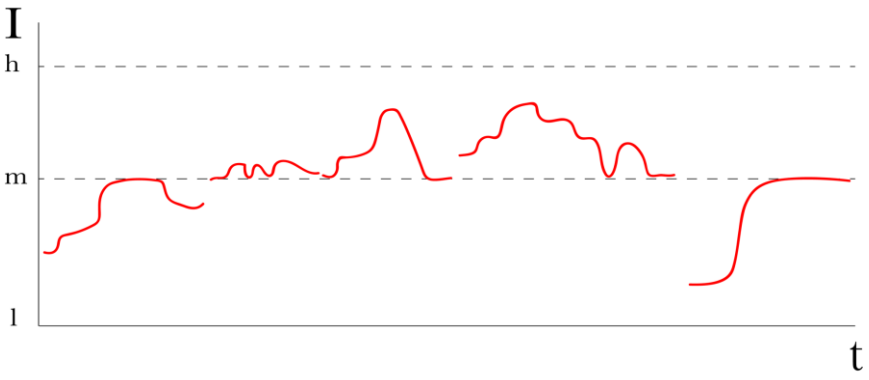
The two performers decided to keep music in a supporting role on the recitation of the first paragraph so as to keep the emotional mystifying sense of the Segah flavour and prioritize the verse.

The second phrase of the yayli tanbur ("reconciled with them"), a connection between the 1st and 2nd verse of the poem, moves to the middle area of Segah, signaling a brighter color and a raise of intensity

both because of higher pitch as well as due to the use of softer intervals (Cholevas, 2014) (Figure 4.9).

Figure 4.9

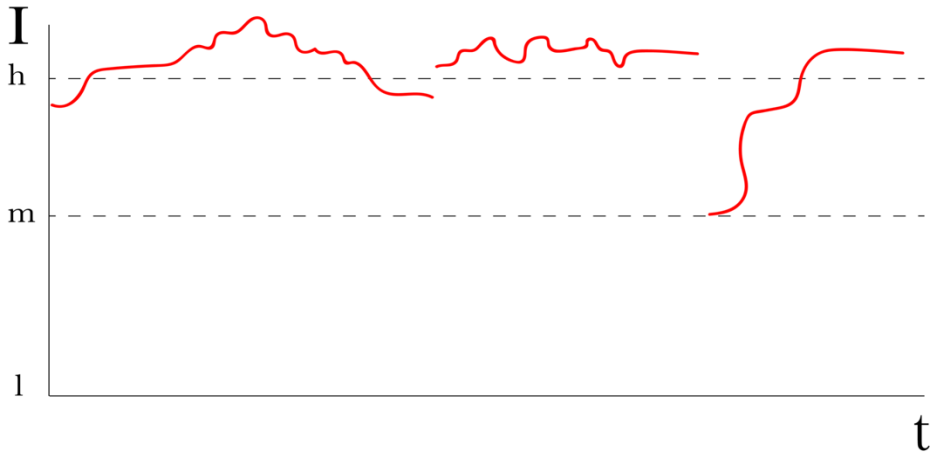
Second musical phrase for "All Souls'' Day"



As in the case before the second phrase, a similar decision was made here to keep the music involved in the performance, discreetly commenting and supporting the recitation of Andrew Watson and prepare the audience for a climax (Figure 4.10). The line "How they endure so much life" was in the performers' point of view the emotional peak of the poem, which was thus supported by a melodic movement on the upper part of the Segah makam spectrum, an intensification of the phrase in volume and a faster and shorter phrasing.

Figure 4.10

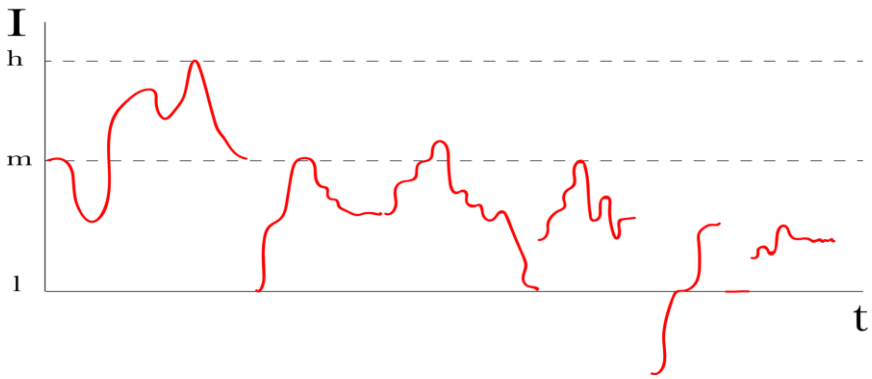
Third musical phrase for "All Souls'' Day"



The yayli tanbur stayed involved performing on the background of the text and preparing the conclusion by descending from the upper part of the mode to the middle part. The last words recited by Andrew “In our dream the earth, only the earth and the blackbird’s song” signaled the final musical conclusion and the return to the base of the makam, closing the ascending form of makam’s route and fading away with the intention to leave the audience with a feeling of emotional exaltation (Figure 4.11).

Figure 4.11

Fourth musical phrase for “All Souls’’ Day”



In comparing the performance of the two poems one may discern the differences in the choice of sound color, the decision around intervals and coexistence of recitation and music improvisation as well a notable contrast between intensity movement. However, the preparation of both recitations was perceived by the performers as a whole, one that is marked by the unifying element of Gotis poetic landscape, as combined and imprinted on the soundscape of diachronic Eastern Mediterranean music dialects, which are strongly influenced by practices of improvisation, melodic and poetic combination and a powerful appeal to the audience’s imagination.

4.8 Tracing affinities in performative ways

Applying the repertoire of a practice-based makam toolbox on the poetry of Giorgos Gotis, our intention in this discussion has been was to illustrate the dialogue that emerged between the two performers during preparation and make it evident “onstage” as a reciprocal exchange between two expressive forms. Building on recent research regarding the ways that emotions can be communicated via musical structure (Juslin & Sloboda 2011), our performance was an attempt to create an environment for the emotional influence of the listeners (Jones, Kokotsaki & Cholevas, 2016) basing our choices on the appropriate sound stimuli (Eerola & Vuoskoski, 2012) which we found was in this case paradigmatically animated by the instrument yayli tanbur.

Our expressive choices and the development of the performance have been informed by a genealogy of cultural elements, which we have found to be commonly evident in the poetry of Giorgos Gotis, in its forceful depiction of mundane ritual and local cosmology, and also imbued in the Makam music tradition, which sprung from the amalgam of music practices of the Eastern Mediterranean region. The work of Valiavitcharska on the Byzantine and Old Church Slavonic rhetoric rhythm has recently brought to light the profound properties of sound and rhythm, challenging the entrenched separation between content and style and emphasizing the role of rhythm as a tool of invention and a means of creating shared emotional experience (Valiavitcharska, 2013). Along the same lines, McGuckin has demonstrated the pivotal role of poetry and music Christian Spirituality in Byzantium and the East Mediterranean. As he notes in reference to the Syrian style of poetic rhetoric vis-à-vis the Christian liturgical tradition in the case of Romanos the Melodist:

> It was not expected that a doctrine should be “proved” by a logical linear method; rather, that it should be circled around in poetry and music, until such time as the heart of the performer and hearer had

> been “seduced” into an apprehension of the mysteries that were depicted in the narrative. This “entering into” the mystery could only be done by empathy and affectivity, not by will or mental effort (McGuckin 2005).

In an effort to retrace these deeply grounded traditions of recitation, immersion and performance, our contribution lies on the merging of modern-day poetry with makam taksim (improvisation) performance and the forging of an analytic attitude that does justice to both the iconography and the emotional unfolding of the poems, while employing the melismatic and affective characteristics of Eastern Mediterranean musical routes. In this respect, our work marks an effort to stage an online performance by highlighting an artistic but also a cultural stance that supports the joint properties of music and poetry, as they have traversed historical time and geographical space in what is broadly seen as one of the multiple renderings of byzantine tropes. By prioritizing the emotive characteristics of the seyir, and combining the intensity curves with poetic narration, we have sought to performatively demonstrate that Eastern Mediterranean music is not necessarily determined by ideological and geopolitical historical constructions that remain mutually exclusive (such as Ottoman Empire, Byzantium, Arabic world) but might well be construed as a melodic and affective ‘promenade’ that maintains to this day affinities with multiple traditions and historical eras.

The graphic rendering of the music phrases presented in this chapter were directly adopted from chapter two. The next chapter is elaborating on the concept of graphic rendering of melismatic music, the addition of graphic layers for different purposes of the analysis and presentation and the educational value of the graphic tools developed.

Chapter 5

Examples of modal music mapping and audio-syncing applications

The first step in solving a problem is recognizing there is one
Will Mcavoy, The Newsroom

5.1 Introduction

In this chapter, a number of applications based on findings of the previous chapters are presented. This set of examples intends to demonstrate a variety of possibilities and solutions the use of audio-score synchronization and graph representations can bring in makam music (as well as other genres') educational purposes. With these examples this research attempts to extend its usability and highlight its value in education. It is my wish and hope that these examples will function as a source of inspiration for teachers and researchers that might find the concept of synchronization and visualizations useful for their educational activities.

5.2 Alternative notation syncing

Although the focus of the videos produced so far is on linking pentagram scores to makam maps, the method is not restricted to it. In this example the melodic contour and its projection over a makam map were added to a double score, using both staff as well as Parasimantiki (byzantine chanting) notations. Although sophisticated and more appropriate for notating modal heterophonic music compared to pentagram notation, *Parasimantiki*, is still a static notational system. The dynamic character of a pitch contour extracted from recordings could be a helpful tool both in teaching and in decoding idiosyncrasies of the specific genre. The melismatic byzantine chanting elements are beautifully rendered with the use of melodic contours.

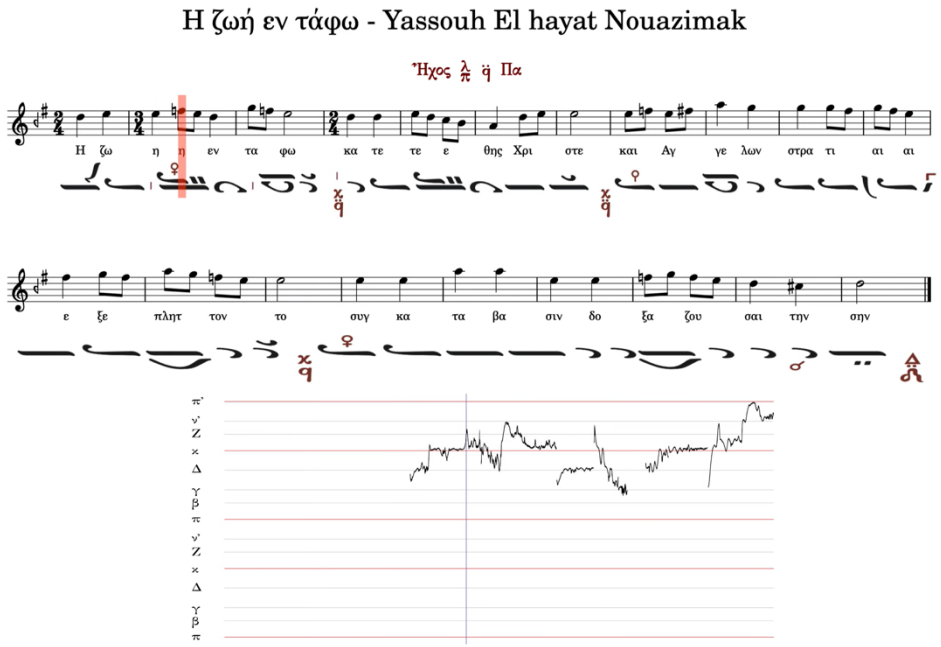
In the following example (Figure 5.2.1 and Video 5.2.1), Nouhad Wadie' Haddad (widely known as Fairuz) sings the byzantine hymn of Great and Holly Friday, *Η ζωή εν τάφω (Yassouh El Hayat Nouazimak)* in both Greek and Arabic languages. The melodic contour depicts her distinctive style in ornamentation, typical for Arabic music but not for interpretations of Byzantine music in Greece's geographical territory.

Video 5.2.1

Synced score and makam map for Η Ζωή εν Τάφω

Figure 5.2.1

Synced score and makam map for Η Ζωή εν Τάφω



On this modal map, the intervals of Byzantine chanting were used (72 moria per octave and intervals of 12 moria = major tone, 10 = neutral second, 8 = great limma, according to the diatonic genre of Byzantine music theory) (Mavroidis, 1993). The names of notes used for the modal map, correspond to the byzantine system as well. The verses in Arabic were transcribed by Yosef Khalifa, master student at Rotterdam Conservatory.

5.3. Melodic contours from Polyphonic modal compositions

Until this point, all melodic contours projected on makam maps belong to different makam tradition (with the focus on taksims and compositions from the classical Ottoman music repertoire). In this example, the composition is not only modal but polyphonic as well. The educational purpose behind the rendering a polyphonic performance was to discuss melodic interweaving and arranging in contemporary modal music. In this example, *Inception* performed by Lingua Franca Ensemble, each instrument presents a different melodic line and a multi-layered melodic contour representation could be helpful in demonstrating melodic function and movement. The access to all individual recorded tracks allowed the extraction of melodic contours for all instruments, each one rendered in distinct color and shape. The five videos (for percussion, oud, tarhu, violin and ney in order of appearance) were mixed together on a video editing program into one file (Video 5.3.1).

Video 5.3.1

Lingua Franca Ensemble, performing Inception by Giannis Koutis

In Figure 5.3.1 Percussion introduces the composition and is presented with red bubbles,

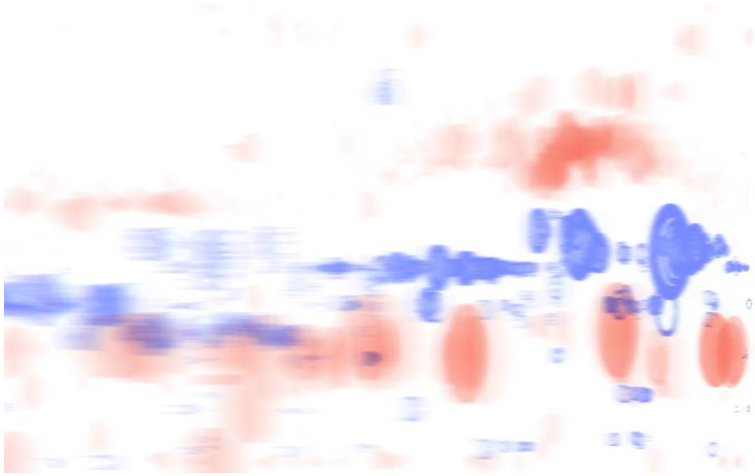
Figure 5.3.1

Percussion (red bubbles)

Which is directly followed by the oud, introduced with an improvised melody and its melodic contour presented in blue onion rings Figure (5.3.2).

Figure 5.3.2

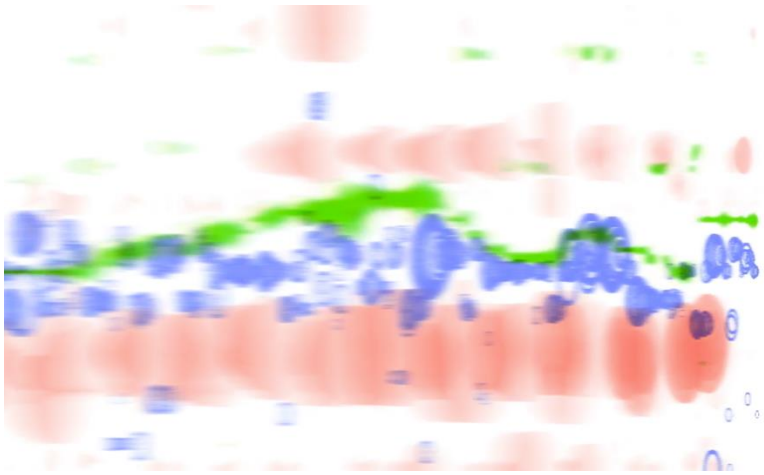
Oud sound rendered as blue onion rings



After the exposition of the first theme, Tarhu is performing another melodic line on the repetition of the first them, and is presented here with a green line (Figure 5.3.3).

Figure 5.3.3

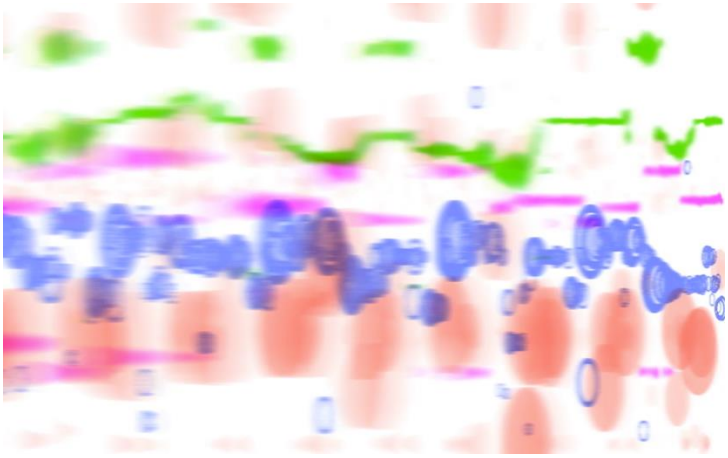
Tarhu sound rendered as a green melodic contour



On the second theme the Violin is introduced and is depicted with a purple melodic contour (Figure 5.3.4).

Figure 5.3.4

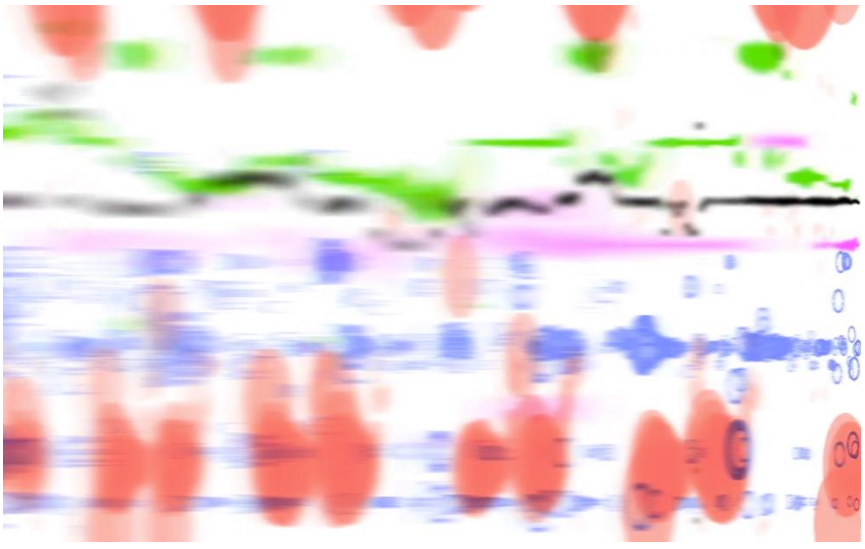
Violin sound rendered as a purple melodic contour



Finally, Ney appears in the recording with a modal improvisation and it is projected over the rest of the melodic lines, marked with a black melodic contour (Figure 5.3.5).

Figure 5.3.5

Ney sound rendered as a black melodic contour



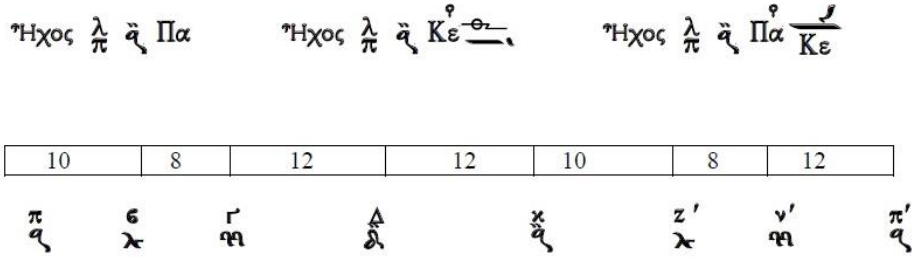
The focus of this representation was to present contrasting melodic movement and the function of arrangement of polyphonic modal compositions rather than a precise pitch movement registration. For that reason, the modal map intervallic lines were omitted as a layer and instead, distinct colors or shapes were introduced for each instrument. An additional layer of information in this representation is the width of the shape which corresponds to the intensity (volume) of the sound, the wider the shapes on the vertical axis, the louder the sounds of the instruments. Although the horizontal axis corresponds to time and the vertical to pitch (logarithmically) and, furthermore the intensity is layered, I consider this representation more of an artifact and less of a precision tool. It has functioned and helpful as a visual basis for the discussion of melodic movement in polyphonic modal compositions for music student audiences, and less of a solid basis for theoretical discourses over style and idiosyncrasy.

5.4 Implementation of byzantine style scale steps in commas

In Byzantine chanting music notation, the scale of each mode is shown with the corresponding intervals of the notes (phthongoi), and their signs (martyriai), as in the following example where *Ήχος πλάγιος του Πρώτου* (plagal first mode) is shown (Figure 5.4.1).

Figure 5.4.1

Martyria and phthongoi of byzantine mode Ήχος πλάγιος του Πρώτου (plagal first mode)



(Image source: the byzantine music blog

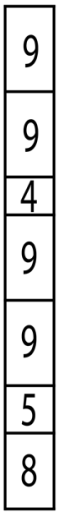
http://ymnous.blogspot.com/2012/02/blog-post_29.html)

After introducing and discussing the concept of makam maps on the previous chapters and after receiving feedback from students on makam maps during the last year, it became clear that, especially for newcomers, the concept of horizontal lines was not clearly demonstrating the intervallic structure of the mode. Although descriptions have been added with text to each video, users would rarely jump to the description box. Trying to increase the usability of makam maps, the idea of implementing the shape of the scale as used in byzantine music, with intervals presented with numbers, emerged.

Since makam maps use the vertical axis for pitch in a logarithmic scale, the lines of intervals were created and rotated 90 degrees. On the following example the scale of makam Uşşâk is presented with its corresponding (theoretical) steps of the scale (Figure 5.4.1).

Figure 5.4.2

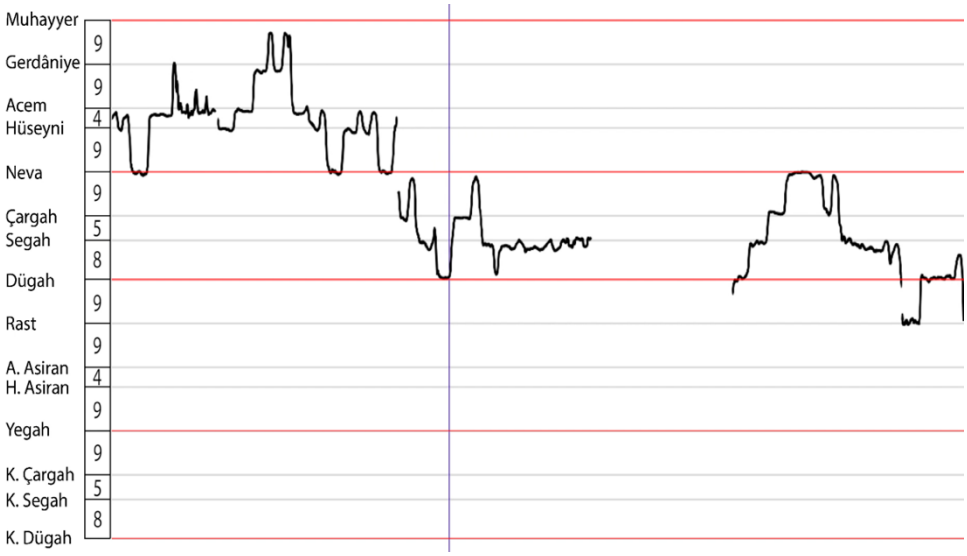
intervals scale makam Uşşâk



and in the following figure, the scale (with commas for each step) has been added to the makam map of the Uşşâk taksim by Kudsi Ergüner, between the curve and the note names (Figure 5.4.3)

Figure 5.4.3

Scale intervals added with a bar next to note names



and the following link contains the full video with the bar of scale intervals added to the makam map (Video 5.4.1)

Video 5.4.1

Video example scale intervals added to makam map on

Kudsi Ergüner's taksim on makam Uşşâk)

5.5 Syncing long rhythmic cycles of classical compositional forms

The largest part of the repertoire of classical music of the Ottoman period, is based on compositional forms whose backbone are long rhythmic cycles.

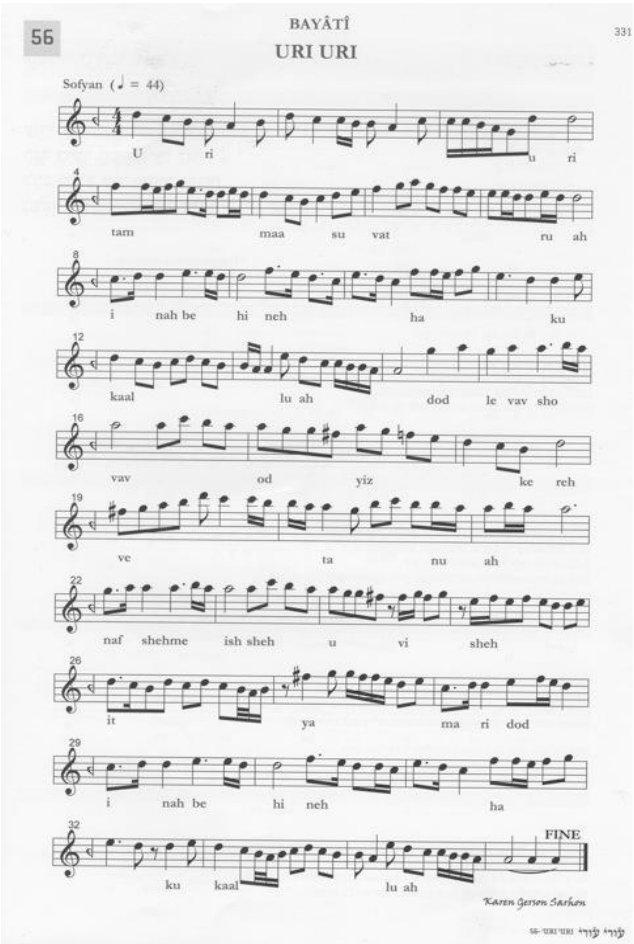
Until recently, those compositions were transcribed on pentagram notation, neglecting the skeleton of the rhythmic cycle, probably because of the limitations of notation software or due to the complications and the degree of difficulty that brings along or even the lack of knowledge of the transcriber when it comes to compositional forms and rhythmic cycles. Since lots of these long rhythmic cycles can be divided by four beats (Çenber =24 beats cycle, Devr-i Kebir = 28beats cycle, Hafif, Muhammes and Berefsan = 32 beats cycles and so on), a typical simplification is the transcription of compositions in bars of four beats. That has brought along a number of problems:

a) most of these cycles do not follow a four beats subdivision structure. For instance, Devr-I Kebir can be considered as a 6-4-4 – 6-4-4 structure.
b) following a four beats subdivision incommodes the performer on the domains of phrasing, accentuation and articulation. It doesn't simply camouflage the rhythmic structure but it actually misguides the performer by dictating incorrectly structured phrases.
c) by using four beat structures it is easy to miss parts of the composition that are then excluded in the transcription.
d) contemporary melodic instrument performers, could be educated in the specific repertoire without having any relation to the actual rhythmic cycles on which the melodic lines are based.

All the above - mentioned problems can be found in the score of Uri Uri Beyati Beste by Mose Cordoba and the effects it has brought to the makam community. The following score is the one used as a reference by the community until recently (both in performances and recordings) (Figure 5.5.1).

Figure 5.5.1

Score in use for Uri Uri Beyati Beste



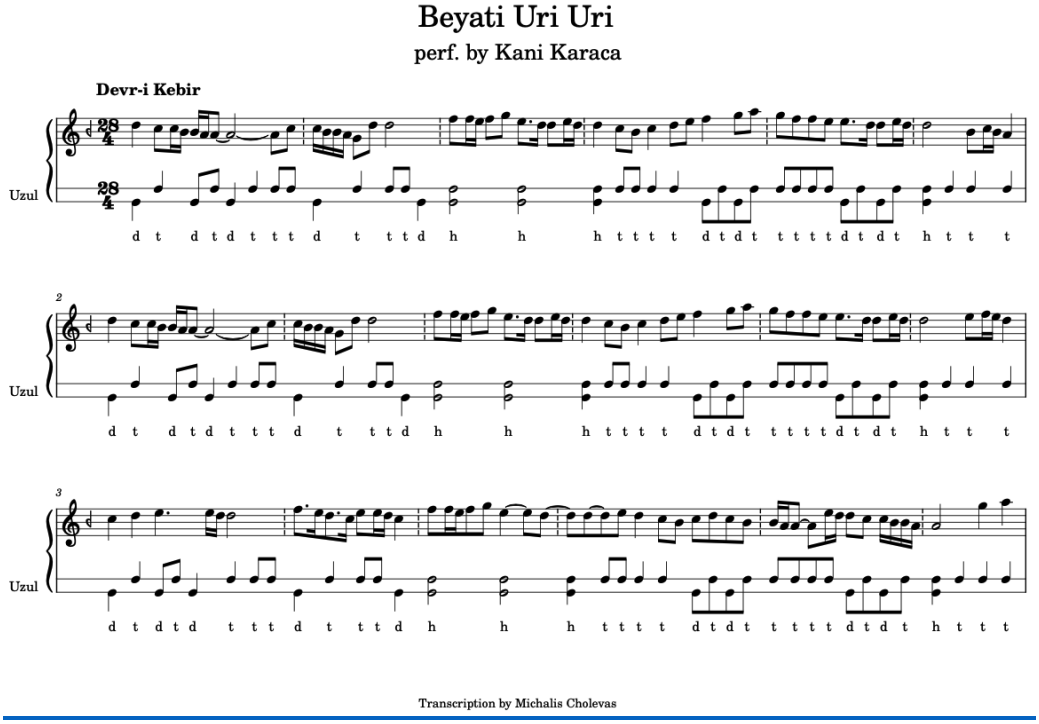
Not only the cycle is mentioned as Sofyan in the title but in the system, the melody has been altered to fit in that four-beats bar-cycle.

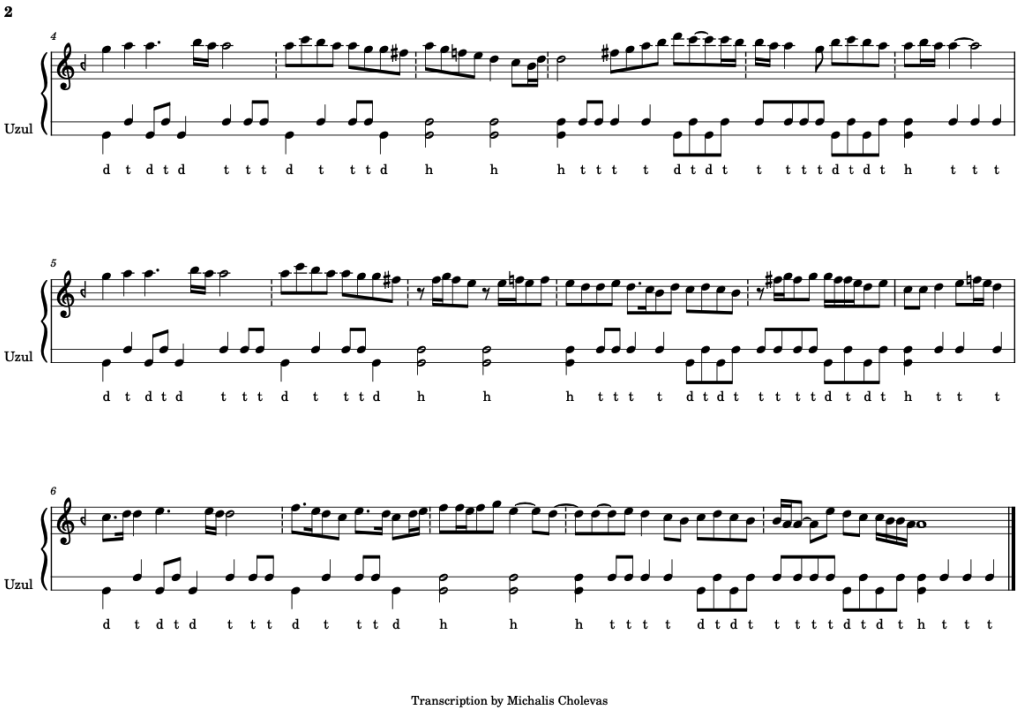
In a recording of the celebrated Turkish singer Kani Karaca, he states that the piece is composed on Devr-i Kebir and he goes on reciting the whole composition by heart (as Kani Karaca was blind, he was famous for the vast size of the repertoire he could recite by heart), keeping the Devr-i Kebir structure clapping his legs with his hands while he sings, and been consequent with the cycle for the whole performance.

In an attempt to bring to the discussion, the differences between the score used and the performance by Kani Karaca, I transcribed the score according to his singing and added the devr-i kebir as an additional layer under the melodic line (Figure 5.5.2)

Figure 5.5.2.

Transcription of Kani Karaca's version of Uri Uri

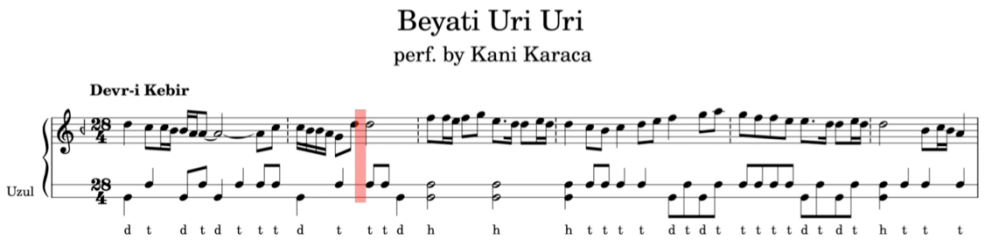




Having completed the transcription, I went on synchronizing it with audio, adding a red cursor that follows the score in real-time (Figure 5.5.3 and Video 5.5.1)

Figure 5.5.3

Uri Uri Audio-score syncing in ianalyse



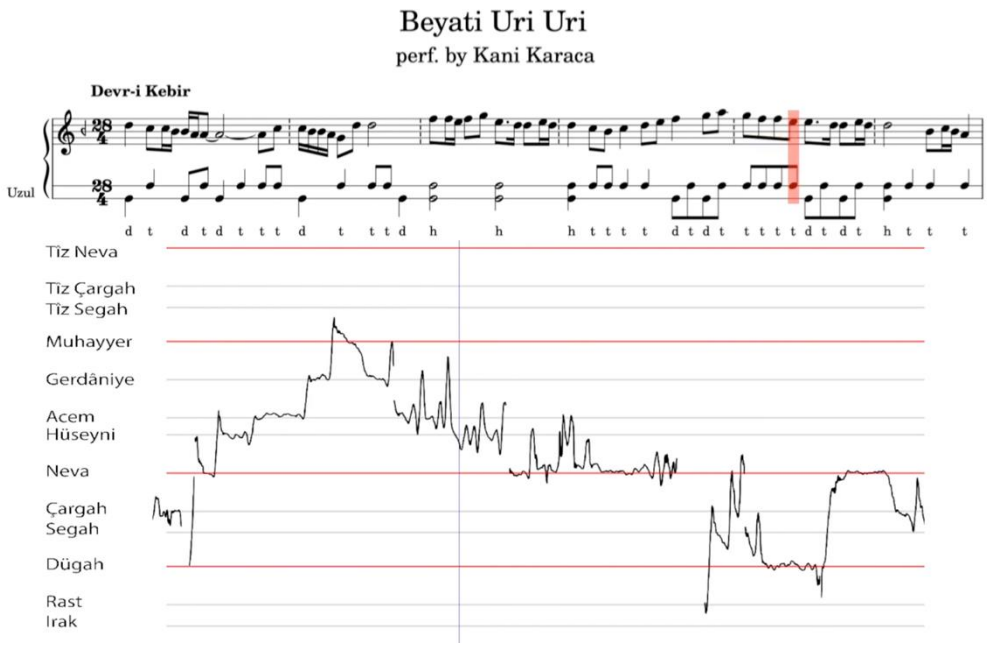
Video 5.5.1

Uri Uri Audio-score syncing in ianalyse

and, finally added the melodic contour projected on the makam map of Beyati intervals and synced and animated that with the score so that both score notation, rhythmic cycle and melodic contour are synced. (Figure 5.5.4 and Video 5.5.2)

Figure 5.5.4

Uri Uri Audio-score and melodic contour on makam map synced



[Video 5.5.2]

Uri Uri Audio-score and melodic contour on makam map synced

5.6 Conclusion

The collection of examples presented in this chapter, is based on the findings and the framework laid in the previous chapters. The intention here was to demonstrate possible directions for extending the toolbox in domains of interest that were not in focus for the main body of this work. Nevertheless, these latest additions although quite recent, have received positive reactions from the makam community via the YouTube channels as well as the social media accounts of Makampedia. The intention is to further extend and apply these developments to more analyses which will allow the use of the database by a gradually growing number of users.

Chapter 6

Discussion - Conclusions - Epilogue

Where you stumble, there lies your treasure

Joseph Campbell

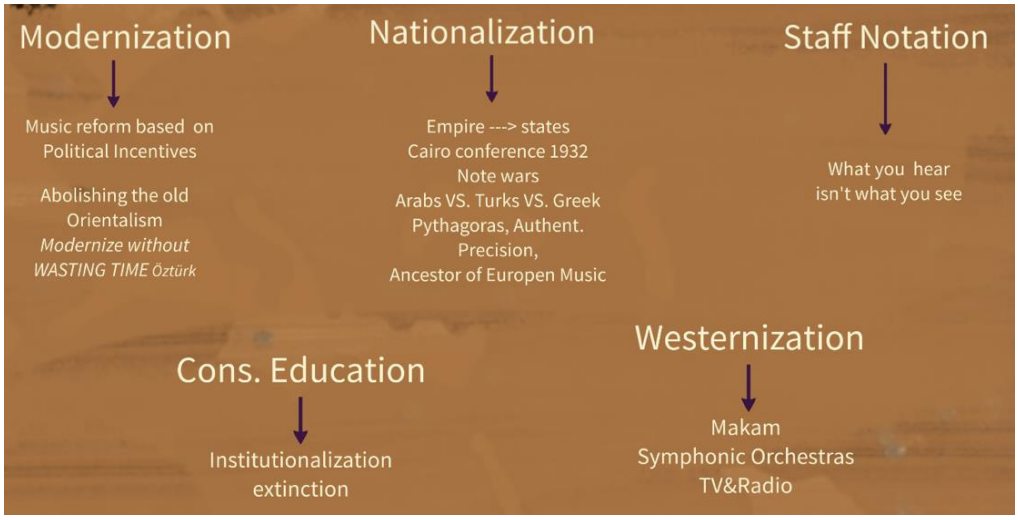
6.1 Discussion

This doctoral dissertation embarked from taksim mastery and reexamined the problematic framework of modern makam theory and education through the prism of praxis. With the combination of manual transcription, analysis, graphic visualizations and the implementation of insights from interviews with celebrated musicians, the work developed tools for educational, performing and research purposes on the makam subject.

The (non-western European) framework of classical and folk makam music traditions, where performer, teacher, composer and improviser are mere facets of an individuals' daily music practice, has been gradually shrinking due to a number of factors. The main factors behind of this reform that is in motion since the 1920s are summarized, to highlight the choice of this research to depart from praxis for its endeavors (Figure 6.1):

Figure 6.1.1

The effect of music reform (based on Modernization, Nationalization, Staff Notation, Conservatory education and Westernization) in the theory and praxis of Makam Music



a) Modernization of the makam theoretical framework was achieved quickly and effectively with the involvement of (non-makam) theoreticians, which were burdened with the task of abolishing the *old practices,* not to better understand the old theories but rather be done with them (Öztürk 2018b). The richness and uniqueness of modal structures were exchanged for a *complex and more natural* than Western equal temperament system (Wright, 1990). Alongside that, the banning of mystical orders such as those of the Mevlevi, the annulment of courts and palaces with the dismantling of the Ottoman empire (Mirmiroglou, 1940) as well as the arrival of recordings (Arnon, 2007), affected the context and function of makam performances.

b) Nationalization was (and still is) a long-term process which utilized effectively the 1932 Arab music conference of Cairo as its spearhead. The newborn states of the *makamistan* area (Turkey, the Arab countries and Greece that emerged after the dismantling of the Ottoman Empire) were invited to the conference and presented national music theories in an attempt to *revive* makam music for the needs (among other agendas) of national identity creation (Öztürk, 2015). The outcome of that conference had radical effects on the hitherto problematic perception of microtonality and its practical applications. From (re)tuning instruments to the formation

of fixed intervals and the scale-oriented conception (Signel, 2002), especially in the environment of contemporary makam education and research, the rigid and static frameworks invented in that period are still the predominant working framework of musical practice and academic level education of makam music today (Öztürk, 2018b).

c) Westernization found virgin soil and was cultivated using the inferiority complex of the *eastern rulers* as its fertilizer. In the words of the patron of the 1932 Conference, King Fu'ad I, "it is hoped that Arab music will reach the degree of refinement and perfection that Western music has reached" (Thomas, 2007). The conducted makam symphonic orchestras that were formed during the first period of the reform, ensured the extinction of the idiomatic and idiosyncratic elements that are forming the character of makam music and which can only flourish in small ensembles (Öztürk 2018b).

d) The character of the institutionalized, goal-oriented **conservatory education**, in combination with the adaptation of **static staff notation** (van den Meer, 2006) and the simultaneous degradation of memory as the music reference were the final blow to the orally transmitted makam tradition (Öztürk, 2015).

The long-lived, ever-shaped classical art form was gobbled by an unfit, static scheme and representation and itt was put in display to be examined only through the eurogenetic prism of orientalism (Öztürk, 2015b).

e) From ***philos-*** to ***-logos***. One more element had a significant role in the direction contemporary makam music theory has taken. The shift from notions such as *philosophy and philology* (philos = love, sophy = wisdom, logos = discourse), literally the *love for wisdom* and the *love for discourse* respectively, to ones such as *anthropology* (the discourse on human) and its derivative, *musicology* (the music discourse), is partially leading the

change. The love about a certain trade and the act of practicing it, has shifted to the discourse on it. Along with the shift from *philos-* to *-logos*, there has been a change of protagonists as well. While, in *philo-* fields, the practitioners are carrying both the trade and the discourse, today they seem to be the missing link of the discourse. Instead, academics from the field of musicology (usually non-practically trained or with a limited background on music practicing), as well as information technology specialists are the ones leading and defining makam theory and its educational discourse.

To emphasize the gap between contemporary theory and praxis the following figure (6.1.2) juxtaposes a number of core elements of makam, its concepts and terminology from the two different angles.

Figure 6.1.2

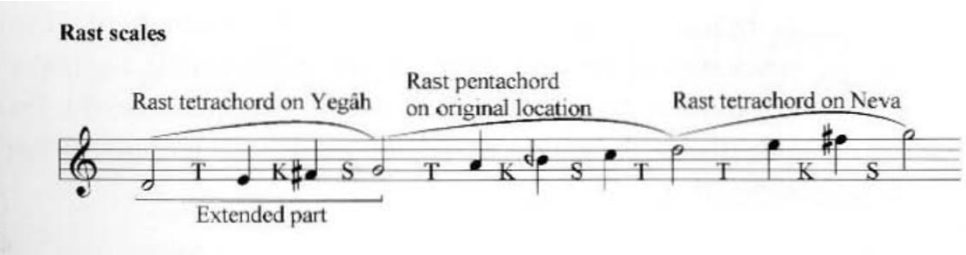
Music characteristics from the aspects of practice-based and theory-based approaches

In the practice of makam, the community uses terms such as flavors or colors (Aydemir, 2010) to describe the character of phrasing and melodic

development within a certain modal context, and depends on music memory (K. Ergüner, personal communication, March 09, 2021) for the performance of compositions and the gradual build-up of the idiom and capacity for improvisation. Theory books approach these flavors as static spans of tri, tetra and pentachords which demonstrate through simple, static, pentagram scores.

Figure 6.1.3

The structure of makam as a combination of n-chords (Aydemir, 2010)



The concept of mode as a melodic map with information on the ingredients of each makam's ethos, such as aspects of pitches hierarchy, flavors, direction, microtonality, pace and case sensitive ornaments, has been compressed (transformed) to the concept of a scale with basic distinction between dominant and secondary degrees. In the words of Tanrikorur (2008) "if a mode is scale plus melodic development, then the scale carries 5% of the melodic information".

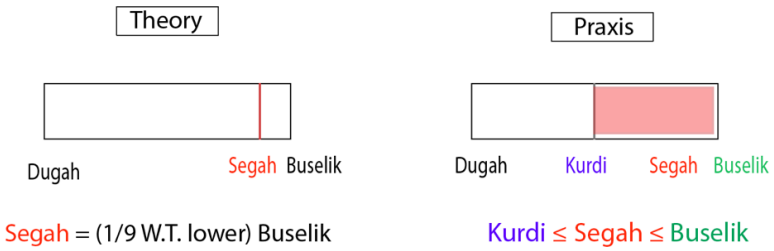
The subject of cycle and its function as the backbone of compositional forms, is another especially important in the musicmaking process of classical makam traditions. The term for composition in Turkish is *beste* means to set, to attach. The poetic concept behind the term is that if a spontaneous melody is set or attached on a fixed (rhythmic) cycle, it becomes a composition! According to K. Ergüner (personal communication, Dec 09, 2021), the old treatises of music in Ottoman

language were titled as *Ilm-I Edwar*, literally *the science of cycles*, highlighting the fact that the rhythmic cycle is the basis for composing music. Contemporary makam theory approaches cycles as a bar or the number of beats in a bar (reference uzulleri).

The notion of microtonality in makam practice-based education has been a dynamic one. Specific pitches of each flavor follow (or signal) melodic movement and melodic gravity, hence, attracted in different directions within boundaries. In contrast with theory which fixes pitches in the makam scale, in practice the position (tuning), articulation and choice of the moment where those pitches will be attracted, are functions of melody and phrasing.

Figure 6.1.4

Microtonality seen from the sides of theory and praxis, fixed pitches vs attraction



As a consequence, intervals are flexible in practice where theory statically fixes them for each makam and flavor.

Moreover, the technical advancement in makam music training is a consequence of music practice. In the master-apprentice model, it is rare that the student would practice technical exercises independently from the music repertoire. Musicians start their training by directly practicing music compositions on their instruments and slowly develop their technical capacity as a result of mimicking and embodying the phrasing character

of the master, prioritizing the slow and organic development of musical idiom. Eurogenetic, theory-based models adapted in contemporary makam education, often approach technical development disconnected from and, in fact, as a prerequisite of music practice.

Finally, the change of context in the performance of ensembles, from small ensembles to larger ones (often conducted symphonic orchestras), removed the element of idiosyncrasy from the performance in an attempt to avoid cacophony. Small ensembles' heterophony gave its place to orchestral monophony and the result is a *tutti*, rigid group performance (resembling symphonic orchestras reciting *Real-book* scores in the case of jazz music), in which musicians lack space and freedom to articulate.

6.2 Conclusions – Contribution to the field

Although the educational context of makam has suffered violent transformations with effects in performance and education, I strongly believe that makam practice holds the solutions to its survival and organic development. In the words of Joseph Campbell "where you stumble, there lies your treasure" (Campbell, 2003). The expanding makam community, the fact that makam masters' generations cultivated in Meşk, are still active, as well as the recent growth of the music-analytical part of scholar education as an addition to makam musicology, offer opportunities to rethink theory and reshape (academic) education through the scope of praxis.

The pillars on which this research was built upon are transcription, analysis, interviews and the approaches of digital humanities. In my point of view, *music example is the vehicle of music education and metaphoric language its gasoline.* Findings of layered analysis of taksim performances, the application of visualizations to highlight and transparently present melismatic, intervallic and rhythmic elements, as well as the insights carried through the metaphorical language of masters,

are combined. Through those, the conducted research aims to highlight the wealth of makam music with a focus on its idiosyncrasy and diversity. The goal is to inspire and make the findings transparent and accessible rather than directly educate, as the studying of this dissertation's findings would be a reactive process and no substitute for the pro-active analysis of material. As one of my enlightened teachers, Dhruba Ghosh mentioned in one of our lessons, "…ease is overestimated, learning the art of music is not easy, but a long, full of challenges, yet enjoyable journey" (D. Ghosh, personal communication, May 15, 2016).

The starting point of this work was led by genuine curiosity and a deep need for further understanding, practicing, comprehending and shedding light on numerous elements of makam performances aspects, using recordings of taksim and makam based performances as a vehicle, setting a course from praxis to theory. In relation to the organization, presentation and usability of the outcome, the principal aim of this research has been to employ approaches of the digital humanities in order to collect and analyze a body of work that often falls outside the mainstream research interest of this area. By compiling makam based recordings and putting them under scrutiny, it is my belief that the project managed to gain and present useful insights into the common, and often concealed, denominators of melismatic and rhythmical properties of taksim and performances.

From a musico-practical point of view, the findings can be divided into two rough categories, time and pitch or temporal and spatial elements. The first two chapters were focused on those elements while chapter three, four and five are generated based on the findings of the first two.

6.2.1 Time

The role of temporal elements such as pulse, rhythm and metricity and their corresponding functions in phrasing has been seldom discussed in the field of performances that are usually discussed as *free-rhythm taksim*. As shown in the following two figures, the transcribed versions of taksim are usually either oversimplified or overcomplex, both obscuring the presence and function of temporality in taksim.

Figure 6.2.1

Transcribing approaches on taksim version 1, rhythmically oversimplified (Aydemir, 2010)

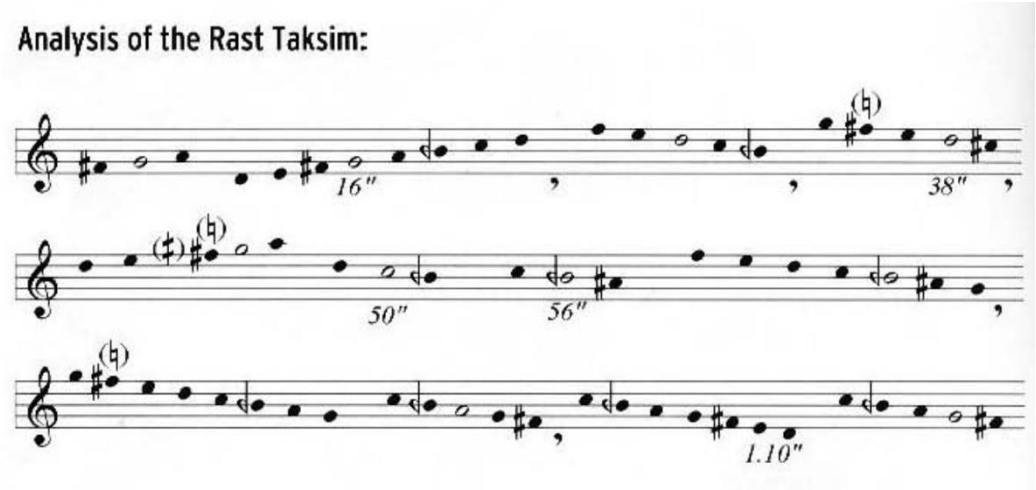
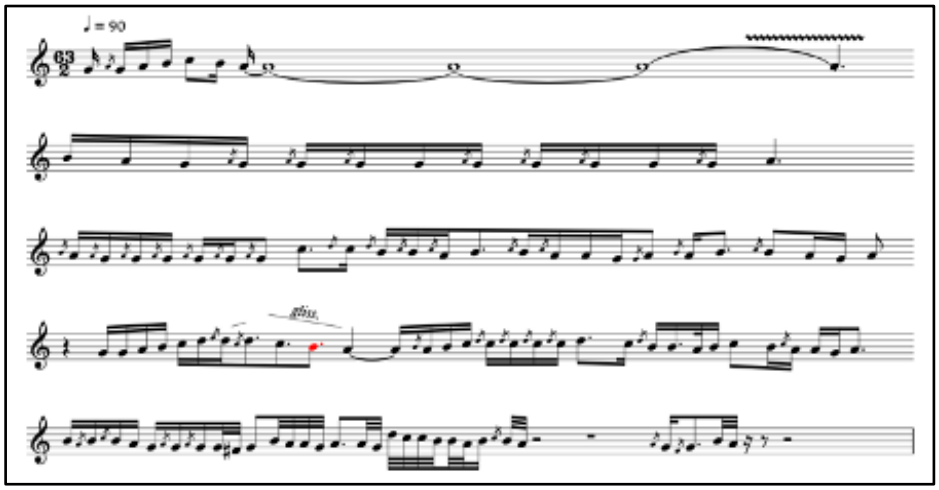


Figure 6.2.2

Transcribing approaches on taksim version 2, rhythmically complex (Cholevas, 2016)



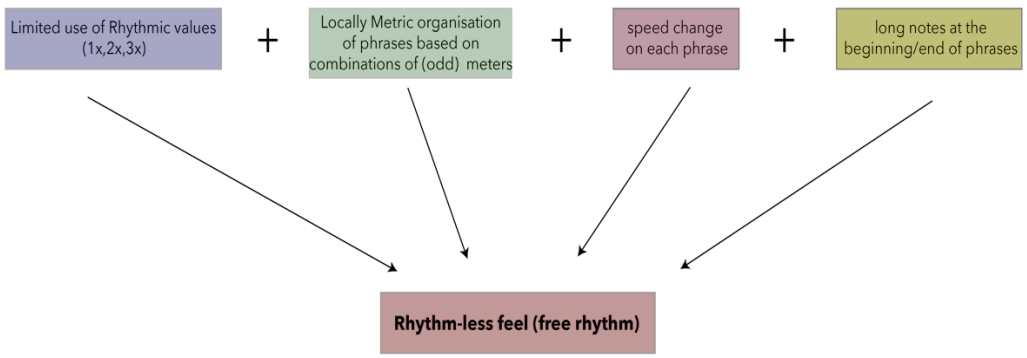
The first chapter was able to shed light in a number of temporal taksim elements and offers a model for the development of articulation and function of rhythmic gravity in the phrasing of taksim.

The thesis supports that the temporal mapping and annotation of phrases offers useful insights on the cloaked rhythmic and metric elements in *rhythm-less* taksim, highlights the aspects and value of rhythmic gravity to the wider discussion of taksim phrasing, the role of temporality in style and idiosyncrasy as well as a toolbox to comprehend it and utilize it for phrases construction, intensification and relaxation.

The *free-rhythm, arhythmical, free* taksim character (Arnon, 2007) is rendered on the basis of pulse, rhythm and locally organized metricity!

Figure 6.2.3

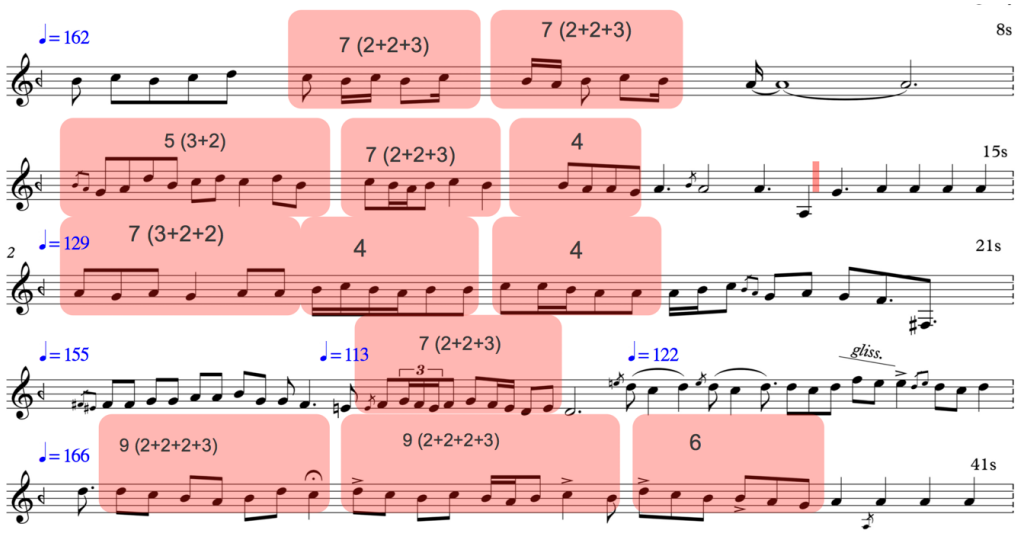
Rhythm-less feel as a combination of temporal elements



The outcome is twofold, on the one hand it offers tools for developing taksim phrases on the basis of temporality and on the other hand it allows a transparent transcription of the temporal aspects of phrasing.

Figure 6.2.4

Annotated, rhythmically and metrically transparent transcription



6.2.2 Pitch and visualizations

The spatial elements of taksim have been diachronically the departing point for makam musicmaking and education. The notion of seyir (melodic promenade) and the use of terms such as melodic development are essential to makam training, both in the traditional and contemporary educational environments. Nevertheless, they are (visually) underrepresented.

A central objective of this thesis has been to address the limited attention that has been diachronically paid to the semiotic constrictions of the western partiture and to try and forge a way to overcome the homogenizing and musically and culturally strict representation it enforces. The research attempts a layered visualization that operates on the unpacking of structure, function, idiosyncrasy, technical and stylistic elements, as well as on the level of cultural appreciation of the specific body of work. As was demonstrated, the approach of layered visualization opens up the score to multiple areas of interest and different degrees of analytical depth, thus enabling the user to navigate the score according to

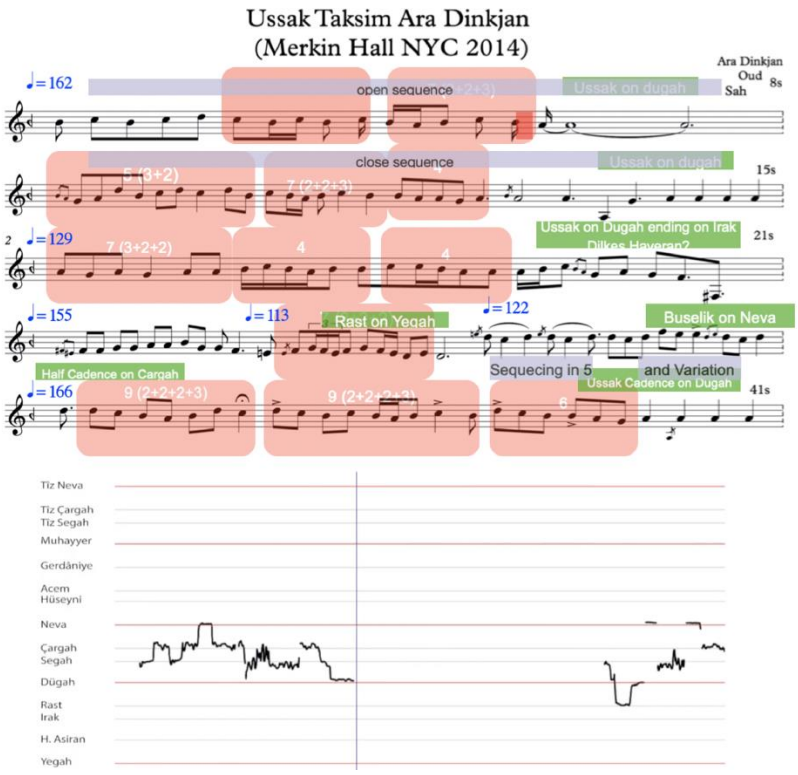
their own individual learning preferences, training requirements and level of expertise.

This allows for a considerable amount of choice on the part of the reader, as they may focus on the desirable level of depth and the number of layers of information, they wish to have access to at any given time, depending on their interest, background and motives for accessing the works. In addition, it raises a set of problematics that is rooted in literary theory and involves the textual layering of meaning and cultural content. Much like the newly-found properties of textual layering, which reconceptualizes textual tradition vis-a-vis contemporary developments, such as the emergence of digital culture, the increasing spectacularization of social life, the renegotiation of historical thinking, and the precarious position of the theoretical humanities within academia (Margaroni et al. 2017), the research at hand seeks to place transcription practices within a larger critique of the history of music and the re/cognition of tailor-made semiotic codes for non-western music cultures. The dissertation proposes that this cannot be achieved through monosemantic and lateral ‘texts’ (including, but not limited to, music scores) but through digitally layered reading surfaces that provide access to differentiated planes of information.
The aforementioned functions have potentially significant implications for the reception and, more importantly, the educational features that surround Makam music today. Making use of the western privileging of vision over the other senses, the approach of this work seeks to subvert the primacy of sight in standard western pentagram. The score system discussed in this paper may also be argued to train the eye -especially the eye imbued in western music score- in fresh semiotic modalities that seek to upset the single-layered reading of the pentagram and render complexity transparent in music notation. One of the most significant features of the proposed approach is the synchronization of sound and image in real time, which is kinesthetically radically different to the static score and the process of locating different sets of information in different

spaces as for example in a book. In contrast to experimental approaches that attempt to challenge the dominant representational paradigm, yet maintain a static representation, on the level of music education this proposition may find its more appreciable application. The unencumbered tuning of eyesight and hearing when reading music score may accelerate grasping, analyzing and re-playing the transcript to a considerable extend, thus enabling not only the quicker and richer access to the various layers of the score but also an immediate recognition/comprehension of its history, context and scope. As Ergüner (K. Ergüner, pers. comm., June 18, 2018) maintains the paramount role of memory that is unique in this tradition is intrinsic to performing and we believe that it ought to be somehow incorporated and visually approximated in the score.

Figure 6.2.5

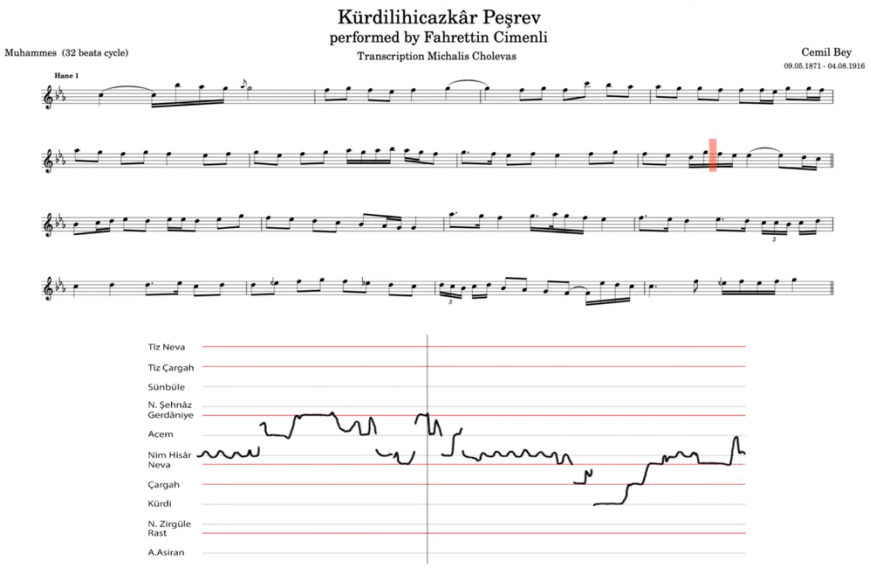
Combination of score, melodic contour and layered annotated visualisations



A key question that arises from the discussion in chapter two is whether the dominance of the semiotic code of the score in contemporary eurogenetic music may be unproblematically applied to other genres, or if an alternative view of the score as a guide might in fact be epistemically and culturally more appropriate. That is to say that the malleability of temporal and melismatic characteristics in Turkish music/Makam are not only omitted from standard transcription but furthermore lead to a historical misunderstanding in obscuring the performative affordances and circumstances of this particular. Drawing a parallel between soft and hard technologies of sound, or their counterpart epistemic paradigms, the present research places emphasis on the visual and semiotic imprint of the cultural histories and the archaeology of knowledge (Foucault 2013 [1969]) imprinted on various score variations. Such moves may hold the potential to challenge the organizing principles (such as the pentagram) by which discourses in different disciplines constituted and regulated themselves. According to Foucualt, the language of discourse would control the practice of the discipline and therefore knowledge in 'the disciplines of man' is never pure but conditioned by power, expressed in specific manifestations in the social practices of the disciplines and their interrelation with disciplinary knowledge.

Figure 6.2.6

Combination of Melodic contour and transcribed score from Fahrettin Çimenli's performance of Kurdilihicazkar Pesrev by Cemil Bey



The very ideology of ‘writing down’ music on a ‘music sheet’ has had grave repercussions in the act of composing, performing and disseminating classical music (Haddon and Potter 2016: 129; Schafer 1976: x) and is well inscribed in a cultural horizon that grands predominance in the written word, in closed immobile forms and in the ensuing requirements of performance. In that sense, framing taksim and makam based compositions in a restricting trope that contradicts its historical and performance-related connotations is not only an unfinished script but, maybe more crucially, a serious misconception of a whole socio-ideological system into an entirely different, and often antagonistic, one.

The approach described here seeks to challenge the criticism that music research in the digital humanities has attended little to socio-cultural context, tradition, history and performance knowledge, focusing instead on the musical score and technical elements (Lam 2012). Through a critical convergence of ‘technical’ elements and cultural-historical accuracy, by viewing the score both as information and as artifact, the proposed thick multi-layered visualization of information might be considered as a visual way of highlighting the relationship between selected pivotal characteristics of taksim performance and Makam’s

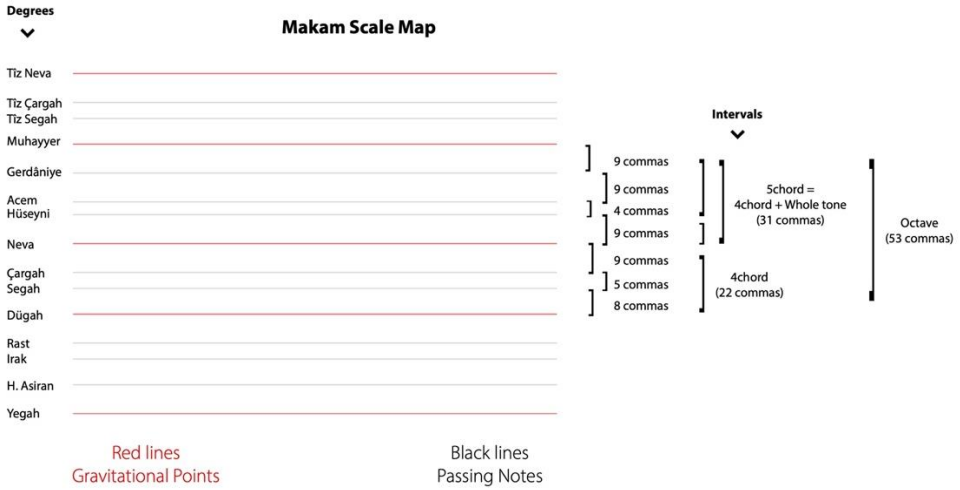
historic genealogy as imprinted in a score that is directed to differently address the teaching of Makam music in contemporary educational settings.

6.2.3 Protocol

In addition, and based on the temporal mapping of taksim elements and the graphic representations generated, the research develops a comprehensive protocol for transcription and analysis that thoroughly explains the methodological input and the innovative approach developed in chapter three. The protocol can generate a number of possibilities for researching in and learning from recordings of taksim masters in the field of Makam music and it was applied on recordings of the twentieth and twenty-first century.

Figure 6.2.7

Protocol for the creation of Makam scale maps as background for melodic contours



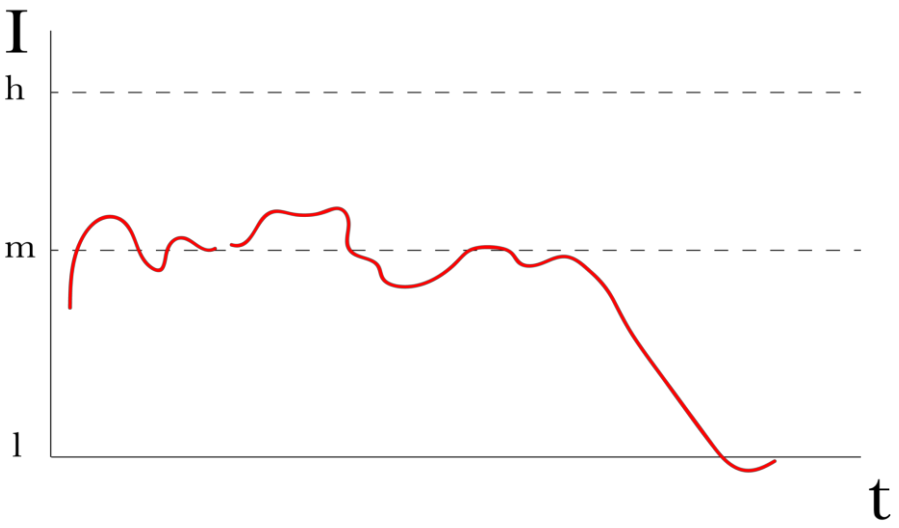
The aim behind its creation is to form a cohesive and consistent tool which different users may use in order to contribute, exchange, reuse transcriptions for further annotations and analysis on various elements of taksim performances. The reusability of the toolbox, will hopefully serve as a basis for the encouragement of colleagues and young researchers and for the further work that is still to be done in the field of registration, transcription and analysis of valuable material for the educational and performing community. The technical description of the transcription and graphic representation complementary score, is presented in the chapter which is compiled in a step-by-step presentation that can be considered as a user manual and, as such, can be directly used. Uniformity, reproducibility and scalability of the building of databases are viewed as the main parameters of importance for the construction of the protocol. As the volume of transcribed and analyzed music will eventually grow, elements of correlation for large data sets processing and comparative analysis will be able to utilize the organized findings of the database.

6.2.4 Affective affinities, seyir as a generator of tension

In chapter four, an example of the affective properties of the taksim analysis is presented, one that illustrates the visual recognition of melismatic movement and the potentially fruitful combination this may have with other forms of artistic expressions as, for example, poetic recital. More specifically, the modality of improvisation and the employment of melodic development (seyir) as an tension generator, is employed in the process of reflecting on the traditions of Late Antiquity and Byzantium in their hybrid character and multicultural exchanges.

Figure 6.2.8

Introductory musical phrase for "Easter at Olympia"



In this conjunction of words and music, the artists attempted to illustrate the underlying performative qualities of poetry and musical (pre-structured) improvisation as it arises from the long and diffused tradition of lands, where the civilization of the ancient worlds was transformed into what we have come to see as the various cultural idioms of Byzantium.

6.2.5 Generalization

Chapter five presents the latest developments of rendering makam based performances in the form of annotated video files, widening the concept of real-time visualizations and the spectrum of applications of the concepts developed and presented on chapters one and two. From the construction of multicolored polyphonic modal performances to alternative notational system syncing and the alignment of long rhythmic cycles to melodic lines, the intention of this chapter is to inspire and encourage possible users in engaging with and creating real time visualized annotations and analysis for their own needs.

Figure 6.2.9

Polyphonic modal composition melodic contours

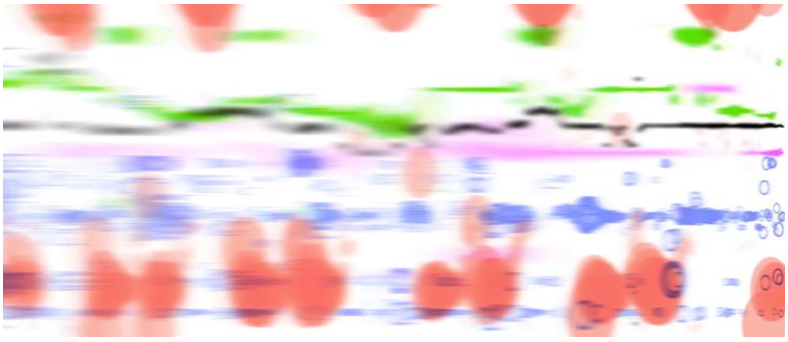
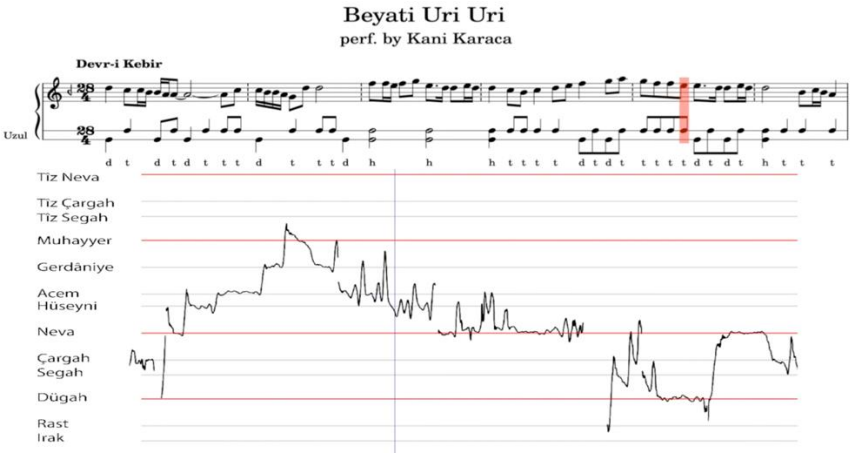


Figure 6.2.10

Rhythmic cycle, pentagram score and melodic contour synced



6.3 Epilogue

My initial motivation to engage in this research, as a musician, a teacher, and an eternal student, was to deepen my understanding of makam phenomena and my performance level in this style, to probe the limits of the field of Makam-related research and to bring it into a productive discussion with contemporary trends in makam theory through the lens and tools of digital humanities. Moving against the grain that sees numerous, often superficial, applications that flourish nowadays, the computer-aided and ethnographically supported analysis proposed by this research project, is one that hopefully encourages cultural sensitivity, a creative appropriation of technology, and is thus inscribed in the wider trajectory of critical pedagogies.

A secondary goal was to ethnographically contextualize this set of materials by inviting contemporary renounced music masters to comment and share their views on the research findings, thus creating an ongoing discussion that evolved into a valuable set of qualitative data that support the methodological experimentation and offers metaphorical language layers in presenting those.

Ultimately, this body of work pays tribute to a lost and obscured tradition of music Masters, attempts to restore their unacknowledged century-long benefaction and to bring out the narrative qualities of their work and tradition. Standing on the shoulders of makam giants, this dissertation attempted to bond their knowledge with visual ways to present it and the growing collection of their work will expectantly help this genre's sustainability against the compressing external forces.

References

Akkoç, C. (2008). Constructing a theory of Turkish music based on practice by traditional masters. *Conference on Issues Surrounding the Conflict between Theory and Practice in Turkish Music and Potential Resolutions, Istanbul, Turkey*.

Akkoç, C., Sethares, W. A., & Karaosmanoğlu, M. K. (2015). Experiments on the Relationship between Perde and Seyir in Turkish Makam Music. *Music Perception*, *32*(4), 322–343. https://doi.org/10.1525/mp.2015.32.4.322

Annand, D. (2011). Social presence within the community of inquiry framework. *International Review of Research in Open and Distributed Learning*, *12*(5), 40-56.

Arnon, Y. (2007). *Rhythm, Syntax, and Rhetorical Pauses in the Turkish Taksim*. Istanbul Technical University

Arnon, Y. (2008). Improvisation as Verbalization: The Use, Function, and Meaning of Pauses in the Turkish Taksim. *TIJDSCHRIFT VOOR MUZIEKTHEORIE*, *13*(1), 36.

Atzakas E. (2012). *Οι άνθρωποι του ξύλου*: *Το ούτι από τις παρυφές του ανατολικού μουσικού πολιτισμού στη σύγχρονη αστική κουλτούρα του ελλαδικού χώρου* [People of the wood: The ud-istic art from the outskirts of eastern music world to the contemporary Greek urban culture]. [Doctoral dissertation, Aegean University, School of social studies, Department of Cultural Technology and Communications].

Greek National Archive of PhD Theses. https://www.didaktorika.gr/eadd/handle/10442/29900

Ayangil, R. (2008). Western Notation in Turkish Music. *Journal of the Royal Asiatic Society*, *18*(4), 401–447. https://doi.org/10.1017/S1356186308008651

Aydemir, M., & Dirikcan, E. (2010). *Turkish music makam guide*. Pan Yayıncılık.

Baron, R., & Cara, A. C. (Eds.). (2011). *Creolization as cultural creativity*. Univ. Press of Mississippi.

Bengtsson, S. L., Csíkszentmihályi, M., & Ullén, F. (2007). *Cortical Regions Involved in the Generation* of Musical Structures during Improvisation in Pianists. Journal of Cognitive Neuroscience, 19(5), 830–842. https://doi.org/10.1162/jocn.2007.19.5.830

Berger, J. (1985). *Ways of seeing: Based on the BBC television series* (p. 176). British Broadcasting Corporation.

Bissell, C., & Dillon, C. (Eds.). (2012). *Ways of thinking, ways of seeing: Mathematical and other Modelling in Engineering and Technology* (Vol. 1). Springer Science & Business Media.

Boersma, P. (2001). Praat, a system for doing phonetics by computer. *Glot. Int.*, *5*(9), 341–345.

Bozkurt, B. (2012). Features for analysis of Makam music. In *Serra X, Rao P, Murthy H, Bozkurt B, editors. Proceedings of the 2nd CompMusic Workshop; 2012 Jul 12-13; Istanbul, Turkey.*

Barcelona: Universitat Pompeu Fabra; 2012. p. 61-65. Universitat Pompeu Fabra.

Bozkurt, B., Ayangil, R., & Holzapfel, A. (2014). Computational Analysis of Turkish Makam Music: Review of State-of-the-Art and Challenges. *Journal of New Music Research*, *43*(1), 3–23. https://doi.org/10.1080/09298215.2013.865760

Bradley, A. J. Mennatallah El-Assady, Katherine Coles, Eric Alexander, Min Chen, Christopher Collins, Stefan Jänicke, and Dadiv Joseph Wrisley. 2018."Visualization and the Digital Humanities. *IEEE Computer Graphics and Applications*, *38*(6), 26-38. https://doi.org/10.1109/MCG.2018.2878900

Campbell, J. (2003). *The hero's journey: Joseph Campbell on his life and work* (Vol. 7). New World Library.

Cannam, C., Landone, C., Sandler, M. B., & Bello, J. P. (2006). The Sonic Visualiser: A Visualisation Platform for Semantic Descriptors from Musical Signals. *ISMIR*, 324–327.

Cholevas, M. (2009). Microharmonics *Integrating Harmony and Microtonality by Playing Heterophonic Turkish Art and Folk Music In Harmonic Environment*. [Master's Thesis, Codarts, Rotterdam, University for the Arts]. Academia.org https://www.academia.edu/23718748/Integrating_Harmony_And_Microtonality_By_Playing_Heterophonic_Turkish_Art_And_Folk_Music_In_Harmonic_Environment

Cholevas, M. (2014) Makam: Modality and style in Turkish art music. In Pätzold, C., & Walter, C. J. (Eds.). (2014). *Mikrotonalität—Praxis und Utopie* (pp. 197-203). Schott Music.

Cholevas, M. (2017). *Locally rhythmical and metric organisation of music phrases in free rhythm Taksim Improvisations*. Retrieved August 4, 2021,http://euromac2017.unistra.fr/wp-content/uploads/2017/05/Ext-Cholevas-Michail.pdf

Cholevas, M., & Abramovay, J. (2018, June 26–29). *Makampedia: Unveiling the Locally Rhythmical and Metric character of Free Rhythm Taksim Improvisations with the Use of Musical Analysis* [AAWM Session A1: Non-isochrony]. Fifth Conference on Analytical Approaches to World Music, Thessaloniki, Macedonia, Greece. Retrieved August 4, 2021, http://aawmconference.com/2018-thessaloniki/schedule/#nowhere

Cholevas, Michalis. 2021. “Rhythm in Taksim? Unveiling Temporal Characteristics Of Free-Rhythm Taksim.” [Manuscript submitted for publication]. Department of Music Science & Art, University of Macedoina, Thessaloniki, Greece.

Chaudenson, Robert. 2002. *Creolization of Language and Culture*. London & New York. Routledge.

Clayton, M. R. L. (1996). Free Rhythm: Ethnomusicology and the Study of Music Without Metre. *Bulletin of the School of Oriental and*

African Studies, *59*(2), 323–332. https://doi.org/10.1017/S0041977X00031608

Clayton, Martin, Sager, Rebecca, & Will, Udo. (2005). In time with the music: The concept of entrainment and its significance for ethnomusicology. *European Meetings in Ethnomusicology,* 1-82.

Collins, J. (1995). Literacy and literacies. *Annual review of anthropology*, *24*(1), 75-93.

Couprie, P. (2008, March). iAnalysis: software to aid musical analysis. In *Computer music days*.

Çimenli, Fahrettin. "Fahrettin Cimenli on Yayli Tanbur (Part 1)." Edited by Phaedon Sinis. YouTube, August 18, 2007. https://www.youtube.com/watch?v=Pc5uXNtzUy0

Danforth, L. M. (1982). *The death rituals of rural Greece*. Princeton University Press.

Darrow, A. A. (2006). The role of music in deaf culture: Deaf students' perception of emotion in music. *Journal of music therapy*, *43*(1), 2-15. https://doi.org/10.1093/jmt/43.1.2

Debenport, Erin, and Anthony K. Webster. 2019. "From Literacy/Literacies to Graphic Pluralism and Inscriptive Practices." *Annual Review of Anthropology* 48: 389–404. https://doi.org/10.1146/annurev-anthro-102218-011309

Delaney, C. (1991). *The seed and the soil: Gender and cosmology in Turkish village society* (Vol. 11). Univ of California Press.

Du Boulay, J. (2009). *Cosmos, life, and liturgy in a Greek Orthodox village*. D. Harvey.

Dubisch, J. (1983). Greek women: Sacred or profane. *Journal of modern Greek studies*, *1*(1), 185-202.

Dubisch, J. (1989). Death and social change in Greece. *Anthropological Quarterly*, 189-200.

Eerola, T., & Vuoskoski, J. K. (2012). A review of music and emotion studies: Approaches, emotion models, and stimuli. *Music Perception: An Interdisciplinary Journal*, *30*(3), 307-340.

Ederer, E. B. (2011). *The theory and praxis of makam in classical Turkish music 1910–2010* [Unpublished doctoral dissertation]. University of California, Santa Barbara.

Feldman, W. (1990). Cultural Authority and Authenticity in the Turkish Repertoire. *Asian Music*, *22*(1), 73. https://doi.org/10.2307/834291

Feldman, W. (1993). Ottoman Sources on the Development of the Taksim. *Yearbook for Traditional Music*, *25*, 1. https://doi.org/10.2307/768680

Feldman, W. (1996). *Music of the Ottoman court: Makam, composition and the early Ottoman instrumental repertoire*. VWB, Verl. für Wiss. und Bildung.

Fitch, W. T. (2012). The biology and evolution of rhythm: Unraveling a paradox. In Rebuschat, P., Rohrmeier, M., Cross, I., & Hawkins, J. A. (Eds.). (2012).*Language and music as cognitive systems*

(pp.73-95). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199553426.003.0009.

Foucault, Michel. (1969) 2013. *Archaeology of Knowledge*. London & New York: Routledge.

Grimshaw, Anna. 2001. *The Ethnographer's Eye: Ways of Seeing in Anthropology*. Cambridge: Cambridge University Press.

Goldman, A. (2016). Improvisation as a Way of Knowing. *Music Theory Online*, *22*(4).http://mtosmt.org/issues/mto.16.22.4/mto.16.22.4.goldman.html

Gudmundsdottir, Helga Rut. 2010. Advances in Music-Reading Research. *Music Education Research* 12, no. 4: 331–338. https://doi.org/10.1080/14613808.2010.504809

Haddon, Elizabeth, and John Potter. 2014. “Creativity and the institutional mindset.” In *Advanced Musical Performance: Investigations in Higher Education Learning,* edited by Graham Welch, and Ioulia Papageorgi, 161–174. Farnham, UK: Ashgate.

Haraway, Donna. 1988. “Situated Knowledges: The Science Question in Feminism and The Privilege of Partial Perspective.” *Feminist Studies* 14, no. 13: 575–599. https://doi.org/10.2307/3178066

Herasymenko, L. (2016). THE RHYTHMIC-INTONATION ASPECT OF SHEVCHENKO'S POETRY AS A FACTOR OF A TEXT-MUSICAL

FORM OF «THE PSALM OF DAVID» BY M. LYSENKO. *LBC 85.31 Editorial board*, 11.

Hinrichs, Uta, Stefania Forlini, and Bridget Moynihan. 2019. “In Defense of Sandcastles: Research Thinking Through Visualization in Digital Humanities.” *Digital Scholarship in the Humanities* 34, supplement 1: 80–99. https://doi.org/10.1093/llc/fqy051

Hodges, Donald A., and D. Brett Nolker. 2011. “The Acquisition of Music Reading Skills.” In *MENC Handbook of Research on Music Learning: Volume 1: Strategies*, edited by Richard Colwell and Peter R. Webster Oxford Scholarship Online, http://dx.doi.org/10.1093/acprof:osobl/9780195386677.001.0001

Holmes, Jessica A. 2017. “Expert Listening Beyond the Limits of Hearing: Music and Deafness.” *Journal of the American Musicological Society* 70, no. 1: 171–220. https://doi.org/10.1525/jams.2017.70.1.171

Holmes, Thom. 2015. *Electronic and Experimental Music: Technology, Music, and Culture*. London & New York: Routledge.

Holzapfel, A. (2013) TEMPO AND PROSODY IN TURKISH TAKSIM IMPROVISATION. In: Proceedings of the 3rd Workshop on Folk Music Analysis (pp. 1-6). Meertens Institute; Department of Information and Computing Sciences, Utrecht University. Retrieved August 4, 2021,

https://www.diva-portal.org/smash/get/diva2:1040427/FULLTEXT01.pdf

Håland, E. J. (2014). *Rituals of Death and Dying in Modern and Ancient Greece: Writing History from a Female Perspective*. Cambridge Scholars Publishing.

Jacob, Pierre, and Marc Jeannerod. 2003. *Ways of Seeing: The Scope and Limits of Visual Cognition*. Oxford: Oxford University Press.

Jänicke, Stefan. 2016. "Valuable Research for Visualization and Digital Humanities: A Balancing Act." In *Workshop on Visualization for the Digital Humanities, IEEE Vis4DH 2016*.

Jones, G., Kokotsaki, D., & Cholevas, M. (2016). Creative music listening-its potential in generating emotion and acting as a stimulus for creative writing. In *32 nd world conference, International Society for Music Education, Glasgow* (Vol. 24).

Juslin, P. N., & Sloboda, J. (Eds.). (2011). *Handbook of music and emotion: Theory, research, applications*. Oxford University Press.

Kallimopoulou, E. (2016). *Paradosiaka: music, meaning and identity in modern Greece*. Routledge.

Karadeniz, İ. S. M. E. T. (2019). Makam-Oriented Symbolism In Batanay's Nikriz Mevlevi Ayini.

Kartomi, M. (2014). Concepts, terminology and methodology in music performativity research. *Musicology Australia*, *36*(2), 189-208.

Killick, Andrew. 2020. “Global Notation as A Tool for Cross-Cultural and Comparative Music Analysis.” *Analytical Approaches to World Music* 8, no. 2: 235–279.

Lartillot, O., & Ayari, M. (2012, July). An Integrated Framework for Transcription, Modal and Motivic Analysis of Maqam Improvisation. In *Proceedings of the 2nd CompMusic Workshop* (pp. 12-13). Istanbul, Turkey. Barcelona: Universitat Pompeu Fabra.

Lam, Margaret. 2012. “Beyond the Score: Music Visualization and Digital Humanities.” *Bulletin of the American Society for Information Science and Technology* 38, no. 4: 45–47.

Limb, C. J., & Braun, A. R. (2008). Neural Substrates of Spontaneous Musical Performance: An fMRI Study of Jazz Improvisation. *PLoS ONE*, *3*(2), e1679. https://doi.org/10.1371/journal.pone.0001679

London, J. (2001). Rhythm. In J. London, *Oxford Music Online*. Oxford University Press. https://doi.org/10.1093/gmo/9781561592630.article.45963

London, J. (2004). *Hearing in time: Psychological aspects of musical meter*. Oxford University Press.

Margaroni, Maria, Apostolos Lampropoulos, and Christos Chatzichristou. 2017. *Textual Layering: Contact, Historicity, Critique*. Lanhan: Lexington Books - Rowman & Littlefield.

Mauch, M., & Dixon, S. (2014). PYIN: A fundamental frequency estimator using probabilistic threshold distributions. *2014 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 659–663. https://doi.org/10.1109/ICASSP.2014.6853678

Mavrooidis, M. (1999). *ΟΙ ΜΟΥΣΙΚΟΙ ΤΡΟΠΟΙ ΣΤΗΝ ΑΝΑΤΟΛΙΚΗ ΜΕΣΟΓΕΙΟ* [MUSIC MODES OF EASTERN MEDITERRANEAN]. Fagotto. https://fagottobooks.gr/en/61-paradosiakh_mousikoitropoi.html

McClary, Susan. 2017. *Reading Music: Selected Essays*. London & New York: Routledge.

McCreless, Patrick. 1997. “Rethinking Contemporary Music Theory.” In *Keeping Score: Music, Disciplinarity, Culture*, edited by David Schwarz, Anahid Kassabian, and Lawrence Siegel, 13–53. Charlottesville & London: University of Virginia Press.

McGuckin, J. A. (2005). Christian Spirituality in Byzantium and the East (600–1700). *CHRISTIAN SPIRITUALITY*, 90.

Mignolo, Walter D., and Catherine E. Walsh. 2018. *On Decoloniality: Concepts, Analytics, Praxis*. Durham & London: Duke University Press.

Miramon-Bonhoure, J. (2014). Music in Motion. The Automated Transcription for Indian Music (AUTRIM). MUSICultures, 41 (1).

Mirmiroglou, V. (1940). *Oi Dervissae* [Dervishes]. Ekati

O'connell, J. (2000). Fine Art, Fine Music: Controlling Turkish Taste at the Fine Arts Academy in 1926. *Yearbook for Traditional Music, 32*, 117-142. https://doi.org/10.2307/3185245

Özkan, Ismail Hakki, and Türk musikisi Nazariyatı. 1994. *Usuller Kudüm Velveleleri*. Ankara: Ötüken Neşriyat.

Öztürk, O. M. (2015a). The conception of contemporizing music in the founding ideology of early republican Turkey: a critical approach. *In which direction is music heading: cultural and cognitive studies in Turkey* (pp. 75-108). *New Castle: Cambridge Scholars Publishing*.

Öztürk, O. M. (2015b). An effective means for representing the Unity of opposites: The development of ideology concerning folk music in turkey in the context of nationalism and ethnic identity. In *Writing the History of" Ottoman Music"* (pp. 177-194). Ergon-Verlag.

Öztürk, O. M. (2018a). The concept of makam-based melody and its problematic in musical analysis. In Sultanova, R., & Rancier, M. (Eds.). *Turkic soundscapes: From shamanic voices to hip-hop*. (pp. 19-40) Routledge.

Öztürk, O. M. (2018b). How was the traditional makam theory westernized for the sake of modernization? *Rast Müzikoloji Dergisi*, *6*(1), 1769–1787.

Paris, Nektarios, Dionysios Politis, Rafail Tzimas, and Nikolaos Rentakis. 2017. “Virtual Design Studio Project for Mobile Learning in Byzantine Music.” In *Interactive Mobile Communication, Technologies and*

Learning, edited by Michael E. Auer and Thrasyvoulos Tsiatsos, 745–757. Cham: Springer.

Poulos, P. (2011). Rethinking Orality in Turkish Classical Music: A Genealogy of Contemporary Musical Assemblages. *Middle East Journal of Culture and Communication*, *4*(2), 164–183. https://doi.org/10.1163/187398611X571337

Poulos, P. (2015). *Η μουσική στον ισλαμικό κόσμο* [Music In The Islamic World]. Kallipos. https://repository.kallipos.gr/handle/11419/4407

Rao, Suvarnalata, Wim Van der Meer, and Jane Harvey. 1999. *The Raga Guide: A Survey of 74 Hindustani Ragas.* Nimbus Records with Rotterdam Conservatory of Music.

Rao, S., & Van der Meer, W. (2013). Music in motion: the automated transcription for indian music. *MUSIC IN MOTION*. (n.d.). Wordpress.Com. Retrieved August 5, 2021, http://autrimncpa.wordpress.com/

Rao, S., & Rao, P. (2014). An Overview of Hindustani Music in the Context of Computational Musicology. *Journal of New Music Research*, *43*(1), 24–33. https://doi.org/10.1080/09298215.2013.831109

Ross, J. C., & Rao, P. (2012). Detection of raga-characteristic phrases from Hindustani classical music audio. In *Serra X, Rao P, Murthy H, Bozkurt B, editors. Proceedings of the 2nd CompMusic Workshop; 2012 Jul 12-13; Istanbul, Turkey. Barcelona: Universitat Pompeu Fabra; 2012. p. 133-138*. Universitat Pompeu Fabra

Roussou, E. (2017). The syncretic religious landscape of contemporary Greece and Portugal: a comparative approach on creativity through spiritual synthesis. In *Invention of Tradition and Syncretism in Contemporary Religions* (pp. 155-175). Palgrave Macmillan, Cham.

Salamon, J., & Gomez, E. (2012). Melody Extraction From Polyphonic Music Signals Using Pitch Contour Characteristics. *IEEE Transactions on Audio, Speech, and Language Processing*, *20*(6), 1759–1770. https://doi.org/10.1109/TASL.2012.2188515

Sanyal, R., & Widdess, R. (2004). *Dhrupad: Tradition and performance in Indian music*. Ashgate.

Schafer, R. Murray. 1976. *Creative Music Education: A Handbook for The Modern Music Teacher*. New York: Schirmer Books.

Schwarz, David, Anahid Kassabian, and Lawrence Siegel. eds. 1997. *Keeping Score: Music, Disciplinarity, Culture*. Charlottesville & London: University of Virginia Press.

Shaw, R., & Stewart, C. (2003). *Syncretism/anti-syncretism: The politics of religious synthesis*. Routledge.

Shaw-Miller, Simon. 2013. “Synaesthesia.” In *The Routledge Companion to Music and Visual Culture*, edited by Tim Shephard and Anne Leonard, 9–22. London & New York: Routledge.

Signell, K. (2002). Contemporary Turkish makam practice. *Garland Encyclopedia of World Music*, *6*, 47-58.

Signell, K. L. (2008). *Makam: Modal practice in Turkish art music*. Usul editions.

Simms, R. (n.d.). *Aka Gündüz Kutbay Ney Taksims*. https://www.yorku.ca. Retrieved August 5, 2021, from https://robsimms.info.yorku.ca/files/2016/11/Akagunduz_taksims.pdf

Skoulios, M. (2005). The musical system: New tendencies. Neo-Hellenic. *Music in the Mediterranea.* In Feldman,W. & Guettat, M. & Kerbage, T (Eds.), *Music in the Mediterannea, Modal classical traditions, Vol. I History. Ch. 2.3.4* (pp. 273-274) Thessaloniki: En Chordais. Retrieved August 5, 2021, https://www.academia.edu/35536998/Music_in_the_Mediterannea_Modal_classical_traditions_Vol_I_History_Ch_2_3_4_The_musical_system_new_tendencies_Neo_Hellenic_ENG_

Spiro, Lisa. 2012. “This Is Why We Fight: Defining the Values of the Digital Humanities.” In *Debates in the Digital Humanities*, edited by Matthew K. Gold, 16–35. Minneapolis: University of Minnesota Press.

Spyridis, Charalambos, Dionysios and Politis. 1990. “Information Theory Applied to The Structural Study Of Byzantine Ecclesiastical Hymns.” *Acta Acustica united with Acustica* 71, no. 1: 41–49.

Srinivasamurthy, A., Holzapfel, A., & Serra, X. (2014). In Search of Automatic Rhythm Analysis Methods for Turkish and Indian Art Music. *Journal of New Music Research*, *43*(1), 94–114. https://doi.org/10.1080/09298215.2013.879902

Stepan, Nancy. 2001. *Picturing Tropical Nature.* Cornell University Press.

Stewart, Charles. ed. 2007. *Creolization: History, Ethnography, Theory*. London & New York: Routledge.

Stewart, Lauren. 2005. "A neurocognitive approach to music reading." *Annals of the New York Academy of Sciences* 1060, no. 1: 377–386. https://doi.org/10.1196/annals.1360.032

Stubbs, F. W. (1994). *The art and science of taksim: An empirical analysis of traditional improvisation from 20th century Istanbul*. Wesleyan University.

Şentürk, S., Holzapfel, A., & Serra, X. (2014). Linking scores and audio recordings in makam music of Turkey. *Journal of New Music Research*, *43*(1), 34-52. https://doi.org/10.1080/09298215.2013.864681

Tanrikorur, Cinuçen. [CTanrikorurFILM]. 2008, March 28. *3/11 TAKSIM: Concept of MAKAM* مقام [Video]. YouTube. https://www.youtube.com/watch?t=211&v=HMgpJXK--TE&feature=youtu.be

Ter Haar, Job. "The Playing Style of Alfredo Piatti: Learning from a Nineteenth-Century
Virtuoso Cellist." PhD diss., Royal Academy of Music, University of London, 2019. https://jobterhaarpiattithesis.files.wordpress.com/2019/

Ter Haar, Jop, Michalis Cholevas and Juliano Abramovay. 2021. “The Absent Teacher” [Unpublished manuscript]. World Music Department, Rotterdam Conservatory, Codarts, University for the Arts.

Thomas, A. E. (2007, August). Intervention and reform of Arab music in 1932 and beyond. In *Conference on Music in the world of Islam, Assilah*.

Valiavitcharska, V. (2013). *Rhetoric and rhythm in Byzantium: the sound of persuasion*. Cambridge University Press.

Van der Meer, W. (2005). Visions of Hindustani Music. The World of Music, 47(2), 105-118. Retrieved August 5, 2021, http://www.jstor.org/stable/41699648

Van der Meer, W., & Rao, S. (2021). WHAT YOU HEAR ISN’T WHAT YOU SEE: THE REPRESENTATION AND COGNITION OF FAST MOVEMENTS IN HINDUSTANI MUSIC. Retrieved August 7, 2021, https://www.researchgate.net/publication/241824990

Widdess, R. (1994). Involving the Performers in Transcription and Analysis: A Collaborative Approach to Dhrupad. *Ethnomusicology*, *38*(1), 59–79. JSTOR. https://doi.org/10.2307/852268

Wright, O. (1990). Çargâh in Turkish classical music: History versus theory. *Bulletin of the School of Oriental and African Studies*, *53*(2), 224–244. https://doi.org/10.1017/S0041977X00026057

Wright, O. (1996). Middle Eastern Song-Text Collections. Early Music, 24(3), 455-469. Retrieved August 7, 2021, http://www.jstor.org/stable/3128261

Yarman, O. (2007). A comparative evaluation of pitch notations in Turkish makam music. *Journal of interdisciplinary music studies*, 1*(2)*, 43-61.

Yarman, O. (2008). *79-tone tuning & theory for Turkish maqam music*. [Doctoral dissertation, Istanbul Technical University, Istanbul, Turkey]. Retrieved August 7, 2021 *http://www.ozanyarman.com/files/doctorate_thesis.pdf*

Appendices

Appendix 1

Scores – Transcriptions – Tables – Analysis layers

In this appendix, snapshots of transcribed performances are presented. For the complete video files please refer to the media list on Appendix 5.

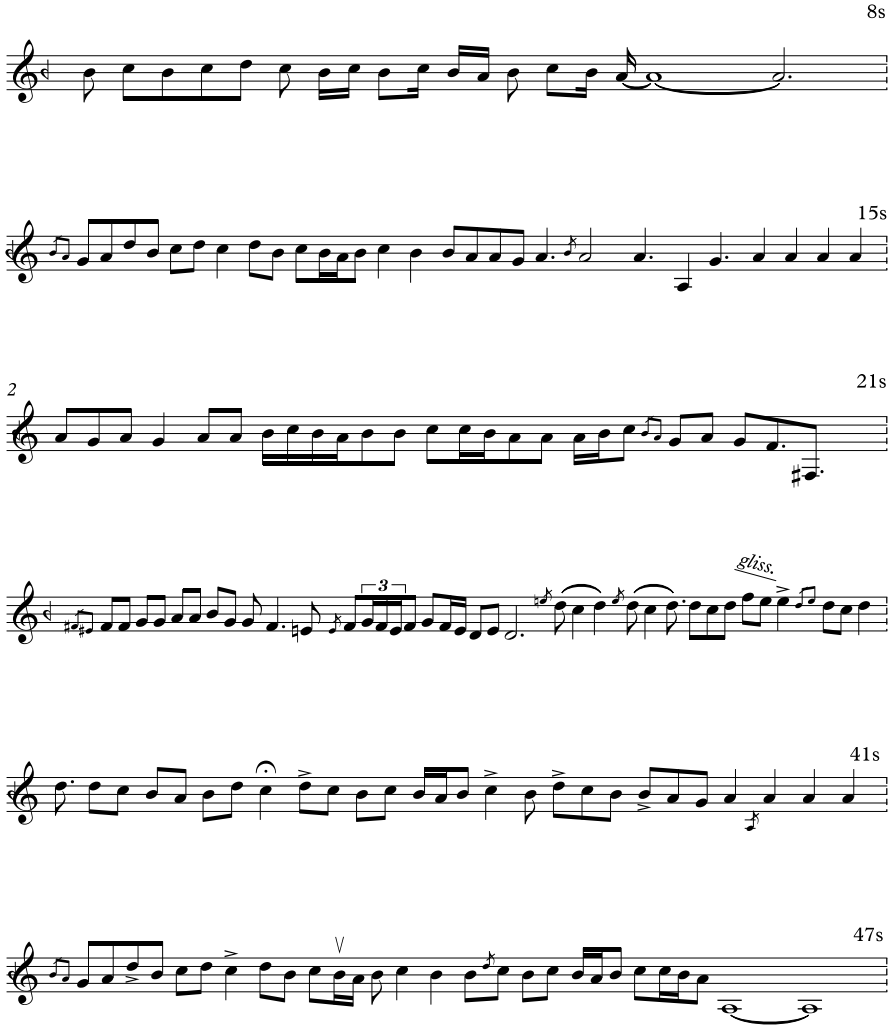
1. Ara Dinkjan – Uşşâk Taksim New York City 2014 (private archive of Ara Dinkjan)

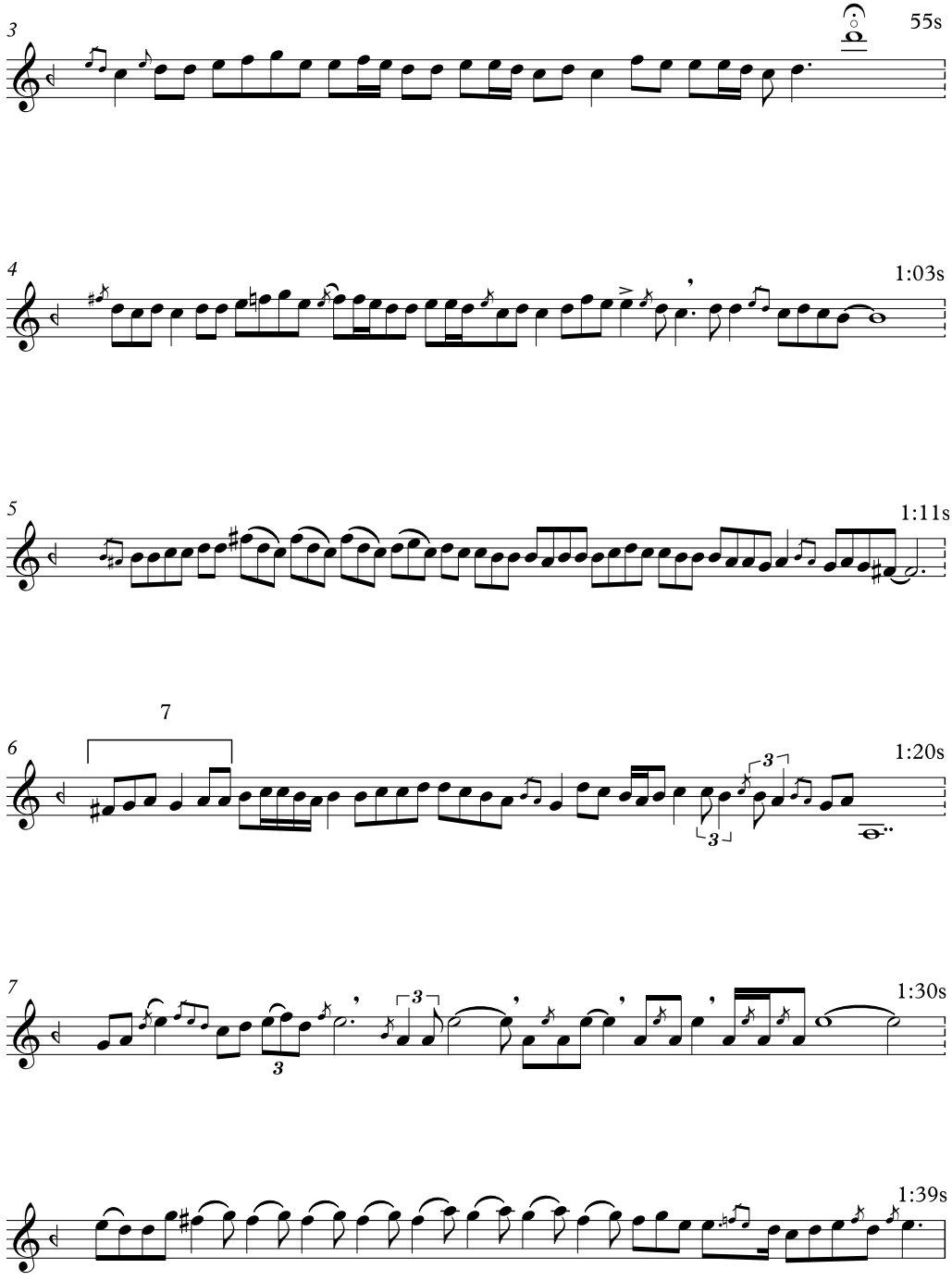
Layer 1 (Transcription):

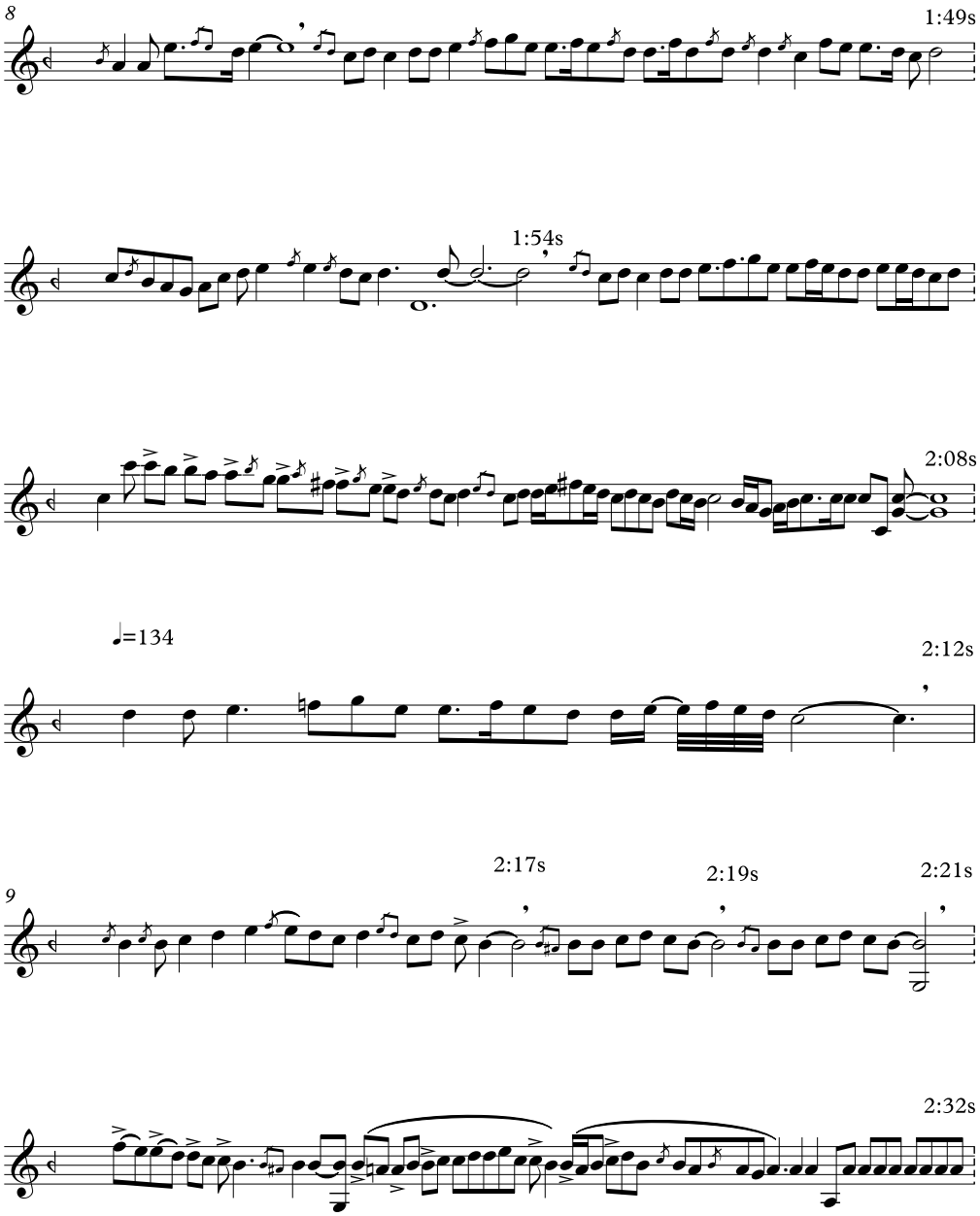
The transcription was written based on the findings of chapter 1 on the rhythmic characteristics of the taksim phrases.

Ussak Taksim Ara Dinkjan
(Merkin Hall NYC 2014)

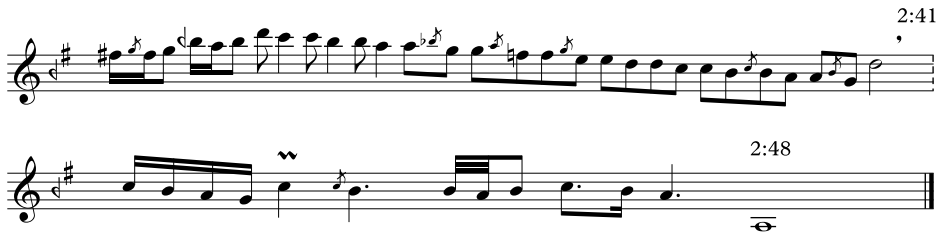
Ara Dinkjan
Oud
Tuning = Şah



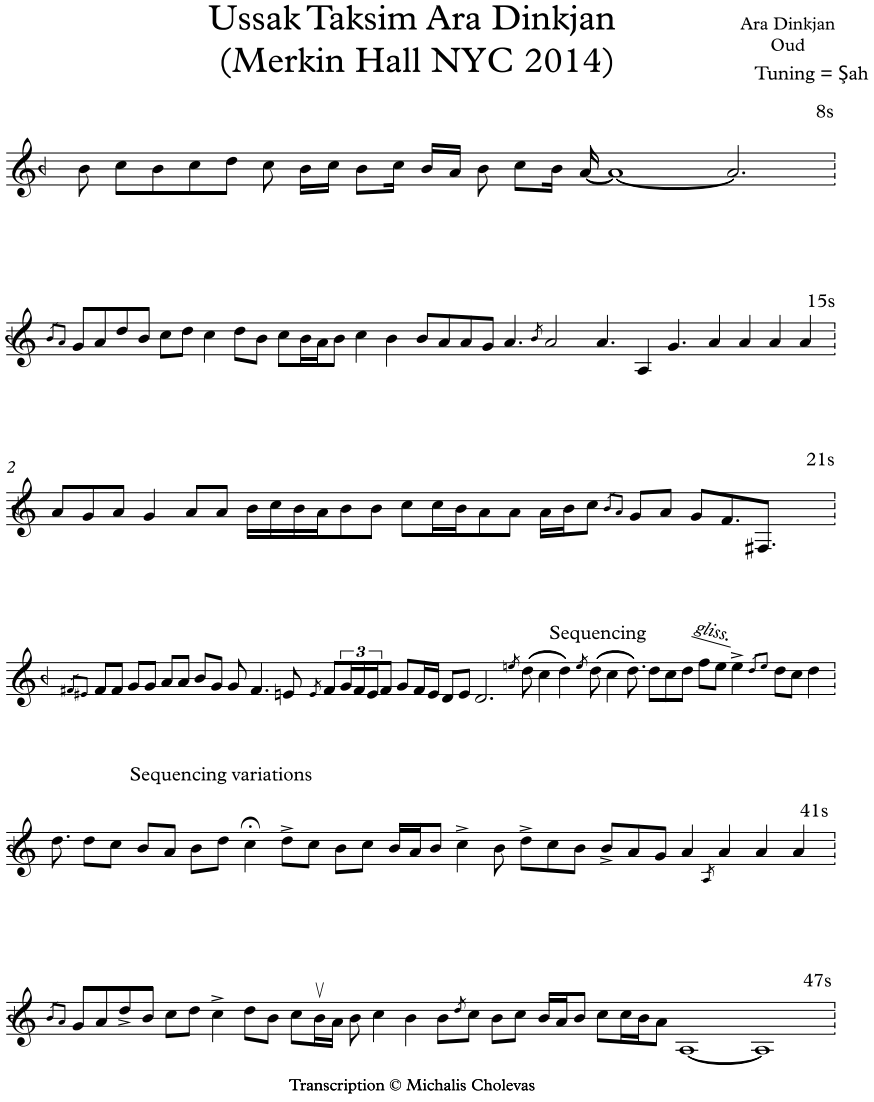

3
55s
4
1:03s
5
1:11s
6
7
1:20s
7
1:30s
1:39s

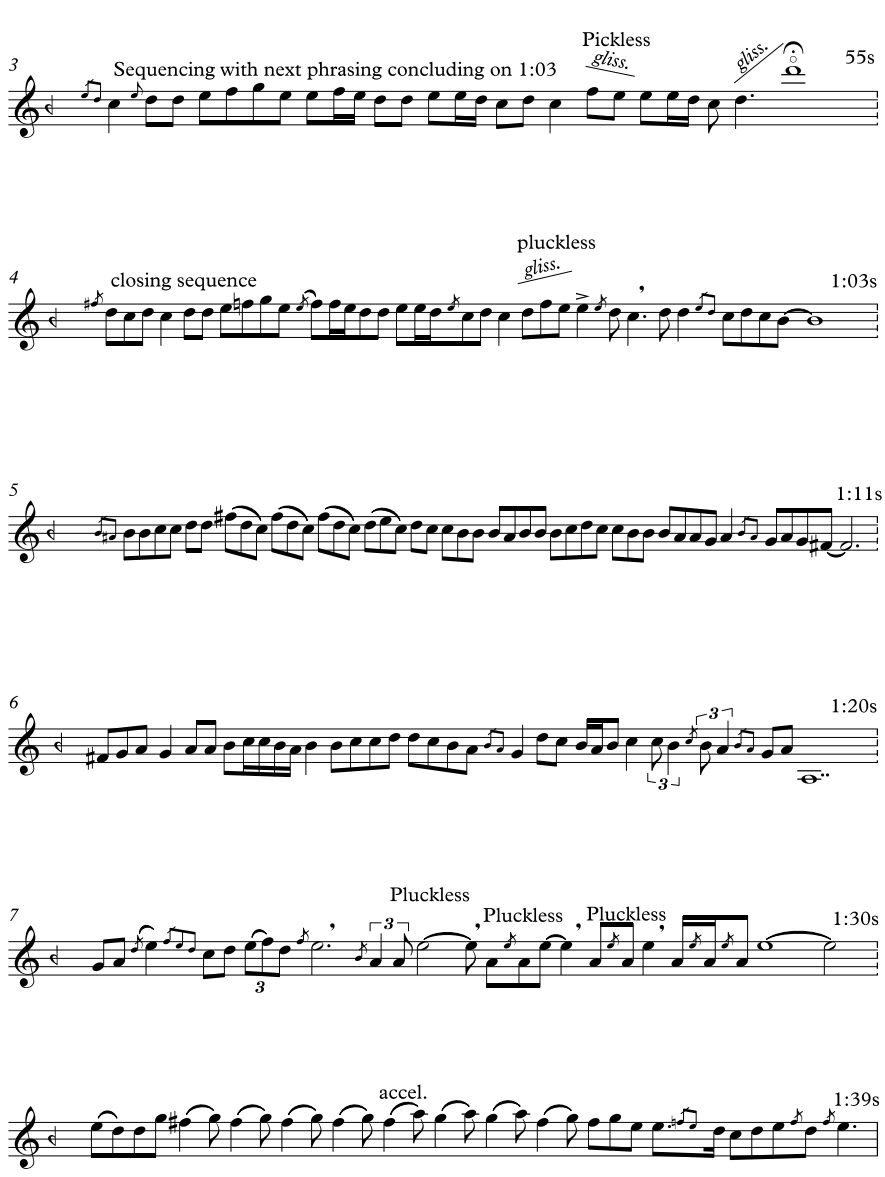

8
1:49s
1:54s
2:08s
♩=134
2:12s
2:17s
2:19s
2:21s
9
2:32s

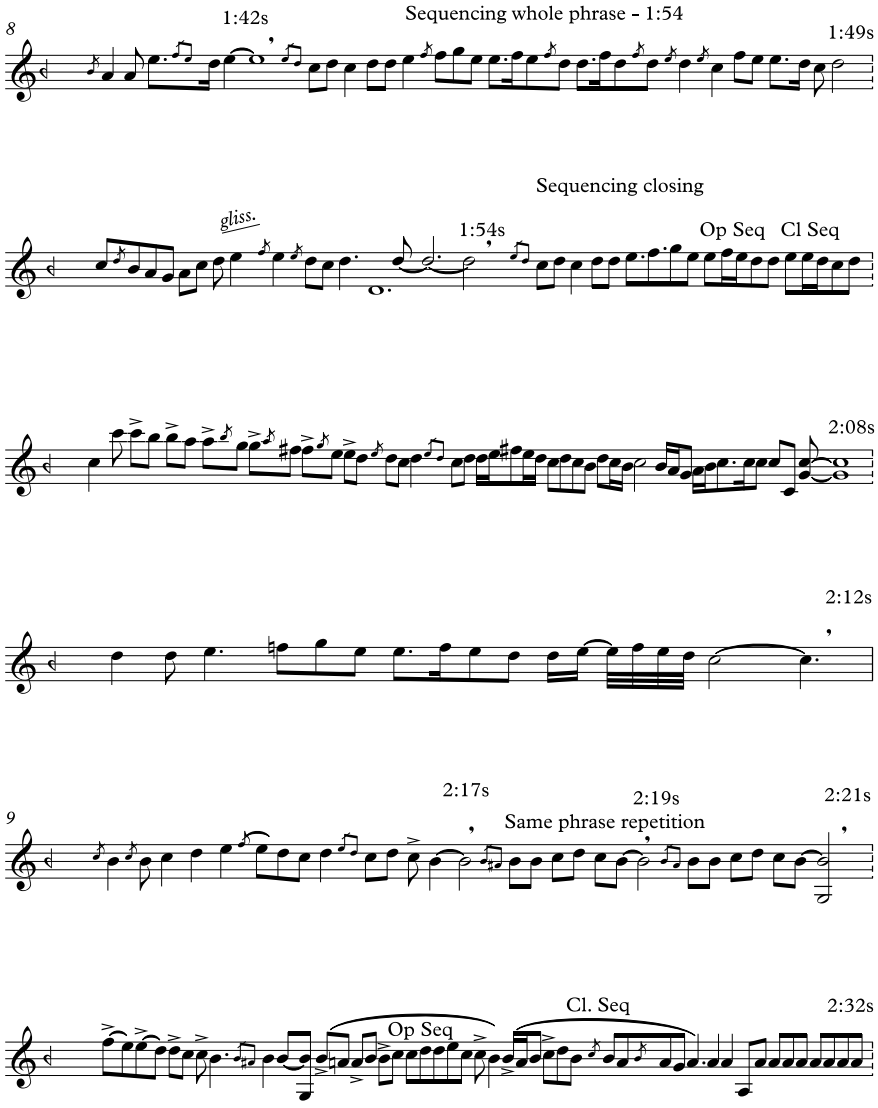
4

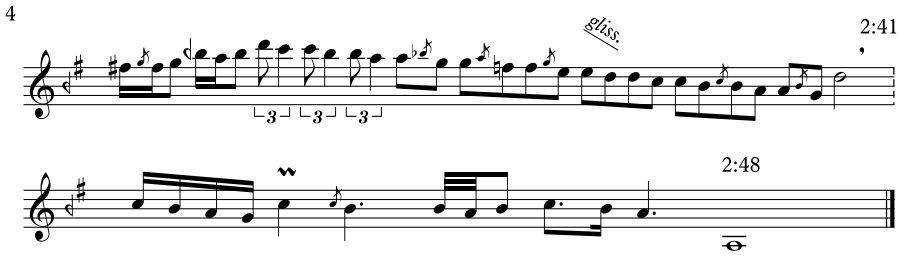


Layer 2 (Phrasing and articulation): On this Layer, phrasing habits such as sequencing, repeating, as well as articulation elements have been added.



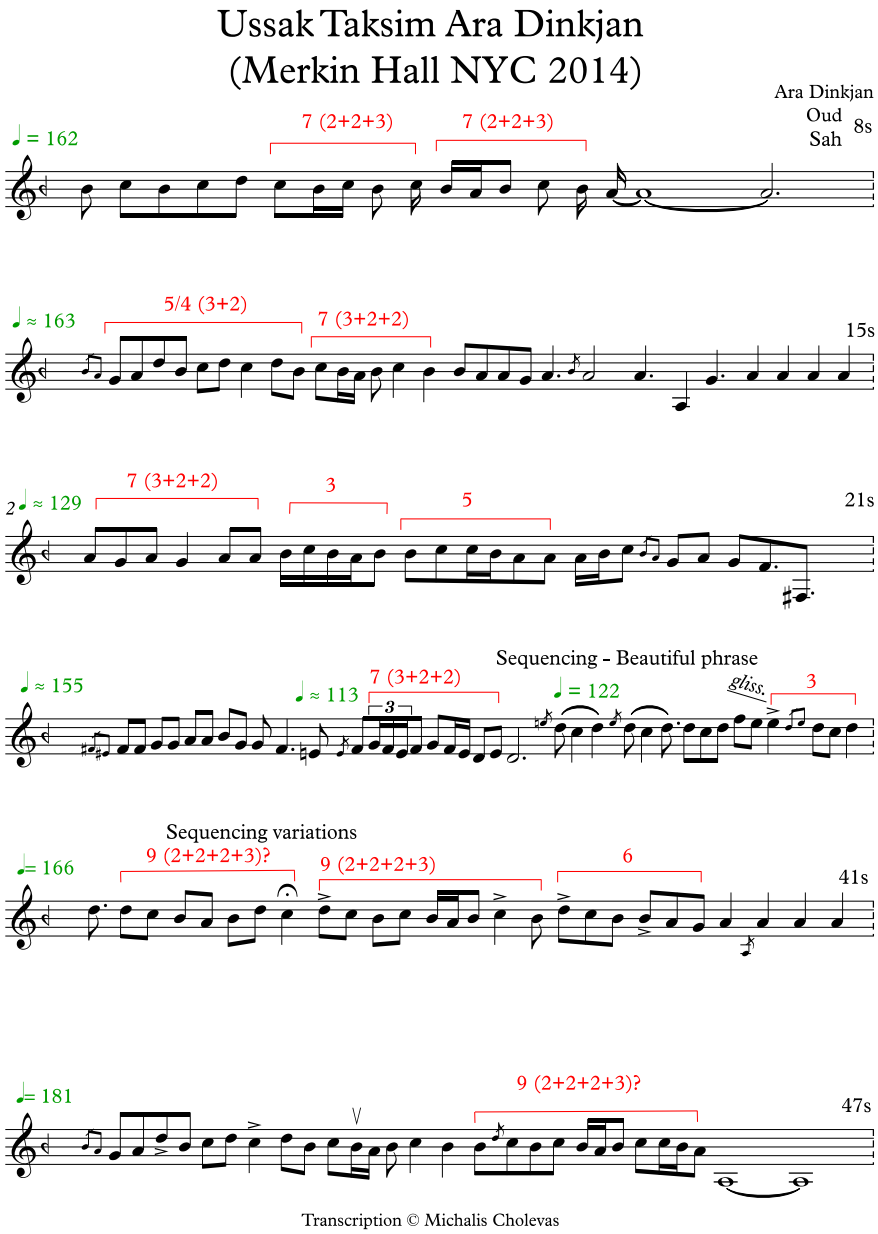

2
3
Sequencing with next phrasing concluding on 1:03
Pickless
gliss.
gliss.
55s
4
closing sequence
pluckless
gliss.
1:03s
5
1:11s
6
1:20s
3
3
7
Pluckless
Pluckless
Pluckless
1:30s
3
accel.
1:39s

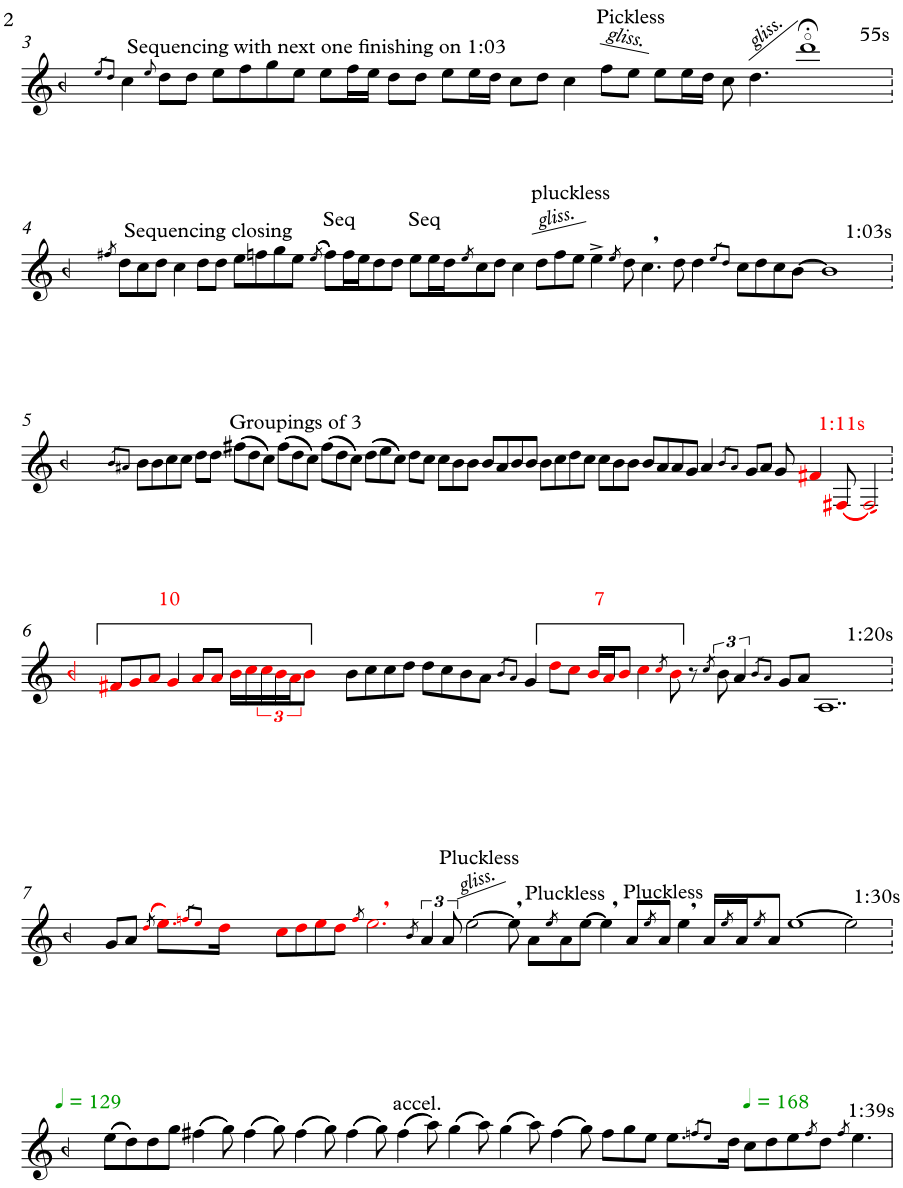

8
1:42s
Sequencing whole phrase - 1:54
1:49s
Sequencing closing
gliss.
1:54s
Op Seq
Cl Seq
2:08s
2:12s
9
2:17s
2:19s
Same phrase repetition
2:21s
Cl. Seq
Op Seq
2:32s

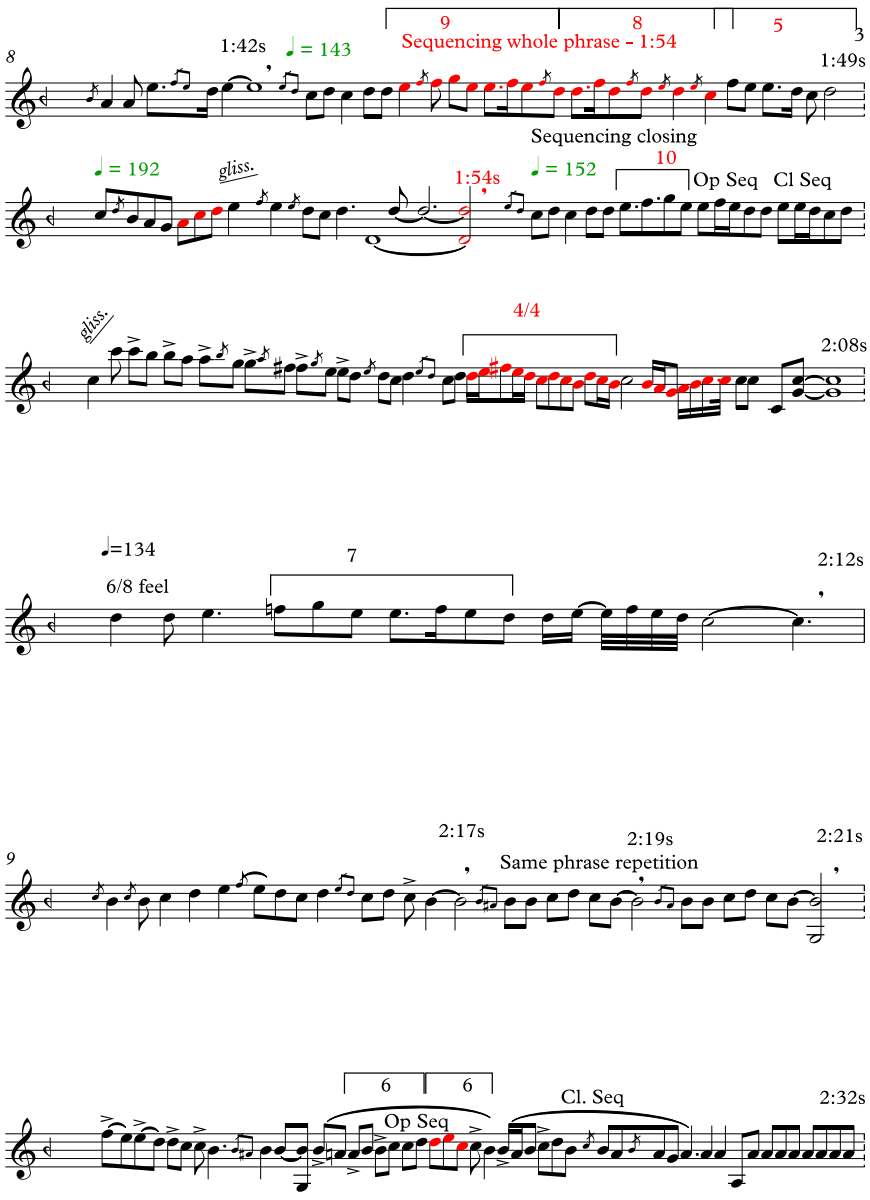

4
gliss.
2:41
2:48

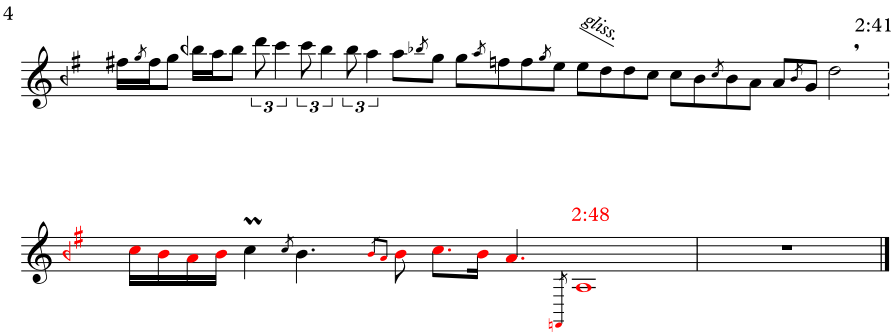
Layer 3 (metronome marks and groupings): On this Layer, the speed of each

phrase as well as the groupings, wherever performed have been added

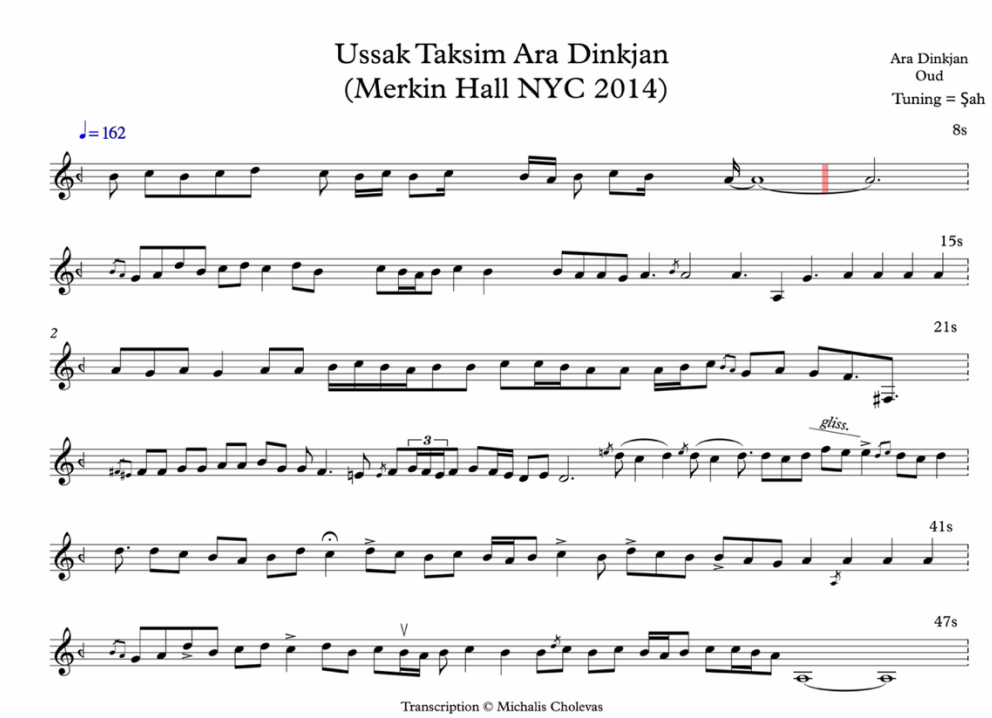



2
3
Sequencing with next one finishing on 1:03
Pickless
gliss.
gliss.
55s
4
Sequencing closing
Seq
Seq
pluckless
gliss.
1:03s
5
Groupings of 3
1:11s
10
7
6
3
3
1:20s
Pluckless
7
3
gliss.
Pluckless
Pluckless
1:30s
♩ = 129
accel.
♩ = 168
1:39s

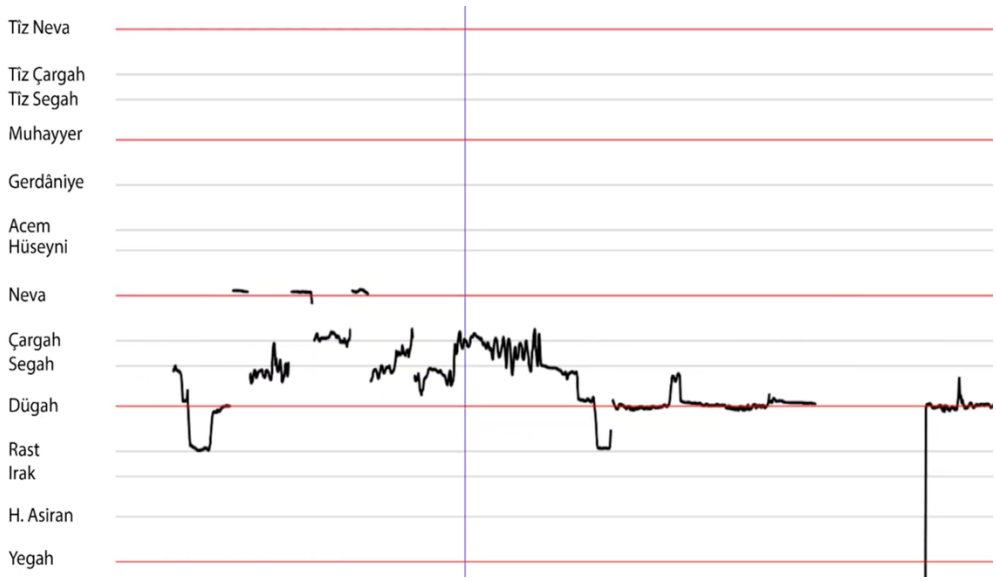

8
1:42s
♩ = 143
9
8
5
3
Sequencing whole phrase - 1:54
1:49s
Sequencing closing
♩ = 192
gliss.
1:54s
♩ = 152
10
Op Seq
Cl Seq
gliss.
4/4
2:08s
♩=134
6/8 feel
7
2:12s
9
2:17s
2:19s
Same phrase repetition
2:21s
6
6
Op Seq
Cl. Seq
2:32s


4
gliss.
2:41
2:48

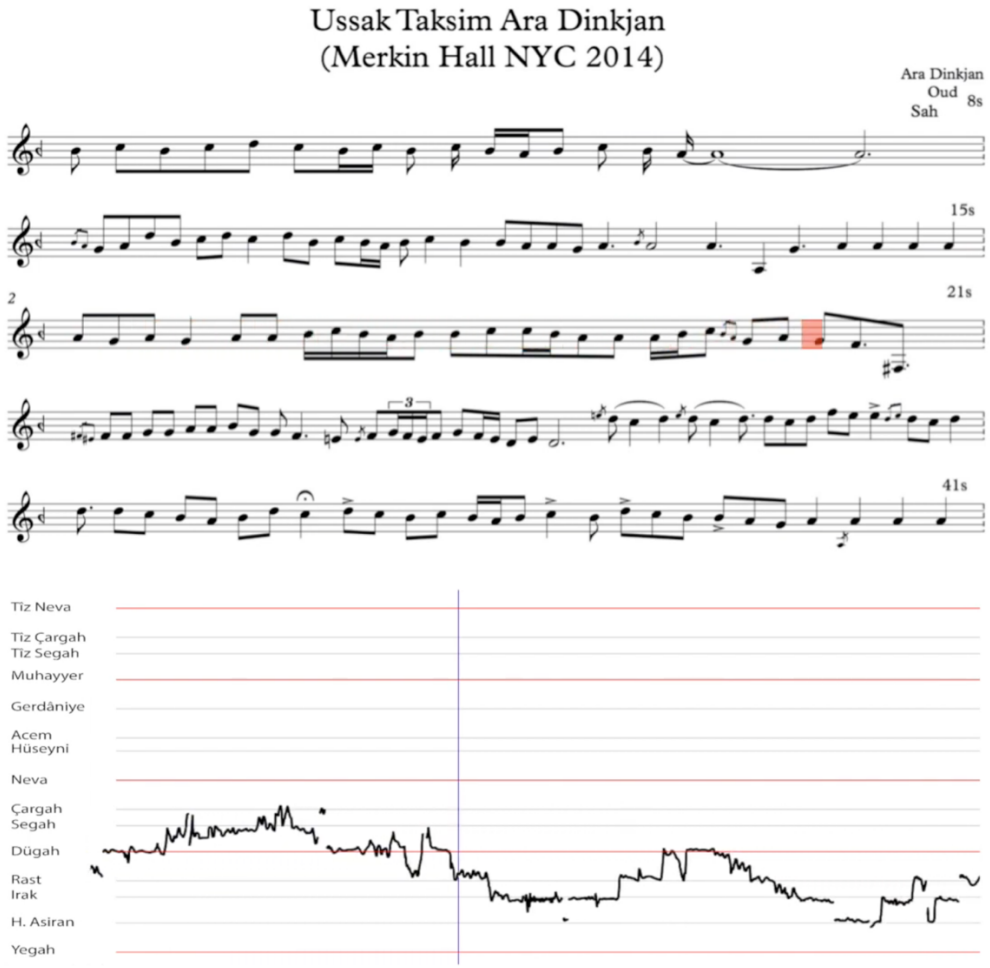
Layer 4: Transcription synced with audio. In this Layer the transcription is synced with audio and a red vertical cursor on the scores is following the audio in real time



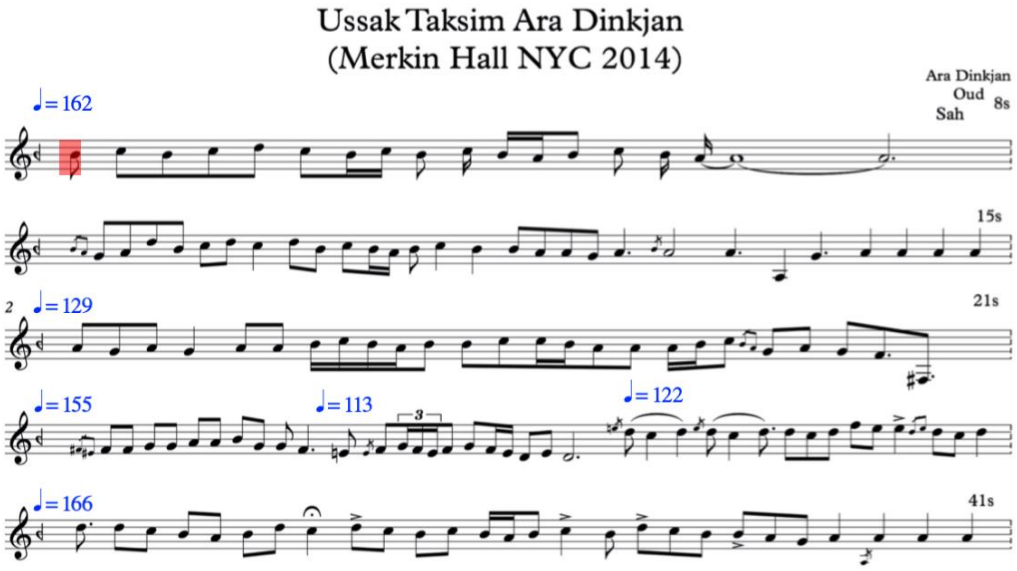
Layer 5: Melodic contour. The melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



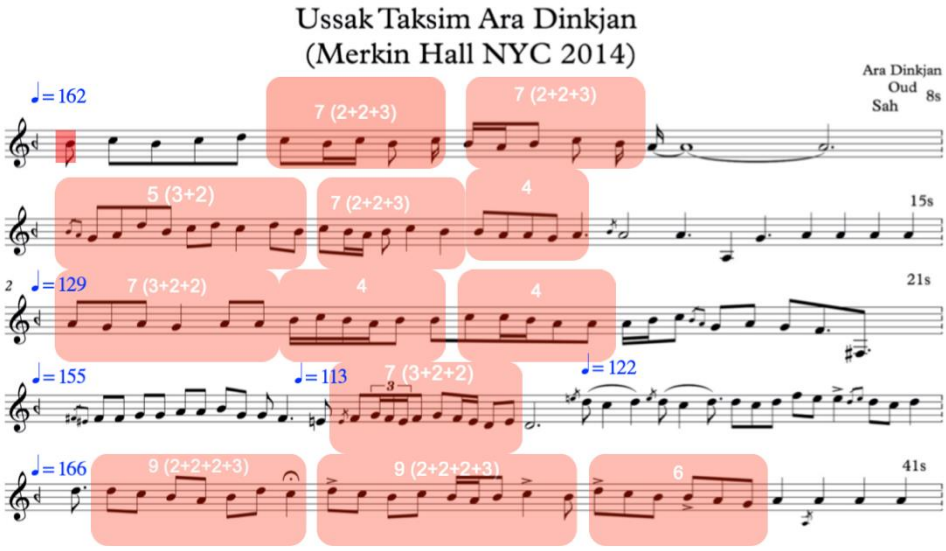
Layer 6: Transcription synced with audio and melodic contour (full video on media list). The melodic contour projected on the makam map has been added to the audio synced transcription



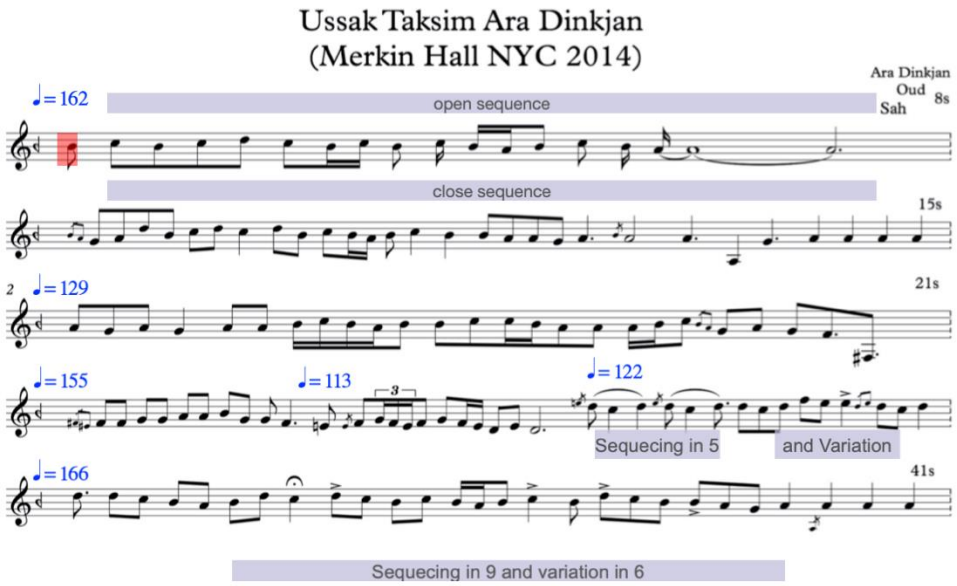
Layer 7: On this Layer the phrasing speed (metronome marks in bpm) of each phrase have been added to the audio synced transcription



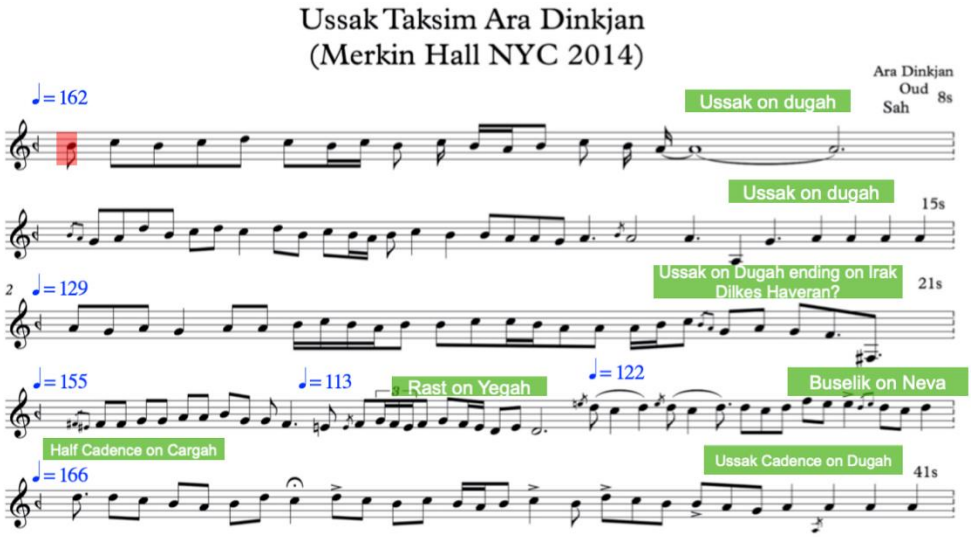
Layer 8: On this Layer the phrasing speed (metronome marks in bpm) and metric groupings have been added to the audio synced transcription



Layer 9: On this Layer the phrasing speed (metronome marks in bpm) and phrasing habits have been added to the audio synced transcription

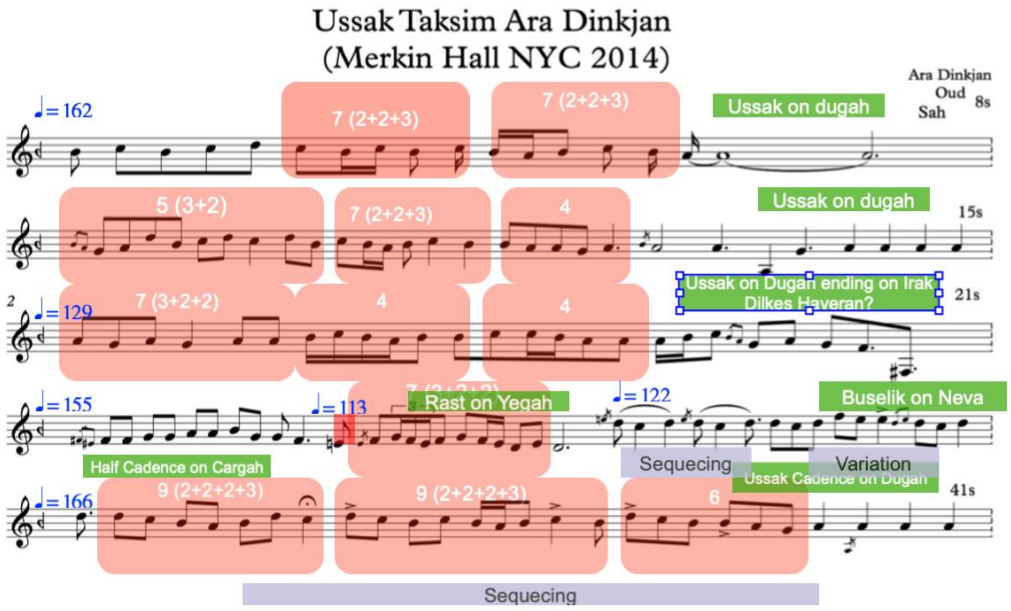


Layer 10: On this Layer the phrasing speed (metronome marks in bpm) and makam flavors have been added to the audio synced transcription



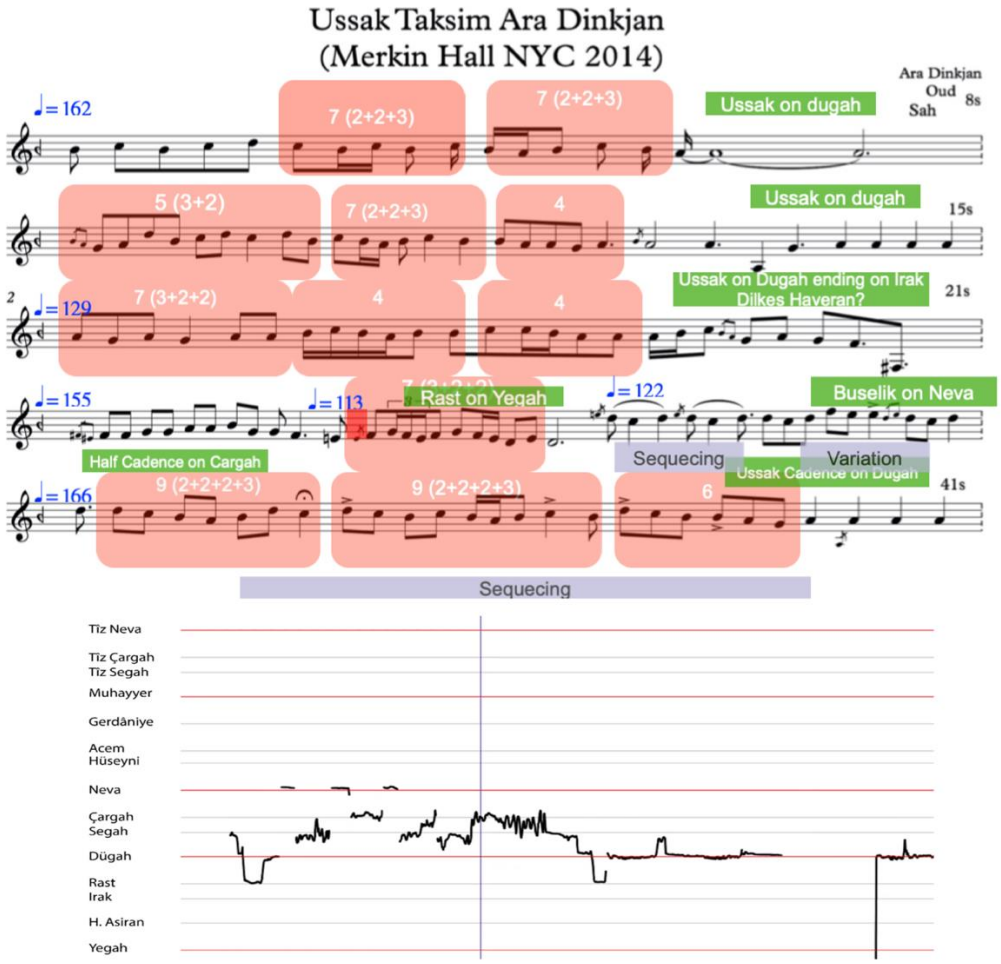
Layer 11: Fully annotated transcription

On this Layer all the desired levels of analysis have been added as real time annotations on complementary synced transcription. On this example, four layers of analysis have been added to the transcription: a) speed (metronome marks in bpm) of each phrase, b) makam flavors, c) rhythmic groupings of phrases, d) phrasing patterns (such as sequencing)



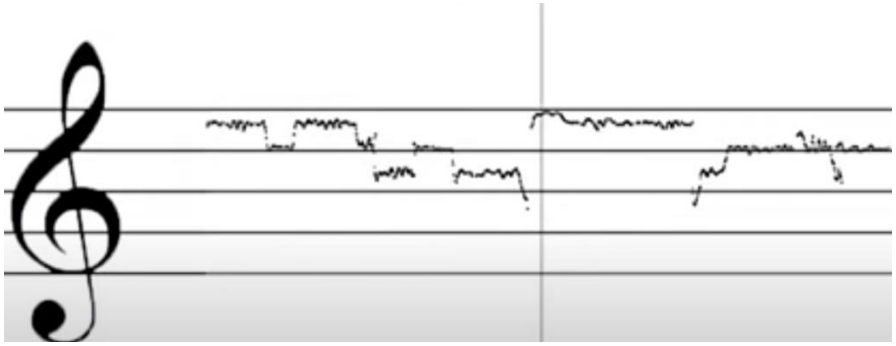
Transcription/analysis © Michalis Cholevas

Layer 12: (Fully) annotated complementary transcription/makam map. On this Layer the melodic contour over the makam map has been synced with the (fully annotated transcription).



Layer 13: Melodic contour on staff.

In this representation, the melodic contour has been projected on the staff. This was used in the early transcriptions but the idea was abandoned due its inaccuracy on presenting intervallic relationships. After the invention of makam maps, all melodic contours are projected on those.



Layer 14 Annotations exported from ianalyse

In this matrix all layers have been exported and the file contains (non-essential information) layers such as annotation shape, color code e.t.c.

ype	name	tags	x	y	width	height	timeStart	timeEnd	layer	corner	fill	fillColor1	fillColor2	border	borderColor	borderWidth	text	slide
ectangle			67.238.464	16.725.304	2.883.939	19.715.715	2.73	6.3	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (2+2+3)	1
ectangle			9.935.272	16.725.304	2.883.939	19.715.715	33.600.767	62.950.654	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (2+2+3)	1
ectangle			33.318.134	3.828.979	4.048.507	19.715.715	7.4	15.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	5 (3+2)	1
ectangle			75.421.124	3.828.979	23.931.596	19.715.715	9.75	15.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (2+2+3)	1
ectangle			10.087.738	3.828.979	197.685	19.715.715	10.5	15.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	4	1
ectangle			33.318.134	58.005.505	3.606.099	19.715.715	15.39	21.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (3+2+2)	1
ectangle			69.379.126	58.005.505	2.669.873	19.715.715	17.0	21.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	4	1
ectangle			9.808.682	58.005.505	25.349.606	19.715.714	18.0	21.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	4	1
ectangle			7.746.745	7.772.122	31.048.218	19.715.715	23.7	27.0	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (3+2+2)	1
ectangle			39.186.816	97.436.926	3.461.639	19.715.715	32.11	39.2	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	9 (2+2+2+3)	1
ectangle			75.421.124	97.436.926	41.802.542	19.715.715	34.0	39.2	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	9 (2+2+2+3)	1
ectangle			11.916.656	97.436.926	28.716.034	19.715.715	36.0	39.2	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	6	1
ext			28.825.098	17.704.141	10.329.551	62.311.405	0.01	47.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=162	1
ext			28.825.098	5.886.855	10.329.551	62.311.405	15.0	47.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=129	1
ext			28.857.263	7.772.122	10.329.551	62.311.405	21.0	47.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=155	1
ext			28.857.263	9.743.694	10.329.551	62.311.405	32.0	47.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=166	1
ext			11.722.367	7.576.778	10.329.551	62.311.405	27.02	47.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=122	1
ext			7.094.489	78.308.545	10.329.551	62.311.405	23.0	47.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=113	1
ursorRectar	Cursor		33.163.422	2.820.844	12.639.686	7.041.832	0.0	7.5	0.0	FALSE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,29,0,0,	2.0		1	
ursorRectar	Cursor		3.443.716	46.967.752	1.367.164	61.241.077	76.362.133	15.5	0.0	FALSE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,29,0,0,	2.0		1	
ursorRectar	Cursor		35.047.748	6.593.265	1.313.759	61.241.077	15.6	20.7	0.0	FALSE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,29,0,0,	2.0		1	
ursorRectar	Cursor		34.567.767	84.539.685	13.810.016	61.241.077	20.9	32.3	0.0	FALSE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,29,0,0,	2.0		1	
ursorRectar	Cursor		3.520.382	1034.21	13.703.898	61.241.077	32.4	39.2	0.0	FALSE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,29,0,0,	2.0		1	
ectangle	Flavour 1		13.322.739	191.356	26.332.886	4.799.683	23.494.425	73.494.425	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Ussak on dug	1
ectangle	Flavour 1		14.009.076	3.828.979	26.332.886	48.663.948	12.0	15.0	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Ussak on dug	1
ectangle	Flavour 1		12.819.211	5.632.934	39.642.517	7.094.186	17.773.428	20.803.192	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Ussak on Dug	1
ectangle	Flavour 1		86.714.056	79.835.394	24.552.092	4.116.963	23.001.335	26.995.436	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Rast on Yega	1
ectangle	Flavour 1		14.944.688	7.772.122	28.765.778	62.311.405	27.381.973	32.381.973	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Buselik on Ni	1
ectangle	Flavour 1		3.131.768	928.534	28.765.778	45.835.396	31.443.659	3.644.366	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Half Cadence	1
ectangle	Flavour 1		13.625.662	94.305.225	31.578.012	62.311.405	35.835.197	39.281.742	Flavours	0.0	TRUE	0.2,0.64,0.03	0.4,0.84,0.23	FALSE	0,0,0.29,0.0,	2.0	Ussak Caden	1
ectangle	Mauve		11.916.656	912.058	19.985.898	62.311.405	27.541.224	32.518.517	Phrasing	0.0	TRUE	0.69,0.67,0.8	0.89,0.87,1.0	FALSE	0.34,0.32,0.4	2.0	Sequecing in	1
ectangle	Mauve		1.478.826	912.058	19.985.898	62.311.405	2.963.697	3.250.796	Phrasing	0.0	TRUE	0.69,0.67,0.8	0.89,0.87,1.0	FALSE	0.34,0.32,0.4	2.0	and Variatio	1
ectangle	Mauve		61.288.544	11.892.616	8.815.833	4.468.717	32.967.327	38.805.603	Phrasing	0.0	TRUE	0.69,0.67,0.8	0.89,0.87,1.0	FALSE	0.34,0.32,0.4	2.0	Sequecing in	1
ectangle			10.328.965	51.72	38.688.254	18.246.895	42.5	47.6	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	9 (2+2+2+3)	2
ectangle			77.556.213	51.72	23.564.088	18.246.895	40.9	47.1	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (3+2+2)	2
ectangle			38.892.654	40.598.734	22.825.224	18.246.895	54.4	58.5	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7 (3+2+2)	2
ectangle			5.843.176	60.464.905	85.601.135	17.913.933	64.2	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	3	2
ectangle			6.699.188	60.464.905	85.601.135	17.913.933	64.8	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	3	2
ectangle			75.551.996	60.464.905	85.601.135	17.913.933	65.4	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	3	2
ectangle			8.283.995	60.752.673	8.242.895	17.626.161	66.0	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	3	2
ectangle			3.812.391	78.378.845	3.659.155	18.246.895	71.3	79.6	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	10 (3+2+2+3	2
ectangle			1.445.004	60.464.905	2.040.378	17.913.933	69.6	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	7/8 (2+2+3)	2
ectangle			11.492.423	60.464.905	29.576.172	17.913.933	68.1	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	11 (4+3+4)	2
ectangle			9.023.717	60.464.905	23.348.935	17.913.933	66.5	71.4	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	9 (2+3+2+2)	2
ectangle			79.186.743	78.378.845	2.794.051	18.246.895	73.6	79.6	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	4	2
ectangle			11.171.152	78.378.845	19.944.908	18.246.895	75.8	79.6	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	3	2
ectangle			3.812.391	42.429.745	38.618.405	18.246.895	39.4	47.1	Metric Phras	35.835.335	TRUE	1,0,0,0,0,1,	1,0,0,8,0,4,1,	FALSE	0,23,0,23,0,2	15.0	5 (3+2)	2
ext			345.934	42.429.745	95.6	5.766.921	39.28	90.0	phrase speec	0.0	FALSE	0.6,0.4,1,0,1,	1,0,0,8,0,4,1,	FALSE	0,0,0,0,0,1,	15.0	q=181	2

Layer 15 Annotations exported from ianalyse: phrase speed layer

layer:	phrase speed		
	sec	bpm	slide
1	0.01	q=162	1
2	15.0	q=129	1
3	21.0	q=155	1
4	32.0	q=166	1
5	27.02	q=122	1
6	23.0	q=113	1
7	39.28	q=181	2
8	90	q=129	3
9	98.0	q=168	3
10	102	q=143	3
11	109.0	q=192	3
12	114	q=152	3
13	151.3	q=175	4
14	158	q=104	4

Layer 16: Annotations exported from ianalyse: rhythmic groupings in phrasing

The table contains the blocks of metric groupings found in the performance

Ara Dinkjan Ussak Metric Groupings					
Bars	start (sec)	end (sec)	Bar	Groupings	D+E
1	2.73	6.3	7 beats	2+2+3	7 (2+2+3)
2	3.365.011	6.3	7 beats	2+2+3	7 (2+2+3)
3	7.4	15	5 beats	3+2	5 (3+2)
4	9.75	15	7 beats	2+2+3	7 (2+2+3)
5	10.5	15	4 beats		4
6	15.39	21	7 beats	2+2+3	7 (3+2+2)
7	17	21	3 beats		
8	18	21	5 beats	3+2	5 (3+2)
9	23.7	27	7 beats	2+2+3	7 (2+2+3)
10	32.11	39.2	9 beats	2+2+2+3	9 (2+2+2+3)
11	34	39.2	9 beats	2+2+2+3	9 (2+2+2+3)
12	36	39.2	6 beats		6
13	42.5	47.6	9 beats	2+2+2+3	9 (2+2+2+3)
14	40.9	47.1	7 beats	2+2+2+3	7 (3+2+2)
15	54.4	58.5	7 beats	2+2+2+3	7 (3+2+2)
16	64.2	71.4	beats	2+2+2+3	3
17	64.8	71.4	9 beats	2+2+2+3	3
18	65.4	71.4	9 beats	2+2+2+3	3
19	66	71.4	3 beats		3
20	71.3	79.6	10 beats	3+2+2+3	10 (3+2+2+3)
21	69.6	71.4	7 beats	2+2+3	7/8 (2+2+3)
22	68.1	71.4	11 beats	4+3+4	11 (4+3+4)
23	66.5	71.4	9 beats	2+3+2+2	9 (2+3+2+2)
24	73.6	79.6	4 beats		4
25	75.8	79.6	3 beats		3
26	39.4	47.1	5 beats	3+2	5 (3+2)
27	91.4	98.8	3 beats		3
28	919.817	98.8	3 beats		3
29	92.6	98.8	3 beats		3
30	93.2	98.8	3 beats		3
31	93.9	98.8	3 beats		3
32	94.6	98.8	3 beats		3
33	95.3	98.8	3 beats		3
34	95.9	98.8	3 beats		3
35	96.5	98.8	3 beats		3
36	103.5	108.8	5 beats	3+2	5 (3+2)
37	104.5	108.8	4 beats		4
38	106.9	108.8	5 beats		
39	109	114	7 beats	4+3	7 (4+3)
40	115	117.6	10 beats	3+3+2+2	10 (3+3+2+2)
41	121.3	127.3	4 beats		4
42	127.6	131.6	6 beats		6/8 feel
43	132	137.14	7 beats	3+2+2	7 (3+2+2)
44	144.7	150.1	9 beats	2+2+2+3	9 (2+2+2+3)
45	146.9	150.1	9 beats	2+3+2+2	9(2+3+2+2)

Layer 17: Annotations exported from ianalyse: Makam flavors (modulations, rests on secondary perdes)

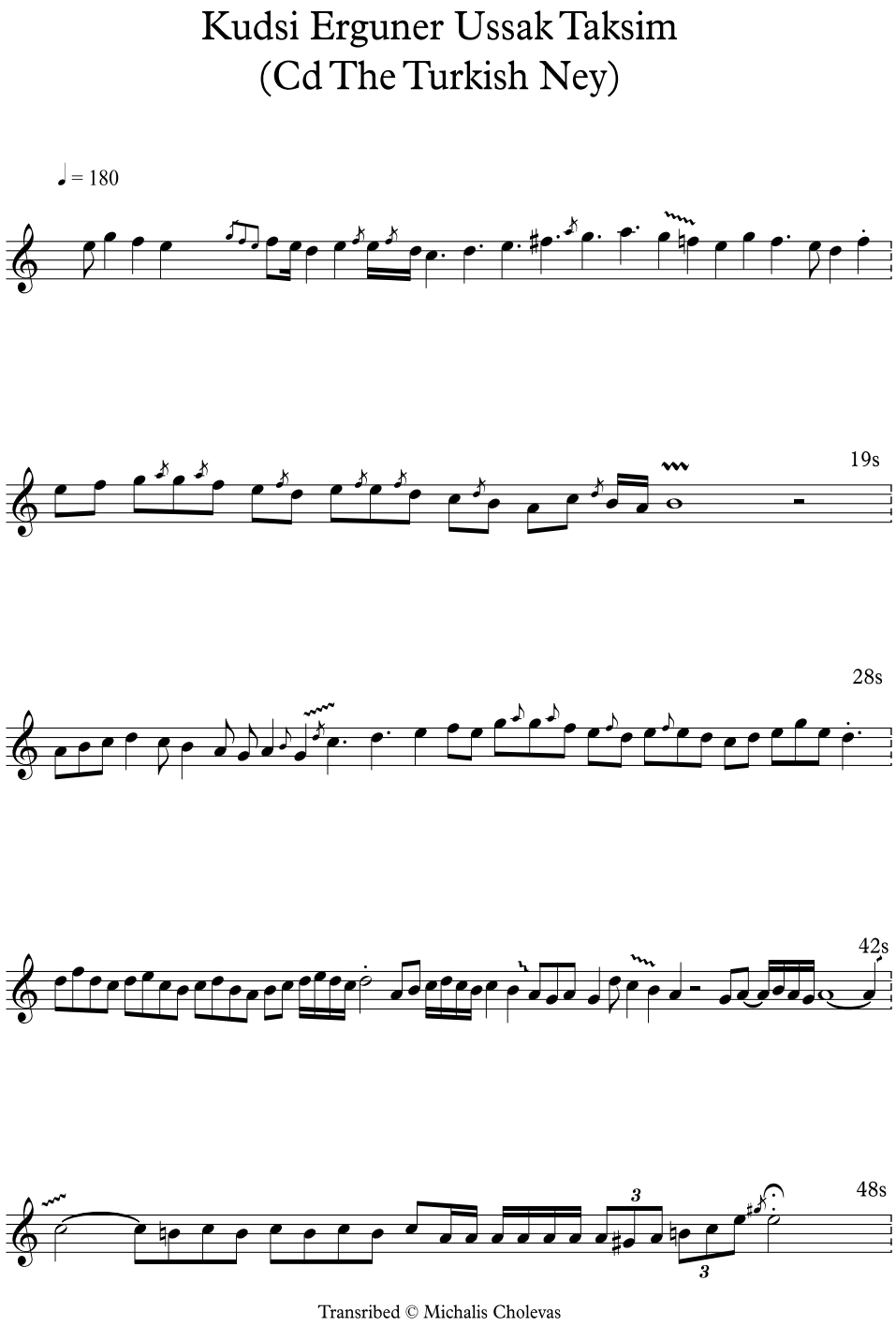
Analysis: Makam flavours			
start (sec)	end (sec	Flavour	page no
2	7	Ussak on dugah	1
12.0	15.0	Ussak on dugah	1
17	20	Ussak on Dugah ending on Irak Dilkes Haveran?	1
23	26	Rast on Yegah	1
27	32	Buselik on Neva	1
31	35	Half Cadence on Cargah	1
36	39	Ussak Cadence on Dugah	2
81	87	Transition to Huseyni flavour	3
105	108	leading to Neva with buselik flavour	3
110	114	establishing neva as the dominant perde	3
115	125	building Cargah flavour and establishing cargah perde	3
132	140	building segah flavour and establishing segah perde	3

Layer 18: Annotations exported from ianalyse: Phrasing Habits

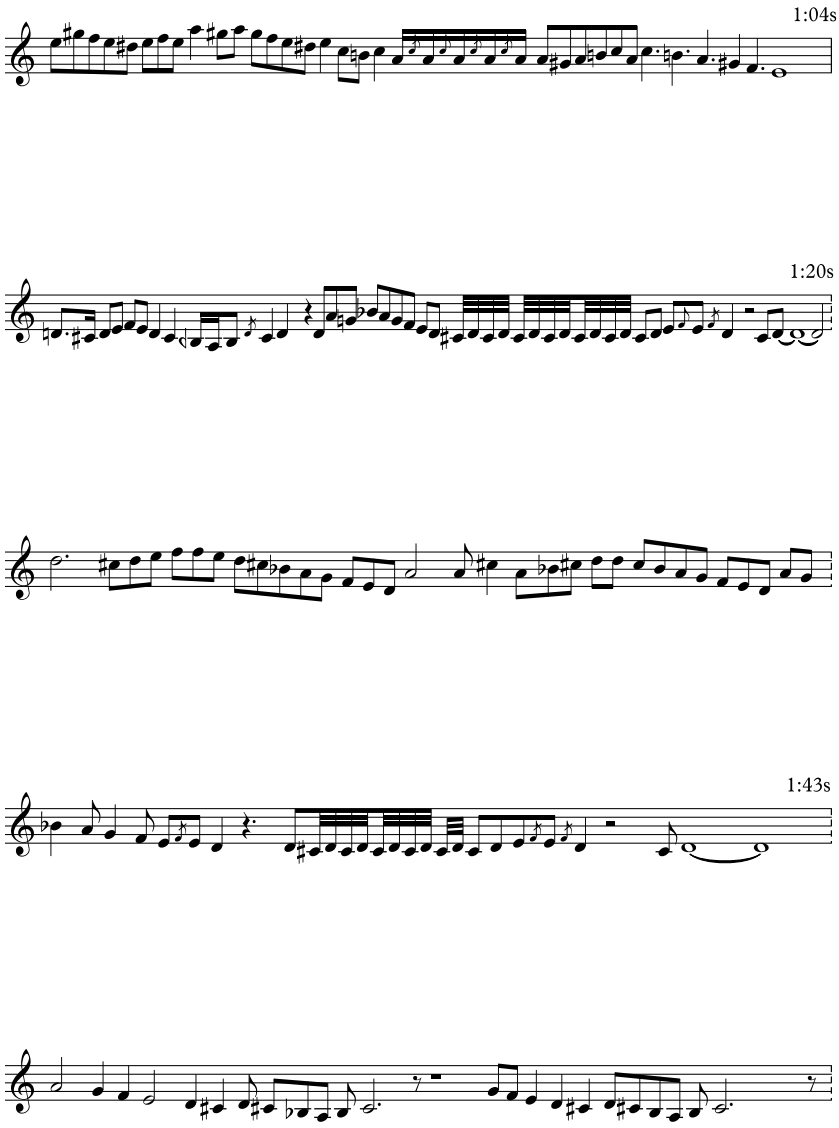
Layer: Phrasing habits			
Start (sec)	End sec	Phrasing description	slide
1	7	Sequencing opening	1
8	15	Close sequence	1
27	32	Sequencing in 5	1
29	32	and adding variation	1
32	41	sequencing in 9 and variation in 6	1
48	55	open sequence	2
57	63	close sequence	2
93	97	Sequencing groupings of 3	3
127	131	Sequence opening on cargah	3
132	136	Sequence closing on segah	3
137	141	variations on sequence	3
143	146	sequence opening	4
147	149	sequence closing	4
151	158	variations on short sequence	4

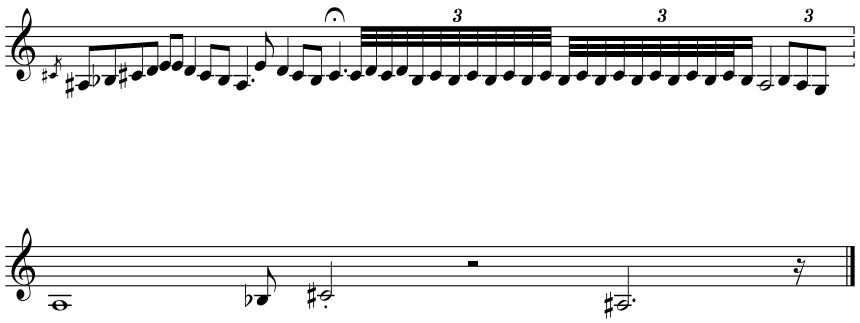
2. Kudsi Erguner Uşşâk Taksim

Layer 1 Transcription, articulation and ornamentation



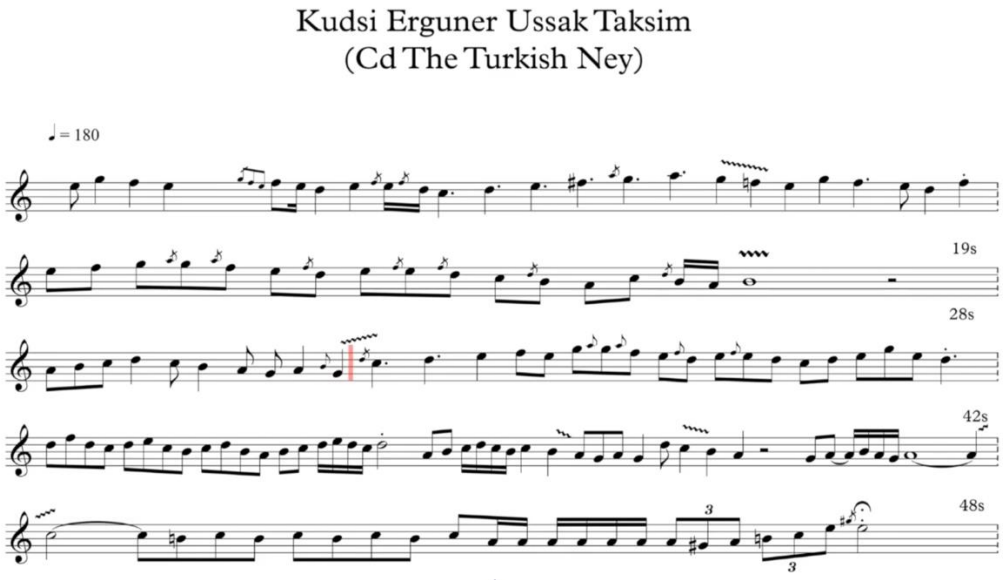
2




3
3
3

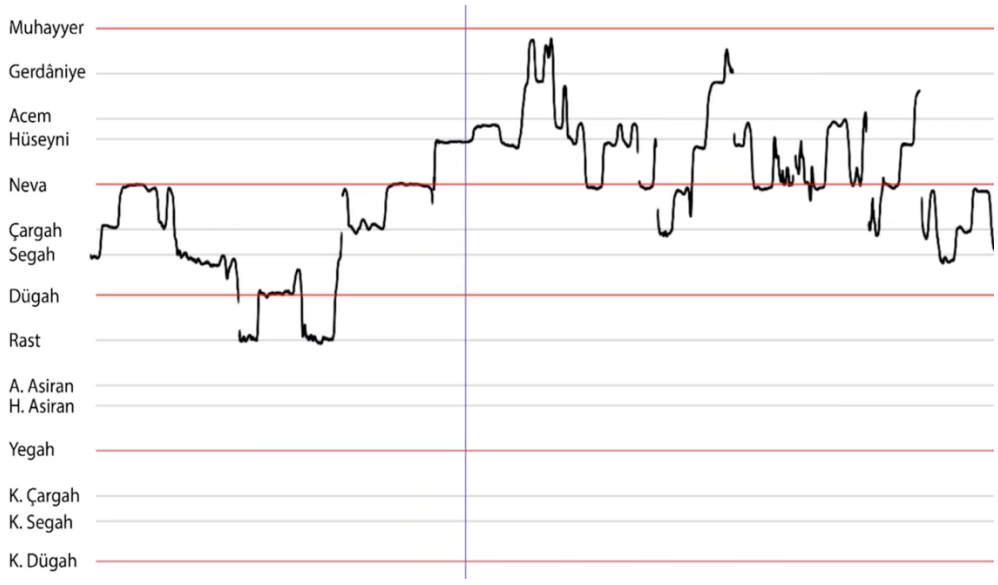
Layer 2 audio-synced transcription.

In this Layer the transcription is synced with audio and a red vertical cursor is following the audio in real time



Layer 3 Melodic contour.

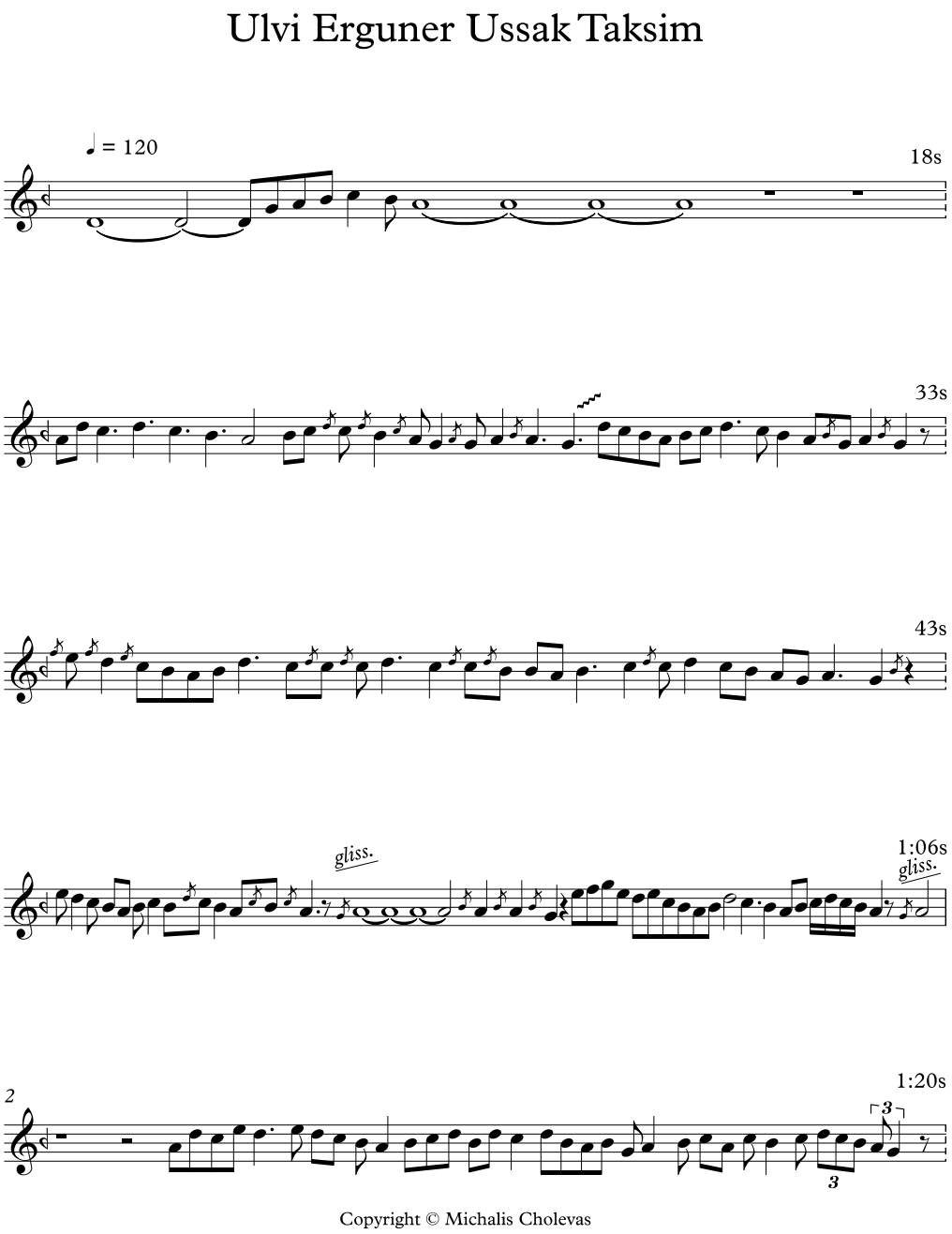
The melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



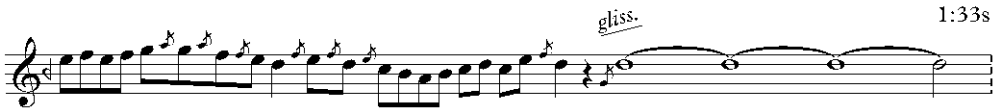
Layer 4: Transcription synced with audio and melodic contour. The melodic contour projected on the makam map has been added to the audio synced transcription

3. Ulvi Erguner Uşşâk Taksim (archive or Kudsi Erguner)

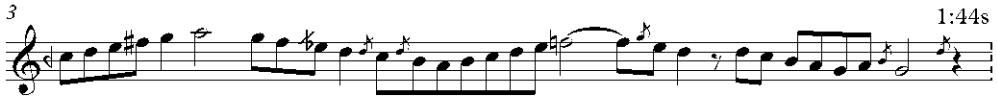
Layer 1: Transcription, ornamentation, articulation, attracted notes (Eviç, Segah marked in red when pitch is lowered to lead to degrees such as Neva and Dugah).

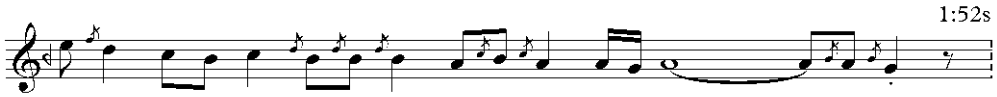


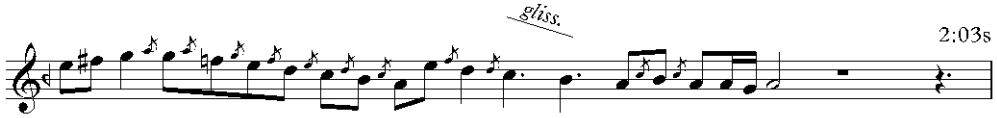
2



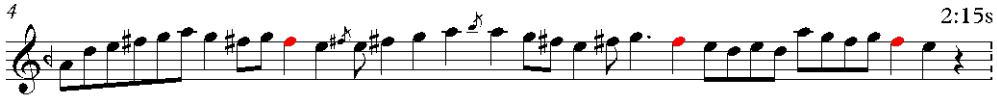
3

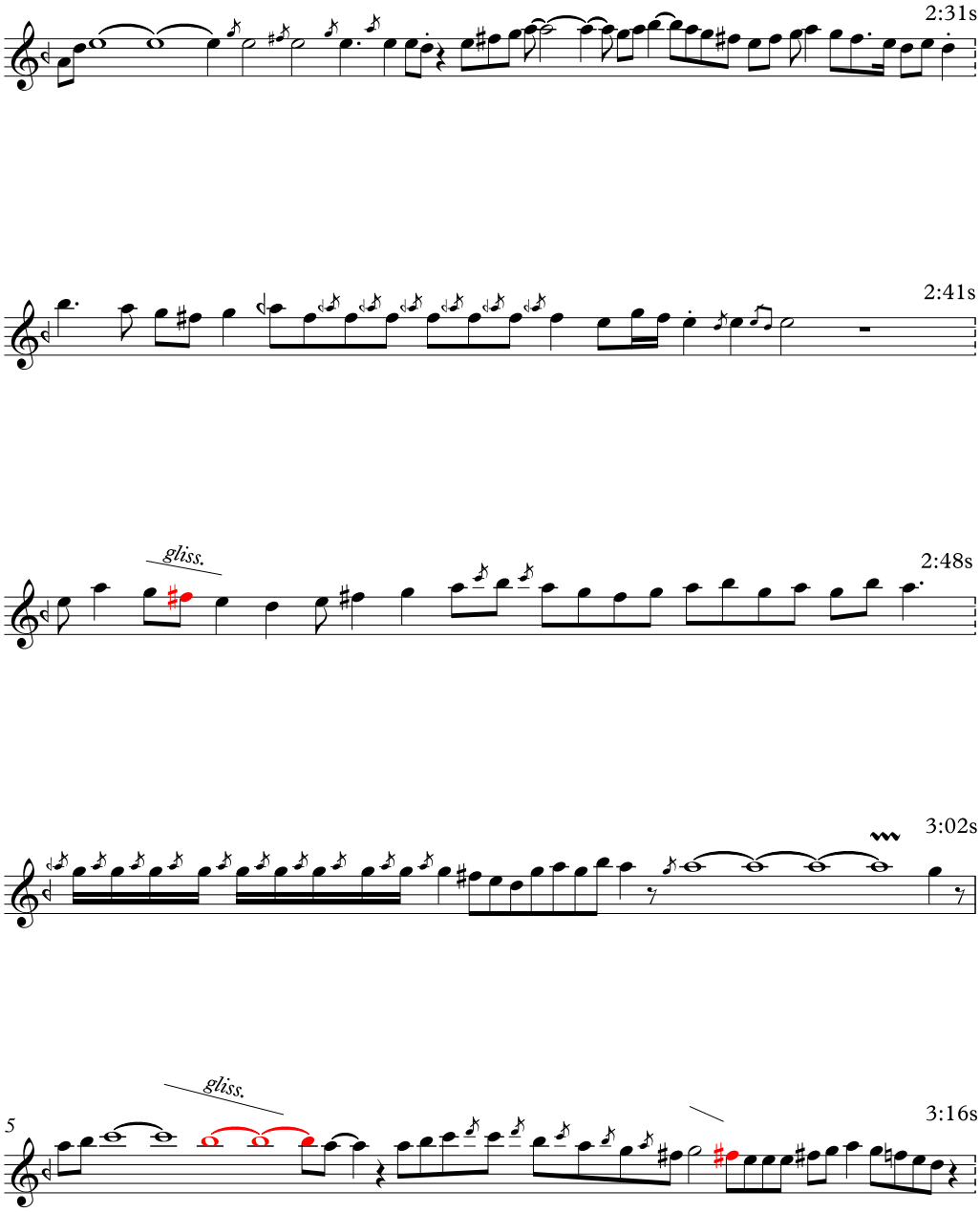




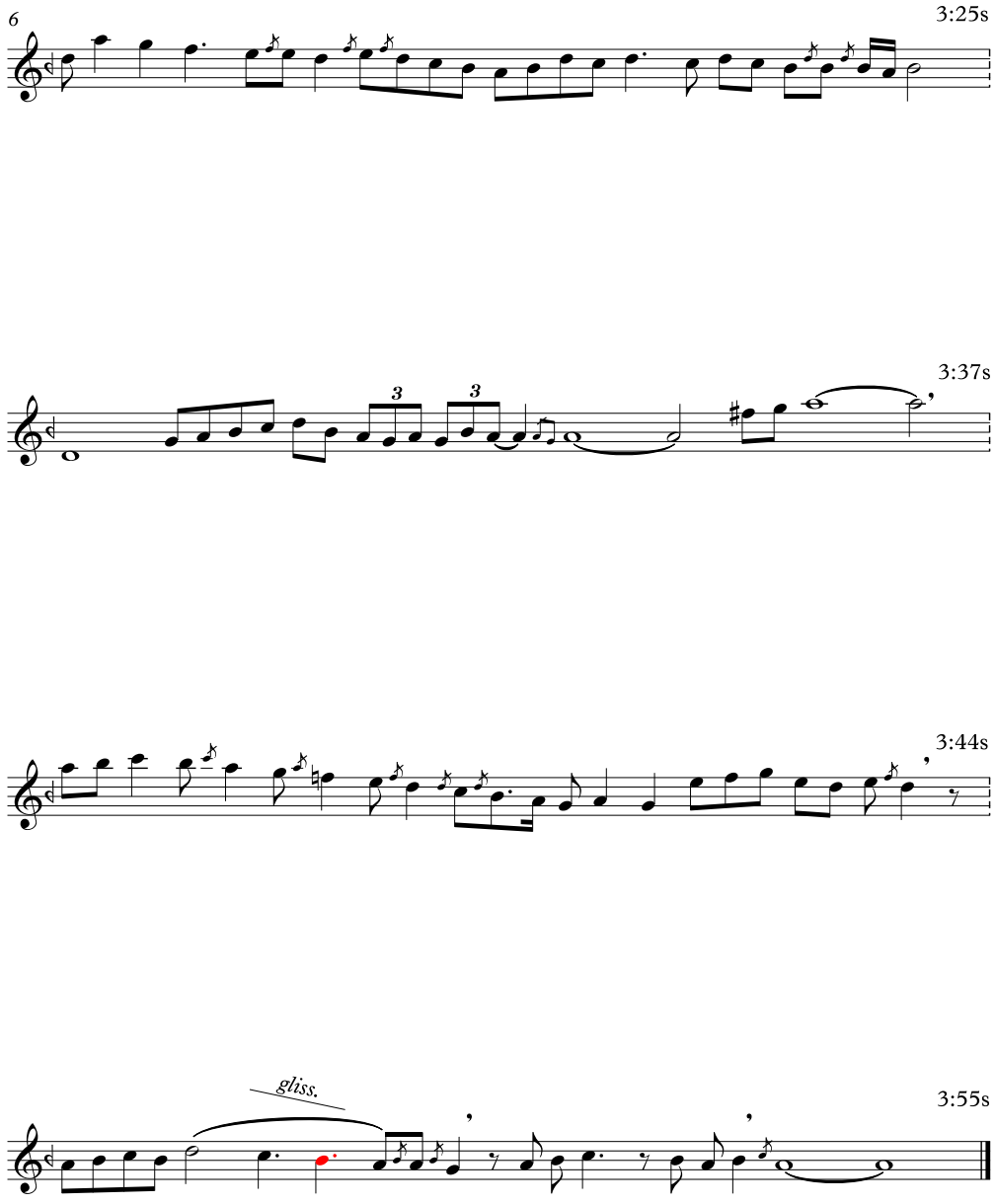


4



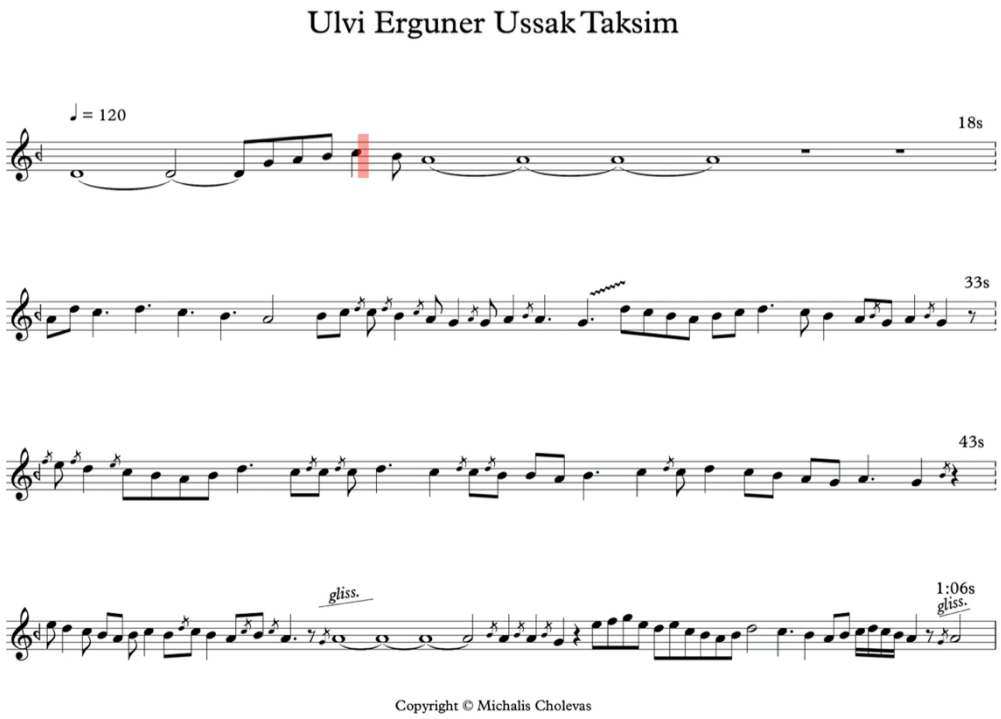


4



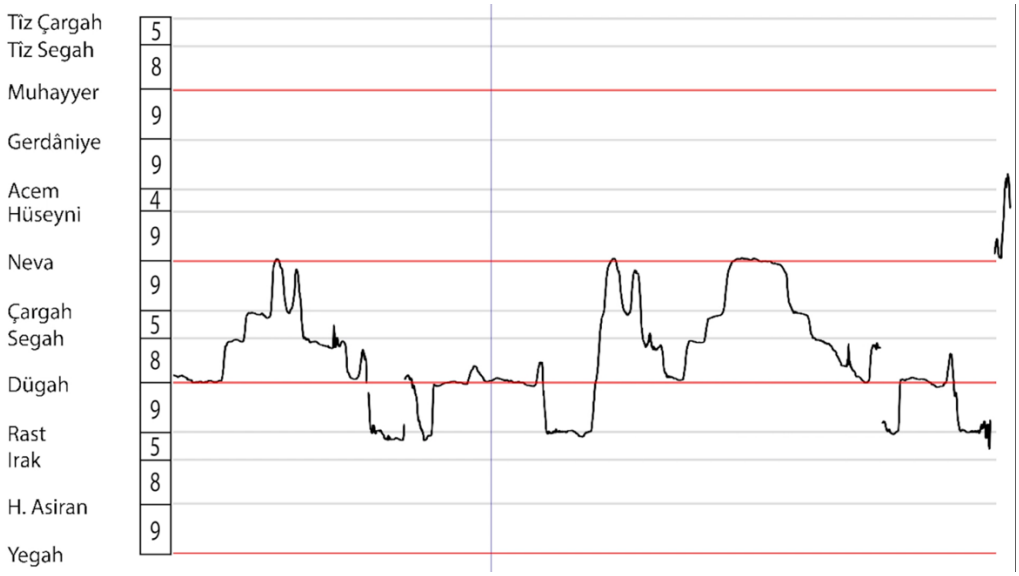
Layer 2 Audio-synced transcription.

In this Layer the transcription is synced with audio and a red vertical cursor is following the audio in real time



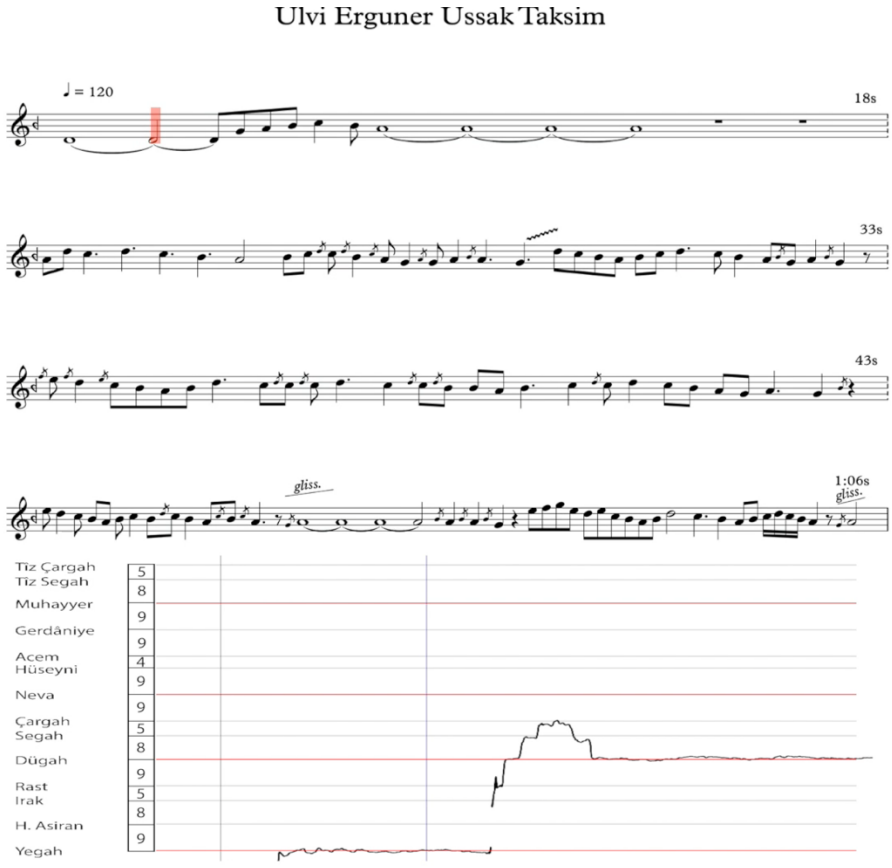
Layer 3: Melodic contour

The melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale and the bar of intervals added next to the names of degrees.



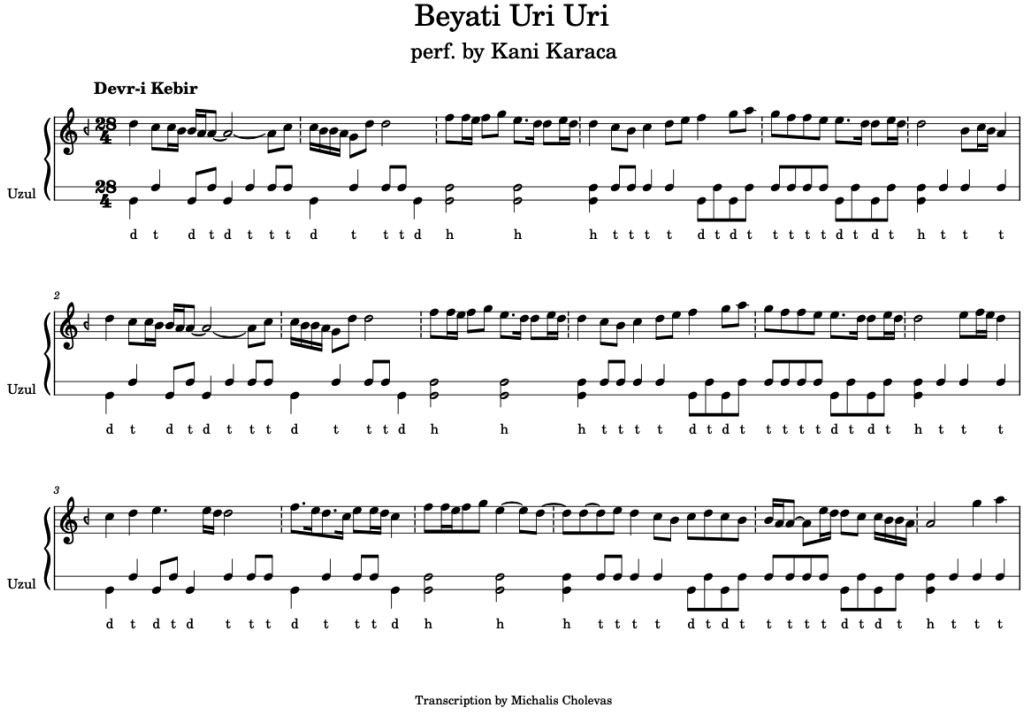
Layer 4: Transcription synced with audio and melodic contour.

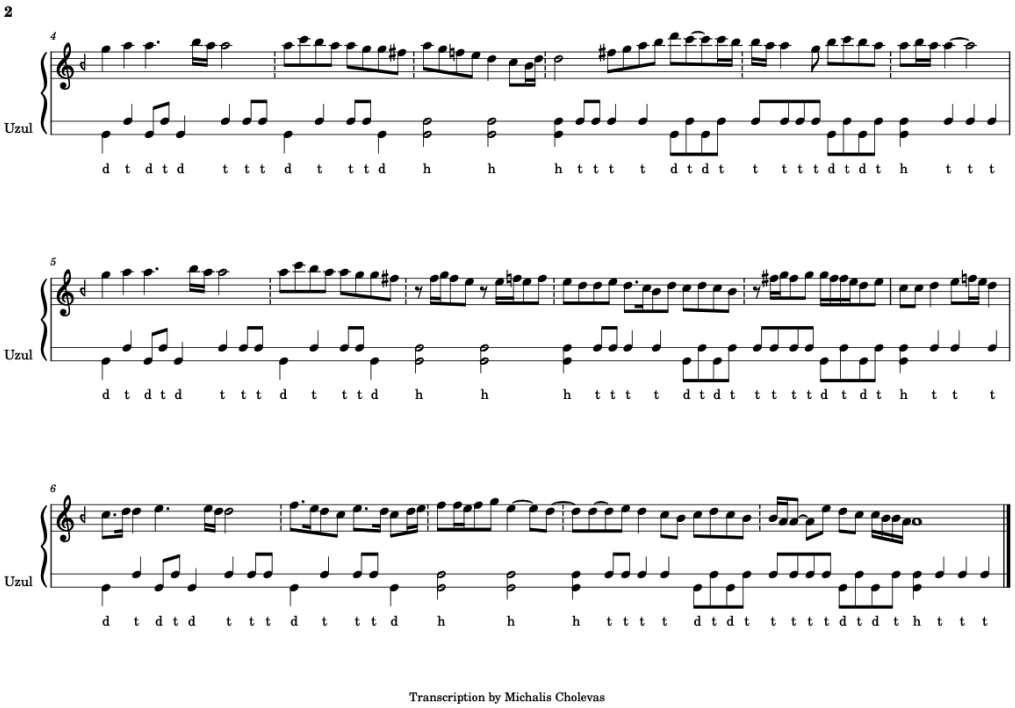
The melodic contour projected on the makam map has been added to the audio synced transcription



4. Kani Karaca Beyati Beste Uri-Uri (comp. by Moşe Cordova)

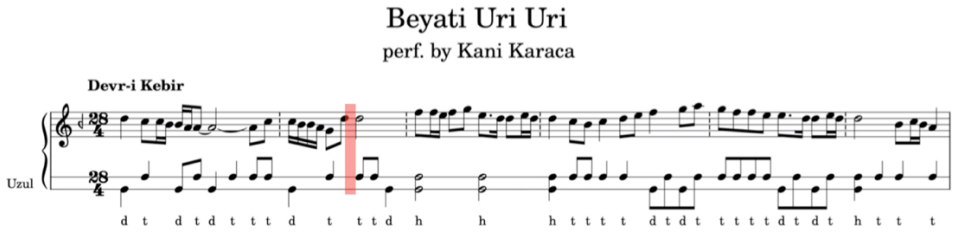
Layer 1: Transcription. In this version the rhythmic cycle (Devr-i Kebir) has been added as a layer below the melodic line





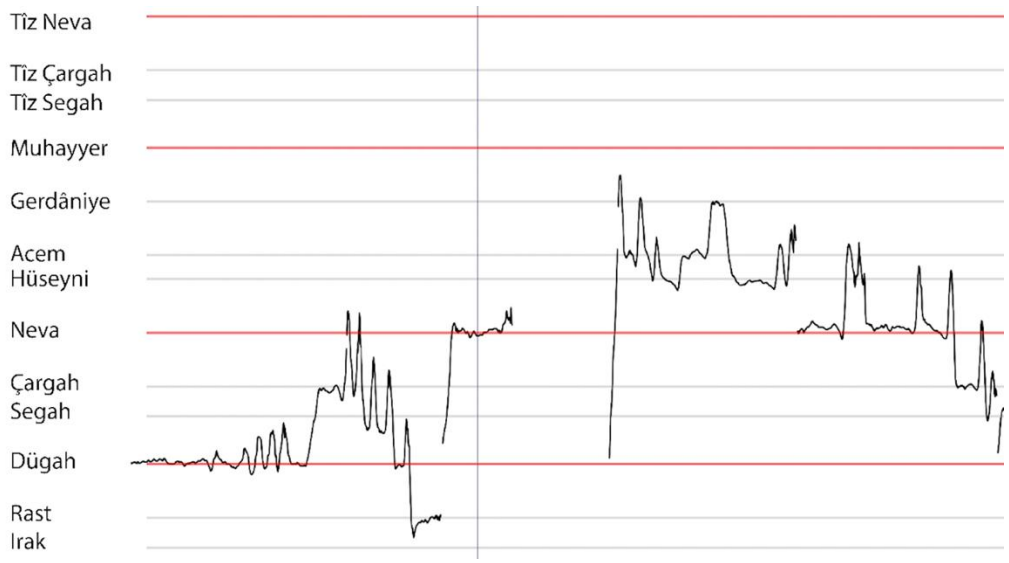
Layer 2: Audio-synced transcription.

In this Layer the transcription of the melody and the rhythmic cycle (Devr-I Kebir, 28 beats cycle) is synced with audio and a red vertical cursor is following the audio in real time



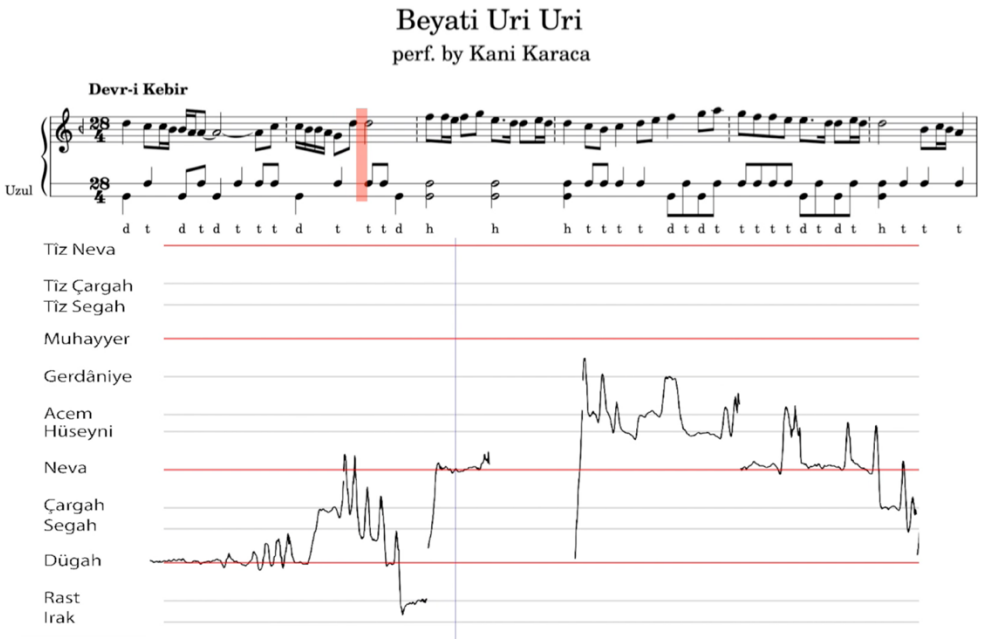
Layer 3: Melodic contour

The melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale and the bar of intervals added next to the names of degrees.


Tîz Neva
Tîz Çargah
Tîz Segah
Muhayyer
Gerdâniye
Acem
Hüseyni
Neva
Çargah
Segah
Dügah
Rast
Irak

Layer 4: Transcription synced with audio and melodic contour.

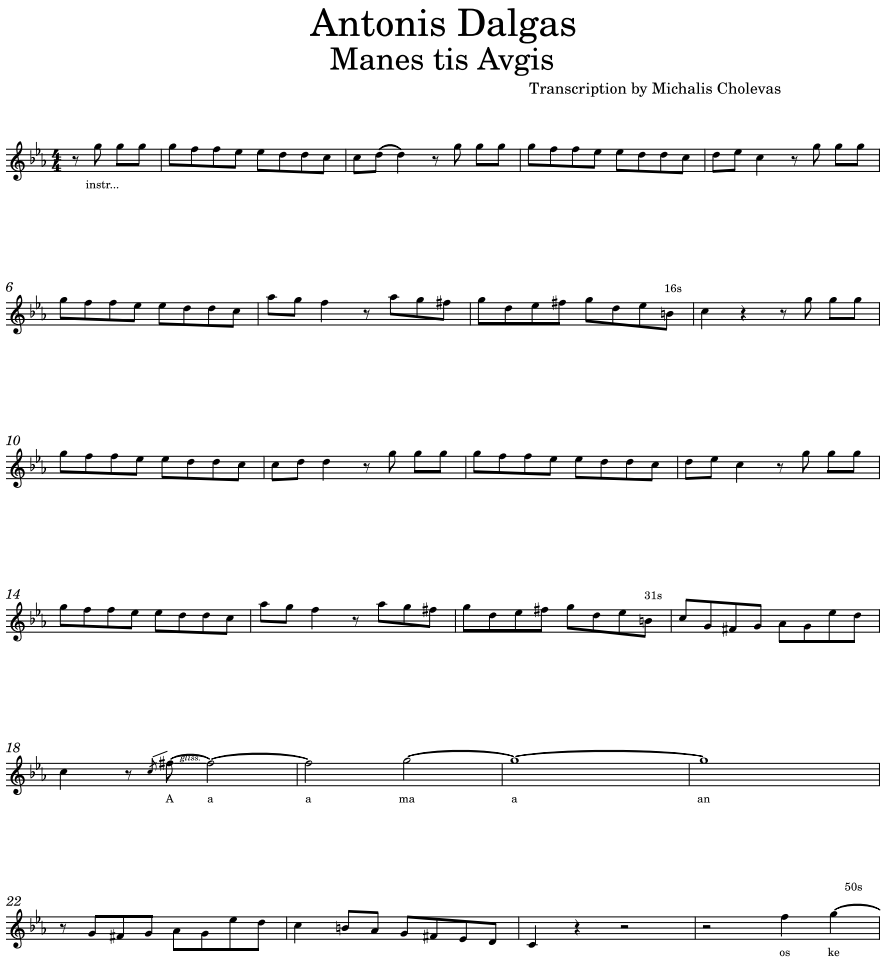
The melodic contour projected on the makam map has been added to the audio synced transcription

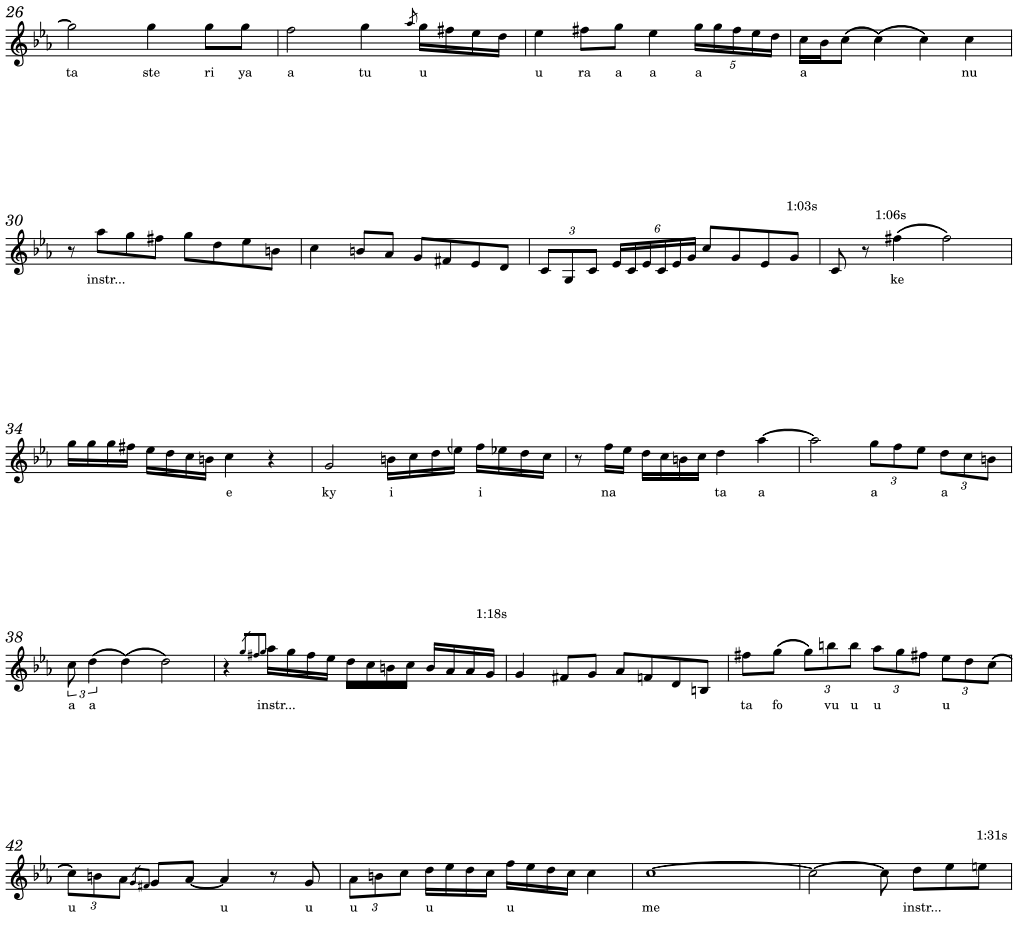


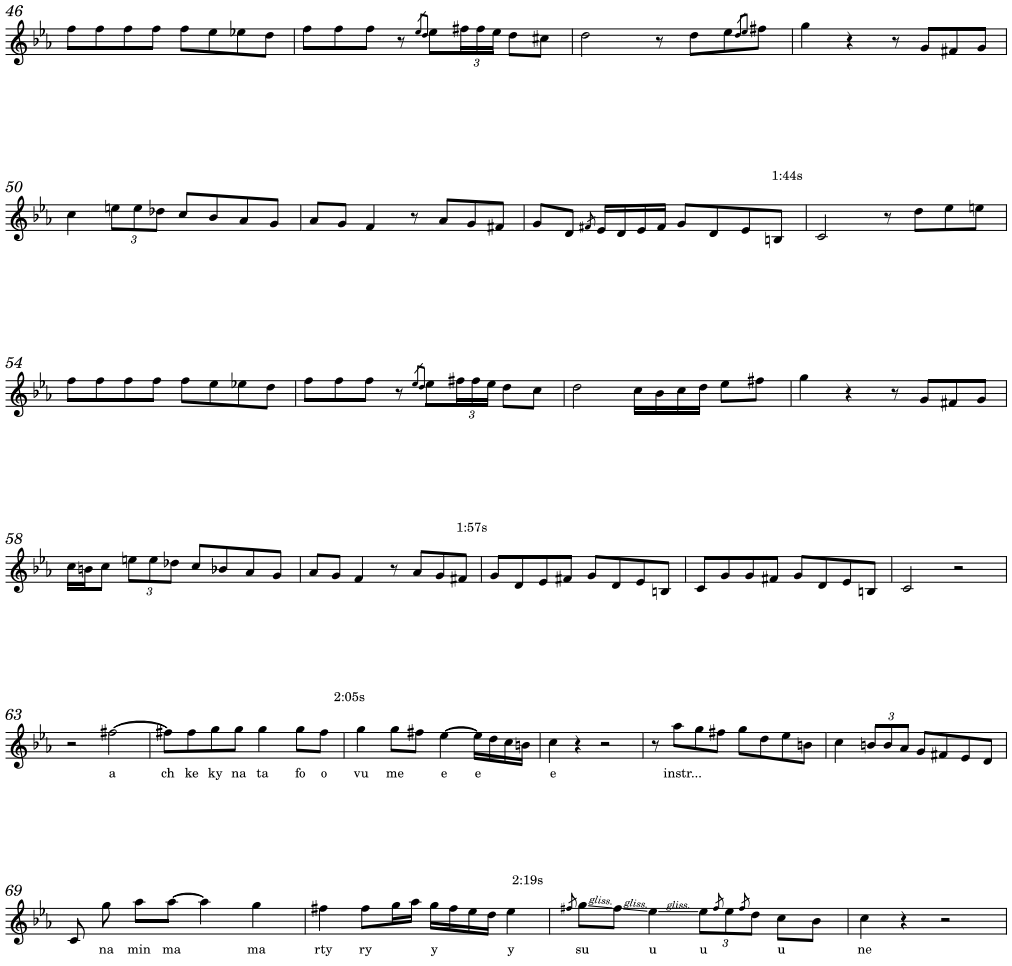
5. Antonis Dalgas: Manes tis Avgis - Αντώνης Νταλγκάς: Μανές της Αυγής

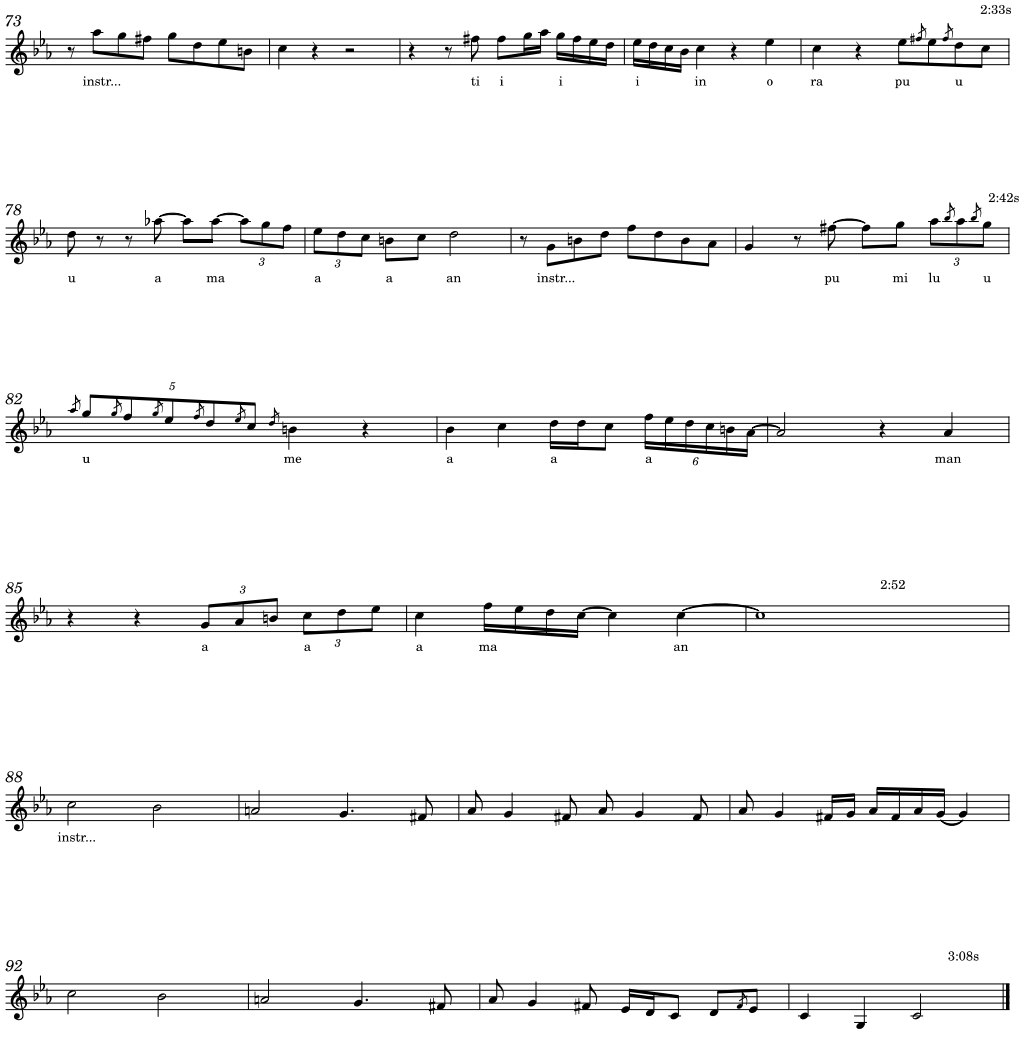
Layer 1: Transcription

In this Layer, the recording was edited so as to extract the melodic contour of the voice, excluding the sound of guitar and accordion.



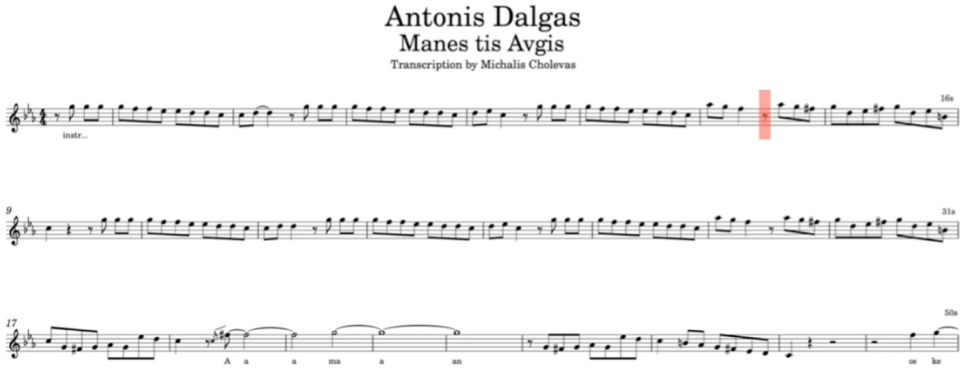

26
ta ste ri ya a tu u u ra a a a a nu
30
1:03s
1:06s
instr... ke
34
e ky i i na ta a a a
38
1:18s
a a instr... ta fo vu u u u
42
1:31s
u u u u u me instr...


46
50
1:44s
54
58
1:57s
63
2:05s
a ch ke ky na ta fo o vu me e e e instr...
69
2:19s
gliss. gliss. gliss.
na min ma ma rty ry y y su u u u ne


73
2:33s
instr... ti i i i in o ra pu u
78
2:42s
u a ma a a an instr... pu mi lu u
82
u me a a a man
85
2:52
a a a ma an
88
instr...
92
3:08s

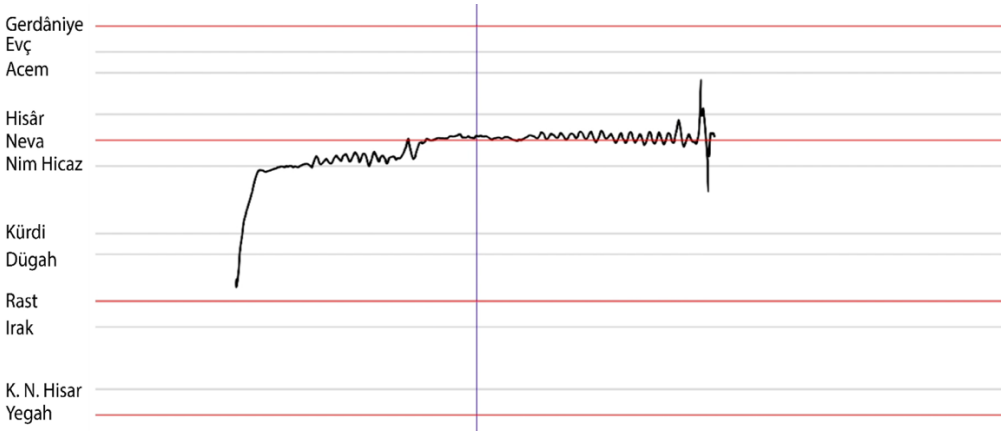
Layer 2: Audio-synced transcription.

In this Layer the transcription of the melody (presented by the voice) and the instrumental part are synced with audio and a red vertical cursor is following the audio in real time



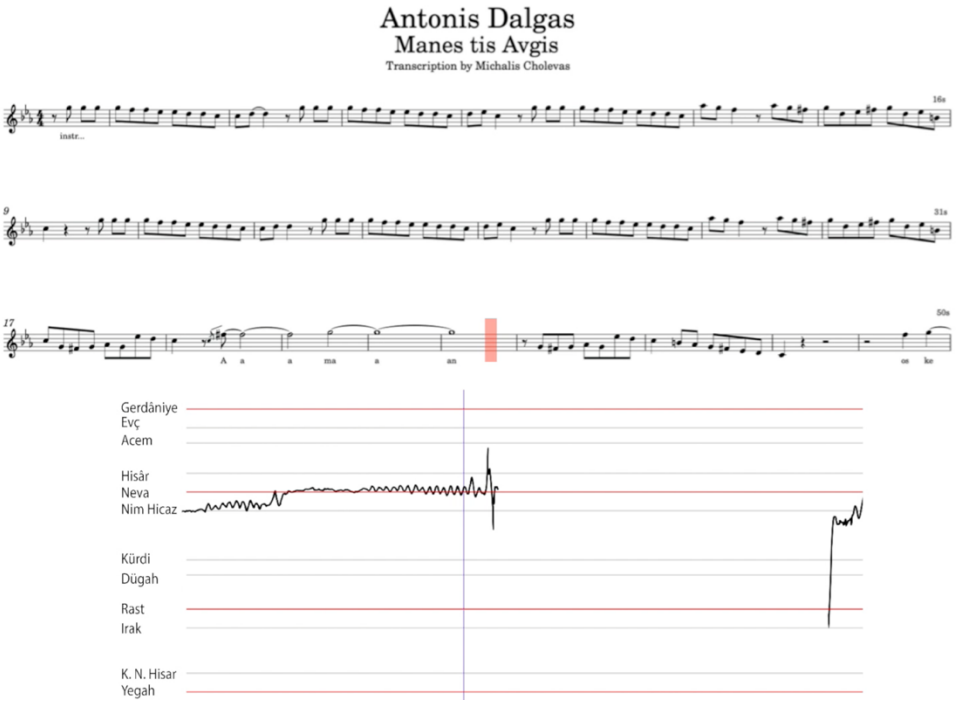
Layer 3: Melodic contour

The melodic contour of the vocal part is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



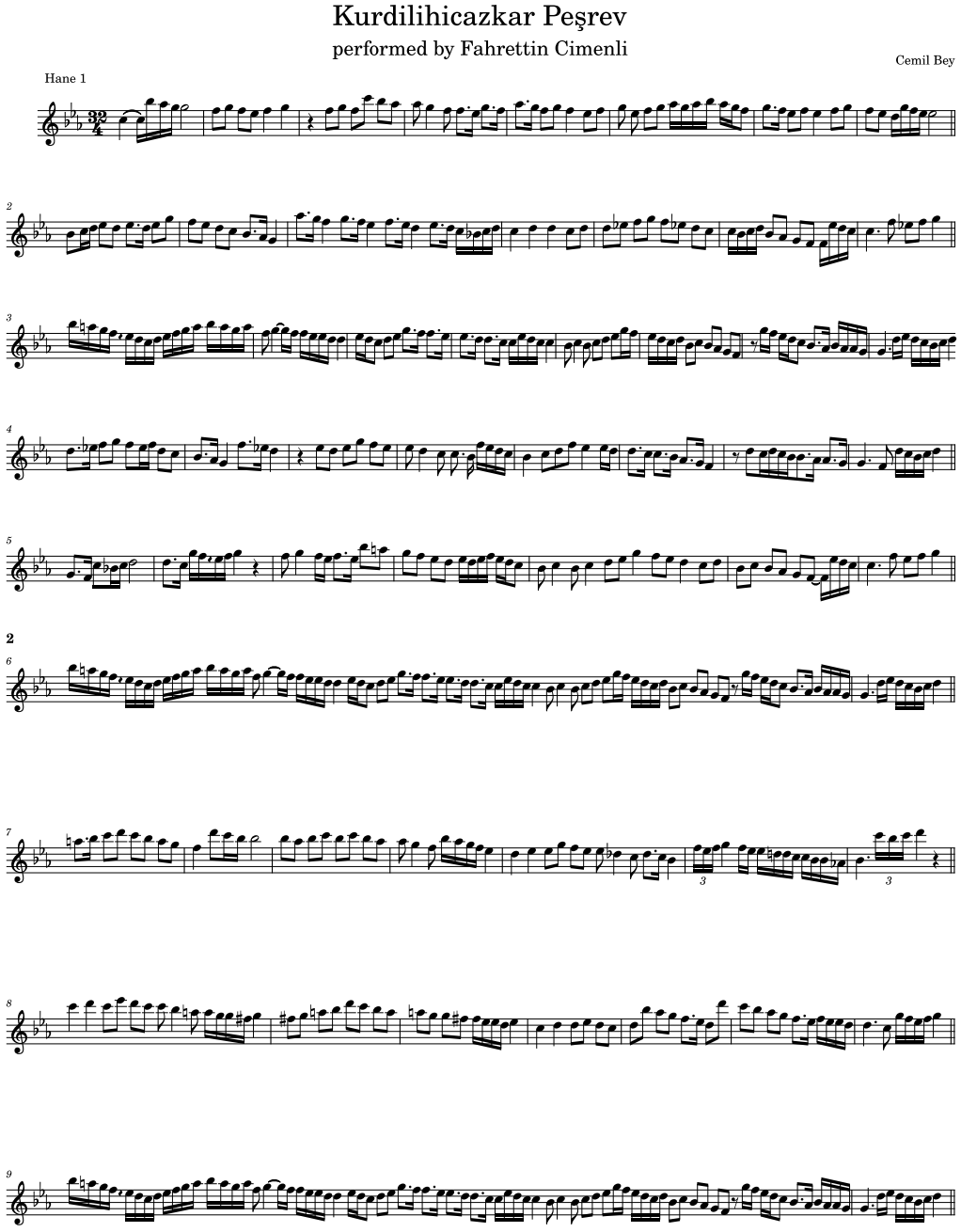
Layer 4: Transcription synced with audio and melodic contour.

The melodic contour projected on the makam map has been added to the audio synced transcription



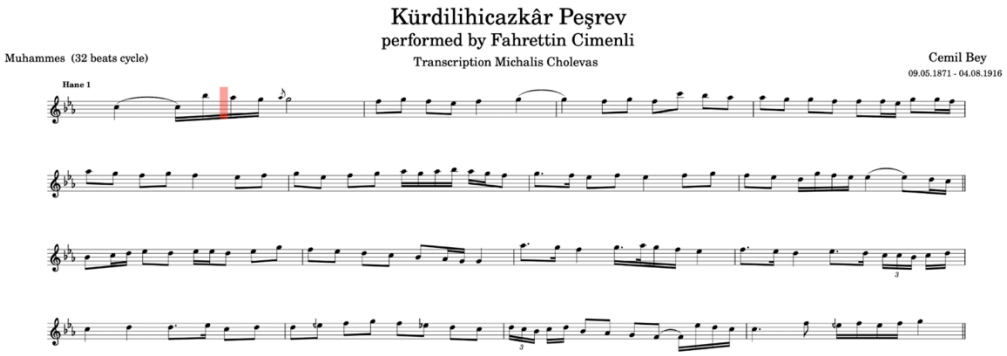
6. Fahrettin Çimenli Kurdilihicazkar Pesrev (comp. Cemil Bey)

Layer 1: Transcription



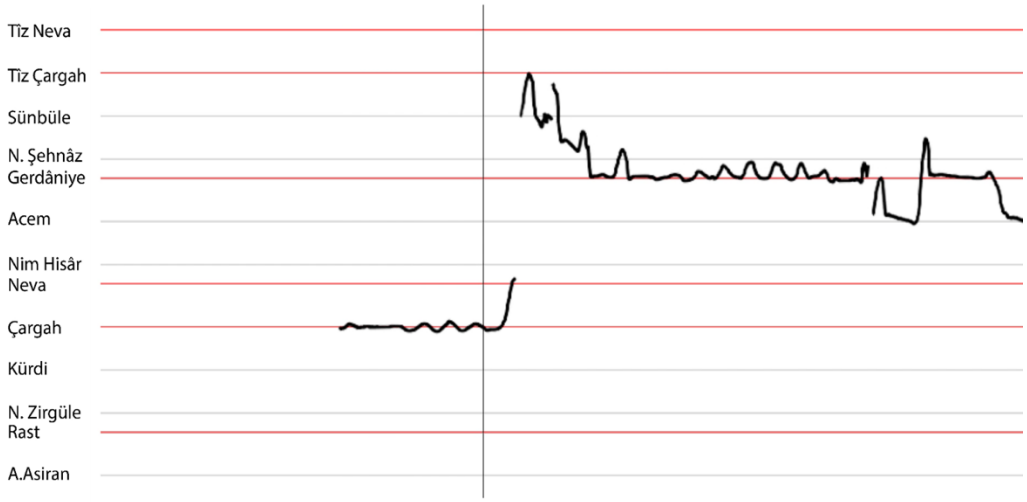
Layer 2 Audio-synced transcription.

In this Layer the transcription is synced with audio. A red vertical cursor is following the audio in real time



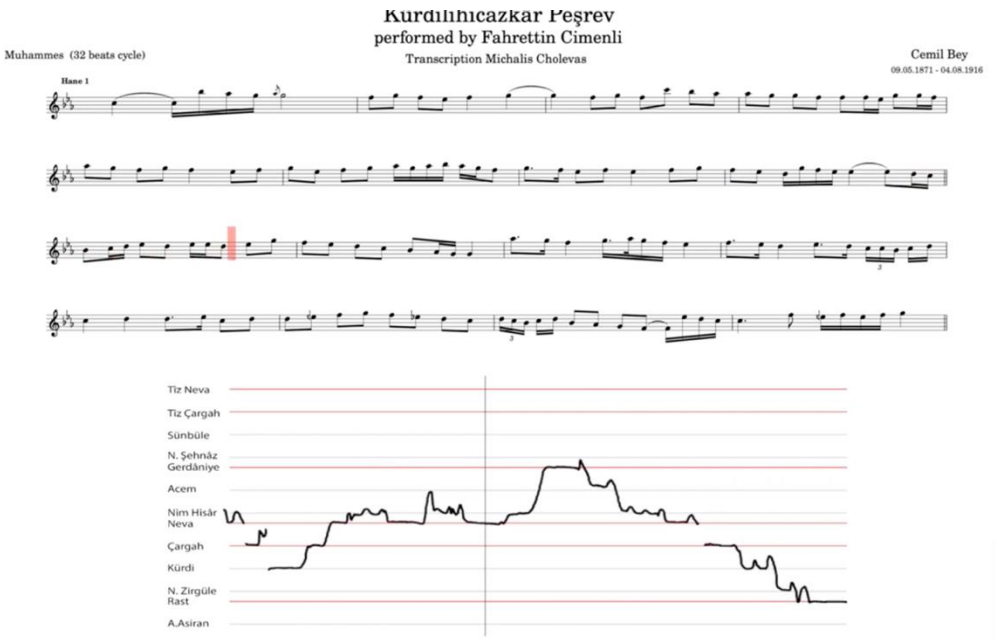
Layer 3 Melodic contour

The melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



Layer 4: Transcription synced with audio and melodic contour.

The melodic contour projected on the makam map has been added to the audio synced transcription



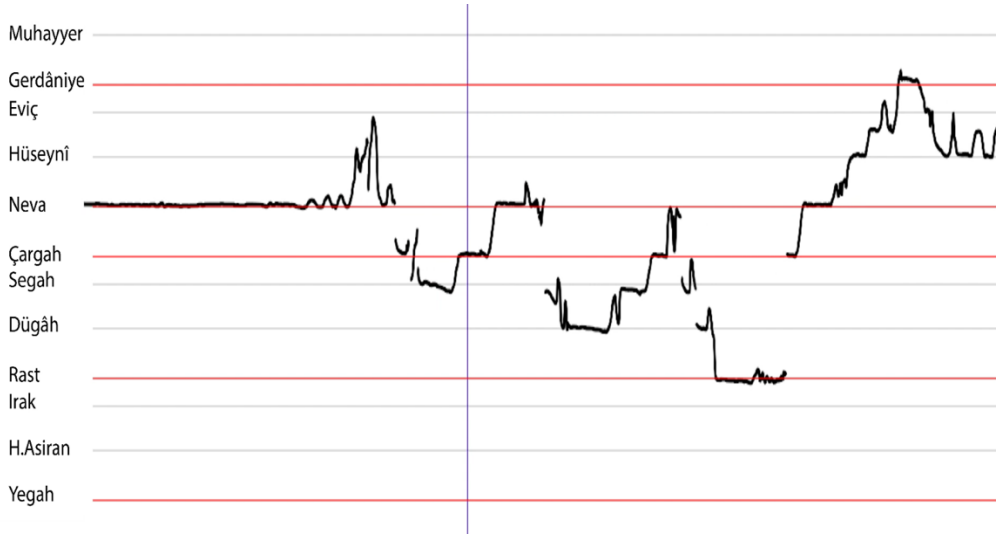
7. Fahrettin Çimenli Taksim introduction before Kurdilihicazkar Pesrev (Private archive of Kudsi Erguner)

The long taksim presented here is unpublished and was recorded by Kudsi Erguner on the same session with the previous performance, the Kurdilihicazkar Pesrev of Cemil Bey. The taksim starts on Rast makam and leads to Kurdilihicazkar, introducing the makam before the Pesrev performance.

7.1 Part 1

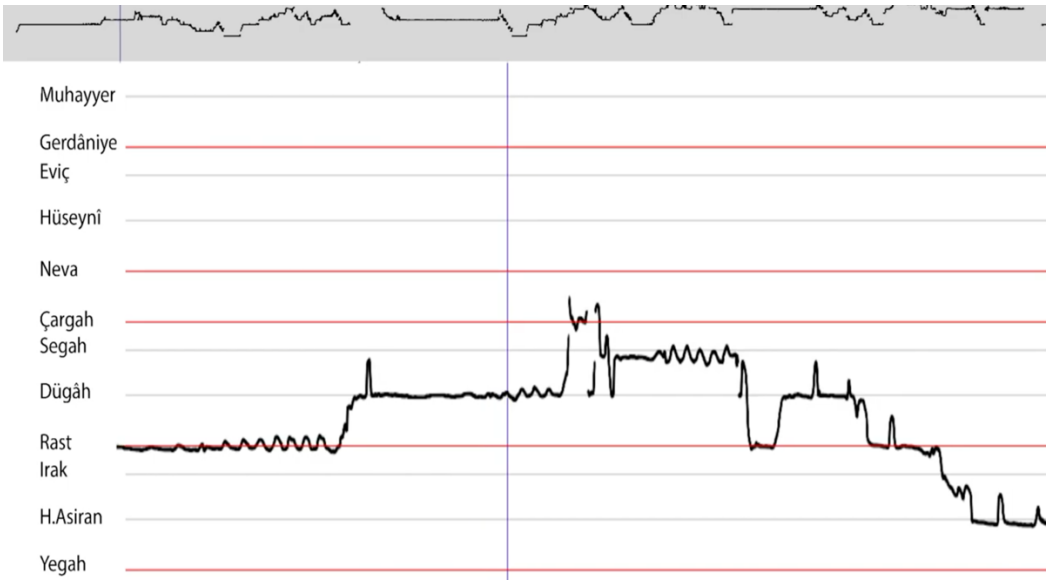
Layer 1: Melodic contour

In this Layer the melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



Layer 2: Double melodic contour

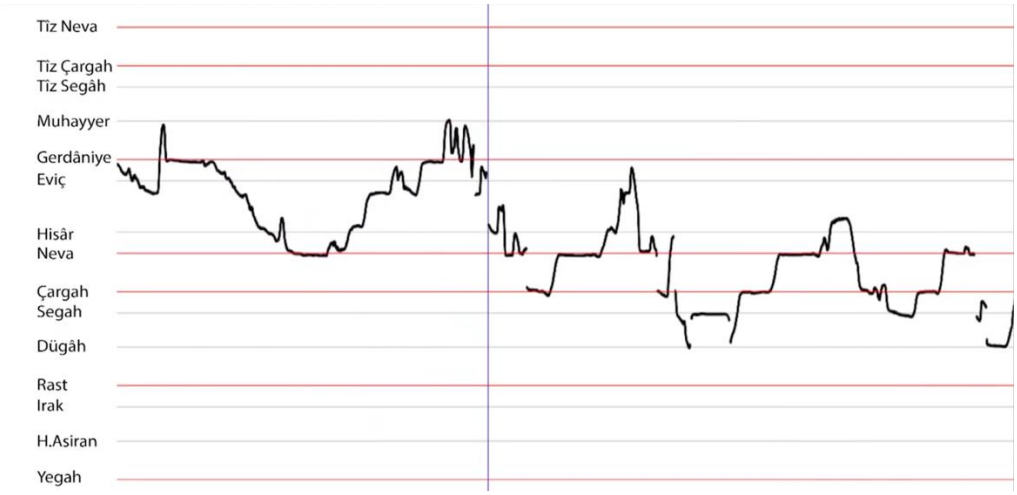
In this new representation, a second pitch contour has been added on the top of the first one. This second contour is zoomed out and allows the viewer to focus on phrasing phenomena that are unfolded in longer time intervals (such as sequencing, mirroring e.t.c.)



7.2 Part 2

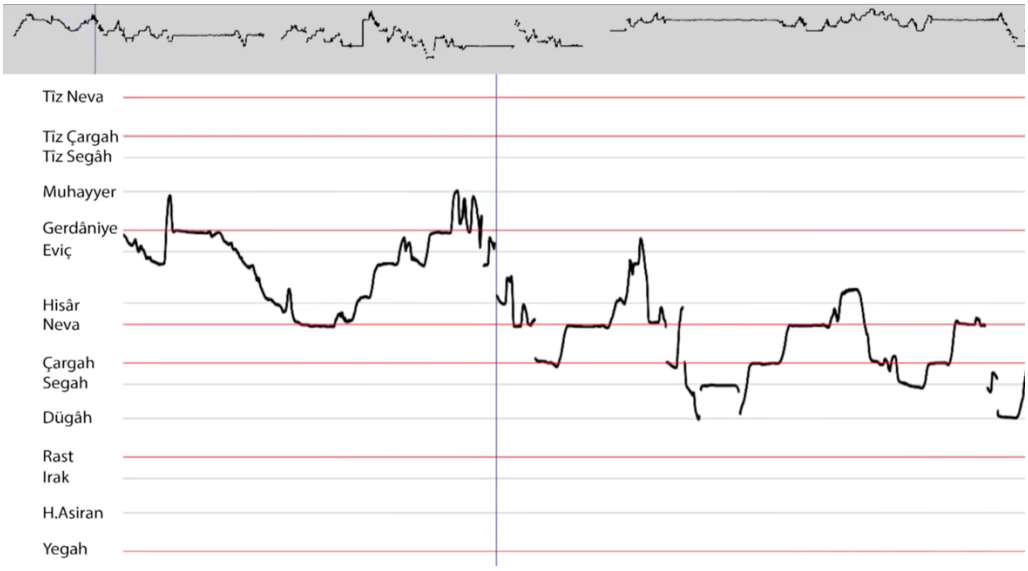
Layer 1: Melodic contour

In this Layer the melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



Layer 2: Double melodic contour

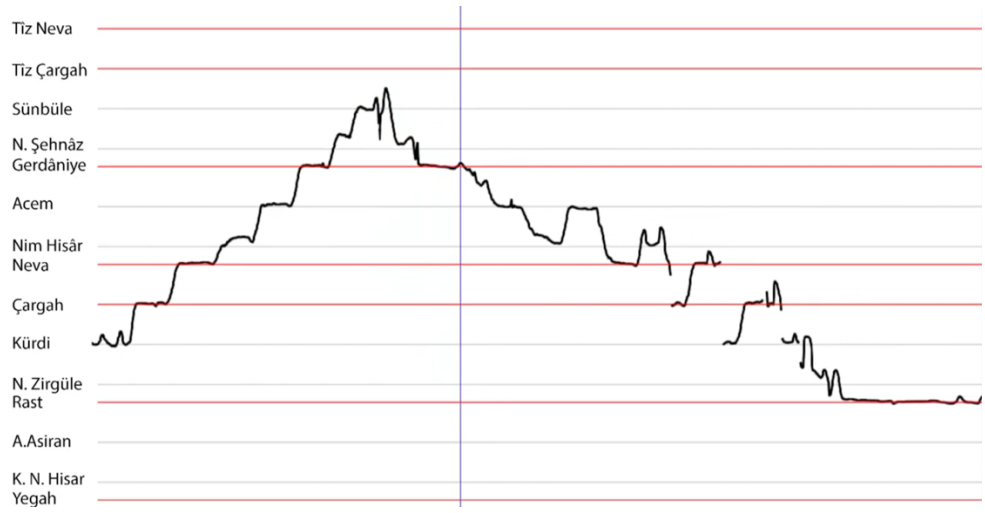
In this new representation, a second pitch contour has been added on the top of the first one. This second contour is zoomed out and allows the viewer to focus on phrasing phenomena that are unfolded in longer time intervals (such as sequencing, mirroring e.t.c.)



7.3 Part 3

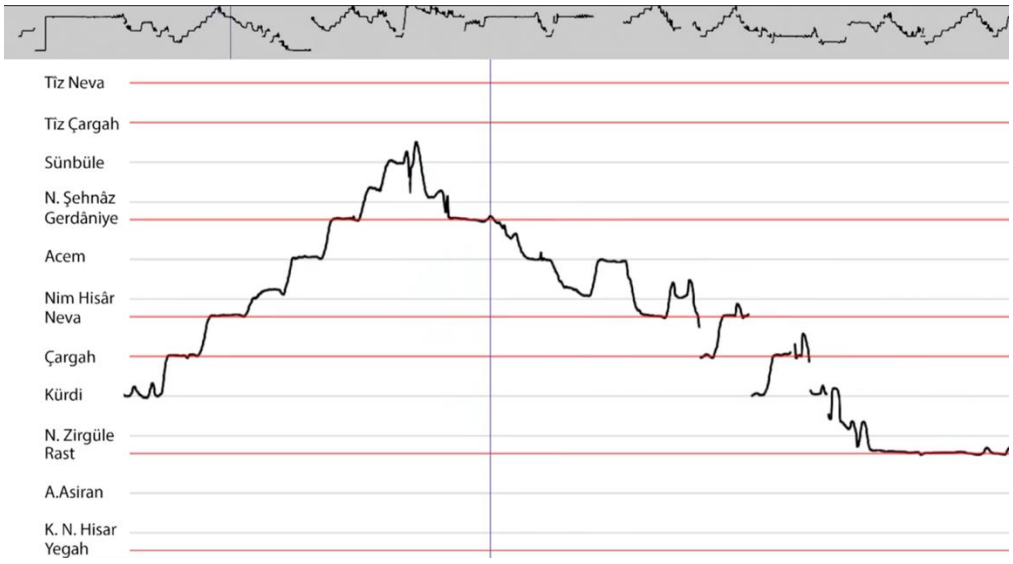
Layer 1: Melodic contour

In this Layer the melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



Layer 2 Double melodic contour

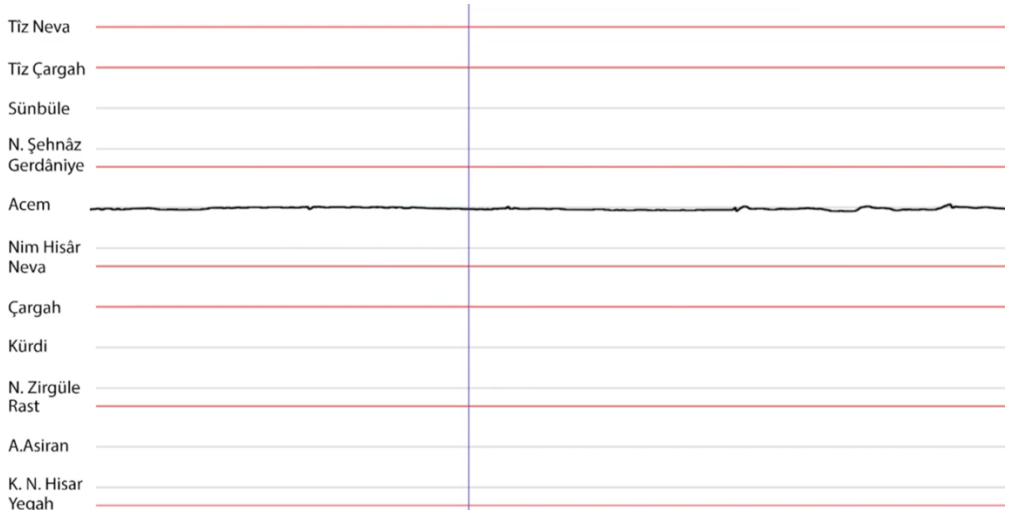
In this new representation, a second pitch contour has been added on the top of the first one. This second contour is zoomed out and allows the viewer to focus on phrasing phenomena that are unfolded in longer time intervals (such as sequencing, mirroring e.t.c.)



7.4 Part 4

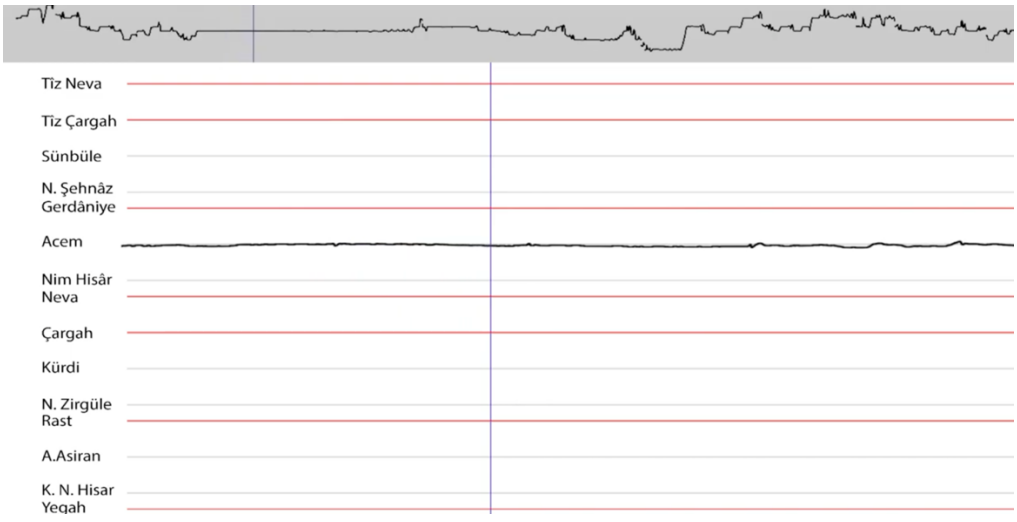
Layer 1: Melodic contour

In this Layer the melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale



Layer 2: Double melodic contour

In this new representation, a second pitch contour has been added on the top of the first one. This second contour is zoomed out and allows the viewer to focus on phrasing phenomena that are unfolded in longer time intervals (such as sequencing, mirroring e.t.c.)

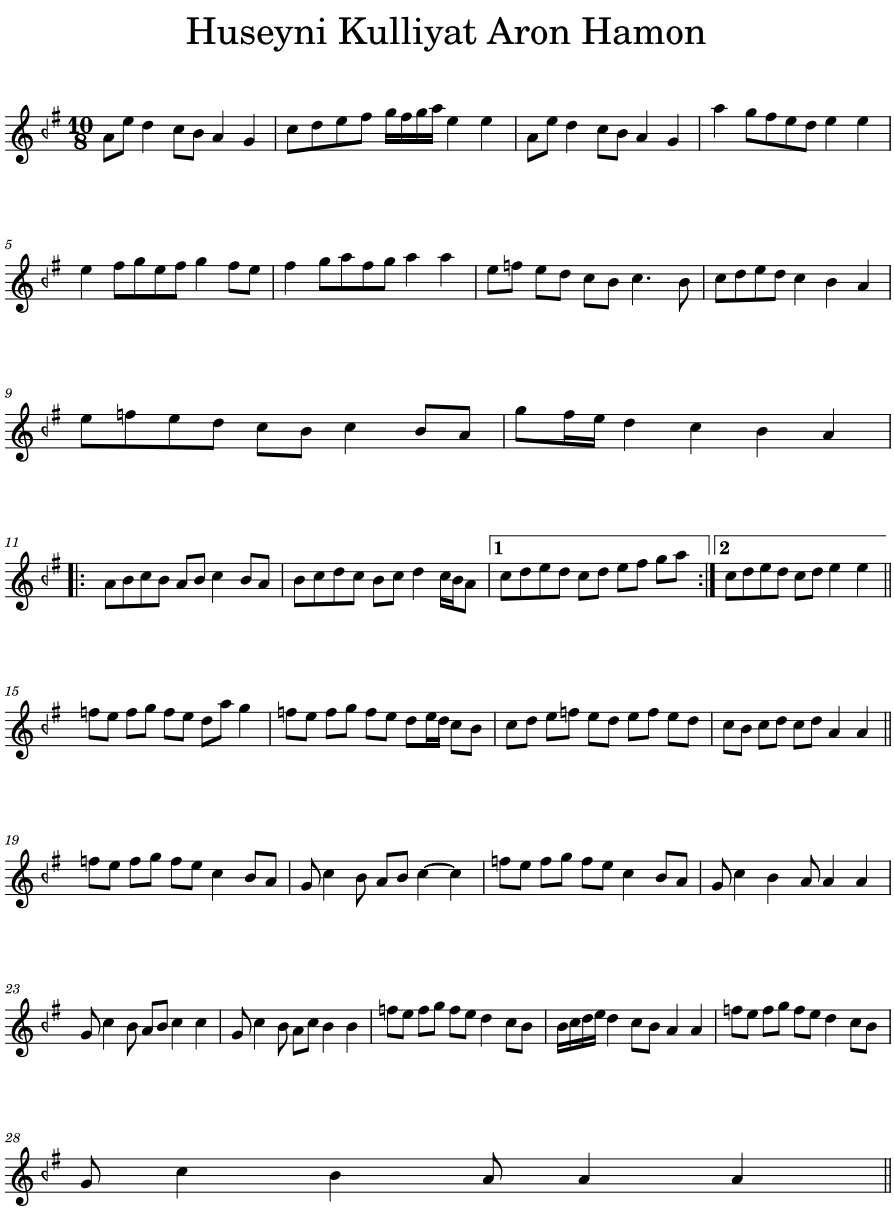


8. Hüseyni Küll-i Külliyat by Aron Hamon

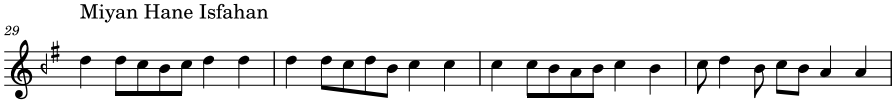
Directed by Kudsi Erguner, Performed by Ensemble Bîrûn

Venice, 2013

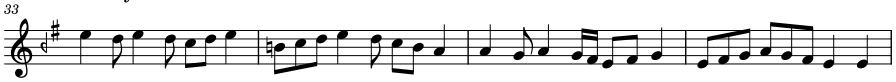
Layer 1 Transcription

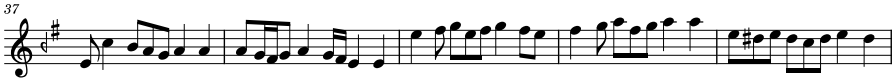


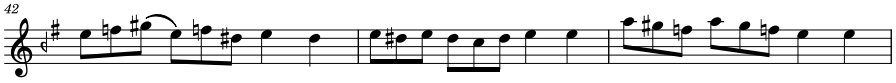
Miyan Hane Isfahan

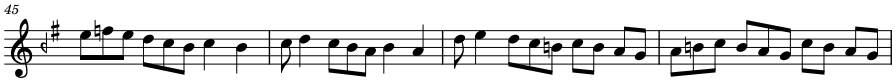


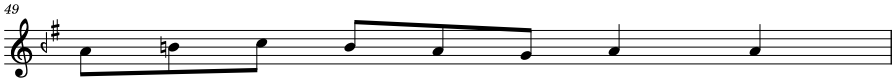
Hüseyni Puselik

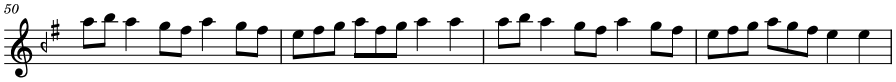


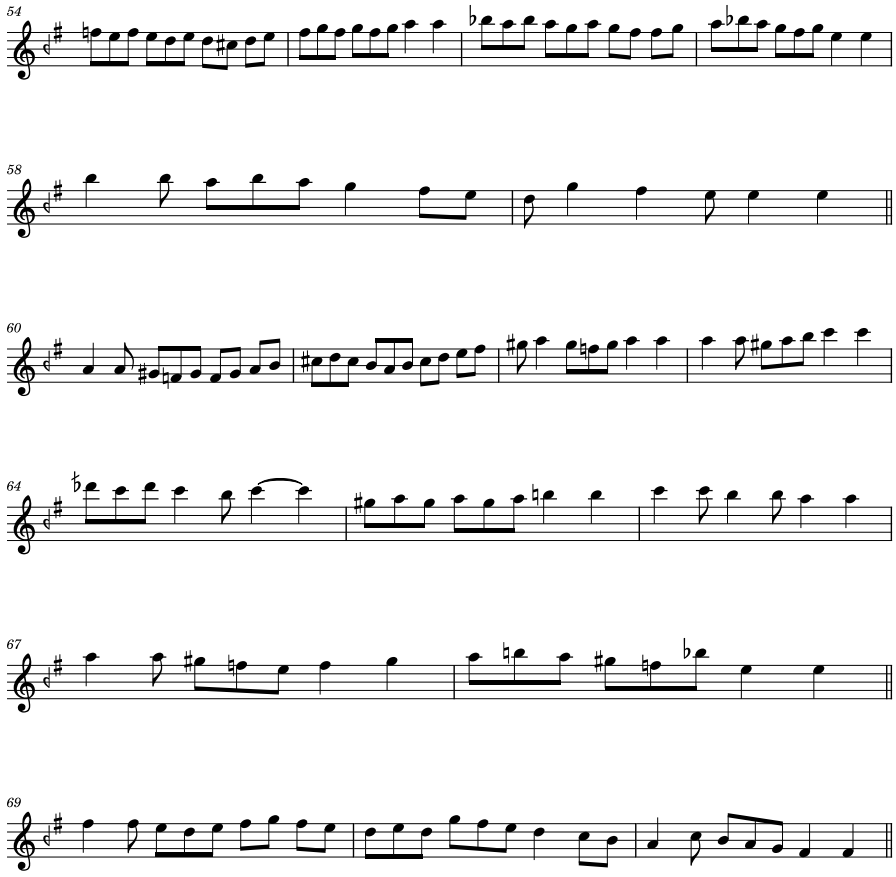


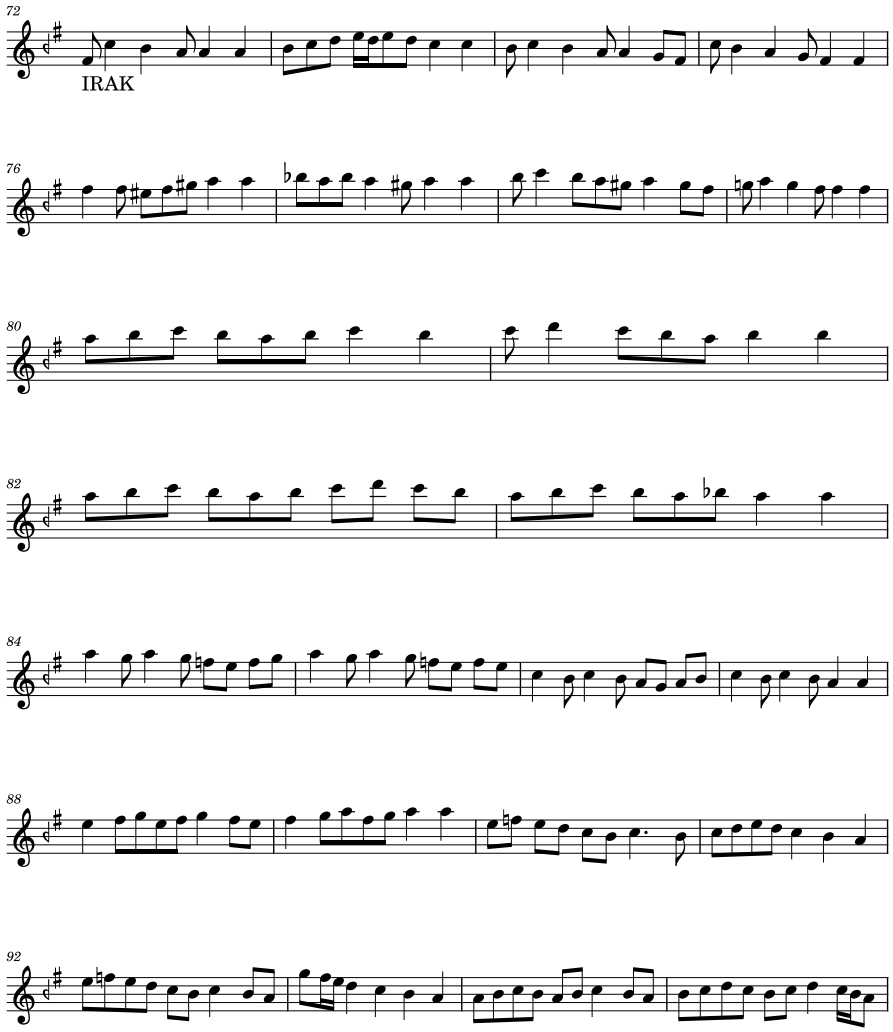


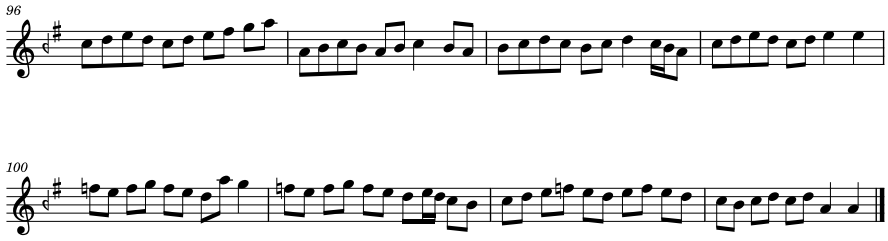






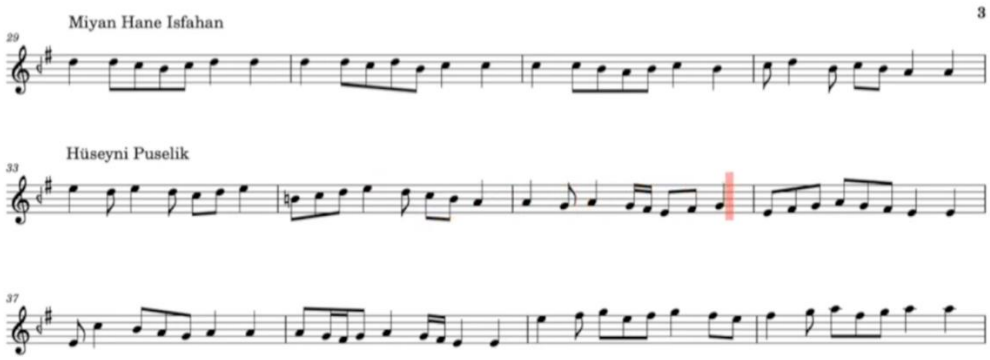

54
58
60
64
67
69


72
IRAK
76
80
82
84
88
92


96
100

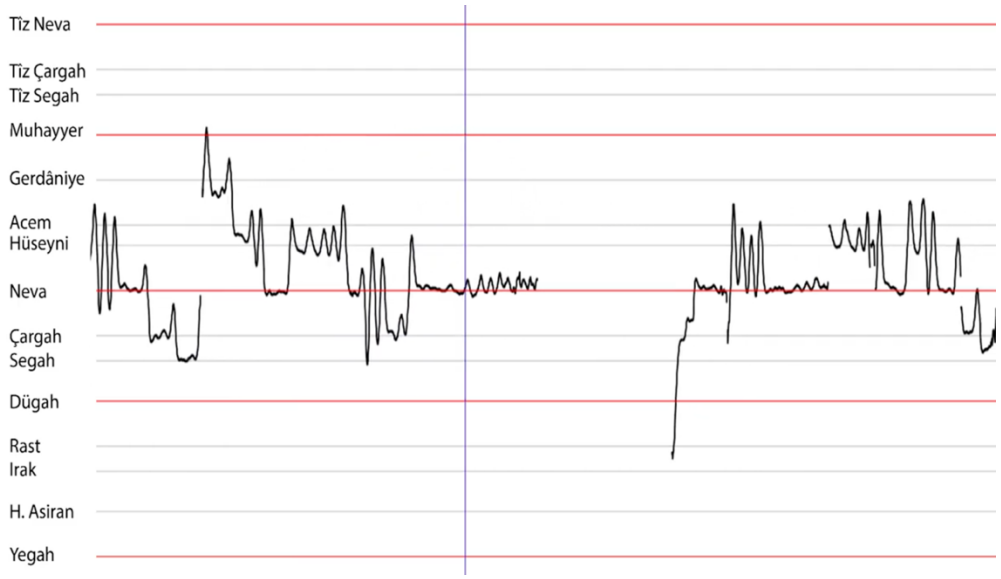
Layer 2 Transcribed score synced with audio.

In this Layer the transcription is synced with audio. A red vertical cursor is following the audio in real time



9. Isak Algazi Efendi Beyati Gazel

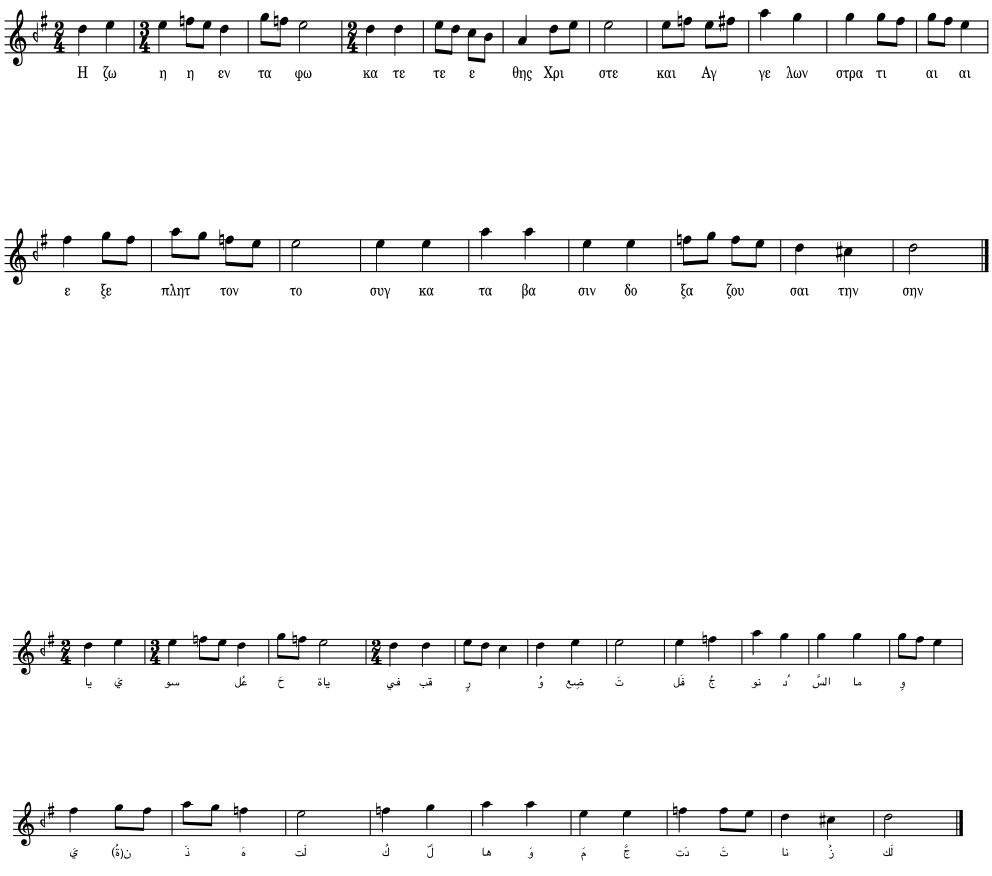
Layer 1 Melodic contour on Beyati makam scale map. To have a clean and reusable melodic contour, the recording was edited to remove the sound of oud.

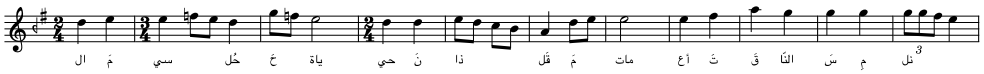


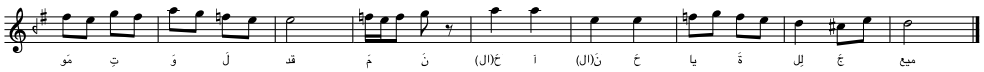
10. Feyrouz Great Friday Orthodox Hymn Η Ζωή Εν Τάφω (Yassouh El hayat Nouazimak)

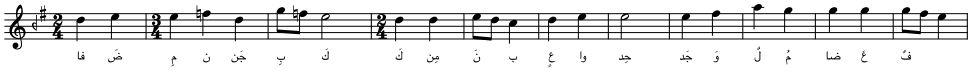
Layer 1 Transcription with lyrics both in Greek and Arabic according to the performance of each verse

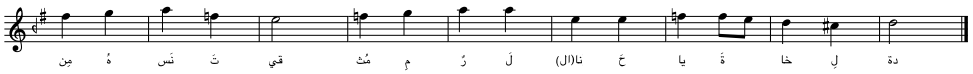
Η ζωή εν τάφω - Yassouh El hayat Nouazimak

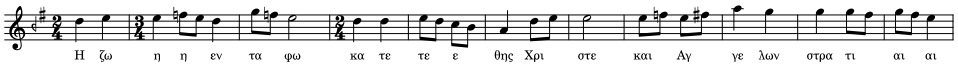


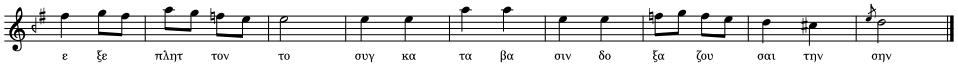

ال مَ سي خُل ياة خَ حي نَ ذا قَل مَ مات أع تَ قَ النَّا سَ مِ نل 3

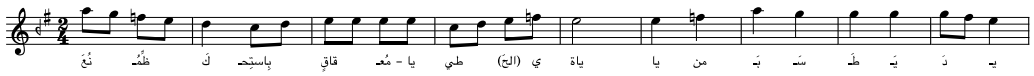

مَو تِ وَ لَ قد مَ نَ (ال)عَ آ (ال)نَ عَ يا ةَ لِل جَ ميع

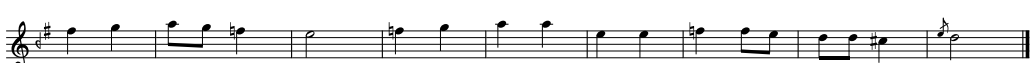

فا ضَ م نَ جَن بِ كَ كَ مِن نَ ب عِ وا جِد جَد وَ لُ مُ ضا عُ فَ

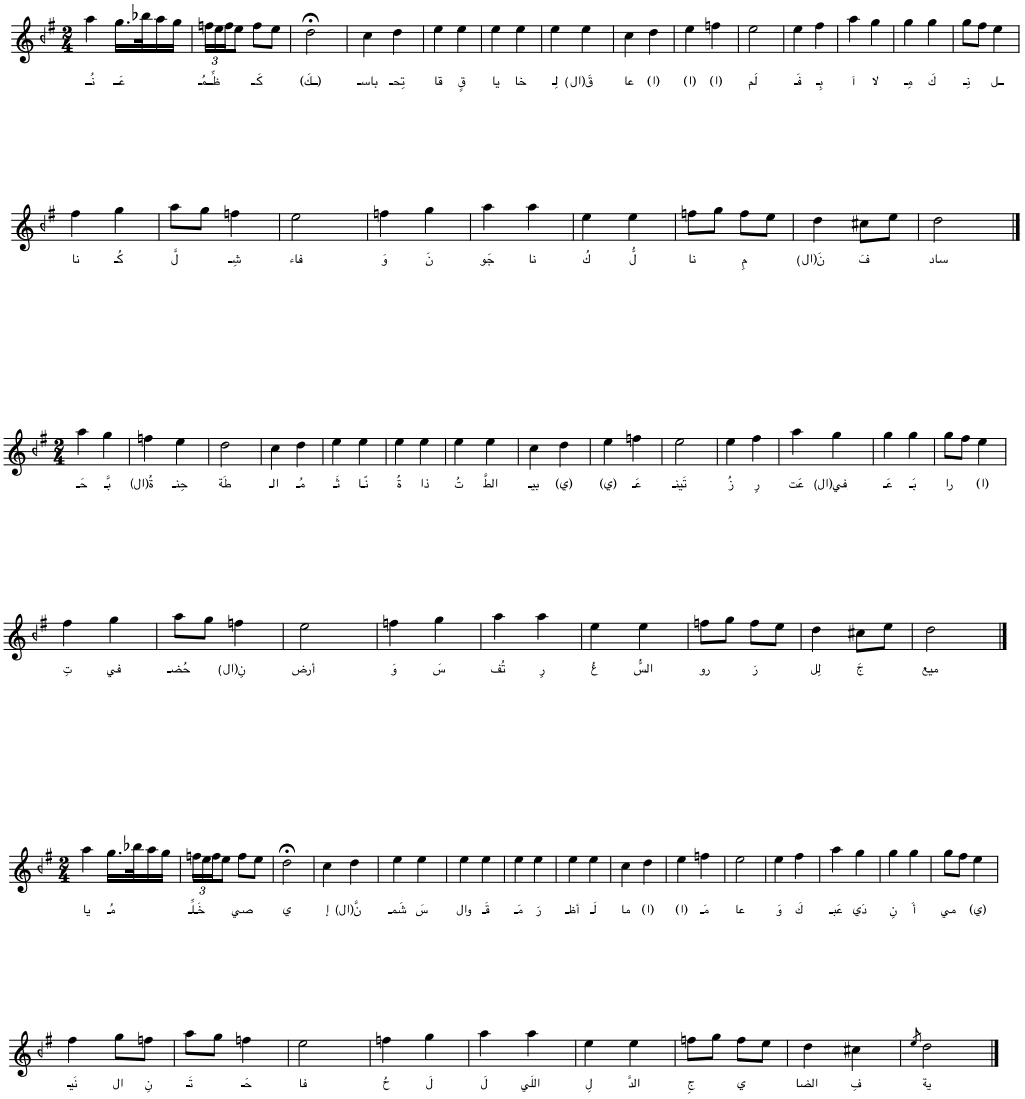

مِن هُ نَس تَ قي مُث مِ رُ لَ (ال)نا عَ يا ةَ خا لِ دة


Η ζω η η εν τα φω κα τε τε ε θης Χρι στε και Αγ γε λων στρα τι αι αι

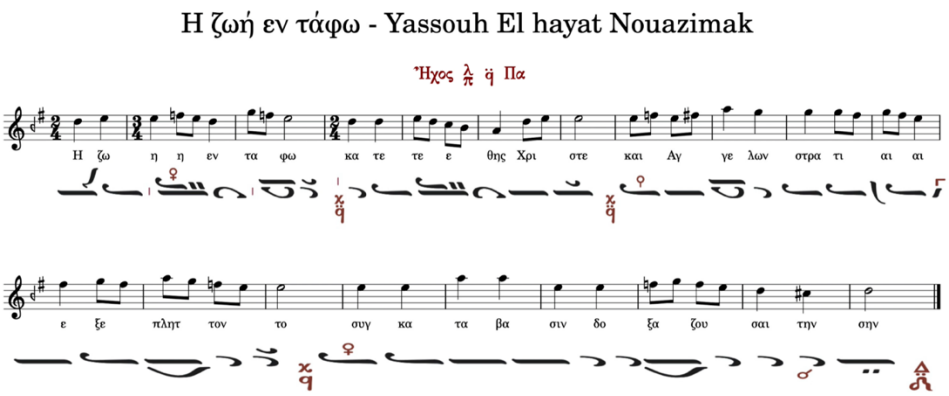

ε ξε πλητ τον το συγ κα τα βα σιν δο ξα ζου σαι την σην


عُ ظُمُ كَ بِاستِحـ قاقٍ مُعـ يا – طي (الحَ) ي ياة يا من بَـ سَـ طَ بَـ دَ بـ


دُو عُ (ن)ال طا سُل ةَ رَ قُد قَّا حِ سا ليب الصَّ لى عَ هِ

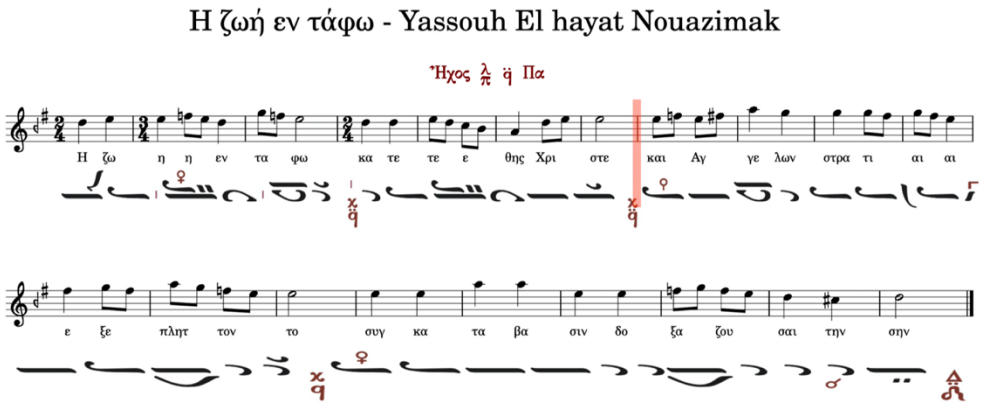

سل نِـ كَ مِـ لا آ بِـ فَـ لَم (ا) (ا) عا قْ(ال) لِـ خا يا قِ قا بِحـ باسـ (لـكَ) كَـ ظَّـمُـ عَـ ثُـ
ساد فَـ نَ(ال) مِ نا لُّ كُ تا جَو نَ وَ فاء شِـ لَّ كُـ نا
(ا) را بَـ عَـ فِي(ال) عَت رِ زُ ثَيِـ عَـ (ي) بِيـ الطُّ ثْ ذا ةُ نَّا ثَـ مُـ الـ طَة جِـ دَةُ(ال) بُّ حَـ
ميع جَ لِل رَ رو السُّ عُ رِ ثُف سَ وَ أرض نِ(ال) حُضـ فِي تِ
(ي) مي أ نِ دَي عَيـ كَ وَ عا مَـ (ا) (ا) ما لَـ أظـ رَ مَـ قَـ وال سَ شَمـ نُ(ال) إ ي صمي خَذُ مُ يا
يةِ فِـ الضا ي جِ الذُّ لِ اللَي لَ لَ حُ فا حَـ ثَـ نِ ال نَيـ

Layer 2: Transcribed score on staff combined with Parasimantiki notation
On this layer the byzantine (parasimantiki) notations has been added to the pentagram transcription



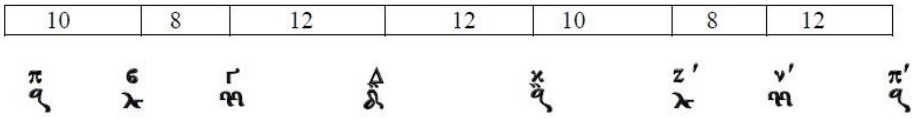
Layer 3: Pentagram and byzantine (parasimantiki) notation synced with audio.

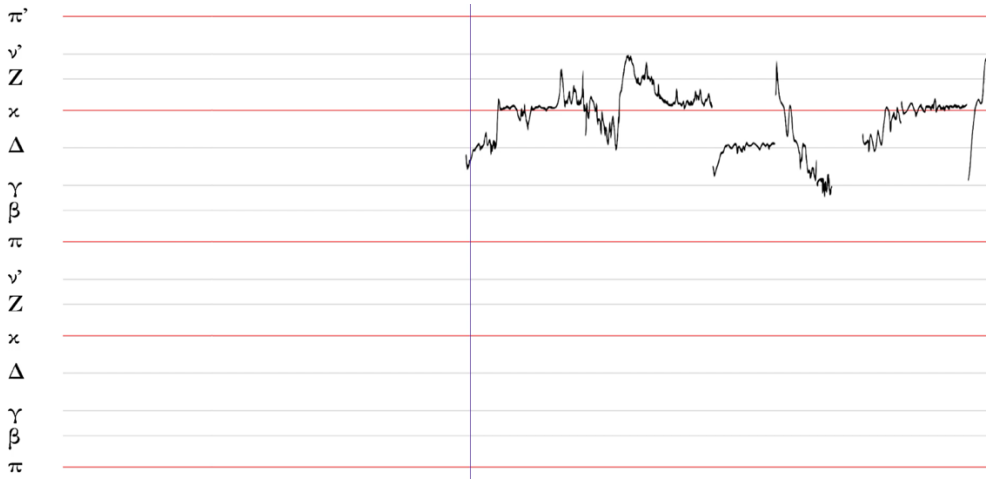
In this layer the transcription is synced with audio. A red vertical cursor is following the audio in real time.



Layer 4: Transcription synced with audio and melodic contour.

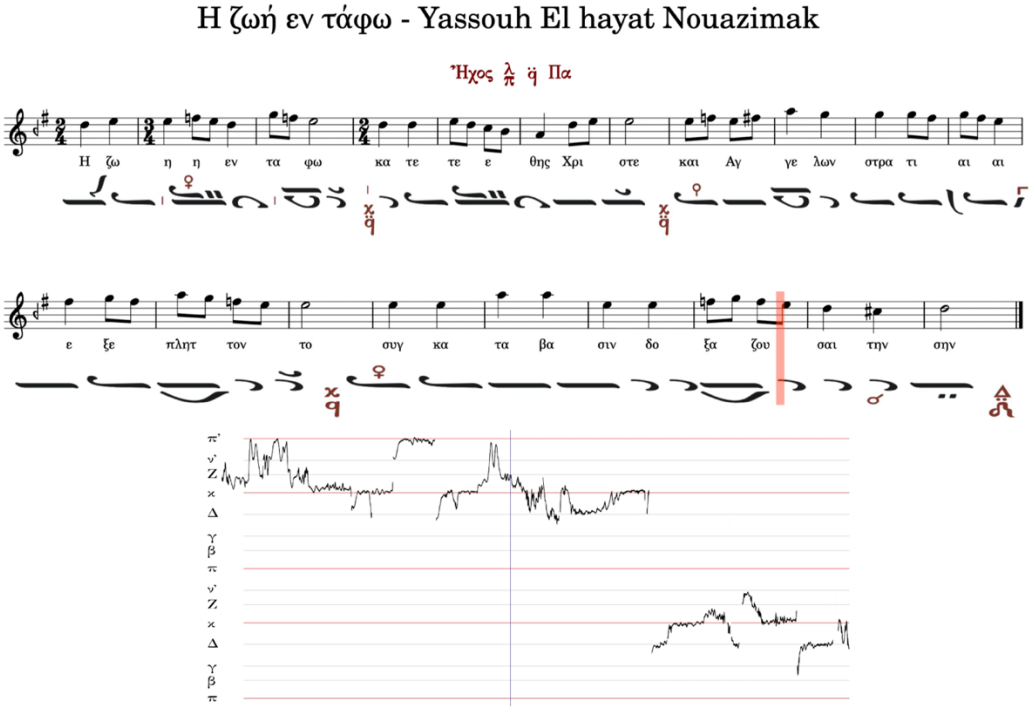
The melodic contour projected on the Plagal first echos (byzantine mode) map has been added to the audio synced transcription. In this representation, the intervals follow the byzantine music theory system (72 commas per octave, intervals for each step shown in the following image)





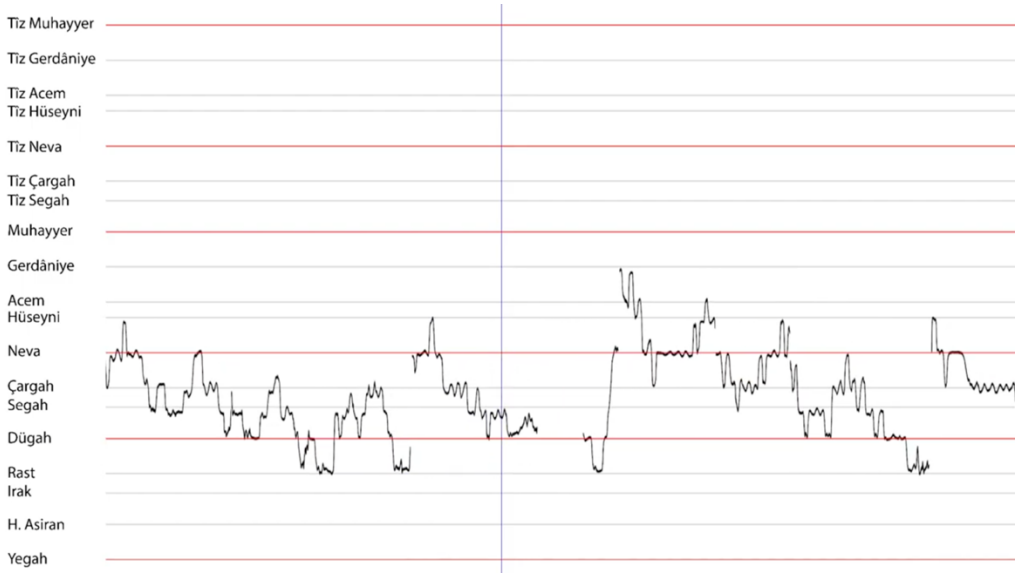
Layer 5: Transcription synced with audio and melodic contour.

The melodic contour projected on the echos (byzantine mode) map has been added to the audio synced transcription. Pentagram and byzantine notation as well as lyrics are synced with the audio



11. Şükrü Tunar - Uşşak Taksim

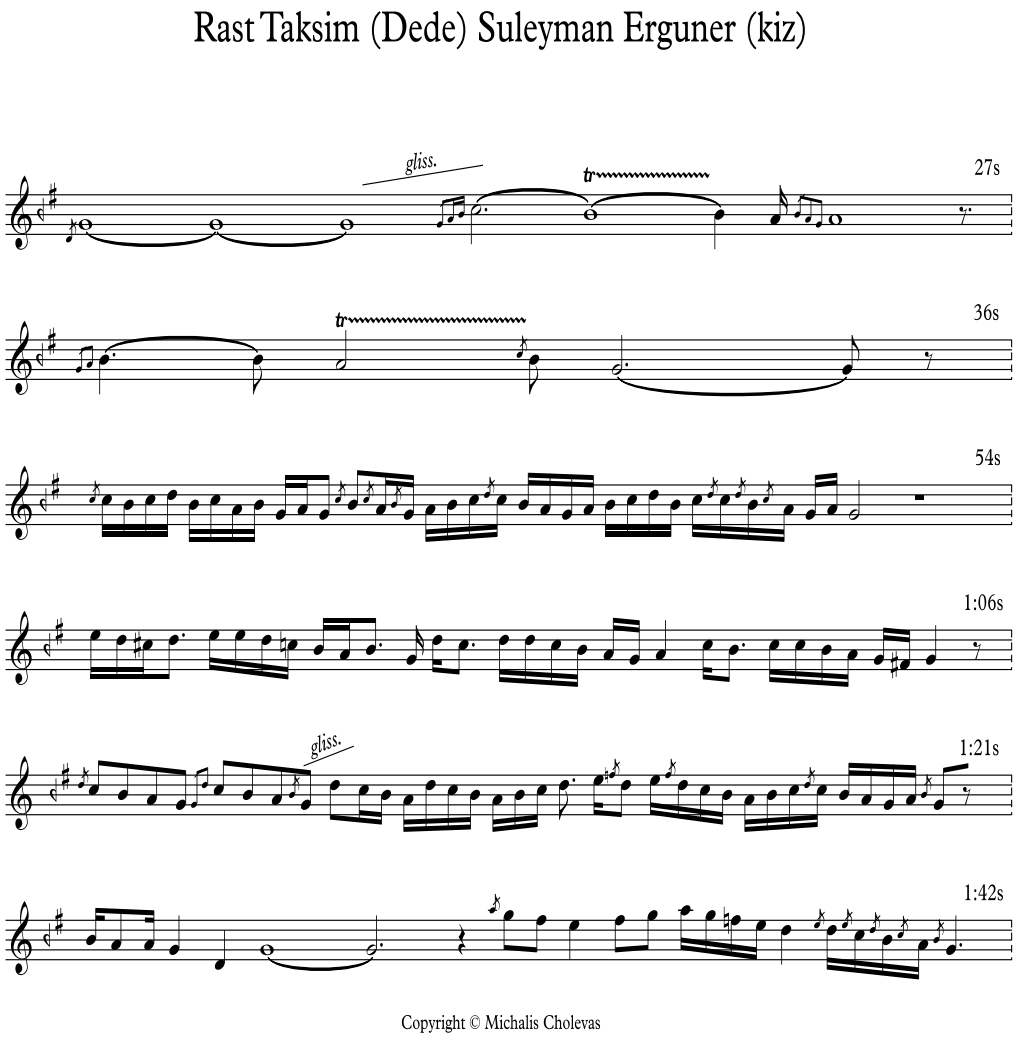
Layer 1: Melodic contour projected on makam map



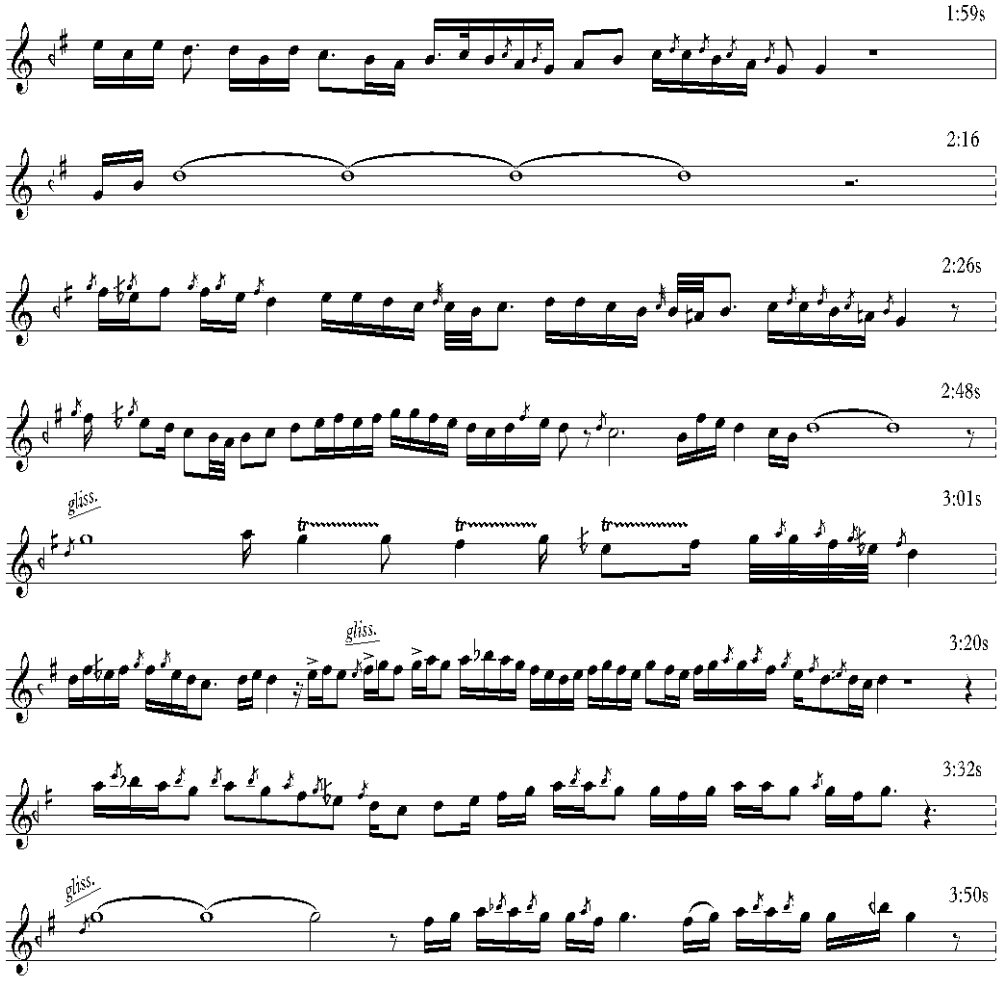
12. Dede Suleyman Erguner Rast Taksim (Archive of Kudsi Erguner)

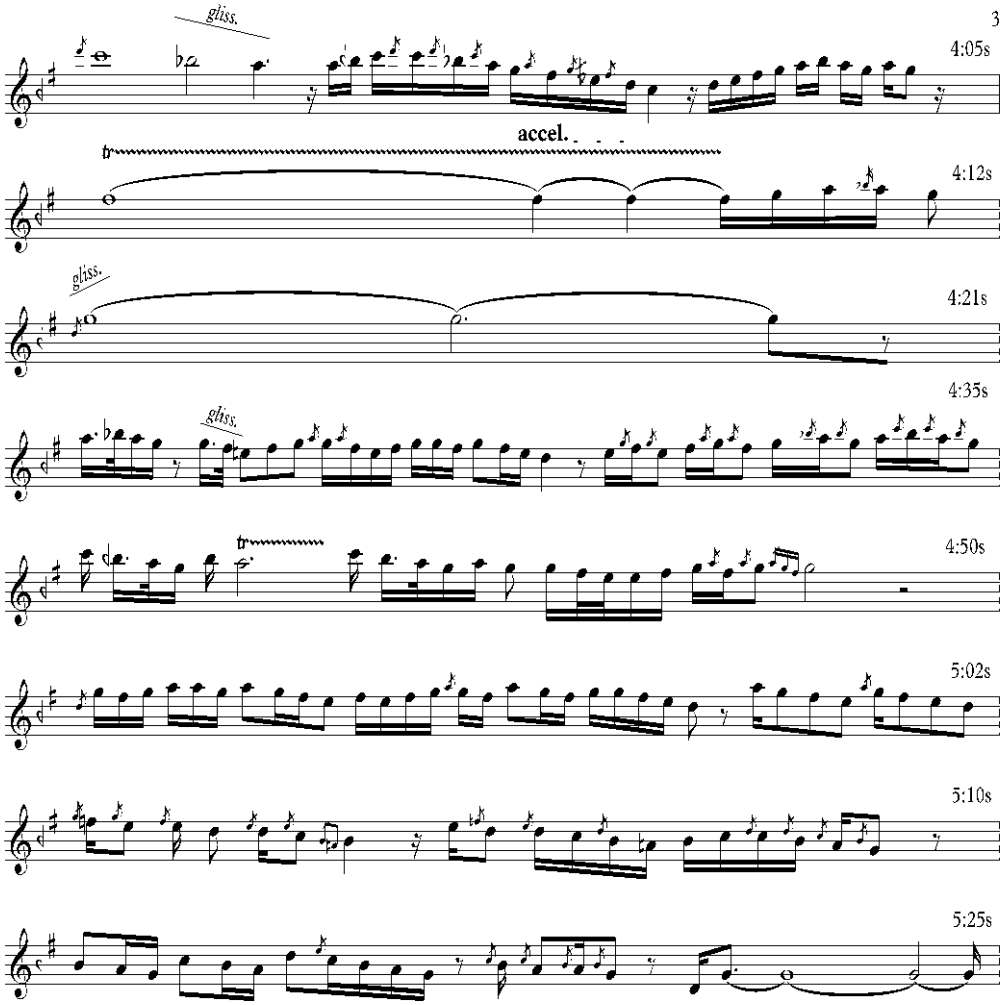
Layer 1 Transcription

The transcription is simplified so as to work in conjunction with the melodic contour projected on the makam map later.

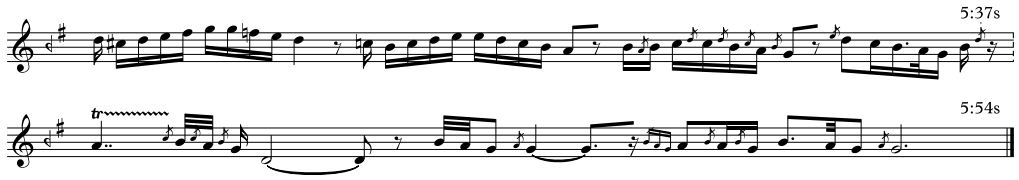


2



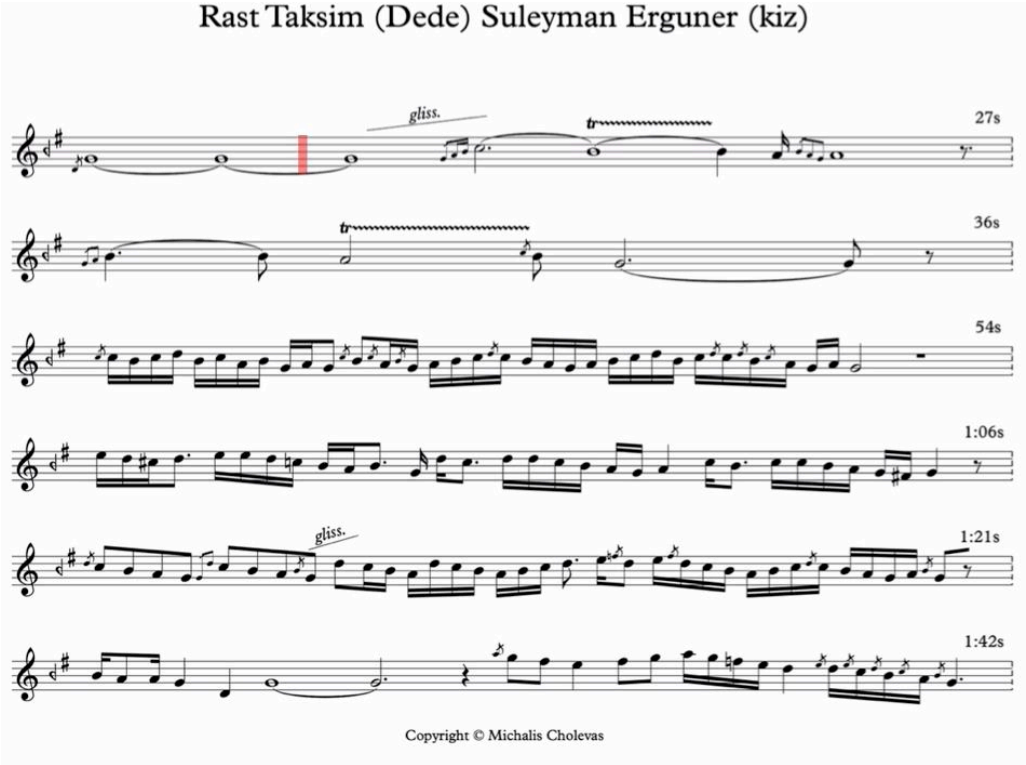


4



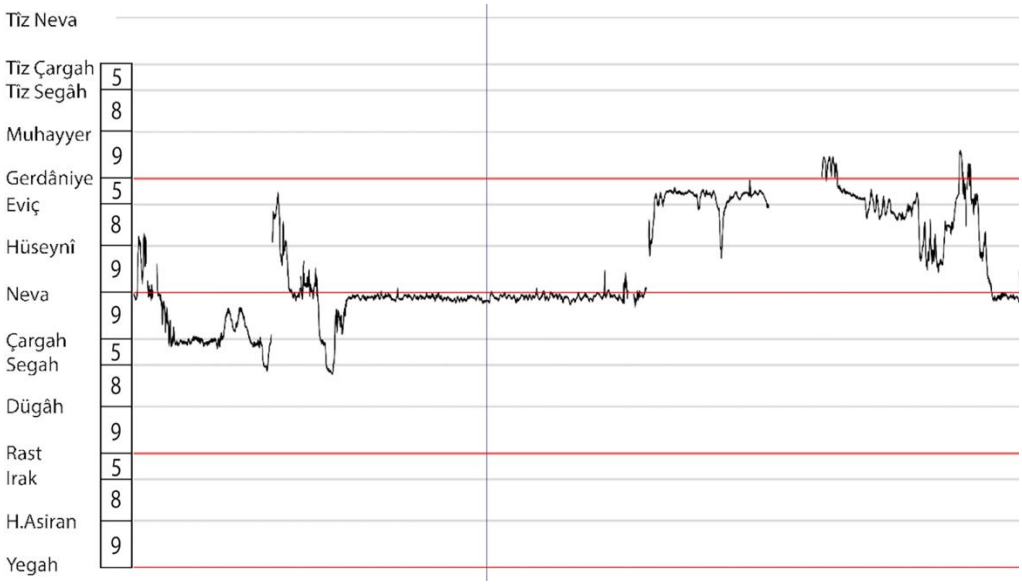
Layer 2: transcription synced with audio.

In this layer the transcription is synced with audio. A red vertical cursor is following the audio in real time.



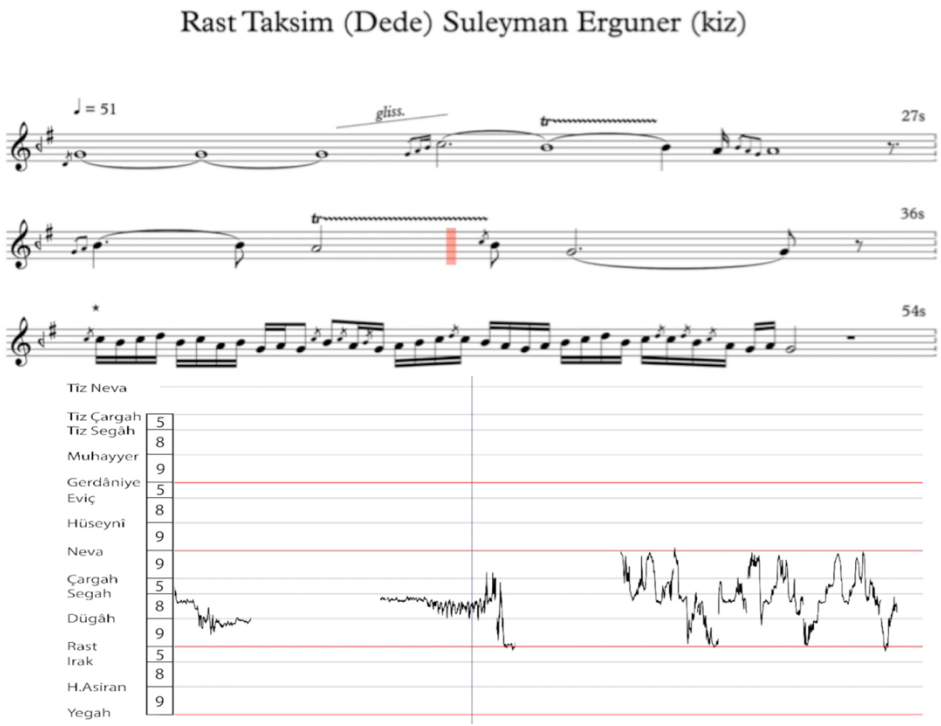
Layer 3 Melodic contour

In this layer the melodic contour is projected on the makam map with the horizontal lines corresponding to the intervals of the makam scale of Rast. In this representation, the intervallic structure of the scale has been as well added on the vertical axis, next to the note names.



Layer 4: Transcription synced with audio and melodic contour.

The melodic contour projected on the makam map has been added to the audio synced transcription



13. Lingua Franca Ensemble – Inception

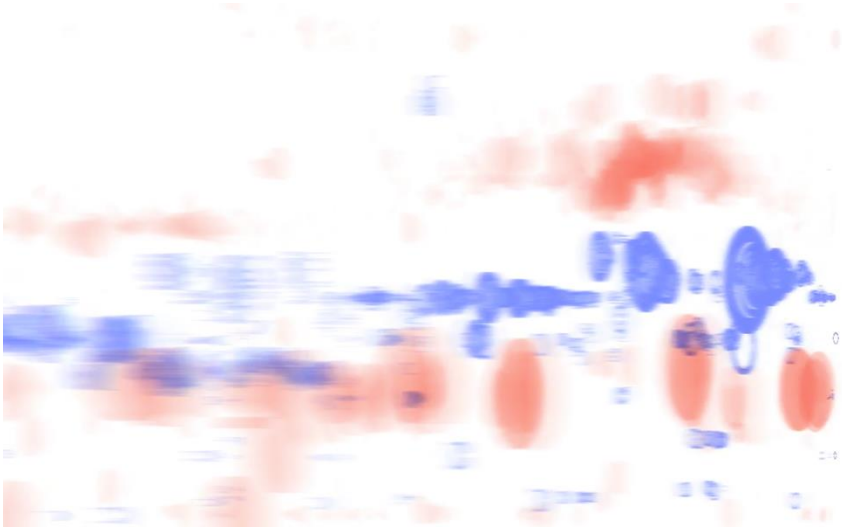
In this example, the composition is modal and polyphonic, with each instrument performing a different melodic line. The possibility of having access to all individual recorded tracks made it possible to extract melodic contours for each instrument, each one of distinct color and shape. The decision was made to represent each instrument with a separate color and to map intensity as a function of shape volume. The size of bubbles and ring, in the case of percussion and our respectively, and the width of the lines, in the cases of Tarhu, Ney and Violin are directly connected with the intensity of the sound.

Layer 1 Percussion contour

In this contour, the percussion sounds are rendered with red color bubbles. The vertical axis corresponds to pitch and the volume of the bubble (or/and rings or/and melodic lines for the rest of the instruments) corresponds to intensity, the larger the volume of the bubble, the larger the intensity of the sound.

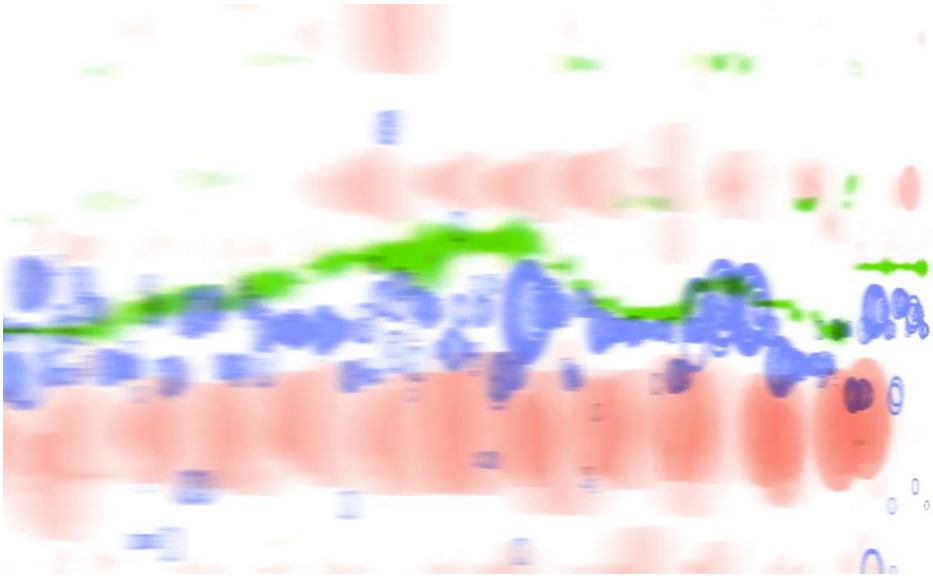
Layer 2 Percussion and Oud melodic contours

In this layer, the layer of the oud has been added coded in blue onion rings.



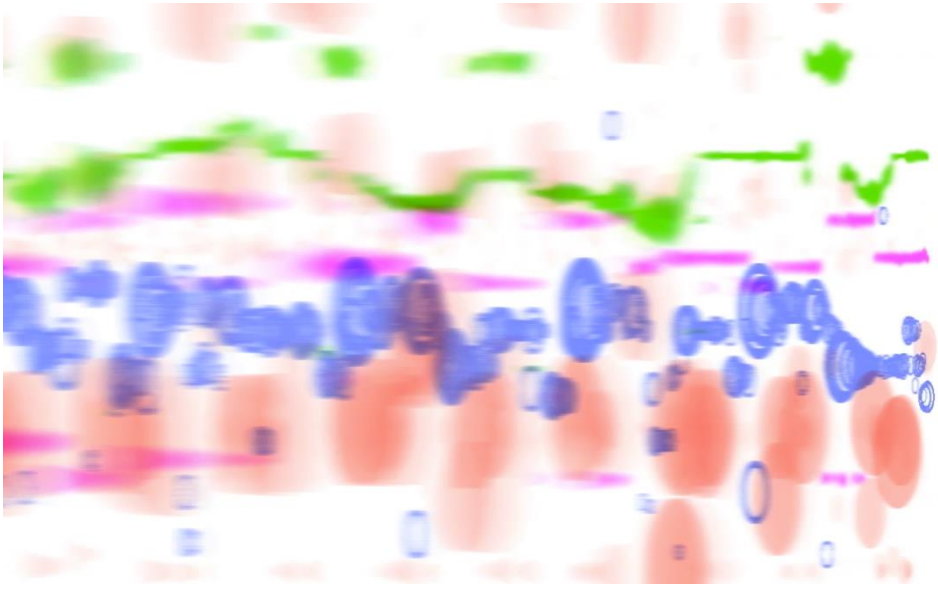
Layer 3 Percussion, Oud and Tarhu melodic contours

In this layer, the melodic contour of the Tarhu has been added and coded with a green line

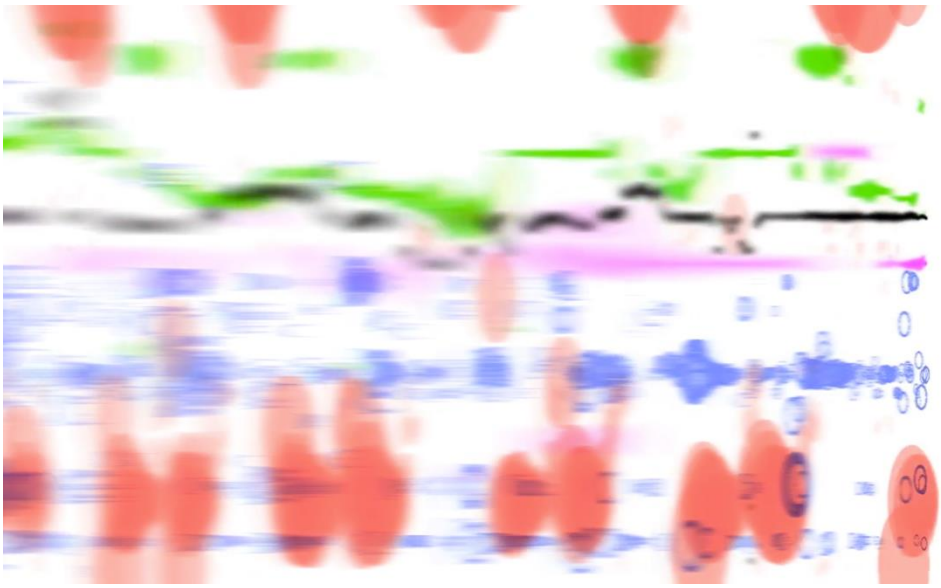


Layer 4 Percussion, Oud, Tarhu and Violin melodic contours

In this layer, the melodic contour of the Violin has been added and coded with a purple line



Layer 5 Percussion, Oud, Tarhu, Violin and Ney melodic contours
In this layer, the melodic contour of the Ney has been added and coded with a black line



Appendix 2

Transcriptions of Interviews

1. Interview/Discussion with Sokratis Sinopoulos, 26 February 2016 on the starting point of the research

1.a

Transcript in Greek (the interview was conducted in Greek language, check 1.b for the English translation)

Michalis Cholevas -> MC

Sokratis Sinopoulos -> SS

00:01:43 MC

Η ιδέα είναι να μην κάνω μόνο εγώ αναλύσεις αλλά να μαζεύουμε και από φοιτητές. Δηλαδή οι μεταπτυχιακοί οι δικοί μας και ίσως και μεταπτυχιακοί από σας για να αρχίσει να γίνεται αυτόματα βιβλιοθήκη που σημαίνει ότι δεν θα μαζεύω μόνο εγώ ούτε θα κάνω αναλύσεις μόνο εγώ, έτσι ώστε περίπου οι μισές να έρθουν από εμένα.

Για να είναι πιο δομημένο το έχω χωρίσει σε εξάμηνα που σε κάθε εξάμηνο θα έχει 2 μακάμια. Είπα να ξεκινήσω μαζεύοντας από Ραστ και ουσάκ. Και είναι 2 οι κατευθύνσεις, θα το δεις και στην πρόταση, η μία είναι οι αναλύσεις και σε τι επίπεδα συγκεντρώνεται κανείς όταν κάνει αναλύσεις, σε δομή σε τεχνικές….Και πως τα συγχρονίζεις αυτά με ήχο και με βίντεο.

00:02:18

Και το άλλο ειναι;

Συνεντεύξεις με ανθρώπους που είναι σημαντικοί στον χώρο για ταξίμια κλπ. Για το Πώς διδάσκεται αυτό το πράγμα;

00:02:31 MC

Δηλαδή ένα πράγμα είναι η τεχνική γλώσσα που υπάρχει συνήθως αλλά και εσύ δεν το κάνεις αυτό…
00:02:36 MC
Όταν μιλάς με φοιτητές
00:02:38 MC
Για να εξηγήσεις πολλές φορές δεν χρησιμοποιείς μεταφορική γλώσσα;
00:02:42 MC
Πχ μίλαγες για το Ουσάκ; Όταν το συγκρίνεις με το Μπεγιάτι δεν θα πεις διάφορα μεταφορικά πράγματα; Αυτό το στοιχείο για μενα ειναι σημαντικό, απο αυτα που θελω να μαζεψω. Εντάξει; γιατί;
00:02:56 MC
Νομίζω ότι, προσωπικά για μένα, είναι από τα πολύ σημαντικά στοιχεία, θυμάμαι όταν έκανα μαθήματα και προσπαθούσα να καταλάβω πράγματα. Φτάνουμε σε ένα σημείο που τεχνικά μπορεί να μην καταλάβαινα, αλλά θα πεις για μεταφορά του κουβαλάει όλη την ουσία του πράγματος.
00:03:12 MC
Οπότε είναι;
Οι αναλυσεις απο ταξίμια από ανθρωπος θα κάνουμε.
00:03:15 MC
Μέσα σε αυτούς και εσύ.
00:03:17 MC
Αλλά και ο τρόπος που το βλέπεις όταν το περιγράφεις κάπως με μια πιο μεταφορική γλώσσα.
00:03:24 SS
Πολύ ωραία.
00:03:26 MC
Γιατρέ το ξέρω έχω βάλει αυτά εκεί δες τα, είναι μια αρχική σκέψη, δεν σημαίνει ότι πρέπει να την ακολουθήσουμε. Μπορεί να αλλάξει, δεν είναι τελειωμένο.
00:03:37 SS
Μια χαρα είναι.

00:03:39 SS

Η μόνη λογική που βλέπω είναι δημοφιλία των μακαμιών ας πούμε

00:03:45 MC

απλά ο τρόπος που τα έχω γκρουπάρει μεταξύ τους είναι να είναι έτσι διαφορετικά μεταξύ τους, ανά εξάμηνο να μη βαριέμαι τις αναλύσεις.

00:04:03 SS

Το μόνο απ' όλα αυτά… στο μυαλό μου.

00:04:07 SS

Αυτό είναι κατηγοριοποιημένα και … σε σχέση με έναν τρόπο πιο ολιστικό που το αντιμετωπίζω όλο αυτό, Τελευταία. Ότι όλα αυτά λειτουργούν μέσα σε ένα πράγμα και στο χρόνο έχουν εξελιχθεί. Το ένα από το άλλο ας πούμε. Είναι κάποια, ας πούμε το Ραστ και το Ουσάκι και το Σεγκιά και το το Χουσεϊνί είναι πολύ μέσα σε αυτό το σώμα, και το Χουζάμ Κάποια διαφοροποιούνται λίγο, αλλά όχι ότι στο λέω για να αλλάξεις όλο αυτό. Απλός από ενδιαφέρον, ας πούμε το Carcigar έρχεται από πιο λαϊκά πράγματα

00:04:46 SS

Και είναι και πιο σύγχρονο, οκέι;

00:04:48 MC

OK

00:04:51 SS

Και το Kurdilihicazkar είναι Πιο σύγχρονο, αλλά δεν έρχεται από λαϊκά πράγματα. Το αντίθετο, είναι το κατ εξοχήν του σαλονιού. Το Karcigar ας πούμε είναι η αντίστοιχη λαϊκή εκδοχή του Beyati Araban

00:05:02 SS

Για αυτό υπάρχουν και τα δυό.

00:05:03 SS

και με τόσο συγκεχυμένες διαφοροποιήσεις. Η μόνη διαφορά είναι ότι το Karcigar έρχεται μέσω Huseyni με αυτό το glissando

00:05:15 SS

Κατά τα άλλα, δευτερόπρωτοι ήχοι είναι και οι δύο (με την βυζαντινή προσέγγιση).

00:05:21 SS

Και το NIhavend μοιάζει. Η τουλάχιστον στο δικό μου το μυαλό…όσο και αν προσπαθησα να το εντάξω μέσα σε αυτό το σώμα είναι ένα δάνειο, ειδικά με τον τρόπο που το παίζουμε τα τελευταία 100 χρόνια… είναι ρομαντισμός της Ανατολής.

00:05:39 SS

Αλλά αυτά, Δεν αλλάζει σε καμία περίπτωση το ότι είναι ένα Makam δημοφηλές.

00:05:43 SS

Δημοφιλές… δημοφιλές… το Kurdi μου κάνει εντύπωση, με την έννοια ότι, δεν ξερω τι υλικό υπάρχει στο Kurdi, με την έννοια ότι, σαν Makam, αυτό και αν είναι λαϊκό Makam, αυτό είναι Saz makam ουσιαστικά. Και σαν ρεπερτόριο…περισσότερο λειτουργεί σαν δεύτερο συνθετικό, συνδυαστικά σαν κομμάτι makam όπως το Acemkurdi ή το Muhayyerkurdi. Kurdi σαν ρεπερτόριο, σαν makam δεν ξέρω τι θα βρεις.

00:06:16 MC

Κυρίως θα το χρησιμοποιήσω για taksim αυτό.

00:06:18 SS

Και για taksim λέω.

00:06:18 MC

Μήνυμα ΕΣΥ καλα λεω λες;

00:06:21 MC

Ok κατ' αρχήν, η σκέψη μου ήταν ότι Nihavend και Kurdi δε χωράνε στην ας πούμε στην φυσική κλίμακα, Αυτό είναι ένα πράγμα.

00:06:35 MC

Το Hicaz πάει στο χρώμα, το θέλουμε.

00:06:41 MC

Γιατί δεν έχει πολλά (στο χρωματικό γένος)

00:06:43 MC

Και το Sultaniyegah το έβαλα γιατί είναι εύκολο να δείξεις πώς το makam ξεφεύγει από τη λογική της οκτάβας, πολύ άνετα επειδή έχει μεγαλύτερη έκταση στην βασική του κίνηση

00:06:58 MC

Και το Karcigar πάλι. Αυτή ήταν και ή δική μου σκέψη, σαν συνδυασμό Πρώτων και δεύτερων ήχων, επειδη Τα άλλα έχουν μια πιο σαφή κίνηση Μέσα σε μια κλίμακα ας πούμε αν το δεις έτσι, αυτό το σπάει λίγο, αυτή ήταν ή λογική, αλλά.

00:07:15 MC

Αν θεωρήσουμε ότι είναι δεδομένα 6 εξάμηνα μέσα στα οποία πρέπει να δουλευτεί.

00:07:25 MC

Αλλάζουν τα πράγματα, σωστά;

00:07:28 SS

Αυτά τα 2 πρώτα εντάξει, πάνε με ασφάλεια, νομίζω και ωραία και σημαντικά και ιστορικά και πυρήνες. Ειδικά τα τρια Rast, Ussak, Segah. Τώρα αν θα είναι το Sultaniyegah ή το Ferahfeza, πάλι… εμένα ενδιαφέρον μου φαίνεται το Sultaniyegah. Αλλά δεν ξέρω. Η εικόνα που έχω δηλαδή, ειδικά του ρεπερτορίου, είναι ότι πάει τρένο! Δεν Κάνει κάτι άλλο. Ενώ το Ferahfeza. Ίσως έχει περισσότερο ενδιαφέρον. Αλλά, το βλέπεις.

00:08:10 MC

OK εντάξει το ξανακοιτάω. Αν είναι ας ξεκινήσουμε τότε με αυτά που θα μπορούσα να ξεκινήσω. Για το πρώτο εξάμηνο.

00:08:12 MC

Εχει το Sultaniyegah κάτι ενδιαφέρον που το έχω δει σε κάποιες συνθέσεις. Και δεν έχω καταλάβει αν είναι στον πυρήνα του όχι. Που κάνει Saba στο Neva.

00:08:29 SS

Τραβηγμένο

00:08:29 MC

Και στα Semai. σε κανα 2 Semai Βρήκα αυτή την κίνηση, ξανάρχονται μετά μέσω Huseyni. Παράξενη κίνηση.

00:08:47 SS

Ναι και τώρα αυτό ανοίγει και ένα άλλο θέμα που πάλι.. Εντάξει μόνο για να το εντοπίσουμε, ίσως και αν χρειαστεί να το συγκεκριμενοποιήσεις. Εσύ, σύ θα ασχοληθείς με Taksim Δηλαδή των τελευταίων εκατό χρόνων. Θα είναι και Cemil Bey μέσα φαντάζομαι ή δεν θα είναι;

00:09:08 MC

Θα 'ναι αλλά θα 'θελα και σύγχρονα Πράγματα για να μην πάμε πάλι ιστορικά τι έκανε μόνο ο Cemil Bey kai ότι αυτό είναι το σημείο αναφοράς…

00:09:16 MC

Γιατί εμένα με ενδιαφέρει πως από το Taksim βγάζεις πληροφορία πολύ-επίπεδη που δεν μπορείς να τη βγάλεις απ αυτήν τη λογική του ότι υπάρχει μία κλίμακα υποδιαιρεμένη σε τετράχορδα κλπ.

Όπως φρασεολογία, τεχνικές κλπ και βασικά, Πόσο διαφορετικές μπορεί να είναι αυτές οι οπτικές και πόσο διαφορετικό υλικό που μπορεί να σου δώσουν; Όχι, Ποια είναι τα κοινά τους σημεία και ότι αν θα δούμε 5 κοινά σημεία αυτό θα είναι το makam. το ανάποδο

00:09:48 SS

ωραία, οπότε… Λειτουργεί στα υπέρ αυτής της οπτικής η σκέψη που έκανα γιατί στο δικό μου το μυαλό, και όχι μόνο στο δικό μου φαντάζομαι είναι πολύ διαφορετικό.Δηλαδή… ποιος; Ποιος; τι έχει ακούσει αυτός που κάνει το Taksim; Γιατί βλέπω αυτήν τη στιγμή να υπάρχει μια σχολή στην Τουρκία που όσο κι αν παίζουν κλασικά όργανα, και Ney και Tanbur, έχουν παίξει την μουσική του 20ού αιώνα, Που το θέμα της τροπικότητας του έφτασε στα άκρα με τα θετικά και τα αρνητικά του. Για παράδειγμα, αυτό το Saba στο Neva στο Sultaniyegah δεν το έχω δει στα δύο, τρία, τέσσερα παλιά κομμάτια που έχω δει. Είμαι σίγουρος ότι είναι σε κομμάτι του εικοστου αιώνα θέλω να πω. Μπορεί να κάνω και λάθος.

00:10:32 MC

Νομίζω πως τα κομμάτια που θυμάμαι είναι πριν από τον εικοστό αιώνα, δεν θυμάμαι σίγουρα. Δεν θυμάμαι Ποιανού σύνθεση είναι, θα την βρω και θα σου πω.

00:10:35 MC

Αλλά ούτως ή άλλως το Sultaniyegah του Selim δεν είναι; Είναι σε περίοδο που υπάρχουν λεφτά για να βγουν καινούργια Makam.
00:10:50 SS
Όχι απλώς αναρωτιέμαι ας πούμε, το ενδιαφέρον είναι ότι κάποιοι μουσικοί που είναι εκτός Τουρκίας, και Τούρκοι, έχουν μείνει προσκολλημένοι σε ένα ρεπερτόριο, στο κλασικό-κλασικό, κάτι το οποίο επηρεάζει και το Taksim τους.
Απ' την άλλη επηρεάζονται από άλλα σύγχρονα πράγματα που κάνουν αυτοί.
Και εγώ το ίδιο είμαι δηλαδή.
Το πιστεύεις ότι δεν μπορώ…Να παρακολουθήσω σε συνθέσεις εύκολα, ειδικά σε Sarki γιατί τα τα Sarki γράφτηκαν Στον εικοστό αιώνα που έφτασαν την τροπικότητα στα άκρα, μετατροπίες παντού, Saba παντού, και απότομα και τα λοιπά.
00:11:25 SS
Κάτι όμως με το οποίο είναι Πολύ εξοικειωμένοι οι Τούρκικοι μουσικοί. Συνομήλικοι μας, Εμπεριέχεται και στο ταξίδι τους αυτό. Αυτό σαν παρατήρηση.
Σκέφτηκα … να σε ρωτήσω μήπως έχει νόημα ακόμα Και να διαχωρίσεις. Αλλά ΟΧΙ εφόσον το ζητούμενο σωστά είναι η ποικιλότητα του πράγματος, απλώς εντοπίζουμε λόγους που υπάρχει αυτή η διαφορετικότητα και ίσως υπάρχει, ίσως και αυτός να είναι ένας σοβαρός λόγος.
00:11:54 MC
Ναι αλλά είναι ενδιαφέρον αυτό που λες τώρα. Γιατί Τώρα καταλαβαίνω τι λες. Όταν λες ότι τραβάνε την τροπικότητα στα άκρα με την έννοια ότι μπορούν να πάρουν ένα οποιοδήποτε χρώμα και να το βάλουν σε οποιαδήποτε βαθμίδα ας πούμε.
00:12:05 SS
Και το σάμπα ειδικά… και όχι….Βέβαια…. επειδή τώρα κάνω αυτήν τη σκέψη.Η αλήθεια είναι ότι, Ακόμα και μουσικοί που έχουν παίξει αυτό το ρεπερτόριο, αν τους πεις: κάνε Taksim.

Θα σου παίξουν κάτι Πολύ κοντινό με κάποιον που έχει παίξει το μόνο κλασικό ρεπερτόριο. Άρα τελικά μπορεί να είναι μόνο στο Μυαλό μου Όλα αυτά δηλαδή… Μπορεί στη γραμμένη μουσική, ερωτήσεις θέτω έτσι!;

00:12:31 MC

Ναι, ναι.

00:12:33 SS

Στις συνθέσεις, να φαίνεται μια αλλαγή στην αντιμετώπιση της τροπικότητας από την απλότητα στην πολυπλοκότητα ας πούμε, τουλάχιστον σε έναν άξονα.

Ιδίως σε συνθέτες του εικοστού αιώνα που δεν τους έχω παρακολουθήσει αλλά… Πώ τους λένε; θα τους μαζέψω! Που είναι Φίρμες. Δηλαδή δεν γίνεται σε ένα τούρκο μουσικό που έχει παίξει, θα σου πει… Δεν έχεις παίξει αυτό το ρεπερτόριο; Τι έχεις παίξει;!

Είναι σαν να έχεις παίξει ρεμπέτικο χωρίς να έχεις παίξει Βαμβακάρη.

Απλώς σκέφτομαι ότι ενώ έχει προχωρήσει η τροπικότητα στις συνθέσεις. Τελικά στο Taksim. Όταν πεις σε κάποιον παίξε μας ένα Taksim έτσι σωστό …εντός εισαγωγικών μέσα στο Makam, θα σου κάνει τα βασικά, δεν θα δοκιμάσει ακρότητες νομίζω.

00:13:27 MC

Ναι, μπορεί να κάνει να κάνει και με το που γίνεται σε τι context γίνεται.

00:13:27 SS

Σωστό,σωστό.

00:13:31 MC

Από την άλλη σκέφτομαι ότι οι συνθέτες του εικοστού αιώνα ακολούθησαν λίγο… από Αυτό που έχω δει εγώ από τους. Kemal Ilerici, όποιος είναι μετά τον Arel κλπ , ακολούθησαν λίγο τη λογική. Την θεωρητική λογική του τροπικού συστήματος. έτσι όπως φτιάχτηκε μετά το 30, ότι έχεις τετράχρονα πεντάχρονα αυτά τα αλλάζεις εκεί και τα λοιπά. Ενώ, ενδεχομένως, πριν από αυτό να. Πως να το πω, δεν ήταν όλα αυτά ανταλλάξιμα, σωστά; Είχες..

00:14:07 SS

Λειτουργούσε περισσότερο ηχοχρωματικά!

00:14:09 MC

Ναι, ναι.

00:14:15 SS

Ή τουλάχιστον για κάποιους από τους συνθέτες.

00:14:18 MC

Ή τουλάχιστον και στο taksim, όπως το αντιλαμβάνομαι εγώ. Απ τα μαθήματα με τον Omer και τον Kudsi που είναι πιο κλασσικοί μουσικοί, είναι ότι το Taksim ρε παιδι μου είναι… κάνεις μια παρουσίαση ενός ηχητικού τοπίου, και για να το φέρεις σε ένα άλλο ηχητικό τοπίο, σε ένα άλλο makam ας πούμε, πρέπει όλα αυτά να γίνονται πολύ σταδιακά, δεν κάνεις πράγματα για να εκπλήξεις, ενώ στα μοντέρνα πράγματα στις μοντέρνες συνθέσεις, ουσιαστικά νομίζω ότι αυτοί βλέπουν κάθε νότα που τελειώνει ένα πεντάχρονο ή ένα τετράχορδο σαν αρμό για να βάλεις οτιδήποτε άλλο. Και είναι λίγο…Σαν μαύρη τρύπα. Σε διακτινίζει κατευθείαν σε κάτι άλλο μακρινό, χωρίς να χρειάζεται να το πας βήμα-βήμα.

00:15:07 SS

Αυτό που λένε εναρμόνια χρωματική μετατροπία, το Ντο δίεση το κάνω Ρε ύφεση και…

00:15:15 MC

Χωρίς να χρειάζεται να το πάνε βήμα-βήμα. Ενώ, οι παλιοί όπως το Καταλαβαίνουμε εμείς, νομίζω ότι το κάνουν αυτό πολύ Σταδιακά, δηλαδή άλλαξε κάτι πολύ Μικρό ,άλλαξε κάτι πολύ μικρό.και φέρτο αλλου χωρις να το καταλάβουμε κατευθείαν.

00:15:29 SS

Ναι και αυτό είναι ένα άλλο μεγάλο θέμα. Και το πόσο η θεωρία επηρέασε Τη μουσική, και στο κούρδισμα πάρει αυτό έτσι; Έχουμε ξεφύγει! Η 3η είναι… Πάμε για συγκερασμένη τώρα, το Segah… είχε ανέβει στο θεό, τρελαίνομαι.

00:15:47 MC

Και στη δικιά μου λογική πάλι δεν είναι μόνο το που πάμε να το κουρδίσουμε, αλλά ότι πάμε να το φιξάρουμε, η διαφορά για μένα αυτή

είναι αυτή, ότι όλα τα θεωρητικά συστήματα (έχω να σου δώσω και κάτι paper να συζητήσουμε)… Κάνουν μια μεγάλη ανάλυση στην Κωνσταντινούπολη, 4 πανεπιστήμια. Στατιστική ανάλυση για να δούνε ποιο σύστημα είναι καλύτερο για να κουρδίσεις, στατιστική ανάλυση ηχογραφήσων. Η Λογική τους όμως παλι είναι ότι οι βαθμίδες είναι ακίνητες. για μένα Αυτό είναι το Μεγάλο ζήτημα. Και με το Segah ήμασταν δηλαδή δεν μπορώ.

Δηλαδή για μένα αυτή είναι η μόνη λογική των διαστημάτων κάθε βαθμίδων που δημιουργούν και την κίνηση την μελωδική, είναι ότι δεν είναι φιξ, και σε μεγάλα όργανα ιδίως. Δεν ξέρω πώς το βλέπεις εσύ στην λύρα. Στο tanbur και το Yayli Tanbur, Είναι σαφές ότι αυτό το πράγμα έλκεται και πάει προς τα εκεί για να οδηγήσει τα Πράγματα προς τα εκεί, προς τα κάτω πχ πηγαίνοντας στο Dugah ή προς τα επάνω πέφτοντας στο Neva. Ότι δεν είναι φιξ αυτά. Δεν νομίζω ότι ποτέ κάποιοι το λύσανε θεωρητικά που πρέπει να είναι και από εκεί το πήραν άλλοι και το έπαιξαν. Αλλά αυτό είναι μεγάλο ερώτημα για εμένα για αυτό θέλω κιόλας Να έχω από διαφορετικά όργανα και από Διαφορετικούς μουσικούς, παιγμένα τα πράγματα. Για να δείξω ότι δεν είναι Το ζήτημα αν το παίζουν πιο εδώ ή πιο εκεί το Segah.

00:17:39 SS

Σωστό, και Εν τέλει, όλα αυτά που είπαμε, κάτσε να το πάω αλλιώς!

Εσύ θα ασχοληθείς με το Makam σήμερα, έτσι δεν είναι; Δεν έχεις καμιά διάθεση ιστορικότητας

Θα ασχοληθείς με το makam, με τα taksims κάποιων μουσικών, που αν δεν είναι εν ζωή, είναι τέλος πάντων των τελευταίων 100 χρόνων. Και ούτε θα ασχοληθείς με τις ακραίες περιπτώσεις. Φαντάζομαι ότι θα αχοληθείς με ανθρώπους που αναγνωρίζονται από τον κύκλο τους ότι Λειτουργούν μέσα σε κάποια πλαίσια, τώρα λιγότερο ή περισσότερο… αλλά σίγουρα δεν κάνουν κάτι ακραίο, ότι αναγνωρίζονται σαν καλοί αυτοσχεδιαστές.

00:18:24 MC

OK, Αλλά για εμένα έχει τρεις άξονες το διδακτορικό. Το ένα στοιχείο είναι εκπαιδευτικό. Δηλαδή μπορείς να χρησιμοποιείς ανάλυση και την

μεταφορική γλώσσα για να επιταχύνεις το πώς μπαίνει άλλος αυτή τη μουσική; Τώρα που δεν έχει 15 χρόνια να Κάτσει δίπλα στον μάστερ.
Μέσω ανάλυσης και μέσω αυτού που λέμε λαϊκή σοφία, να τον βοηθήσει να κάνει κάτι σε 4 χρόνια, που Θεωρητικά δεν μπορεί να το κάνει; Στην δική μας σχολή το βλεπω. Σε τέσσερα χρόνια, κάποιος που δεν έχει έρθει ξέροντας το ιδίωμα, αποκλείεται να βγει γνωρίζοντας κάποια πράγματα. Αν δουλεύουμε με τον τρόπο που λέμε: πάρε το πεντάχορδο, βγάλε το τετράχορδο κλπ. Αυτό είναι το εκπαιδευτικό.
Το μουσικό για μένα είναι: Μπορώ εγώ να βελτιώσω το δικό μου κομμάτι, το πώς αντιλαμβάνομαι το Makam, τι συνδέσεις μπορώ να κάνω κλπ;
και το τρίτο είναι θεωρητικό, αν αυτά τα μαζέψουμε και να αναλύσουμε και δούμε πέντε πράγματα. Έχουμε ένα τρόπο να δείξουμε ότι αυτή η ιδέα, μιας στατικής θεωρίας με στατικά διαστήματα δεν δουλεύει προς όφελος κανενός; Αυτό είναι το πλαίσιο.
00:19:36 SS
Και όχι μόνο το θέμα των διαστημάτων. Η συνολική περιγραφή του τί είναι makam, δεν στέκει. Ποτέ δεν έχει περιγράφει όλο το πράγμα. Παλιότερα ήταν πιο κοντά, αλλά και πάλι ήταν μόνο βαθμίδες, και κίνηση.
00:19:58 MC
Ναι, αλλά εγώ δεν έχω διαβάσει, να σου πώ την αλήθεια παλιούς, δηλαδή δεν έχω διαβάσει το αυθεντικό του Cantemir ή και άλλων, αλλά έχω την εντύπωση ότι και ο Cantemir και άλλοι που χρησιμοποιούνται τώρα σαν συστήματα αναφοράς, Είναι μάλλον πιο Θεωρητικό το μπάσιμο τους στην μουσική παρά πρακτικό.
Για μένα είναι παράδοξο ότι απ' την μια, Ο φορέας της μουσικής δεν είναι οι θεωρητικοί. Είναι αυτοί που παίξανε ρεπερτόριο, Taksim και τα λοιπά, και από εκεί μαθαίνουμε και καταλαβαίνουμε. Και απ' την άλλη, αυτήν τη στιγμή, τα τελευταία 100 χρόνια δηλαδή, Εκπαιδευτικά προγράμματα βασίζονται σε προσεγγίσεις θεωρητικών, που στην καλή περίπτωση έχουν και μια ιδέα για την μουσική αυτή. Στην κακή έχουμε δυτικότροπη ας πούμε προσέγγιση, αλλά είναι θεωρητικοί. Δηλαδή αυτοί είναι πεπεισμένοι ότι ένα θεωρητικό σύστημα όπως έχει η αρμονία και

μαθαίνεις πέντε πράγματα και αυτά τα πέντε πράγματα τα κάνεις, ότι έτσι και αυτό το δικός τους τροπικό σύστημα, Αν το μάθεις καλά θα παίξεις!

Ωραία, λοιπόν, Rast, Ussak, ξεκινάμε με αυτά.

1.b

Translated ranscript in Greek

Michalis Cholevas -> MC

Sokratis Sinopoulos -> SS

00:01:43 MC

The idea is that not only I will analyze but also to gather analyses from students as well. That is, our master's students and maybe even graduates from you to start enlarging a library which means that I will not only collect me nor will I do analyses only myself, so that about half of them will come from me.

To structure it I have divided the work into semesters that in each semester will have 2 Makam modes. I thought of starting by picking up from Rast and Ussak. And there are 2 directions, you will see it in the sentence, one is the analyses and at what levels one concentrates when one makes analyses, in structure in techniques....And how do you synchronize these with sound and video.

00:02:18

And the other is Interviews with people who are important in the field of taksim etc. For How is this thing taught?

00:02:31 MC

That is, one thing is the technical language that usually exists but you don't do that either...

00:02:36 MC

When talking to students

00:02:38 MC

To explain many times you don't use metaphorical language?

00:02:42 MC

For example, were you talking about Usak? When you compare it to Beyati, won't you say various metaphorical things? This element for me is important, from what I want to collect. Okay? why?

00:02:56 MC

I think, personally for me, it's one of the very important elements, I remember when I was taking lessons and trying to figure out things. We get to a point that technically I may not have understood, but you will say about the metaphor of carrying the whole essence of the thing.

00:03:12 MC

So is it?

The analyses of taximia by man will do.

00:03:15 MC

Within them and you.

00:03:17 MC

But also the way you see it when you describe it somewhat in a more metaphorical language.

00:03:24 SS

Very nice.

00:03:26 MC

Doctor I know I've put these in there see them, it's an initial thought, it doesn't mean we have to follow it. It can change, it's not finished.

00:03:37 SS

It's a joy.

00:03:39 SS

The only logic I see is popularity of macaques let's say

00:03:45 MC

just the way I've grouped them together is to be so different from each other, every six months not to get bored of the analyses.

00:04:03 SS

The only one of them... in my mind.

00:04:07 SS

This is categorized and... in relation to a more holistic way that I deal with all this, Lately. That all this works in one thing and in time has evolved. One of the other, let's say. It's some, let's say Rast and Usaki and Segia and Hussein are very much within that body, and Hussam Some are a

little different, but not that I'm telling you to change all that. Simple out of interest, let's say Carcigar comes from more folk things

00:04:46 SS

And is it more modern, oki?

00:04:48 MC

OK

00:04:51 SS

And kurdilihicazkar is More modern, but it does not come from folk things. On the contrary, it is the par excellence of the living room. Karcigar let's say is the corresponding folk version of Beyati Araban

00:05:02 SS

That's why there are both.

00:05:03 SS

and with such confusing variations. The only difference is that Karcigar comes through Huseyni with this glissando

00:05:15 SS

Otherwise, second-in-front sounds are both (with the Byzantine approach).

00:05:21 SS

And the NIhavend looks like, or at least in my own mind... as much as I tried to integrate it into this body it is a loan, especially with the way we have been playing it for the last 100 years... it is the romance of the East.

00:05:39 SS

But these, it does not in any way change the fact that it is a Makam popular.

00:05:43 SS

Popular... Popular... Kurdi strikes me, in the sense that, I do not know what material there is in Kurdi, in the sense that, as a Makam, this and if it is popular Makam, this is essentially Saz makam; and as a repertoire... more works as a second synthetic, combined as a piece of makam like Acemkurdi or Muhayyerkurdi. Kurdi as a repertoire, like a makam I don't know what you're going to find.

00:06:16 MC
Mostly I'll use it for taksim this.
00:06:18 SS
And for taksim I say.
00:06:18 MC
Message YOU well I say you say?
00:06:21 MC
Ok first of all, my thought was that Nihavend and Kurdi don't fit into let's say on the physical scale, that's one thing.
00:06:35 MC
Hicaz goes to color, we want it.
00:06:41 MC
Because it doesn't have much (in color gender)
00:06:43 MC
And the Sultaniyegah I put it because it is easy to show how the makam escapes the logic of the octave, very comfortable because it has a greater extent in its basic movement
00:06:58 MC
And Karcigar again; this was also my thought, as a combination of First and Second Sounds, because The others have a clearer movement Within a scale let's say if you look at it that way, this breaks it a little bit, that was the logic, but.
00:07:15 MC
If we consider that it is given 6 semesters in which it must be worked.
00:07:25 MC
Things are changing, right?
00:07:28 SS
These first 2 ok, go safely, I think and nice and important and historical and cores. Especially the three Rast, Ussak, Segah. Now whether it will be Sultaniyegah or Ferahfeza, again... I find Sultaniyegah interesting to me. But I do not know. The picture I have, especially of the repertoire, is

that it goes by train! It does not do anything else. While Ferahfeza. Perhaps it is more interesting. But, you can see it.
00:08:10 MC
OK ok ok I look at it again. If it is let's start then with what I could start with. For the first half.
00:08:12 MC
It has Sultaniyegah something interesting that I've seen in some compositions. And I haven't figured out if it's at its core no. That makes Saba in Neva.
00:08:29 SS
Far-fetched
00:08:29 MC
And in Semai. in cana 2 Semai I found this move, coming back after through Huseyni. Strange move.
00:08:47 SS
Yes and now this opens up another topic that again.. Ok just to identify it, maybe if you need to concretize it. You, you will deal with Taksim That is, of the last hundred years. Will Cemil Bey be in I imagine or won't it be?
00:09:08 MC
I would but I would also like modern Things so that we don't go back historically what only Cemil Bey did and that this is the point of reference...
00:09:16 MC
Because I'm interested in the fact that from Taksim you get very-flat information that you can't get it out of this logic that there is a scale subdivided into tetrachords, etc.
Such as phraseology, techniques, etc. and basically, How different can these perspectives be and how different material can they give you? No, what are their commonalities and that if we will see 5 common points this will be the makam. the other way around
00:09:48 SS

nice, so... It works in favor of this perspective the thought I made because in my own mind, and not only in mine I imagine is very different. who? Who? Because I see at the moment there is a school in Turkey that no matter how much classical instruments play, and Ney and Tanbur, have played the music of the 20th century, where the subject of its modality has gone to extremes with its pros and cons. For example, this Saba in Neva in Sultaniyegah I haven't seen it in the two, three, four old tracks I've seen. I'm sure it's in part of the twentieth century I mean. I may be wrong.

00:10:32 MC

I think the pieces I remember are before the twentieth century, I don't remember for sure. I don't remember Whose composition it is, I'll find it and tell you.

00:10:35 MC

But is selim's Sultaniyegah not anyway? It is at a time when there is money to get a new Makam out.

00:10:50 SS

Not only do I wonder, let's say, the interesting thing is that some musicians who are outside Turkey, and Turks, have clung to a repertoire, the classical-classic, which also affects their Taksim .

On the other hand, they are influenced by other modern things they do.

And I am the same.

You think I can't... To watch in compositions easily, especially in Sarki because the Sarki were written In the twentieth century that reached the modality to extremes, transformations everywhere, Saba everywhere, and abruptly and so on.

00:11:25 SS

But something that Turkish musicians are very familiar with. Our peers, it is also included in their journey. That's as an observation.

Thought... to ask you if it makes sense even to separate.

But NO as long as the right thing is to do is the diversity of the thing, we just identify reasons why this diversity exists and maybe it exists, maybe that's a good reason.

00:11:54 MC

Yes, but it's interesting what you're saying now. Because now I understand what you're saying. When you say that they pull the modality to the extremes in the sense that they can take any color and put it in any tier let's say.

00:12:05 SS

And the samba especially... and not....Of course.... The truth is that, Even musicians who have played this repertoire, if you tell them: do Taksim.

They'll play you something Very close to someone who has played the only classic repertoire. So in the end it can only be in my mind All this... Can in the written music, I ask questions like that!?

00:12:31 MC

Yes, yes.

00:12:33 SS

In the compositions, to show a change in the treatment of modality from simplicity to complexity let's say, at least on one axis.

Especially to composers of the twentieth century who I have not watched but... Who do they say? I will pick them up! Which are Brands. That is, it is not done to a Turkish musician who has played, he will tell you... Haven't you played this repertoire? What have you played?!

It's like having played rebetiko without having played Vamvakaris.

I'm just thinking that while the modality has progressed in the compositions.

Finally in Taksim. When you tell someone play us a Taksim so right... within quotation marks within Makam, it will make you the basics, it won't test extremes I think.

00:13:27 MC

Yes, it can also do so as soon as it is done in what context it is done.

00:13:27 SS

Right, right.

00:13:31 MC

On the other hand, I think that the composers of the twentieth century followed a little... from What I've seen myself of them. Kemal Ilerici, whoever is after Arel , etc., followed the logic a little bit. The theoretical logic of the tropical system. as it was made after 30, that you have four-year-olds five-year-olds you change them there and so on. Whereas, perhaps, before that. How can I say that, not all this was interchangeable, right?

00:14:07 SS

It worked more timbre!

00:14:09 MC

Yes, yes.

00:14:15 SS

Or at least for some of the composers.

00:14:18 MC

Or at least in taksim, as I understand it, from the lessons with Omer and Kudsi who are more classical musicians, is that Taksim is my kid... you make a presentation of a soundscape, and in order to bring it to another soundscape, to another makam let's say, all this has to be done very gradually, you don't do things to surprise, while in modern things in modern compositions, basically I think they see every note that ends a five-year-old or a tetrachord as a joint to put everything else. And it's a little... Like a black hole. It moves you straight to something else distant, without having to go step by step.

00:15:07 SS

What they call a harmonized chromatic transformation, the Dodesis I do re recession and...

00:15:15 MC

Without having to go it step by step. While, the old ones as we understand it, I think they do this very gradually, that is, it changed something very small, changed something very small.and bring it another without realizing it directly.

00:15:29 SS

Yes, and that's another big issue. And how much the theory influenced The music, and in tuning get it right? We have escaped! The 3rd is... Let's go for a reunion now, the Segah... he had gone up to god, I'm going crazy.
00:15:47 MC
And in my own logic again is not only where we are going to wind it up, but that we are going to fix it, the difference for me is this, that all theoretical systems (I have to give you something paper to discuss)... They do a great analysis in Istanbul, 4 universities. Statistical analysis to see which system is best to wind up, statistical analysis of recordings. Their logic, however, is that the tiers are immovable. for me This is the Big Issue. And with the Segah we were i.e. I can't.
That is to say for me this is the only logic of the intervals of each step that create and move the melodic, is that it is not fix, and in large instruments in particular. I don't know how you see it in the lyre. In tanbur and Yayli Tanbur, It is clear that this thing is attracted and goes thither to lead Things thither, down for example by going to Dugah or up by falling on Neva. That these are not fixes. I don't think that some people have solved it in theory that it should be and from there others took it and played it.
But that's a big question for me so I want to have different instruments and different musicians, things played. To show that it's not the question of whether they play it more here or more there the Segah.
00:17:39 SS
True, and In the end, all that we said, sit down and I go it differently!
You're going to deal with Makam today, are you not? You have no mood of historicity
You will deal with the makam, with the taksims of some musicians, which if they are not alive, they are anyway of the last 100 years. And neither will you deal with the extreme cases. I imagine that you will be afraid of people who are recognized by their circle that they operate within certain frameworks, now more or less... but they certainly don't do something extreme, that they are recognized as good improvisers.
00:18:24 MC

OK, But for me the PhD has three axes. One element is educational. That is, can you use analysis and metaphorical language to speed up how someone else enters this music? Now that he doesn't have 15 years to sit next to the master.

Through analysis and through what we call folk wisdom, help him to do something in 4 years, which theoretically he can not do it? In our school I see it. In four years, someone who has not come knowing the idiom, is excluded to come out knowing some things. If we work the way we say: take the five-string, take out the tetrachord, etc. That's the educational.

The music for me is: Can I improve my own track, how I perceive Makam, what connections can I make, etc.

and the third is theoretical, if we collect them and analyze and see five things. Do we have a way to show that this idea of a static theory with static intervals doesn't work for anyone's benefit? That's the context.

00:19:36 SS

And not just the issue of intervals. The overall description of what is makam, does not stand. It has never described the whole thing. It used to be closer, but again it was only steps, and movement.

00:19:58 MC

Yes, but I have not read, to tell you the truth of the old days, that is, I have not read the authenticity of Cantemir or others, but I have the impression that Cantemir and others who are now used as reference systems, It is more theoretical to put them in music than practical.

For me it is paradoxical that on the one hand, the bearer of music is not the theorists. They are the ones who have played repertoire, Taksim and so on, and from there we learn and understand. And on the other hand, at the moment, in the last 100 years, that is, in the last 100 years, educational programmes are based on the approaches of theorists, who in the good case have an idea of this music. In the bad case we have a western-style approach, let us say, but they are theorists. In other words, they are convinced that a theoretical system such as harmony and you learn five

things and these things and these things. five things you do, that's how and their own tropical system, If you learn it well you will play!

Well, well, Rast, Ussak, let’s start with those.

2. Email discussion with Ara Dinkjan March 16-17 2016

I approached Ara Dinkjan with the assistance of Sokratis Sinopoulos in March 2016. Ara preferred to have the discussion via email due to high workload. My questions and his answers follow in the text. The taksim performances he sent to me as well as his comments on the direction of taksim with phrasing as its vehicle have been instrumental in the conceptualization and application of pulse, rhythmic and metric presence in phrasing, as discussed in Chapter 1.

Michalis Cholevas – Questions (March 16 2016)

1. Which Makams would you start with, which are the essential ones for you, both for teaching and for performing?

2. Is there any division that you are following in order to classify those makams?

3. Are metaphors important for you teachings on Makam phrasing, movements, seyir, improvisation? Could you give some examples especially on rast and ussak?

(For example, a friend is presenting Isfahan phrasing as trying to put a piece of cork under the water, the push down force is like an ussak phrase leading on Dugah and the force of the water at pushes the cork up is like the rast phrase from Dugah to Neva)

4. How do you work on your lesson with notes such as segah and evic that are not necessarily fixed, do you use metaphors for those?

Finally, would it be possible to send me some of your improvisations on rast and ussak? I loved you beyati one before the pesrev and I could use more for transcription.

Ara Dinkjan - Answers (March 17 2016)

I will do my best to answer your questions.

1) When I was a child, just learning the oud, I always seemed to want to play the Ussak-family makams (Ussak, Bayati, Huseyni, Muhayyer) and Hicaz. Also, I was in love with the curcuna usul. Indeed, most of my early compositions were in Ussak. It is only recently that I realized why I am so attracted to these makams. My ancestors are from Diyarbakir and Harput. The folk music of these towns is dominated by Ussak, and some Hicaz, and the predominant rhythm is curcuna. So you see, it is in my blood.
As for teaching, I try to make the students aware of the basic makams (besides the Ussak-family and Hicaz), including Hicazkar, Huzzam, Karcigar, Kurdilihicazkar, Mahur, Nihavent, Nikriz, Sabah, Segah, etc.

2) When I was younger I used to divide the makams in my mind, but according to my own perception of their harmonic(!) color. For example, Segah & Huzzam, Rast & Mahur, Suzinak & Hicazkar, Sehnaz & Nikriz, etc. Now, I choose not to divide them, but rather consider them as individuals, perhaps related, but individuals nonetheless.

3) I do indeed use metaphors when teaching. For example, I tell my students that taksim is like taking a ride in a car. You must start at your home, but you can't stay in your driveway! You must go somewhere. You must visit other places, and describe their beauty. And the best drivers never turn too sharply. The best drive very smoothly, until you are suddenly in a different place. How did we get here? And how will he get back home?

I tell my students that there are two main sources to research in order to know where you can modulate in a taksim:
1) Masterpiece compositions
2) Taksim recordings by master players
By analyzing these compositions and/or performances, you can make a blue-print of where you can go.

As for phrasing, I try to emphasize very subtle pitch movement. I compare it to when we are driving (again!) on the highway very fast. If we want to change lanes, all we have to do is just move the steering wheel ever so little, and the car will go into the next lane.

Another very useful lesson I give in phrasing is the following. Here is a six word sentence:
I am going to the park.
We think we know what that means. However, by emphasizing different words in that sentence, it completely changes the meaning:
I am going to the park.
I **am** going to the park.
I am **going** to the park.
I am going **to** the park.
I am going to **the** park.
I am going to the **park**.

To illustrate the importance of form and discipline, I tell the student that if I was to drop him in the middle of the ocean and told him to swim, he would most likely drown. However, if I dropped him in the middle of the ocean and I told him to swim in a particular direction, he would eventually hit land.

As for metaphors for particular makams, I really don't use any. However, I do speak about the emotional aura that each makam can bring. I also speak about how many of the makams correspond to a particular time of day.

4) I teach with notes. Indeed, I have personally transcribed literally hundreds (perhaps thousands) of sarkis, saz semais, pesrevs, longas, zeybeks, turkus, kantos, etc., as well as Armenian, Greek, Arabic, and other genres. However, I tell the student that these notes are just the skeleton, and we must put the meat on. There are so many limitations to our western notational system. This is why I encourage my students to listen to masters play the pieces, to get a general idea of phrasing, tempo, dynamics, intonation, etc.

When it comes to intonation, I always love to tell my students that Pythagoras discovered the harmonic series, where the third is slightly flat, like Rast! In other words, God and/or nature sing in Rast!!

As requested, I have attached two of my taksims:

1) Rast -- this was recorded in a Stuttgart, Germany club in 1990! Please forgive the bad, amplified sound.
2) Ussak -- this was recorded in Merkin Hall, New York City in 2014.

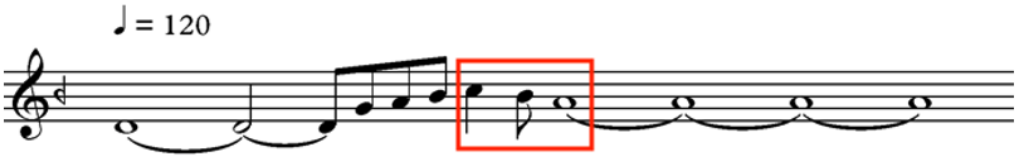
3. Kudsi Ergüner Inteview/discussion on the findings on the first chapter: Rhythm in Taksim (?), 27 february 2018

Transcript

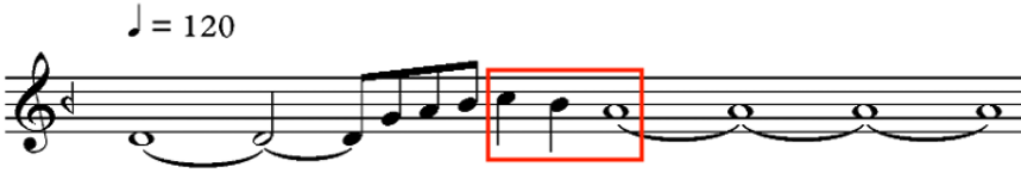
MC-> Michalis Cholevas
KE-> Kudsi Ergüner
WE-> Wieland Eggermont

00:00:00 MC
Do you mean that the metric phrases are coming because of the metricity of the poems?
00:00:05 KE
Yeah because of the poem it was what we call in French contre-chant.
00:00:09 MC
In French, what does it mean?
00:00:12Q KE
It is when you have a singer singing and the instrument answers.
00:00:16 MC
Yeah, okay.
00:00:20 KE
So you see, it's like a dialogue between the singer and the instrument. So, for example, if the single makes
Audio 1
And then the instrument answers
Audio 2
00:00:47 KE
So then in this idea of the dialogue between the singing and the instrument, an answer, there is a relation which makes the taksim when it is alone, without even with the singer is the same atmosphere of like the metric of the poem is going inside.
00:01:05 KE

Which when I say abstract because the first time first bit is not fixed.
00:01:11 MC
Exactly, you cannot mark from the first bit, but if you mark in the middle of the phrase then you can apply it to that core and then estimate the rest.
00:01:19 KE
Yeah, you can measure the time but not like a rhythmic cycle.
00:01:24 MC
No, no, but definitely the phrase itself has a very clear metricity.
That helps you.
Create gravity
00:01:32 KE
Absolutely
00:01:33 MC
and I saw then that the opposite thing happens. So I made the score of your grandfather's. I made a mistake on Ussak, so I checked the score without having the music in my ears. it's the opening phrase and it says (singing the right example, then singing the wrong example, check discussion on Uliv Ergüner's Ussak taksim opening phrase in Chapter 1 and in Conclusions) 00:01:53
Correct phrase



Wrong phrase



MC
And you know this cannot work cause when Segah gets the same value with Cargah and Rast, the phrase doesn't create gravity. But if you do (singing right phrase again).
00:01:59 KE
of course.
Yes. I want to add something because as in the maqam you have note steps to go towards to. So you have to give a sort of dynamic to do to your melody. Yeah, which gives the sense of when you go to stop on this note. So if you give the same value to the notes.
There is no any dynamic.
00:02:30 MC
Yes,
00:02:31 KE
Audio 3
00:02:35 KE
If you make
Audio 4
Then it becomes a movement. You see?
But if you make
Audio 5
you need to...something has to go.
00:02:47 MC
Yes exactly
00:02:49 KE
But if the
Audio 6
is enough to stop on there, but if do
Audio 7
you have to go out again.
You see it, so it's also related to the sound of the degree that you want to go, yes, so you have to create a movement which makes sense when

you go to go to that note, so which gives also a sort of rhythm, a time idea on this.
00:03:18 MC
And you can see the other way round, because with many people... I mean again, when you have the whole vocabulary build-up on your system, naturally through a long period you kind of...translate this metricity that you might not even know about the words behind it, but you have it on your system. When you get someone, imagine that you train someone that comes from jazz music for instance, and you tell him.
Okay we are playing non rhythmical improvisation. It is a taksim and you have to create gravity to go to that note.
00:03:49 MC
For them This doesn't mean anything because they never heard music that is not sitting on a on a fixed bar, so this can be a middle ground.
00:03:59 MC
To understand how you go from metric to something that is not metric, and then what I saw is that for instance.
00:04:02 KE
Absolutely yeah.
00:04:06 MC
We are talking about Cemil Bey. Great taksims, why he was so great bla bla bla . I took this idea from your grandfather
00:04:14 MC
Applied to your father works, apply to you. Works. Applied to tCemil Bey. Do you know what is a big difference there? that the change what we discussed on the metronome.
00:04:26 MC
It happens within the same phrase two or three times that it's not happening to most of the other people, so every person will play one phrase, and usually there is one metric stem in that phrase that you can recognise. With him, He changes the speed of his phrasing in one time

in one phrase, two or three times. So he goes from 100 beats. The next is also completely metric, but is consequent only with itself for, two seconds, and then he goes on a very slow one.
00:04:55 KE
Yes but in the in the idea of Cemil Bey anyway, because he was a very nervous person
00:05:00 MC
Yeah, okay.
00:05:05 KE
So he goes to
Audio 8
00:05:10 MC
And before that this
Audio 9
00:05:13 MC
so he changes again the speed there.
00:05:15 KE
Yeah, yeah.
Of course, but because he wants to push when he goes when he opens on another degree. So he goes in a very wwwwwroom
00:05:27 MC
Yeah, yeah.
00:05:28 KE
And not in a very small way.
00:05:31 KE
But it depends to the moment that you play in the context that you play. For example, if you play a taksim in the beginning of the ceremony, again, it has to be very majestic, so you have to do long notes and not brrrrrrrr
00:05:50 KE
It's not this type for this moment.
00:05:52 MC

But still the difference between for instance Niyazi Sayin and your grandfather you see on the same ceremony that they play together. Even yeah, you see one Taksim. That has, Very clear ideas based... using also rhythm for that, and it helps you create very clear intentions without having.
00:06:16 MC
To play one minute of a very slow note Just to open. In ussak for instance. that the phrasing uses rhythm to make clear intentions.
00:06:25 KE
But I want to say something after when we started to the period of the radio house.
00:06:33 KE
What they have done, they took away all the rhythm for the songs even.
00:06:38 KE
When somebody thinks the Sarki, for example, which is in duyek.
00:06:45 KE
ITdoesn't respect the singer wants to do it in a very free way.
00:06:49 KE
Like a ballad so.
00:06:51 KE
Because this cycle is not played in the Fasil idea is not as....
00:06:56 MC
Yeah, it's just one single song.
00:06:58 KE
Yeah, it becomes separated from the context, so he sings instead of doing
Audio 10
00:07:13 KE
Then it breaks it the tempo and So what happened: The instrumentalist, also they started to play like this.
00:07:21 KE

Yeah, became a style, but I called this style of the radio house, TRT style. So for example, in the case of Ney Niyazi Sayin developed this style which became now the classical style of the Ney players which there is not any idea of time in, it is timeless.
00:07:39 KE
Is always long. Notes are very very, like, yeah, very long in this sense, but the same thing with the other instruments as well.
00:07:48 KE
I can send you, I have a recording. For example, a Suzinak taksim , a taxi or Ferit Sidal. You have the impression that somebody is singing without words.
00:07:59 KE
You see, and then you listen. For example, Erol Deran, who plays the Kanun.
00:08:04 KE
Audio 11
00:08:12 KE
It doesn't have any dynamic in it. The Seyir is correct. The melodic itinerary is correct, but there is no any movement in it.
00:08:23 MC
And that's the other idea behind this.
00:08:29 MC
When you talk about the seyir, okay, it can be clear on some people's mind, but when the thing becomes lame on improvisation,
00:08:39 MC
by just rethinking rhythmically, I want to make this experiment with MIchalis (referring to Michalis Kouloumis, a violin virtuoso in the style of Makam, well known as well for his high-level rhythmic based improvisations). I haven't tell him about the idea.
00:08:47 MC
You can use very simple ideas like, you have only three values. Don't forget about playing.

00:08:53 MC
Triplets, tablets, quintuplets or doing crazy stuff. Use only these things. One value its double and its triple . And build the phrase only with that. Because. Every phrase that comes out of these improvisations, you can just parameterise it like that. You don't need a million tuplets to make the phrase. You need only these three values and the thing makes sense
00:09:23 KE
I give you another example. You said the thing makes sense. So your speech has a dynamic. But if I
say: yooooooour....speeeeech.....hasadynamic. It is another way of saying. But if I say: your..speech.. Has.. A.. this is messed up. you understand?
00:09:51 KE
Yeah, because now you don't communicate your idea. So what happens in the in the taksim is the same thing.
00:09:57 KE
It is like an abstract speech without words, so your speech needs the commas,
00:10:06 KE
It needs to have the verb, which is the note that you go to.
00:10:14 KE
To stop on it, with a comma or a dot. Then it gives you a dynamic because your speech has a meaning.
00:10:26 KE
So, what is the problem today? The taksims they are out of meaning.
00:10:31 KE
There is no speech behind it, so that's the that's the modern style in in in Turkey, because the language and the music, they lost the contact, the poetry and music they lost the contact. And also the rhythmic of the composition they are lost. They were put away because of many other reasons. So then the Taksim also follows this situation, so the instrument

that is like for example the Ney that we heard today very beautiful and the phrases are correct.
00:11:06 KE
But there is no any sense in it, it doesn't touch you because it doesn't have a speech doesn't have any meaning.
00:11:13 KE
That's the that's the problematic, but you are absolutely right, because in reality in the taksim there is the idea of time but not a rhythmic cycle.
00:11:24 MC
No no, no, not a rhythmic cycle, but this, what came out of this analysis is that on every phrase there is no cycle, but there is A clear organisation on the phrase, first with a pulse and then with metric bars like so she plays 9,5,7, 10 and then nothing and your brain says is there is no rhythm there. And if you break every phrase, it becomes a phrase that it could be a phrase in the composition one in 9, one in 5. So it makes it very clear intentions just with rhythm. So, I see that for instance for Ara is clear and then.
00:12:02 MC
His organisation over the taksim follows Follows this idea of motricity because... My interpretation is that because his training in music comes from the folk styles, so he plays usually Curcunas, karsilamas E.t.c
00:12:19 MC
On your Gran Father, this becomes less obvious, he doesn't organise the phrases in seven bla bla bla.
00:12:29 MC
Usually it is 4,6, 8 something like that and they don't follow one bar after the other. But still the pulse, especially in your grandfather. The pulse, there is a metronome on every phrase.
00:12:40 KE
I give you an example
Audio 12

Because you have to do si-la la, otherwise they cannot stop on the la, so the timing of each note corresponds to the idea that you have.
00:13:16 MC
Yeah and the intention you want to make clear
00:13:19 KE
Because if you do
Audio 13
00:13:24 KE
you need something else for instance
Audio 14
So you see that you cannot do it otherwise because it doesn't make sense to stop on la.
00:13:34 MC
But then there is a third layer exactly what you said. Now you see when the thing becomes again meaningless or lame? You said you told soooooool dooooooooooo siiiiiiii laaaaaaaa laaaaaa feels very static, right?
00:13:37 KE
Yeah
00:13:48 MC
Again, if you think that you know all the values, it's a multiplication of a basic value. Either you have the first value or one that is 2 times slower, or one that is three times slower. What happens there is that when you become very.... when it doesn't make sense, you don't create gravity there.
00:14:04 MC
You can jump to a faster phrasing. That's exactly what happens every time, so you see the phrase is not moving, right?
00:14:14 MC
Audio 15
00:14:16 MC
The trick is

Audio 16

and you came back into exactly what was decoded here. Rhythmically it gives you an extra tool to speak about this. To talk about phrasing.

00:14:27 KE

Absolutely, absolutely, absolutely. But the thing which is the tricky.

00:14:32 KE

Is, you have to organise all this spontaneously.

00:14:36 MC

Of course,

00:14:37 KE

yeah, I mean this is the challenge so.

When you say.

I mean, it happens in the lessons when I teach taksim

00:14:45 KE

So okay, you have to go to La and you have to stop there or on Si and the guy is so the guy makes

Audio 17

00:14:55 MC

It makes no sense.

00:14:56 KE

But if you do

Audio 18

then it makes sense, yeah?

00:15:05 MC

And I think, well, spontaneous again for improvisation. I think it's also a funny term cause it this spontaneous, the way you connect things.

00:15:15 MC

But of course, it's based on a huge, large Bank of information that you have there, and then you always have some kind of maps, like they seyir.

00:15:24 MC

Here is a kind of map on your head where you will move from somewhere to somewhere else is not a spontaneous map that you make. The melodic map, right?
00:15:32 KE
Yeah, but also there's one thing.
you know this traditional theater. So if the guy starts to tell his story directly, nobody listens, so he's going to say these silly things bla bla bla And then: I was thinking that like in this story that the guy who was sitting under the tree and .... you understand. So if you do your taksim.
00:16:05 KE
It has to be related in the context, so if you learn the rast taksim .

00:16:11 KE
Audio 19
00:16:20 KE
If it's out of the context.... So sometimes you have to do some movements to attract the attentions instead of starting so.
Audio 20
You understand, so it depends on the context,
00:16:51 KE
So in the idea of contra-chaunt (is the answer of the singer). Okay, so in the answer of the singer... so the singer has already established the dynamic, the attention is there, so you're playing.
00:17:05 KE
That taksim is related to what is sung. You're so you have to guide him. So if the makam goes to Huseyni, he sangs Dugah e.t.c
Audio 21
00:17:22 KE
And he will take it from there.
00:17:23 KE
so you guide also with your instrument the seyir. for the for singer, so it's not only the answer, but you bring the itinerary of the makam

00:17:35 KE
So this is the old system which is completely lost now
00:17:41 KE
For me all the taksims I hear from the instrument doesn't make sense. I mean okay. They seyir is there. But it doesn’t communicate anything, I mean most of the time.
00:17:57 MC
That's what I understand as well or I don't get from the taksim and I see now that for me the rhythmical part becomes much more important than I had in my mind, because the whole discussion is always about the seyir.
00:18:12 MC
Okay, but for the seyir we more or less have a map. It doesn't work, and it doesn't work because the phrases don't make clear intentions and the phrases don't make clear intentions, because now the focus is for instance on sound. You make one huge vibrato. You make a sound for 40 seconds and you create some kind of atmosphere, right? But the intentions, what I saw in these improvisations that they're not big taksims, 2-5 minutes right? But every phrase.
00:18:41 MC
Start here and text you there in 5 seconds and you know that this is the place you wanted to be. Andthe coding behind it....!
00:18:49 MC
I mean...the coding behind it? Rhythm plays a huge part in this thing, that is not discussed yet.
00:18:54 KE
Yeah, of course, yeah that's.
00:18:56 KE
Absolutely, I would not say the rhythm, it is the time.
00:19:01 KE
There is the idea of time.
00:19:02 MC

Yeah, the pulse.
00:19:02 KE
Yeah, the pulsation is there but this pulsation. It doesn't correspond to a rhythmic cycle like, first beat is there and you know you have a cycle.
00:19:14 MC
No, no no, you're right about it.
00:19:19 KE
But the pulse is there, of course.
00:19:20 MC
And then between a cycle and something that is completely arrhythmical, there are all these steps that can come in to help you fill it in because.
00:19:20 KE
Yeah, of course
00:19:31 MC
I mean really, if you see the phrases there, if I just isolate the phrase and give it to you, you'll say: Ah!! they are is probably coming from Curcuna and if I make another one. You'll say it's coming for instance from mandra.
00:19:44 MC
And it happens in every phase
00:19:47 KE
I give always this example. You know we have for instance in TRT the guy is reading the news.
Everything is in the same level:
Today the president had arrived he went to a dinner with the businessman and etc. And on the highway #5 there was a big accident. 50 personnel dead . Everything in the same voice, no any change on the tone, it is very unpersonal.
00:20:22 KE
So the guy he's absent and he's just reading a text and. The sense of it, it doesn't. He doesn't get it.

00:20:31 WE
On the other hand, in our society you see also that live by the atmosphere and but not the real events.
Everything is atmosphere.
00:20:43 KE
So inthe music is the same situation. The guy, He learned the Rast makam. So in every context he will play the same idea of Rast,
00:20:51 WE
Yeah, he plays the right notes in the right place but without....
00:20:57 KE
And that's why I I considered that in the Makam idea. There is no rule. Yeah, there's the taste of the makam.
00:21:05 KE
But there's not any rules that you should do, you should do, you should do, you should do.
00:21:09 KE
But it is up to you to create this atmosphere of this Makam in your way. Someone for example will say
00:21:16 KE
Rast makam is this but if for example, Rast pesrev from Hasan Aga
Audio 22
00:21:29 KE
It has nothing to do with the Rast
Yeah, but it is true that the makam is not one thing. It's a communal perception, but.
00:21:48 KE
You have to be able to give the Taste of it, but depending to the context.
00:22:08 KE
I recorded for example, an Istanbul player Abdi Coscun, in ‘78
00:22:11 MC
Yeah, I know!
00:22:12 KE

he made a Rast taksim tax him that I recorded, published in Switzerland.
00:22:19 MC
I have your CD!
00:22:19 KE
Yeah, I did the art of tanbur.
00:22:21 KE
Now, 30 years after we played together, he played exactly the same Rast taksim.
00:22:28 KE
Which is nice, but.
00:22:31 WE
At least it's consistent.
00:22:33 KE
And it's not anymore improvisation it’s not spontaneous.
00:22:37 MC
Sukru did the same SUkru Tunar one of his Taksims. Ara sent me this taksim. Then he said:
00:22:46 MC
Sukru came to New York and he played this taksim note by note. He said we all loved his sound and his...you know the way he played. But the taksim was layed note by note
00:22:55 KE
yeah, but.
00:22:57 KE
Did you know what is also true? Because when you do something even improvised, that you like.
00:23:04 KE
and people. They like it, you know.
00:23:06 KE
That it is, it works!
00:23:08 KE

Yeah, there is normal that you repeat also.

00:23:10 KE

I mean because it you know that in fact it becomes like a composition in a sense Any composition is an improvisation without the cycle.

00:23:19 MC

For me... I haven't seen that. I mean, if what Ara says is true.

00:23:25 MC

I don't think I've ever seen it. I mean you recognise patterns on everybody, but he played, he said note by note exactly said, I don't think I know anyone who can do it!

00:23:34 KE

Yeah it is not so easy to do it.

00:23:36 MC

Yeah, I think we have to go in again.

Appendix 3

List of conference presentations

2021

September 30 - Basel, GMTH, Invited Keynote speaker, CH

April 19 Harvard University Online, Performance in Late Antiquity and Byzantium, Online

2018

June 18 Analytical Approaches to World Music AAWM Conference Thessaloniki, GR, Link for abstracts

2017

October 10 - Researching Performance, Performing Research, Conservatory of Amsterdam, NL

June 23 – European Music Analysis Conference, Euromac 2017 Strasburg, FR, Extended abstracts link

March 10 - Codarts Artistic Research Festival, Rotterdam, NL,

Feb 15 - British Society of music Analysis, SMA Conference of Music Analysis, Bangor, UK

Appendix 4

List of submitted articles for publication

1. Rhythm in Taksim?

Analytical approaches to World Music

https://www.aawmjournal.com/about_aawm.htm

Double blind peer review

ISSN 2158-5296

Submitted on 27/08/2021

Accepted by the editor on 20/09/2021

in Peer review process.

2. Makam Synesthesia? Digital layered score and the cultural-educational qualities of Makam

Journal of Music Theory

https://www.dukeupress.edu/journal-of-music-theory

Double blind peer review

ISSN: 0022-2909

e-ISSN: 1941-7497

Submitted on 08/11/2021

3. Affective affinities in Eastern Mediterranean poetry and music: An online performance

Classics@ Journal

https://classics-at.chs.harvard.edu

Double blind peer review

ISSN: 2327-2996

Submitted on 07/07/2021

Accepted on 01/11/2021

4. The absent teacher approach

Taksim 1: a protocol for transcription and performance analysis with complementary graphic representations.

Article sent for publication with the conference proceedings of
Researching Performance, Performing Research
Amsterdam conservatory
October 27-29, 2017
https://www.conservatoriumvanamsterdam.nl/onderzoek/evenementen/congressen-en-symposia/researching-performance-performing-research/
Accepted by Editors 01/06/2021
2nd review submitted on 29/10/2021
to be published with Ashgate/Routledge 2022

Appendix 5

Video List

Ara Dinkjan

Ussak Taksim on oud

1 Melodic contour on Staff

2 Score and melodic contour on staff

3 Melodic contour on makam map

4 Score and melodic contour on makam map

5 Melodic contour on makam map with intervals

6 Phrases speed and metric groupings

7 Phrases speed and phrasing habits

8 Phrases speed and makam flavours

9 All layers of annotations

Kudsi Erguner

Ussak Taksim on ney

10 melodic contour on staff

11 transcription and melodic contour on staff

12 melodic contour on makam map

13 Melodic contour on makam map with intervals

14 Transcription score and melodic contour

Ulvi Erguner

Ussak Taksim on Ney

15 Ulvi Erguner Ussak taksim melodic countour

16 Ulvi Erguner Ussak taksim score and contour

Dede Suleyman Erguner

Rast Taksim on ney

17 Dede Suleyman Erguner Rast taksim melodic contour

18 Dede Suleyman Erguner Rast Taksim score

19 Dede Suleyman Erguner Rast taksim score and melodic contour

Fahrettin Çimenli

Kurdilihicazkar Peşrev on yayli tanbur

Fahrettin Çimenli - Kürdilihicazkâr Peşrev transcription and melodic contour

20 on makam map

Introductory Taksim on Kurdilihicazkar Peşrev on yayli tanbur

Fahrettin Çimenli - Introductory Taksim for Kürdilihicazkâr Peşrev (by Cemil

21 Bey) Part 1

Fahrettin Çimenli - Introductory Taksim for Kürdilihicazkâr Peşrev (by Cemil

22 Bey) Part 2

Fahrettin Çimenli - Introductory Taksim for Kürdilihicazkâr Peşrev (by Cemil

23 Bey) Part 3

Fahrettin Çimenli - Introductory Taksim for Kürdilihicazkâr Peşrev (by Cemil

24 Bey) Part 4

Isak Algazi Efendi

Beyati gazel

25 Isak Algazi Beyati Gazel melodic contour on makam map

26 melodic contour on makam map and scale intervals

Sukru Tunar

Ussak Taksim on clarinet

27 Melodic contour on makam map

28 Melodic contour on makam map and scale

Aron Hamon

Performed by Birun Ensemble under the direction of Kudsi Erguner

29 Hüseyni Küll-i Külliyat transcription

Kani Karaca Uri Uri Beyati Beste

30 Transcription melody and rhythmic cycle

31 Transcription melody rhythmic cycle and melodic contour on makam map

Feyrouz Zoi En tafo

32 zoi en tafo melodic contour on makam map

zoi en tafo melodic contour on makam map staff score and parasimantiki

33 notation

Antonis Dalgas Manes tis avgis

34 melodic contour on makam map

35 melodic contour on makam map and transcription

Videos prepared by Juliano Abramovay. Supervised and reviewed by M.Cholevas

Juliano Abramovay - Transcription and analysis

Hafız Memduh & Fahr Eyleme Ey Şema

Hicaz Taksim on Kanun

36 hicaz taksim melodic contour

37 Hicaz taksim score and melodic contour on staff

38 motivic analysis and flavours

Dimitris Atraidis

Manes Neva

39 melodic contour on staff

40 Melodic contour on staff transcription motivic and flavours analysis

Cinusen Tanrikorur

Pençgâh Taksim on oud

41 melodic contour on staff

42 Transcription and melodic contour on staff

43 motivic analysis

Huseyni Taksim on oud

44 melodic contour on staff

45 Transcription and melodic contour on staff

46 Transcription melodic contour on staff motivic and flavours analysis

Ercümend Batanay

Huseyni Taksim on tanbur

47 Melodic contour on staff

48 Melodic contour on staff and transcription

Cemil Bey

Huseyni Taksim on Yayli Tanbur

49 Melodic contour on staff

50 Melodic contour on staff and transcription

51 Melodic contour on staff transcription flavours and motivic analysis

Appendix 6

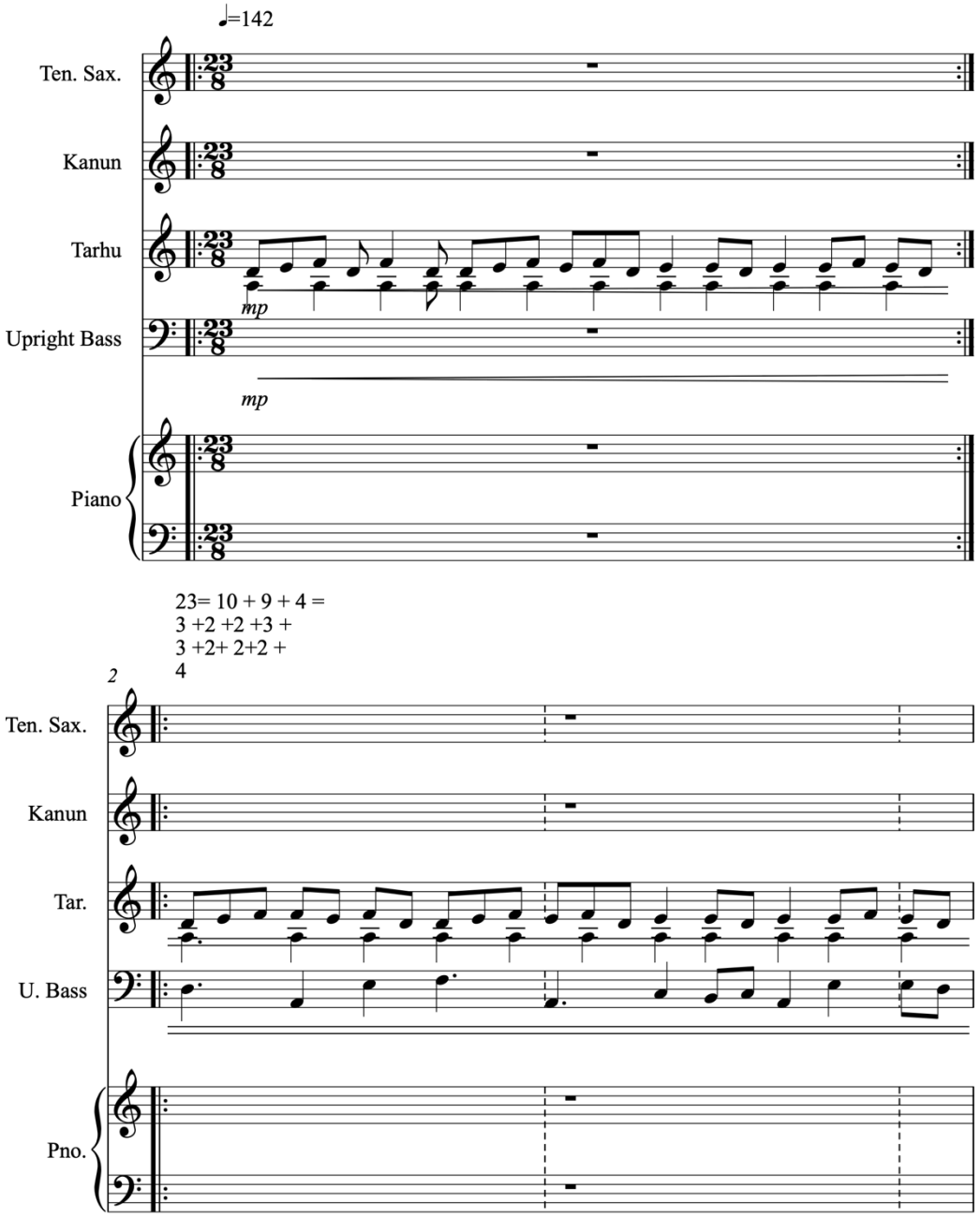
Original modal compositions created during the PhD trajectory

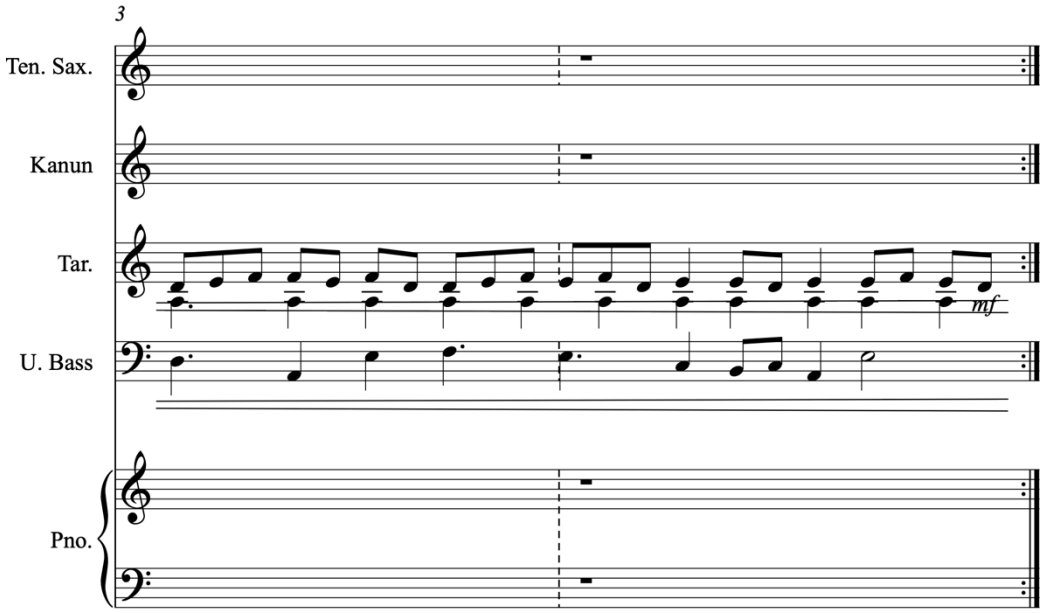
1. Exileosis:

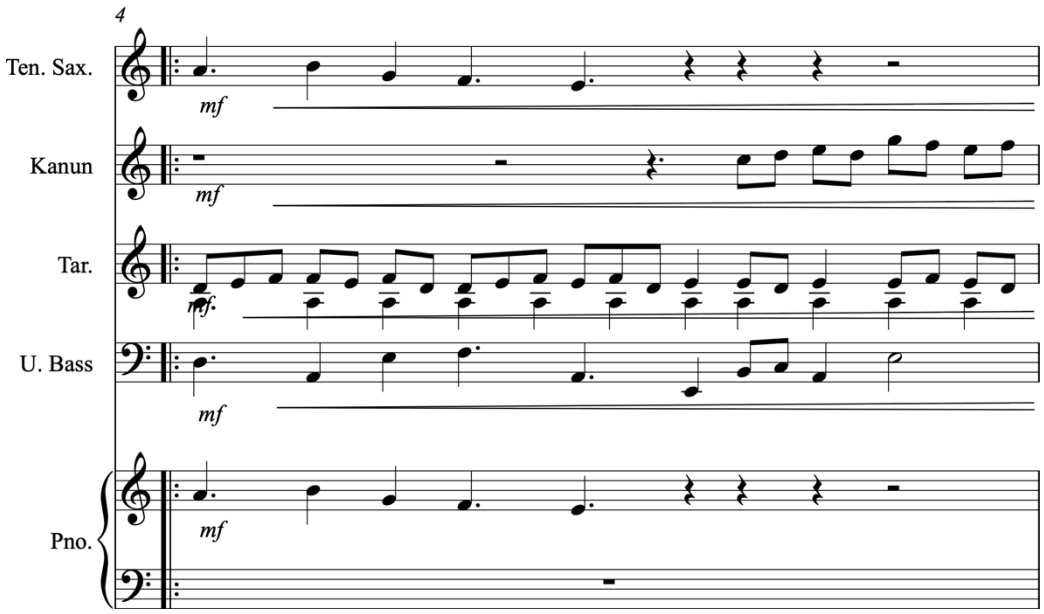
Exileosis was composed for the Lingua Franca Ensemble. The composition and arranging part were completed in 2016 and the piece was recorded in 2017. Link of the CD recording

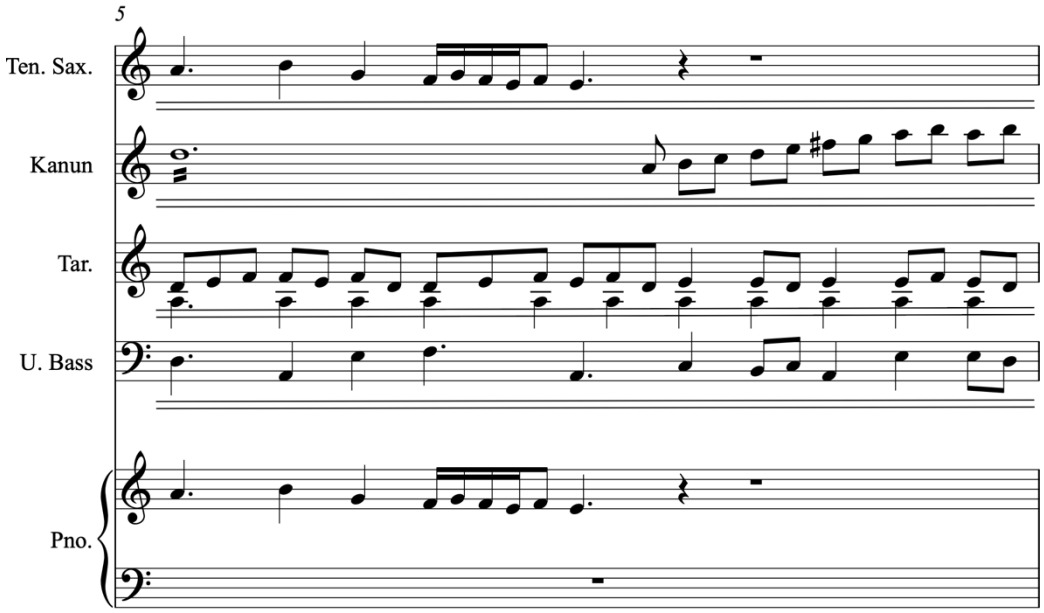
https://youtu.be/08dDToxSMDw

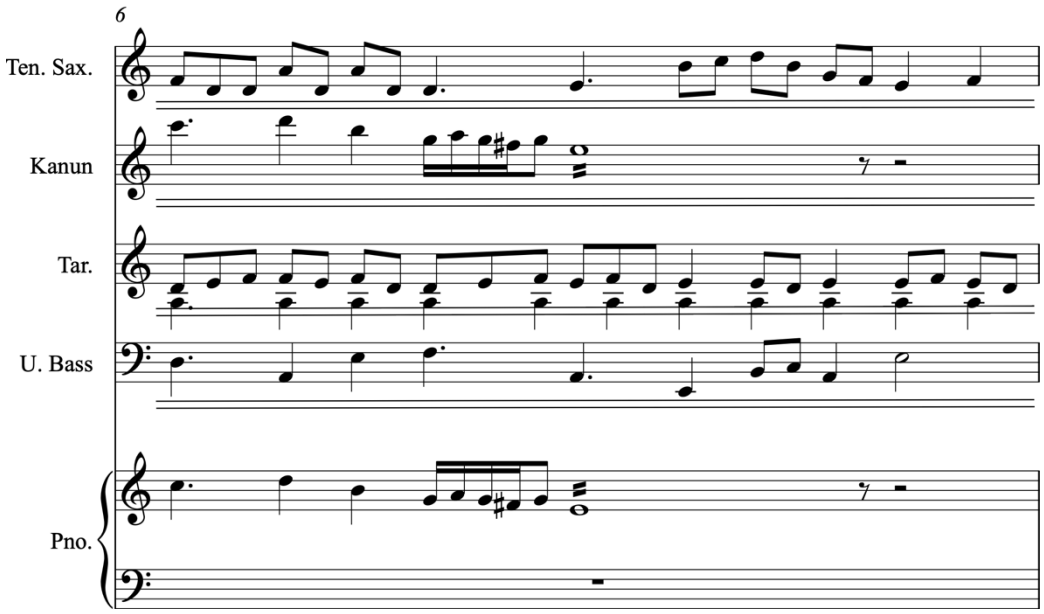
Exileosis

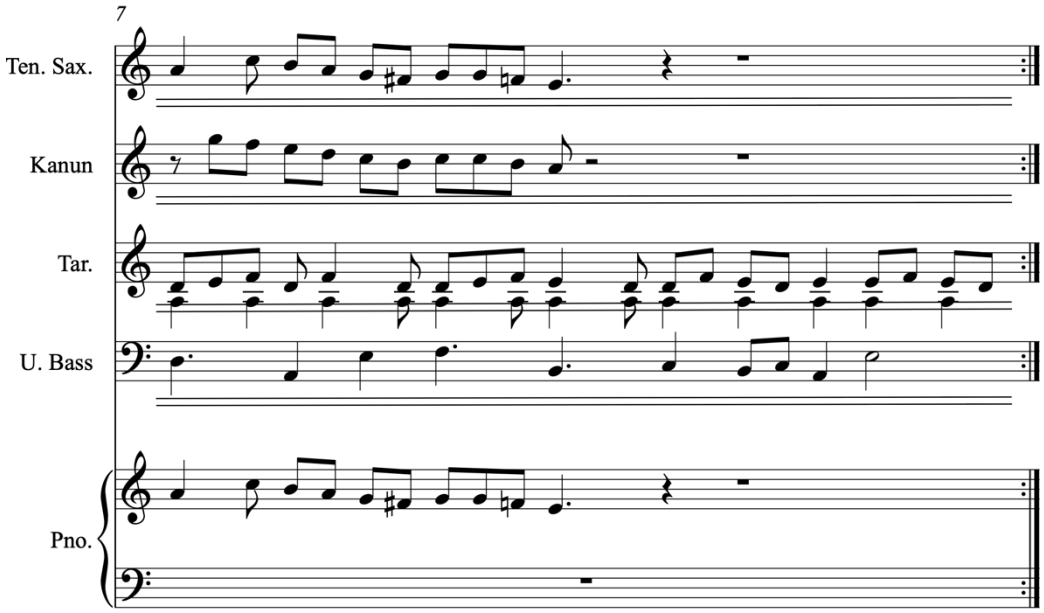


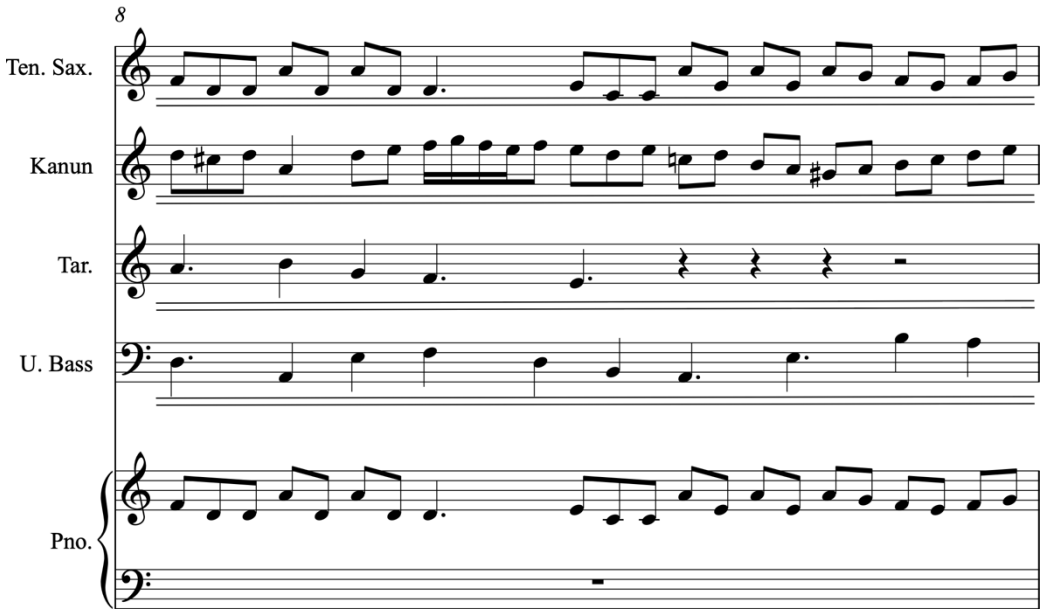

3
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.
mf

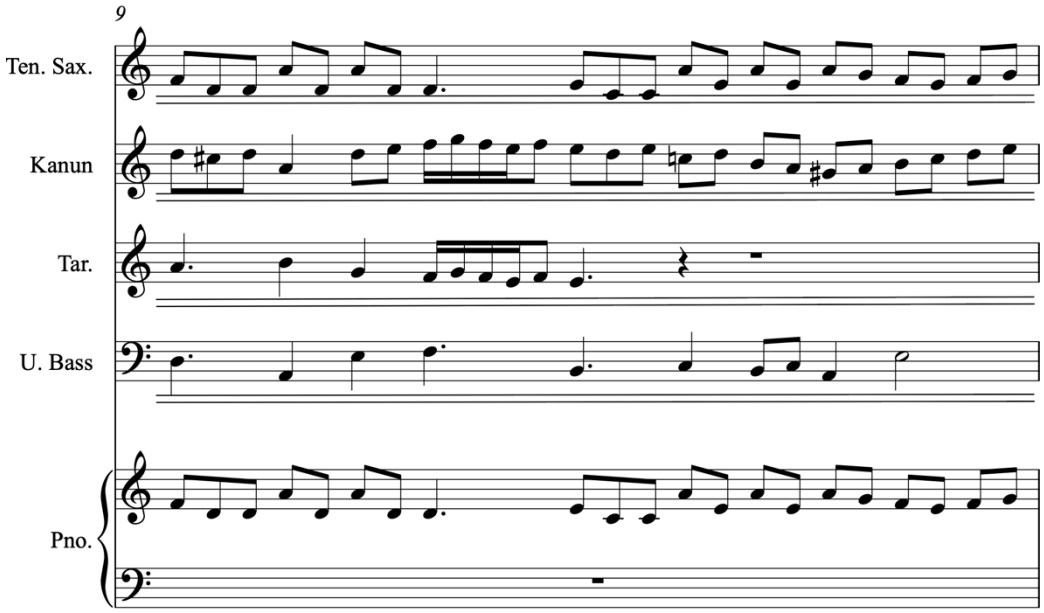

4
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.
mf

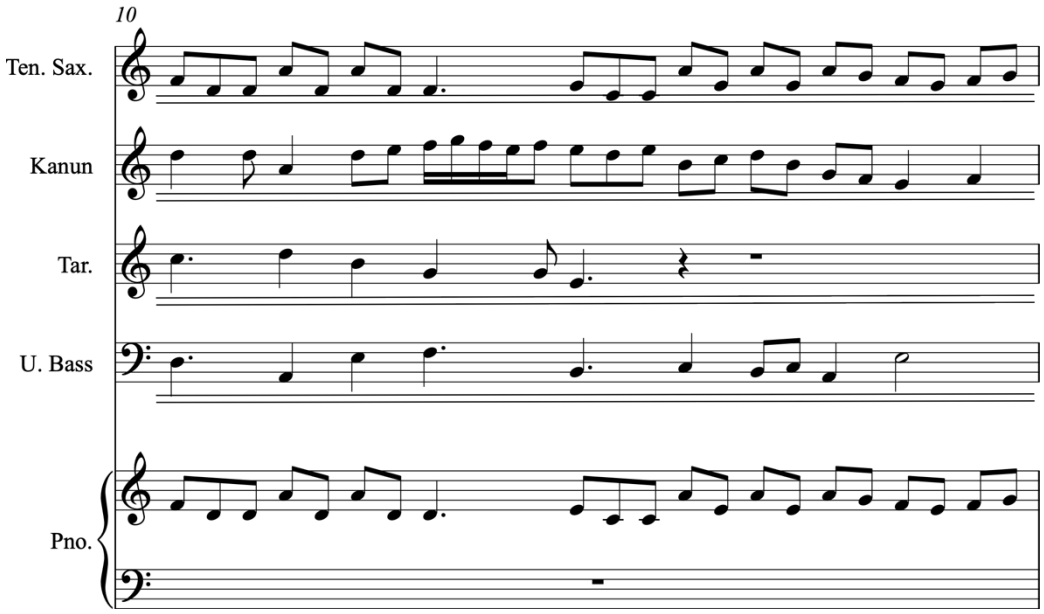

5
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

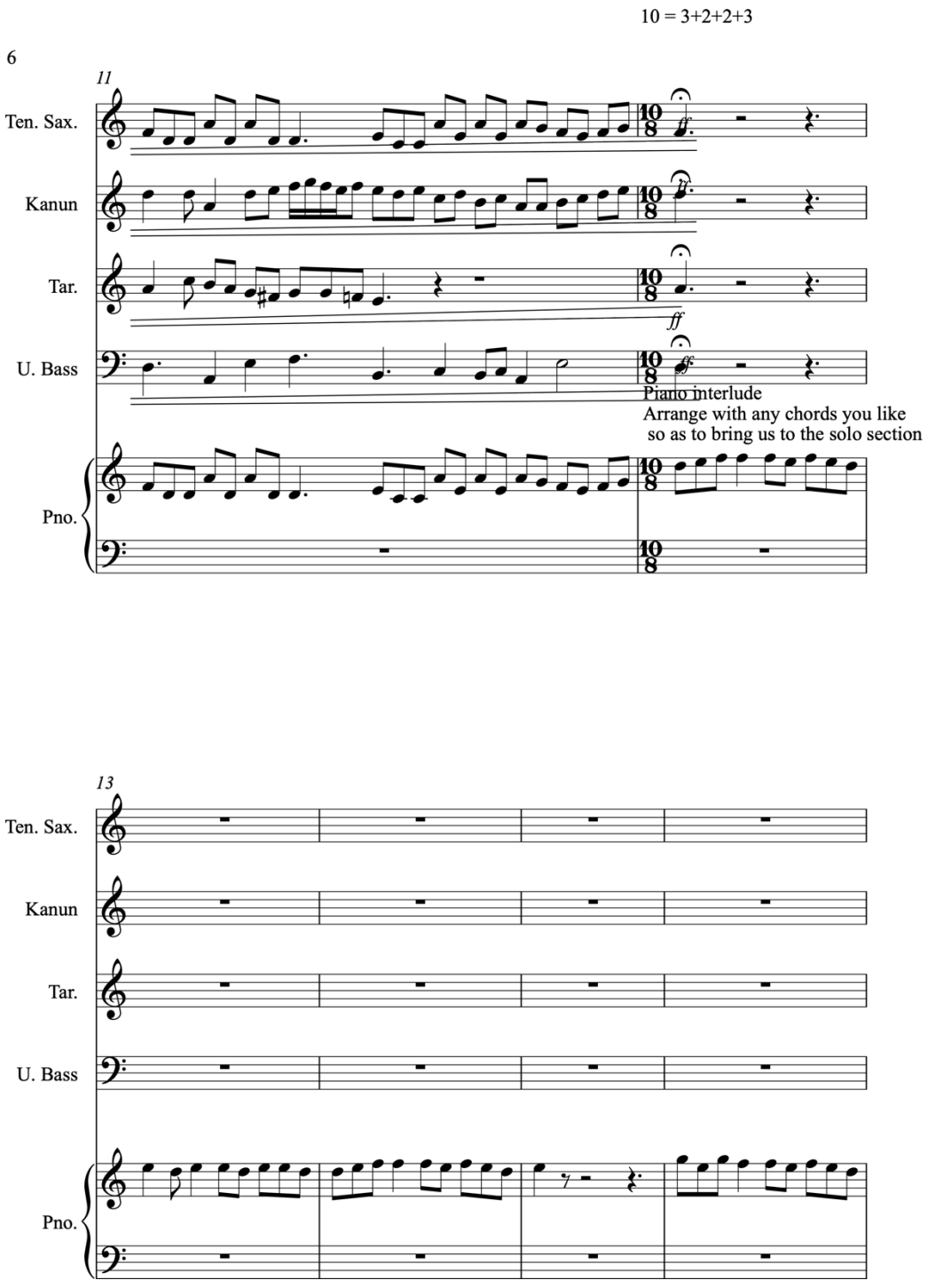

6
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

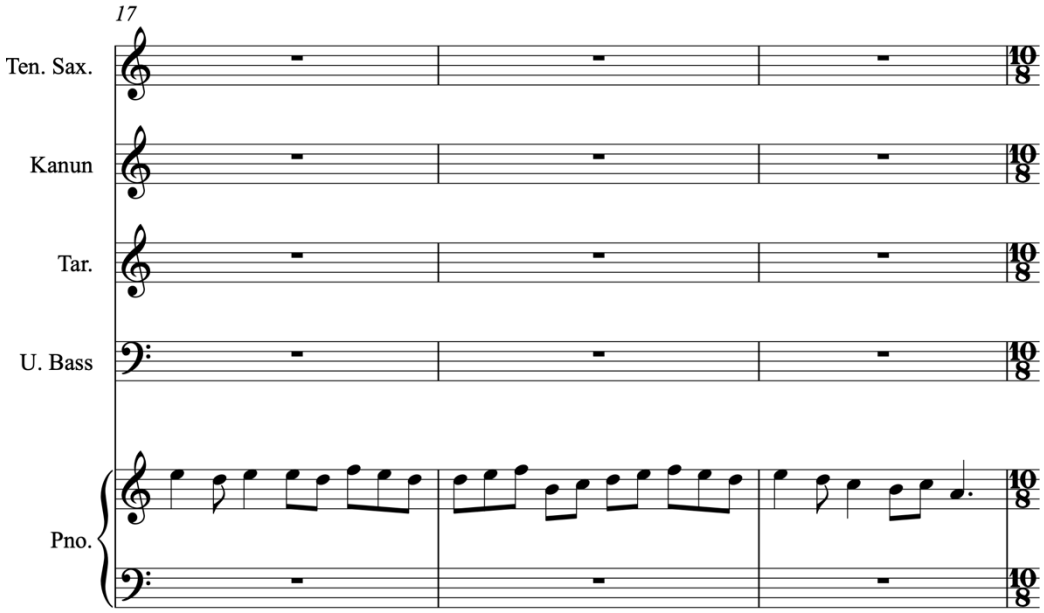

7
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

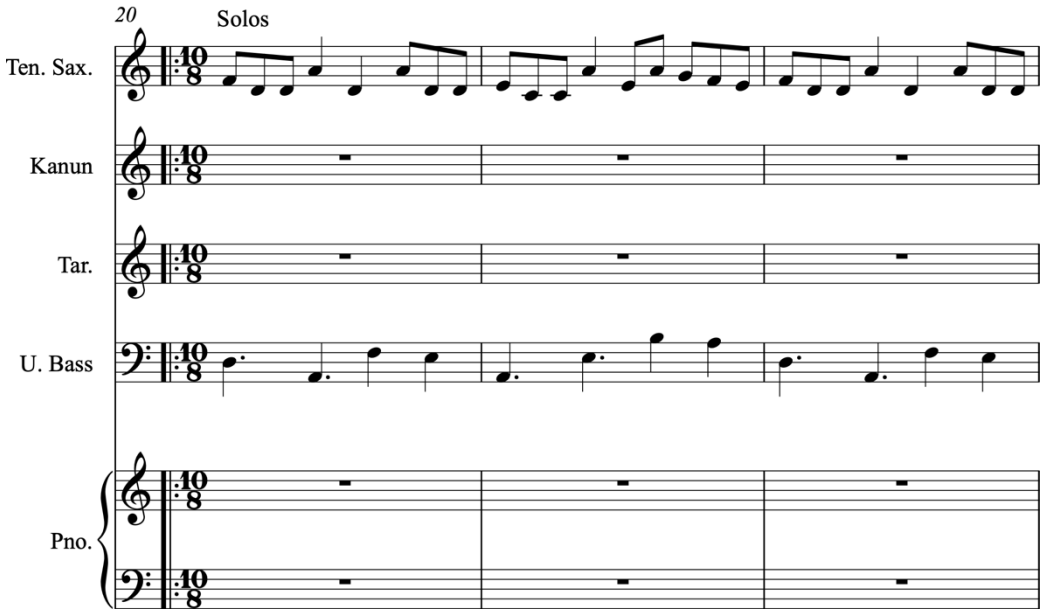

8
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.


9
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

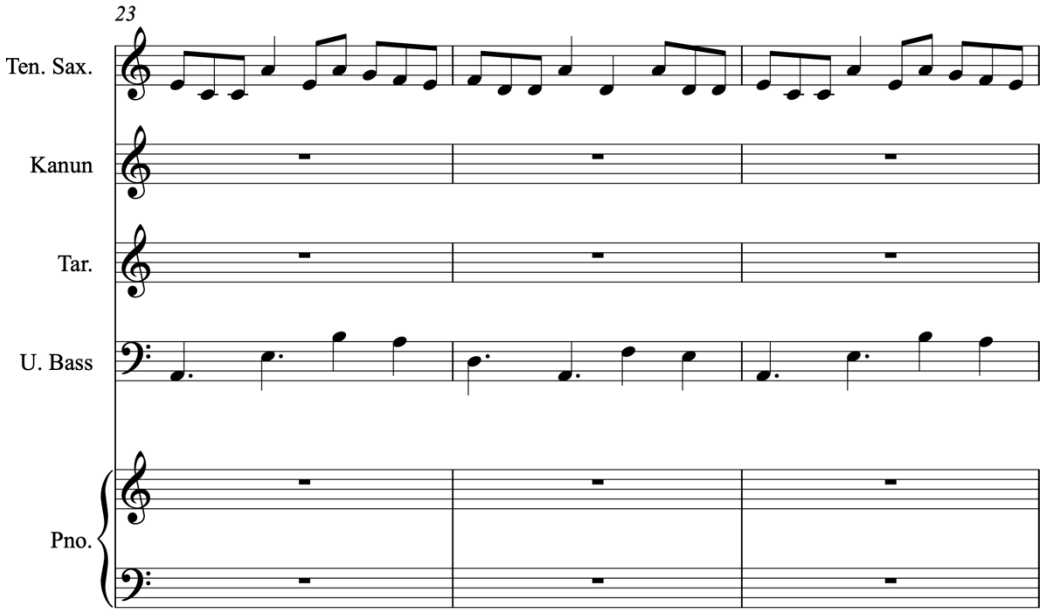

10
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

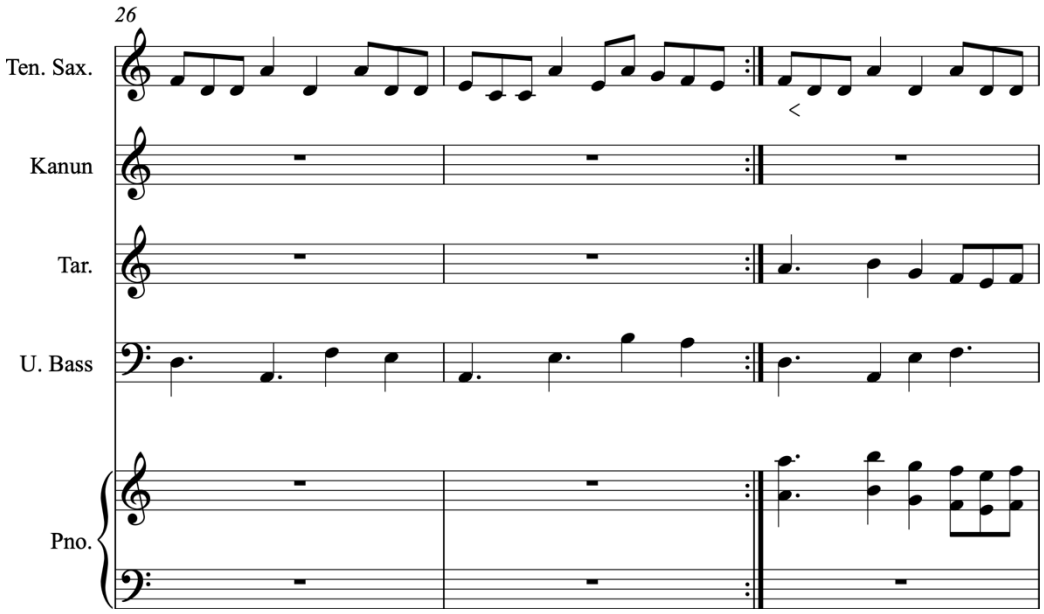

10 = 3+2+2+3
6
11
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.
ff
Piano interlude
Arrange with any chords you like
so as to bring us to the solo section
13
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

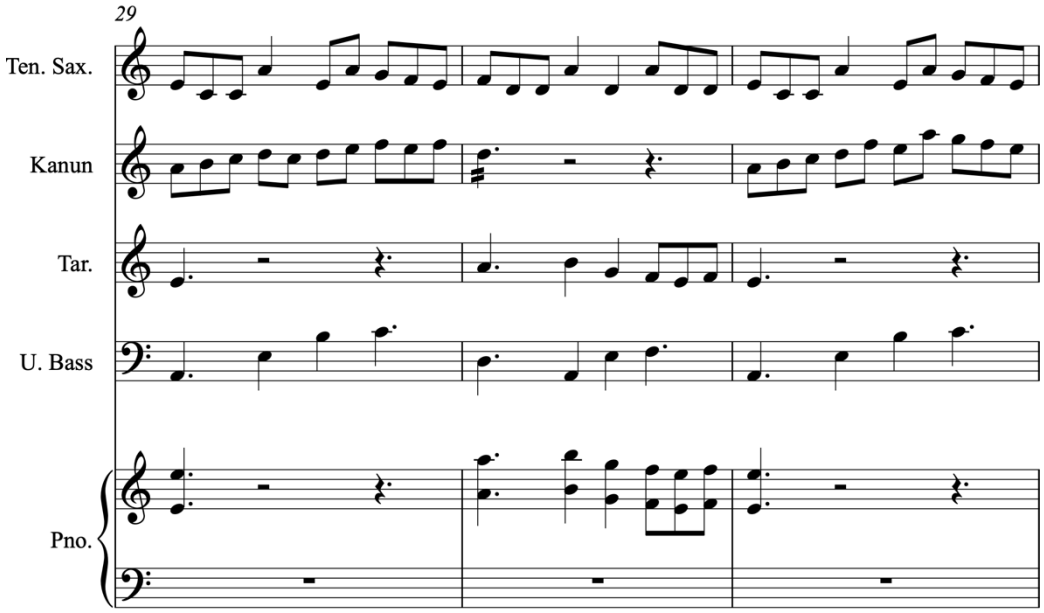

17
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

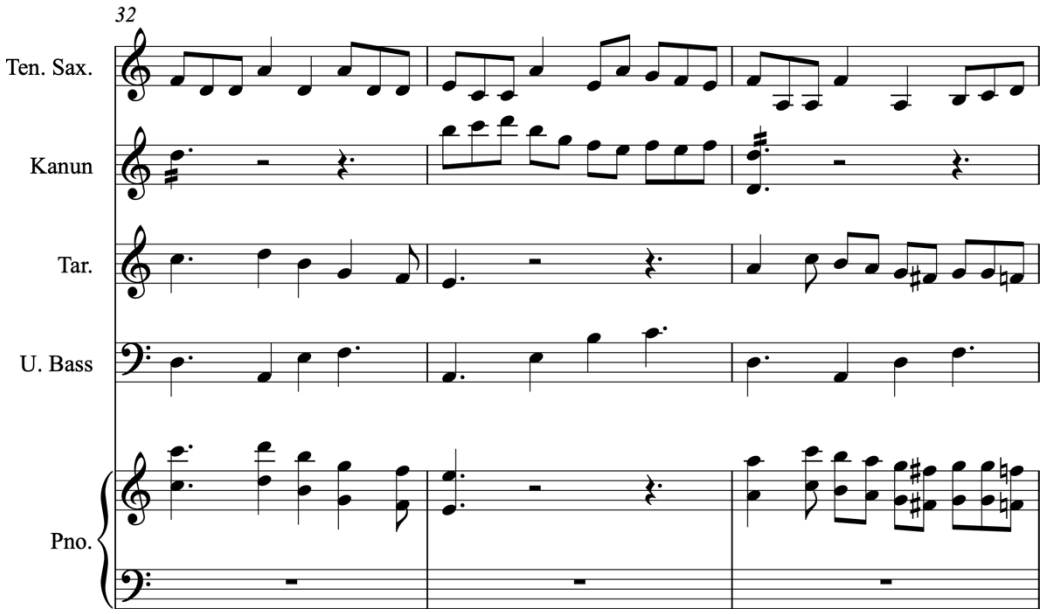

20
Solos
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

8

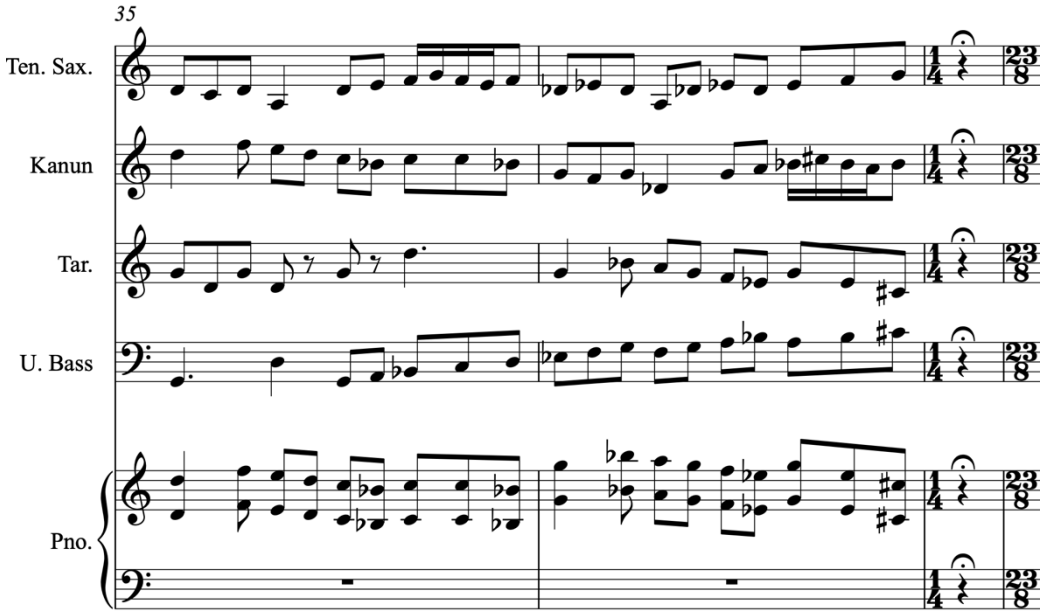


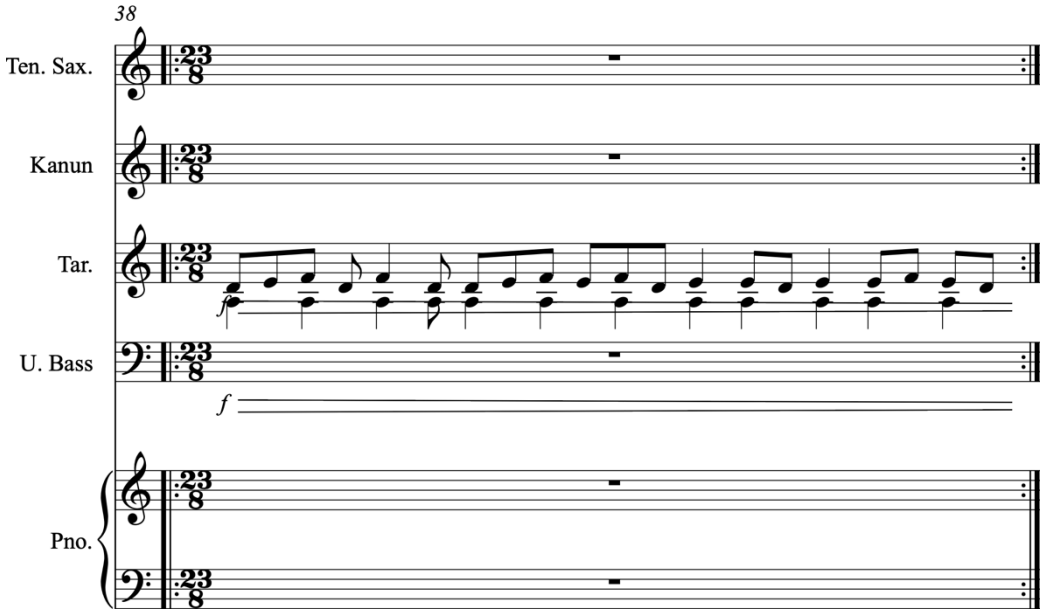



29
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.


32
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

10

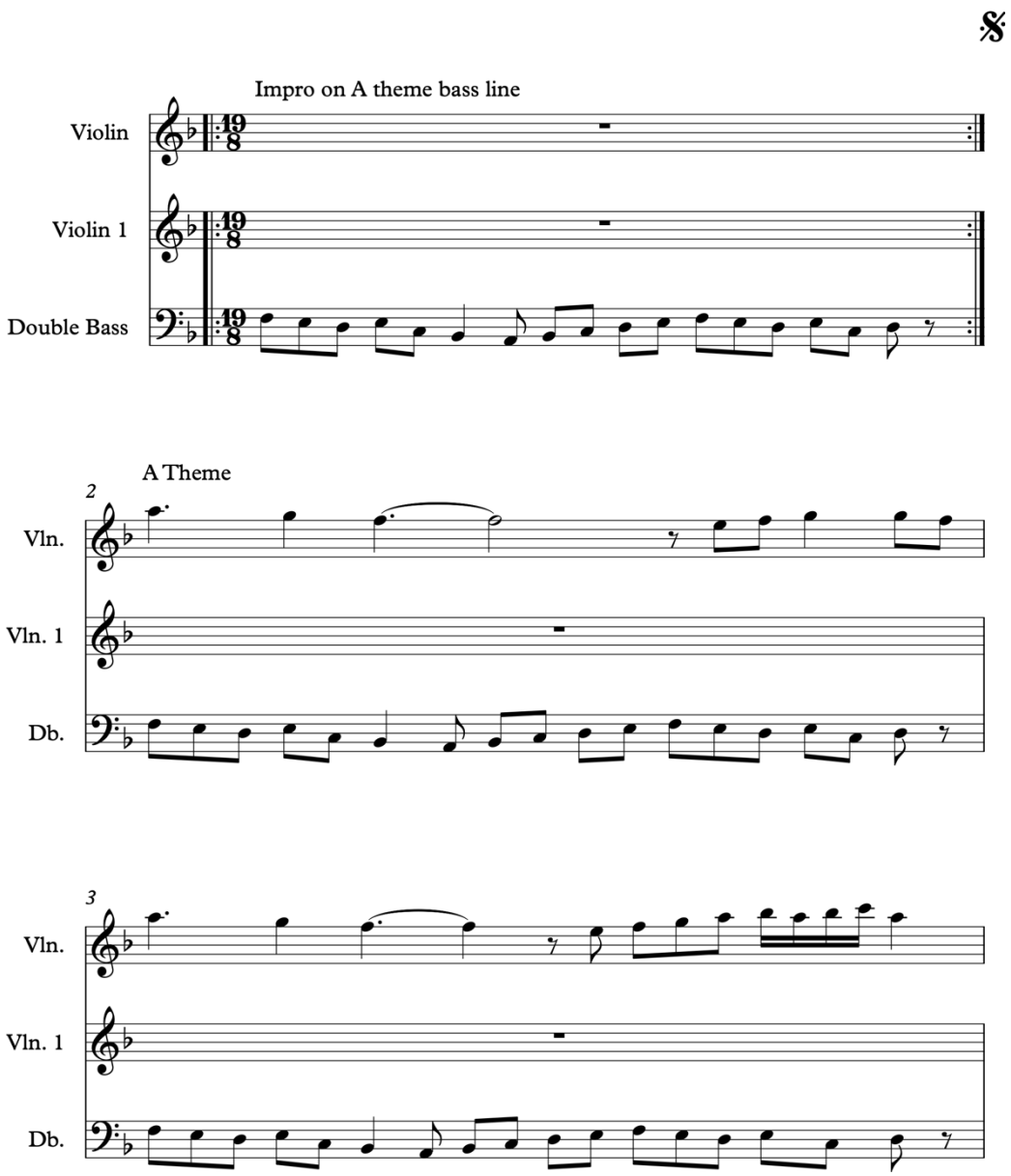

35
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.

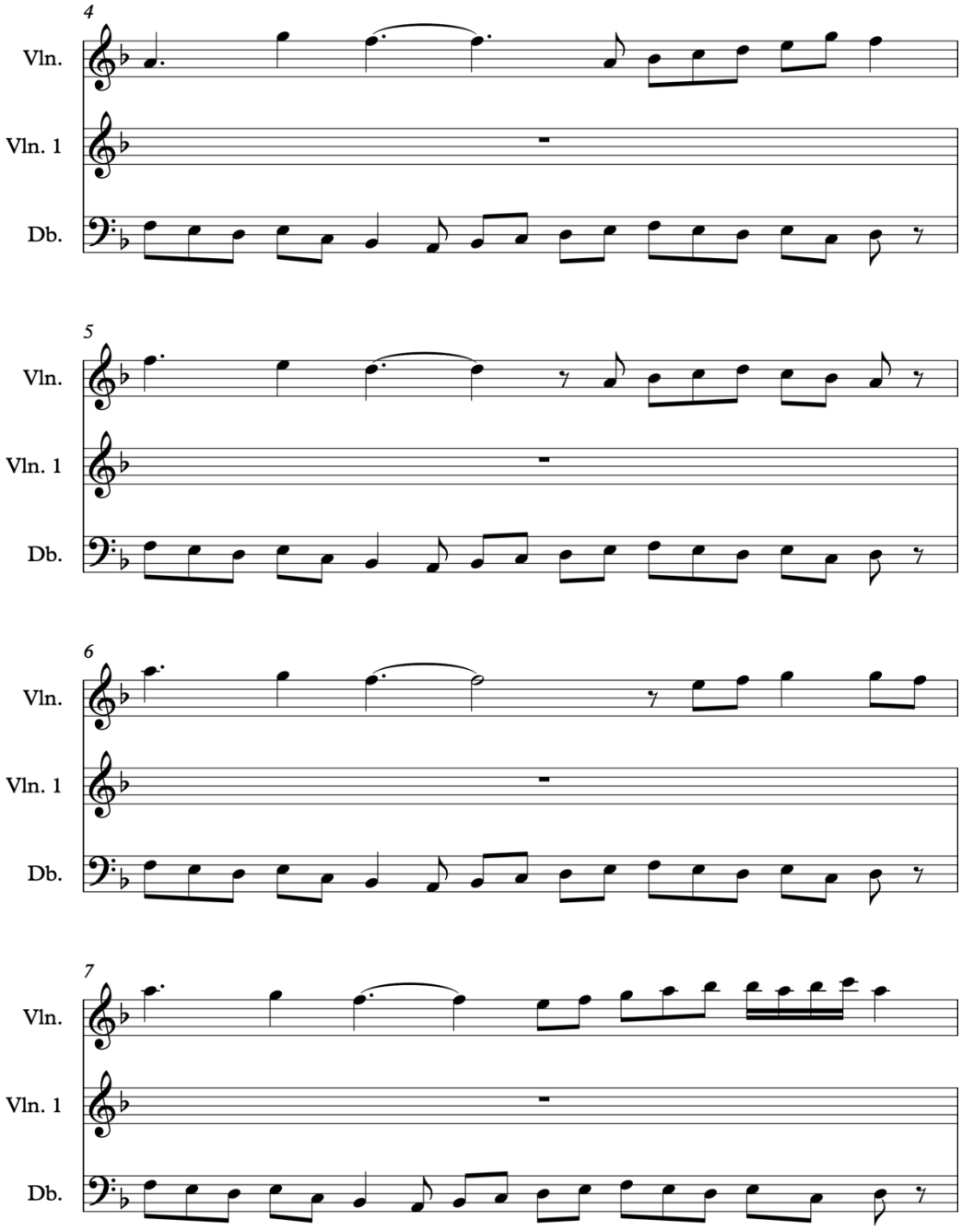

38
Ten. Sax.
Kanun
Tar.
U. Bass
Pno.
f
f

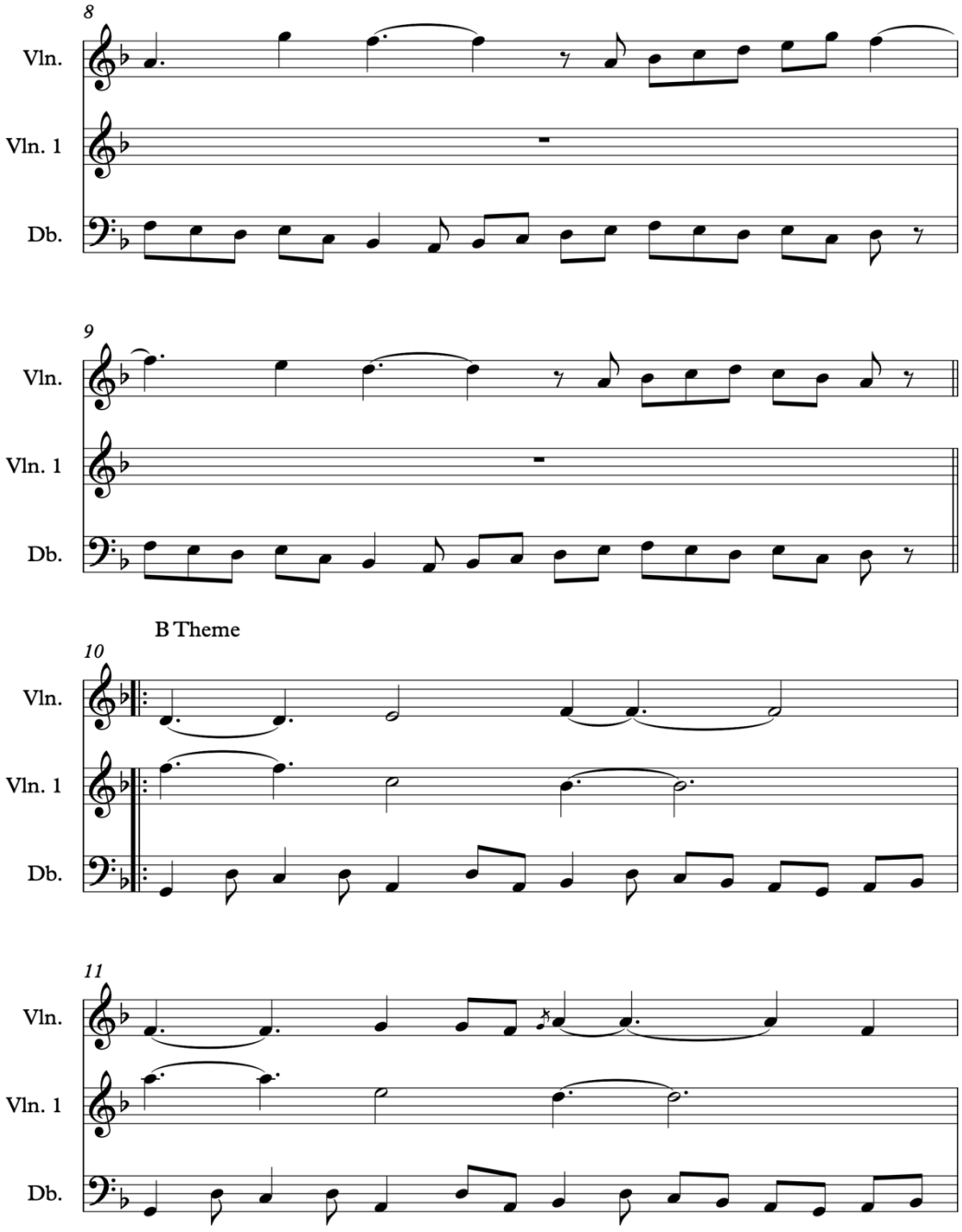
2. 19 Steps of Separation:

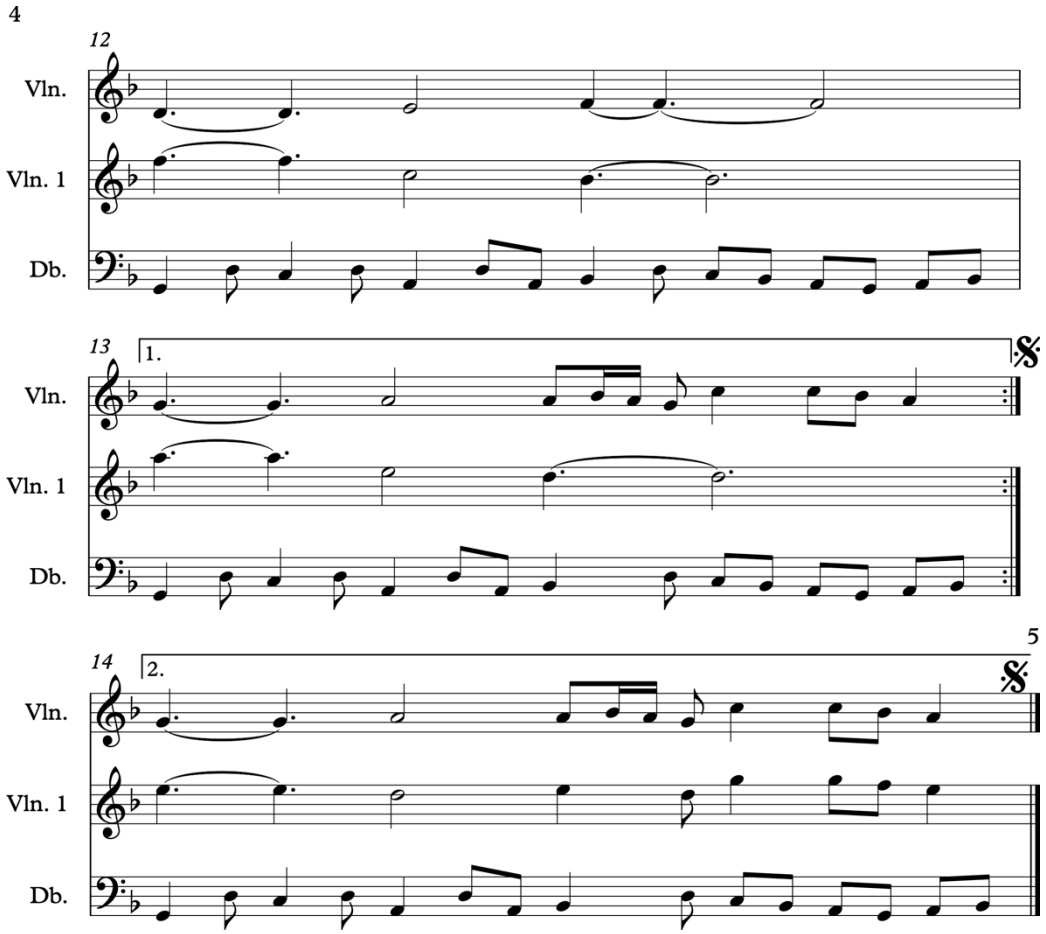
19 steps of Separation was composed for the Lingua Franca Ensemble. The composition and arranging part were finalized and recorded in 2017. Link of the CD recorded version https://youtu.be/iM5f3ShO1OU

19


Impro on A theme bass line
Violin
Violin 1
Double Bass
A Theme
2
Vln.
Vln. 1
Db.
3
Vln.
Vln. 1
Db.


4
Vln.
Vln. 1
Db.
5
Vln.
Vln. 1
Db.
6
Vln.
Vln. 1
Db.
7
Vln.
Vln. 1
Db.


8
Vln.
Vln. 1
Db.
9
Vln.
Vln. 1
Db.
B Theme
10
Vln.
Vln. 1
Db.
11
Vln.
Vln. 1
Db.

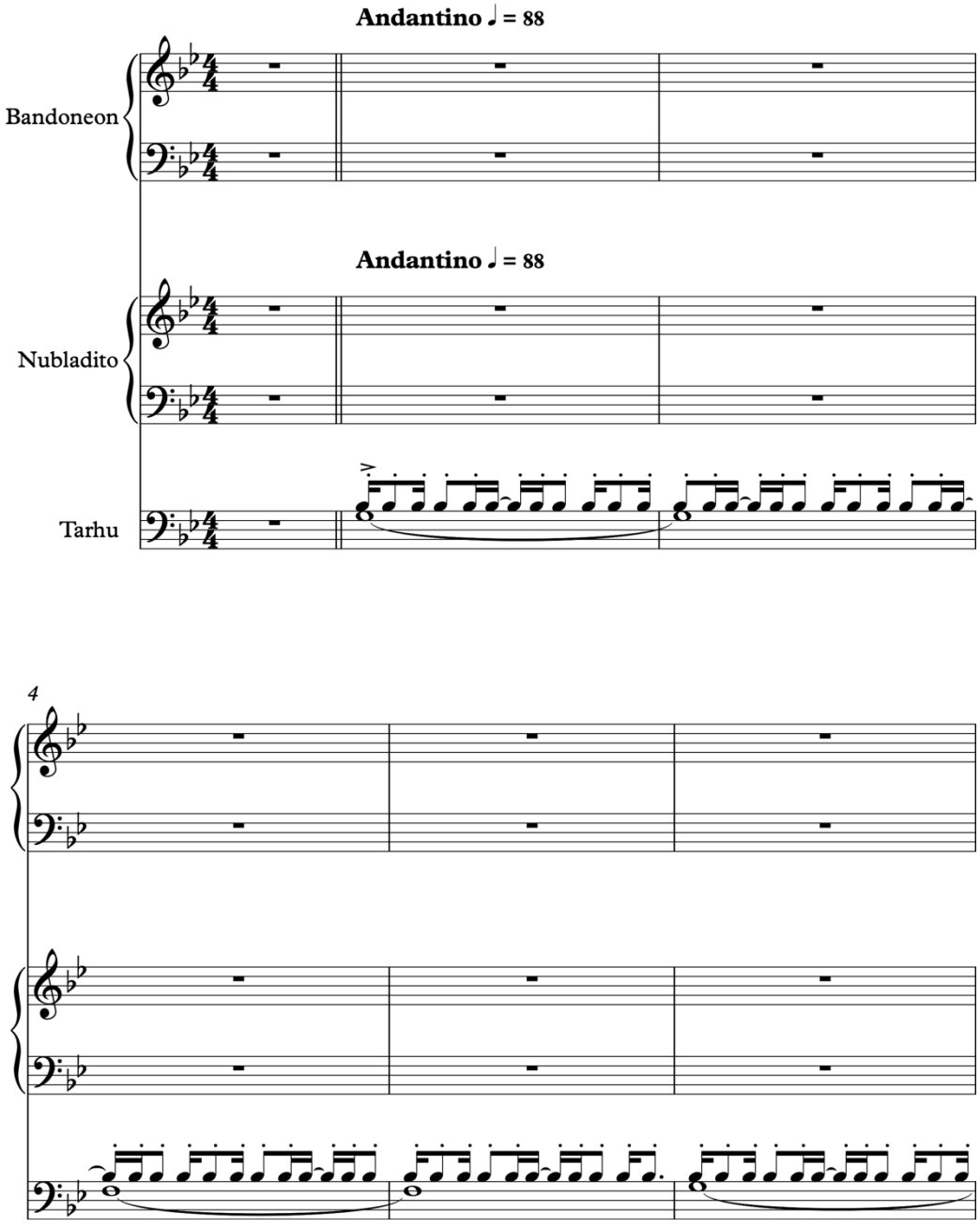

4
12
Vln.
Vln. 1
Db.
13
1.
Vln.
Vln. 1
Db.
5
14
2.
Vln.
Vln. 1
Db.

3. Aurora Borealis:

Aurora was composed in 2019 for the Ensemble Phos (Harp, Bandoneon and Tarhu) https://ensemblephos.com. The CD *Fyr – Φάρος* is under production and the CD presentation tour will take place in Norway in May 2022.

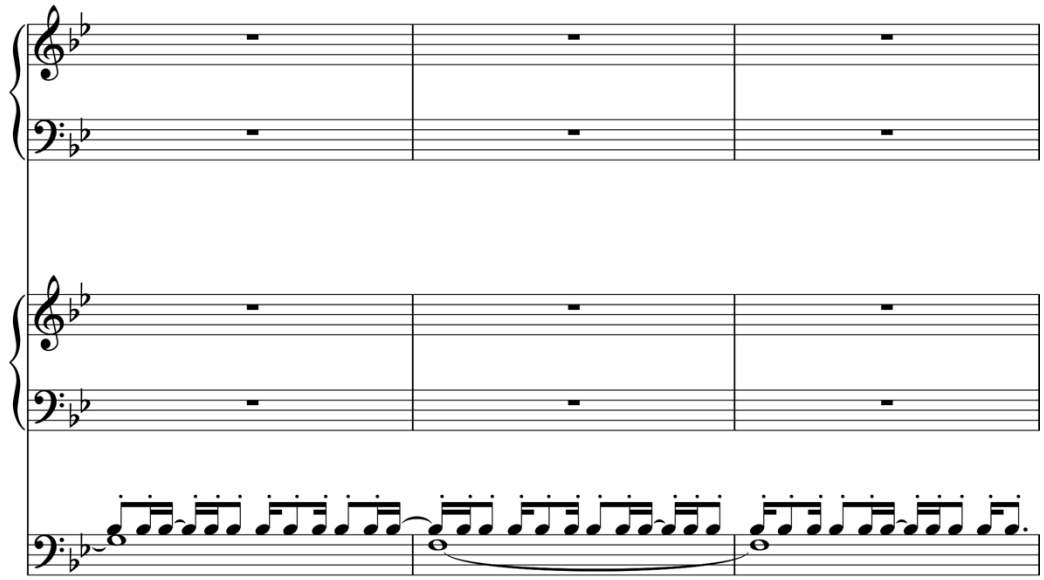
Fyr · Φάρος

Aurora Borealis

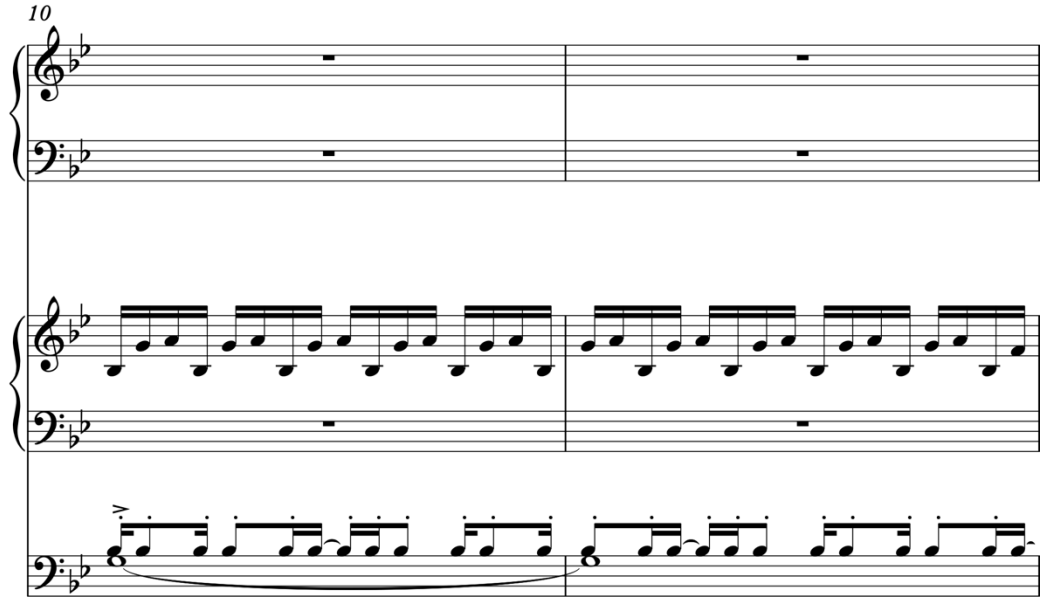


2

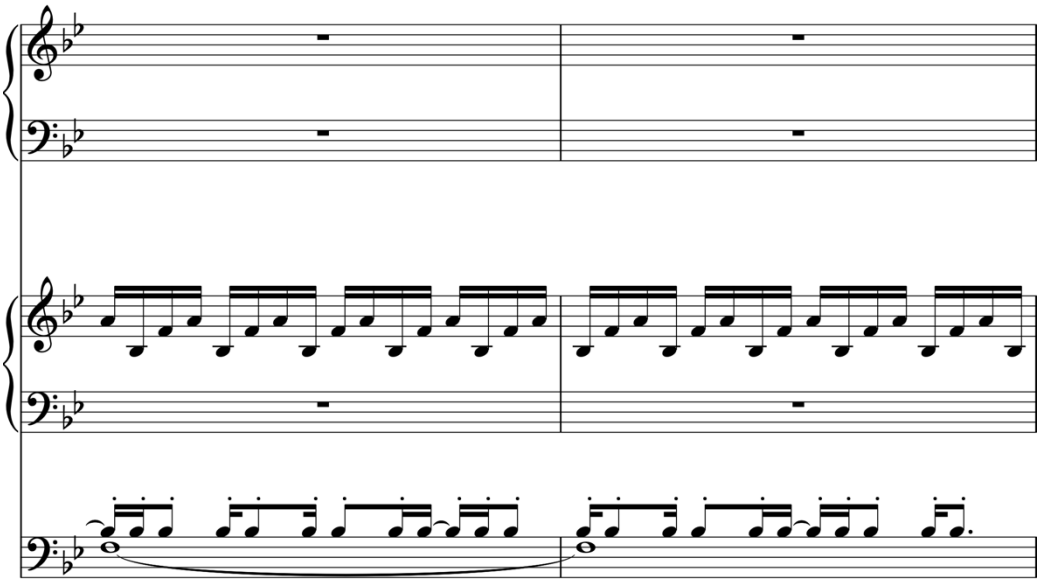
7



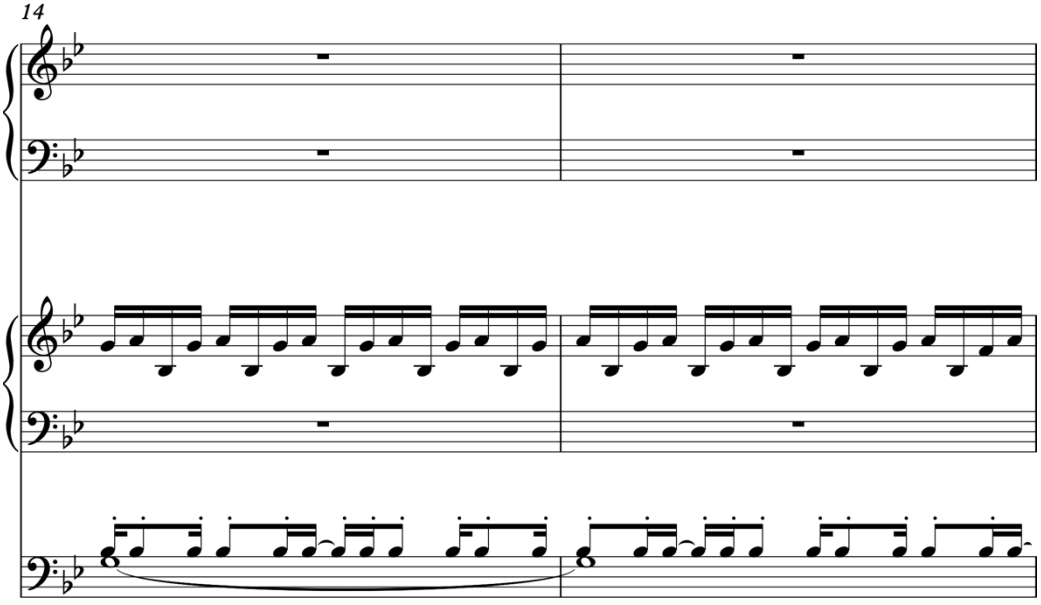
10

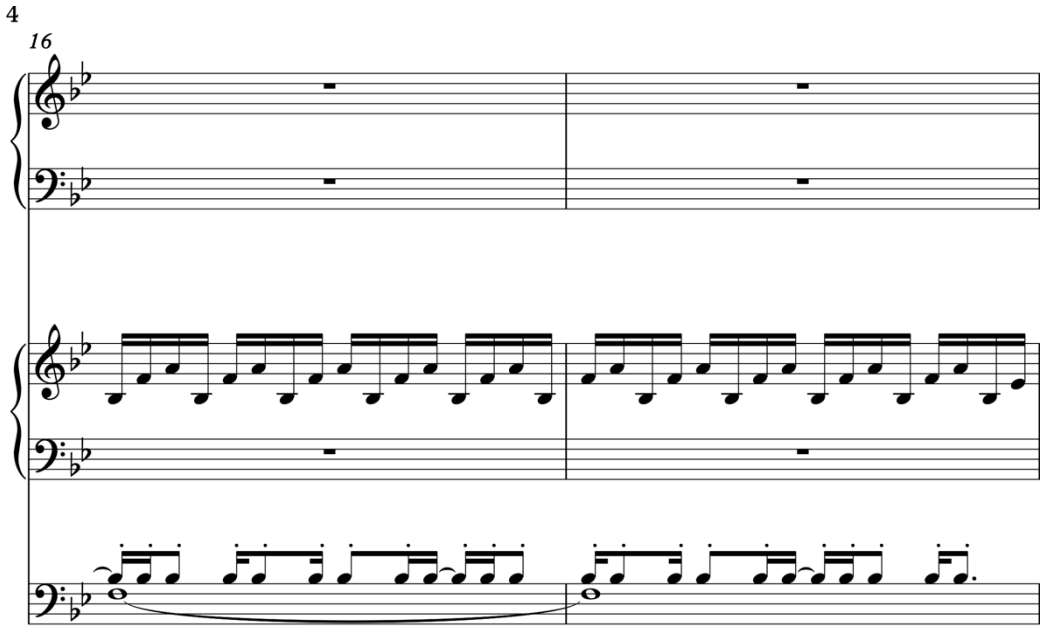


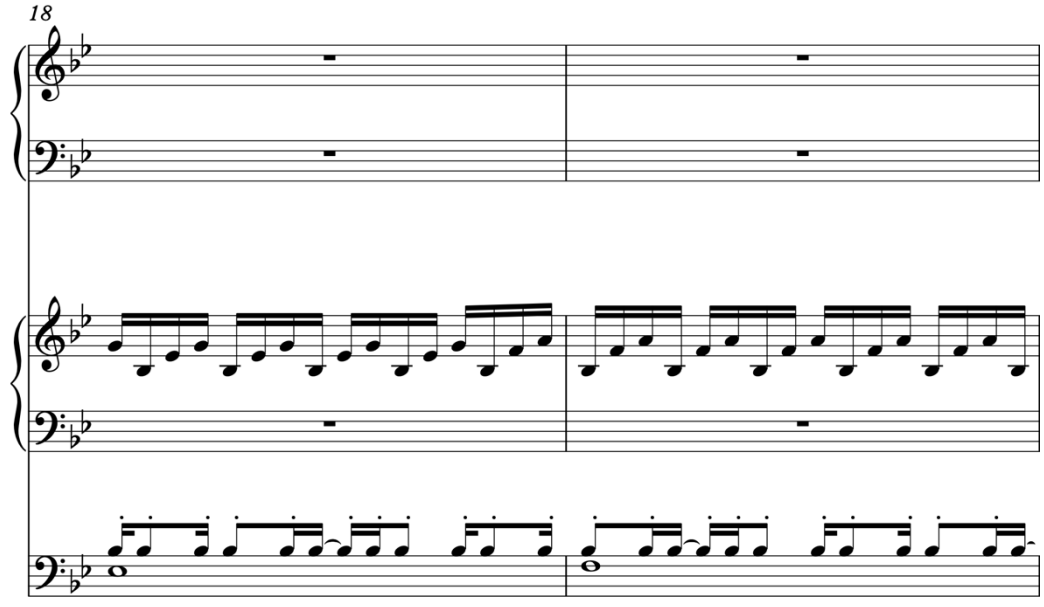
12

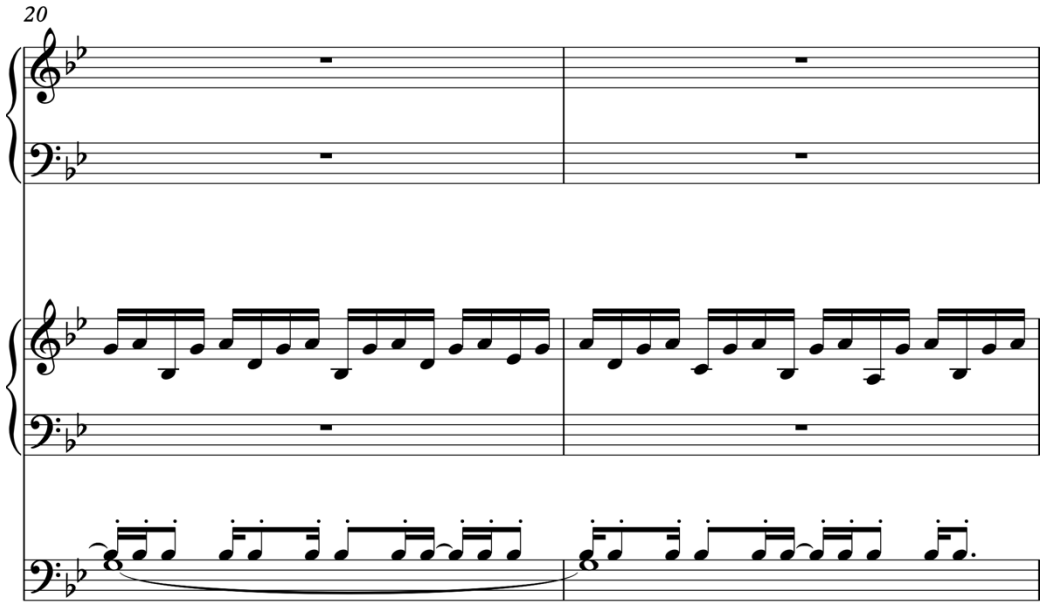


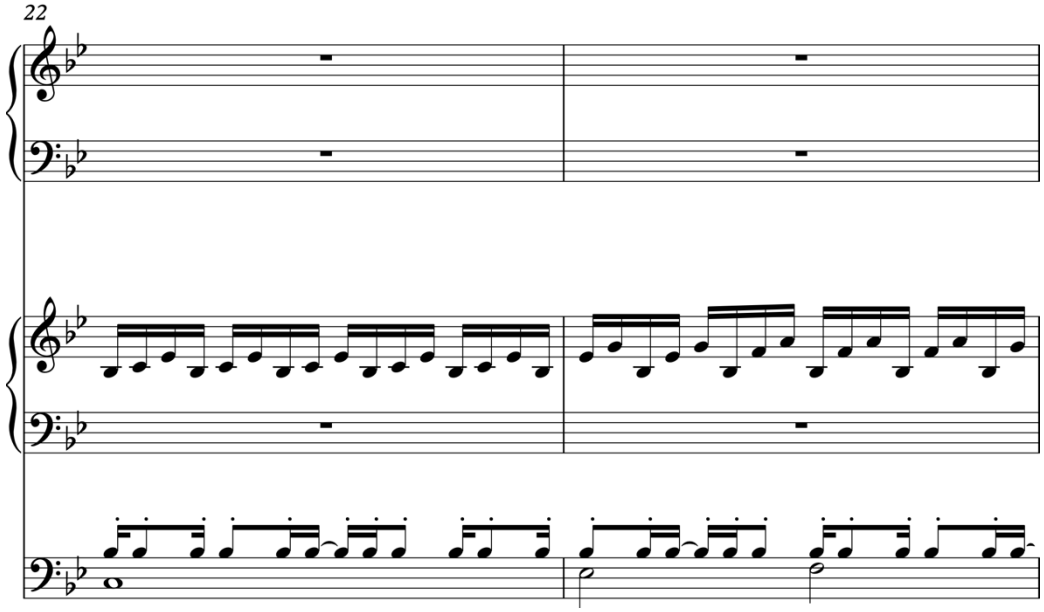
14




4
16

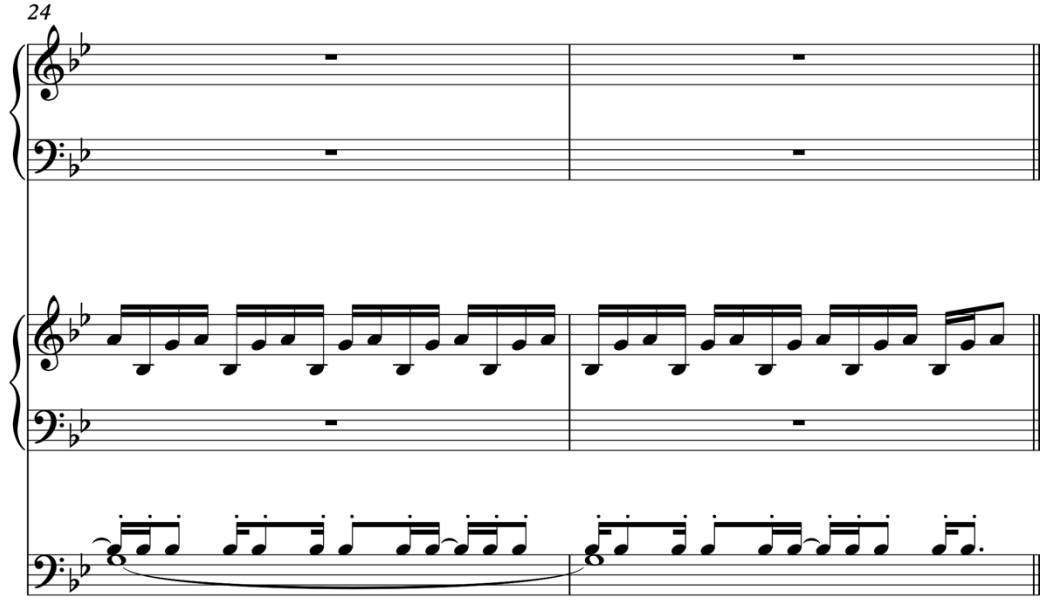

18


20

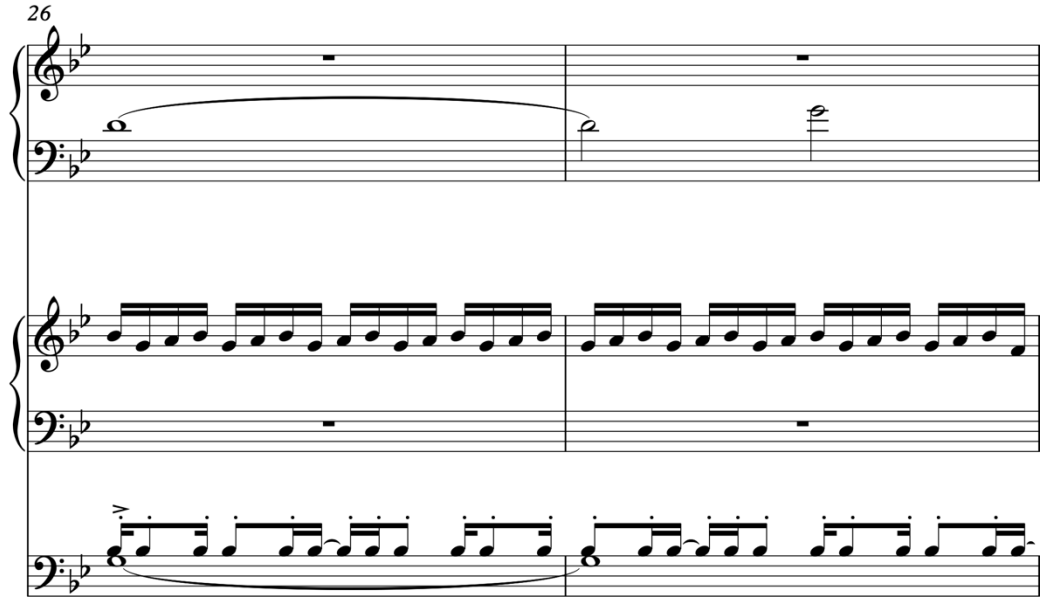

22

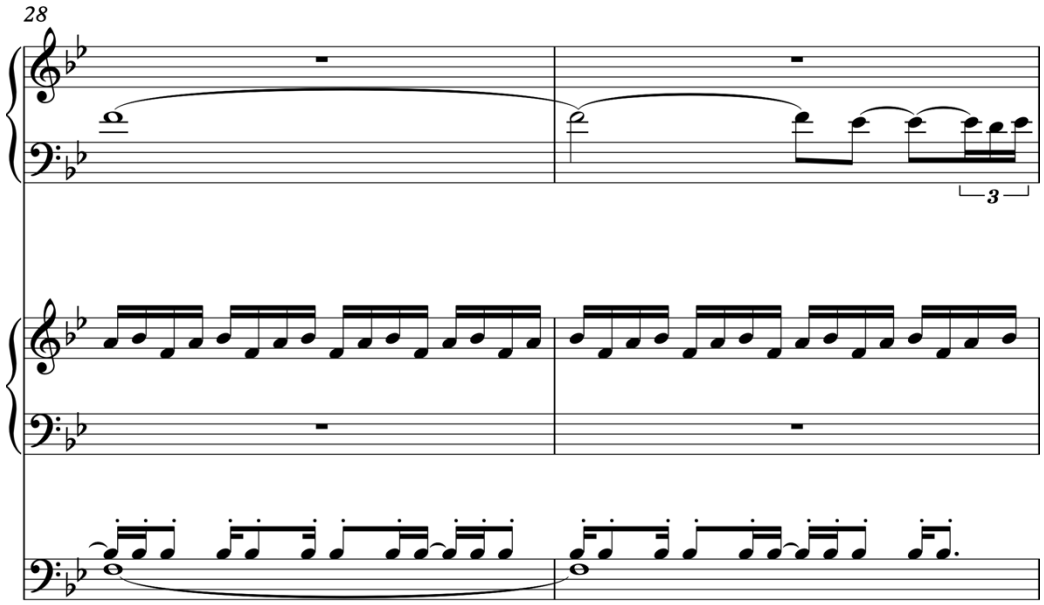
6

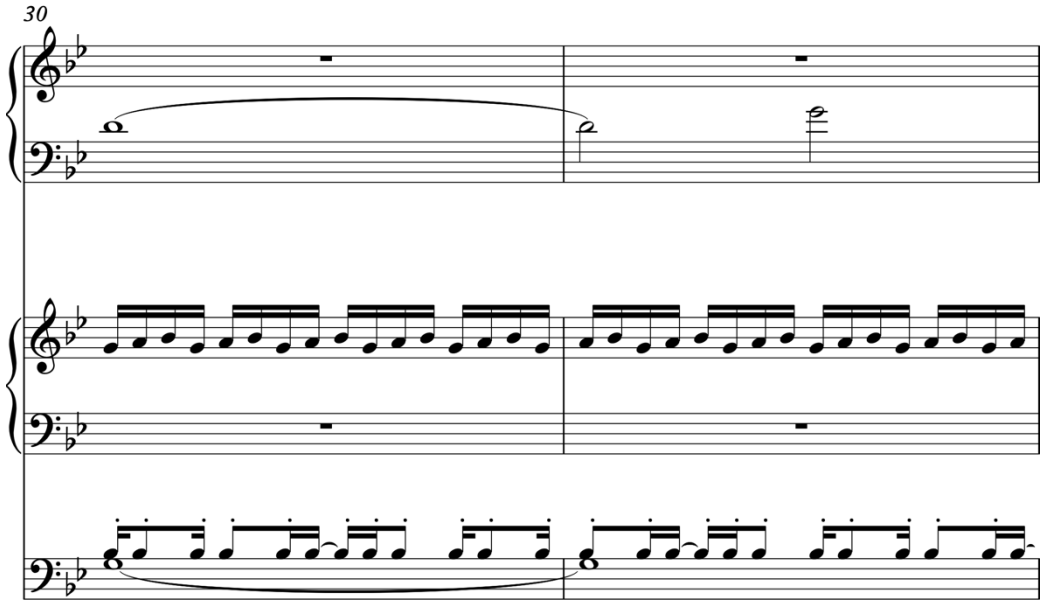
24



26

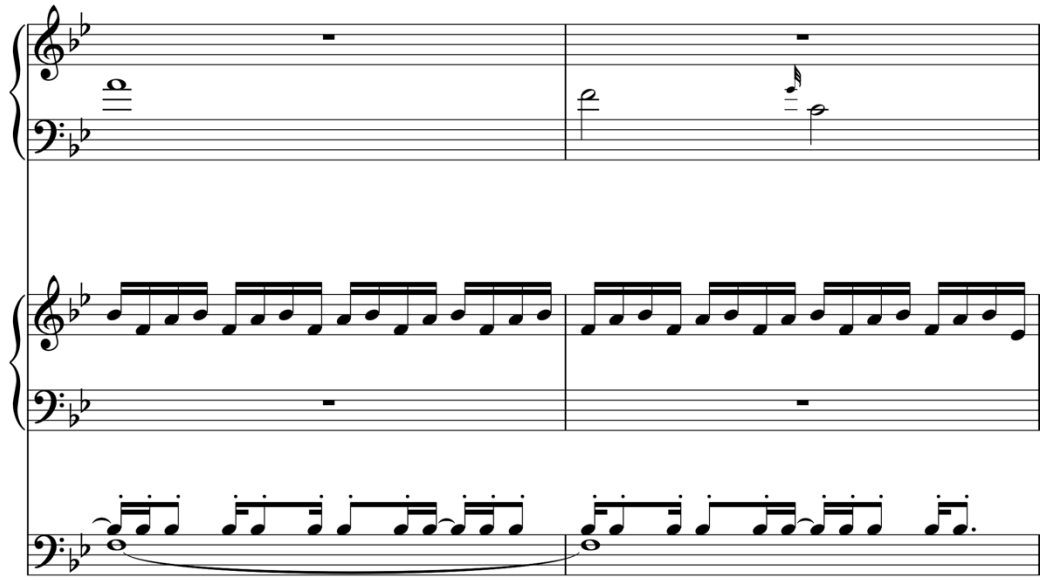



28
3

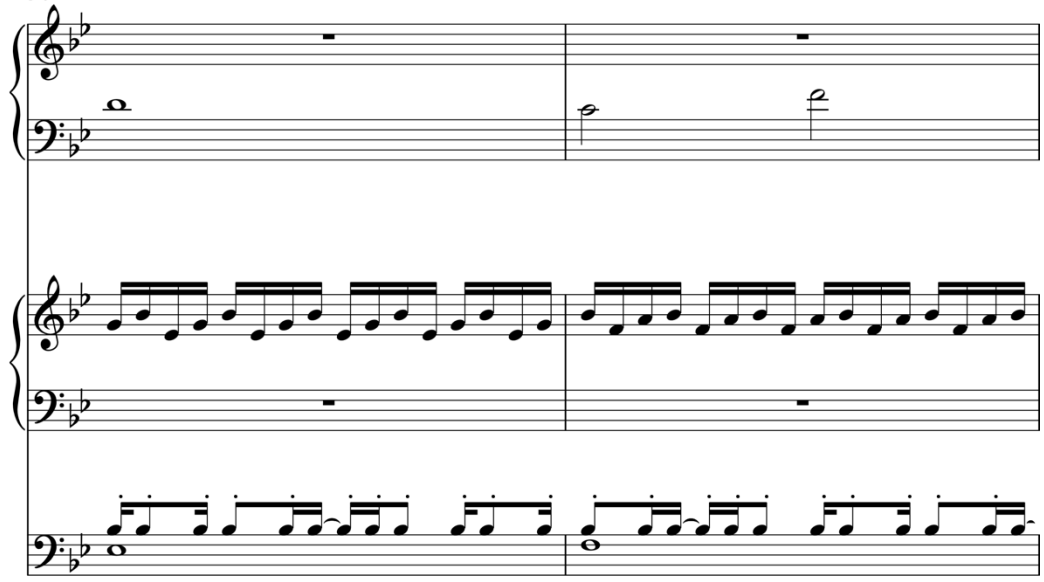

30

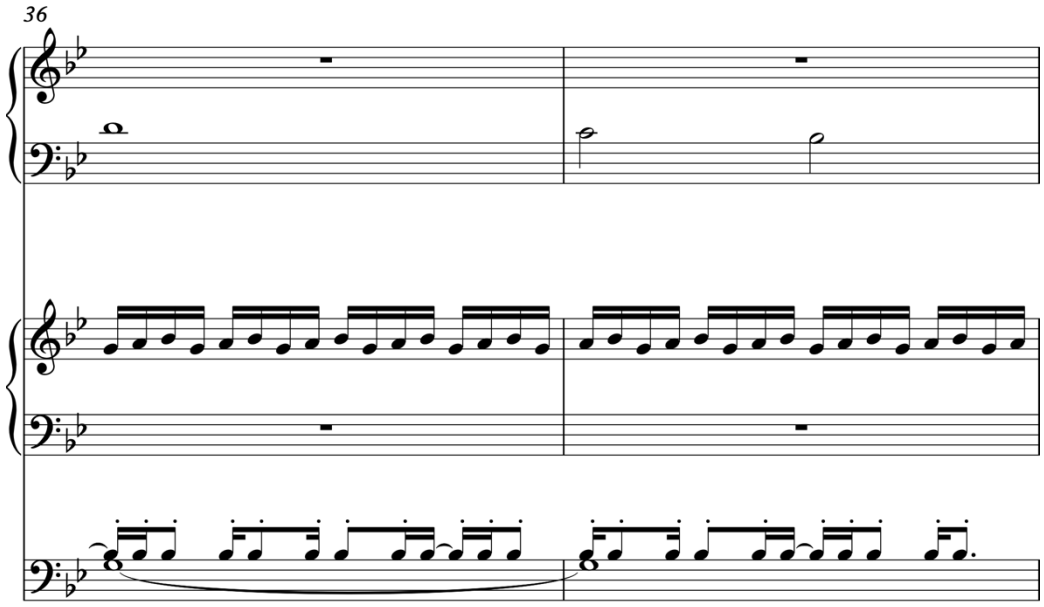
8

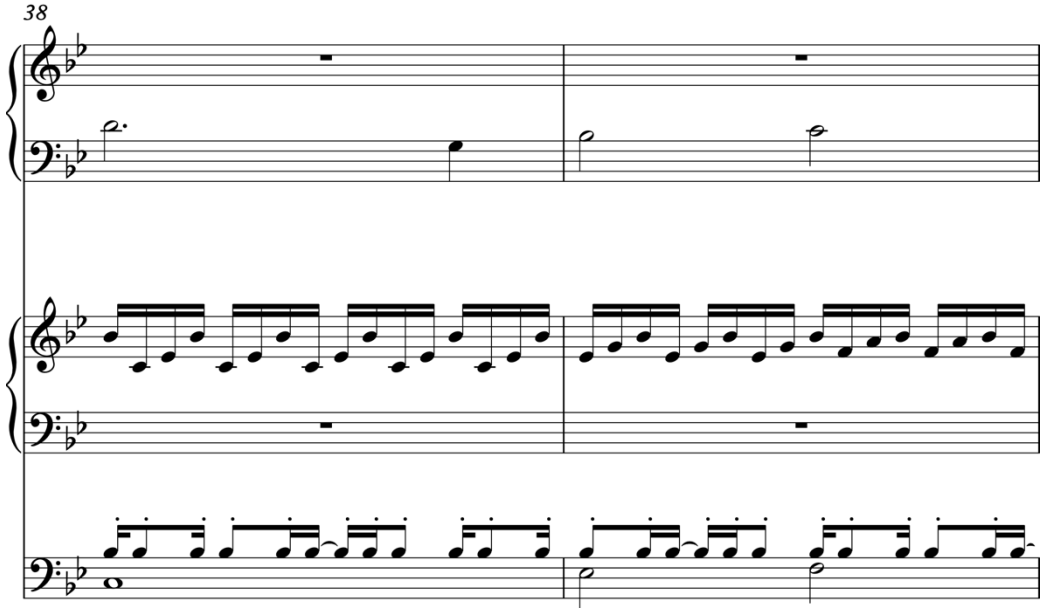
32

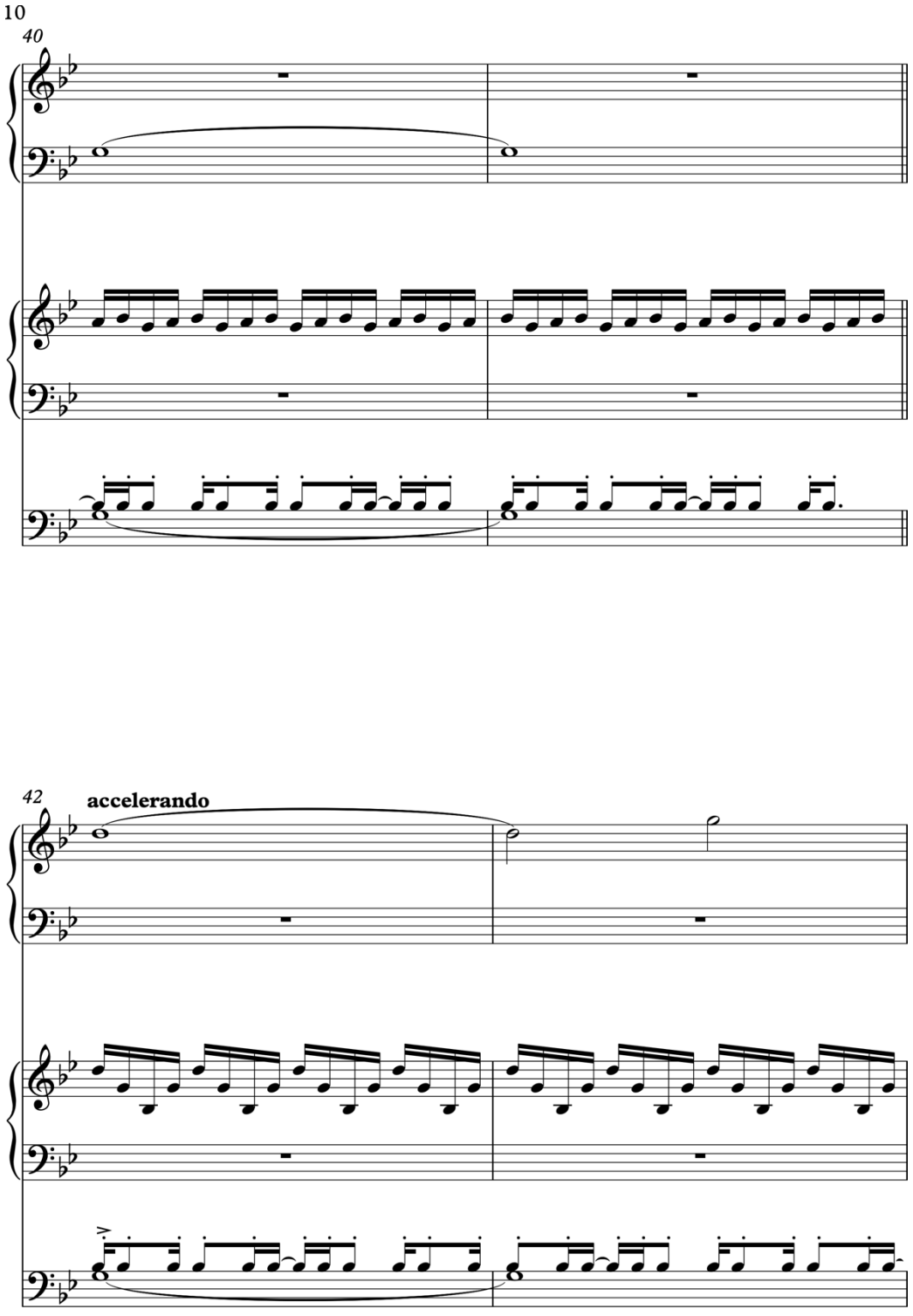


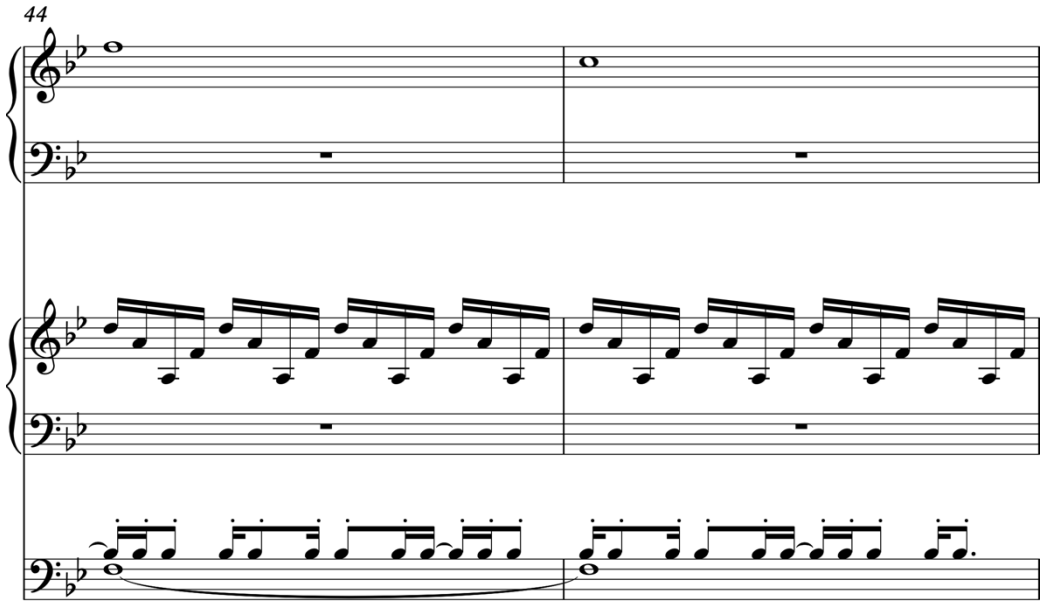
34

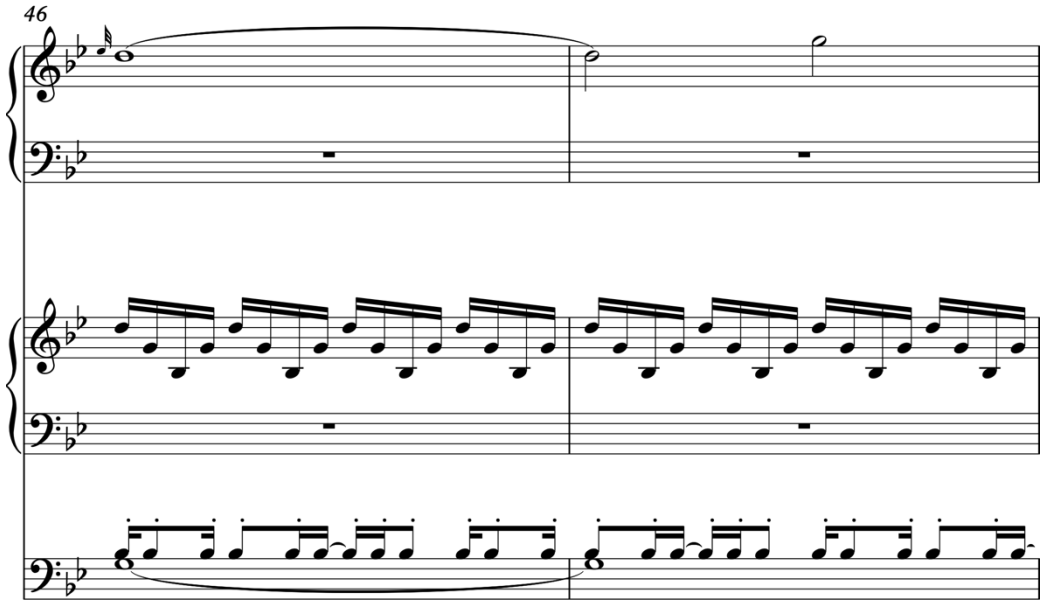



36


38

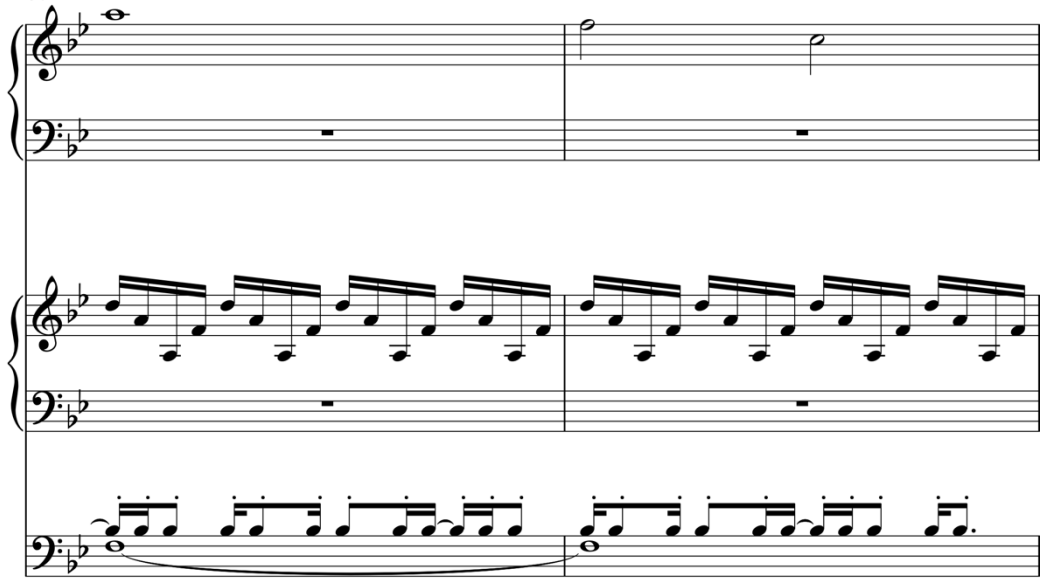

10
40
42
accelerando


44

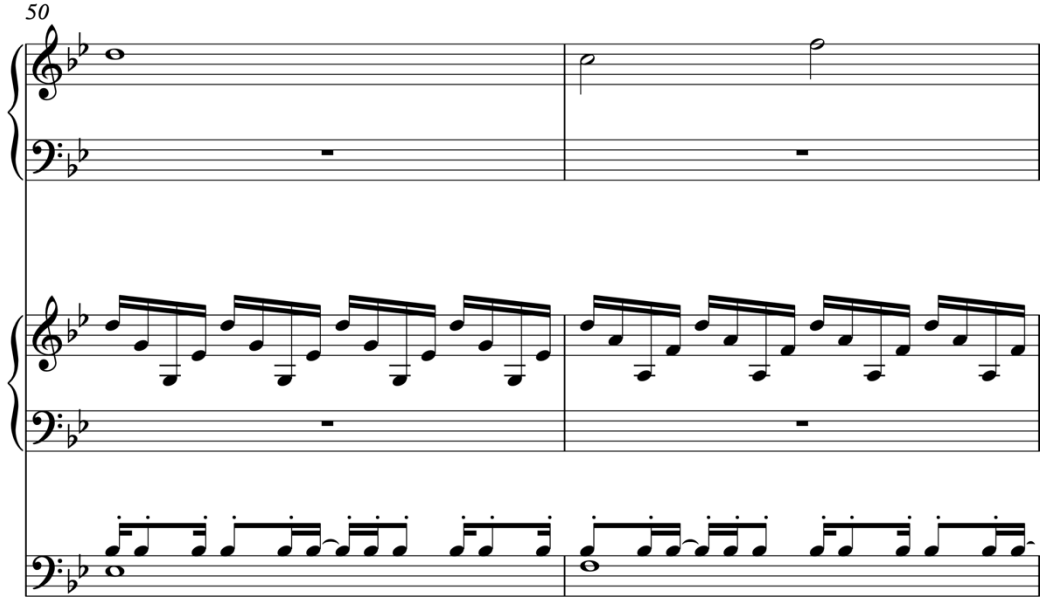

46

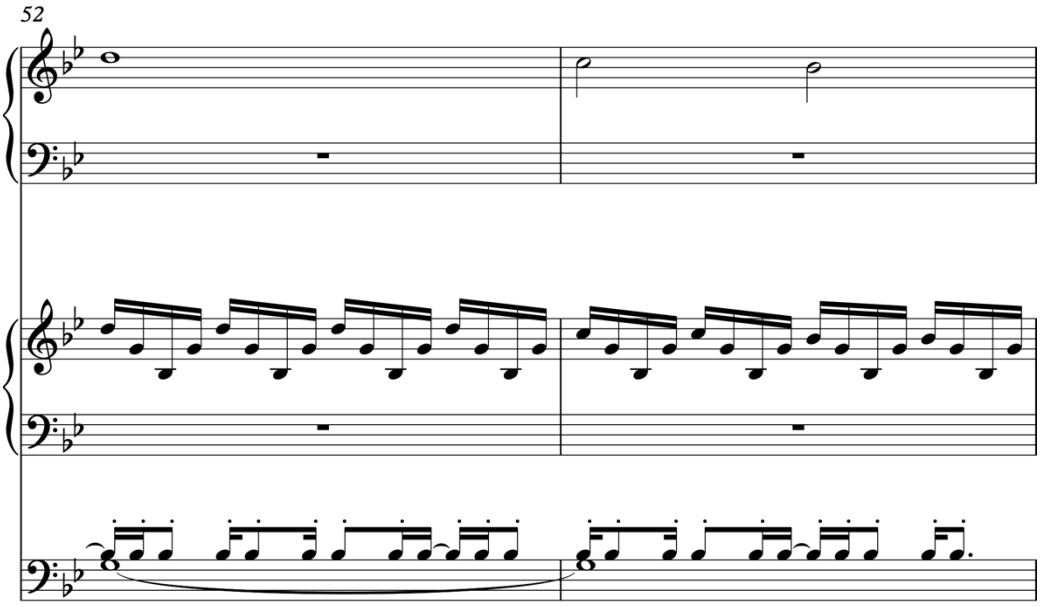
12

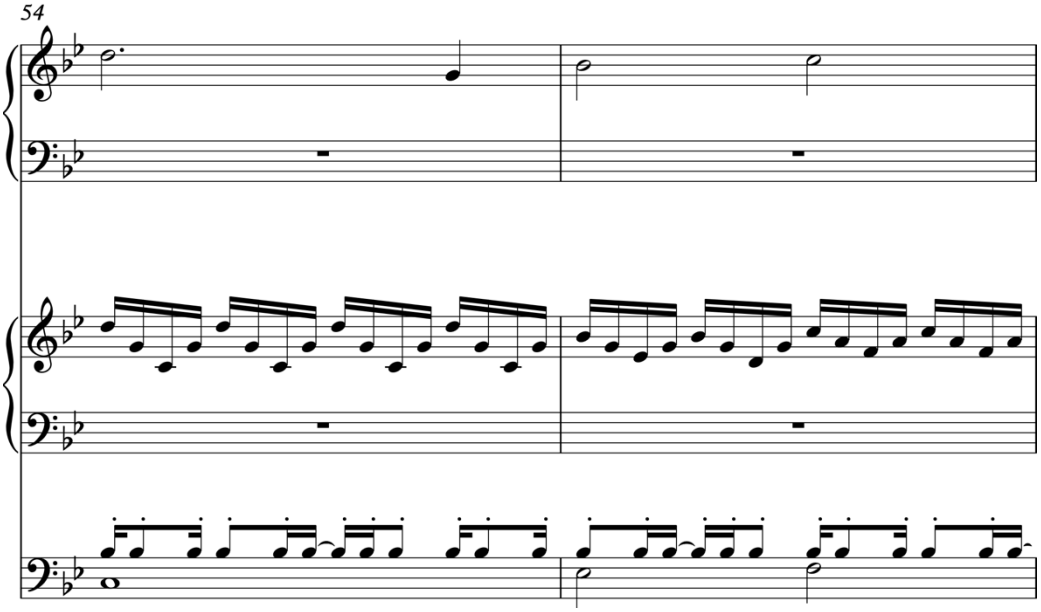
48

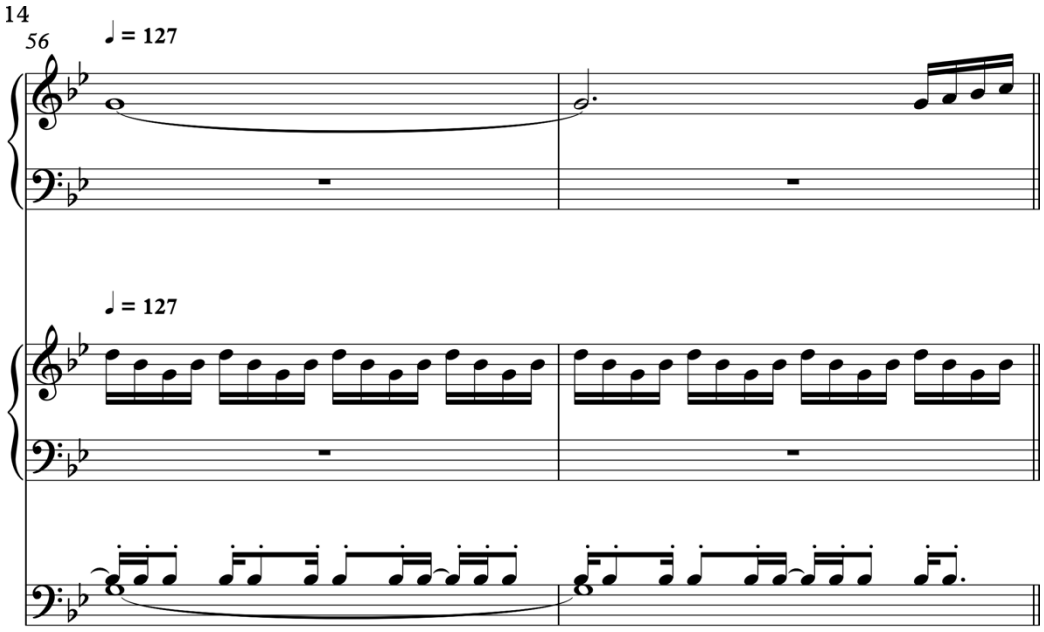


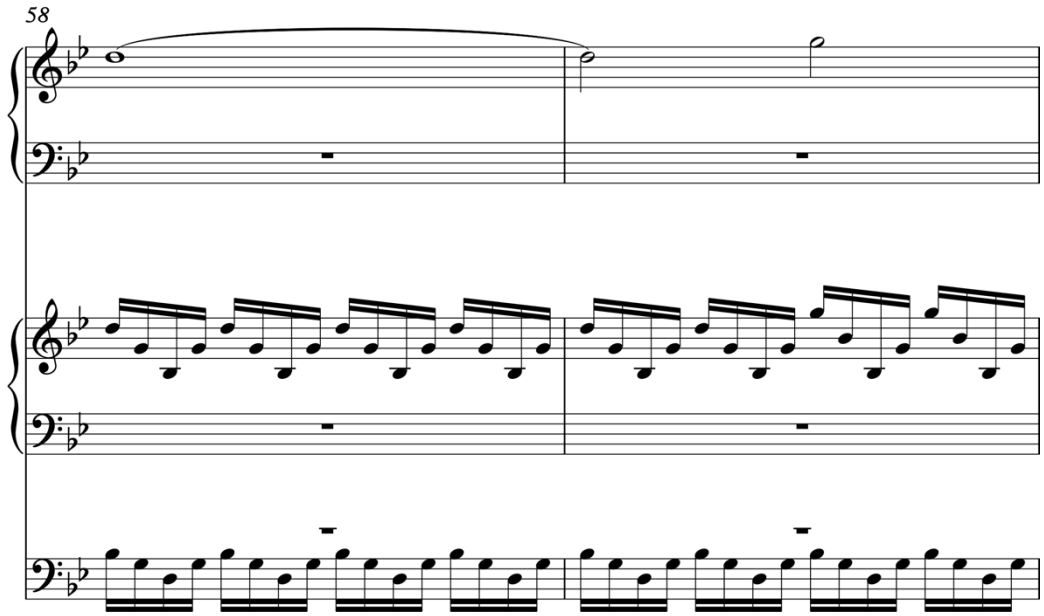
50

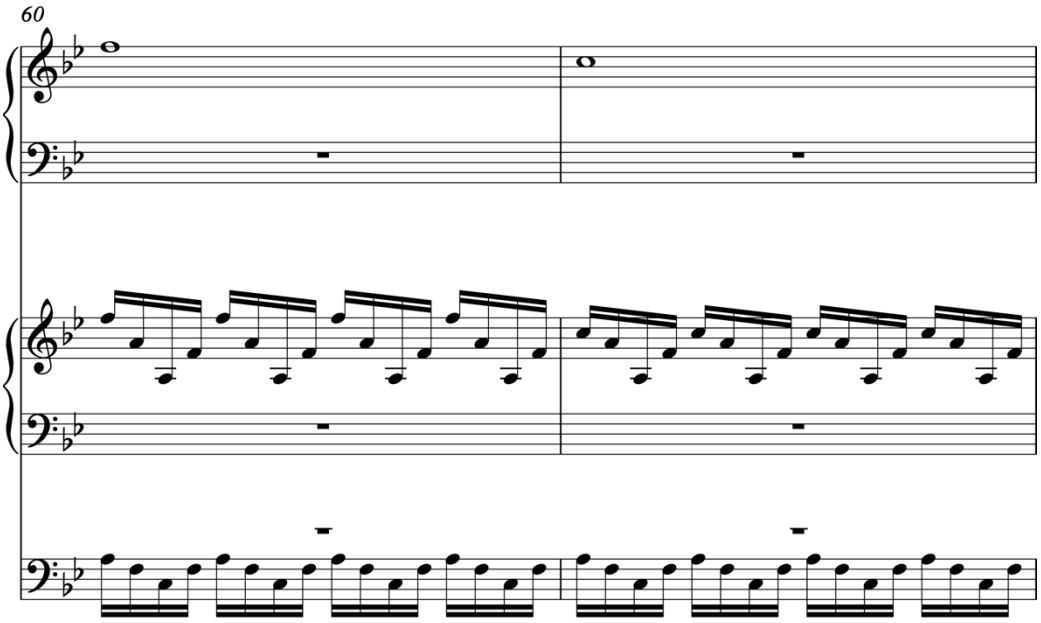


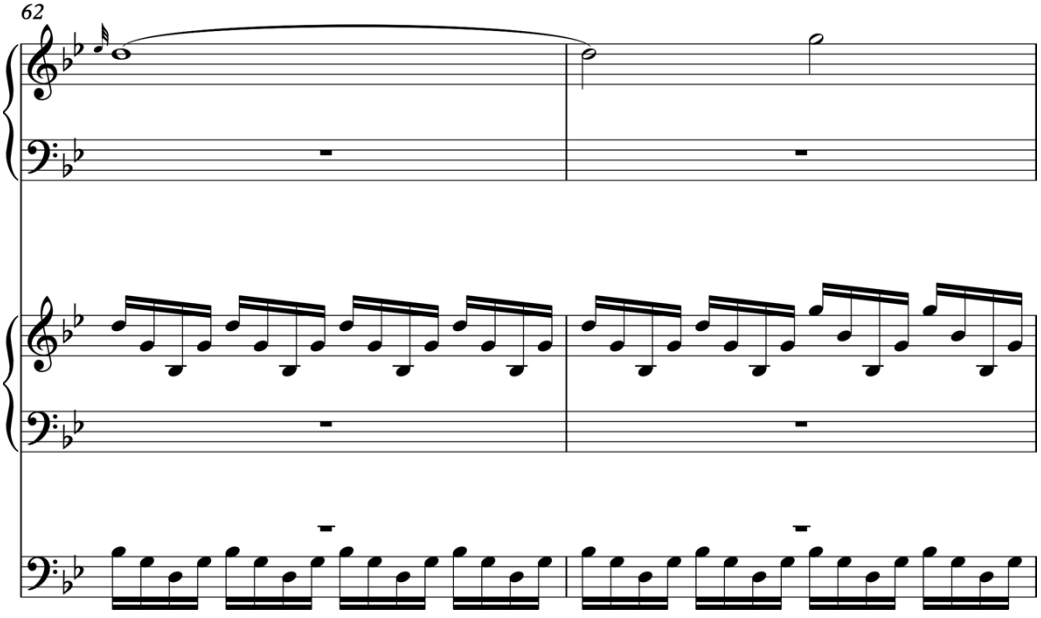

52

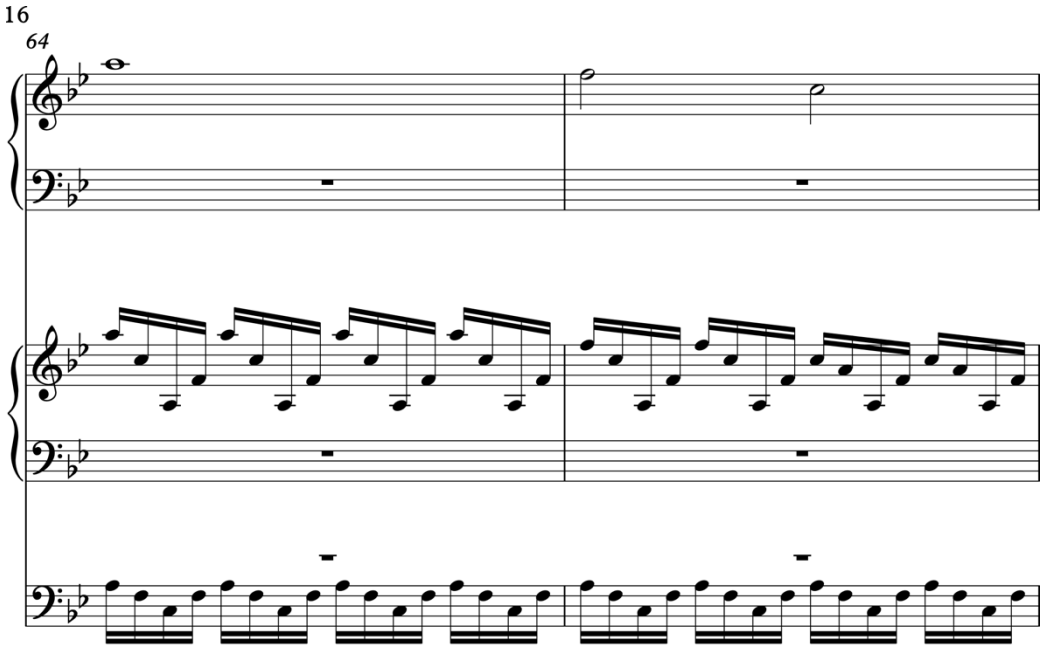

54

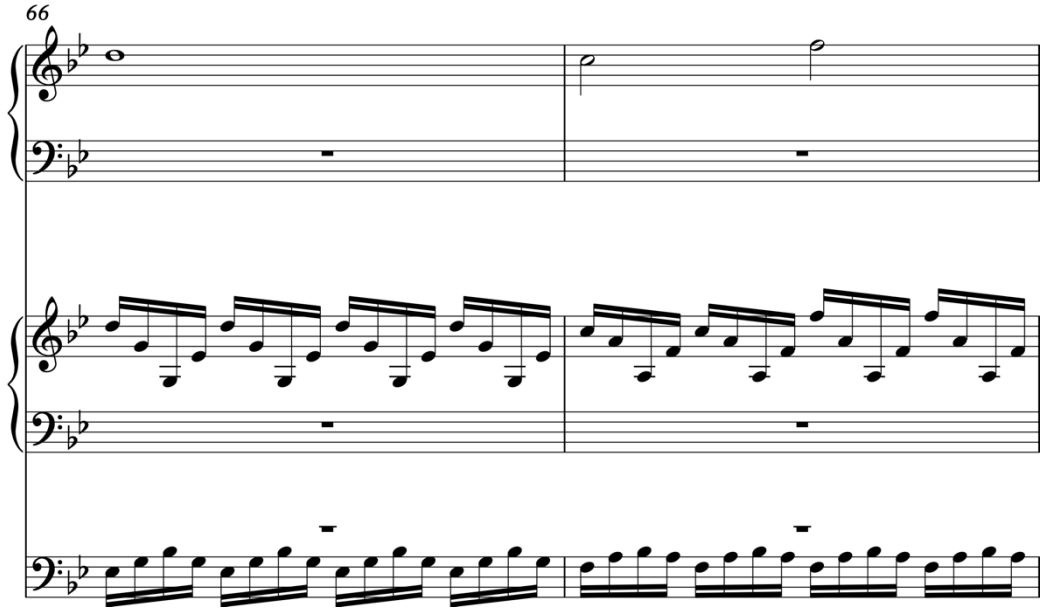

14
56
♩ = 127
♩ = 127

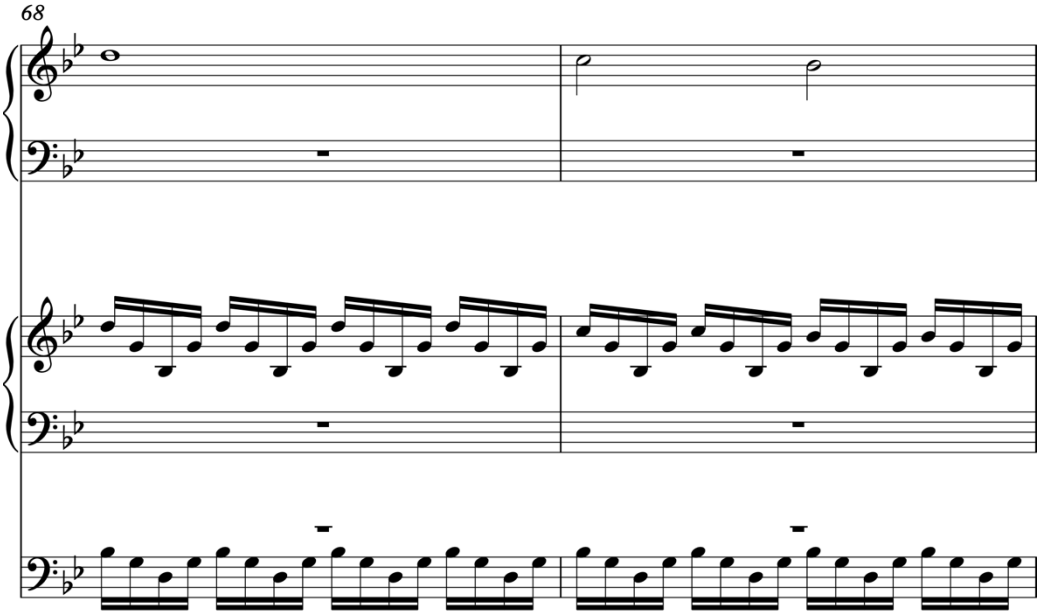

58

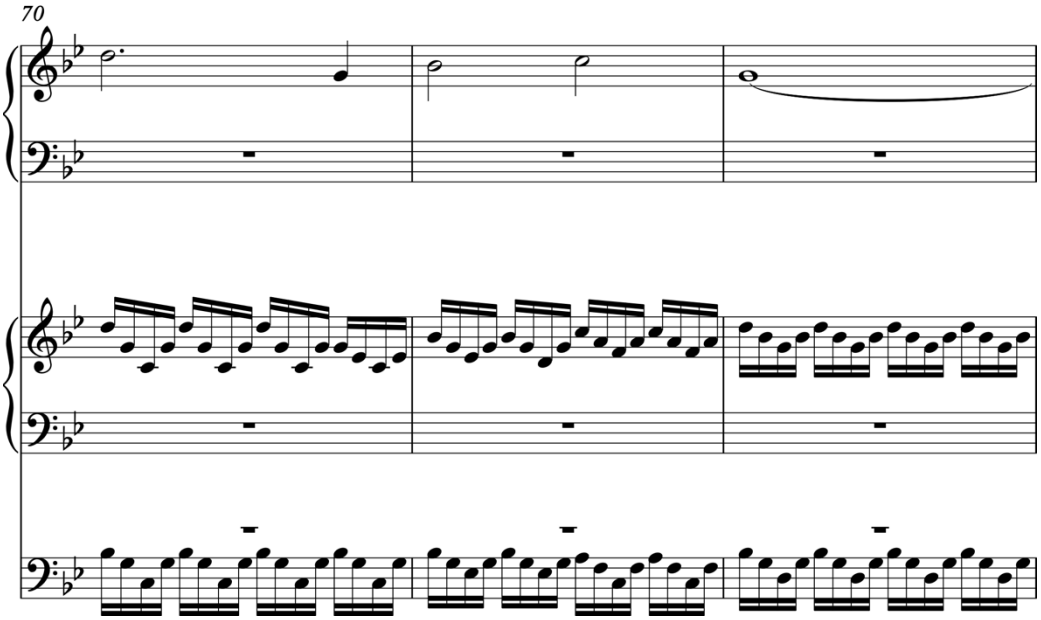

60


62

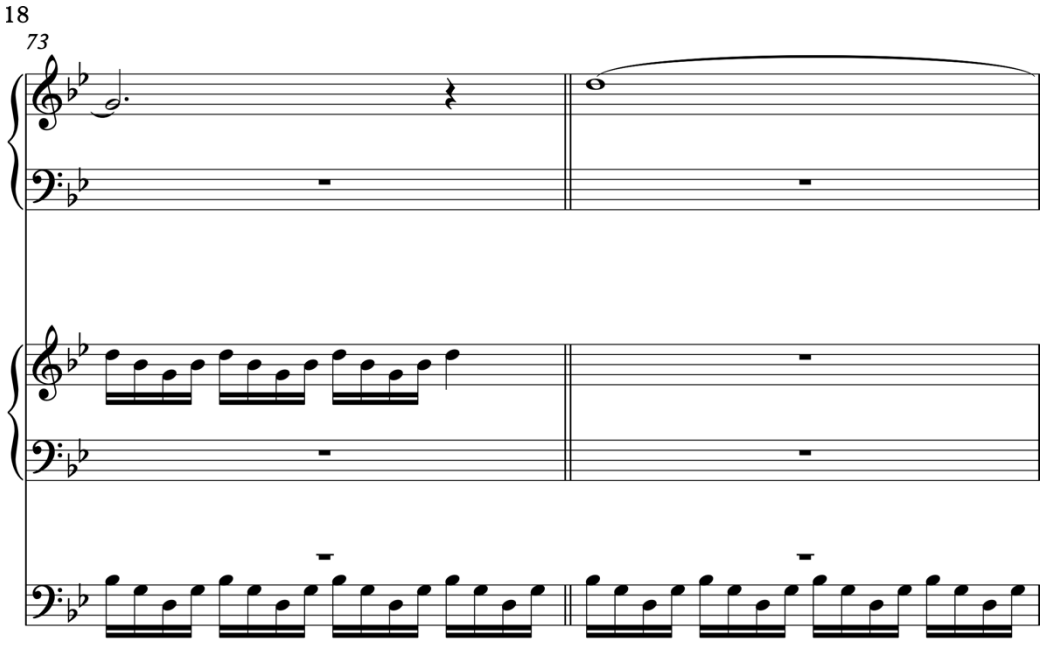

16
64

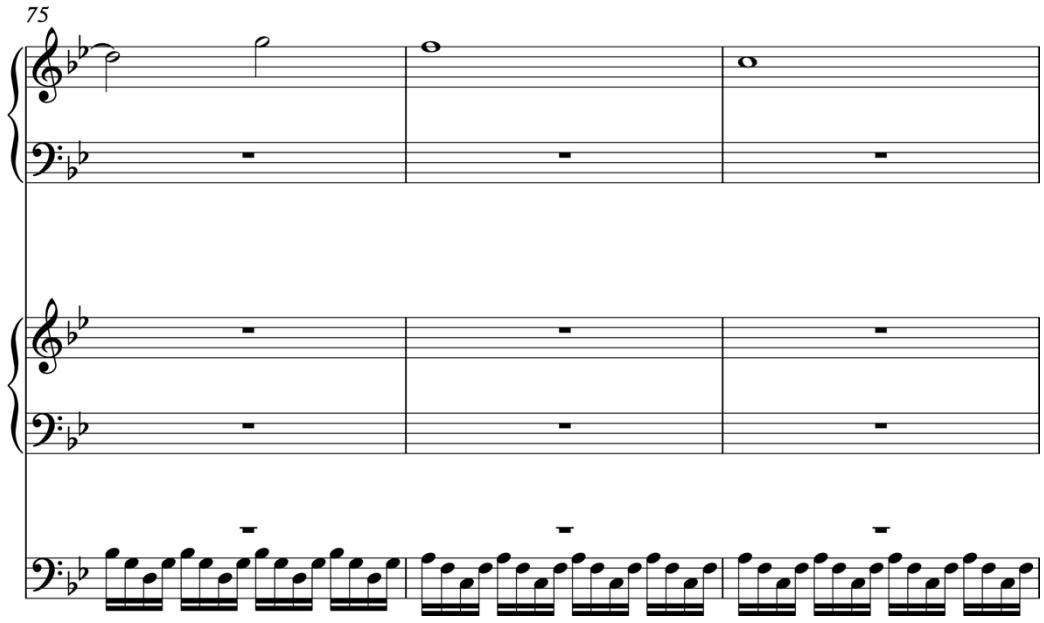

66

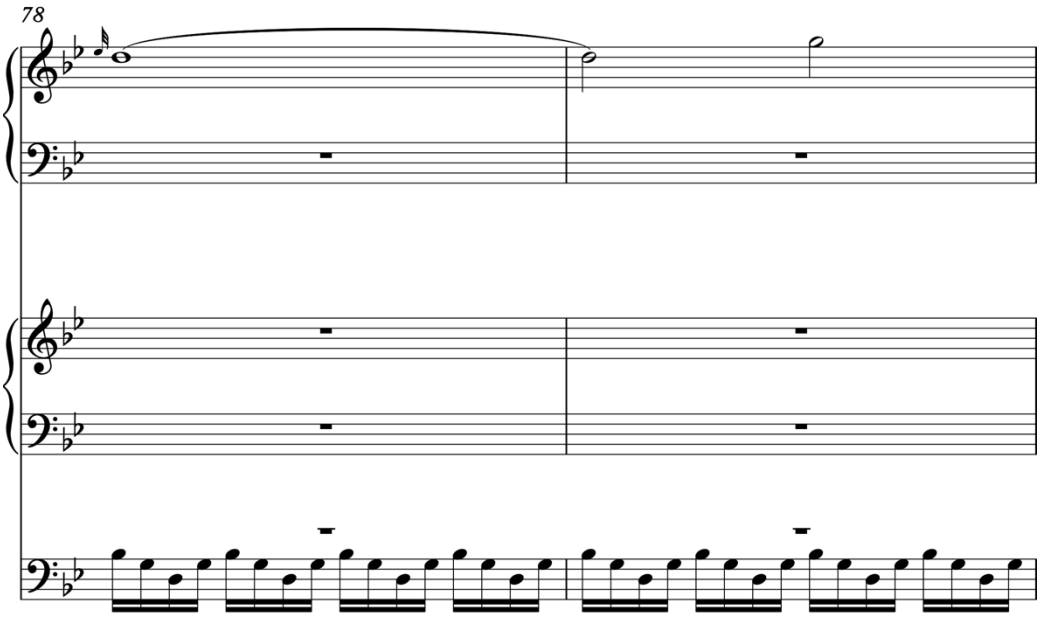

68

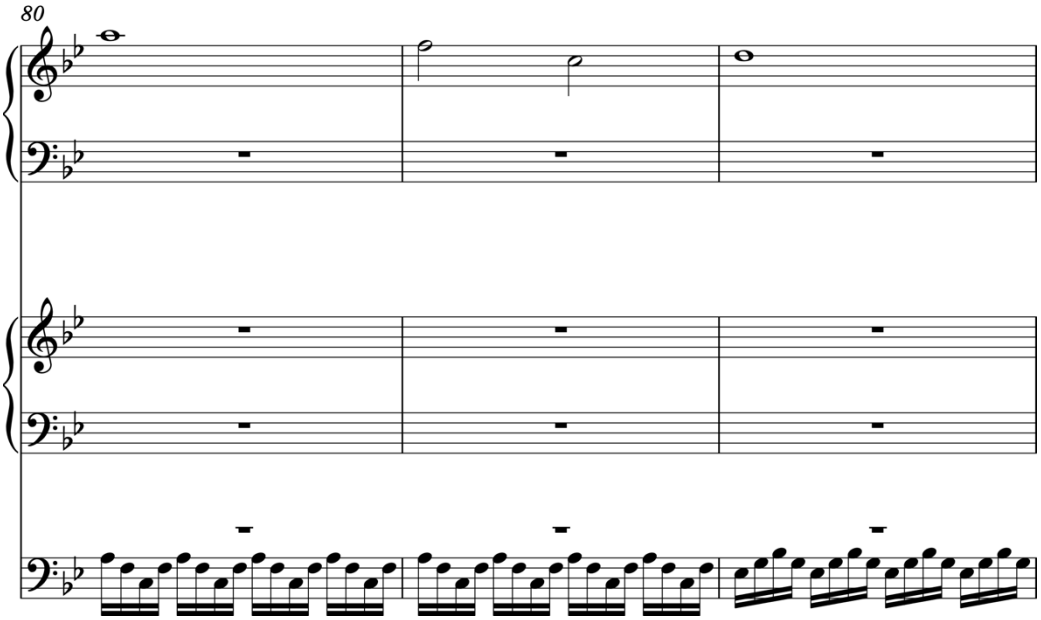

70

18

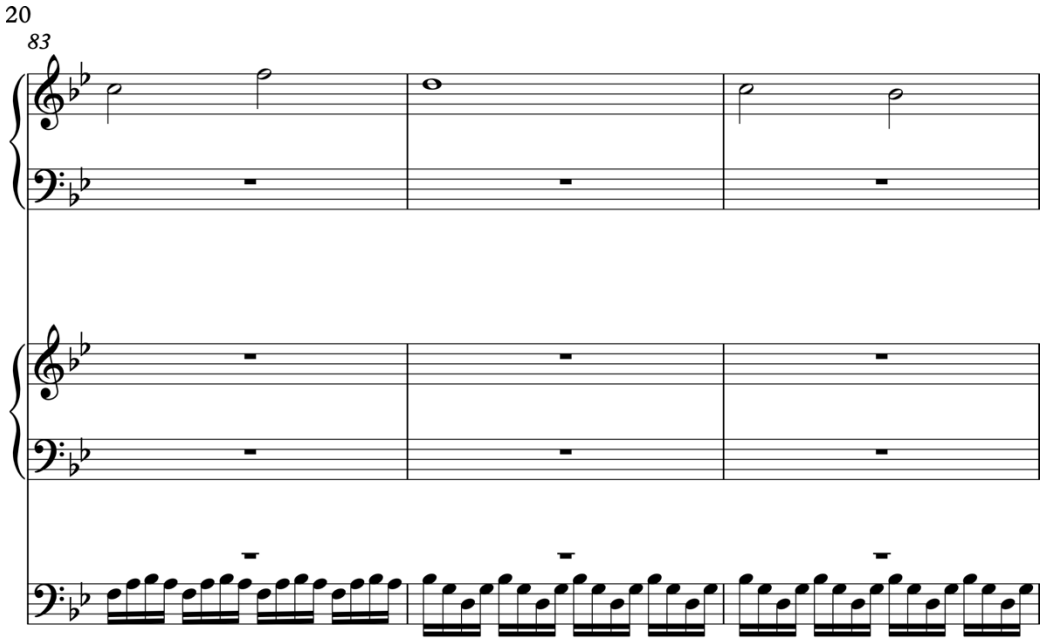


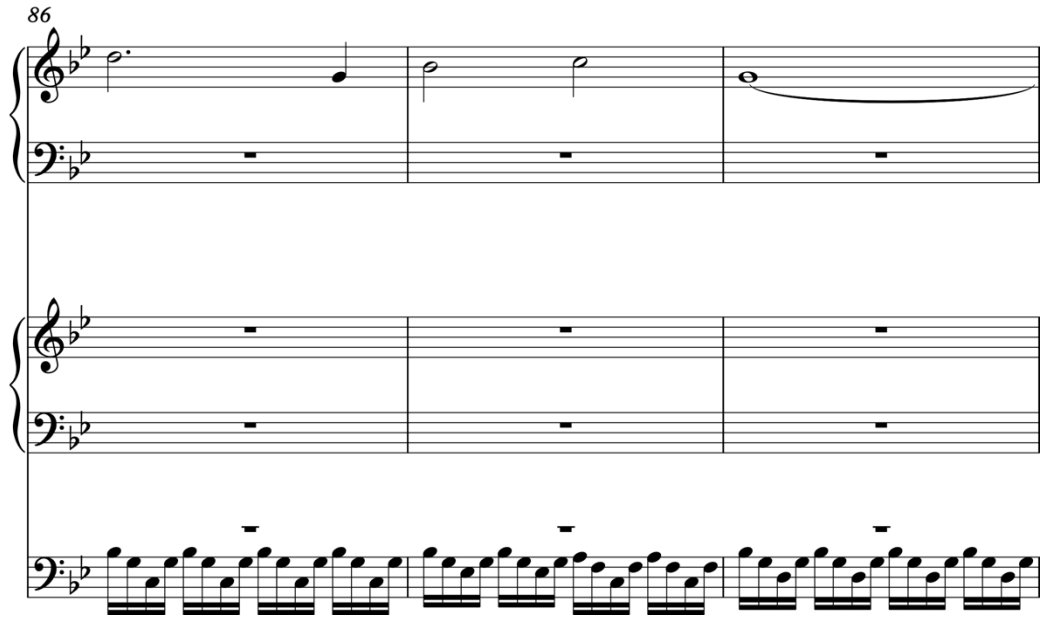


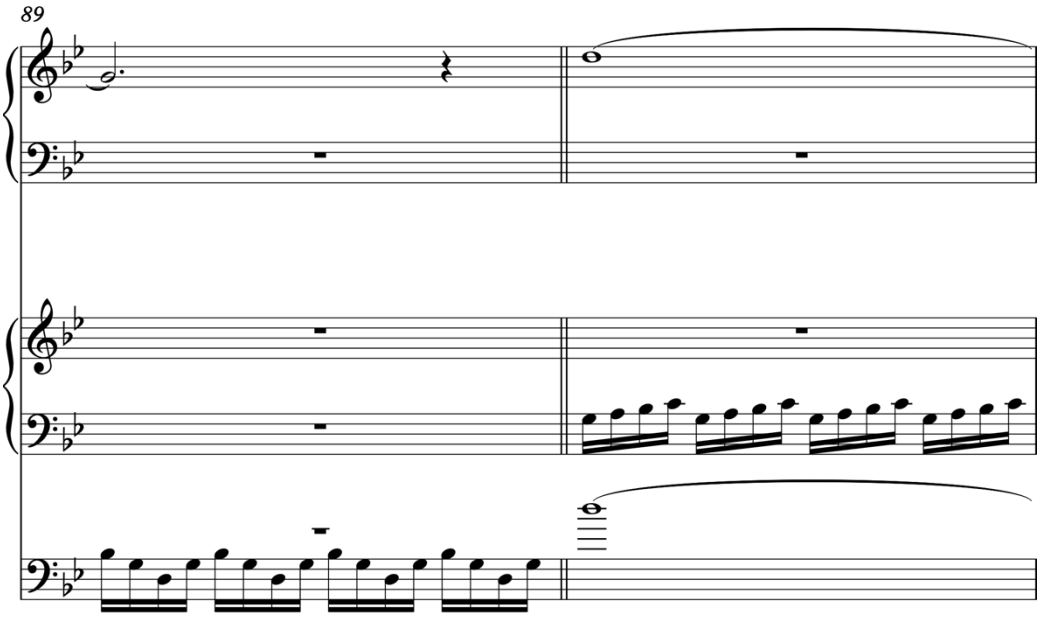

78

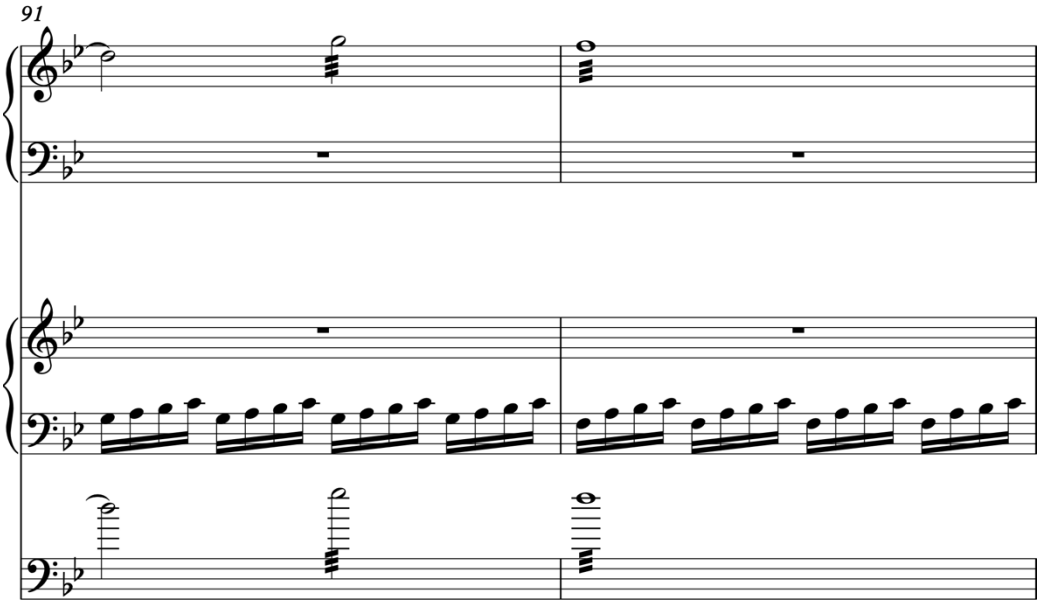

80

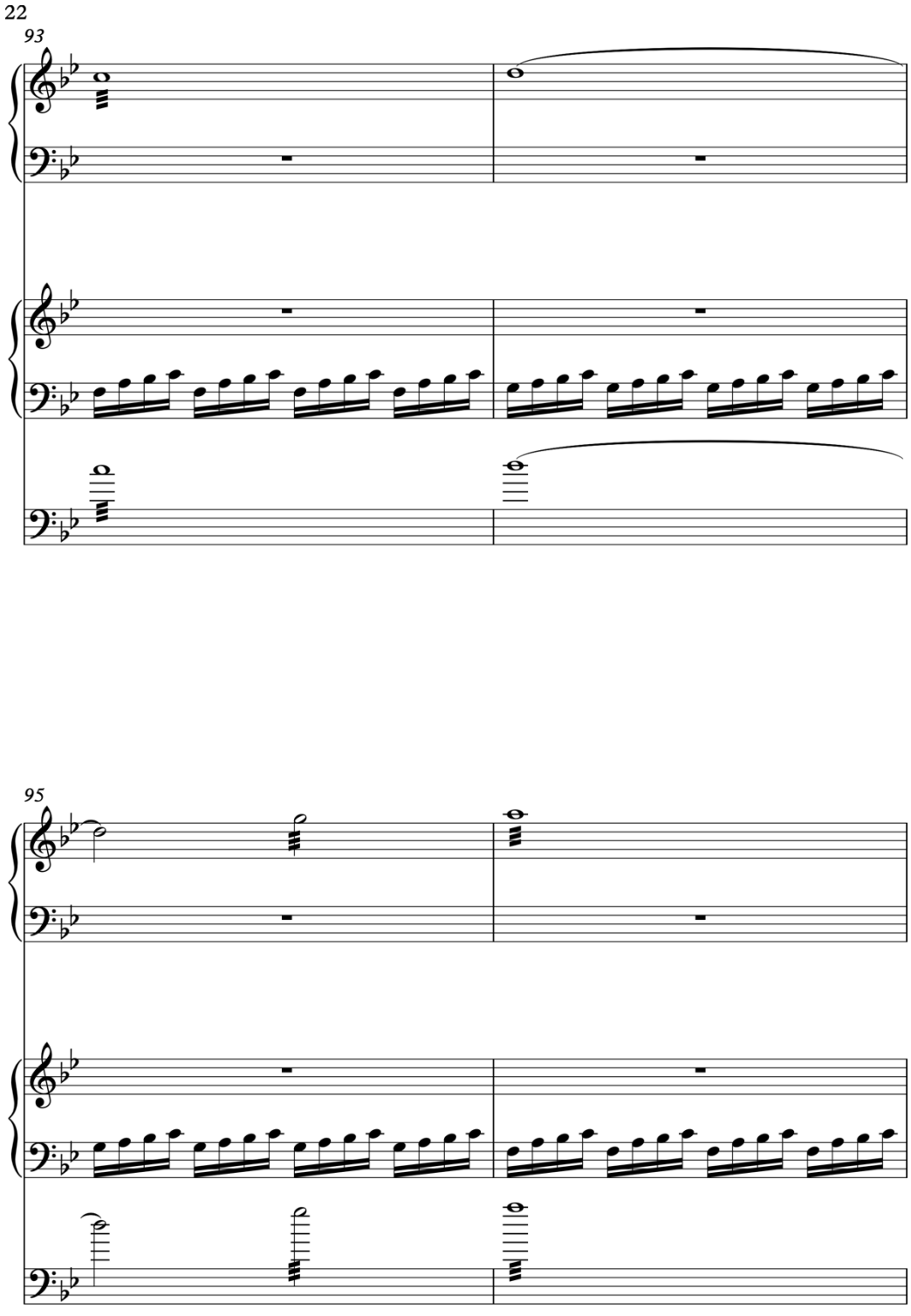
20



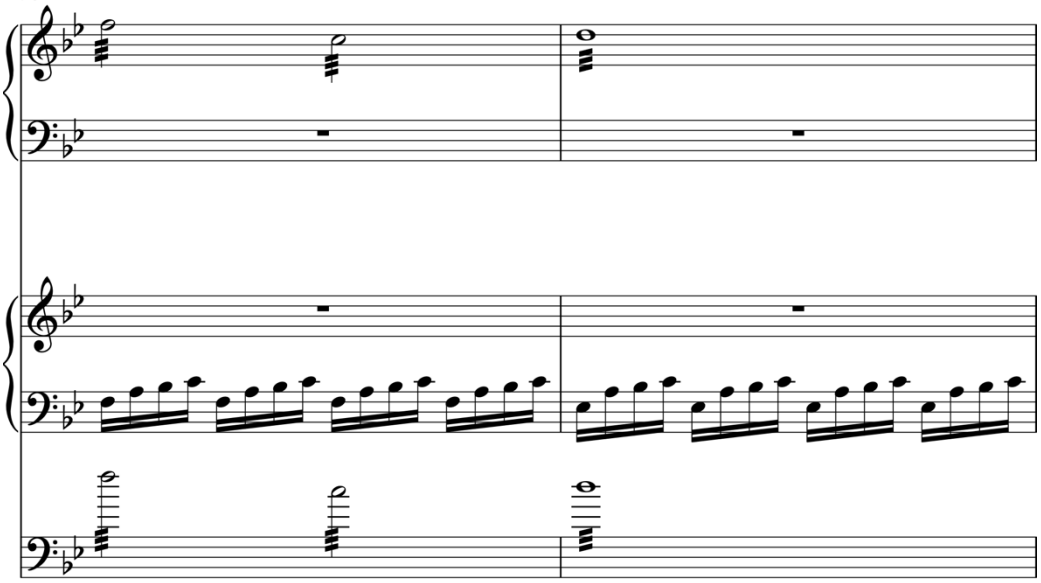



89

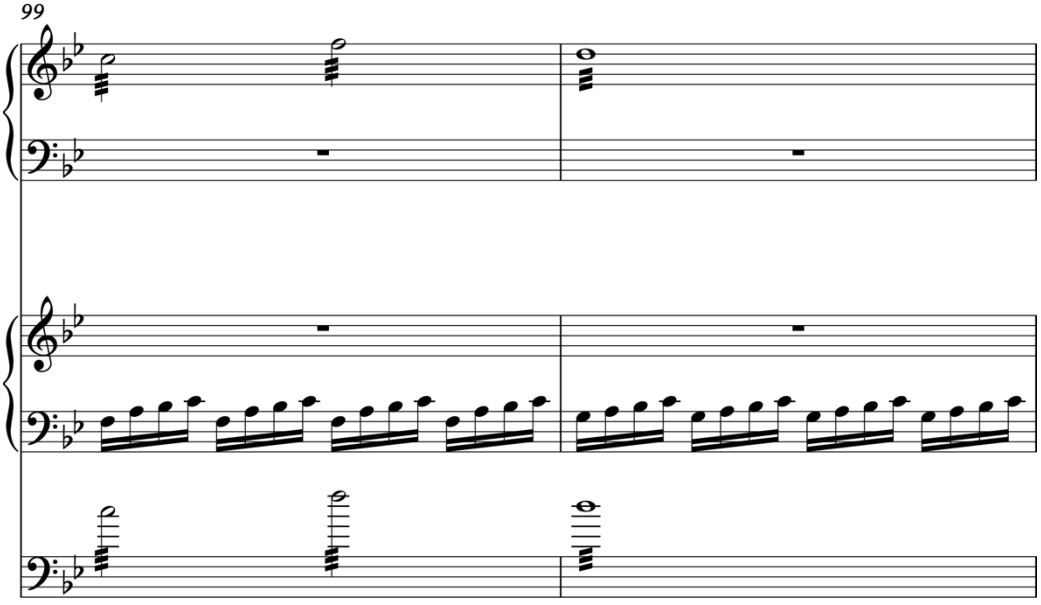

91


22
93
95

97

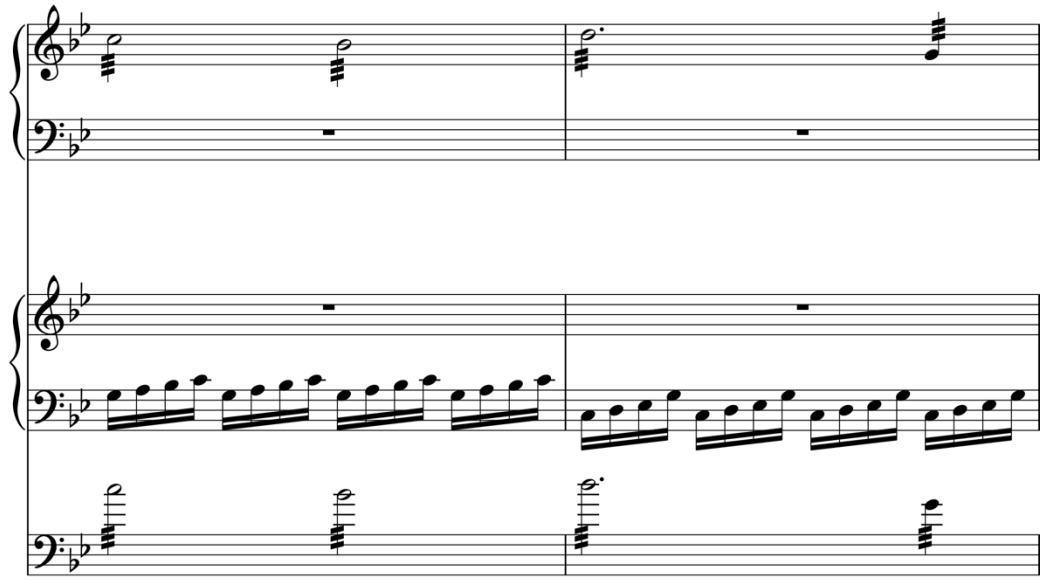


99

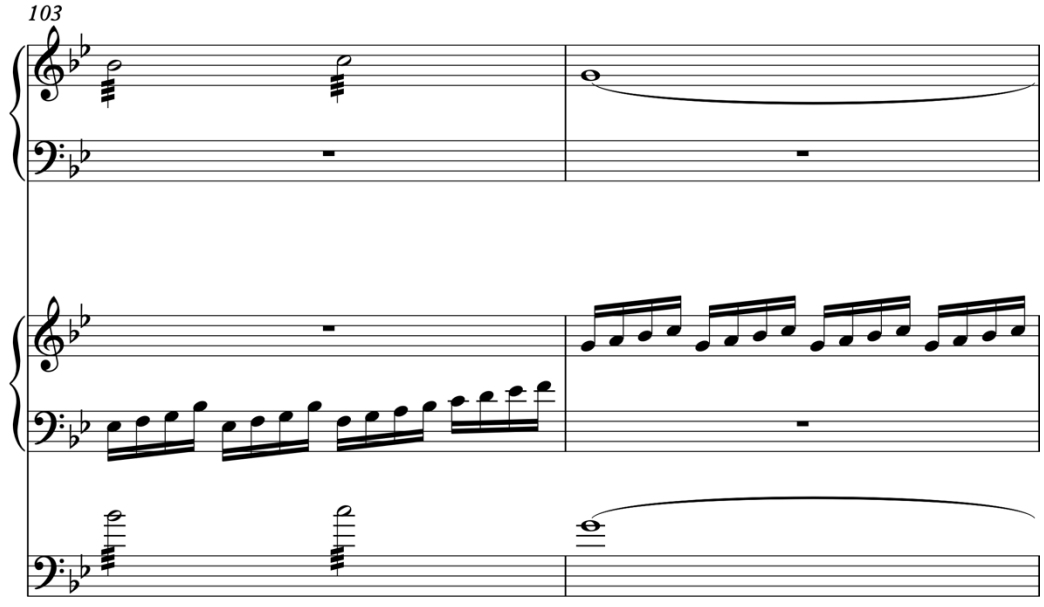


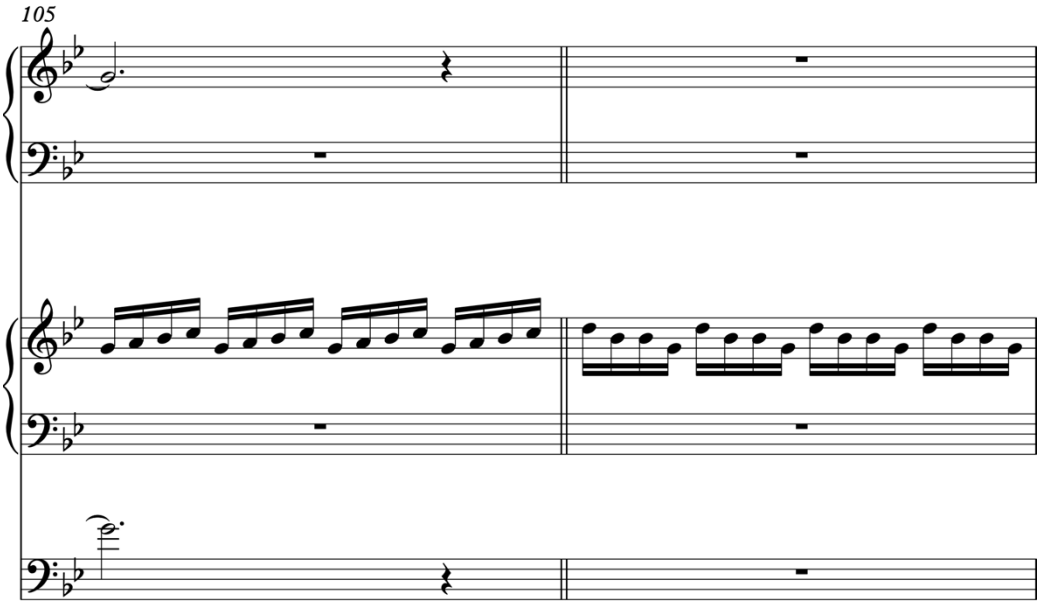
24

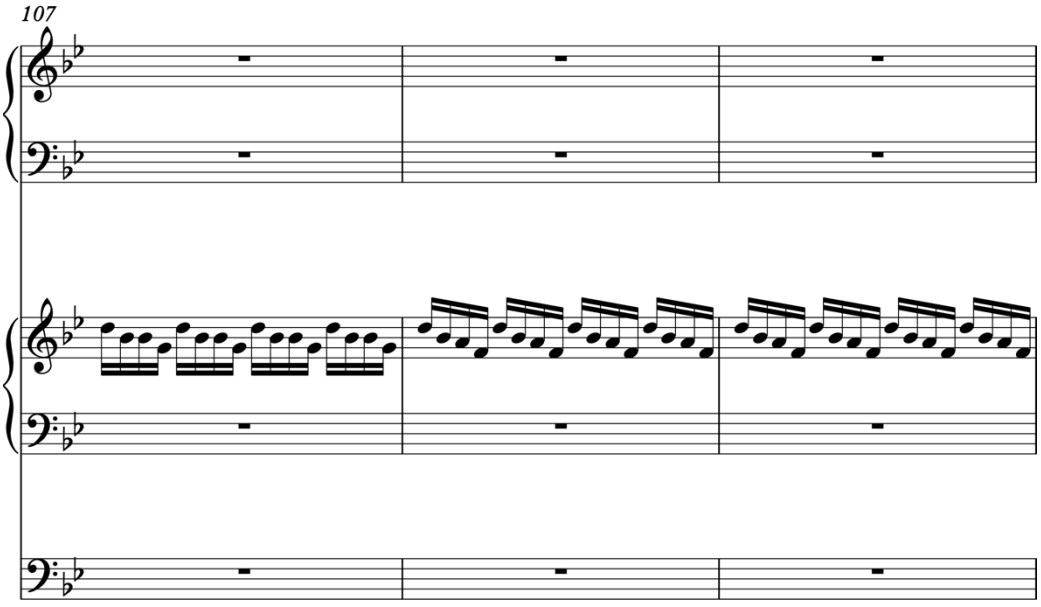
101



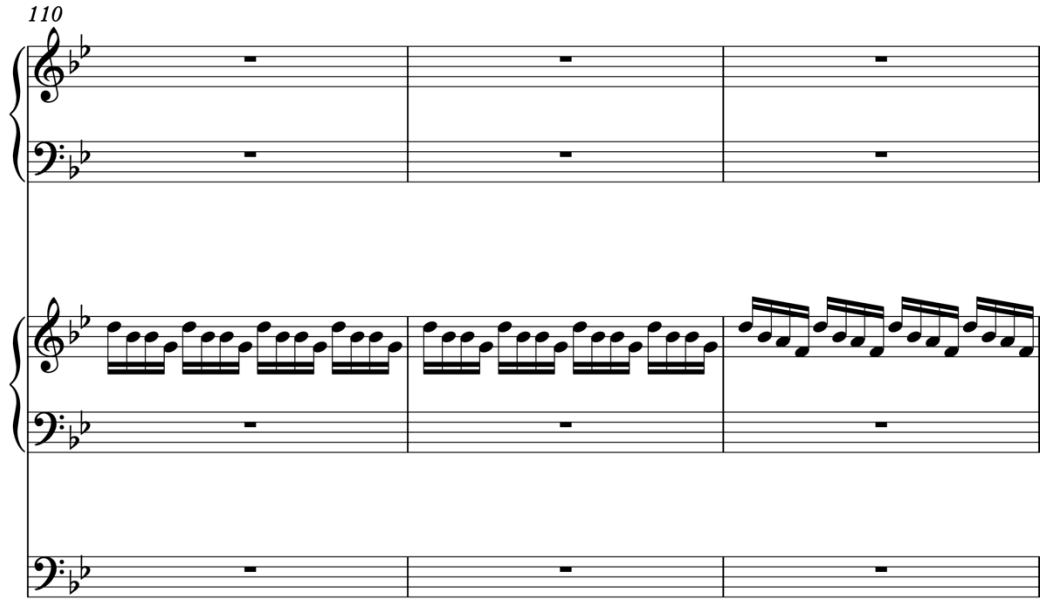
103

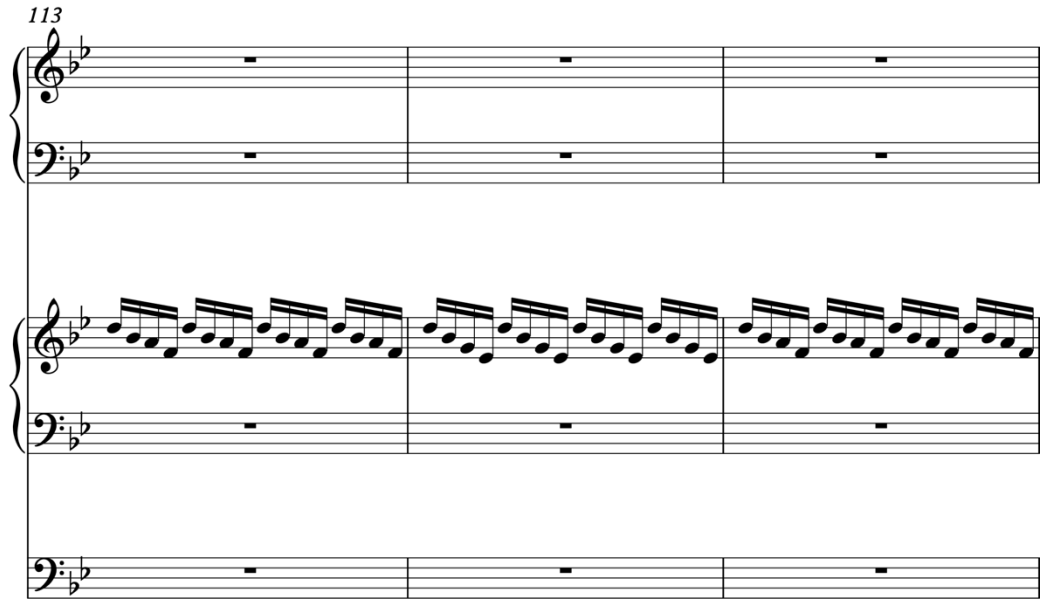


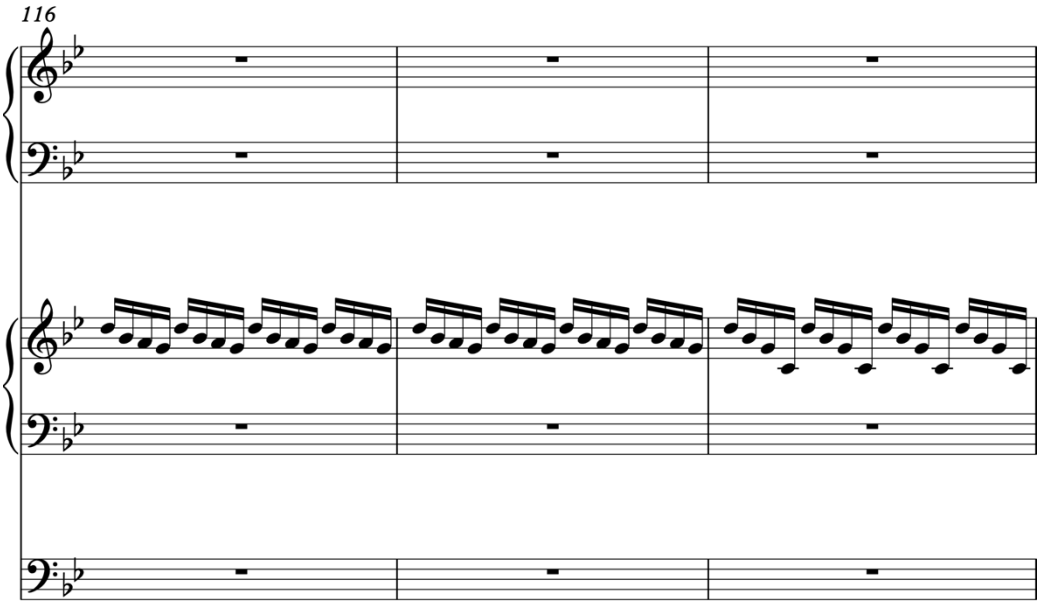

105

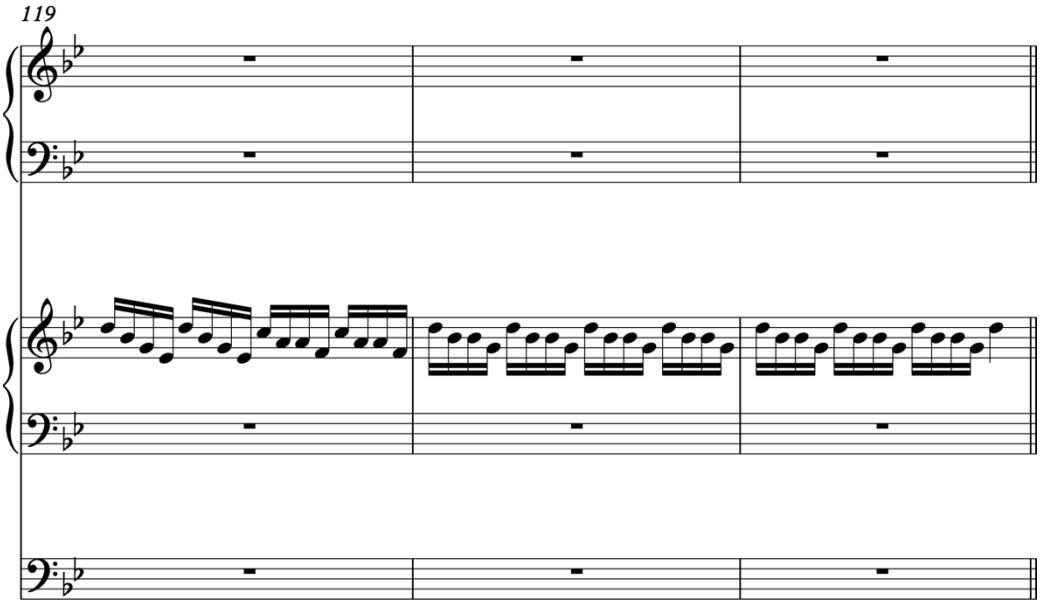

107

26

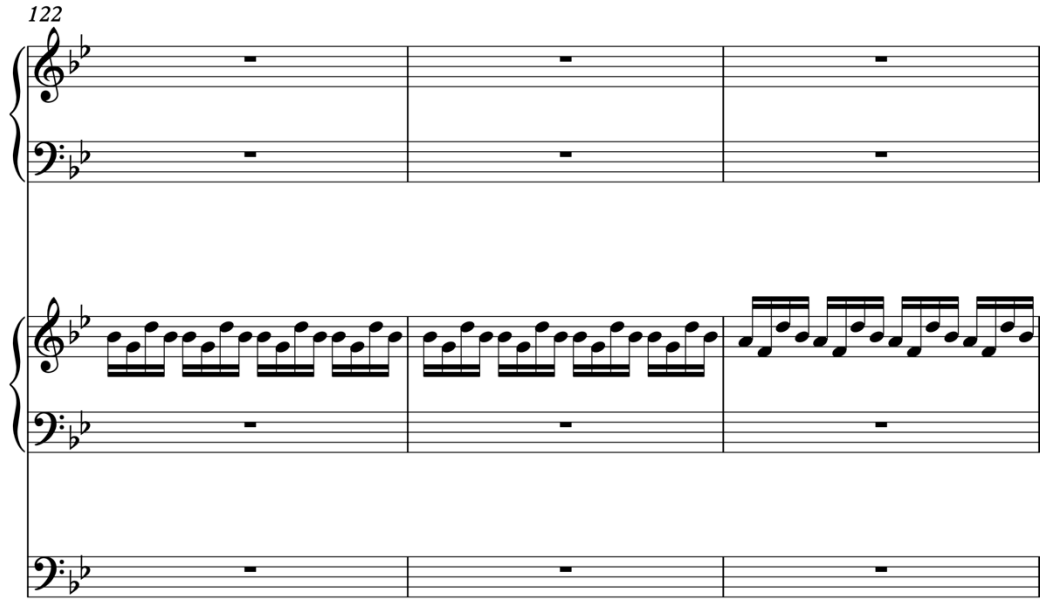


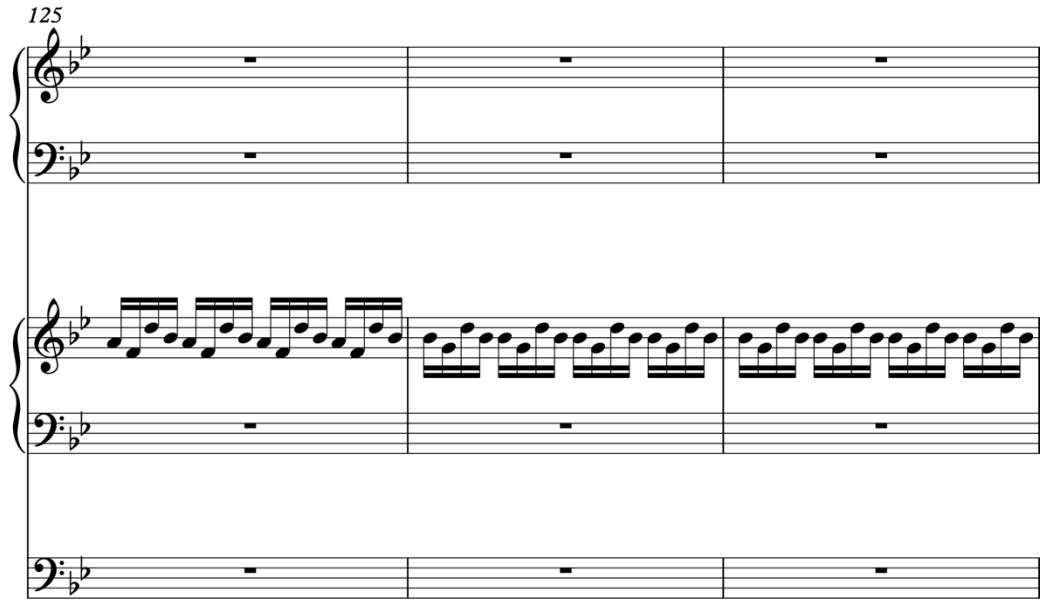


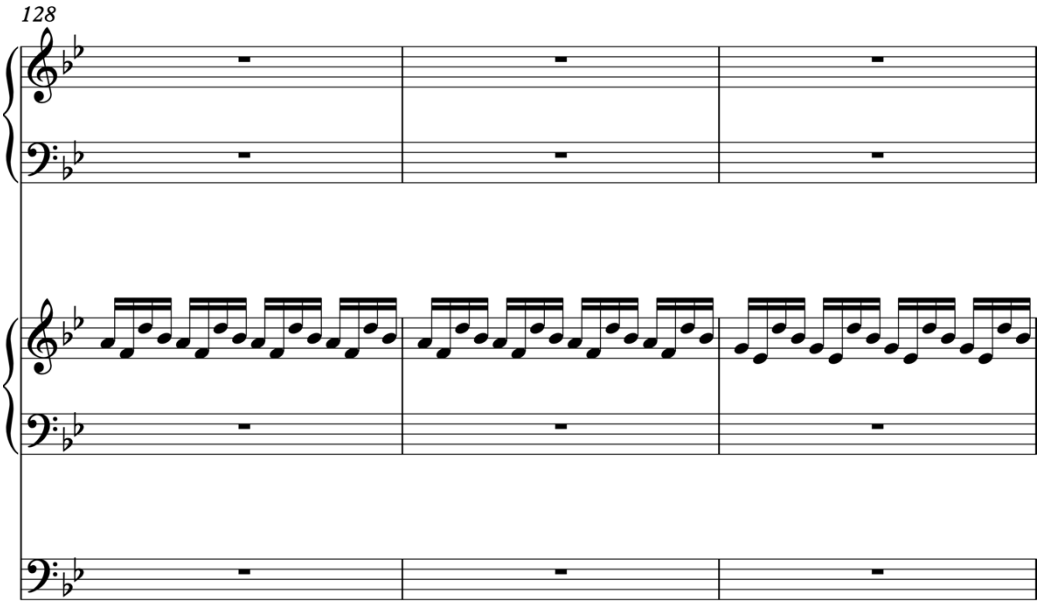

116

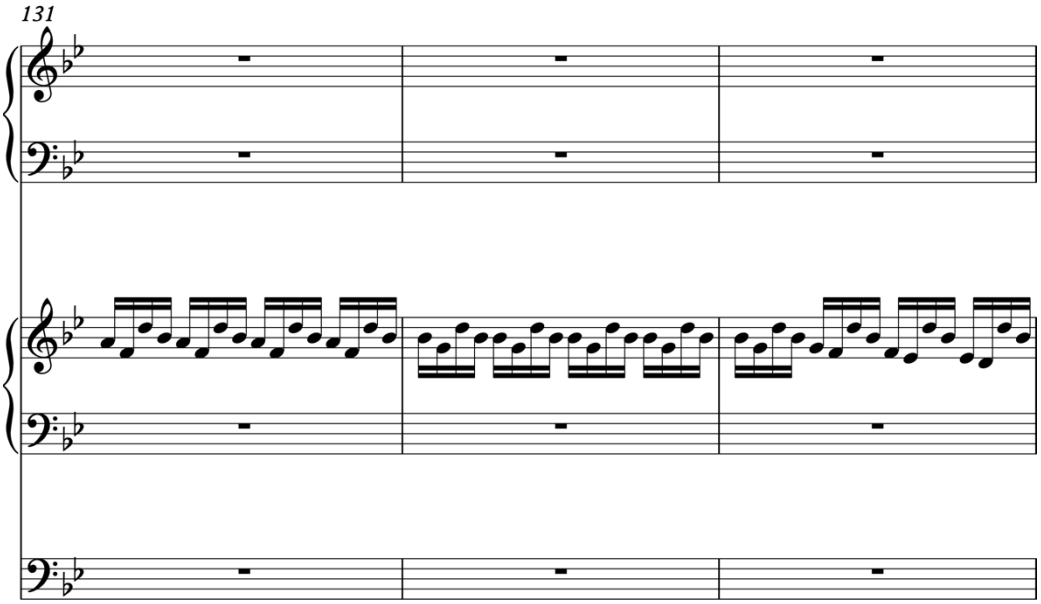

119

28

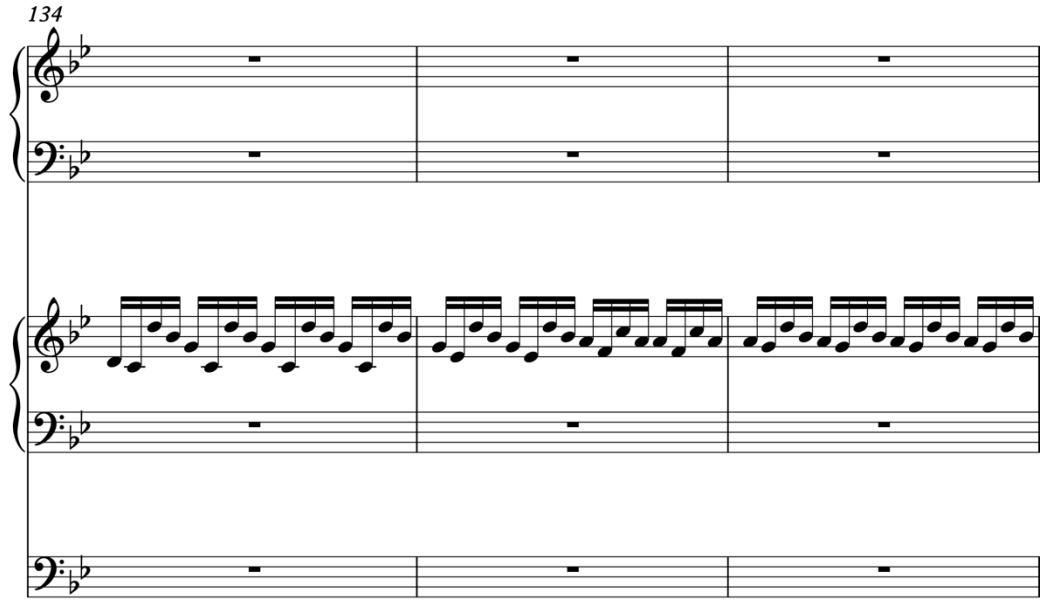


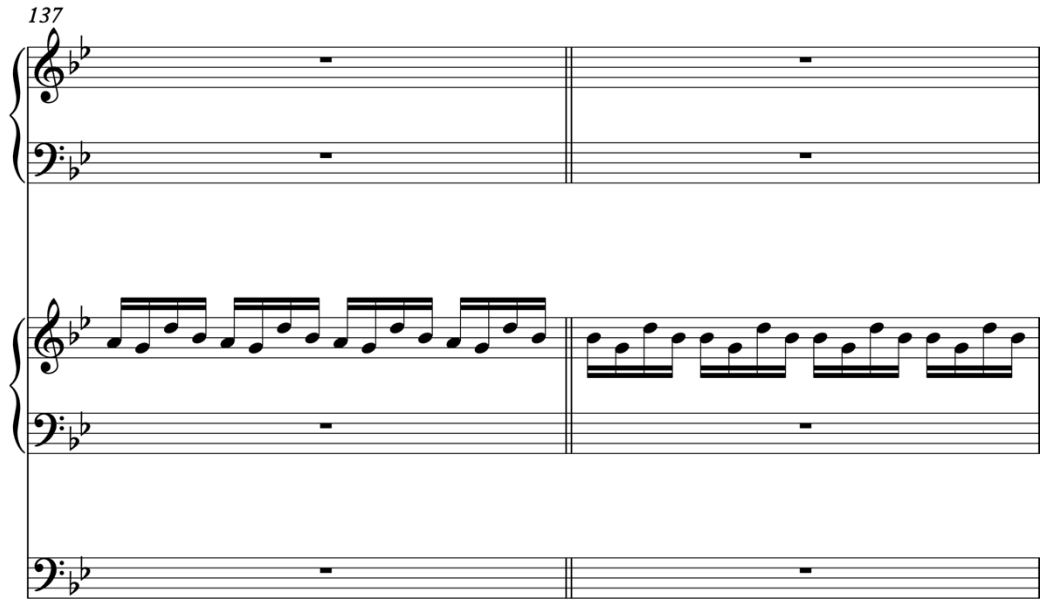


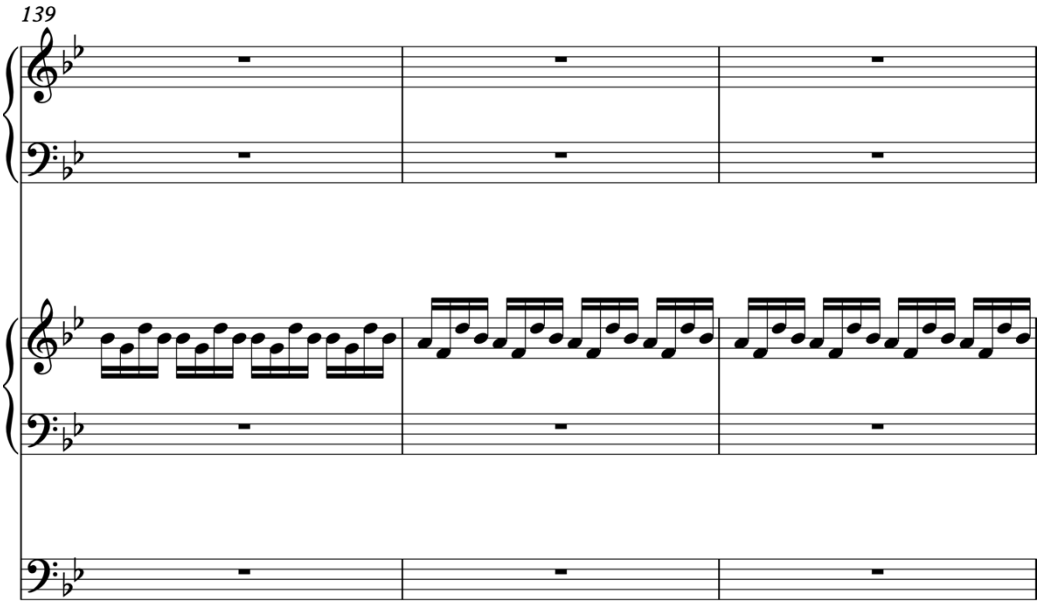

128

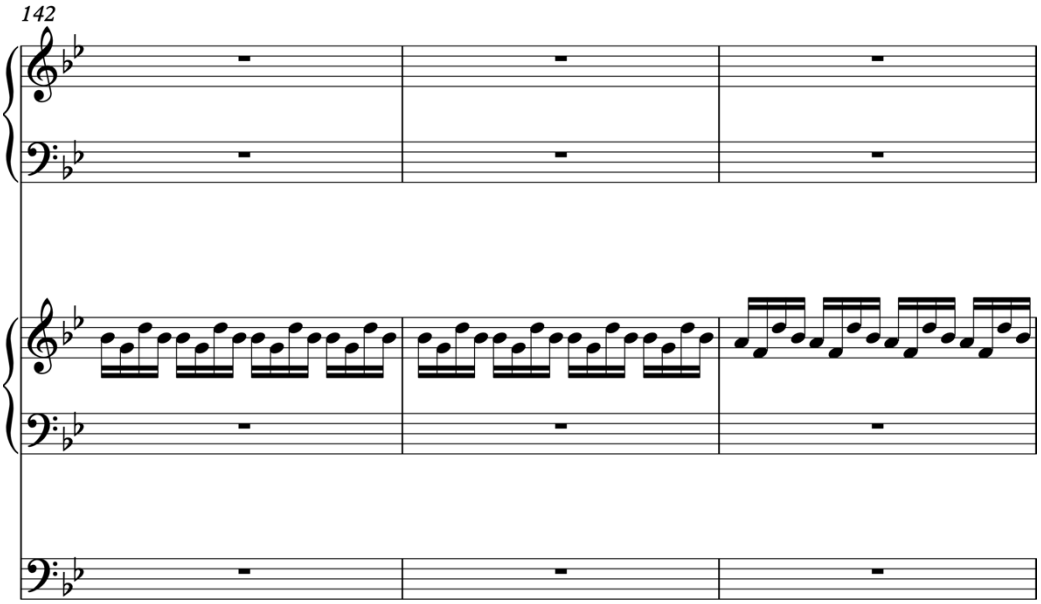

131

30



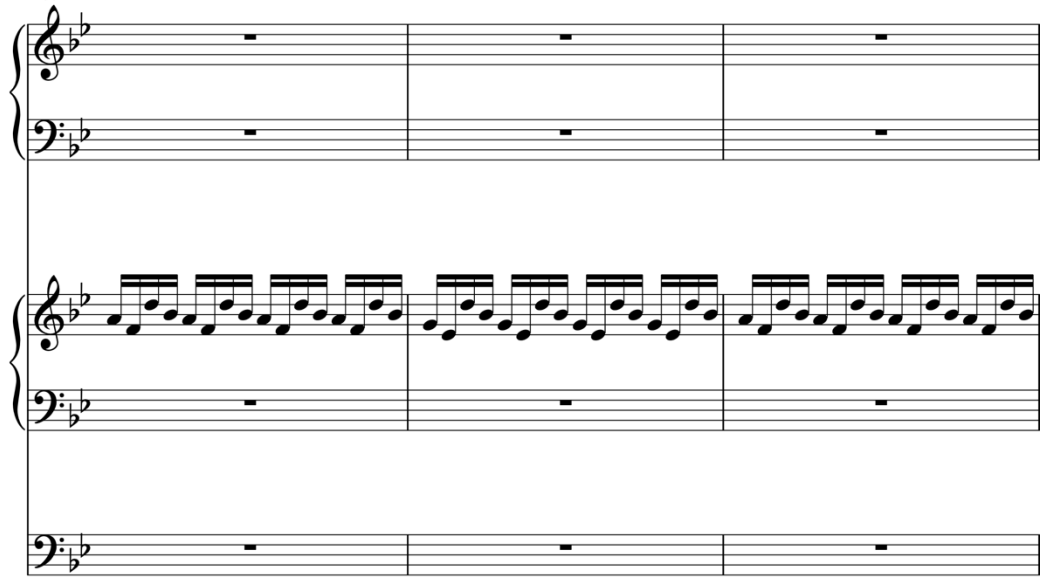



139

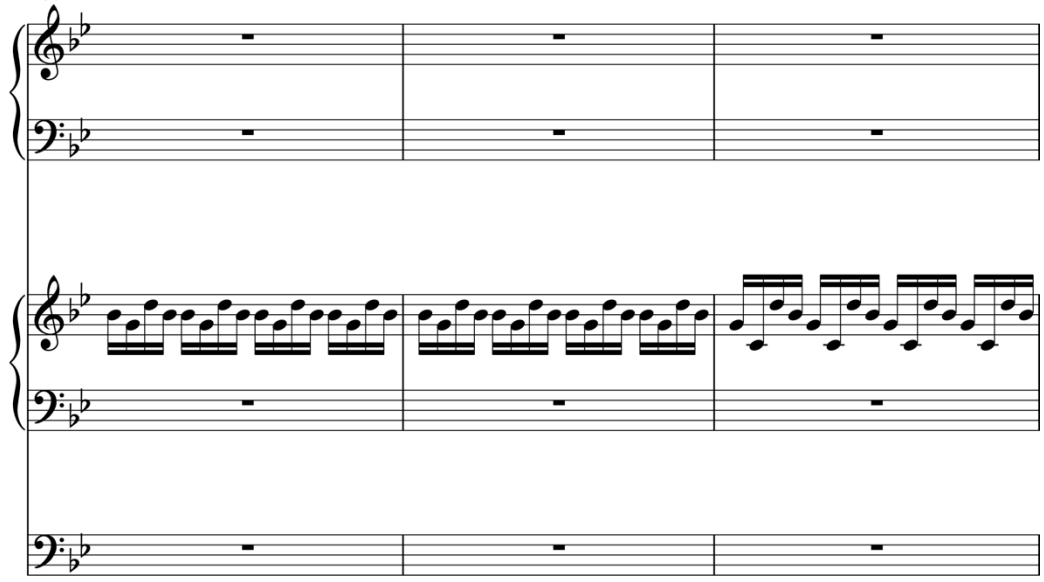

142

32

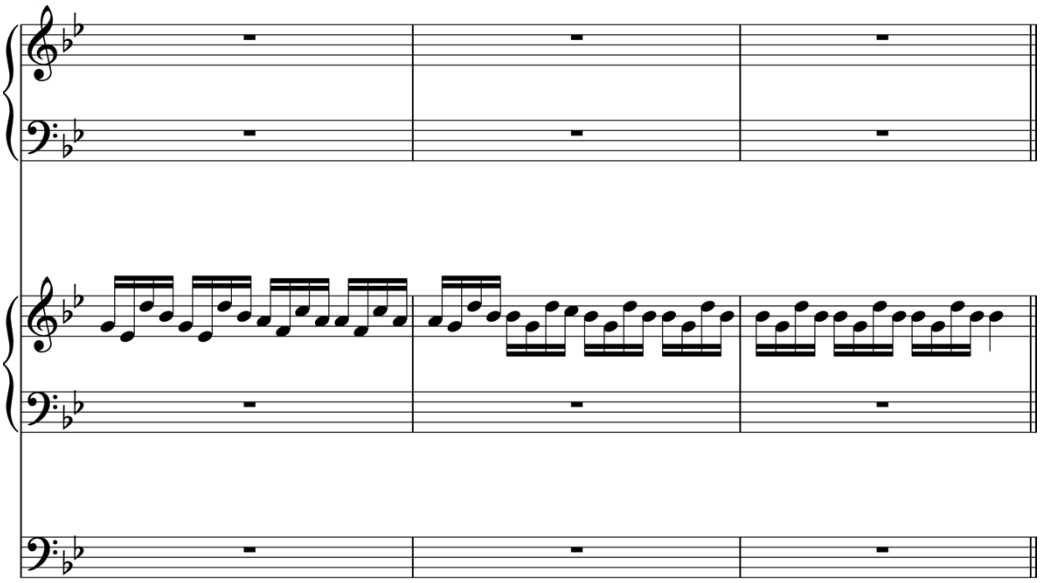
145



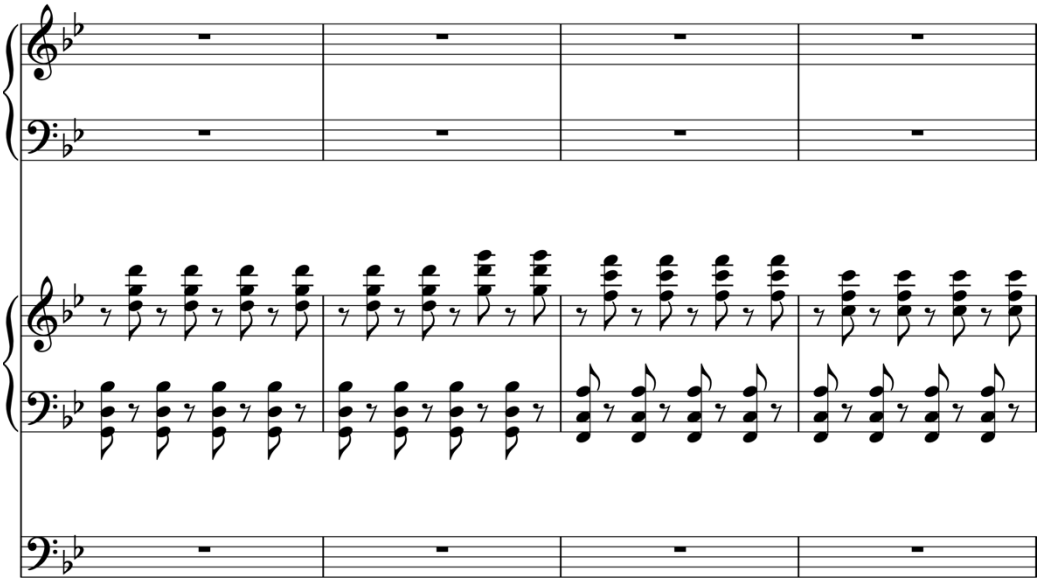
148



151

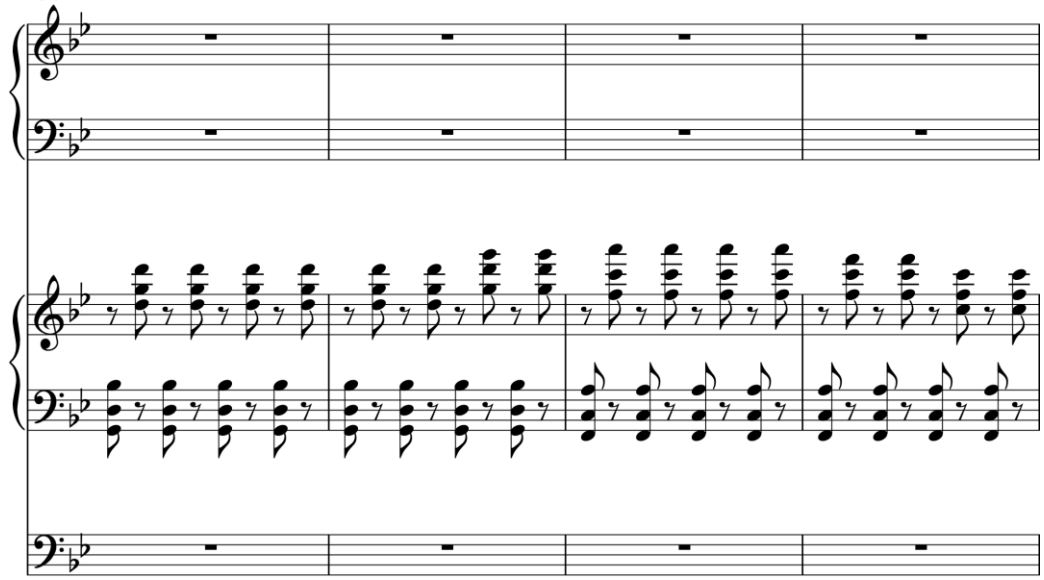


154

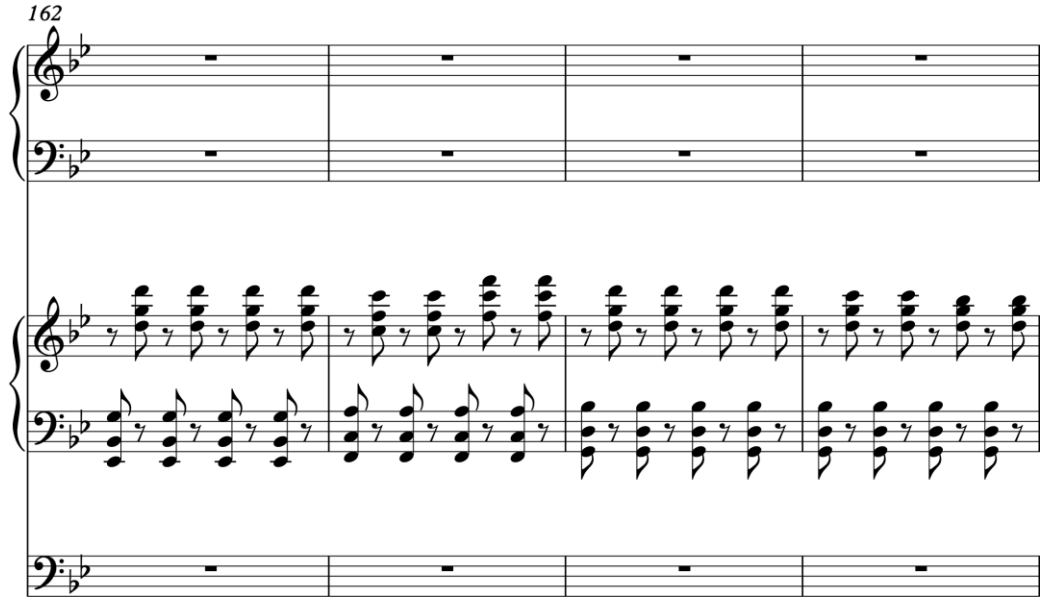


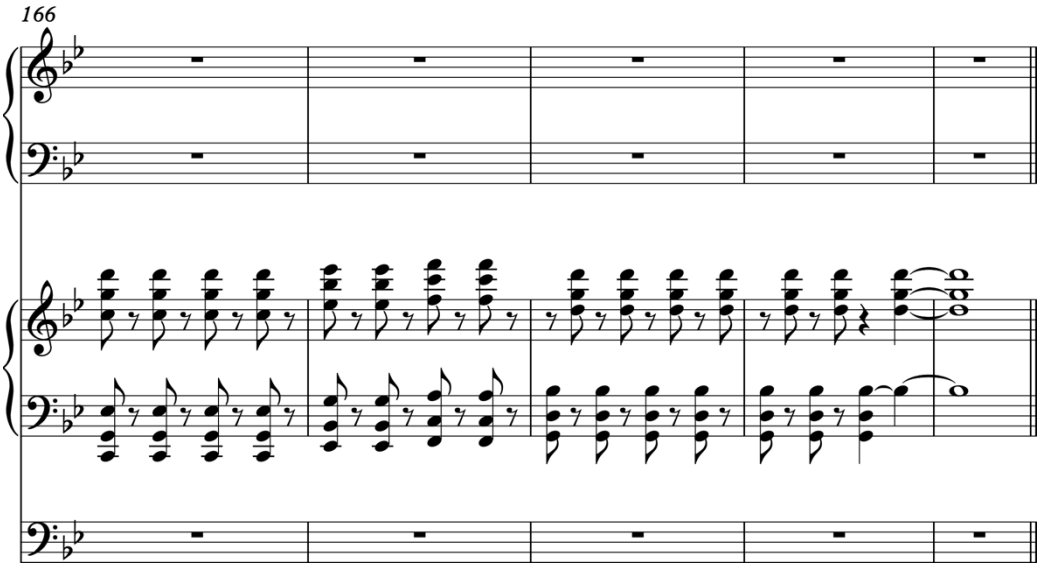
34

158



162




166

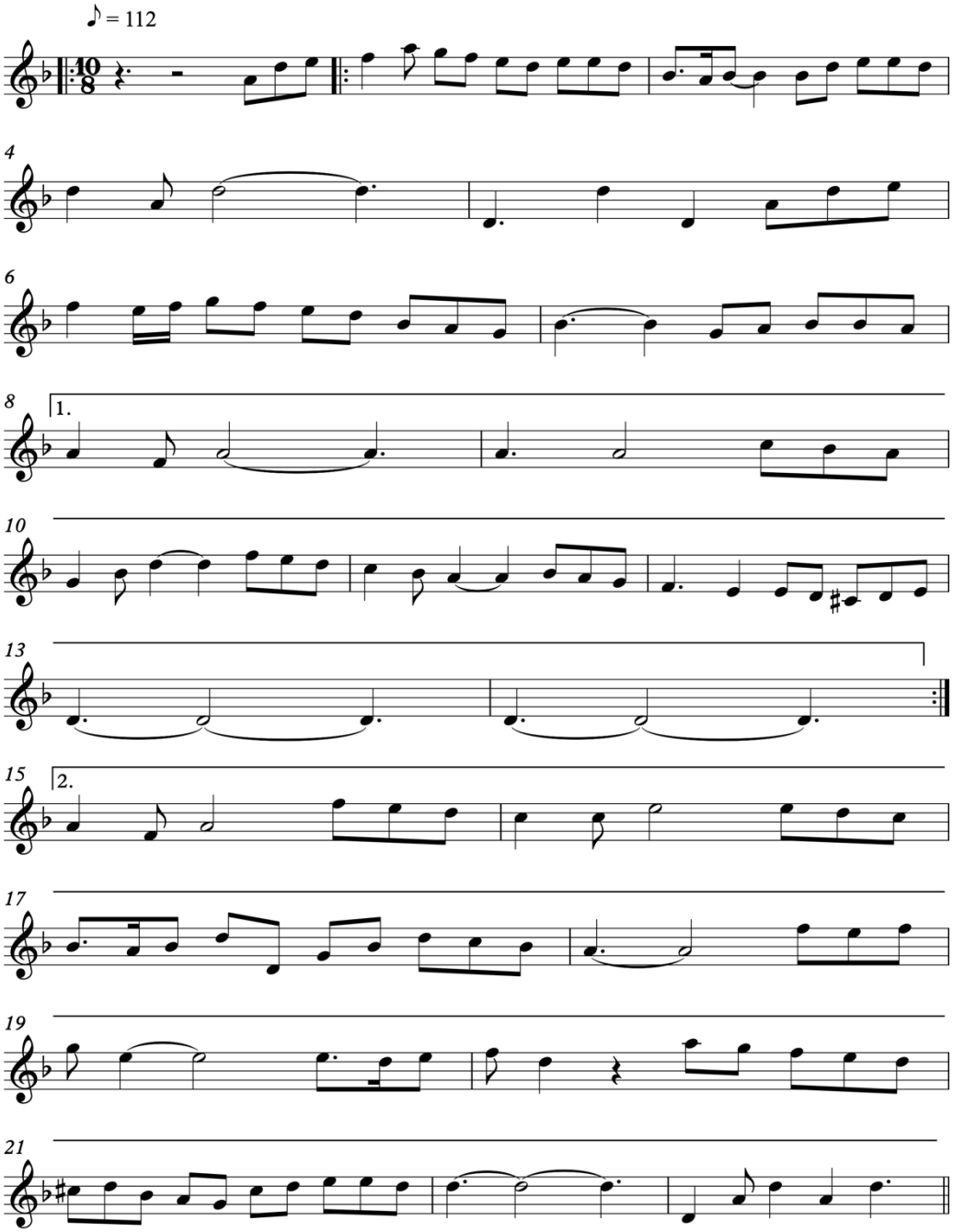
4. The Lonely lighthouse:

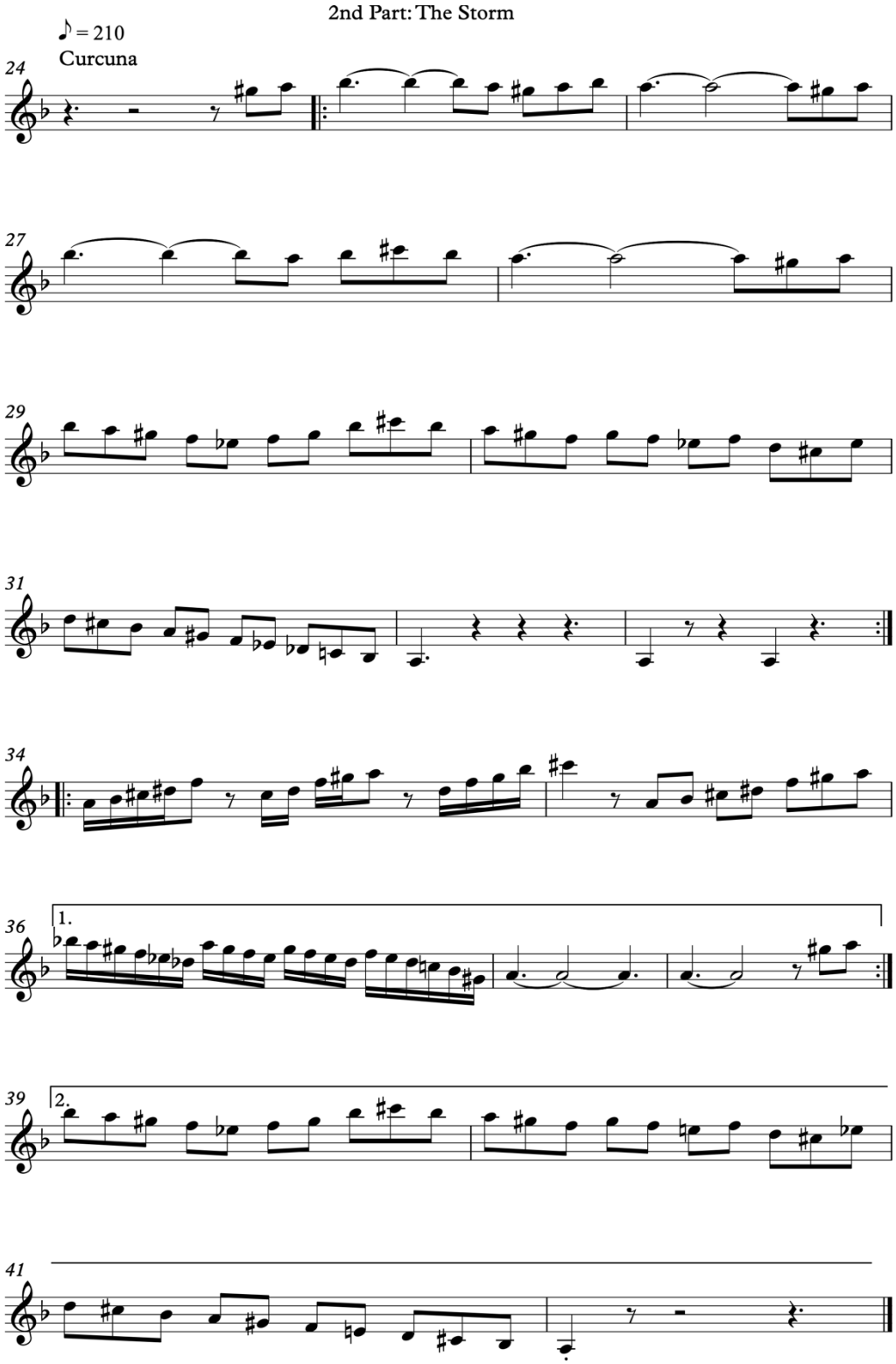
The loneley lighthouse was composed on the isolated island of Sula, in Norway, on April 2019 for Ensemble Phos (Harp, Bandoneon and Tarhu) https://ensemblephos.com. The CD *Fyr – Φάρος* is under production and the CD presentation tour will take place in Norway in May 2022.

The lonely lighthouse

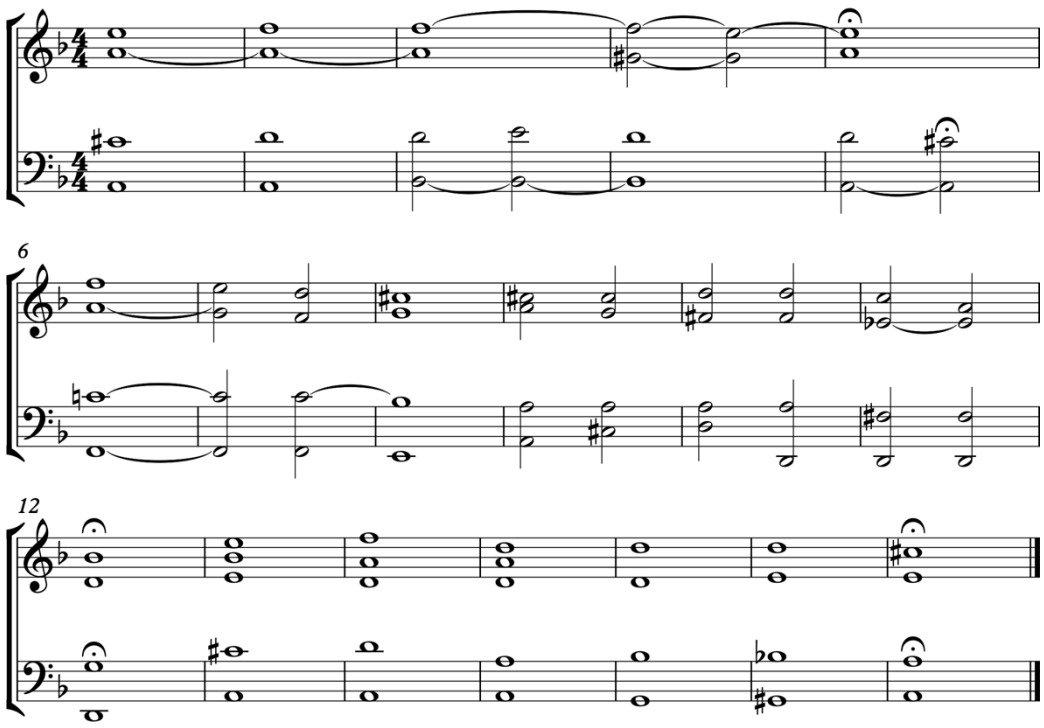
1st Part: Safe Passage
Aksak

Michalis Cholevas




2nd Part: The Storm
2
♪ = 210
Curcuna
24
27
29
31
34
36
1.
39
2.
41

Lighthouse 3rd Part - Mourning

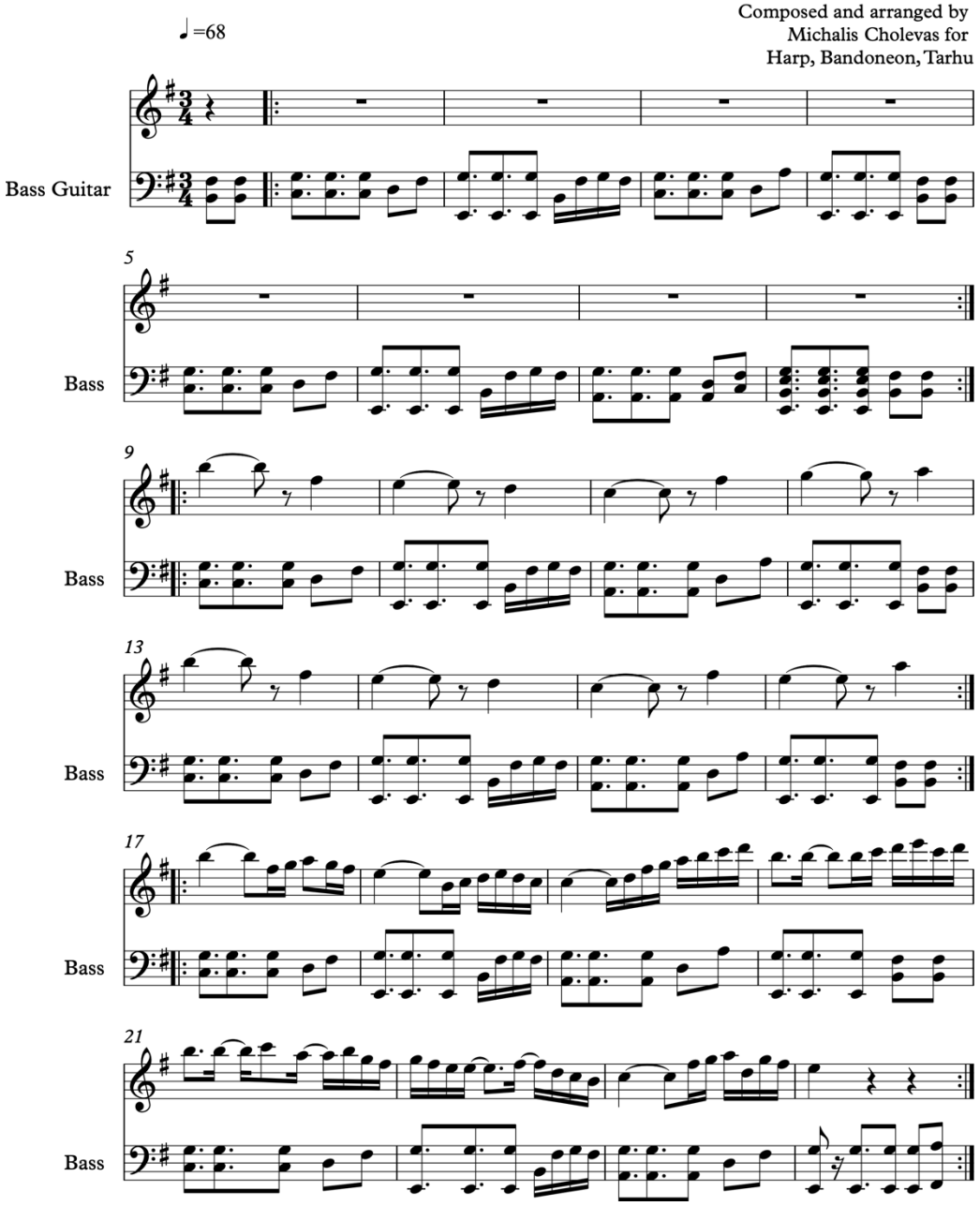


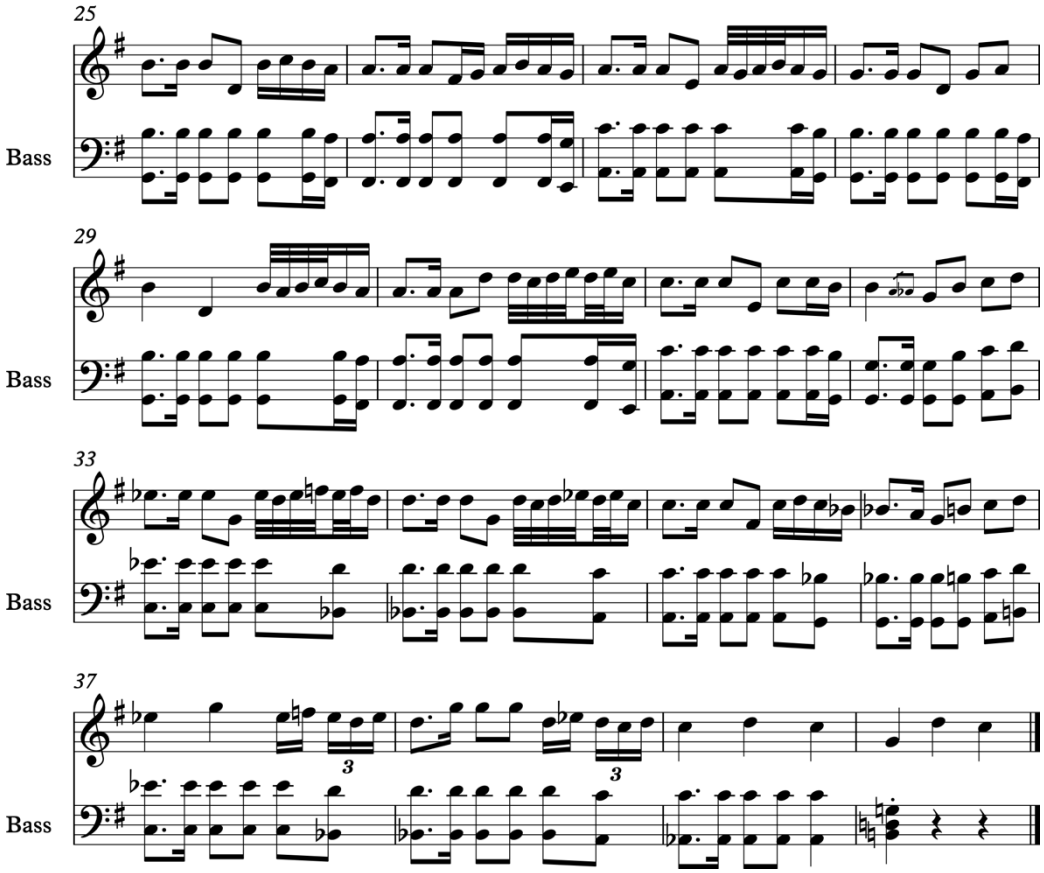
5. I will never say goodbye:

I will never say goodbye was composed on the isolated island of Sula, in Norway, on April 2019 for Ensemble Phos (Harp, Bandoneon and Tarhu) https://ensemblephos.com. It is dedicatd to the people of Sula, who supported the first edition of Artist/composer in residency. The CD *Fyr – Φάρος* is under production and the CD presentation tour will take place in Norway in May 2022.

I will never say goodbye

Composed and arranged by
Michalis Cholevas for
Harp, Bandoneon, Tarhu




25
Bass
29
Bass
33
Bass
37
3
3
Bass