

**Portfolio of Original Compositions
with Written Commentary**

by

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for the degree of Doctor of Philosophy

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School of Music

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Abstract

Heterophony, one of the fundamental forms of multilinear music, has hardly played a role in Western art music. Even after heterophonic music practices became known and were given their own term in the early twentieth century, the potential of heterophony as a way of multipart composing was seldom recognised, with some prominent exceptions including, Pierre Boulez, George Enescu, Ștefan Niculescu and William Sweeney. The present thesis is an examination of heterophony with the intention of making the phenomenon fruitful for my own composing. For this purpose, it was initially necessary to sharpen the term, which is often used vaguely and inconsistently in musicological literature. Through the evaluation of the various concepts of heterophony—from the introduction of the term into the musicological discourse (in 1901, by Carl Stumpf) up to the current state of research (Pärtlas 2016)—as well as through my own transcriptions and analyses of non-European and traditional heterophonic music, I arrived at a preliminary definition of heterophony which currently serves as the basis for my compositional work.

The study identifies two types of heterophony: variant heterophony and ornamental heterophony. Both categories are based on 'labelled' or 'skeletal' melodies; ornamental heterophony, however, is sometimes also based on 'melodic patterns'. The main difference between the two types is that in variant heterophony some pitches of the basic melody are replaced by others in some of the parts involved, while in ornamental heterophony various forms of simultaneous ornamentation 'actualise' the otherwise unchanged skeletal melody.

Paradoxically, the great difficulty in defining the boundaries between heterophony and related forms of multilinear music turns out to be a source of inspiration for my work as a composer. For this reason and because my concept of heterophony only gradually emerged in the course of my studies, not all of the compositions submitted are based on the definition mentioned above. Rather, as discussed more in depth in the second section of this thesis, the composition portfolio shows my path to a better understanding of heterophony.

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List of Compositions

Studies for Two Performers

šēru for one performer

Invocatio for soprano and viola

anfár for brass trio

šēru IIa for trumpet, trombone, guitar, cello, piano and percussion

ETYM III for saxophone and accordion

Due Canti di Ungaretti for voice and bass flute

Ghasel for soprano and piano

Lied der Minne for five voices

Das ander Lied for soprano and bass recorder

Glossary of Performance Directions

Invocatio

page 1: fast unhörbar, unbeweglich / *almost inaudible, motionless*

kleinste Bewegung, fast unmerklich / *slightest movement, almost imperceptible*

langsames trem., aber unregelmäßig / *slow, irregular tremolo*

trem. langsam beginnen / *start tremolo slowly*

immer im Strich „umschalten“ (Brüche) / *always change while bowing (break)*

(ein Atem) fast gesprochen / *(sing on one breath) almost like spoken*

nicht absetzen / *“freeze“ (keep bow on strings)*

page 3: in E nur relative Koordinierung von Sopran und Viola /

in E only relative coordination of soprano and viola is required

page 4: ab G: Sopran und Viola relativ unabhängig voneinander / *From G to the end:*

soprano and viola play relatively independent from each other

anfár

page 1: Übedämpfer / *practice mute*

Stimme / *voice*

I, bar 6: langsam beginnen / *begin slowly*

- bar 7: präzise / *accurately*
 bar 15: Wah-wah-Dämpfer / *wah-wah mute*
 bar 20: Stimme / *voice*
 bar 24: (Hintergrund); ohne Dämpfer / *(background); remove mute*
 bar 26: kompliziert / *knotty*
- II, bar 1: Übedämpfer / *practice mute*
 Wah-wah-Dämpfer / *wah-wah mute*
 bar 29: etwas gequält / *somewhat tortured*
- III:
 Harmon-Dämpfer / *Harmon mute*
 bar 3: unmerklich / *imperceptibly*
 weiter spielen bei / *continue at*
 Alternativer Beginn / *alternative beginning*
 bar 18: Aufschwung / „*revival*“

šēru IIa

Die kleine Trommel wiederholt an den angegebenen Stellen für die angegebene Dauer das Motiv. Dabei ist das Motiv beständig zu variieren, zu dehnen und zu stauchen, etwa so: Das Motiv ist mit der Hand (Fingerkuppen) in einer leichten, wischenden Bewegung zu spielen. /

The snare drum repeats the motif at the specified places for the specified duration. The motif must be constantly varied, stretched and compressed, for example like this: The motif is to be played with the hand (fingertips) in a light, wiping gesture.

- bar 1, cello: am Dämpfer / *near the mute*
 page 1: in Balance mit Trompete und Posaune /
in balance with trumpet and trombone
 Akzente in pp / *accents in pp*
- bar 23: Pedal nachtreten: Nachhall /
Press the pedal shortly after playing the chord: echo effect
- bar 35: tiefstmöglicher Ton, eventuell mit Flatterzunge /
lowest possible tone, possibly with flutter tongue
- bar 46: Pedalwechsel zwischen den Gruppen Takt 46 und 47 /
change of pedal between bars 46 and 47

ETYM III

- page 1: flackernd, heimlich / *flickering, secretly*
halbe Luft / *half air*
“flexible Sekunde”: minimale Dehnungen und Stauchungen der Grund-
Zeiteinheit; Synchronizität zwischen den beiden Instrumenten ist nicht
erforderlich / “*flexible second*”: *minimal elongation and compression of the*
basic time unit; synchronicity between the two instruments is not required
- bar 23: weich / *soft*
- bar 26: Ton / *tone*
- bar 35: etwas hektisch / *a little frantic*
- bar 116: flackernd / *flickering*
- bar 123: durcheinander wegnehmen, “abbröckeln” lassen /
take tones away randomly, let the chord “crumble away”
- bar 128: mit Nachdruck / *emphatically*
- bar 200: aus Nachklang herauswachsen lassen; “hinübergreifen”, aber nicht hektisch /
let the tone grow out of the resonance; reach over, but not hectically
- bar 201: vorsichtig / *delicately*

Due Canti di Ungaretti

Emblema

- bar 36: auf dem Schlag / *on the beat*
- bar 37: Die Länge der nun folgenden Fermaten sollte zwischen 2" und 8" liegen; sie
kann pro Abschnitt ad lib. festgelegt werden /
The lengths of the following fermatas should be between 2" and 8"; they can
be specified ad lib for each section

Fase

- page 1: Rhythmische Präzision ist nicht erforderlich; beide Stimmen in Grenzen
unabhängig / *Rhythmic precision is not required; both parts are independent*
to a certain extent
- bar 7: kurz vor dem nächsten Ton schnelle, undeutliche Umspielungsfigur /
fast, indistinct embellishment figure shortly before the following tone
- bar 13: verschmiert / *blurred*
- bar 23: verschmiert / *blurred*

Lied der Minne

II: sehr vorsichtig, zögerlich / *delicately, hesitantly*

Version mit gleichen Stimmen / *Version for equal voices*

Version mit gemischten Stimmen / *Version for mixed voices*

Das ander Lied

1. Bicinium

Text: Anonymes Flugblatt aus dem 30-jährigen Krieg /

Text: Anonymous leaflet from the 30-year war

2. Motet

Blockflöte weitgehend unabhängig von der Stimme /

Recorder largely independent of the voice

wenn möglich, Subbass oder Paetzold-Bass /

play it on a contrabass recorder or a Paetzold, if possible

schwer / *heavy*

Bassflöte eine Oktave höher / *bass flute sounds one octave higher*

3. Monophonie

ein Atem / *sing on one breath*

ungefähre Tonhöhe („Helligkeitswert“); Mischung aus Singen und Sprechen /

Approximate pitch ("brightness value"); mixture of singing and speaking

immer subito im Sprechrhythmus für sich murmeln; in Unterscheidung zum Singen /

subito mumbling in a normal speaking rhythm

ein Atem / *sing on one breath*

List of Recordings

- 1 *šēru*
Susanne Fröhlich, garklein recorder
July 2, 2017, *To Be Sung On The Water* Festival, Berlin
- 2 *šēru*
Susanne Fröhlich, treble recorder
July 2, 2017, *To Be Sung On The Water* Festival, Berlin
(performed on a moving boat, hence the engine noise)
- 3–6 *šēru*
Nathan Plante, trumpet
July 8, 2016, *Randspiele* Festival, Zepernick
- 7 *Invocatio*
Claudia van Hasselt, soprano/Zhechao Xie, viola
April 18, 2015, St.-Matthäuskirche, Berlin (recording of the first performance)
- 8 *anfár*
Ensemble Apparat
October 3, 2015, Akademie der Künste Berlin (as part of the Ensemble Kollektiv project)
- 9–10 *šēru IIa*
Ensemble Ascolta
November 11, 2015, *Neue Musik Delmenhorst* Festival, Delmenhorst (recording of the first performance)
- 11 *ETYM III*
Ensemble LuxNM
June 10, 2018, Vivaldi-Saal, Berlin
- 12 *Lied der Minne*
Students of the Hochschule für Musik 'Hanns Eisler' Berlin
July 5, 2018, *Randspiele* Festival, Zepernick
- 13 *Lied der Minne*
Ensemble AuditivVokal
June 14, 2018, Deutsches Hygiene-Museum Dresden
- 14 *Das ander Lied*
Claudia van Hasselt, soprano/Susanne Fröhlich, bass recorder
April 18, 2015, St.-Matthäuskirche, Berlin (recording of the first performance)
- 15 *Improvisation on 'Das ander Lied'*
Susanne Fröhlich, recorder/Zhechao Xie, viola
April 18, 2015, St.-Matthäuskirche, Berlin (recording of the first performance)

Introduction

Heterophony as a way of multi-part composing has fascinated me for more than ten years. My interest was not, as one might expect, aroused by traditional and non-European music but by works of Western art music. Robert Schumann's 'imprecise unison', labelled by some scholars as 'heterophony', was a major inspiration, as was the music of George Enescu, who was arguably the first composer to consciously apply heterophonic techniques in his compositions.¹ What fascinated me in their music—as well as in the heterophonic passages in Beethoven's, Mahler's and Stravinsky's works and later in non-European music—was the beguiling ambiguity, the confusing multi-dimensionality of the musical texture. Incidentally, Felix Hoerburger attributes this artful characteristic to 'folk music' all over the world as one of its most important general traits: 'folk music', according to Hoerburger, is not supposed to be 'beautiful', but rather 'exciting'. It should create 'a constant feeling of dizziness'.² To find out more about the origins and nature of heterophony, I needed to look to traditional and non-European music.

Before I started my PhD, I applied heterophonic structures to my own compositions in a rather subjective way. It was my intention to use my doctoral studies to build a more objective theoretical basis that engages thoroughly with musicological research. Whilst homophony and contrapuntal polyphony have been widely and fruitfully explored and developed by composers of the twentieth and twenty-first centuries, the potential lying in heterophony as a way of multipart composing has hitherto been neglected. My aim is to create a concept of heterophony that is not only comparable to that of contrapuntal polyphony, but also to use it in a similar way. This involves reconceptualising the history of Western art music in which heterophony takes the

¹ The term 'imprecise unison' [*ungenaues Unisono*] was coined by Reinhold Brinkmann in 1984 and has since generally been accepted: Reinhold Brinkmann, 'Das ungenaue Unisono. Sechs Kommentare zu Schumanns "Zwielicht"', *Musik-Konzepte 95: Robert Schumann*, ed. by Heinz-Klaus Metzger and Reiner Riehn (1997), pp. 49–70. Charles Rosen calls the compositional technique in question 'heterophonic', as does Anno Schreier: Charles Rosen, *The Romantic Generation. Based on the Charles Eliot Norton Lectures* (Cambridge, MA: Harvard University Press, 1995), p. 32 and p. 350; Anno Schreier, "'Kollision" und "Verschiebung". Satztechnische Modelle in Liedern Robert Schumanns', *Zeitschrift der Gesellschaft für Musiktheorie*, 7.1 (2010), 99–110 (p. 109). Having studied heterophonic practices in various musical cultures all over the world I have come to the conclusion that the musical textures described should not be called heterophonic; the topic is discussed in chapter 1.3.4.—For more information on heterophony in Enescu's music see Pascal Bentoiu, 'Enescu, Georges', in *Die Musik in Geschichte und Gegenwart. Personenteil*, vol. 6, ed. by Ludwig Finscher (Kassel: Bärenreiter, 2001), columns 327–336; Ștefan Niculescu, 'Die Universalität George Enescus', in *Ștefan Niculescu. Archiv für osteuropäische Musik*, ed. by Violeta Dinescu and Eva-Maria Houben, vol. 1 (Oldenburg: BIS, 2013), pp. 64–71; Ștefan Niculescu, 'George Enescu und die musikalische Sprache des 20. Jahrhunderts', in *Ștefan Niculescu. Archiv für osteuropäische Musik*, ed. by Violeta Dinescu and Eva-Maria Houben, vol. 1, pp. 41–48. (Oldenburg: BIS, 2013), pp. 89–95.

² Felix Hoerburger, *Musica vulgaris. Lebensgesetze der instrumentalen Volksmusik* (Erlangen: Universitätsbund Erlangen-Nürnberg e.V., 1966), p. 48.

place of counterpoint and homophony, and thus opens up a new artistic and discursive space.

Musicological writings that deal exclusively with the subject are few and far between. The articles on 'heterophony' in the two most important music encyclopaedias, the *Musik in Geschichte und Gegenwart* and the *New Grove Dictionary of Music and Musicians*, proved to be of little help: Rüdiger Schumacher rejects the concept of 'heterophony' altogether, whereas Peter Cooke provides a far too general definition, using examples from Beethoven's *Missa solemnis* to Gaelic Psalm Singing.³

Very few musicologists have attempted to find an accepted definition of heterophony that considers all the difficulties the phenomenon entails. I therefore studied musicological descriptions and analyses of musical practices commonly associated with heterophony with the aim of more deeply understanding what heterophony is. Additionally, I performed my own research by transcribing and analysing traditional and non-European music as well as studying the works of composers who use heterophonic procedures in their music. My participation in the Gamelan workshop which Sarah Walsh organised at the University of Leeds in 2015, enabled me to experience heterophony in practice.

One of my strategies for approaching heterophony was to transcribe and analyse recordings of heterophonic music. This may seem somewhat old-fashioned. The practice of transcribing and analysing 'vernacular' music has 'largely passed out of Anglo-American ethnomusicology', although 'most ethnomusicologists would agree that musical analysis is necessary to understand how a particular musical tradition works, what is distinctive about it, and how, precisely, it bears the personal, social, and cultural meanings attributed to it.'⁴ Since my aim is to develop a concept of heterophony comparable to that of contrapuntal polyphony and homophonic composition techniques, it is mainly the 'sonic outcome' which interests me. This is the reason why my investigations focus on the 'inner musical' aspects, or the 'mechanics', of heterophonic textures such as melodic shape, tonal relationships, rhythmical processes et cetera. Although I made sure to consider the wider cultural context as well as the 'musical behaviour' associated with each heterophonic style I studied, my main interest was the musical texture itself, or, to use the terminology of Allan P. Merriam's tripartite model of music-making (concept—behaviour—sound), the 'sound' level of heterophonic music.⁵ Working frequently with music from 'other cultural forms', the composer Liza Lim comments on this topic as follows:

³ Rüdiger Schumacher, 'Heterophonie', in *Die Musik in Geschichte und Gegenwart*. Sachteil, vol. 4, ed. by Ludwig Finscher (Kassel: Bärenreiter, 1996), columns 274–279 (columns 277–279); Peter Cooke, 'Heterophony', in *The New Grove Dictionary of Music and Musicians*, vol. 11, ed. by Stanley Sadie (Oxford: Oxford University Press, 2001), p. 465.

⁴ Timothy Rice, *Ethnomusicology. A Very Short Introduction* (Oxford: Oxford University Press, 2014) p. 41.

⁵ Alan P. Merriam, *The Anthropology of Music* (Evanston, IL: Northwestern University Press, 1964), p. 32.

The tools of modernism give you ways of thinking abstractly about materials. The idea of deconstructing things into their parameters—reforming them actually—I think is very useful as a way of analysing other cultural forms.⁶

Tim Rutherford-Johnson, in his essay on Lim's music, concludes that

[c]omposing in parameters allows for the analysis of phenomena and their translation through pattern into musical forms, but it also allows for the transformation, development and interconnexion of materials while retaining parts of their fundamental identity.⁷

Interestingly, the cultural context of a heterophonic style is often reflected in the music, as can be seen in the hierarchical distribution of the parts in Chinese *Kunqu* opera or in the religiously inspired 'grassroots democracy' in Gaelic Psalm Singing (see chapter 1.2.3.2.2.); I tried to incorporate this aspect in my own compositions wherever possible. On the other hand, it is undeniable that my compositional approach implies a fundamental shift in function: while the parishioner has the communicative aspect in mind—'vertically' to God and 'horizontally' with the other singers—it is mainly the sound result as an aesthetic object that interests me.⁸

In regard to the transcriptions, my goal was not just 'the experience of transcription itself', as Ter Ellingson describes one of the motives for ethnomusicological transcription,⁹ but rather the process of transcribing a piece of heterophonic music brought me 'a more intensive relationship with the particularities of sound.'¹⁰ Indeed, I felt that it also brought me closer to the people who produce this 'sound'; it afforded me a more intimate portrayal of the musicians through the lens of my studies.

By repeatedly listening to very short sections of a piece of music, which the process of transcribing demands, I memorised many of the transcribed songs by heart—including all the 'interpretative' peculiarities of an individual singer or instrumentalist. This enabled me not only to sing the songs myself and thereby familiarise myself with the specific techniques of tone production associated with heterophonic music, but also to analyse the songs 'in my mind', wherever I was, independent of scores and recordings.¹¹ However, the analytical tools with which I approached the recordings are

⁶ Quoted in Tim Rutherford-Johnson, 'Patterns of Shimmer: Liza Lim's Compositional Ethnography', *Tempo*, 65.258 (2011), 2–9 (p.6).

⁷ Ibid.

⁸ Calum Martin, 'Session 2', paper given at the *Gaelic Psalm Singing and American Music Conference*, 25 April 2015. <http://www.stlspae.org/gaelic-psalm.html> (video recordings) [accessed 23 September 2016] (my transcription).

⁹ Ter Ellingson, 'Transcription', in *Ethnomusicology: An Introduction*, ed. by Helen Myers (New York, NY: Norton, 1992), pp. 110–151 (p. 147).

¹⁰ Michael Tenzer, 'Introduction: Analysis, Categorization, and Theory of Musics in the World', in *Analytical Studies in World Music*, ed. by Michael Tenzer (New York, NY: Oxford University, 2006), p. 8.

¹¹ 'Musicians in many cultures preserve complex musical structures in their minds [...] and think theoretically or analytically about them. Analysis is made possible by musical memory.' Tenzer, 'Introduction', p. 6.

of Western provenance; the musical participants whom I so closely studied could not provide corrective feedback regarding my interpretation.

Another significant outcome of transcription was that it acquainted me with the possibilities and limitations of notating heterophonic music. This proved helpful for my own compositions. The result of my investigation is a preliminary concept of heterophony; it serves as a modifiable working hypothesis for my compositional work.

My findings are mostly based on my studies of the musical cultures of two widely separated parts of the world: East Asia, especially China (*Kunqu* opera and folk music), Myanmar and Japan (*gagaku*) on the one hand, and Gaelic Psalm Singing on the other; however, I tried to consider as many heterophonic styles as possible in order to obtain a comprehensive concept of heterophony. At this point the question may arise whether it is permissible to isolate individual aspects of a foreign musical culture and to use them in another style. It is difficult to explain why a particular musical style, technique or practice appeals to someone. Heterophony has fascinated me since my first encounter with heterophonic music more than ten years ago. The following description by the composer Dieter Mack, whose music often deals with cross-cultural relationships, seems a good summary of the adaption process of a musical style:

One's own musical language can only be the cumulative result of a comprehensive transformation of all the experiences that one carries at each particular moment in life. I call this the process of finding one's own culture. What is being sought is something authentic that transcends the alleged dichotomy between synthesis and antithesis.¹²

In the following chapters I present my own approach towards a better understanding of heterophony. The text is divided into two main sections: in separate subchapters of the first part, I discuss individual aspects related to heterophony such as melody, ornamentation and rhythm, and I include my conclusions and a preliminary definition of heterophony.

The second part presents detailed analyses of the works I composed during my studies; they are based on my research findings and document the progress of my examination of heterophony. Most of the compositions submitted are not manifestations of an ironclad theory of heterophony; rather, they explore techniques and insights in practice and examine certain aspects of heterophony. They show ways in which heterophony can be used in place of contrapuntal polyphony and homophony in contemporary composing.

¹² Dieter Mack, 'In eigener Sache II', in *Dieter Mack, Komponist und Musikethnologe* <<http://www.dieter-mack.de>> [accessed 28 February 2016] (my translation).

1. Towards a Definition of Heterophony

1.1. Conceptual History

Since Carl Stumpf, in his 1901 book *Tonsystem und Musik der Siamesen*, introduced the term 'heterophony' into musicological terminology, it has been one of the most ambiguous.¹³ Roughly 60 years after its first occurrence, Curt Sachs presented the following four, partly contradictory and not altogether serious, definitions of the term:

1. Each piece of music that contains 'different notes' is heterophonic.
2. All forms of 'different sounding-ness' [Anderstönigkeit], excluding Western 'scholarly' post-medieval polyphony and harmony, are heterophonic.
3. Heterophony is simultaneous variation.
4. All kinds of 'sounding together' [*Zusammentönen*] that are based on tradition and improvisation are heterophonic: 'contrappunto alla mente' as opposed to 'res facta'.

Sachs concluded that 'heterophony is one of the most vague terms in the musicological glossary and that only one thing is certain: heterophony includes two simultaneous but differing parts.'¹⁴ Fifty years later, a vast number of contradictory definitions relating to an equally large variety of musical styles caused Rüdiger Schumacher in his essay entitled somewhat sarcastically 'Heterophonie—ad infinitum?' to suggest using the term 'heterophony' in a transitional sense; his hope was that with a growing understanding of culture-specific concepts and techniques of harmonic construction [*Mehrklangsbildungen*] in the various musical cultures throughout the world, the concept of 'heterophony' would eventually be rendered redundant.¹⁵ Some musicolo-

¹³ Stumpf adopted the term from Plato who used the word when discussing 'the unsuitability of music for lyre and voice in musical education. It is not clear if he meant that the "other voice" (the lyre) provided a contrasting melody, a harmonization of the vocal part or deliberate variations on it. Thus its meaning could range from reference to minute discrepancies in singing or playing in unison or octaves [...] to the most complex of contrapuntal writing.' Cooke, 'Heterophonie', p. 465; cf. Herwig Görgemanns and Annemarie Jeannette Neubecker, "'Heterophonie" bei Plato', *Archiv für Musikwissenschaft*, 23 (1966), 151–169.

¹⁴ Curt Sachs 1957, 'Heterophonie', in *Die Musik in Geschichte und Gegenwart*, vol. 6, ed. by Friedrich Blume (Kassel: Bärenreiter, 1957), columns 327–330 (column 329f. [my translation]).

¹⁵ Rüdiger Schumacher, 'Heterophonie—ad infinitum?' in *Mehrstimmigkeit und Heterophonie. Bericht zur Tagung in Wien, 11. bis 12. Dezember 1999*, ed. by Gernot Gruber, August Schmidhofer, Michael Weber (Frankfurt am Main: Peter Lang, 2005), pp. 51–67 (p. 60). The ambiguity and vagueness of the term 'heterophony' tempted Rebekah Plueckhahn to use it in a very broad sense. During her field studies at a Mongolian wedding ceremony she observed that the singing 'seemed to include the intermingled talking and laughing, where ongoing chatter did not at all cease during moments of singing, but combined with it. This intermingling of sociality and musicality, I argue, is a combined musical-social heterophony.' She later explains that 'in using the term "heterophony", I wish to utilise the notion that the value of heterophony as a term of translation lies in its insistent multivalence, its imprecision.' Rebekah Plueckhahn, 'Fortune, Emotion and

gists reject the term altogether without giving a precise reason. Peter Brenner, for instance, in his study of Turkish instrumental folk music, writes that the musical practice ‘traditionally’ called heterophonic should better be labelled ‘loose unison’ or ‘melic diversification’; he does not justify this.¹⁶

Heterophony is usually defined as the ‘simultaneous variation [...] of what is identified as the same melody’ or, as Bruno Nettl states, ‘the use of slightly modified versions of the same melody by two or more performers.’¹⁷ These definitions prove to be too vague when it comes to a distinction from other plurivocal phenomena.¹⁸ Two examples illustrate the difficulties in defining the boundaries of the term ‘heterophony’:

(1) In many respects, interferential diaphony [*Schwebungsdiaphonie*], a musical practice that occurs, for example, in Bulgarian and Albanian folk music, is structurally akin to heterophony: two or three parts/voices sing or play together in small distances around a tone ‘axis’, forming intervals that are often smaller than a semitone.¹⁹ Unisons are less frequent than they might be in most textures that are labelled ‘heterophonic’. The fundamental distinction from heterophony seems to be the fact that the single melodic line of a *Schwebungsdiaphonie* texture is meaningless without the others, as the friction between the voices is the most important characteristic, and indeed is the purpose of this musical practice. It could also be true that the single melodic line has no meaning if isolated from its heterophonic environment, as will be discussed in chapter 1.3.5.

The definition of the ‘imprecise unison’ [*ungenaues Unisono*], a term coined by Reinhold Brinkmann for a compositional technique Robert Schumann sometimes applied in his songs, reads like a description of heterophony:

Poetics: The Intersubjective Experience of Mongolian Music Sociality’, *The Asia Pacific Journal of Anthropology*, 15.2 (2014), 123–140 (p. 128f.). Used in this way, the term ‘heterophony’ loses all its meaning. Given the different, indeed contrary natures of singing, laughing and talking (with regard to sound production, pitch, rhythm, temporal structure and ‘meaning’), the term ‘polyphony’ would seem to be more appropriate, if the use of traditional terminology is suitable at all (cf. chapter 1.2.2.1.).

¹⁶ Klaus-Peter Brenner, *Dörfliche Musik aus dem Distrikt Bodrum, Südwest-Türkei: Stiluntersuchungen anhand der Sammlung Reinhard 1968 und eigener Feldaufnahmen 1984–86*, 2 vols. (Münster: Lit, 1992), p. 103 (my translation).

¹⁷ Cooke, ‘Heterophony’, p. 465; Bruno Nettl, *Music in Primitive Culture* (Cambridge, MA: Harvard University Press, 1956), p. 90.

¹⁸ I use the word ‘plurivocality’ as an umbrella term for all polyphonic phenomena [*Mehrstimmigkeit*] in order to distinguish it from (contrapuntal) polyphony. The term was introduced into musicological terminology by Simha Arom in his book *African Polyphony and Polyrhythm. Musical Structure and Methodology*, translated from French by Martin Thom, Barbara Tuckett and Raymond Boyd (Cambridge: Cambridge University Press, 1991), p. 20.

¹⁹ G. Florian Messner, *Do they Sound Like Bells or Like Howling Wolves? Interferential Diaphony in Bistritsa. An Investigation into a Multi-Part Singing Tradition in a Middle-Western Bulgarian Village* (Frankfurt am Main: Peter Lang, 2013), pp. 64–67; cf. Rudolf M. Brandl, ‘Universale Basis-Definitionen von Mehrstimmigkeit, Polyphonie und Heterophonie (=multiple Abläufe) aus Sicht der Vergleichenden Musikwissenschaft’, in *Mehrstimmigkeit und Heterophonie. Bericht zur Tagung in Wien, 11. bis 12. Dezember 1999*, ed. by Gernot Gruber, August Schmidhofer, Michael Weber (Frankfurt am Main: Peter Lang, 2005), pp. 9–36 (p. 22).

[T]he singing voice and higher piano voice are identical and not identical at the same time. They run parallel in unison [...] and are nonetheless separated by minute differences, which result in friction and sometimes sounded dissonances.²⁰

Musical textures like this can be found in the works of Beethoven, Schubert, Mendelssohn and other composers of the classic and romantic eras;²¹ however, they have only rarely been described as ‘heterophonic’, and a clear distinction between heterophony and ‘imprecise unison’ has not yet been made. The reason for this may be the fact that heterophony is often associated with improvisational or quasi-improvisational practices;²² furthermore, it is not clear whether heterophony happens accidentally or deliberately.²³ The danger of confusing non-European musical practices with Western polyphony may be another reason that musicologists avoid using the term ‘heterophony’ when discussing art music of the nineteenth and twentieth centuries. The difference between ‘imprecise unison’ and heterophony is discussed in detail in chapter 1.3.4.

Despite the difficulties, some scholars cling to the concept of heterophony. William P. Malm, for instance, in his essay ‘On the Meaning and Invention of the Term “Disphony”’, counts heterophony as one of the fundamental forms of plurivocality. According to his definition, heterophony is

multipart music in which each part is rhythmically different (like counterpoint) but the difference is caused by simultaneous variations on the same melody by each of the multi-parts.²⁴

Oskár Elschek, another advocate of the concept of heterophony, points out that the term is ‘indispensable’ to the terminology that refers to the network of plurivocality.²⁵ In order to make it possible to categorise the great diversity of polyphonic phenomena, Elschek developed a matrix showing the interdependence among most types and techniques of plurivocality. ‘Heterophony’, along with ‘monody’, ‘homophony’ and ‘polyphony’ is among the generic terms in the matrix, and can thus be analysed in

²⁰ Reinhold Brinkmann, quoted in: Yonatan Malin, *Songs in Motion: Rhythm and Meter in the German Lied* (Oxford: Oxford University Press, 2010), p. 124.

²¹ Peter Cooke quotes a short excerpt from Beethoven’s *Missa solemnis* in his New Grove entry on ‘Heterophony’: Peter Cooke, ‘Heterophony’, p. 465. The first composer to expressly include heterophonic structures in his compositions might have been George Enescu: cf. Niculescu, ‘Die Universalität George Enescus’, p. 40, and Niculescu, ‘George Enescu und die musikalische Sprache’, p. 44f.

²² Cf. chapter 1.3.2.

²³ Cooke, ‘Heterophony’, p. 465; Marius Schneider, *Geschichte der Mehrstimmigkeit* (Tutzing: Hans Schneider, 1969), p. 47.

²⁴ William P. Malm, ‘On the Meaning and Invention of the Term “Disphony”’, *Ethnomusicology*, 16.2 (1972), 247–249 (p. 248).

²⁵ Oskár Elschek, ‘Begriffliche Differenzierungsmöglichkeiten der mehrstimmigen Singpraxis und Heterophonie’, in *Mehrstimmigkeit und Heterophonie. Bericht zur Tagung in Wien, 11. bis 12. Dezember 1999*, ed. by Gernot Gruber, August Schmidhofer, Michael Weber (Frankfurt am Main: Peter Lang, 2005), pp. 37–50 (p. 46).

relation to all other terms and can be redefined as necessary for each individual case (see figure 1).²⁶

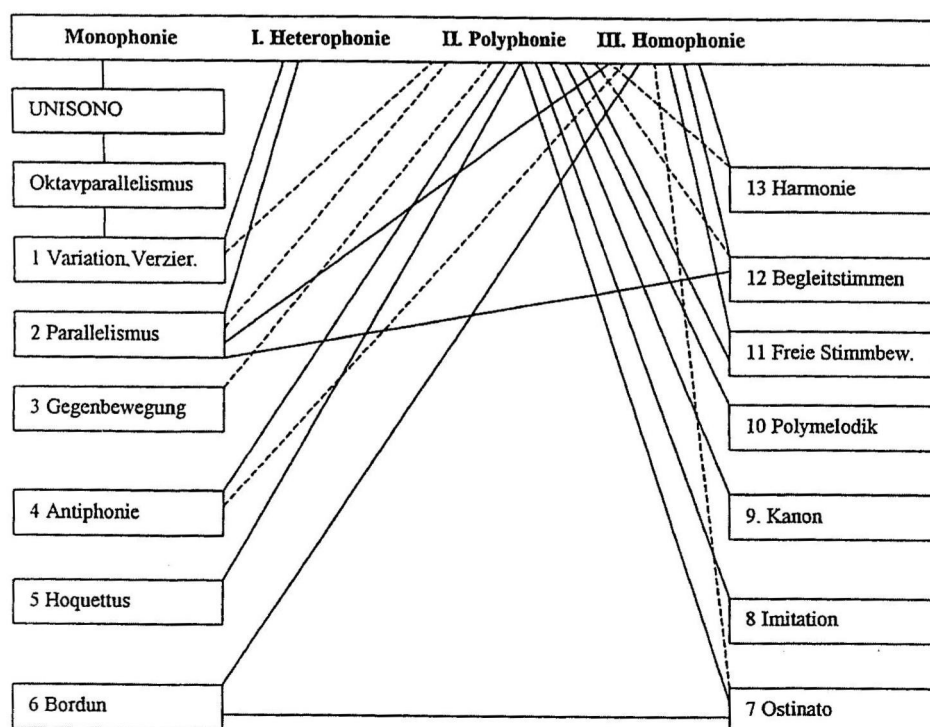


Figure 1: Oskár Elsček: 'Types and techniques' of plurivocality.

Another approach, which attempted a more sophisticated definition of heterophony, was taken by Alica Elsčeková. In her method, the results of statistical analyses of pitch relationships are translated into graphic representations. This shows a visual depiction of the 'degree' of the relationships among all forms of plurivocality. She does this by placing the unison as the starting point on the median of the graph; parallel seconds are shown as parallel with the median, and drones are indicated as horizontal and vertical lines. In this representation she can show the degrees of the relationships between all forms of plurivocality with great precision (figure 2).²⁷ With Elsčeková's method, the variety of 'heterophonic' phenomena can be distinguished from related forms.

²⁶ Ibid., p. 50.

²⁷ Alica Elsčeková, 'Mehrstimmige traditionelle Singformen im Mittelmeerraum', in *Mehrstimmigkeit und Heterophonie. Bericht zur Tagung in Wien, 11. bis 12. Dezember 1999*, ed. by Gernot Gruber, August Schmidhofer, Michael Weber (Frankfurt am Main: Peter Lang, 2005), pp. 131–152 (pp. 136–144).

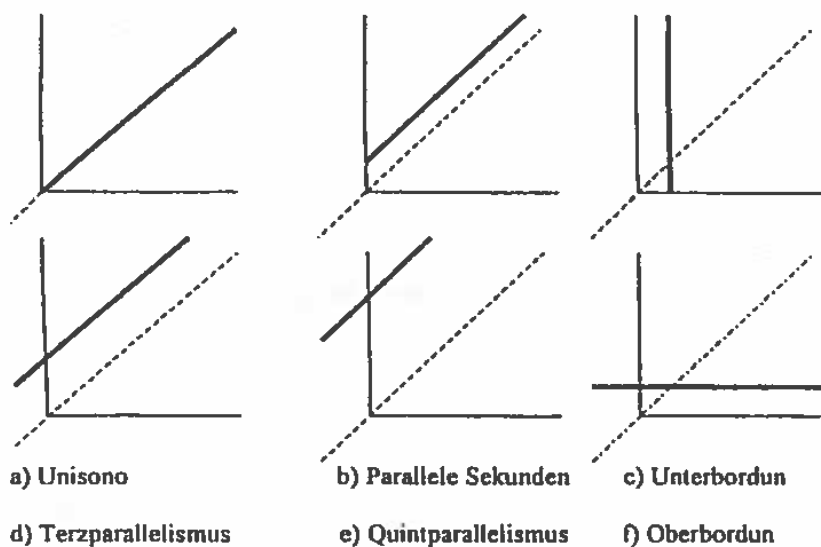


Figure 2: Alica Elscheková: Graphic representation of ‘different structural types’ of plurivocality.

Rudolf Maria Brandl, in his essay on ‘Universale Basis-Definitionen von Mehrstimmigkeit, Polyphonie und Heterophonie’, attempts to establish ‘basic’ and ‘universal’ definitions of the traditional categories of plurivocality (including interferential diaphony) using the lens of systematic musicology. Heterophony is, according to Brandl:

a two-dimensional cognitive structuring of the aural impression, where, according to certain rules, sounds and/or noises are assigned to a melodic line. There is no rule concerning the vertical relationship to the basic melody. Part-crossing is frequent and the parts often are located in the same register. Heterophonic parts are often understood as equivalent (alternative) manifestations of the basic melody (‘variant-heterophony’); they are often contrasting in their tone colour in order to avoid a vertical blending or merging of sounds. The parts can establish an independent and autonomous melodicity that can be in competition with the basic melody. It is useless to distinguish heterophony from polyphony on the basis of consonance/dissonance relations, since statistically, [...] also in ‘classical’ polyphonic music, dissonances outnumber consonances.²⁸

It is important to regard this definition as a ‘pre-structure of a cognitive musical system’. The specific set of musical regulations, i.e. the cultural superstructure of each individual music culture, has to be overlaid on the basic concept.²⁹ Brandl adds that the court and temple music of China, Vietnam, Korea and Japan is a ‘superb’ example of heterophony; heterophonic structures can also be found in avant-garde cluster compositions by composers such as Lutosławski and Ligeti.³⁰

²⁸ Brandl, ‘Universale Basisdefinitionen’, p. 19 (my translation). It should be added that in many heterophonic practices, the parts are not ‘located in the same register’ but rather spread over several octaves (cf. chapter 2.3.2.: *Study V*).

²⁹ *Ibid.*, p. 23 (my translation).

³⁰ *Ibid.*, p. 20 (my translation).

In a more recent article, Žanna Pärtlas attempts to achieve ‘a general theoretical understanding of heterophony’ by taking into account ‘different aspects of the musical process, merging the anthropological, music-theoretical and cognitive research methods.’³¹ She arrives at the following definition:

[T]he term ‘heterophony’ may be used to define *different types of music making, both one-part and multipart, which are characterized by a multilinear texture and which come into being through the process of the simultaneous variation of the same melody when the performers do not control the quality of the vertical sonorities.*³²

1.2. Aspects of Heterophony

In this chapter, I will discuss the commonly-accepted basic components of heterophony: first, I outline melody, in all its manifestations, as the basis of heterophonic music-making; after laying this foundation, I explore the various terms that are used to describe heterophonic processes: ‘variation’, ‘variants’, ‘ornamentation’. These are the procedures which are applied to the melodic basis simultaneously by at least two performers.

The comparison of different musicological descriptions of heterophony as well as my own observations and conclusions has led me to identify two basic types of traditional heterophony: variant heterophony and ornamental heterophony. They will be explained in chapters 1.2.2.2. and 1.2.3., respectively.

1.2.1. Melody, Melodic Pattern and Melos

1.2.1.1. Melody

Scholars agree—whether implicitly or explicitly—that the most important component in the formation of heterophony is melody, or, more precisely, a ‘skeletal’ or ‘labelled’ melody. It is necessary to distinguish melody in a heterophonic context, in which it is never played or sung in its original form, versus the context of European art music, in which it is based on fixed (notated) pitches and rhythms and allows only the very limited deviation of ‘interpretation’.³³ Melody in heterophonic music practices is the ‘raw material’ upon which the heterophonic procedures are built.

³¹ Žanna Pärtlas, ‘Theoretical Approaches to Heterophony’, *Res Musica*, 8 (2016), 44–72 (p. 45).

³² *Ibid.*, p. 67.

³³ Only a beginner or an ‘unexperienced musician’ may play a melody without ornamentation; cf. Daphne Wolf, *Bamarische Musik. Yodaya-Lieder im historisch-kulturellen Kontext Myanmars* (Berlin: Regiospectra, 2010), p. 93; Liang Mingyue, *Music of the Billion. An Introduction to Chinese Musical Culture* (New York, NY: Heinrichshofen, 1985), p. 220. In Vietnamese music, ‘every note has to be decorated.’ ‘[A] tone that can be heard in its raw state is a naked sound—for Vietnamese listeners it is very ugly in this state.’ Trần Văn Khê, *Die Musik Vietnams* (Wilhelmshaven: Heinrichshofen, 1982), p. 59 (my translation).

In the musical cultures I studied there is a repertoire of traditional melodies, known by all members of the respective group, which serves as the basis for all musical activities. Chinese music, for example, is

built upon a system of old, well-known stock melodies called *qupai* ('named tunes'). These melodies – which are of diverse origins such as folk song and traditional opera – are thought to have been in popular usage between the 14th and 17th centuries [...]. In their basic form, *qupai* are short tunes of fixed beat-count, usually performed at moderately-fast tempo. Their lengths vary between about 24 and 68 beats for the most common tunes.³⁴

Stephen Jones adds that '[t]hey are the basic unit of study in Chinese melody, and also a basic unit of variation.'³⁵ The music of Myanmar is also based on pre-existent melodies:

Burmese classical vocal music consists of one repertory, with two different formats for interpretation and performance. The repertory comprises several hundred traditional classical songs, clearly categorized, whose texts are contained in two large, regularly printed anthologies, the *Maha Gi-tá* and the *Gi-tá Wí-thàw-dani*. They are usually available in several editions and are basic reference works for all classical musicians. Most professional musicians know all the songs in this repertory of several hundred compositions, and many musicians often know several versions of many of the pieces.³⁶

Gaelic Psalm Singing is also built on tunes known to the whole congregation. In contrast to East Asian music, however, the melody repertoire has changed over time: new melodies were added, others disappeared. While in the immediate post-Reformation period the tunes were mostly taken from the Anglo-Genevan Psalter, melodies from a variety of sources were included in the course of time—even secular ones.³⁷

In most heterophonic textures, the melody or melodic pattern appears in a varied form. In the various movements of a suite in Chinese folk music, for example, the skeletal melody is often augmented or diminished; moreover, the melody can be transposed, which in a pentatonic context includes a change in the intervallic structure of the melody.³⁸ Similar procedures can be observed in Japanese court and temple music.³⁹

In Gaelic Psalm Singing, the underlying hymn melody is stretched rhythmically to such an extent that any sense of rhythm is lost to the listener. Nevertheless, the rhythmic proportions are more or less retained.

³⁴ Alan R. Thrasher, 'The Melodic Model as a Structural Device: Chinese "Zheng" and Japanese "Koto" Repertoires Compared', *Asian Music*, 26.2 (1995), 97–118 (p. 97f.).

³⁵ Stephen Jones, *Folk Music of China. Living Instrumental Traditions* (Oxford: Clarendon, 1998), p. 130.

³⁶ Garfias, Robert/Becker, Judith/Williamson, Muriel, 'Myanmar', *Oxford Music Online* [accessed 28 June 2016].

³⁷ For information on the history of Psalm singing in Scotland see Millar Patrick, *Four Centuries of Scottish Psalmody* (London: Oxford University Press, 1949).

³⁸ Jones, *Folk Music of China*, pp. 146–148.

³⁹ William P. Malm, *Japanese Music and Musical Instruments* (Rutland, VT: Tuttle, 1959) p. 102.

1.2.1.2. Melodic Pattern

Another musical element on which heterophonic practices may be based is the 'melodic pattern', as described by Josef Kuckertz:

[A] melodic pattern [...] is a short group of tones in a specific order where each tone has a specific temporal-metrical weightiness.⁴⁰

He later explains that

[e]very basic melodic pattern is a unit, even though it can be divided into several parts. This basic melodic pattern, always present in the mind of the performing musicians, is the background of melodic organization. From the opposite point of view the performed melody is perceived as a succession of numerous realizations of the basic melodic pattern. [...] Periods and phrases are formed by stringing together realizations of the basic melodic pattern according to the traditional principles of the musical culture in question. The balance of the form is based on the harmonious proportion of the duration of all periods and phrases.⁴¹

Kuckertz found melodic patterns as the basis for multilinear musical practices in Northern Africa and Persia. Figure 3 shows the melodic pattern underlying an Egyptian piece of music:



Figure 3: Melodic pattern underlying an Egyptian 'composition'.

The note values do not represent durations but rather indicate the rhythmical 'weight' of each note in relation to the others. In an actual performance, the melodic pattern is 'brought to life' by adding 'ornaments' and 'diminutions';⁴² if several instruments and/or singers perform together, Kuckertz calls the resulting musical texture 'heterophonic'.⁴³ Figure 4 shows an extract from a melodic pattern and four of its 'manifestations':

⁴⁰ Josef Kuckertz, *Form und Melodiebildung der karnatischen Musik Südindiens* (Wiesbaden: Schriftenreihe des Südasien-Instituts der Universität Heidelberg, 1970), p. 26.

⁴¹ *Ibid.*, p. 238.

⁴² *Ibid.*, p. 11 and p. 13.

⁴³ *Ibid.*, p. 1. In their book *Musik in Būšehr (Süd-Iran)*, Kuckertz and Massoudieh describe in detail the transformation processes of a melodic pattern: Josef Kuckertz and Mohammad Taghi Massoudieh, *Musik in Būšehr (Süd-Iran). Textband* (Munich: Emil Katzibichler, 1976), pp. 9–23, especially p. 15.



Figure 4: Melodic pattern (upper staff) and four of its manifestations.

The skeletal melody as well as the melodic pattern are often subject to compositional elaboration before heterophonic practices are applied in a performance. For example, in Chinese folk music one distinguishes ‘three main types of melodic variation:’

In the first, the basic melodic and metrical structure remains constant: decorations may be added, and individual pitches, rhythms, or melodic contours may be varied. In the second type the metrical structure is modified by augmentation or diminution. The third type consists of variation by changes in scale, mode, and key.⁴⁴

A melodic pattern, as described by Kuckertz, can serve as the background for pieces of music that consist of multiple parts. Kuckertz and Massoudieh distinguish three stages of elaboration in the realisation of a melodic pattern: the first stage is a ‘basic, model-like fixed melodic line’ (the melodic pattern itself); in the second stage ‘the melody is given its formal structure. This relates to its subdivision into melodic elements’ and a ‘specialisation of the melodic arcs’. The actual realisation during a performance—the third stage of elaboration—‘is entirely up to the performer’ who decorates the basic melody according to local traditions.⁴⁵ It would be interesting to know how the elaborations described are communicated among the musicians prior to a performance; unfortunately, Kuckertz and Massoudieh do not comment on this.

1.2.1.3. Melos

To distinguish heterophony from similar forms of plurivocality, a further practice must be examined. At first sight, the traditional music of Carpathos seems to be a perfect

⁴⁴ Jones, *Folk Music of China*, p. 142.

⁴⁵ Kuckertz and Massoudieh, *Musik in Būšehr*, p. 15 (my translation).

example of heterophony; however, Rudolf Maria Brandl shows that the Carpathian concept of music does not include an ‘awareness of the horizontal and vertical dimensions’ of music. In other words, there is no ‘harmony as a vertical quality, there is only a sonic space [*tonräumliches Gerüst*] as a horizontal quality of the tonal hierarchy of the underlying scale.’ In short, the performers do not intend to create heterophony in their music.⁴⁶

A Carpathian *skopos* (song) is made up of the ‘dialectical synthesis’ of two independent layers: the *skeletos*, a series of fundamental tones without a ‘metro-rhythmical-temporal’ rule that only exists in the ‘imagination’ of the performers, and the *doxaries*, or *fioritura*: short stereotypical formulae;⁴⁷ the latter represent the individual ‘realisation’ of the *skeletos*. There is no primary form [*Urgestalt*] of the *skopos*, only a ‘platonic idea’ thereof.⁴⁸ The ‘realisation’ of the *skeletos* is based on ‘free movement within the tonal frame’, i.e. each part represents an individual ‘way through the *skopos*’.⁴⁹ A major difference in comparison to heterophony is that because of the lack of rhythmical structure in the *skeletos* there is only a loose coordination of the parts in an actual performance. The musicians have to ‘wait for each other’ at certain ‘halt points’.⁵⁰ This implies a completely different attitude towards music-making than in heterophonic practices, where the individual parts follow a common base (the skeletal melody or the melodic pattern, respectively), held together in some musical cultures by a ‘time-keeper’, i.e. an instrument that strictly maintains the basic rhythm.⁵¹

For Carpathian music, Brandl therefore suggests to use the term ‘*Spaltmelos*’ or ‘*melische Ausfächerung*’ (melic diversification) instead of ‘heterophony’.⁵² In a more recent essay, he introduces the term ‘fractal polyphony’ for this type of musical practice.⁵³ The composer Mark Kopytman’s concept of an ‘imagined prototype’ is very

⁴⁶ Rudolf M. Brandl, *Die Volksmusik der Insel Karpathos. Die Lyramusik von Karpathos. Eine Studie zum Problem von Konstanz und Variabilität instrumentaler Volksmusik am Beispiel einer griechischen Insel 1930–1981* (Göttingen: Edition Re, 1992), p. 91 (my translation). The same applies to various heterophonic practices such as some types of ‘variant heterophony’ (see subchapter 1.2.2.2. and Pärtlas, ‘Theoretical Approaches’, p. 56ff.); this is therefore not really a distinctive feature. However, in cases that I had information about the musicians’ thoughts regarding their musical practice; I mention it. Otherwise, I relied on the information I gathered from musicological texts, and most musicologists took an ‘etic’ approach to the music they studied. Participants of some of the music cultures I have encountered are well aware of the peculiarities of their music; sometimes even the term ‘heterophony’ is used, for example by Gaelic Psalm singers and by Trần Văn Khê for Vietnamese music (it should be mentioned, however, that Trần Văn Khê was trained in Western musicology): Trần Văn Khê, *Die Musik Vietnams*, p. 72. More information about what the musicians think about their music would be very interesting and could indeed change my definition of heterophony.

⁴⁷ ‘*Spielfiguren*’, cf. Hoerburger, *Musica Vulgaris*, pp. 30–35, and chapter 1.2.3. of this text.

⁴⁸ Brandl, *Die Volksmusik*, p. 16.

⁴⁹ *Ibid.*, p. 91.

⁵⁰ Rudolf M. Brandl, *Musik als kommunikative Handlung. Musikalische Hermeneutik versus kognitive Anthropologie. Entwurf einer dramatologischen Musikanthropologie*. (Göttingen: Cuvillier, 2007), p. 106.

⁵¹ Wolf, *Bamarische Musik*, p. 80.; Brandl, *Musik als kommunikative Handlung*, p. 109.

⁵² Brandl, *Die Volksmusik*, p. 91.

⁵³ Brandl, ‘Universale Basisdefinitionen’, p. 16.

similar to what Brandl describes as *Spaltmelos* or *melische Ausfächerung*. Kopytman, however, classifies it as ‘heterophonic.’⁵⁴

The *skopos* in Carpathian music can be considered a form of *melos*—namely, a more or less fixed series of pitches without an underlying rhythmical structure.⁵⁵ To make an initial distinction, I suggest using the term ‘heterophony’ only for musical textures that are based on a melody or a melodic pattern, i.e. a fixed series of rhythmically structured pitches (or, more precisely, intervals). It does not matter that Brandl himself, in his later book on *Kunqu* opera, does not follow his own definitions and confuses the two terms.⁵⁶ It is still a useful concept to distinguish heterophony from similar forms of plurivocality.

1.2.2. Variants, Variant Heterophony and Variation

Another important aspect of melody, namely its variability in ‘traditional’ music, must be considered. Some scholars assume that heterophony occurs when several ‘variants’ or ‘variations’ of a melody are sung or played at the same time.⁵⁷ Unfortunately, few definitions provide details about the nature of these ‘variants’ or ‘variations’. Often there is not even a clear distinction between the two terms; they seem to be interchangeable. In the following subchapters I will discuss the usability of both terms separately.

The term ‘variant heterophony’ sounds like the *terminus technicus* of the idea that heterophony is based on ‘variants’ of a melody, and indeed it is sometimes used as such. However, the concept of ‘variant heterophony’—introduced by Marius Schneider—has a well-defined meaning, which will be explained in chapter 1.2.2.2. While I believe that the ‘variant’ or ‘variation’ concept is not precise enough to understand the nature of heterophony, the term ‘variant heterophony’ may still be useful to describe a specific type of heterophony.

⁵⁴ Mark Kopytman, ‘About Heterophony’, in *The Music of Mark Kopytman. Echoes of Imaginary Lines*, ed. by Yulia Kreinin (Berlin: Ernst Kuhn, 2008), pp. 176–232 (p. 179). Kopytman's concept is discussed in chapter 1.3.1.

⁵⁵ Carl Dahlhaus and Heinrich Hüschen, ‘Melodie’ in *Die Musik in Geschichte und Gegenwart*. Sachteil, vol. 6, ed. by Ludwig Finscher (Kassel: Bärenreiter, 1997), columns 35–67 (column 41): ‘*Melos* can be defined as the order of intervals and pitch relations, metre as the order of tone durations.’ (My translation).

⁵⁶ Brandl, *Musik als kommunikative Handlung*, p. 56. Brandl writes: ‘Thus, the main melody instrument plays [...] in multilinear melic diversification (heterophonically) [...]’. (My translation).

⁵⁷ Schneider, *Geschichte der Mehrstimmigkeit*, p. 24; Malm, *Japanese Music*, p. 98; Nettl, *Music in Primitive Culture*, p. 90; David Morton, *The Traditional Music of Thailand* (Berkeley, CA: University of California Press, 1976), p. 21.

1.2.2.1. Variants

Many scholars content themselves with the statement that the musical style they are engaged with is based on variants. Hardly any author describes in detail what they understand by a melodic variant within a heterophonic texture. Do they occur accidentally or deliberately? Are they only occasional tonal and/or rhythmical deviations in an otherwise homorhythmical texture, or do the individual parts develop their own 'versions' of the melody deviant enough to be called independent? This begets further questions: is there a hierarchy among the individual variants that are sung or played at the same time? In other words: is there a 'main' part which carries the 'original' melody, while the accompanying part(s) play the variants? Is the variant a valid melody in itself or does it, as in interferential diaphony, only make sense in combination with the other part(s)?

I will discuss one example of a musical practice that actually may be based on melodic variants (the lament-singing of Romania) and one example of a theory of heterophony that is based on variants (the theory of David Morton). Felix Hoerburger describes a musical practice where 'unconnected musical elements' sound together at the same time; while there is 'no relationship between the elements in terms of rhythm and tonality', these 'coincidences' make the impression of 'musical unity'.⁵⁸ One of the examples Hoerburger uses to illustrate the 'non-musical conjunction of melodies and musical elements' is taken from Romanian folk music:

In a village of southern Rumania [*sic*], I observed some thirty or forty women going to the churchyard; there, each woman stood in front of a tomb and sang a song. Each woman sang a different melody and there was no musical relation between one song and the other. And yet the whole formed a uniform expression in a higher, let us say, extra-musical sense.⁵⁹

Later, in his book on the traditional music of Nepal, where he found similar practices, Hoerburger complements his earlier observations with the assumption that the simultaneous singing of unconnected musical elements may be based on a 'common sonic idea'.⁶⁰ He states that the simultaneous combination of otherwise unconnected musical elements

is not polyphony in the sense of musical 'punctus contra punctum', nor primitive heterophony. But we feel that it is, in some extra- or pre-musical sense, a unity. Therefore I would claim that it is in fact a species of pre-musical polyphony.⁶¹

⁵⁸ Felix Hoerburger, 'Zufälligkeitsbildungen als eine vormusikalische Form der Polyphonie', *Jahrbuch für Volksliedforschung*, 10 (1965), 125–127 (p. 125f. [my translation]).

⁵⁹ Felix Hoerburger, 'Polyphony in Folk and Art Music: Haphazard Assembly as a Pre-Musical Form of Polyphony', *Journal of the International Folk Music Council*, 1.16 (1964), 50 (p. 50).

⁶⁰ Felix Hoerburger, *Studien zur Musik in Nepal* (Regensburg: Gustav Bosse, 1975), p. 83 (my translation); Hoerburger's ideas about the importance of the basic 'sonic idea' [*klangliche Komponente*] in folk music is described in his book *Musica Vulgaris*, pp. 21–28.

⁶¹ Hoerburger, 'Polyphony in Folk and Art Music', p. 50; Hoerburger's theory might also help interpret Rebecca Plueckhahn's observations of Mongolian musical practices (see footnote 15).

Hoerbuerger emphasises that in his opinion the practice described is not heterophony, especially because he does not see any musical connections between the melodies that are sung simultaneously. The Romanian composer and ethnomusicologist Violeta Dinescu, however, believes that the different melodies in Romanian lament-singing are in fact variants of one basic melodic pattern, and that the musical practice of singing the different variants simultaneously should be called heterophony.⁶²

If we accept Dinescu's perspective, it would be worthwhile to further investigate the melodic and formal relations between the melodies in which Hoerbuerger made no connections. James Cowdery's ideas regarding 'tune families' could be of help here. Unlike earlier concepts of tune families, Cowdery's theory is not based on a diachronic 'genealogy' of a melody but rather on the relatedness of tunes that exist in a given musical culture at the same time. He offers 'three basic principles', the first of which—called the 'outlining' principle—could be useful in the analysis of Romanian lament-singing.

Tunes grouped by the outlining principle 'show similarities in their overall contours. 'This consideration may cut across considerations of rhythm, scale, and overall length. It may also cut across considerations of cadence and final.'⁶³ The details of Cowdery's method are outside the scope of this thesis; however, the following example from his book on *The Melodic Tradition of Ireland* illustrates how various tunes may appear quite different on the surface yet are regarded by Cowdery as 'members' of the same tune family.

⁶² Informal talk with Violeta Dinescu on 9 February 2017.

⁶³ James Cowdery, *The Melodic Tradition of Ireland* (Kent, OH: Kent State University Press, 1990), p. 89.

The image displays a musical score for the 'Ballylee' family, specifically A1-phrases. It consists of 13 numbered staves, labeled 1.1 through 4.3. The notation is written on a grand staff (treble and bass clefs) with a key signature of one sharp (F#). The time signature is 5/4. The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. There are several measures with a 9/8 time signature. The score includes various musical ornaments and phrasing marks, such as slurs and accents. The overall structure is a series of variations on a basic melodic pattern.

Ex. 35A. "Ballylee" family: A1-phrases

Figure 5: James Cowdery: 'Members' of a tune family.

If Romanian lament-singing fits into the processes described by Cowdery, it would indeed be appropriate to call the individual manifestations of the basic melody 'variants', especially because the contour of the melodic pattern seems to be more important than its concrete pitches. This remains speculative, however, because there has not yet been thorough research on the musical practice in question.

Another advocate of the ‘variant’ theory is David Morton. In his book on *The Traditional Music of Thailand* he states that

[t]he technique of combining simultaneously one main melody and its variants is often incorrectly described as heterophony; *polyphonic stratification* seems a more precise description, since each of the ‘layers’ is not just a close approximation of the main melody but has distinct characteristics and a style of its own.⁶⁴

Morton’s term ‘polyphonic stratification’ appears entirely nondescript to me: ‘polyphonic’ not only evokes associations with (Western) counterpoint; if used in the broader sense of ‘plurivocality’, it could apply to almost all multipart music. The same is true of the word ‘stratification’: there is always some kind of layering if more than one part is involved.

Morton observes ‘distinct characteristics and a style of its own’ in each part of a Thai multilinear texture.⁶⁵ The reason for this may be the different playing techniques of the instruments involved, as is also the case in most heterophonic styles I have studied; this includes the traditional music of Myanmar, Chinese folk music and Bhutanese *Zhungdra* (cf. chapter 1.2.3.1.). Morton’s observation that ‘the individual lines are highly consequential and logical linearly’ also applies to many heterophonic textures.⁶⁶ However, the rules for the execution of a skeletal melody by a solo instrument are often quite different from those for an ensemble because in the latter case (often very strict) rules concerning the interaction of the musicians must be observed. Morton does not elaborate on this subject. He does not provide any music examples or transcriptions.

If the principles upon which the ‘extemporisation’ of a skeletal melody in Thai multipart music are based were significantly different from related forms of plurivocality, the introduction of a new term would be useful; however, the processes found in Thai music bear a remarkable resemblance to those in other Asian music cultures.

In her doctoral thesis on ‘Melodic Organization and Improvisation in Thai Music’, Bussakorn Sumrongthong describes in detail the ‘transformation of [a] basic melody according to the way (thaang) of each instrument’:⁶⁷ a student of traditional Thai music must learn melodic ‘patterns’ that are based on the playing techniques of each instrument; these are used to extemporise the basic melody. Afterwards,

the student learns how to fit various improvising patterns of thaang ránaât èèk into each sentence of the basic melody by observing and then imitating the teacher. [...] After understanding and recognizing all the patterns studied, the student tries to apply

⁶⁴ Morton, *Traditional Music of Thailand*, p. 21.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Bussakorn Sumrongthong, *Melodic Organization and Improvisation in Thai Music, with Special reference to the Thaang Ránaât Èèk* (PhD thesis, University of York, 1997), p. 34.

each pattern to fit different sentences of the basic melody, or find different patterns for the same sentence of the basic melody.⁶⁸

Figures 6 and 7 show the application of ‘improvising patterns’ to a basic melody in traditional Thai music:



Figure 6a: Basic melody.



Figure 6b: Embellished version of the melody.



Figure 7a: Basic melody.



Figure 7b: Embellished version of the melody 1.



Figure 7c: Embellished version of the melody 2.

Admittedly, Sumrongthong investigates solo instrumental music, which is often based on different rules than ensemble music. However, it is unlikely that the internal structure of an individual part in Thai multilinear music is built upon rules completely different from those governing the music for soloists. What is important is that the skeletal melody is preserved and not changed, as the term ‘variant’ and Morton’s description of Thai music suggest.

Thus, like in the music of Myanmar, China and elsewhere, the processes underlying the ‘manifestations’ of the basic melody are based on standardised patterns that, in my opinion, can be described as ornaments rather than as individual ‘variants’ of the

⁶⁸ Ibid., p. 35.

melody (see chapter 1.2.3.). I believe, therefore, that it is not necessary to introduce a new term specifically for Thai plurivocal music. The term ‘polyphonic stratification’ has been used by some scholars to describe music of Southeast Asia such as Gamelan music and other ‘gong-chime’ musical practices; however, the term remains controversial.⁶⁹

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As for the term ‘variants’, it seems to me that this nomenclature is not helpful in understanding heterophony. It is both too broad and too vague in terms of analysing the fundamental structure of the parts of a heterophonic texture; it is too broad in that it can mean both small tonal and rhythmical deviations as well as individual manifestations of a basic melody that are independent enough to be considered valid melodies in themselves.⁷⁰ The latter can also imply a notion of musical freedom that is not usually found in traditional music; it ignores the strict rules which ‘melody-making’ is based upon in most musical cultures.

The term ‘variant’ is too vague because it does not take into account the internal structure, i.e. the processes which create the actual *gestalt* of an individual part within a heterophonic texture. Furthermore, to my understanding the term ‘variant’ implies an alteration of the melody itself, i.e. its pitches and rhythms. This is true of ‘variant heterophony’, a concept introduced by Marius Schneider, which has its own clearly defined meaning (see chapter 1.2.2.2.). It is not, however, true of all other types of heterophony, where the pitches of the basic melody are retained, regardless of the complexity of the individual parts involved (see chapter 1.2.3.).⁷¹ I therefore prefer to speak of ‘manifestations’ or ‘actualisations’ of a basic melody rather than of ‘variants’.

1.2.2.2. Variant Heterophony

Marius Schneider, in his once influential *Geschichte der Mehrstimmigkeit* (History of Polyphony), distinguishes between ‘pure heterophony’ and ‘variant heterophony’.⁷² The former—which, according to Schneider’s theory, was the starting-point for the develop-

⁶⁹ Pärtlas, ‘Theoretical Approaches’, p. 51 and p. 59; Terry E. Miller, ‘Thailand’, in *The Garland Encyclopedia of World Music: Southeast Asia*, ed. by Terry E. Miller and Sean Williams (New York, NY: Garland, 1998), pp. 218–334 (p. 317).

⁷⁰ Pärtlas relates that Russian ethnomusicologists ‘draw a distinction between “monodic” and “variant heterophony” depending on the amount of multilinear divergence’: Pärtlas, ‘Theoretical Approaches’, p. 51. Joseph Jordania defines that heterophony ‘differs from all other types of polyphony, because it can belong to (a) polyphonic family (when the differences between the versions are well defined), or it could also belong to (b) monophonic family (when the deviations from the unison are minimal).’ Joseph Jordania, *Who asked the first question? The Origins of Human Choral Singing, Intelligence, Language and Speech* (Tbilisi: Logos, 2006), p. 28f.

⁷¹ There are, however, successive variants of a skeletal melody in heterophonic music, for example in the movements of a suite in Chinese folk music, where each movement can be based on a variant of the original melody: Jones, *Folk Music of China*, pp. 146–148. However, the individual variant serves as the basis for all parts involved. Similar observations can be made in the traditional music of Myanmar (Wolf, *Bamarische Musik*, pp. 121–123).

⁷² Schneider, *Geschichte der Mehrstimmigkeit*, p. 19f., p. 32 and p. 43.

ment of plurivocality—can be found in ‘the most primitive cultures’, where there are no tonal pitches in the modern sense but rather different degrees of ‘brightness values’ [*Helligkeitwerte*].⁷³ ‘Pure heterophony’ occurs when a singer ‘unconsciously’ and ‘accidentally’ deviates from the melodic line.

In ‘more advanced cultures’, on the other hand, the ‘two originally equivalent melodies’ are divided into ‘one principal and one subordinate voice/part’.⁷⁴ Heterophony in these musical cultures is regulated by tonal relationships that are based on strict rules: ‘In version B of a *cantus* the tone X of version A can only be replaced by a tone which is functionally closely related to the tone X of version A.’⁷⁵ Schneider calls this form of plurivocality ‘variant heterophony.’

It is interesting that all musical examples of variant heterophony in Schneider’s book are homorhythmical; rhythmic variation, which for many musicologists is the most important characteristic of heterophony, does not occur in his theory (see figure 8).



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⁷³ Ibid., p. 15 (my translation).

⁷⁴ Ibid., p. 43 (my translation).

⁷⁵ Ibid., p. 20 (my translation).



Figure 8: Marius Schneider: Three examples of variant heterophony.

An example of a heterophonic musical practice that still exists and seems to come close to Schneider’s definition of ‘variant heterophony’ is the genre *saibara*, which belongs to the Japanese *gagaku* repertoire. In his detailed analysis of the *saibara* ‘Mushiroda’, Kurt Reinhard describes the deviations between the vocal part and the parts of the three instruments which also carry the main melody, namely the *shō*, the *hichiriki* and the *huë*. Some of the deviations are based on minimal rhythmical shifts or embellishments of the tones of the melody. The most conspicuous trait, however, is that throughout the piece certain pitches in the instrumental version of the melody always sound simultaneously with certain pitches in the vocal part (see figure 9). Reinhard observes that

[t]he scale of the vocal part and the scales of the instrumental parts share the fundamental tone G and the second most common tone D. But all other pitches do not match. Where the instruments play a B, C is sung, and instead of F, E is intoned. [...] [The microtonally raised A sharp and the flattened B flat] appear in places where the instruments play an A, whereby the raised A sharp is chosen when the melody descends, while the flattened B flat occurs in ascending melodic movements.⁷⁶

⁷⁶ Kurt Reinhard, *Einführung in die Musikethnologie. Beiträge zur Schulmusik*, ed. by Wilhelm Drangmeister and Hermann Rauhe (Wolfenbüttel: Möesler, 1968), p. 101 (my translation).

no no I - du
Ti - to
Yo - ro

10

-nu -ki -ka -wa - (n) ni
-se o ka - (n) te
-zu -yo ka - (n) te

15

Figure 9: Saibara 'Mushiroda' (excerpt).

Reinhard believes that the resulting 'heterophony' is based on the superposition of two different stages of development: 'While the instrumental parts are based on an anhemitonic pentatonic scale, the transition to the hemitonic pentatonic scale is

already being prepared in the voice.⁷⁷ He does not comment as to whether the parts involved can be divided into 'main' parts and 'accompanying' parts.

Similar procedures can be observed in other genres of *gagaku*. However, it should be noted that ornamentation plays a similarly important role as variants in the 'extemporisation' of a skeletal melody in *gagaku* music (see my transcriptions nos. 8 and 9 in the appendix).

Apart from Japanese *gagaku*, I have come across only two examples, both from Taiwan, that partly fit into Schneider's theory. Two of the deviations in the first example (transcription no. 2 in the appendix) are of a rhythmic nature (sections *e* and *h*): one singer arrives at the next pitch earlier than the other. Most other deviations (sections *c*, *d*, *f* and *i*) look like embellishments rather than alternative 'versions' or 'variants' of the basic melody. In two sections, however, the melody splits into two simultaneous pitches (sections *a* and *b*); interestingly, in both cases the G is part of the interval.

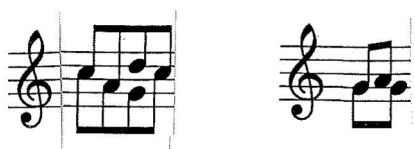


Figure 10: Taiwanese song 1: sections *a* and *b*.

The G is a fifth apart from the 'tonic' C and may therefore play an important role in the scale underlying the song. This seems to be a classic example of Schneider's theory of 'variant heterophony', according to which a tone in the heterophonic variant of a melody can only be replaced by a tone which is functionally closely related to the original tone. It is likely that a pitch of such significance as the fifth of a scale is 'functionally close' to most of the other pitches. However, it remains unclear if one of the two parts is the 'main part'.

The remaining two 'heterophonic' sections (*g* and *j*) in the example are also of interest: while one performer sings the notes G and A, the other one sings them in reverse order. The 'pitch material' is the same, but its 'execution' is different in each part.



Figure 11: Taiwanese song 1: section *g* (and *j*).

Since the section occurs identically two times, it is indeed likely that at least one of the singers performs her own variant. However, this raises a fundamental question which has not yet been answered by Schneider nor by other advocates of the 'variant' theory:

⁷⁷ Ibid., p. 102 (my translation).

is the variant a valid melody in itself or does it only exist as a part of a heterophonic texture?⁷⁸

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Another question closely linked to this topic concerns the flexibility of a melody: which sections or notes of a melody are essential and unalterable, and which can be subject to variation? The second example (appendix, example 3) may provide some clues to answer this question.

The song consists of two verses, which makes it possible to determine if there is ('internal') variation in the heterophonic 'execution' of the melody.⁷⁹ It should be mentioned that not all plurivocal passages are heterophonic: in some places the male voice shows more independence from the melody by singing drones and melodic figures that are made up of the central tones of the underlying scale (see for example items 18 to 20 and 31 to 34).⁸⁰ Item 6 is repeated identically three times throughout the song—including all heterophonic 'deviations'. In every other place where this item appears, the male voice sings drones or arpeggios, which indicates that the female voice indeed carries the 'main part', while the male part—at least in the places mentioned—has an accompanying function.

Like item 6, the immediately following item 7 also reappears two more times identically. Other items (3 and 5), however, are sung in unison throughout the song, without any tonal deviations. It appears that some parts of the melody can serve as the basis for heterophonic procedures, while others cannot.

Regarding the tonal organisation of the heterophonic items, the most conspicuous trait is the unison at the end of each group; 'deviations' occur only at the beginning and in the centre section, while the last three, four or even more notes are always sung in unison (see figure 12).



Figure 12: Taiwanese song 2: items 11 and 7.

There is one exception to this rule: the very last interval of the following item is always a second B–C#:

⁷⁸ This question will be discussed in chapter 1.3.6.

⁷⁹ On the terms 'internal' and 'external' variants cf. Kurt Reinhard, 'Zur Variantenbildung im türkischen Volkslied, dargestellt an einer Hirtenweise', in *Festschrift Heinrich Besseler zum 60. Geburtstag* (Leipzig: Breitkopf, 1961), pp. 21–34 (p. 23f.).

⁸⁰ According to Marius Schneider, the quick succession of 'drone, imitation, heterophony and parallelism' is typical of 'primitive' music: Schneider, *Geschichte der Mehrstimmigkeit*, p. 48f.



Figure 13: Taiwanese song 2: item 6.

The fact that at the end of most items both voices sing in unison may be because almost all of the items end with one of two melodic standard patterns: either F#–E–B/C# or D–B–A.

As for the melodic shape of the individual parts in each item, the *direction* of the melodic movement seems to be more important than actual pitches. The identical repetitions in both parts described above show, however, that the pitches are not chosen at random. In regard to the vertical relationships in the heterophonic sections, some simultaneous intervals are preferred to others. The following table shows the simultaneous intervals occurring in the heterophonic sections of the song in the order of their frequency:

A–F#	8
F#–E	6
C#–B	5
E–C#	4
E–B/D–B	3
C#–A/A–G#/D#–C#/D–C#/E–A/G#–C#/C#–B	1

Figure 14: Taiwanese song 2: Frequency of simultaneous intervals occurring in the heterophonic sections.

The most frequent interval, A–F#, appears exclusively on weak beats within a given item; the same applies to E–C#. Of greater significance are the two intervals F#–E and C#–B: they not only occur frequently on strong beats, F#–E is also often the very first interval of an item, while C#–B, as mentioned above, always ends item 6.

The frequent use of the simultaneous seconds F#–E and C#–B is indeed striking; however, most scholars do not believe that there is any vertical relationship between the parts of a heterophonic texture, or they do not comment on this issue. The only exception—apart from Schneider—is Žanna Pärtlas, who discovered that in the individual parts of the heterophonic music of the Russian-Belorussian borderland ‘it is possible to substitute any scale note with the tonic [...] and with the fifth above or the

fourth below the tonic.’⁸¹ She puts this observation in relation to the ‘overjumping’ principle [*Überspringverfahren*] which Gerhard Kubik discovered in African music:

The tertian correlation of the structural notes points to the validity of the rule of ‘overjumping’ in this heterophonic style. The interchangeability of all scale notes with the tonic, upper fifth and lower fourth indicates the function of these three notes as imaginary ‘drones’ or the reference tones of musical mode.⁸²

It is not easy to find out whether processes like those described by Schneider and Pärtlas are at the base of the two Taiwanese songs I have presented above. My observations, especially in the first song, point in this direction, however, many more examples of a similar musical style must be found and analysed to substantiate the theories on vertical relationships between the parts of a heterophonic texture.

In summary, it seems that the unalterable parts of the basic melody of a heterophonic texture of this type are standard patterns like the ‘cadences’ of the items in the second example. Additionally, certain items of the melody seem to never be altered throughout a song; they are reserved for strict unison. It is often impossible to decide if there is a ‘main’ and an ‘accompanying’ part, in other words which part is the ‘variant’ of the other. Variant heterophony can only be built on a skeletal melody but not on a melodic pattern, which is too vague to be the basis for the creation of variants.

*

Variant heterophony is characterised by few and small deviations from the basic melody; the melody is mostly sung or played homorhythmically and in unison. The deviations can happen unconsciously or deliberately; in the former case the performers often claim to sing in unison.⁸³

Some scholars have suggested their own terms for this type of heterophony. Žanna Pärtlas, for instance, calls it ‘one-part heterophony’; other alternative terms are ‘functional one-part singing’ and ‘monodic heterophony’.⁸⁴ Marius Schneider’s definition of variant heterophony contains many questionable aspects. His theory on the vertical relationship between the parts is original but has not yet been proven and is rejected by most scholars. The assumption that variant heterophony can always be divided into ‘main’ and ‘accompanying’ parts applies to some heterophonic practices but by no means to all.

Nevertheless, I believe that the term ‘variant heterophony’ is still useful, especially because it emphasises the most conspicuous trait of this heterophonic practice, namely the fact that the basic melody itself is (occasionally) changed in one or more of the

⁸¹ Pärtlas, ‘Theoretical Approaches’, p. 64.

⁸² Ibid.

⁸³ Pärtlas relates that during her field studies in the Russian-Belorussian borderland her informants provided her with the ‘standard explanation’: ‘We sing these songs in one voice.’ Pärtlas, ‘Theoretical Approaches’, p. 60f.

⁸⁴ See Pärtlas, ‘Theoretical Approaches’, p. 58.

parts involved, although not to such an extent that the individual parts would create independent melodies. The fact that the melody itself is changed, I argue, corresponds to the true meaning of the term ‘variant’; in all other heterophonic styles I have studied the melody is retained, which means the different simultaneous manifestations of the melody cannot be called variants. Rather, they are based on different strategies of ornamentation of the existing pitches of the melody, as will be shown in chapter 1.2.3. The usage of the term variant heterophony should be limited to practices with the above-mentioned characteristics.

1.2.2.3. Variation

Another term frequently used in definitions of heterophony is ‘variation’.⁸⁵ While the term ‘variant’ does not have a single entry in the *New Grove* and the *Musik in Geschichte und Gegenwart*, there is an extensive amount of literature on ‘variation’ as one of the generic and universal forms of musical shaping. Musicology distinguishes several forms of variational processes. Elaine Sisman lists eight subcategories: (a) ostinato variations, (b) constant-melody or cantus firmus variation, (c) constant-harmony variation, (d) melodic-outline variations, (e) formal-outline variations, (f) characteristic variations, (g) fantasy variations, and (h) serial variations.⁸⁶ Stefan Drees’s list in his *Musik in Geschichte und Gegenwart* entry looks very similar.⁸⁷

If the term variation is used as part of the definition of heterophony, it is necessary to specify which variation technique is used as a foundation. Žanna Pärtlas, who herself believes that heterophony is built upon variation, confirms this:

[T]he most usual definition of heterophony—‘the simultaneous variation of the same melody’—allows different interpretations and embraces different musical phenomena. If one prefers a more specific use of this concept (as, for example, Morton, Brandl and Russian ethnomusicologists), the relevant definition should include the additional limitations concerning the functional interrelation of the melodic lines and the methods of variation. The latter aspect should be specified even if we agree with the more general usage of the term, and the distinction between different forms of heterophony is still of use in both situations.⁸⁸

While Pärtlas regards the ambiguity of the concept of ‘variation’ as an advantage, I believe that it is too broad a term to be useful for a proper description of heterophony. The extensibility of the term ‘variation’ is illustrated by the fact that Marius Schneider built his theory of polyphony upon the assumption that all forms of multilinear music are based on various processes of ‘simultaneous variation’; this includes, in Schneider’s

⁸⁵ Nettl, *Music in Primitive Culture*, p. 80f.; Alan Lomax, *Folk Song Style and Culture* (New Brunswick, NJ: Transaction Books, 1968), p. 44.

⁸⁶ Elaine Sisman, ‘Variation’, in *The New Grove Dictionary of Music and Musicians*, vol. 26, ed. by Stanley Sadie (Oxford: Oxford University Press, 2001), pp. 284–326 (p. 288).

⁸⁷ Stefan Drees, ‘Variation’, in *Die Musik in Geschichte und Gegenwart. Sachteil*, vol. 9, ed. by Ludwig Finscher (Kassel: Bärenreiter, 1994), columns 1239–1271 (column 1239).

⁸⁸ Pärtlas, ‘Theoretical Approaches’, p. 52.

definition, ostinato techniques, canons and parallel motion.⁸⁹ Another example of the versatility of the term is R. Anderson Sutton's approach to Central Javanese Gamelan music. Sutton believes that the basic principles of Balinese society are reflected in Javanese music. Balinese society is a 'steady state', which

resists radical change by allowing no variable, including originality, to be maximized, though certain elements must be allowed to vary.⁹⁰

Accordingly,

[t]he dynamic forces in the Javanese tradition work not to change the music system but to vary elements within the system. The tradition is not static, but rather it is internally dynamic. It is based on variation that occurs within what I call a musical 'steady state.'⁹¹

Hence, on the level of concrete musical performances, variation is examined 'in the framework of stability.'⁹² It is

an integral principle (or complex of principles) of sound organization in the relation of one performance or one passage to another and in the vertical relationships of parts played and heard simultaneously.⁹³

Used in this way, the term 'variation' makes sense, although I doubt that it is very useful when analysing the micro-level of a Javanese composition.⁹⁴

*

Of the many subcategories of 'variation', as they have been listed above, only one can partially be applied to processes underlying heterophony: the 'melodic outline variation' technique, in which

the theme's melody, or at least the 'outline' of its main notes, is recognizable despite figuration, simplification (unfigured variation) or rhythmic recasting. Types of figuration may be pleonastic (the addition of 'superfluous' notes within the melody or as a countermelody) or periphrastic (the original notes replaced by a more ornate line, though with sufficient resemblance to the original, especially at cadences).⁹⁵

In heterophonic music, I argue, this practice can be described more neatly as 'ornamentation', as will be shown in chapter 1.2.3. To be sure, ornamentation can (and probably

⁸⁹ Schneider, *Geschichte der Mehrstimmigkeit*, p. 15 and p. 32f.

⁹⁰ R. Anderson Sutton, *Variation in Central Javanese Gamelan Music: Dynamics of a Steady State* (DeKalb, IL: Northern Illinois University Press, 1993), p. 4.

⁹¹ Ibid.

⁹² Ibid., p. 5.

⁹³ Ibid. Sutton calls the resulting musical texture 'heterophonic.'

⁹⁴ Sutton avoids the use of Western musicological terminology in his analyses of Javanese music. Michael Tenzer uses the term 'figuration' to describe the processes Gamelan music is based on: Michael Tenzer, "'Oleg Tumulilingan": Layers of Time and Melody in Balinese Music', in *Analytical Studies in World Music*, ed. by Michael Tenzer (New York, NY: Oxford University Press, 2006), pp. 205–236 (p. 219ff.).

⁹⁵ Sisman, 'Variation', p. 288.

should) be defined as a variation technique, but in the case of heterophony, it is not useful to elaborate on the more abstract superordinate taxonomical level ('variation') before turning to an analysis of the more concrete processes of ornamentation.

The fact that the term variation is mostly used to describe a genre of music rather than a basic principle of musical form adds to the difficulties the concept causes. Regarding heterophony, it would be more precise to speak of 'simultaneous ornamentation' rather than 'simultaneous variation'.

1.2.3. Ornamentation and Ornamental Heterophony

1.2.3.1. Ornamentation

1.2.3.1.1. 'Simple' and 'Compound' Ornaments

Some scholars use the term 'ornamentation' (sometimes also called 'embellishment' or 'decoration') to describe the processes underlying heterophonic practices.⁹⁶ Still, however, most authors use rather vague terms and do not elaborate upon the 'mechanics' of such ornamentation. I believe that ornamentation in heterophony is based on specific musical and/or sociological principles and that these principles are the key to understanding heterophony in general. Ornaments can be divided into 'two broad categories':

small-scale ('simple') ornaments or 'graces' added to single notes; and more extensive ('compound') or florid decorations applied to entire passages, in which the original melody might be almost entirely disguised.⁹⁷

An example of the latter type of ornamentation is the 'diminution' practice in Renaissance and Baroque music, where

a melodic figure [...] replaces a long note with notes of shorter value. [...] Whereas specific graces such as trills or appoggiaturas were applied to single notes, diminutions served to decorate the transition from one note of a melody to the next with passage-work, giving scope for virtuoso display. 16th and 17th century instruction books provide tables of diminution formulae for the most used musical intervals, in various note values, which performers could learn by rote and apply to any piece of music.⁹⁸

The music theorist Friedrich Wilhelm Marpurg (1718–1795) distinguishes between *Spielmanieren* (embellishments of one note, e.g. trills, mordents, etc.) and *Satz-*

⁹⁶ Jones, *Folk Music of China*, p. 109; Liang, *Music of the Billion*, p. 220; Hoerburger, *Musica Vulgaris*, p. 29; Kuckertz, *Karnatische Musik*, p. 11 and p. 13; Thorkild Knudsen, 'Ornamental Hymn/Psalm Singing in Denmark, the Faroe Islands and the Hebides', *DFS Information*, 68.2 (1968), 5–22 (p. 9f.).

⁹⁷ Simon McVeigh and Neil Peres DaCosta 2011, 'Ornaments and Ornamentation', in *The Oxford Companion to Music*, 1 (2011) [accessed 23 April 2016].

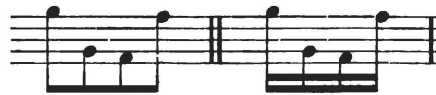
⁹⁸ Greer Garden and Robert Donington, 'Diminution', in: *The New Grove Dictionary of Music and Musicians*, vol. 6, ed. by Stanley Sadie (Oxford: Oxford University Press, 2001), p. 352.

manieren (diminutions); the latter is divided into five subcategories (see figure 15). Originally, diminution was an improvisational practice; by the end of the 16th century, however, 'French and German composers were notating much of the ornamentation they considered appropriate in their music.'⁹⁹ In other words, diminutions became a part of the texture of a composition, or, as Robert Lach puts it, they were integrated into the 'architectonics' of the melody.¹⁰⁰ It may therefore sometimes be difficult to differentiate between ornamentation and 'substance' in the 'free forms' of European art music, i.e. genres such as toccata and fantasia, that are not based on variational techniques or *cantus firmi*.

1. Schwärmer und Rauscher



sowie springende Schwärmer



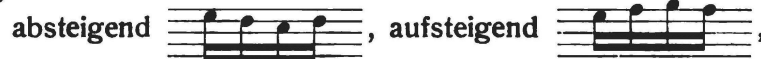
2. Laufende Figuren



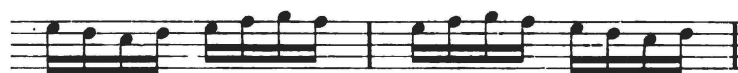
3. Rollende Figuren, und zwar Walze oder Rolle



Halbzirkel,



Ganzzirkel, aus zwei Halbzirkeln bestehend



4. Gebrochene harmonische Figuren, z. B.:



und akzentuierte Brechung



Figure 15: Marpur/Lach: 'Satzmanieren'.

⁹⁹ Ibid.

¹⁰⁰ Robert Lach, *Studien zur Entwicklungsgeschichte der ornamentalen Melopöie. Beiträge zur Geschichte der Melodie* (Leipzig: C. F. Kahnt Nachfolger, 1913), p. 36. Lach as well as Marpur believed that the *Spielmanieren* derive from the *Satzmanieren*. Lach's theory of 'ornamental melopoiesis' is based on the assumption that originally more extensive ornaments such as melismas, sequences etc. became 'increasingly fossilised' and 'shranked like a mummy' to small stereotypical phrases such as trills and mordents (p. 46).

McVeigh's and DaCosta's definition of ornamentation (see above) is based on Western classical and Jazz music; however, it can also be applied to non-Western music. Josef Kuckertz writes that the individual realisation of a melodic pattern is based on 'diminution or ornamentation', with 'ornamentation' probably meaning 'small-scale ornamentation'.¹⁰¹

An example of the 'more extensive ("compound")' ornamental style is the traditional music of Myanmar, as described by Judith Becker. Ornamentation is closely connected with modality in this case; indeed, it is considered an integral part of a mode, which is not just a set of single tones but rather a 'pool' of more or less fixed stereotyped formulas. This notion of modality, which is now widely accepted in ethnomusicology, is not new.¹⁰² In his 1940 book *Music of the Middle Ages*, Gustave Reese writes: 'A MODE [...] is composed of a number of MOTIVES (i.e. short music figures or groups of tones) within a certain scale.'¹⁰³ Curt Sachs states that it is

a truth that even in modern times melodic invention was 'composition'—in the exact sense of the word—more than we dare realize. In all folk songs, in the art of the German *Meistersinger*, in Luther's chorales, in Calvin's Psalter, and way back in the Gregorian Chant, the mosaic is quite obvious.¹⁰⁴

Like her predecessors, Becker observes that in the music of Myanmar '[e]ach mode has characteristic configurations, patterns of melodic formulas associated with it.'¹⁰⁵ She then shows that these melodic patterns are themselves composed of 'basic units' ('segments')—combinations and sequences of at least two tones—and concludes that '[t]he segments, combined into patterns, combined into verses, combined into songs make Burmese music a multileveled hierarchical system.'¹⁰⁶ Becker mentions rather casually that '[i]n addition to these constraints [...] the artist usually has a more or less fixed tune to follow.'¹⁰⁷

Figure 16 shows the segments Becker found in four Burmese *Kyo* songs. They are classified not only by shape but also by function, reflecting the fact that many segments only occur in certain parts of a song: 'the segments have functional slots within the *Kyo* songs. They cannot be simply strung together in a haphazard manner.'¹⁰⁸ Becker distinguishes between 'static segments' which are 'typical in opening lines', and 'active segments, initiating sequences or occurring in the middle of such a sequence.'¹⁰⁹ A third

¹⁰¹ Kuckertz, *Karnatische Musik*, p. 11.

¹⁰² Simon McKerrell, *Focus: Scottish Traditional Music* (Abingdon: Routledge, 2016), p. 153f.; Powers and others, 'Mode', in *The New Grove Dictionary of Music and Musicians*, vol. 16, ed. by Stanley Sadie (Oxford: Oxford University Press, 2001), pp. 775–860 (p. 776).

¹⁰³ Gustave Reese, *Music in the Middle Ages* (New York, NY: Norton & Co., 1940), p. 10.

¹⁰⁴ Curt Sachs, *The Rise of Music in the Ancient World. East and West* (New York, NY: Norton & Co., 1943), p. 84.

¹⁰⁵ Judith Becker, 'The Anatomy of a Mode', *Ethnomusicology*, 13.2 (1969), 267–279 (p. 271)

¹⁰⁶ *Ibid.*, p. 272.

¹⁰⁷ *Ibid.*, p. 277.

¹⁰⁸ *Ibid.*, p. 274.

¹⁰⁹ *Ibid.*

category is single segments which 'occur in several patterns and not always [are] in the same position in each'; Becker calls this phenomenon 'pattern overlap'.¹¹⁰

Example 1 (Cont'd.)

8 8.1 8.2 8.3 8.4

9 9.1 9.2 9.3 9.4 9.5

9.6 9.7 9.8 9.9 9.10

9.13 9.14 9.15 9.19

11 11.1 11.2 11.3 11.4 11.5

11.6 11.7 11.8 (interrupted) 11.9 11.10 11.11 11.12 (phrase endings)

13 13.1 (begin sequence)

18 18.1 18.2 18.3 18.4 18.5

18.6 18.7 18.8 18.9 18.10 18.11

22 22.1 (approaches cadence)

total Kyag Segments: 60 sets

Figure 16: Traditional music of Myanmar: 'Segments'.

¹¹⁰ Ibid., p. 275.

William P. Malm's observations in Japanese Noh music are similar to those made by Becker in the traditional music of Myanmar:

'Each section of the play [...] has special melodic patterns which are not used in the other sections. These patterns themselves are internally constructed of still shorter standard patterns which may be found in the other sections but arranged in a different order. [...] however, there are certain phrases that are used there exclusively.'¹¹¹

Steven G. Nelson adds that

[i]n terms of melodic ornamentation, the tones that make up each mode are thought to have distinctive melodic characteristics, so that certain figures occur only on certain degrees. For example, it is only *kyū*, the final of a mode, and *chi*, the fifth, that are ornamented with the common figure *yuri*—essentially movement away from a tone and back to it, either upper or lower, sometimes fast and sometimes slow.¹¹²

With regard to the melodic construction in the 'musical narratives' of the Japanese Heike tales, Komoda Haruko observes that they consist of

preceding and succeeding formulas; some formulas tend to co-occur as a set: *kudoki*, for example, rarely appears by itself but is followed by *sage* or *kowarisage* [...] each formula has a function – introductory, connecting, central or concluding.¹¹³

Finally, Phong T. Nguyễn states about the music of Vietnam: 'That some ornamentations are associated [...] with particular scale tones is a striking aspect of Vietnamese music.'¹¹⁴

*

Examples for the 'small-scale' type of ornamentation are the folk music of China and Gaelic Psalm Singing. The latter is mainly characterised by three types of 'simple' ornaments: (a) neighbouring grace notes reminiscent of the *tahrir* (see below) that can be extended to composite figures by repetition;¹¹⁵ (b) passing notes; and (c) several forms of *glissandi*. According to Robert Lach, whose monumental *Entwicklungsgeschichte der*

¹¹¹ Malm, *Japanese Music*, p. 120.

¹¹² Steven G. Nelson, 'Court and Religious Music (2): Music of Gagaku and Shōmyō', in *The Ashgate Research Companion to Japanese Music*, ed. by Alison McQueen Tokita and David W. Hughes (New York, NY: Routledge, 2008), pp. 49–77 (p. 66).

¹¹³ Haruko Komoda 2008, 'The Musical Narrative of The Tale of the Heike', in *The Ashgate Research Companion to Japanese Music*, ed. by Alison McQueen Tokita and David W. Hughes (New York, NY: Routledge, 2008), pp. 77–105 (p. 86f).

¹¹⁴ Phong T. Nguyễn, 'Vietnam', in *The Garland Handbook of Southeast Asian Music*, ed. by Terry E. Miller and Sean Williams (New York, NY: Garland, 1998), pp. 247–290 (p. 255).

¹¹⁵ Ornamentation in Gaelic Psalm Singing seems to have been more extensive in the past. Thorkild Knudsen's transcription in his essay on 'Ornamental Hymn/Psalm Singing in Denmark, the Faroe Islands and the Hebrides' (1968) shows a lot of ornamentation to an extent not found in later recordings (see figure 18). It is, however, possible that the 'performance' situation—Knudsen's example is that of a family worship with four singers—is the reason for the difference. Calum Martin relates that according to his 93-year-old mother the only difference between congregational Psalm Singing in the 1950s and today is the basic tempo: in the past it used to be much slower (Martin, 'Session 2' [my transcription]).

ornamentalen Melopöie (Evolutionary history of ornamental melopoiesis, 1913) is still today the only attempt to systematically analyse ornamentation in past and present, all three of these ornaments belong to the most primordial forms of embellishment.¹¹⁶ Lach's approach is built upon the then-fashionable *Kultukreislehre*; the method purports that the evolution of any culture can be reconstructed through analysing its features and tracing their origins to one or more of a limited number of *Kulturkreise* ('culture circles'). Even if Lach's historic-genetic approach is considered obsolete today, his assumption that many of the 'simple' ornaments are the most 'natural' forms of embellishment could be correct.

But a further aspect of Gaelic Psalm Singing particularly contributes to the specific aural impression of this type of heterophony: the lengthening of the skeletal tones by individual singers, which causes slight rhythmical imprecision in the execution of the skeletal melody. Robert Lach believed that the joy in the sound was the original motive for ornamentation: the 'primitive' revels in a single tone, lengthens it and dwells on it as long as possible. Lach invented the term 'periheletic' for this phenomenon; according to him, it is the origin of all ornamentation. The next steps in the evolution of ornamentation are the repetition of a tone, *glissandi*, and finally the gradual addition of neighbouring tones.¹¹⁷

The lengthening of a tone originates from the same desire for self-expression as all other spontaneously interspersed ornaments. The statement of a parishioner from the Isle of Lewis seems to confirm this: 'When one sings from the heart you might draw a note a little bit longer.'¹¹⁸ I am therefore inclined to rate the dwelling on a tone among the 'simple' ornaments.

To be sure, the lengthening of the skeletal tones in Gaelic Psalm Singing is due in no small part to the lack of rhythmical coordination that can occur in unaccompanied congregational singing (Gaelic Psalm Singing is never accompanied by an organ or other instruments). This is especially true when the basic melody is sung so slowly that the rhythmic proportions become indistinct. However, the asynchronicity could at least be in part understood as the result of individual singers' dwelling on tones for reasons of expressivity, and therefore could be seen as a form of ornamentation.

It might be necessary to add another distinction of ornamentation to the bipartite model of McVeigh and DaCosta; this would be 'passing' and 'neighbouring' notes with their own rhythmical weight (as opposed to grace notes). One might argue that they belong to the 'substance' of a composition, but I assess the situation differently when these notes are added to an extant melody; then they must be regarded as ornaments.

¹¹⁶ Lach, *Ornamentale Melopöie*, p. 18.

¹¹⁷ Lach, *Ornamentale Melopöie*, pp. 4, 6 and 18. It should be mentioned that Lach's theory has not been questioned so far; however, the reason for this may be that the focus of musicological research has shifted considerably in the past decades. The interest in the 'origins' of a musical phenomenon has ceased.

¹¹⁸ Derek Bailey, *On the Edge (Part 1)*. Television series (BBC 1992) <www.youtube.com/watch?v=edy2QIP_jaU> [accessed 24 January 2015] (my transcription).

What are called ‘passing notes’ and ‘neighbouring notes’ in Western terminology also exists in other musical cultures such as the rural music of Bodrum in Southwest Turkey, Chinese folk music, and the music of *Kunqu* opera.¹¹⁹ They are situated between the ‘simple’ and the ‘compound’ type, in that they are integrated into the musical texture like the ‘florid’ ornaments while also consisting of only few notes (one or two) like many of the ‘small scale’ ornaments.

It may seem unusual to equate the practices described with diminution techniques of European Baroque music; the latter was mainly chosen as an example to facilitate understanding for readers more familiar with Western music.¹²⁰ On the other hand, however, there are similarities. Both practices are used to bring to life a melody by applying a limited number of stereotypical formulas, which cannot be chosen freely by the interpreter but must be in accordance with rules concerning their combination and their place within a piece of music; both practices are situated between composition and improvisation.¹²¹ The main difference is that ‘modal’ ornamentation is not, like diminution, used to connect two tones but to arrange individual ‘segments’ in a predefined manner while following a basic melody. Generally, the practice of ‘embellishing’ an extant melody exists in music cultures all over the world.

1.2.3.1.2. ‘Spielfiguren’

Both types of ornamentation derive from basic instrumental playing techniques or vocal techniques, respectively.¹²² In her study on modality in Burmese traditional music,

¹¹⁹ The following authors use the terms ‘neighbouring note’ and ‘passing note’ for non-European music: Vãn Khê, *Die Musik Vietnams*, p. 69; Liang, *Music of the Billion*, p. 232; Brenner, *Dörfliche Musik*, p. 182;; Brandl, *Musik als kommunikative Handlung*, p. 56; Alan R. Thrasher, ‘Instrumental Music: Structures and Performance Practices’, in *Garland Encyclopedia of World Music*, vol. 7, *East Asia: China, Japan and Korea*, ed. by Robert C. Provine, Yosihiko Tokumaru and J. Lawrence Witzleben (Abingdon: Routledge, 2001), pp. 171–198 (p. 242). The use of Western terminology for the phenomena discussed may seem problematic, in particular because the terms ‘passing note’ and ‘auxiliary note’ are based on the distinction between consonant and dissonant intervals which does not apply to most non-European music cultures. From a more general perspective, ‘passing notes’ and ‘auxiliary notes’ are primarily used to connect two notes of a basic melody (a *cantus prius factus* in Western music) by stepwise motion; this is what happens in the examples of non-European music when pitches of the underlying skeletal melody/melodic model are connected. From this point of view, I think the use of the terms ‘passing note’ and ‘auxiliary note’ are legitimate. In fact, one could even change the definition of these terms to the effect that the connection of two notes by adjacent notes is a universal phenomenon, while the strictly regulated use of such a connection in written Western music is an exception.

¹²⁰ Stephen Jones, too, equates ornamentation in Chinese folk music with the ‘Renaissance division technique in Europe’ (Jones, *Folk Music of China*, p. 142).

¹²¹ On the relationship between heterophony and improvisation, see chapter 1.3.2.

¹²² Some authors acknowledge this fact as well as the connection between heterophony and ornamentation. Stephen Jones writes that in Chinese folk music ‘the melodic instruments play in heterophony, decorating the same basic melody in different ways **according to the idiom and technique of each instrument.**’ (Jones, *Folk Music of China*, p. 109; my emphasis); Liang Mingyue describes it as such: ‘[E]ach instrumentalist plays **according to the idiomatic conventions**, as based on a given melodic skeleton.’ (Liang, *Music of the Billion*, p. 220; my emphasis); Alan Thrasher is a bit more precise when writing that ‘the musicians are guided by the idiomatic characteristics of their instruments. For example, trills, various finger articulations, and rhythmically dense figures can be played on the *dizi* with ease. On the *sheng* these embellishments are

Judith Becker asserts that for the classification of what she calls ‘segments’ ‘the musical instrument itself sometimes had to be taken into consideration’:

Segment 9 is characterized by the descent of a 2nd. But segment 9.19 shows the drop of a 3rd. In this case the instrument justifies the classification. All the Kyo songs in the corpus were played on the harp. In the first modal tuning, strings b and g are adjacent. A drop from g to f or from b to g is exactly the same kind of motion on the harp. For this reason I felt a separate classification was unjustified. Also, segment 18 which does include a drop to a 3rd, from f' to d', always includes other notes too, predominantly lower octave f and c.¹²³

It is likely that the ‘compound’ ornament type—to which the embellishments in Burmese music belong—can be equated with what Heinrich Bessler calls *Spielfigur*, which, according to Hoerburger, is one of the most important basic elements of instrumental folk music all over the world;¹²⁴ he defines it as

a form cell—I do not mean a motif because Bessler regards ‘motif’ and ‘*Spielfigur*’ as contrasting—a melodic splinter which may initially be conceived from the playing on and with the instrument, from the build of the hands, from the construction of the instrument, from the skills of the lips or the tongue. It is the fingering that shapes/controls the *Spielfigur*.¹²⁵

The term *Spielfigur* emphasises the ‘nature’ of a standard pattern—its origin in the construction of the instrument and the playing skills of the musician. Some *Spielfiguren* may have become standard patterns with fixed tones in the course of time, others may only provide a melodic contour or a rhythmical cell. The ‘simple’ ornaments are also based on elemental playing techniques. Hoerburger writes that

[t]hey result from the fingering, from the playing techniques of the various instruments. Trills, grace notes, passing and neighboring notes, runs—these are figures which can be easily executed in one way or another on both the chordophone and the aerophone.¹²⁶

not used, but other distinctive techniques are common. String instruments have their own techniques, such as portamento on the *erhu* and reiteration of pitches on the *pipa*.’ (Thrasher, ‘Instrumental Music’, p. 242); according to Terry E. Miller, the texture of Thai musical ensemble music ‘is heterophonic in that each musician realizes the pre-existing melodic structure **in the idiom peculiar to his or her instrument or voice**’: Terry E. Miller, ‘Thailand’, in *The Garland Handbook of Southeast Asian Music*, ed. by Terry E. Miller and Sean Williams (New York, NY: Garland, 1998), pp. 121–182 (p. 147; my emphasis).

¹²³ Becker, *Anatomy of a Mode*, p. 274.

¹²⁴ Heinrich Bessler, ‘*Spielfiguren in der Instrumentalmusik*’, *Deutsches Jahrbuch für Musikwissenschaft*, 1 (1956), 12–38 (p. 12ff). The term *Spielfigur* is sometimes translated as ‘playing-figure’: Eero Tarasti, *Signs of Music. A Guide to Musical Semiotics* (Berlin: Walter de Gruyter, 2002), p. 136. However, this ignores the (probably deliberate) ambiguity of the original term, which also means ‘token’ or ‘playing piece’.

¹²⁵ Hoerburger, *Musica Vulgaris*, p. 31 (my translation).

¹²⁶ *Ibid.*, p. 44.

The third category of ornamentation—passing and neighbouring notes—is so simple and natural that it can be played on almost all instruments and can therefore be considered a universal basic element of music.

1.2.3.1.3. Culture-specific Conventions

Ornaments are often overlaid by culture-specific conventions. The *tahrir*, for example, is a vocal ornament that exists in many different forms all over the world. It is a ‘falsetto break or cracking of the voice in the form of a grace note above, and in between the notes of, the melodic line.’ (see figure 17).¹²⁷

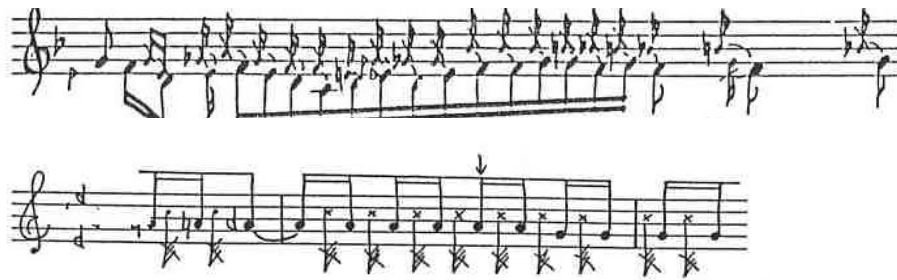


Figure 17: Two different types of the tahrir.

Clifton Lloyd Miller relates that

[t]he present-day geographic extent of this type of ornamentation covers a vast area reaching from the Far East to Spain; [...]. The practice exists in another form in Korea, Mongolia, Indonesia and Turkmenistan. In India, the technique is smoother, taking on the form of slurs and slides rather than clearly different notes separated by a cracked voice. Turks and Arabs usually prefer the slurred ornamentation although in Iraq and Syria the Persian type also exists. [...] It should be emphasized that Iran and Azerbaijan [...] have the most intricate and highly elaborate form of tahrir in the world.

The *tahrir* appears to be ‘natural’ and ‘inherent’ in the human voice—an ‘elemental movement pattern’ of singing;¹²⁸ its shape varies according to the conventions and traditions of the music culture.

¹²⁷ Clifton Lloyd Miller, *Music and Song in Persia. The Art of āvāz* (Salt Lake City, UT: University of Utah Press, 1999), p. 108f.

¹²⁸ Brenner, *Dörfliche Musik*, p. 185.

More often than not, ornaments based on the playing techniques of one instrument are adopted by another. ‘Cranning’ in Irish traditional music

was originally developed by pipers as a way of articulating their low D, which cannot be rolled. Until recently, only pipers used crans, but now flute, whistle, and even fiddle players have adapted the technique to their instruments.¹²⁹

The ‘pendulum’ ornament type, most commonly used in Southern Turkish folk music is an instrumental version of the originally vocal *tahrir*.¹³⁰ Klaus-Peter Brenner shows that this ornament is not based on the playing techniques of the melody instruments involved, namely the *krenet* (*klârnet*), the *keman* and the *cümbüş*; indeed, the *tahrir* is more difficult to play on stringed instruments, as it often requires the use of two fingers and even shifts. Brenner compares a hypothetical version of the ornament based on the instrumental playing techniques, with the ‘pendulum ornament’ actually used; the ‘alternative’ version would be easier to play on a string instrument (see figure 18).

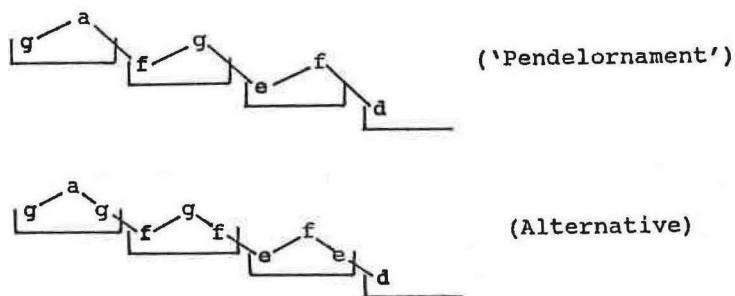


Figure 18: Playing technique of the ‘pendulum ornament’ in Turkish folk music.

Like the vocal *tahrir*, its instrumental equivalent can be found in various musical cultures all over the world and is demonstrated by a huge variety of instruments. Although I have not yet found any examples of the adoption of instrumental ornaments by the singing voice in vernacular music, it is possible that this phenomenon exists. Felix Hoerburger shows that in many musical cultures the vocal music imitates techniques and principles of instrumental music. Scottish ‘mouth music’ is a good example of this. Alphorn signals in Swiss folk music and bell signals in northwest German *Glockenbeiern* serve as the basis for new songs.¹³¹ In Western music, the very first treatises on vocal embellishments to appear at the beginning of the seventeenth century suggest that singers imitate instrumental diminution techniques, regardless of their physical suitability for the human voice.¹³²

¹²⁹ Cowdery, *Melodic Tradition of Ireland*, p. 19f.

¹³⁰ Brenner, *Dörfliche Musik*, pp. 182–188.

¹³¹ Hoerburger, *Musica Vulgaris*, pp. 15–20; Manfred Bartmann, *Das Beiern der Glocken in der Grafschaft Bentheim, Denekamp (NL) und Ostfriesland. Bewegung und Klang* (Ludwigsburg: Philipp, 1991), pp. 54–70.

¹³² Theodor Göllner, ‘Instrumentale Spielformeln und vokale Verzierungen im 16. Jahrhundert’, *Anuario Musical* 56 (2001), 47–58 (p. 56) <<http://anuariomusical.revistas.csic.es>> [accessed 28 February 2016].

1.2.3.1.4. Function

The function of ornamentation varies according to individual musical cultures and genres. Dance music, for example, must act as a

stimulus, stimulator, inciter. It cannot do this as an undecorated sequence of notes. [...] It is not the fixed, rational execution of the music which stimulates dancing but rather the deviation from the norm, and in our case it is first and foremost the decoration [*Umspielung*] of a tone, not its bare presentation.¹³³

In many musical cultures, ornamentation has an expressive function. Joe Heaney, a traditional Irish singer, states in an interview given to James Cowdery that

when you're emphasizing something, you've got to decorate that particular spot—it means a lot to you, you want to hold on to it as long as you can, but you can't forever, so you decorate and go on to the next line. [...] And you see, especially a love song in Gaelic, you decorate them. A love song is something that you hold dear, and you just don't want to run away with it, you know, you just don't want to, just want to take and keep it gently.¹³⁴

Michael Tenzer, who uses the term 'figuration' for the compound type of ornamentation, relates that in Gamelan music

for most Balinese listeners figuration styles are expressive, influencing musical mood and meaning. Beyond this, for musicians and composers the palette of figuration styles comprises a collection of specific compositional techniques available to create desired musical impressions. Some styles are newly invented, while others originate, and are often uniquely associated with, certain older [...] genres. Thus, the use of a certain figuration style may constitute a clear reference to an older music, and the reference in turn evokes the particular ritual or social associations of that music.¹³⁵

In a film documentary on Gaelic Psalm Singing, created by Derek Bailey in 1992, one of the singers explains how the heterophony in this musical practice comes about:

I think, with Gaelic Psalm Singing, the actual singing or the notes isn't as important as singing from the heart, and the sincerity of the music is what counts... not so much the music really but of the words, and when one sings from the heart you might draw a note a little bit longer, someone might add just a little twiddly note to it, just because maybe carried away with a feeling of it.¹³⁶

¹³³ Hoerburger, *Musica Vulgaris*, p. 45.

¹³⁴ Cowdery, *The Melodic Tradition of Ireland*, p. 29f. Interestingly, though beyond the scope of this thesis, Heaney observes similar mechanisms in Gaelic storytelling: '[...] amazing, you know, these stories are decorated too, you know, like the songs. In Gaelic, you know. The decorations are fantastic, you know—about a boat that'll go under the sea, over the sea, and between the sea and the sea. [...] But it's virtually impossible to embellish a story in the English language the same way as you'd do it in the Irish.' (p. 39).

¹³⁵ Tenzer, 'Oleg Tumulilingan', p. 225.

¹³⁶ Bailey, *On the Edge* (my transcription).

1.2.3.2. Ornamental Heterophony

1.2.3.2.1. Definition

Ornamental heterophony—as opposed to variant heterophony—emerges when several instruments (including the human voice) ‘embellish’ the same melody or melodic pattern at the same time. In some heterophonic styles, an instrumental, unembellished ‘skeletal’ melody is played simultaneously with its ornamented version (Gamelan, *gagaku*), whereas in other heterophonic practices only the ornamented manifestations of the basic melody are performed (Gaelic Psalm Singing, *Kunqu* arias, Chinese folk music).

The two (or three) types of ornamentation—the ‘simple’ type, the ‘compound’ type, and passing/neighbouring notes—are based on the playing-technique of each instrument and sometimes on the adaptation of the playing-technique of another instrument. Typically, the ornaments are further shaped by the musical conventions of the individual musical culture. The order of the ornaments within one piece of music is predefined in some musical cultures. Even in music that is based on the ‘compound’ type of ornamentation, the temporal distance between the pitches of the ‘skeletal melody’ among the parts involved is not large.¹³⁷

It should also be mentioned that in some musical cultures one or several parts of a heterophonic texture may play *less* tones than the skeletal melody contains: instead of enriching the melody with ornaments, they thin it down. The result could perhaps be described as ‘negative ornamentation’, though we should be mindful not to overstretch the term ‘ornamentation’. ‘Colotomic’ procedures in Gamelan music can be understood as such a reduction of a basic melody: the ‘main melody is punctuated in a (mostly) regular, repeated pattern [...], played on various knobbed gong instruments [...]’¹³⁸ Figure 20 shows a transcription of a Balinese composition, where the high mid-range metallophones [*penyacah*] play the skeletal melody while mid-range metallophones (*calung*) and the bass metallophones (*jegogan*) play a reduced version of it.

In his essay on heterophony in North Indian music, John Napier states that ‘[i]n the case of faster or more complex improvised passages, or should the soloist so demand, the accompanist may follow in outline only.’¹³⁹

¹³⁷ Daphne Wolff relates that ‘[s]ince the songs are heterophonic, ‘*si* and ‘*wa* [rhythmical units] are necessary to keep the tempo and to bring several musicians back to the set basic lines of the song and hold them together when they freely and virtuously vary the basic melody.’ Wolff, *Bamari-sche Musik*, p. 80 (my translation).

¹³⁸ R. Anderson Sutton/Roger R. Vetter, ‘Flexing the Frame in Javanese Gamelan Music: Playfulness in a Performance of “Ladrang Pangkur”’, in *Analytical Studies in World Music*, ed. by Michael Tenzer (New York, NY: Oxford University Press, 2006), pp. 237–272 (p. 241).

¹³⁹ John Napier, ‘A “Failed” Unison or Conscious Differentiation: The Notion of “Heterophony” in North Indian Vocal Performance’, *International Review of the Aesthetics and Sociology of Music*, 37.1 (2006), 85–108 (p. 88).

(Two players per octave stems down, two stems up = 8)

8 10-key metallophones (4 pemade and 4 kantilan one 8ve higher)

Row of tuned gongs (upper 8ve) (reyong)

Row of tuned gongs (lower 8ve) (reyong)

Bamboo flutes (sulung)
(flute notation is approximate.)

Lead metallophone (ugal)

2 high mid-range metallophones (penyacah)

2 mid-range metallophones (calung)

2 bass metallophones (jegogan)

High drum (kendang lanang) and low drum (kendang wadon)
Drum key: ● = pitched r.h. stroke; ◐ = semi-pitched r.h. stroke; x = unpitched l.h. stroke

Small cymbals (ceng-ceng)

Gongs (kempli: time keeper; gong: bass; kempur: mid-range; kemong: high)

Beat Number: (16) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Figure 19: *Oleg*: reduced versions of the skeletal melody in the *penyacah*, *calung* and *jegogan* parts.

1.2.3.2.2. Social and Communicative Aspects of Ornamental Heterophony

Heterophonic practices in many musical cultures are based on social and communicative principles that also determine the musical texture. Chinese folk music, for example, is characterised by hierarchical conventions and attentiveness among the musicians, similar to the attentiveness that (ideally) governs the interaction between chamber music players in Western classical music. Stephen Jones relates that

[i]n northern China, the roles of the instruments in a sheng-guan ensemble are expressed by a popular folk expression, ‘clumsy the sheng, artful the guanzi, ornate the dizi’ (zhuo sheng, qiao guan, langdang di). Most folk ensembles acknowledge the need to be sensitive to the decorations of their colleagues: one hears expressions like ‘while you play elaborate ornaments, I play simply’ (ni fan, wo jian). Since the register of each instrument is also flexible, this also requires sensitivity in ensemble playing. There is a natural ebb-and-flow between the members of a group.¹⁴⁰

Jones concludes that ‘[h]eterophony is a result of experience, sensitivity, and trust amongst musicians.’¹⁴¹ Alan R. Thrasher gives further details on this practice:

In Jiangnan sizhu, for example, performers on the lead instrument (dizi and erhu in particular) often alternate in playing highly embellished (and attention-grabbing)

¹⁴⁰ Jones, *Folk Music of China*, p. 110.

¹⁴¹ *Ibid.*

passages. They rarely perform these passages together. Performers on accompanying instruments (such as the sheng and the yangqin), on the other hand, primarily assume the heterophonic role of accompaniment – that is, of performing simplified variations that are closer to the ‘melodic skeleton’ and support the more highly embellished solo variations.¹⁴²

Thrasher observes that the ‘interactive “complex-simple” ideal’ rests upon three basic principles:

(1) the distribution of rhythmic density among parts, resulting in a contrast between rhythmically complex and simple variants; (2) the distribution of range among parts, so that short variant motifs emerge over the heterophonic texture by virtue of their higher range and their greater power of projection; and (3) the alternation of motifs among parts, so that the melody is divided between two instrumental parts or one performer canonically imitates a motif (or phrase) just performed by another instrument.¹⁴³

Like in Chinese folk music, the role of the performers of *Kunqu* Opera is based on hierarchical conventions. However, while the folk music is characterised by a ‘natural ebb-and-flow among the members of a group’, the roles of the soloist and the accompanist(s) in *Kunqu* opera remain the same from the beginning to the end of an aria. Heterophony in *Kunqu* Opera is ‘subject to strict regulations, concerning the relationship between the singers and the flutist.’¹⁴⁴ The ‘perfect’ accompanist must have four skills:

- *Chen* requires the accompanist to bring to fore all nuances and subtleties of the voice [...].
- *Sui* means absolute synchronicity with the voice; that is why the accompanist needs to know perfectly all melodies (*qiang*) of the singer.
- *Tuo(qiang)* means for the accompanist not to embarrass the singer by modulating at difficult passages in the melody.
- *Bu(qiang)* requires the accompanist to continue and complete a melody before playing an interlude if the singer ends his/her part earlier.¹⁴⁵

In addition to the rules mentioned above, in *Kunqu* Opera as well as in Beijing Opera the heterophonic texture is interspersed with ‘conventions that guide the transition from one part to another’:

¹⁴² Thrasher, ‘Instrumental Music’, p. 242.

¹⁴³ *Ibid.*, p. 242f. The ‘imitation’ of ‘motifs’ among the parts of a heterophonic texture is also mentioned by John Napier in his essay on ‘The Notion of “Heterophony” in North Indian Vocal Performance’ (p. 99). I do not believe that this phenomenon can be called heterophonic; rather, it is a polyphonic element within a heterophonic overall texture (cf. chapter 1.3.5.).

¹⁴⁴ Brandl, *Musik als kommunikative Handlung*, p. 55.

¹⁴⁵ *Ibid.*

- a) the intervallic movement between the last pitch of the instrumental prelude and the beginning pitch of the following vocal line is most often stepwise (in the pentatonic scale), or sometimes unison or a third above;
- b) the first pitch of the instrumental interlude should be the same as the immediately preceding, last pitch of the vocal line;
- c) the last pitch of the instrumental interlude and the first pitch of the next vocal line are often in a fourth or fifth intervallic relationship;
- d) the first bar of the instrumental postlude should be an embellishment of the last pitch of the preceding vocal line.¹⁴⁶

Hierarchy within a heterophonic texture can also be based on the social status of the musicians involved. Liang Mingyue observes that in Chinese music '[t]he lead performer is determined by the musician's high artistic ability, but more often by the individual's social and political status.'¹⁴⁷ In his study on heterophony in North Indian music, John Napier states that

[...] something more than aesthetics is implicated in the preference for *sangat* [melodic accompaniment]. In as much as there are social structures and economic relationships that impel towards a near-identity of the lines of soloist and accompanist, there are social attitudes which may contribute to their partial independence. [...] Qureshi has pointed out that in Indian cultures, greater prestige accrues to a person who, though capable of performing a particular function for themselves, takes on the role of patron, and engages the service of another [...]. Thus it may be seen that the practice of accompaniment, call it 'heterophonic' or not, is sustained by a tension between social structure and economic relationships on the one hand, social attitude on the other. The former, by determining the subordination of accompanist to soloist, pulls the *sangat* towards identity with the replicated line. At the same time, the latter demands the patronage of a performer whose product is demonstrably individualised. The overarching impression is of complementarity and rapprochement.¹⁴⁸

The social concept underlying Gaelic Psalm Singing is completely different, indeed diametrically opposed to those of both Chinese and North Indian music; nonetheless, the members of a congregation on the Isle of Lewis are as conscious of their socio-musical principles as are Chinese folk musicians of theirs.

In a lecture-performance delivered during a conference on 'Gaelic Psalm Singing and American Music', Calum Martin pointed out that

the great thing about Gaelic Psalm Singing is: everyone takes part. We will accommodate all the great singers, all the not-so-great singers, and maybe even down as far as all the rubbish singers. [...] It's not a choir, it's a congregation.¹⁴⁹

¹⁴⁶ Liang, *Music of the Billion*, p. 256; cf. Brandl, *Musik als kommunikative Handlung*, p. 56.

¹⁴⁷ Liang, *Music of the Billion*, p. 17.

¹⁴⁸ Napier, 'Failed Unison', p. 104.

¹⁴⁹ Martin, 'Session 2' (my transcription).

This congregation does not, however, sing a 'congregational song in which everyone sings in a body, as with one mouth, following the baton of the organist.'¹⁵⁰ Rather, it consists of 'individual people, who in singing fellowship reserve the freedom to bear witness to their relation to God on a personal basis, "each bird with its own beak" as we say in Danish.'¹⁵¹

Gaelic Psalm Singing is based on a multi-dimensional communication: it is 'vertically a worship between you and God' and 'horizontally' 'amongst the whole group.'¹⁵² The factor of individual worship sometimes causes a lot of ornamentation, the use and order of which is not regulated. Calum Martin suggested to the attendants of the conference (to whom he tried to teach heterophonic singing) not to 'worry about adding your grace notes; put them in.'¹⁵³ John Purser sums up that

the freedom to decorate the melody so that each member of the congregation makes an individual act of worship out of his or her own singing fulfils the highest ideals of the Reformation by processes the reformers probably never envisaged.¹⁵⁴

Despite the emphasis on the 'freedom' of ornamentation in Gaelic Psalm Singing, and although there are no fixed traditional rules concerning the distribution of the ornaments within a piece of music (as in the music of Myanmar), it is likely that the embellishment of a basic melody is a 'learned behaviour' and that certain intervals always or often occur together with certain ornaments. Further research is required to better understand the conscious or unconscious regulations underlying ornamentation in Gaelic Psalm Singing.

1.2.4. Summary

My investigations have revealed that there are two types of heterophony: variant heterophony and ornamental heterophony. The basic traits that connect these two types are: (a) the skeletal melody/melodic model is presented in exact or relative simultaneity by the parts involved; (b) the skeletal melody is sung/played in unison (including octavation) in all parts involved (with occasional deviations in variant heterophony); (c) tones are added to the skeletal melody/melodic model, either through ornamentation or melodic variants;¹⁵⁵ d) there is no 'vertical' (i.e. harmonic) dimension in heterophonic textures, unless a harmonic function is assumed for drones,

¹⁵⁰ Knudsen, 'Ornamental Hymn/Psalm Singing', p. 10.

¹⁵¹ Ibid.

¹⁵² Martin, 'Session 2' (my transcription).

¹⁵³ Ibid. (my transcription).

¹⁵⁴ John Purser, *Scotland's Music: A History of the Traditional and Classical Music of Scotland from the Earliest Times to the Present Day* (Edinburgh: Mainstream, 1992), p. 147.

¹⁵⁵ It should be mentioned that Marius Schneider labels the simultaneous presentation of the skeletal melody on different pitches as heterophony (Schneider, *Geschichte der Mehrstimmigkeit*, p. 33).

as they occur in North Indian music.¹⁵⁶ A heterophonic style that is based solely on rhythmical variation of a melody does not exist (see subchapter 1.3.1.). These characteristics distinguish heterophony clearly from other forms of plurivocal music.

A counter-test confirms this theory: a texture where the parts involved do not play the basic melody simultaneously must be called imitative, therefore making the texture a form of contrapuntal polyphony; the same applies when different melodies are played/sung at the same time or in succession; if identical (or similar) melodies are presented simultaneously but not in unison, the result could be called homophonic, et cetera. The following graph may illustrate the formation of heterophony:

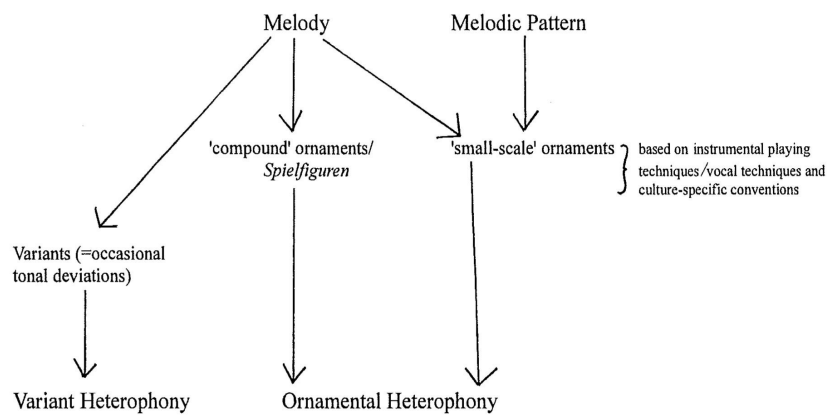


Figure 20: Formation of Heterophony.

¹⁵⁶ See, however, Younghi Pagh-Paan's remarks on the 'harmonic' dimension of heterophony in Korean music (chapter 2.4.3.: 'Reflections on Form and Heterophony').

1.3. Further Aspects of Heterophony

1.3.1. Rhythm

It is a widely-held view that heterophony is based on rhythmic variation of a melody. Alan Lomax, for example, states that in heterophonic music

[e]ach voice sings the same melody in a slightly different manner. The variation is usually rhythmic, with some voices lagging behind, others pushing forward, or with some voices more rhythmically active than others. There may be some melodic individuality, but it is only temporary and usually inconsistent.¹⁵⁷

In his essay on *Musical Technique*, Pierre Boulez also maintains that heterophony is

a structural distribution of identical pitches, differentiated by divergent temporal coordinates, manifested by distinct intensities and timbres [...].¹⁵⁸

I have not encountered any musical practice during my studies that conforms to this notion of heterophony. The theories presented above exclude both types of heterophony that I have identified: the texture of variant heterophony is mainly homorhythmical, while the rhythmic 'imprecision' of the skeletal melody in ornamental heterophony is determined by the different types of ornaments and their specific rhythmic shape.

There are two rhythmic phenomena that are important in the context of ornamental heterophony: the simultaneous use of ornaments of different lengths, and the simultaneous use of ornaments covering the same time span or occurring within the same time span, respectively.

The two main types of ornamentation defined in chapter 1.2.3.1.1. can take shape in both rhythmic categories. The third type—passing and neighbouring notes—is distinguished from the other two types only melodically; in terms of rhythm it can be regarded as a subcategory and therefore does not have to be specifically mentioned. The following table illustrates rhythmic procedures in various heterophonic textures:

¹⁵⁷ Lomax, *Folk Song Style*, p. 44.

¹⁵⁸ Pierre Boulez, *Boulez on Music Today*. Translated [from the French] by Susan Bradshaw and Richard Rodney Bennett (London: Faber, 1971), p. 121. In his essay on 'Heterophonie', Ștefan Niculescu contradicts this definition, emphasising that heterophony is based on ornamentation and improvisation (Niculescu, 'Heterophonie', p. 67).

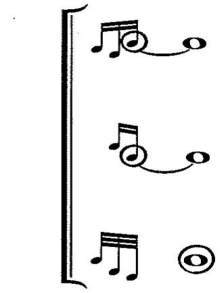

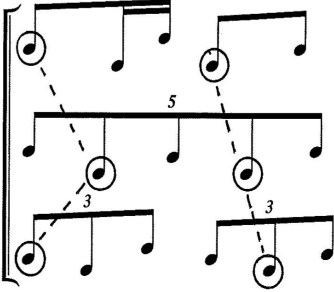
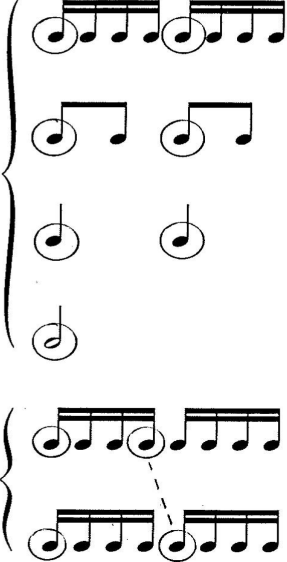
Ornaments of different lengths / covering different time spans	Ornaments of equal lengths / covering the same time span
'Small-scale' ornaments (grace notes)	
 <p>Gaelic Psalm Singing; <i>Zhungdra</i>; Chinese folk music</p>	 <p>Irish traditional music; Chinese folk music; dance music in general</p>
'Compound' ornaments ('diminution')	
 <p>Traditional music of Myanmar; Turkish folk music</p>	 <p>Thai traditional music; Gamelan</p>

Figure 21: Rhythm in heterophony. The encircled tones represent the pitches of the skeletal melody.

Heterophonic styles such as Gaelic Psalm Singing and the traditional music of China and Myanmar, that are based on simultaneous small-scale and/or compound ornaments covering *different* time spans have been described in chapter 1.2.3.1.1. Simultaneous small-scale ornaments occurring within the *same* time span are frequently found in music that is dependent upon a rhythm kept by all instruments, such as dance music. Traditional Irish music, for example, is mainly dance music where

[...] musicians playing in a group all play the tune together at the same time in a texture called *heterophony*.¹⁵⁹

In their ‘Low Whistle Book’—a practical guide ‘designed for beginners’ on that instrument—Steáfán Hannigan and David Ledsam spend two full chapters on ‘Ornamentation’. They repeatedly emphasise that it is important to ‘have enough room’ to play an ornament and that a ‘roll’, ‘tap’ or ‘slide’ ‘replaces’ a note: ‘Both [the original skeletal note and the ornament that ‘replaces’ it] should take the same time to play.’¹⁶⁰ The on-line guide to Irish traditional music, ‘tradschool.com’, confirms this: ‘Ornaments must be played as rapidly as possible, and must not break the rhythmic flow of the tune.’¹⁶¹ The following example shows the use of the ‘short roll’ and the ‘standard roll’ to illustrate this practice:

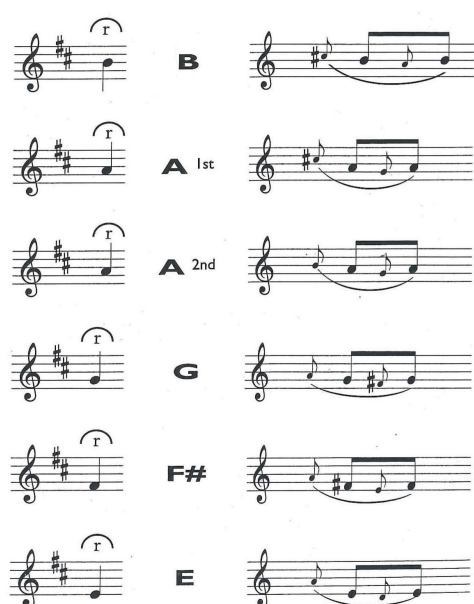


Figure 22a: Irish traditional music: short rolls.

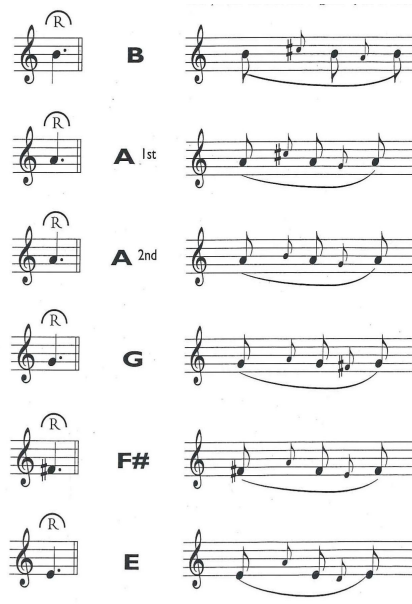


Figure 22b: Standard rolls.

The same applies to all other tin whistle ornaments. ‘Rolls’ are also played on the traditional Irish fiddle, as are ‘cuts’ which also belong to the stock of tin whistle ornaments.¹⁶² Regarding the ornament called ‘cran’, James Cowdery relates that ‘[u]ntil recently, only pipers used crans, but now flute, whistle, and even fiddle players have

¹⁵⁹ Sean Williams, *Focus: Irish Music* (London: Routledge, 2010), p. 10; see also John O’Flynn, *The Irishness of Irish Music* (Burlington: Ashgate, 2009), pp. 165–167.

¹⁶⁰ Steáfán Hannigan and David Ledsam, *The Low Whistle Book. All you need to know about how to play the low whistle, featuring ornamentation, history and fantastic tunes* (Rothley: SVM Publications, 2013), p. 37 and p. 39.

¹⁶¹ Stephen Duce, *Tradschool*, <<http://www.tradschool.com/en/about-irish-music/ornamentation-in-irish-music/>> [accessed 18 June 2017].

¹⁶² Mick Conneely, *Mick Conneely—Irish Traditional Fiddle Player*, <<http://www.mickconneely.com>> [accessed 11 November 2017].

adapted the technique to their instruments.’¹⁶³ The rule, noted above, that the rhythmic flow of the tune has to be preserved, regardless of any ornaments, applies to all instruments involved in a session. *Simultaneous ‘compound’ ornaments covering the same time span* can be found in Vietnamese music where, according to Trần Văn Khê, the parts involved

must play in unison or octavated on the first beat of each bar, so that even in the middle of a musical phrase there is a perfect unison on the first beat of each bar.¹⁶⁴

Another example is the ‘colotomic’ music of Thailand and Indonesia. In Gamelan music, the term ‘colotomy’, which was invented by Jaap Kunst, is used to describe

the phrase structure of the *gendhing* (‘piece’). Each major section of a *gendhing* begins and ends on a gong beat and is further subdivided into subsections and phrases by several other single-note instruments of the gong type; their function is to mark the skeletal melody (adapted and played by the metallophones in unison) at regular metric periods.¹⁶⁵

Michael Tenzer adds that the ‘figuration’ played by the melodic instruments

is actually a kind of filling-in at a greater rhythmic density, done in many possible styles drawn from a palette of possible figuration types.¹⁶⁶

Figure 23 shows an excerpt of a Balinese *Oleg*:

¹⁶³ Cowdery, *The Melodic Tradition of Ireland*, p. 19f.

¹⁶⁴ Văn Khê, *Musik Vietnams*, p. 68f. (my translation).

¹⁶⁵ ‘Colotomic structure’, in *The New Grove Dictionary of Music and Musicians*, vol. 6, ed. by Stanley Sadie (Oxford: Oxford University Press, 2001), p. 156.

¹⁶⁶ Tenzer, ‘Oleg Tumulilingan’, p. 224.

FIGURE 6.1. Oleg: Melodic Strata and Gongs in cycle 8 (1:00-1:32. see appendix for fuller transcription).

The musical score consists of five staves and a gong pattern line. The first staff, 'Stratum 1 (Payasan; slow version)', starts at 1:00. The second staff, 'Stratum 1.1 (Payasan; fast version)', begins at the end of the first staff. The third staff, 'Stratum 2 (neliti)', has 'P.T.' markings at beats 2, 4, 6, 8, 10, 12, and 14. The fourth staff, 'Stratum 3 (pokok)', has 'P.T.' markings at beats 2, 4, 6, 8, 10, and 12. The fifth staff, 'Stratum 4 (jegogan)', has 'P.T.' markings at beats 2, 4, 6, 8, 10, and 12. The sixth staff, 'Stratum 5 (gongs)', has 'Kempli Gong' markings at beats 2, 4, 6, 8, 10, and 12. The gong pattern line at the bottom shows 'Kempli Gong' at beats 2, 4, 6, 8, 10, and 12, and 'Kemong' at beats 8, 10, 12, and 14. The 'Beat Number: (16)' is indicated at the bottom right, with beat numbers 1 through 16 marked along the staff lines.

Figure 23: Balinese Oleg (excerpt).

R. Anderson Sutton and Roger R. Vetter purport that ‘one useful way to conceive of the texture of Gamelan music [...] is to think of the following layers’:

1. a main melody, or melodic skeleton (*balungan*), is usually played by single-octave metallophones;
2. this main melody is punctuated in a (mostly) regular, repeated pattern known to musicologists as ‘colotomic’ punctuation, played on various knobbed gong instruments, some hanging vertically, others mounted in wooden cases;
3. other melodic instruments, playing at faster densities (usually 2, 4, 8, 16, or 32 times faster than the beat of the main melody), provide melodic elaboration, in complex heterophonic relation to the main melody and to each other [...].¹⁶⁷

The characteristic rhythmic ‘ambiguity’ of heterophonic music was one of the main interests of the Israeli composer Mark Kopytman. He used various canonic techniques—labelled ‘heterophonic shifting’—to create this aural effect. ‘Heterophonic shifting’ implies consecutive entrances of identical structures in quick succession, or, as Kopytman himself puts it, ‘in a close time position, without taking into consideration the exact vertical dimension of such a shifting.’¹⁶⁸ The following example is taken from Kopytman’s essay ‘About Heterophony’. It shows the difference between ‘heterophonic shifting’ and the structure of a classic canon.

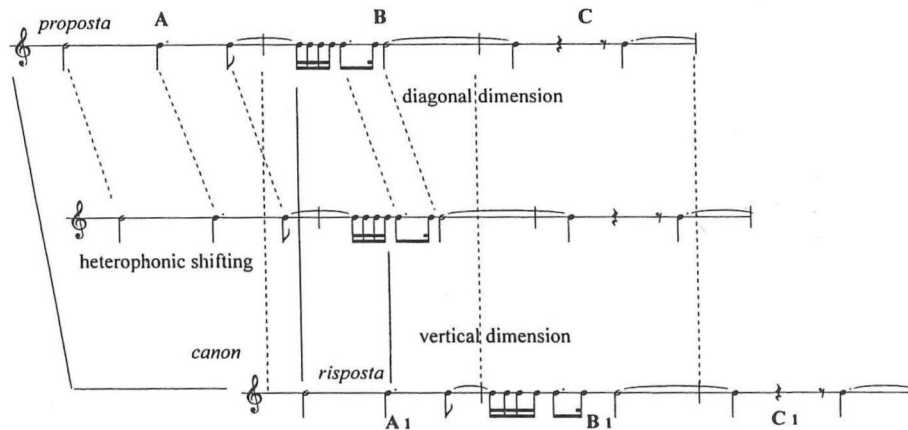


Figure 24: Mark Kopytman: ‘Heterophonic shifting’.

Ligeti’s cluster compositions of the 1960s—‘superb’ examples of heterophony, according to Rudolf M. Brandl—are based on similar procedures.¹⁶⁹ However, these techniques focus only on one aspect of heterophony; the entire field of ornamentation and variation, i.e. aspects that are at least as important as rhythmic ambiguity, are omitted. Furthermore, heterophony in non-European and vernacular cultures is never based on canonic techniques or imitation.¹⁷⁰

¹⁶⁷ Sutton and Vetter, ‘Flexing the Frame’, p. 240f.

¹⁶⁸ Kopytman, ‘About Heterophony’, p. 206.

¹⁶⁹ Brandl, ‘Universale Basisdefinitionen’, p. 20.

¹⁷⁰ Liang, *Music of the Billion*, p. 249. It must be mentioned, however, that the lack of rhythmic coordination in Gaelic Psalm Singing sometimes creates ‘echo effects’ (cf. chapter 1.2.3.1.1.); in

To be sure, it is legitimate to use techniques like those described to achieve an aural impression similar to that of heterophonic rhythmic imprecision. It would be more precise, however, to call the techniques as well as the sounding result ‘micropolyphony’—a term Ligeti himself used to describe his cluster compositions.¹⁷¹

It should also be mentioned that rhythmic variation of the skeletal tones can indeed occur in heterophonic textures. The lengthening of skeletal tones in Gaelic Psalm Singing is often a function of ornament (cf. chapter 1.2.3.1.1.), but the (deliberate) lack of rhythmic coordination is equally as often a cause of its rhythmic ambiguity. Liang Mingyue describes that in the performance of Chinese ensemble music ‘in the pre-1950 era the sense of rhythmic exactitude was not crucial’; he calls this phenomenon ‘polychronicism’:

[A] noticeable characteristic especially to the Western-trained ear is that the unification of the beat is somewhat less precise compared to the concept of uniform beat in Western high art ensemble playing. It is this rhythmic flexibility and personified tolerance that gives a polychronic texture to Chinese music.¹⁷²

However, rhythmic imprecision in the performance of a skeletal melody is never the only characteristic of a heterophonic music practice; other aspects of greater significance such as ornamentation are always added.

In extreme cases, the different rhythmic shape of simultaneously sung ornaments can lead to instances in which heterophony is combined with ‘imitative practices’—although the singers involved might not be aware of this. In his 1756 book ‘The Rudiments of Music’, Robert Bremner describes his aural impression of Gaelic Psalm Singing thus:

Had these nonsensical graces been the same everywhere, it would have been the less matter, but every congregation, nay, every individual, had different graces to the same note, which were dragged by many to such immoderate length that one corner of the church, or the people in one seat, had sung out the line before another had half done: and from the whole there arose such a mass of confusion and discord as quite defaced this noblest part of Divine worship.¹⁷³

1.3.2. Improvisation

Heterophony is sometimes associated with improvisational practices.¹⁷⁴ However, in view of the variety of heterophonic styles, on the one hand, and the confusing

North Indian music, heterophonic sections sometimes alternate with sections that are based on ‘imitation’ (cf. chapter 1.3.5.).

¹⁷¹ György Ligeti, ‘Musik und Technik’, in *Gesammelte Schriften*, vol. 1, ed. by Monika Lichtenfeld (Mainz: Schott, 2007), pp. 237–261 (p. 253).

¹⁷² Liang, *Music of the Billion*, p. 22.

¹⁷³ Robert Bremner [1756], quoted in Patrick, *Four Centuries of Scottish Psalmody*, p. 139.

¹⁷⁴ Brenner, *Dörfliche Musik*, p. 106; Enescu, ‘Heterophonie’, p. 67.

ambiguity of the term improvisation, on the other hand, it exceeds the scope of this thesis to establish whether heterophony *in general* is an improvisational practice or not.¹⁷⁵ In the following section I will discuss some aspects of improvisation and their relation to heterophonic practices. In his *Musik in Geschichte und Gegenwart* entry on 'improvisation', Artur Simon defines that the term should

basically [be] used where the performers have alternatives in creating the music. This applies not only to solo performances, but also to the singing and playing groups.¹⁷⁶

With regard to non-Western musical practices, Simon emphasises that detailed analysis often reveals that seemingly 'free' improvisation is in fact based on an interpretation of musical 'constants'.¹⁷⁷ He states that

[i]f improvisation is to be understood in the sense of *improvisum* (Latin: 'the unpredictable'), this is limited to the apparently unregulated sequence of individual phrases or *Spielfiguren*.¹⁷⁸

Simon's definition is problematic in that it does not include certain aspects that are crucial to an understanding of improvisation. It does not, for example, refer to the question of spontaneity, or, in other words, to the point in time when the 'free' decisions are made.

The vagueness of many definitions as well as the many difficulties associated with the term led Bruno Nettl to state somewhat resignedly that '[w]e probably should never have started calling it improvisation.'¹⁷⁹ In his 2013 essay, *Contemplating the Concept of Improvisation and its History in Scholarship*, he adds that he wonders 'whether all the things we include under the rubric of improvisation have enough in common to justify a collective term.'¹⁸⁰ Furthermore, many musical cultures do not 'single out the improvisatory nature of any of their musical products'; this 'applies even to those among them that articulate ideas about composition.'¹⁸¹ Nettl suggests

that we become more nuanced by creating a taxonomy that explores the intersection of improvisation and what one might best call pre-composition, a taxonomy that

¹⁷⁵ A 'sampler' of definitions of 'improvisation' can be found in Bruno Nettl, 'Introduction: An Art Neglected in Scholarship', in *In the Course of Performance: Studies in the World of Musical Improvisation*, ed. by Bruno Nettl with Melinda Russell (Chicago, IL: University of Chicago Press, 1998), pp. 1–27 (p. 10).

¹⁷⁶ Artur Simon, 'Improvisation', in *Die Musik in Geschichte und Gegenwart. Sachteil*, vol. 4, ed. by Ludwig Finscher (Kassel: Bärenreiter, 1996), columns 538–561 (column 601; my translation).

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ Bruno Nettl, 'Preface', in: *Musical Improvisation: Art, Education, and Society*, ed. by Gabriel Solis and Bruno Nettl (Urbana, IL: University of Illinois Press, 2009), pp. ix–xv (p. ix).

¹⁸⁰ Bruno Nettl, 'Contemplating the Concept of Improvisation and its History in Scholarship', *MTO, a journal of the Society for Music Theory*, 19.2 (2013), 27–87 (p. 28).

Derek Bailey states that 'improvisation' 'is always changing and adapting, never fixed, too elusive for analysis and precise description; essentially non-academic'. Derek Bailey, *Improvisation. Its Nature and Practice in Music* (Dorchester: Dorset, 1992), p. ix.

¹⁸¹ Bruno Nettl, 'Thoughts on Improvisation: A Comparative Approach', *The Musical Quarterly*, 60.1 (1974), 1–19 (p. 6).

avoids simply drawing a line between the two but looks at how they overlap and intersect, at what they have in common, at the role of preparation, of following canons, of audience expectation—looking at the many kinds of musical creation holistically.¹⁸²

*

Nettl's ground-breaking 1974 essay entitled *Thoughts on Improvisation: A Comparative Approach*, may be a more promising approach to the subject than most other theories. Nettl establishes five key terms that are crucial for an understanding of improvisation: 'model', 'points of reference', 'building blocks', 'spontaneity', and 'density'. I will use these fundamental terms for describing improvisatory elements in heterophonic music. First, Nettl points to the fact that improvisation is usually based on a 'model':

The improviser, let us hypothesize, always has something given to work from—certain things at the base of the performance, that he uses as the ground he builds. We may call it his model.¹⁸³

Nettl references Indian *raga* and *tala*, the Arabic *maqam*, *dastgah* in Iran, and *patet* in Gamelan music as examples, but also blues sequences in jazz and figured bass in Baroque music: there are 'very diverse kinds of models used in the world of improvisation.'¹⁸⁴

Generally, the 'model' is 'a melody, rhythmic pattern, or chord progression which, whether actually sounded or not, is known by the improvising musician.'¹⁸⁵ R. Anderson Sutton summarises that

[m]usical improvisation [...] is not free expression constrained only by the inspiration of the moment, but a complex and multilevel process, one that must be learned and practiced.¹⁸⁶

In heterophonic music, the 'model' is a skeletal melody or melodic pattern (which includes rhythm or predefined approximate rhythmic proportions of the pitches involved; see chapter 1.2.1.2.).

According to Nettl, the 'model' must be articulated at certain 'points of reference': 'obligatory musical events which must be observed [...] in order that the model remain intact.'¹⁸⁷ 'Points of reference' or 'signposts', as Nettl sometimes calls this occurrence, can be 'certain central tones, opening and closing motifs, melodic indications signalling

¹⁸² Nettl, 'Contemplating the Concept of Improvisation', p. 28.

¹⁸³ Nettl, 'Thoughts on Improvisation', p. 11. Nettl later uses the term 'point of departure' synonymous with 'model' (Nettl, 'Introduction', p. 12ff.).

¹⁸⁴ Ibid., p. 12.

¹⁸⁵ R. Anderson Sutton, 'Do Javanese Gamelan Musicians Really Improvise?', in *In the Course of Performance. Studies in the World of Musical Improvisation*, ed. by Bruno Nettl with Melinda Russell (Chicago, IL: University of Chicago Press, 1998), pp. 69–94 (p. 71).

¹⁸⁶ Ibid.

¹⁸⁷ Nettl, 'Thoughts on Improvisation', p. 12.

the coming of closing sections, etc.’¹⁸⁸ In heterophony, the ‘points of reference’ are the tones of the skeletal melody or the melodic pattern; additionally, culture-specific conventions underlying the ‘actualisation’ of the ‘model’ can also be regulated by a system of ‘signposts.’ For example, in the traditional music of Myanmar, one layer of the texture is based on the skeletal melody; another layer is made up of the ‘segments’ that are used to ‘actualise’ this ‘model’ and that are themselves organised according to certain conventions: they are classified as ‘opening’ and ‘closing’ segments, ‘static’ segments, segments ‘approaching a cadence’, etc.¹⁸⁹

The ‘segments’ can also be considered as the ‘building blocks’ that Burmese musicians use to extemporise a manifestation of a song. ‘Building blocks’ are another important feature of improvised music. Nettl states that they are the ‘component units’ of a musical ‘system’, accumulated by tradition, ‘which musicians within the tradition make use of, choosing from among them, combining, recombining, and rearranging them’:

They are the tones selected from a tone system; they are melodic motifs; they are harmonic intervals and interval sequences in improvised polyphony; they are types of sections (e. g., the exposition of sonata forms).¹⁹⁰

It is not easy to draw a clear line between ‘points of reference’ and ‘building blocks’. In his later *Introduction* to the book ‘In The Course Of Performance’ (1998), Nettl appears to have abandoned the idea of ‘points of reference’ altogether; he only speaks of ‘building blocks’ which he defines as ‘the vocabulary on which the performer may draw.’¹⁹¹ The ‘manipulation’ of the building blocks is a ‘major component of improvisation in some cultures.’¹⁹² Regarding ornamental heterophony and its two layers of musical texture, however, it may be useful to preserve the concept of ‘points of reference’; the term could refer to the melody/melodic model, while the term ‘building blocks’ could describe the culture-specific conventions surrounding ornamentation.

Judith Becker rejects the term ‘improvisation’ for the music of Myanmar altogether:

The wonder of the Burmese tradition lies in the fact that the artist is able to arrange his materials in the proper syntactic order, operate within a metrical frame, repeat earlier patterns in successive verses, and roughly conform to the contours of a melody, all in the instant of the performance. Improvisation, so often used to describe oral traditions, is hardly the correct word for this compositional technique. However, it is clear that this kind of composition demands great creative skill. The skill lies in the ability to produce an infinite number of good compositions using severely restricted musical materials and operating within a rigid metric and architectonic formula.¹⁹³

¹⁸⁸ Ibid.

¹⁸⁹ Becker, ‘Anatomy of a Mode’, p. 272f.

¹⁹⁰ Ibid., p. 13.

¹⁹¹ Nettl, ‘Introduction’, p. 15.

¹⁹² Ibid., p. 14.

¹⁹³ Becker, ‘Anatomy of a Mode’, p. 278.

Elsewhere in the same text, Becker describes the process as ‘instantaneous composition.’ She confirms this view in her later book on ‘Traditional Music in Modern Java’:

The musician in an oral tradition [...] has mastered a *technique* of composition, based upon the manipulation of formulas, which allow him to perform and compose at the same moment.¹⁹⁴

R. Anderson Sutton, on the other hand, believes that Javanese Gamelan music contains improvisatory elements. He defines that the *balungan* (‘skeleton’ or ‘outline’)

serves as the ‘model’ with its ‘points of reference’ that constrain, in various idiomatic ways, the playing of other instrumental parts and, when present, singing.¹⁹⁵

The ‘model’ is realised by a ‘flexible melodic pattern’, called *céngkok*, which normally fills out ‘four beats of skeletal melody (or in some cases twice or half that number).’¹⁹⁶

The *céngkok* can be regarded as the ‘building blocks’ of Javanese Gamelan music.

Meanwhile, the ‘points of reference’ occur in a culture-specific ‘density’, i.e., they are either closer or further apart to each other, depending on the musical culture.¹⁹⁷

The ‘density’ is very close both in variant heterophony and in ornamental heterophony, i.e. the ‘points of reference’ (the ‘skeletal tones’) are very close to each other in all heterophonic styles that I have studied.

*

The aspects discussed above apply equally to most of the notated music of the Western tradition. Bruno Nettl does not consider improvisation and composition as opposite concepts, but rather as ‘two points on a continuum’; the distinguishing feature between these two points is the ‘degree of spontaneity, or, if you will, the time lag between creation and presentation.’¹⁹⁸ The notion that improvisation involves spontaneity is shared by other authors.¹⁹⁹

Spontaneity can certainly be observed in Gaelic Psalm Singing, where each singer may ‘sing from the heart.’²⁰⁰ There is no regularity of order or distribution of the ornaments as they are based on spontaneous decisions owed to the expressive will of the individual singer. In his aforementioned lecture-performance on Gaelic Psalm Singing (cf. Chapter 1.2.3.2.2.), Calum Martin gives an example of two (of many) possible ways of decorating an excerpt of a basic hymn tune:

¹⁹⁴ Judith Becker, *Traditional Music in Modern Java* (Honolulu, HI: University of Hawaii Press, 1980), p. 20.

¹⁹⁵ Sutton, ‘Do Javanese Gamelan Musicians Really Improvise?’, p. 74.

¹⁹⁶ *Ibid.*, p. 75.

¹⁹⁷ Nettl, ‘Thoughts on Improvisation’, p. 13.

¹⁹⁸ *Ibid.*, p. 71.

¹⁹⁹ See, for example, Ernest T. Ferand, *Improvisation in Nine Centuries of Western Music. An Anthology with a Historical Introduction* (Cologne: Arno Volk, 1961), p. 5; Simon, ‘Improvisation’, p. 601.

²⁰⁰ Bailey, *On the Edge* (my transcription).



Figure 25: Calum Martin: Two possible 'extemporisations' of the beginning of a melody.

Apparently, the spontaneous decisions of performers of Carpathian traditional music with a limited number of *Spielfiguren* led Rudolf M. Brandl to assume that this music is based on improvisation; this is evident in the following assertion:

The melodic rhythm arises only through the fractal dimension of the *doxaries* [= *Spielfiguren*], whose selection (improvisation!) brings about the final determination of the tone sequence and—connected with it—the concrete rhythmic form of the melody (the *skopos*).²⁰¹

Since this is not the main topic of his book, Brandl does not go further into the subject. By quoting Brandl's statement in his book on Southwest Turkish folk music, Klaus-Peter Brenner adapts this notion of improvisation for heterophonic music.²⁰² Like Brandl, he does not pursue the subject further either.

*

In the *Kunqu* opera tradition, prior to a performance musicians work together closely in order to develop an interpretation. The accompanists 'need to know exactly all the moves of the singer so as to be able to accompany them well'.²⁰³ The preparation of a performance of a *Kunqu* opera requires

the collaboration of several specialists: apart from the librettist/arranger an expert of the *qupai* repertoire is needed, who must be able to sing and to harmonise the melody pattern with the text. [...] Finally, a good singer is required, who brings the music effectively to life by applying appropriate embellishments and dynamic expressive nuances to the actual version.²⁰⁴

The heterophonic structure

is not arbitrary and random; rather, it requires elaboration prior to a performance (*jiahua*), especially by the flutist who plays interludes and has to carry the vocal melody to a finish if the singer does not sing it completely.²⁰⁵

Javanese musicians distinguish between 'parts which are closely bound to [the] skeletal melody (and thus could hardly be said to be improvised)' and those which 'routinely' deviate from it.²⁰⁶ The deviations in the diverging parts may be chosen by the musician 'well before a performance'; however,

²⁰¹ Quoted in Brenner, *Dörfliche Musik*, p. 106 (my translation).

²⁰² Brenner, *Dörfliche Musik*, p. 106 (my translation).

²⁰³ Brandl, *Musik als kommunikative Handlung*, p. 45 (my translation).

²⁰⁴ *Ibid* (my translation).

²⁰⁵ *Ibid.*, p. 55 (my translation).

²⁰⁶ Sutton, 'Do Javanese Gamelan Musicians Really Improvise?', p. 71.

musicians [...] confide that their choices between *céngkok* or aspects of their realization may sometimes be spontaneous, particularly in response to what others are playing at the moment.²⁰⁷

Contrarily, Sutton concedes that ‘one will not find a very high degree of spontaneity in the choice of *céngkok*, due to the finite supply of acceptable *céngkok* in a particular context.’ The level

at which one finds a far greater degree of individual input, often spontaneous, though by no means always, is in the detailed realization of a particular *céngkok*, often called [...] *wiletan* or *wilet*.²⁰⁸

He later explains that

[w]hile the final tone, general contour, and some rhythmic elements [of a *wilet*] must be maintained, some of the tonal material can be altered.²⁰⁹

Sutton concludes that

Javanese musicians make choices among extant patterns, sometimes during rather than prior to performance; and they may spontaneously alter some elements of these extant patterns; and, therefore, indeed they improvise.²¹⁰

I have not found any information on improvisatory elements in variant heterophony; the question whether or not the tonal deviations are based on improvisation is closely linked to the debate whether these deviations occur deliberately or unconsciously.

1.3.3. Performance Situation

Heterophony occurs in a variety of genres, either alone or in combination with other plurivocal and/or monophonic practices: it can be found in sacral and secular music, in ‘high art’ and ‘folk’ music, in ceremonial (East Asian court and temple music) as well as in operatic music (Chinese opera genres), dance music (*Zungdhra*, Irish traditional music) and congregational singing (Gaelic Psalm Singing). The performance situation is correspondingly varied.

As far as the interaction between the musicians is concerned, it is noticeable that in at least three very different musical cultures heterophonic music-making seems to be associated with physical motionlessness, even rigidity, of the performers and—due to the positioning of the musicians—the avoidance of eye contact: the members of a congregation heterophonically singing a Gaelic psalm sit side by side in pews and look in the same direction, but not at each other. Communication between the parishioners

²⁰⁷ Ibid., p. 75.

²⁰⁸ Ibid., p. 76.

²⁰⁹ Ibid.

²¹⁰ Ibid., p. 86.

seems to take place exclusively *through* the music.

Only the precentor, the single person facing the congregation, enjoys a unique role: His 'lining out'—giving each line of a hymn before it is sung by the congregation—in earlier times served to announce the text to the illiterate members of the community, but today is primarily supposed to 'animate' and 'inspire' the singers.²¹¹ The precentor is also the one who, often spontaneously, chooses the tune for a psalm to be sung. However, once he has 'precented' the line of a tune, the members of the congregation appear to sing for themselves, independently from the precentor (whose voice seems to disappear in the crowd) and in loose association with the other singers.

A similar situation can be found in *gagaku* music: the members of the 'orchestra' sit far away from each other, looking in the same direction but not at each other, and only move to operate their instruments. In contrast to Gaelic Psalm Singing, *gagaku* is performed in front of an audience. Interaction between the instrumentalists and the audience does not take place; it is 'one-way communication.'²¹² The same applies to some Gamelan genres, where the musicians do not face each other but sit side by side in rows. One of the musicians—sometimes one in each instrumental group—has a leading role, similar to that of a principal in a Western classical symphony orchestra.

In all three heterophonic styles described above, communication takes place primarily through the music. A similar situation can also be found in Western notated music; here, however, communication is coordinated by a notated score and sometimes by a conductor. Christian Kaden notes that 'a large number of musical decision-making processes have been removed from the musical act and put on paper.'²¹³

On the other hand, the instrumental parts in *gagaku* music are so strictly defined—even the heterophonic passages often are played exactly the same way in every repetition—that the difference to a performance of Western notated music appears negligible; ²¹⁴ it is simply not necessary for the performers to look at each other.²¹⁵

²¹¹ Informal talk with a 'precentor' from Back on the Isle of Lewis on 17 September 2016.

²¹² Christian Kaden, *Musik im Zivilisationsprozeß* (Kassel: Bärenreiter, 1993), p. 178. On possible ways of giving 'feedback' between performers and audiences see Christian Kaden, *Musiksoziologie* (Berlin: Neue Musik, 1984), pp. 170–200.

²¹³ Kaden, *Musiksoziologie*, p. 178.

²¹⁴ Stephen Jones observed a similar phenomenon in shawm music of North China, where the heterophonic manifestations are 'not casual but highly regulated: for instance, the top player always "walks shrill" in exactly the same passages. Similarly, at places known but not articulated, the top part also often reverts to the lower register, playing more or less in unison with the lower part.' Stephen Jones, *Ritual and Music of North China: Shawm Bands in Shanxi* (Aldershot: Ashgate, 2007), p. 95.

²¹⁵ The heterophonic 'deviations' may have been planned prior to a performance, or perhaps they are the result of years of practice. The only 'freedom' in *gagaku* is to be found in the 'imprecise' attacks of the (sustained) melodic tones, when, within a limited time frame, the players of the melody instruments can freely decide when to start playing. Moreover, the tones are rarely directly 'attacked'; they usually start with a short upward glissando or a small ornament. According to Rudolf M. Brandl, this characteristically slow 'transient response' is what makes heterophony in East Asian Court and Temple music so special. He writes: '[t]he actual tension lies in the small glissandi; small, partly microtonal figures and alterations in pitch; isolated, dynamically differentiated beats of drums, gongs and cymbals; and extremely noisy 'transients' played by the wind and string instruments. Each sound detail thus has (semantic-)structural

Nevertheless, in Western notated music the attention of the musicians is not entirely 'drawn away from their mutual acoustic contact'.²¹⁶ Paolina Decevic observes that 'through breathing, gestures, postures (e.g. hand movements) and eye contact, entries and *rubati* can be coordinated and the intensity of tempo, dynamics, et cetera, can be shown.'²¹⁷ The 'playing style and rhythmical *entrainment* create a shared bodily excitement'; this 'sense of coming together both aesthetically and in sharing embodied communication can create a powerful feeling of social connection between the musicians.'²¹⁸ To demonstrate how different the 'communication structures' in the above-mentioned heterophonic practices are from other plurivocal styles, the description of the 'social component' in interferential diaphony may be helpful: here,

the experience of human proximity [...] is essential. [...] [W]hen performing diaphonically, the singers stand very close to each other and often wrap their arms around each other. They form a group that differs fundamentally from the wide aspect of a school choir.²¹⁹

Another critical aspect that must be mentioned to understand the performances not only of *gagaku* music is the role of one of the percussion instruments as a 'time-keeper'; it ensures the coordination of the other parts.²²⁰ A 'time-keeper' is also to be found in other heterophonic styles such as Chinese folk music and *Kunqu* opera; in the latter case, a 'time-keeper' is necessary because of the spatial separation of the performers. The performance situation can be quite different in other heterophonic styles. In an Irish 'music session', for example,

whether it is at a pub [...] or at a home, the players face each other, not the audience if there is one, because Irish music does not require an audience.²²¹

In the song sections that are not danced to, Bhutanese *Zungdhra* performers stand very close to each other, holding hands and facing the audience. This ensures closer physical communication than in other musical styles such as *gagaku* or Gamelan. Furthermore, the characteristic continuous stream of sound of *Zungdhra* is based on 'choral breathing'; this group response requires greater attentiveness from the performers than the 'individualistic' simultaneous extemporisations of a hymn tune in Gaelic Psalm Singing or the instrument-specific manifestations of a skeletal melody in Chinese folk music and *gagaku*.

weight.' By means of the temporal organisation, heterophony 'structures a "ritual space" [...] of symbolic-associative timbres in which [...] noisy sound events are intersected as symbolic "objects".' Brandl, *Musik als kommunikative Handlung*, p. 109 (my translation).

²¹⁶ Ibid.

²¹⁷ Paolina Decevic, *Aspekte der nonverbalen Kommunikation in der Musik* (Master's thesis, Universität für Musik und darstellende Kunst Graz, 2016), p. 5.

²¹⁸ McKerrell, *Focus: Scottish Traditional Music*, p. 17.

²¹⁹ Christian Kaden, *Das Unerhörte und das Unhörbare. Was Musik ist, was Musik sein kann* (Stuttgart: Metzler, 2004), p. 282 (my translation).

²²⁰ Brandl, *Musik als kommunikative Handlung*, p. 109; Wolf, *Bamarische Musik*, p. 80.

²²¹ Williams, *Focus: Irish Music* (London: Routledge, 2010), p. 10.

1.3.4. 'Heterophony' in pre-1900 Western Art Music

The definition of 'imprecise unison' reads like a description of variant heterophony:

The singing voice and higher piano voice are identical and not identical at the same time. They run parallel in unison [...] and are nonetheless separated by minute differences, which result in friction and sometimes sounded dissonances.²²²

It is a term coined by Reinhold Brinkmann for a compositional technique Robert Schumann sometimes applied in his songs;²²³ this technique is called 'heterophony' by some authors.²²⁴ The following extract from Schumann's song *Zwielicht*, which is often cited in this context, shows a passage where the upper melodic line of the right hand in the piano part is identical with the voice part except for one tone in each bar; at first glance, it looks like variant heterophony:

Figure 26: Schumann: *Zwielicht*, bars 28–31.

The harmony in this passage is obscured by the contrapuntal texture; figure 27 shows a simplified version of bars 30 and 31:

Figure 27: Schumann: *Zwielicht*, simplified version of bar 30 (and 31).

²²² Quoted in: Malin, *Songs in Motion*, p. 124.

²²³ Brinkmann adopted the term from Adorno who speaks of 'imprecise unisons' in connection with Webern's song op. 3, No. 1. (Brinkmann, 'Das ungenaue Unisono', p. 61). Brinkmann was the first author to systematically apply the term to romantic and early modern music. He found 'imprecise unisons' not only in Schumann's music but also in the music of Mahler, Pfitzner, Wolf and others.

²²⁴ Schreier, 'Kollision und Verschiebung', p. 109; Rosen, *The Romantic Generation*, p. 32 and p. 350. Rosen even speaks of 'heterophonic polyphony' (p. 325) and 'heterophonic counterpoint' (p. 349) in the music of Chopin, without explaining what that is.

The two dissimilar pitches (fourth quaver in each bar) are components of the same underlying chord: F# is the seventh, G# the root of G# major. Viewed from a broader perspective, the G# in the voice part is the neighbouring note of the preceding F#: the basic melodic movement goes from F# to E; the detour via the neighbouring note in the voice part is made for motivic reasons.

The case is slightly different in bars 28 and 29, which differ from the following two bars only in terms of harmony, but are otherwise of the same texture. Figure 28 shows a simplified version of the two bars, presenting the harmonic progression.



Figure 28: Schumann: *Zwielicht*, simplified version of bar 28 (and 29).

The only issue with the B in the voice part is that it is not part of the underlying chord (a diminished seventh chord F#–A–B#–D#); its function here seems to be that of a neighbouring note only. The harmonically ‘correct’ pitch, B#, would create an awkward (augmented) interval (A–B#) in the melodic line, which might be the reason why Schumann chose the ‘smoother’ B.

Although the pitch is not part of the chord, I believe it should be heard in relation to it. The delicate friction between the concurrent tones B and B# is certainly intended, as confirmed by the fact that a similar phenomenon can be found in *Mondnacht* from the same song cycle (*Liederkreis* op. 39):



Figure 29: Schumann: *Mondnacht*, bars 7 and 8.

The E# in the voice part and the E natural in the piano part, which sound at the same time, create a similar effect as in the example above. The similarities between the

‘imprecise unison’ and variant heterophony are clear: (1) both types of texture contain only few and small deviations between the two parts involved; (2) it is nearly impossible to determine whether the texture consists of ‘main’ and ‘subordinate’ parts.

The fundamental differences are equally evident: (1) the tonal deviations in the Schumann example are based on Western harmony; they are heard (and intended to be heard) as manifestations of common underlying chord progressions. Each tone is embedded in a broad harmonic context, which is not the case in melody-oriented heterophonic textures. ‘Vertical’ listening is presumably not intended in heterophonic music practices. (2) Heterophony is always based on a pre-existing skeletal melody or a melodic pattern known to all those who are involved in a performance. Heterophony-like passages in Western music can also be based on pre-existing melodies such as hymn tunes; more often, however, the melody upon which the texture is based is an original invention of the composer. The listener only knows the melody during the performance, which requires a completely different mode of listening. (3) Imprecise unison rarely occurs alone; other parts sound at the same time, which are usually of a different texture. In the passages from the Schumann song analysed above, for example, the lower piano voices create a dense contrapuntal texture. Heterophony normally occurs alone; at most, sometimes the individual parts are interspersed with occasional adoptions from other plurivocal practices (see chapter 1.3.5.)

In another passage from *Zwielicht*, the right hand piano part is more independent from the voice part. It creates a unique melody that is rhythmically denser than the melody of the voice part; the two only coincide when the voice moves on:

The image shows a musical score for Schumann's 'Zwielicht', bars 16-18. It consists of a vocal line and a piano accompaniment. The vocal line is in G major and 4/4 time, with lyrics in English and German. The piano accompaniment is in the same key and time, with a dense, rhythmic texture. The tempo is marked 'In tempo.'.

In tempo.

Hast a fawn thou lo - vest dear - ly, Leave it not a
Hast ein Reh du heb - vor an - dern, lass es nicht al -

In tempo.

Figure 30: Schumann: *Zwielicht*, bars 16–18.

Similar examples can be found in abundance in Western music. Peter Cooke, in his New Grove entry on *Heterophony*, provides an example from Beethoven's *Missa Solemnis* (see figure 31).

Figure 31: Beethoven: *Missa solemnis* (excerpt).

It has a dual function: first, it adds a rhythmic layer that consists of continuous quavers to the overall texture; second, it plays an important role in manifesting the underlying harmony. Bars 16 and 18 in the Schumann example present a melodic line that consists basically of arpeggios of diminished chords. In bars 17 and 19 the melody splits into two melodic lines, complementing each other contrapuntally.

Rhythmic and melodic independence of one or more parts are also common in heterophonic textures, for example in Gamelan music, where some of the ‘melodic instruments’ that play at faster densities (usually 2, 4, 8, 16, or 32 times faster than the beat of the main melody) provide melodic elaboration.²²⁵

The similarities to ornamental heterophony are apparent: (1) The addition of a rhythmic layer is also an important characteristic in some heterophonic music practices such as Balinese Gamelan (see chapter 1.3.1.). (2) The tonal deviations may not always be based on traditional ornaments, but they are often derived from the playing technique of the instrument in question; the arpeggios in bar 12 are typical for a piano part. Again, however, the decisive difference to heterophony, as it is known in non-European and ‘vernacular’ music, is that the texture is based on harmonic chord progressions—this implies ‘vertical’ listening which presumably is not intended in heterophonic music. Additionally, as seen in the previous example, the texture of the Schumann song is not based on a pre-existing melody known to all listeners. To perceive heterophony adequately listeners likely must reorient their listening. In regard to these analysed music examples, it would be at most permissible to speak of ‘quasi-heterophony’.²²⁶

²²⁵ Sutton and Vetter, 'Flexing the Frame', p. 240f.

²²⁶ The case may be different in early modern music. Gustav Mahler may have become acquainted with the concept of heterophony through his friend, the musicologist Guido Adler, whose essay ‘Über Heterophonie’ is one of the earliest contributions to the subject. Georges Enescu knew heterophonic practices firsthand from the folk music of his homeland Romania. It is beyond the scope of this thesis to go into the early adaption of heterophonic music practices for Western

1.3.5. Heterophony in Combination with other Textures

Heterophony can occur in combination with other textures, either consecutively or (rarely) simultaneously. Marius Schneider states that the quick succession of 'drone, imitation, heterophony and parallelism' is typical of 'primitive' music.²²⁷ The Taiwanese song discussed in chapter 1.2.2.2. consists of heterophonic passages and sections dominated by drones (see transcription no. 3 in the appendix). Japanese *gagaku* music begins with a flute solo that is sparingly accompanied by percussion instruments (see transcription no. 9 in the appendix). Formally speaking, the 'precenting' line in Gaelic Palm Singing can also be considered an introductory section outside the heterophonic texture.

As far as the simultaneous use of other textures is concerned, this practice is almost exclusively limited to occasionally borrowing and embedding elements in an otherwise predominantly heterophonic texture; the only exception may be the obligatory drone part in North Indian or Hindustani music.²²⁸

The occasional spontaneous imitation of a melodic motif in another instrumental part, as sometimes happens in Chinese folk music, may be considered a contrapuntal element.²²⁹ However, given the 'naturalness' and the omnipresence of imitation—not only in musical cultures all over the world but also in human behaviour in general—classifying this element as 'contrapuntal polyphony' may be somewhat exaggerated. Interestingly, the player may be forced to modify the playing technique of his or her instrument, if the motif to be imitated is played on a different instrument type. Liang Mingyue points to the 'programmatic' elements that sometimes occur in Chinese music:

Occasionally, the melodic instrument will make a descriptive sound such as a crying baby, chirping bird, or crowing cock to enhance the dramatic text.²³⁰

Heterophony is sometimes interspersed with passages that are played in unison or in an 'attempted unison'. John Napier shows that in North Indian and Hindustani music

the melodic accompanist imitates or doubles the singer's lines, either completely, in outline, or with some degree of variation, and continues playing whilst the soloist is not singing.²³¹

There is a 'flexible rapprochement of the two or more lines'. Napier suggests

that it is a texture that may be heard flexibly: as a unison, as a heterophony or as polyphony. This flexibility may be thought of as a continuum in 'ways of hearing'. At

notated music.

²²⁷ Schneider, *Geschichte der Mehrstimmigkeit*, p. 48f.

²²⁸ Napier, 'A Failed Unison', p. 87f. On the question whether a drone can be regarded as an own part in a plurivocal texture see Rudolf M. Brandl, 'Bordun', in *Die Musik in Geschichte und Gegenwart. Sachteil*, vol. 2, ed. by Ludwig Finscher (Kassel: Bärenreiter, 1995) columns 69–75 (column 71).

²²⁹ Thrasher, 'Musical Instruments', p. 242.

²³⁰ Liang, *Music of the Billion*, p. 232.

²³¹ Napier, 'A Failed Unison', p. 87f.

one end of the continuum, a traditional notion of a unison emphasises hearing those features in common or in proximity between two or more melodic lines. In heterophony the reverse is to be heard. It may be possible to not only subsume both terms within the ideal of *sangat* [melodic accompaniment], but to reverse the way in which they are traditionally heard, hearing in heterophony common features, in unison discrepancies.²³²

1.3.6. Is the Individual Part of a Heterophonic Texture a Valid Melody in Itself?

As was shown in Chapter 1.2.1.1., it is not clear whether there are ‘principal’ and ‘subordinate’ parts in variant heterophony.²³³ It is therefore difficult to decide whether the parts involved are valid melodies in themselves. The question would be answered if the individual parts were also performed as ‘solos’.

As far as ornamental heterophony is concerned, it must be noted that the principles upon which an ‘extemporisation’ of a skeletal melody by a solo instrument is based differ fundamentally from those of an ensemble performance. In view of sometimes strict hierarchies in ornamental heterophony as well as the fact that listening to each other is practiced in many heterophonic music practices such as Gaelic Psalm Singing, it is unlikely that an individual part of an ornamental heterophonic texture can be considered a valid melody in itself, since the hierarchy within the group of performers affects the internal melodic structures of the individual parts, as was shown in the example of the flute part in *Kunqu* arias (cf. chapter 1.2.3.2.2.).

²³² *Ibid.*, p. 104f.

²³³ Cf. Schneider, *Geschichte der Mehrstimmigkeit*, p. 43.

2. Compositions

The compositions discussed in this chapter were written during my studies; they reflect my path to a better understanding of heterophony and therefore not all of them are based on the definitions presented in Chapter 1, which I solidified at the end of my studies. In fact, many of the compositions are an interpretive approach to the subject.

I have divided the works into groups which are presented in subchapters; their order is only approximately chronological. The compositions of each subchapter focus on one aspect of heterophony as described in the previous chapter, such as melody, rhythm, social interaction, et cetera. The compositions of two of the subchapters deal with the two types of heterophony that I have identified: variant heterophony and ornamental heterophony. Another two subchapters include those compositions that represent a first approach to heterophonic composing; they were written before I had gained deeper knowledge of heterophony.

- 2.1. Approaches I: *Studies I–III*
- 2.2. Melody/Ornamentation: *šěru*
- 2.3. Variant Heterophony: *Studies IV and V*
- 2.4. Approaches II: *Invocatio, anfár* (third movement), *šěru IIa, ETYM III*
- 2.5. Social Implications: *Due canti di Ungaretti*
- 2.6. Ornamental Heterophony: *Ghasel, Study VI, Lied der Minne*
- 2.7. Rhythm/Ornamental Heterophony: *Study VII*
- 2.8. Melody/Ornamental Heterophony/Improvisation: *Das ander Lied*

Over the entire period of my studies I have composed several *Studies for Two Performers*, which explore various aspects of heterophony, often in a rather experimental way. The *Studies* can be divided into four groups: the first group contains *Studies I–III*; they were composed during the first months of my postgraduate studies and are an initial approach to the subject. They deal with various basic aspects of what is typically associated with heterophonic music-making.

The other studies examine individual questions that have arisen from my investigations of heterophony. With regard to their texture, *Studies IV and V* can be assigned to variant heterophony; however, they were written before I discovered that a pre-existent skeletal melody is an indispensable element of heterophony. *Study VI* is an approach to ornamental heterophony; it is based on a melody from another composition of the portfolio. Finally, *Study VII* deals with the notion of heterophony as it is often encountered in musicological literature, namely as a phenomenon primarily based on rhythmic shifts.

Like the first group of *Studies*, the compositions presented in Chapter 2.4. are based on initial observations of heterophony. They explore the topic from different angles, but are more comprehensive and elaborate and are partly written for larger ensembles. They create a heterophonic texture with the help of contemporary composition techniques, but are not based on a pre-existent melody like traditional heterophony. Rather, the skeletal melody is an incidental result of the compositional processes.

The only piece for solo instrument, *šēru*, is a compositional approach to melody as the basis of many traditional heterophonic textures. In particular, it explores the characteristics of flexibility and variability attributed to folk music melodies.

Due Canti di Ungaretti examine the social implications that often exist in non-European, in this case Chinese, heterophony. Chapter 2.6. discusses those compositions in my portfolio that are based on ornamental heterophony. Finally, *Das ander Lied* (chapter 2.8.) explores the relationship between ornamental heterophony and improvisation.

Despite the assignment of the compositions to specific 'topics' in the individual subchapters, there are numerous thematic overlaps. *Study IV*, for example, can also be interpreted as a study on rhythm in variant heterophony; *Lied der Minne* is not only about ornamental heterophony, but also about the social implications of Gaelic Psalm Singing. Many of the compositions are based on a technique I often use when I want to break new ground. It is introduced in subchapter 2.2., where it appears for the first time in connection with *šēru*. Subchapter 2.4.3. also discusses the challenge of form in composing heterophonic textures.

2.1. Approaches I: *Studies for Two Performers I–III*

In *Study I* the 'idea' of heterophony is reduced to its very basics: a rudimentary fixed melodic frame is increasingly extended by other tones that are subject to 'controlled randomness'. The 'melodic' line in both voices is a repeated downward movement within the frame of a fifth. The two outer pitches are fixed, and the pitches in between can be chosen freely by the performers within the frame of the fixed outer tones. The number of tones within the fixed frame increases from one to seven with each section; then the tones decrease from seven back to one. The more pitches there are to be sung/played between the two fixed pitches the more likely it is, given the narrow frame of a fifth, that the performers sing in unison or approximate unison. Even if the performers choose to sing/play 'undulating' melodic lines (instead of 'ascending' lines) it is likely that their pitches 'meet' more often in the sections with more tones.²³⁴ The number seven was chosen as the highest number because it exceeds the number of

²³⁴ Cf. the chapter 'Melodic Range, Contour, and Intervals' in Nettl, *Music in Primitive Culture*, p. 51.

chromatic pitches within a fifth by one tone, thus forcing the performers to either repeat one pitch or to include microtones.

*

Study II is based on Marius Schneider's definition of heterophony in 'East Asia and Oceania'.²³⁵ The texture happens to be that of variant heterophony, the concept of which I had not yet developed at the time of composition. Both parts follow the graphically notated melodic line, the execution of which is determined by the 'pitch sets' (one for each part) provided in the score.²³⁶ The two pitch sets differ mainly in range and number of pitches; most of the pitches, however, appear in both sets. The combination of accordance and difference between the two pitch-sets is designed to ensure that the two-part interpretation of the melodic line contains both unison and heterophonic passages. While, for instance, performer 1 may choose C5, D5 or E5 for a high pitch, performer 2 is restricted to C5 only. Thus it is possible to sing the passage either in unison or with two different pitches.

The choice of pitches is based on Schneider's description of the origins and early development of tonality.²³⁷ They form a scale which is roughly pentatonic, though there is an additional E5 in the first pitch set and omissions in the second. Schneider maintains, however, that an occasional E can sometimes appear in a pentatonic scale.²³⁸ I chose this 'ancient' mode because it enables me to study 'consonance/dissonance relationships' in heterophonic textures as described by Schneider.²³⁹ 'Consonance' in this context does not mean harmony in the traditional European sense. Rather, it refers to the sounding together of two 'functionally close tones.'²⁴⁰ F and G are, according to Schneider, the 'core cell' (with the 'tonic' F) which form the basis for the development of melodicity.²⁴¹ Since they are equally important their simultaneous sounding, in the context of this stage of harmonic development, is considered a consonance by Schneider.²⁴² The same applies to C (as the fifth of F) and D (as the fifth of G). A has an exceptional position within the scale; it may be considered as the fifth of D, but from the very beginning it also marks the division of the fifth F–C. It may therefore be sung simultaneously with the pitches of the 'core cell' as well as with their 'dominants'. E was (historically) the last pitch to enter melodicity, marking the beginning of the extension of the pentatonic scale. Its function is restricted to the 'division' of the fifth C–G and may therefore only sound simultaneously with these two tones.²⁴³

²³⁵ Schneider, *Geschichte der Mehrstimmigkeit*, p. 43f.

²³⁶ It is possible to sing/play *Study II* with more than two performers.

²³⁷ Schneider, *Geschichte der Mehrstimmigkeit*, pp. 1–19.

²³⁸ *Ibid.*, p. 24; Schneider transposes all his musical examples to keys without accidentals. His pentatonic scale always consists of the tones F, G, A, C and D.

²³⁹ Cf. chapter 1.2.2.2.

²⁴⁰ Schneider, *Geschichte der Mehrstimmigkeit*, p. 24.

²⁴¹ *Ibid.*, p. 18; the pitches are not absolute pitches.

²⁴² *Ibid.*, p. 21.

²⁴³ *ibid.*, p. 20–26.

The design of the 'pitch-sets' in relation to the melodic line makes it impossible for the performers to sing/play in 'dissonances', as Schneider defines them. Although it was not the main concern of this composition, the indeterminate notation also promotes a rhythmic ambiguity considered by many researchers characteristic for heterophonic textures.

*

Study III explores the possibilities of deriving one melody from another, based on (controlled) chance operations. By externalising tones of one melody a new melody with its own rhythmic and pitch relations is formed. One of the two parts, played by a plucked instrument, creates a melody that is based on certain rules concerning pitches and rhythm. The other performer picks up individual tones from this melody and sustains them, thus creating a separate long melodic line; the choice of pitches as well as their duration is entirely up to the performer.

As I found out later, the resulting structure is similar to that of the music of Japanese *bunraku* puppet theatre, where 'the *shamisen* often punctuates the vocal phrase with two or three notes, carrying the skeleton of the vocal melody.'²⁴⁴

2.2. Melody/Oramentation: 'šēru' for one Performer

Preliminary note: The 'Meander Sequence'

In many of my compositions, when I want to break new ground I employ a type of numerical sequencing that I adopted from the visual artist Sabine Laidig, with whom I have engaged in an intensive interdisciplinary exchange for many years. Since 1995, the object of Laidig's artistic investigations has been the meander as an artistic ornament. In her work, mathematics 'functions [...] as a complementary science. [...] The aesthetic component emerges from mathematical logic.'²⁴⁵ Laidig uses simple numerical sequences in order to 'decompose' the basic structure of the meander. These sequences may be composed of two intertwined reverse numerical series:

1(3)2(2)3(1)2(2)1(3)

Figure 32: Meander Sequence.

Like Sabine Laidig, I use the Meander Sequences (as I have come to call them) to create an inscrutable (musical) surface which is based on the solid ground of a strict rule; it is

²⁴⁴ Chieko Yamada, 'Gidayū-bushi: Music of the Bunraku Puppet Theatre', in *The Ashgate Research Companion to Japanese Music*, ed. by Alison McQueen Tokita & David W. Hughes (Aldershot: Ashgate, 2008), pp. 197–228 (p. 219).

²⁴⁵ Jessica Müller, 'Pulsierende Frequenzen im Raum', in *Sabine Laidig, mäander—meanderings* (Stuttgart: author's edition, 2001), p. 24.

sometimes surprising to discover where the application of the sequences lead. More often than not, however, the Meander Sequences only serve as a tool in the very first stage of the composition process, in order to inspire; the rest of the work is based on different principles. Wherever possible, I apply one single Meander Sequence to pitch organisation, rhythm, and form of a particular work; however, it is often necessary to create individual sequences for each parameter. In some cases, I have created ‘super-meanders’, that is, several intertwined Meander Sequences. The neutrality and flexibility of the Meander Sequences make it possible to use them in many different compositional contexts.

2.2.1. *šēru* (1)

As has been shown in chapter 1.2.1. all scholars agree that heterophony is based on melody or a melodic pattern. It was therefore an important part of my research to investigate the origins and manifestations of ‘melodicity’. According to Curt Sachs, two-tone melodies at a very early stage already showed rudimentary formal organisation:

A revolutionary innovation interfered with mere reiteration on the very level of Veddoid and Patagonian music. The original motif and its first repetition were tied together to form a complex unit by varying the final notes: the first time the voice rested on a level that kept the listener in suspense; the second time it shifted to the other level to give a satisfactory ending. To put it technically: the first phrase ended on a semicadence and the second on a full cadence.²⁴⁶

What seems a precursor to the classical period also forms the basis for the development of various forms of Gregorian Chant. According to Stephan Klöckner ‘the recitation of the text on one tone is the nucleus for this process; accentuation and intonation unfold freely, with the clauses being marked by small melodic motifs.’²⁴⁷ These ‘monopolar compositions’ are the basis for the development of the ‘primal modes’ [*Urmodi*].²⁴⁸ They are at the same time, according to some scholars, considered as the basis for the various types of cantillation all over the world. Edith Gerson-Kiwi therefore asserts that Gregorian Chant is ‘part of the large family of ancient Asian cultures who first designed and accomplished the overall scheme of liturgical cantillation.’²⁴⁹ The exuberance of these words has been dampened by more recent research: an influence of Synagogal or Byzantine music on early Christian chanting, as was often stated by earlier scholars, cannot be verified because there is little knowledge about Jewish and Byzantine cult

²⁴⁶ Sachs, *The Rise of Music*, p. 34.

²⁴⁷ Stephan Klöckner, *Handbuch Gregorianik. Einführung in Geschichte, Theorie und Praxis des Gregorianischen Chorals* (Regensburg: ConBrio, 2009), p. 72 (my translation).

²⁴⁸ *Ibid* (my translation).

²⁴⁹ Quoted in: Wolfgang Suppan, *Der musizierende Mensch* (Mainz: Schott, 1984), p. 62 (my translation).

music of that time.²⁵⁰ Still, before they were ‘pressed into the system of “Octoechos”’ during the Middle Ages, early Gregorian melodies are believed to have been heavily influenced by oriental singing styles, which are based on ‘melody models’.²⁵¹ In contrast to Josef Kuckertz’s idea of ‘melodic patterns’, that are based on a more or less fixed series of loosely rhythmically-organised pitches, a ‘melody model’, as defined by Fellerer, represents the general contour of a melodic line; its interpretation is up to the individual performer and can include ornaments, microintervals, augmentations, diminutions, et cetera.^{252, 253}

šēru (1) is an attempt to capture the idea of ‘melody models’ by interpreting the contour of a melodic line in various rhythmic and tonal ways. The contour generally is a simple movement, rising from a fundamental tone to a fifth (sixth and seventh respectively in other manifestations) and descending back to the fundamental tone.²⁵⁴ This basic movement is divided into eight sections containing the ‘pitch sets’ for each segment of the melodic line. Figure 33 shows the pitch sets for the *Kernmelodie* (central stave in the score) and for the other two basic manifestations of the melody (one stave above and below the *Kernmelodie*); this shows the three different tonal interpretations of the contour.²⁵⁵

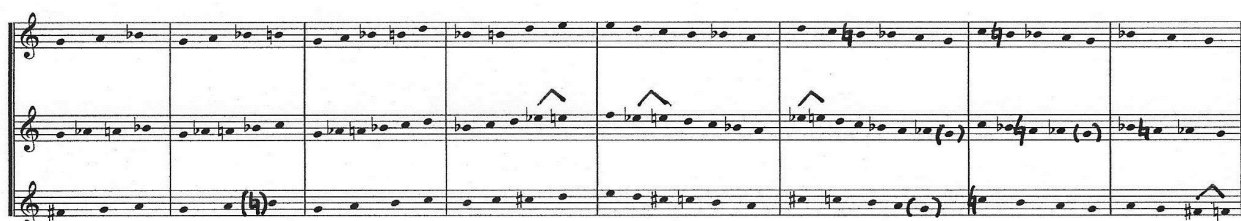


Figure 33: *šēru* (1): Pitch sets.

Their rhythmic organisation is based on three divisions of the crotchet: sextuplets, septuplets and demisemiquavers, which are imposed in a permutational sequence upon the melody:

²⁵⁰ Klöckner, *Handbuch Gregorianik*, p. 40 (my translation).

²⁵¹ Karl Gustav Fellerer, *Der gregorianische Choral im Wandel der Jahrhunderte* (Regensburg: Pustet, 1936), p. 10f. (my translation).

²⁵² Fellerer characterises oriental ‘melody models’ almost poetically as ‘in verschiedenen Tondistanzen und Zwischentönen verschleifte Melodieformeln’. Fellerer, *Der gregorianische Choral*, p. 10.

²⁵³ I made the conceptual assignment (melodic model versus melodic pattern) to clearly distinguish the two melodic phenomena. As far as I know, it cannot be found anywhere else in musicological literature and may otherwise be unusable.

²⁵⁴ The melodic ‘arc type’, according to Nettl, *Music in Primitive Culture*, p. 53.

²⁵⁵ The presence of a *Kernmelodie* is based on the now somewhat old-fashioned assumption that the variants of a tune can be traced back to an original melody. I composed *šēru* before I had knowledge of James Cowdery’s concept of ‘tune families’ (see chapter 1.2.2.1.). In order to avoid the impression of a hierarchy among the melody variants (original melody versus derivative variants), I intend to rename the *Kernmelodie* as ‘source material’ and forbid the playing of this source material as an individual melody in future editions of *šēru*.

| |:ABCBCACABCBABACACB:| |

(A: sextuplets; B: septuplets; C: demisemiquavers)

Figure 34: šĕru (1): Rhythmic organisation.

I chose these rhythm values because they are close to each other; they enabled me to create rhythmically fluent melodic lines. The Meander Sequence I use for determining pitches and attacks serves the same purpose. It is composed of two intertwined numerical sequences that are used throughout one melody. Figure 35 shows how each melodic interpretation of the contour has its own sequence:

Kernmelodie: | |: 1 (7) 2 (6) 3 (5) 4 (4) 5 (3) 6 (2) 7 (1) 6 (2) 5 (3) 4 (4) 3 (5) 2 (6) :| |

Melody 2: | |: 2 (6) 3 (5) 4 (4) 5 (3) 6 (2) 5 (3) 4 (4) 3 (5) :| |

Melody 3: | |: 3 (5) 4 (4) 5 (3) 4 (4) :| |

Figure 35: šĕru (1): Meander Sequence for pitches and touches.

The superimposed rhythm (figure 34) is the basis of the pitches of each section that run in the background ; the Meander Sequences shown in figure 35 determine which tone is ‘made audible’, i.e. which pitch is played. Figure 36 shows the ‘making’ of the beginning of the *Kernmelodie*:

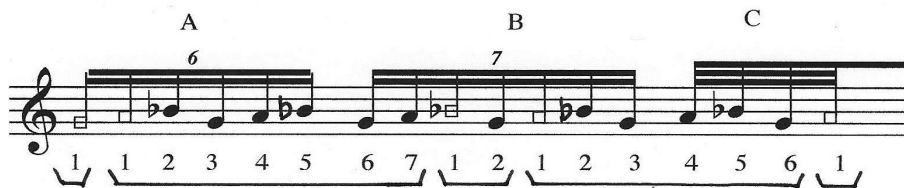


Figure 36: šĕru (1): Making of the beginning.

Tone repetitions are sometimes drawn together to a sustained tone in the final version. After five attacks— independent of their duration—each melody moves on to the next ‘pitch-set’, i.e. to the next melodic segment. Junctures throughout the melodies, indicated by vertical lines in the score, enable the performer to switch from one melody to another, thus mixing the different rhythmic and tonal interpretations. In this way it is possible to present a large number of ‘realisations’ of the melodic contour.

In some places, there are additional alternative interpretations of melodic segments, most of which are based on augmentation: the rhythm of the original ‘motif’ is multiplied by 4, the resulting rhythm is then divided into semiquavers, and finally the relevant Meander Sequence (see figure 35) is applied again. The result is an alternative ‘way through the melody model’. Some of the additional alternative interpretations are written in space notation. Their pitch organisation is based on the processes described above; however, their rhythm is not fixed, which provides the performer with more freedom.

The tempo can be chosen freely by the performer. The phrasing of the individual melodies depends on the tempo and the length of the alternative melodic segments chosen. The performer is advised to play up to four manifestations of the melody and to use not more than four ‘alternatives’ per manifestation; the chosen manifestations should be distributed throughout a concert programme and never played consecutively. The reason for this is that each realisation of the ‘melody model’ should be considered as a fully valid melody. Played in succession, the individual melodies could be perceived as variations or variants of a given melody. This would establish a hierarchy among the manifestations, challenging the independent status of each. The *Kernmelodie* represents the skeletal melody in some of the other compositions submitted. It thus serves as a basis for an (artificial) lineage of tradition within my compositional output.

2.2.2. *šēru* (2)

The second piece is based on the same material and similar composition processes. It is for this reason that it shares the same title and that its manifestations can be mixed with those of the first piece. The main topic of this part of *šēru* is ornamentation, which according to Nettl, is an ‘important trait’ of ‘primitive’ melodies.²⁵⁶ As I have shown in chapter 1.2.3. of this text, it is also important in the formation of ornamental heterophony.

Robert Lach, in his study *Entwicklungsgeschichte der ornamentalen Melopöie*, presents a theory on the origins and the development of ornamentation; he purports that all ‘small-scale’ ornamentation in Western classic and romantic music ‘derived from organic material, that progressions originally primary in nature had shrivelled up, as it were, and become subsidiary to the basic melodic line.’²⁵⁷

In his critique of Lach’s theory, Bruno Nettl admits that Lach’s conclusions ‘have been substantiated at least in part by musical evidence.’²⁵⁸ However, Nettl believes that for some melodies the reverse could be true, asking: ‘could it not be that scales of originally few tones tended to expand by creating unimportant ornamental tones outside of the scale, and then gradually [gave] them the status of regular tones?’ Nettl concludes that ‘some ornamental material grew out of tones originally organic, while some organic tones developed from initially ornamental material as the scale expanded.’²⁵⁹

šēru (2) is based on Nettl’s theory of the gradual integration of tones outside the given scale to change the tonal and rhythmic structure of the melody. The eight manifestations trace this process: the duration of ‘non-organic’ ornamental grace notes in

²⁵⁶ Nettl, *Music in Primitive Culture*, p. 57.

²⁵⁷ *Ibid.*

²⁵⁸ *Ibid.*

²⁵⁹ *Ibid.*

manifestation 1 grows gradually during the following manifestations until in manifestation 8 the notes reach the same duration as the former ‘main melody’. At the same time, the tones of the main melody decrease in duration until, in manifestation 8, they reach the status of grace notes. Additionally, both intermingled melodies are subject to constant development. This reflects that ‘folk music’ is never fixed but changes with time, locality, social structure and function.²⁶⁰ As with *šēru* (1), I consider the eight pieces as equivalent manifestations of the same melody.

Indeed, since most ‘parameters’, such as range, register, tempo and melodic shape, remain the same throughout the piece, an inattentive listener could misinterpret the different manifestations as equal. Although in the score the manifestations are presented in their logical order, they can be played in any order. As in *šēru* (1) the performer is advised to choose up to four manifestations and distribute them either over a concert programme or several days. Both melodies follow the shape of an ‘arc type’ melody.²⁶¹ Melody 1 is based on the same pitch material as the *Kernmelodie* in *šēru* (1); it spans a hexachord G4–E5. Melody 2 encompasses a minor seventh and involves most of the pitches that are omitted in Melody 1:



Figure 37a: *šēru* (2): Melody 1, pitch sets.



Figure 37b: *šēru* (2): Melody 2, pitch sets.

In both melodies the contour is divided into eight sections, each of which contains the ‘pitch-sets’ of each individual segment of the melodies. The number of pitches in most sections is different in both melodies to avoid similar movements of the melodic line:

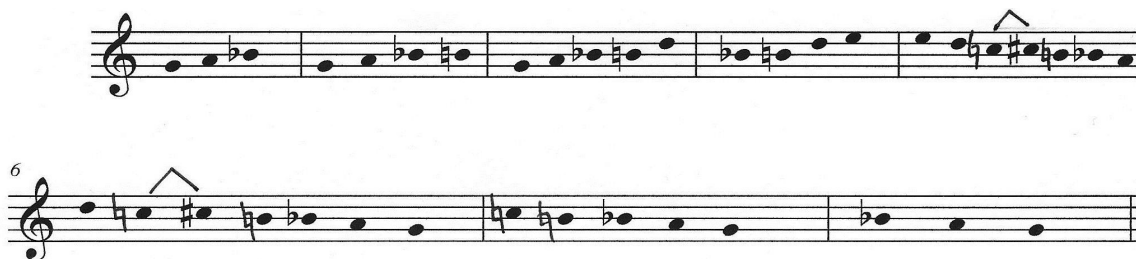


Figure 38a: *šēru* (2): Melody 1, pitch sets.

²⁶⁰ Wolfgang Suppan, *Volkslied* (Stuttgart: Metzler, 1966), p. 24; Kaden, *Des Lebens wilder Kreis*, pp. 37–45.

²⁶¹ Nettl, *Music in Primitive Culture*, p. 57. By ‘melody 1’ and ‘melody 2’ I mean the two intertwined melodies in *šēru* (2).

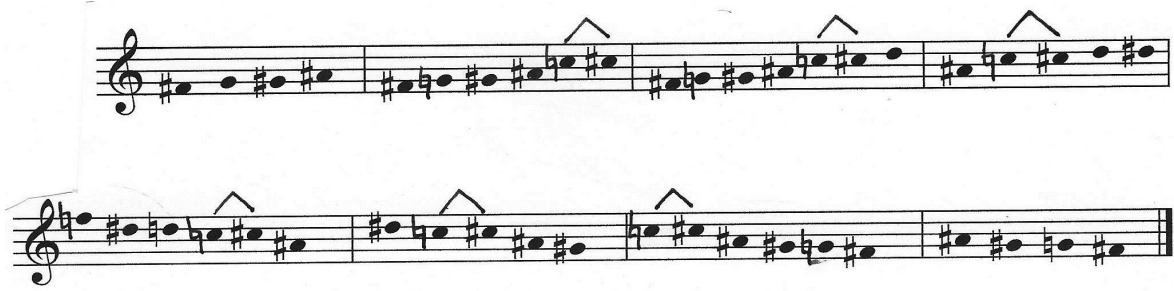


Figure 38b: šēru (2): Melody 2, pitch sets.

Meander Sequences as shown in the analysis of šēru (1) are applied to both melodies to determine the concrete pitches and their duration. In contrast to šēru (1), the sequences vary in the manifestations. Since the note values in Melody 1 reduce over the course of the whole piece, a growing number of shorter values must be included. The sequence for manifestation 1 is:

3 4 4 3 4 3 3 4 3 3 4 3 4 4 3 3 etc.

The numbers 3 and 4 were chosen because they represent an average value. For manifestation 2 the sequence is:

2 4 3 3 4 2 3 2 2 3 3 4 4 4 2 etc.

The newly added 2 represents both shorter note values and a sequence of pitches different from manifestation 1. In manifestation 4 when the first grace notes appear, it becomes necessary to apply two separate numerical sequences to pitches and rhythm:

pitches: [1,2,3,4,5]: 1 (5) 2 (4) 3 (3) 4 (2) 5 (1) 4 (1) 3 (2) 2 (3) 1 (4) 2 (5) etc.

rhythm: [0,1,2,3,4]: 0 (4) 1 (3) 2 (2) 3 (1) 4 (0) 3 (0) 2 (1) 1 (2) 0 (3) 1 (4) etc.

Figure 39: šēru (2): Meander Sequences for pitches and rhythms.

The same applies for Melody 2 in reverse. The following table compiles all sequences used in the piece and illustrates the processes:

Manifestation	1		2		3		4		5		6		7		8	
Melody	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Durations	[3,4]	[0]	[2,3,4]	[0,1]	[1,2,3,4]	[0,1,2]	[0,1,2,3]	[0,1,2,3]	[0,1,2,3]	[0,1,2,3]	[0,1,2]	[1,2,3,4]	[0,1]	[2,3,4]	[0]	[3,4]
	3(4) 4(3) 4(3) 3(4) 3(3) 4(3) 4(4) 3(3) etc.		2(4) 3(3) 4(2) 3(2) 2(3) 3(4) 4(4) etc.	0(1) 1(0) 1(0) 0(1) 0(0) 1(0) 1(1) 0(0) etc.	1(4) 2(3) 3(2) 4(1) 4(2) 3(3) 2(4) 1(3) etc.	0(2) 1(1) 2(0) 1(0) 0(1) 1(2) 2(2) 3(1) etc.	4] 0(4) 1(3) 2(2) 3(1) 4(0) 3(0) 2(1) 1(2) etc.	0(3) 1(2) 2(1) 3(0) 3(1) 2(2) 1(3) 0(2) etc.	0(3) 1(2) 2(1) 3(0) 3(1) 2(2) 1(3) 0(2) etc.	4] 0(4) 1(3) 2(2) 3(1) 4(0) 3(0) 2(1) 1(2) etc.	0(2) 1(1) 2(0) 3(2) 4(1) 0(1) 1(2) 2(4) 1(3) etc.	1(4) 2(3) 3(2) 4(1) 4(2) 0(1) 3(3) 2(4) 1(3) etc.	0(1) 1(0) 1(0) 0(1) 0(0) 1(0) 1(1) 0(0) etc.	2(4) 3(3) 4(2) 3(2) 2(3) 3(4) 4(4) etc.		3(4) 4(3) 4(3) 3(4) 3(3) 4(3) 4(4) 3(3) etc.
Selection of pitches	Identically equal to „Durations“	[3,4]	Identically equal to „Durations“	[4,5]	Identically equal to „Durations“	[3,4,5]	[1,2,3,4,5]	[2,3,4,5]	[2,3,4,5]	[1,2,3,4,5]	[3,4,5]	Identically equal to „Durations“	[4,5]	Identically equal to „Durations“	[3,4]	Identically equal to „Durations“
		3(4) 4(3) 4(3) 3(4) 3(3) 4(3) 4(4) 3(3) etc		4(5) 5(4) 5(4) 4(5) 4(4) 5(4) 5(5) 4(4) etc.		3(5) 4(4) 5(3) 4(3) 3(4) 4(5) 5(5) 4(4) 2(3) etc	1(5) 2(4) 3(3) 4(2) 5(1) 4(1) 3(5) 2(4) 2(3) etc	2(5) 3(4) 4(3) 5(2) 5(3) 4(4) 3(5) 2(4) etc.	2(5) 3(4) 4(3) 5(2) 5(3) 4(4) 3(5) 2(4) etc.	1(5) 2(4) 3(3) 4(2) 5(1) 4(1) 3(5) 2(4) 2(3) etc	3(5) 4(4) 5(3) 4(3) 3(4) 4(5) 5(5) 4(4) etc.		4(5) 5(4) 5(4) 4(5) 4(4) 5(4) 5(5) 4(4) etc.		3(4) 4(3) 4(3) 3(4) 3(3) 4(3) 4(4) 3(3) etc	

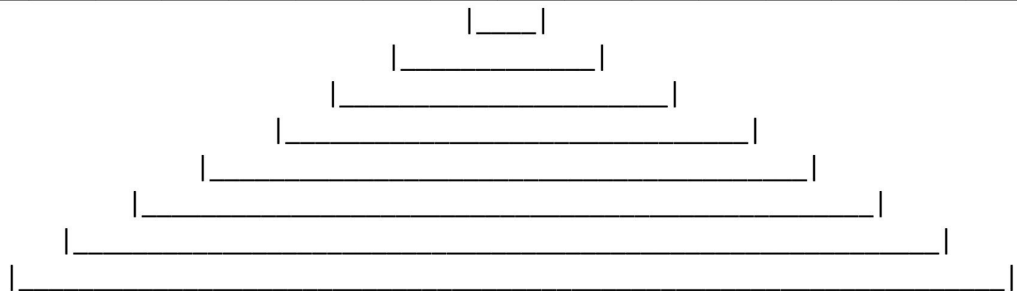


Figure 40: Meander Sequences underlying šėru (2).

The superimposed rhythm for Melody 1 is the same as in šėru (1); Melody 2 starts with the first permutation of the same sequence. Both sequences run throughout the entire piece without interruption:

Melody 1: || : ABC BCA CAB CBA BAC ACB : ||

Melody 2: || : BCA CAB CBA BAC ACB CBA : ||

A: sextuplets; B: septuplets; C: demisemiquavers

Figure 41: šėru (2): Rhythmic sequences.

The alternation of the two melodies is based on a Meander Sequence that is made up of two intertwined sequences. The non-italic numbers represent the number of tones in Melody 1; the numbers in italics show the number of tones in Melody 2 in each manifestation:

1 *4* *4* *1* 2 *3* 3 *2* 3 *2* 2 *3* 4 *1* 1 *4* 4 *1* 1 *4* 3 *2* 2 *3* 2 *3* 3 *2* 1 *4* 4 *1*

A manifestation ends when this pattern has been completed once. The longer the durations of Melody 2 become in the course of the piece, the more ‘weight’ they gain in relation to the tones of Melody 1. One of the challenges in the composition process was to establish convincing tonal relationships within the context of ever-changing pitch constellations. I solved this problem mainly through dynamics and phrasing (including rests).

2.2.3. *šēru* (3)

The third part of *šēru* realises Robert Lach’s above-mentioned theory on the origins of ‘small-scale’ ornaments: according to this theory, melodic formulas, ‘originally primary in nature, had shriveled up, as it were, and become subsidiary to the basic melodic line.’²⁶² The *Kernmelodie* from *šēru* (1) serves as the basis for this procedure; with each repetition, more melodic tones turn into grace notes. This process is based on a simple numerical rule: the first note and then every fifth note becomes a grace note. Shown as a numerical formula, it looks like this:

1 *4* 1 *4* 1 etc.

This process does not start anew with every repetition of the melody as to do so would prevent development. Instead, the application extends throughout the entire set of melodies. Tones that have already been transformed into an ornamental tone in a previous manifestation remain grace notes in the following manifestations, so that in the course of the process more and more grace notes accumulate and eventually start to form groups of ornamental tones.

In the sixth manifestation, the main melody consists only of single notes and two-tone groups; any further ‘shriveling up’ of the melody would result in a musical *gestalt* that could no longer be recognised as a melody. For this reason the process is stopped in the sixth manifestation.

šēru was originally written for garklein recorder. After learning about folk musicians’ practice of adapting a well-liked melody for their instrument, I decided to

²⁶² Nettl, *Music in Primitive Culture*, p. 57.

allow *šēru* to be played on every instrument, under the condition that the performers ‘make the music their own’, as folk musicians do, without regard to the ‘inventor’ of the music. Performers therefore are free to transpose the melodies, choose any tempo, add ornaments, and play the music in whatever context they like. For example, *šēru* has been played as part of an installation by Gerhard Staebler in Berlin in November 2016; Nathan Plante and Matthew Conley, both trumpet players, took turns playing a selection of the melodies.

2.3. Variant Heterophony

2.3.1. Study IV

Study IV is inspired by Marius Schneider’s idea of the origins of heterophony, which for him is also the origin of all plurivocal music. Schneider believed that in the beginnings of music history music-making (which meant singing) was not based on ‘proper’ pitches and intervals but rather on different degrees of ‘brightness’ of the tones (*‘Helligkeitswert’* vs. *‘Tonigkeit’*). He called this phenomenon *Distanzmelodik*.²⁶³ According to Schneider, ‘primitive’ heterophony evolved as a result of unintentional and unconscious tonal deviations in group singing.²⁶⁴

The performers of *Study IV* should imitate this ‘technique’ of tone production; the piece is intended for human voices, but may also be performed on instruments. It is a two-tone study: both voices start at the same ‘pitch’, singing either ‘meaningless syllables’ (e.g. ‘dah-dah-dah’ or ‘deh-deh-deh’) or a self-chosen text. In the course of the composition, more tonal deviations (all about a semitone lower than the ‘central tone’) appear in both voices, until in the last line of the score both voices have arrived at the lower tone, which represents the new ‘tonal centre’. The piece is made up of twelve ‘phrases’, separated by breaks of varying lengths. Each phrase comprises of 35 attacks sung simultaneously by both parts, the only exception being the sixth phrase which consists of 45 tones; this was done to create variety.

In both parts, the introduction of the deviating tones is based on numeric rules. The process starts in line two of the score: in the upper voice every 16th tone, in the lower voice every 9th and 18th tone is alternately replaced by the lower pitch. Figure 42 shows the underlying pattern:

part 1: 15 1 15 1 15 1 etc.

part 2: 17 1 8 1 17 1 8 1 etc.

Figure 42: Numeric pattern underlying Study IV.

²⁶³ Schneider, *Geschichte der Mehrstimmigkeit*, p. 15.

²⁶⁴ *Ibid.*, p. 20.

A pitch that has been changed once is retained in the following phrases, so that the number of lower pitches continuously increases. From line six onwards, the numerical rule is modified in order to speed up the process:

part 1: 15 1 14 2 13 4 12 5 etc.

part 2: 17 1 8 2 17 3 8 4 etc.

Figure 43: Study IV: Modified numeric pattern.

The original 'macro-rhythm' is maintained; the counting of the intermediate tones always starts from the second tone of a group of lower pitches. The composition is also a study of rhythm in variant heterophony. The odd number of tones sung in each phrase prevents the performers from counting in groups of three or four tones and thus creating a hierarchy of accented and unaccented tones. Additionally, the increasing number of deviating pitches creates an ever-changing rhythmic shape of the phrases. Curt Sachs observed that if in a two-tone melody one note 'predominates', it is

rather the upper one, while the lower seems to peter out like an accessory note, so that the cadential trend unexpectedly leads to the higher note. In such cases, we may be allowed to speak of a 'negative melody', as in geometry we speak of a 'negative curve,' which in the main runs below the zero or 'reference line.' In a melody in which the first and the last notes are approximately at the same pitch, the imaginary connecting line indicates the 'reference'; a melody is *positive* if it runs essentially above this line, and negative in the contrary case.²⁶⁵

A secondary topic of *Study IV* is to find the moment when the 'positive melodic line' (when the upper tone predominates) tips over into a 'negative' one. There is no objective answer to this question; it can only be found subjectively by the individual listener.

2.3.2. Study V

Depending on the instrumentation, the skeletal melody of a heterophonic texture can be sounded in the same register or in octaves. Musicological literature, however, does not explore whether there is an audible difference between the two types of presentation. This is the objective of *Study V*, where a basic melodic contour can be played simultaneously in the same register or in different registers by the two performers. Furthermore, realising the melodic contour in different intervals allows us to find out if different interval structures of a melody—when played in different registers—cause different aural impressions. It is a study of variant heterophony; ornamental heterophony is completely different.

²⁶⁵ Sachs, *The Rise of Music*, p. 32.

The melody consists of five sections (*a–e*), each of which is assigned three pitches, taken from one of four ‘pitch sets’. The internal structure of each of these pitch sets is based on a particular interval: (1) quarter-tones, (2) semitones, (3) whole tones, and (4) minor thirds.

Regarding the interaction of the two parts, it was important for me to find a basic structure that would ensure enough unisons, while simultaneously creating a succession of unisons and tonal deviations that are not too regular. The interwoven permutational sequences shown in figure 44 helped me achieve this:

Performer 1

Sequence 1: 123321 123321 231132 231132 312213 312213 123321 12

Sequence 2: 3212 3212 3212 2131 2131 2131 1323 1323 1323 3212 3212

Resulting sequence: **1 3 2 2 3 1 3 2 2 3 1 2 etc.**

Performer 2

Sequence 1: 2131 2131 2131 1323 1323 1323 3212 3212 3212 2131 2131

Sequence 2: 312213 3122213 123321 123321 231132 231132 312213 31

Resulting sequence: **2 3 1 1 3 2 1 2 2 1 1 3 etc.**

Figure 44: Permutational sequences underlying Study V.

The numbers 1,2 and 3 signify the three pitches in each section, with 1 representing the low, 2 the central, and 3 the high pitch. It is noticeable that the melody version that consists of small thirds does not sound heterophonic in any register; this is probably in large part due to the fact that thirds (for western ears) always have a harmonic effect. Interestingly, however, the impression of heterophony does not appear when using fourths and fifths either. It seems that the typical heterophonic sound effect is created by small intervallic deviations of up to a large second. The effect is retained even if the parts involved are spread over several octaves. On the other hand, it must be said that the proportional relationship between unisons and tonal deviations also plays a role in the formation of the heterophonic effect. The example of the Taiwanese song (see chapter 2.2.2. in this text) shows that in a texture that consists predominantly of unisons, the occasional deviations may also have larger intervals (in the example a fifth) without disturbing the heterophonic sound impression. This must be the subject of future studies.

2.4. Approaches II

2.4.1. *Invocatio*

Invocatio was commissioned by the Guardini Foundation (Berlin) for an ecumenical vesper. It is a setting of a text by Isaac of Antioch (died 540) for voice and viola. The text reads as follows:

Gott sprach: Lasst uns Menschen machen nach unserem Bilde. Du findest Gottes Bild weder in den Pflanzen noch in den Tieren noch auch in der Heerschar der himmlischen Geister, nur der Mensch ist das Bild des Königs.

In uns ist der unfassbare Geist, der unbesiegbare Wille, der geistige Verstand. In uns weilt die Seele, die unsterblich ist wie Gott, denn sie bleibt ewig am Leben, sei es im Licht oder in der Finsternis.

Betrachte das Bild Gottes, betrachte den Menschen, und du erblickst Gott. Dies ist das Ebenbild Gottes, das die Herrschaft über die Erde erhalten hat. Ein jeder Mensch trägt das göttliche Ebenbild in seiner Seele, in seinem Verstand und in seiner Freiheit.²⁶⁶

And God said, Let us make man in our image. You will find God's image neither in plants nor in animals nor in the host of heavenly spirits, only man is the image of the king.

In us is the incomprehensible spirit, the invincible will, the spiritual mind. In us dwells the soul, immortal as God, for it remains eternally alive, whether in the light or in darkness.

Look at the image of God, look at man, and you see God. This is the image of God, who has received the dominion over the earth. Every man carries the divine image in his soul, in his mind and in his freedom.

The compositional focus is the voice part; the viola part is mainly a 'reaction' to the melodic line. The piece uses several plurivocal techniques that are often associated with the origins of music. Similarly to *Study II*, *Invocatio* is based on a 'core cell' (A–G) with the central tone A. The tonal development of the melodic line roughly follows Marius Schneider's description of the history of tonality—from the beginning up to the more elaborate *Tonalitätskreismischung* (blending of tonal circles).²⁶⁷

In parts C and D the range of pitches is extended in each new textual unit; the pitches are assigned to a macro-rhythm, which is derived from the number of syllables per clause. Each syllable is translated into a crotchet; the resulting number of crotchets is then transformed into a symmetrical rhythm in accordance with the number of pitches. This forms the melodic 'background contour' on which the actual melody unfolds freely:

²⁶⁶ *Ausgewählte Schriften der syrischen Dichter: Cyrillonas, Baläus, Isaak von Antiochien und Jakob von Sarug*, translated from the Syriac by S. Landersdorfer (Kempten: Kösel, 1912), p. 400.

²⁶⁷ Schneider, *Geschichte der Mehrstimmigkeit*, p. 61.



'(In) uns ist der unfassbare Geist': 8 syllables



'(der) unbesiegbare Wille': 7 syllables



'(der) geistige Verstand': 5 syllables



'(in) uns weilt die Seele': 5 syllables



'(die) unsterblich ist in Gott': 6 syllables



'(denn) sie bleibt ewig am Leben': 7 syllables



'(sei) es im Licht oder in der Finsternis': 10 syllables

Figure 45: *Invocatio*: Basic melody.

The first word of each clause is sung using the pitches D and E/E \flat as a standard opening phrase; this opening phrase is therefore excluded from the general composition process described above. The crotchets are divided into triplets (A), demiquavers (B) and quintuplets (C) and appear in an order in which the two sequences ABCBA and CBAB are intertwined:

A C B B C A B B A C A B B A C B B C A B A A B B C C B B A A A B B
C C B B A A B A C B B C A B B

This sequence covers exactly the number of syllables in parts C and D. The bars are occasionally extended either by the opening phrase or incorporated rests. The succession of tone changes is based on the following Meander Sequence:

||: 1 4 2 3 3 2 4 1 3 2 2 3:||

At the end of this section (D) the pitch range encompasses the tones D4, Eb/E, F/F#, G, A, B/Bb, C/C#, D5. The pitches are arranged symmetrically around the 'core cell' A–G and cover an octave.

In section E, which carries the central message of the text, all pitches are used on the basis of quasi-dodecaphonic procedures. The crotchets in this section are divided into demiquavers (A), quintuplets (B), sextuplets (C), septuplets (D) and demisemiquavers (E). Their succession is based on three interwoven sequences: abcdedcba, EDCBABCDE and CBDAEADBC; it reads as follows:

a E C b D B c C D d B A e A E d B A c C D b D B a E C

The section grows directly out of the previous sequence of rhythms that finishes at the end of section D. The tone changes in section E are based on the numerical order:

||: 1 9 2 8 3 7 4 6 5 5 6 4 7 3 8 2 9 1 8 2 7 3 6 4 5 5 4
6 3 7 2 8:||.

The greater variety of rhythms and tone durations in this section made it possible to create a longer and more intricate melodic line. After the viola interlude in section F, the rhythmic procedures of sections C and D are continued in section G. The pitch range is gradually reduced to the 'core cell' A–G in a similar manner as it expanded in sections C and D. The superstructure of the voice part can therefore be labelled an ABA' form.

The viola part in sections C and D is based on a double drone on the open fifth D4–A4, thus defining the tonal background for the melodic line of the voice part. Furthermore, I was interested in investigating the effect of a drone that, according to Felix Hoerburger, is 'an acoustic phenomenon because of the resonating overtones that are constantly 'felt' [*mitempfund*en] by the listener, especially when they are given priority in the pitches of the melody.'²⁶⁸

²⁶⁸ Hoerburger, *Musica Vulgaris*, p. 22 (my translation).

The lower tone of the drone is flexible; the upward *glissandi* form a free 'counterpoint' to the voice part. The dynamics and the playing techniques (*sul ponticello*, *tremolo*) correspond loosely with the contents of the text. In section E the viola part, now playing two octaves higher, forms an 'imprecise parallelism' with the voice part: the intervals of the latter are proportionally translated into smaller intervals; a fifth, for example, appears as a minor third in the viola part, or a ninth as a minor sixth.²⁶⁹ On this basis the viola part establishes an independent simultaneous manifestation of the melodic line.

The solo interlude of the viola in section F is made up of a melodic structure that, according to Schneider, belongs to the 'most primitive' forms of music-making:²⁷⁰ *Distanzmelodik*, a type of tone production that is not based on 'proper' intervals but rather on different degrees of 'brightness' of the tones (cf. chapter 2.3.1.: *Study IV*). The (marginal) detuning of two of the viola strings is an attempt to recapture this type of tone production. *Distanzmelodik* is usually combined with the 'terrace' type of melodicity: a two-tone 'motif' that is repeated over and over again while irregularly sequencing down.²⁷¹

During the rehearsals for *Invocatio* I informed the musicians that the vocal part is the main part and that the viola part is subordinate to it. I also instructed the viola player to pay attention to nuances in the singer's interpretation of her part and to adapt her playing when necessary. In this way I applied principles of *Kunqu* opera arias before I knew them.

2.4.2. *anfár* (3rd movement)

This is the final movement of a brass trio, the first two movements of which were composed in 2013. In some respects, it is different from the other pieces I composed during my studies, in that it continues the compositional ideas presented in the previous movements. The main topic of this last movement are triads; the piece consists of 21 triads of (almost) equal duration. At the very beginning of the movement all three parts play the 'chords' simultaneously, whilst the underlying rhythmical structure causes slight arpeggio-like differences during the course of the piece. Were there a next 'chord' after the movement ends, it would (according to the underlying rules) be played simultaneously again. The compositional procedures I will describe start after the short introduction (bars 1–6/1–2 in the 'alternative beginning').

The rhythm is again based on intertwined retrograde sequences including: (A) demisemiquavers, (B) septuplets, (C) sextuplets and (D) quintuplets. Each instrument

²⁶⁹ Pierre Boulez describes a similar procedure in his essay 'Eventuellement...': Pierre Boulez, 'Eventuellement...', in *Relevés d'apprenti* (Paris: Editions du Seuil, 1966), pp. 147–182 (p. 156).

²⁷⁰ Schneider, *Geschichte der Mehrstimmigkeit*, p. 15f.

²⁷¹ *Ibid.*, p. 16.

has independent sequences in all parts of the movement. The sequences in each part represent circles which are complete in themselves. They start with two different divisions of the crotchet and grow over the course of the piece, by gradually including the other note values, thus doubling the length of each previous part:

	Trumpet 1	Trumpet 2	Trombone	Number of crotchets
part 1 (bar 7)	free use of A and B	free use of A and C	A only	6
part 2 (bars 8-10)	A(A)B(B)B(A)A(B)B(A)B(B)	B(C)C(B)B(B)C(C)B(B)C(B)	D(C)C(D)D(C)D(C)C(D)D(C)	12
part 3 (bars 11-16, 2 nd crotchet)	A(C)B(B)C(A)B(A)A(B)B(C)C (C)B(B)A(A)B(A)C(B)B(C)	D(B)C(C)B(D)B(C)C(B)D(C)D (D)C(C)B(B)B(C)C(D)D(C)	C(D)D(C)A(A)D(A)C(C)D(D)A (D)D(C)C(A)D(A)A(C)D(D)	24
part 4 (bar 16, 3 rd crotchet; bar 27, 2 nd crotchet)	A(D)B(C)C(B)D(A)C(A)B(B)A (C)B(D)C(D)D(C)C(B)B(A)A (A)B(B)C(C)D(D)C(D)B(C)A (B)B(A)C(A)D(B)C(C)B(D)	A(B)D(C)C(D)B(A)B(D)C(C)D (B)A(C)A(D)D(A)C(D)B(C)B (B)C(C)D(D)A(A)A(D)D(C)C (B)B(C)B(D)C(A)D(D)A(C)	C(B)D(A)A(D)B(C)A(C)D(D)C (A)D(B)A(B)B(A)A(D)D(C)C(C) D(D)A(A)B(B)A(B)D(A)C(D)D (C)A(C)B(D)A(A)D(B)	48

Figure 46: *anfár* (third movement): Rhythmic organisation.

The ‘chord’ pitches in the first trumpet appear on every 31th attack of the underlying rhythm, whilst in the second trumpet and trombone they are played on every 32nd attack. These differences in duration along with the different sequences, are the reason why the ‘chords’ are almost never sounded simultaneously:

Figure 47: *anfár* (third movement): Rhythms underlying the ‘chords’.

The first and second movements of *anfár* are based on the second and the third, respectively, as the predominant intervals. When I planned the macro-structure of the work two years prior to the composition of this movement, it was my intention to use the fourth as the basic interval in the third movement. The pitch organisation is based on tetrachords that have an internal structure similar to that of ancient Greek tetrachords.

There are three types of tetrachords: 'The *chromatic* genus [...] consists of 'a minor third and two semitones'; the *diatonic* scale is 'composed of [...] two whole tones and a semitone in each tetrachord'; an *enharmonic* tetrachord consists of 'a major third and two microtones of, more or less, a quarter tone each.'²⁷²



Figure 48: *anfár* (third movement): Use of tetrachords/heptachords.

In part 1 all three instruments start with one of the possible manifestations of a D–G tetrachord. In the following parts, each instrument plays tetrachords in different registers. It is possible in parts 2–4 to include the pitches of the adjacent upper or lower tetrachord ('conjunct tetrachords'), thus forming a heptachord; at this point I had the option to make a subjective choice, of either one of the two tetrachords or the heptachord. During the fourth part the tonality is 'opened up'—meaning that in all three instruments all tetrachords of the previous parts of the movement are used, thus forming a 'super-scale' (see figure 48).

The pitches of the tetrachords (or heptachords) 'run through' the whole movement mostly inaudibly on the basis of the rhythmic patterns described above. It was again subject to my intuition which of the pitches I 'made audible'. The only fixed rule was that all 21 'chords' are sounded. In some instances, I decided to employ a rapid passage where all the tone changes of the rhythmic pattern are played; at these times I had to apply different Meander Sequences to rhythm and pitch organisation. The pitches in these passages are determined by one of the numerical sequences described. For example, in bar 8 the pitches for the septuplets in the second trumpet are based on the sequence 1 3 2 2 3 1 2 2.

In some cases, the tetrachord is gradually built up during the course of a rapid passage. In bar 8, for example, the second trumpet starts with a 'rudimentary' pitch set consisting of D, E, and F. In the course of this passage the pitch range is gradually increased: D4–G4, C#4–G4, C4–G4 et cetera, until the full heptachord A3–G4 is reached (second beat of bar 9). In bar 10, trumpet 1 starts with the tetrachord D4–G4; with each new 'run' through the pitch set one tone is added, so that at the end of this bar the heptachord D4–C5 is reached.

²⁷² Sachs, *The Rise of Music*, p. 206.

2.4.3. *šēru Ila* for trumpet, trombone, cello, piano and percussion

šēru Ila deals with the synchronicity of the skeletal melody in the different parts of a heterophonic texture. It is based on the observation that different Meander Sequences with the same sum total produce a tonal match at the end of the sequence. Interestingly, this remains true if the parts involved have different rhythms: in this case at least two of the voices match in tone. The tonal concordance sometimes lasts only a nonuplet demisemiquaver, sometimes a whole beat. In *šēru Ila* the melodic lines in the trumpet, trombone, and cello parts are built on different Meander Sequences consisting of the numbers 3 and 4; their common 'basic number' is 7. Figure 50 shows the Meander Sequences for the formation of the melodies in the trumpet, trombone and cello parts:

Trumpet:

[3,4,4,3/4,3,3,4;3,3,4,3;3,4,3,3]: 3 (4) 4 (3) 4 (3) 3 (4) 3 (3) 4 (3) 4 (4) 3 (3) 3 (3) 4 (4) 4 (3) 3 (3)

Trombone:

[4,3,3,4/3,4,3,3;3,3,4,3;3,4,3,3]: 4 (3) 3 (4) 3 (3) 4 (3) 4 (3) 3 (3) 3 (3) 4 (4) 4 (3) 3 (3) 3 (4) 4 (3)

Cello:

[4,3,3,4;3,3,4,3;3,4,3,3/3,4,4,3]: 4 (3) 3 (4) 3 (4) 4 (3) 3 (3) 3 (4) 4 (4) 3 (3) 3 (3) 4 (4) 3 (4) 3 (3)

Figure 49: *šēru Ila*: Meander Sequences.

Figure 50 shows the first pitches of the resulting skeletal melody:



Figure 50: *šēru Ila*: Beginning of the skeletal melody (pitches).

The melodies are based on two conjunct tetrachords A-D and D-G in the different 'Greek' *genera* described in chapter 2.4.2. Like in *šēru* for solo performer and *anfár* for brass trio, the melodic movement is divided into eight sections containing the 'pitch-sets' for each segment of the melodic line. However, in contrast to the two previous works the lines of each section are read and 'processed' from top to bottom in each voice, so that there is a mixture of the *genera* in each part (see figure 51):

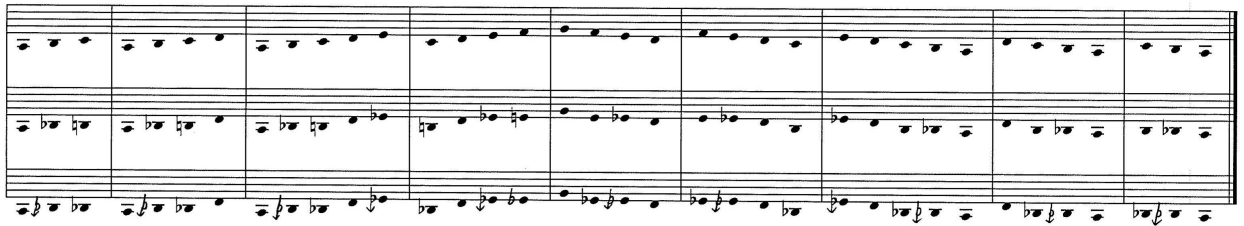


Figure 51: Šēru Ila: Pitch sets.

In each part, the melody moves on to the next pitch set after every fifth tone. The whole composition is based on eight runs through the table.

*

The rhythmic organisation is based on six subdivisions of the crotchet: a=semiquavers; b=quintuplet; c=sextuplet; d=septuplet; e=demisemiquavers; f=nontuplet. Their order in each part is made up by three interlaced sequences of different lengths:

Trumpet:

[abcdedefcba/FEDCBAABCDEF/cdbeafaebd]: aFcbEdcDbdCeeBa etc.

Tombone:

[fedbcabcde/ABCDEF FEDCBA/cdbeafafbd]: fAceBddCbbDe etc.

Cello:

[cdbeafaebd/AECCE/fbddb]: cAjdEbbCdeCd etc.

Figure 52: Šēru Ila: Meander Sequence underlying the rhythmic organisation.

Figure 53 shows the beginning of the melodic lines in all three parts based on the processes described above:

Figure 53: Šēru Ila: Beginning.

To be sure, the skeletal melody in *šēru Ila* is the *result* of the procedures described above; it is not, as in traditional music, a pre-existent *basis* for musical processes.²⁷³ The skeletal melody in its (almost) unembellished form is played by the guitar, accentuating the tonal coincidences in the parts of the melody instruments. The spatial notation of the guitar part ensures that the skeletal melody does not follow the unisons slavishly, but rather forms its own rhythmic layer. All melody instruments play simultaneously different manifestations of the underlying skeletal melody. In *šēru Ila*, as in most other compositions of the portfolio, the heterophonic processes replace contrapuntal and homophonic thinking; regardless of how distant homophonic and contrapuntal thinking may be from the ‘classical’ models in an actual work, it is still dominant in Western music.

In the trumpet, trombone, and cello parts, the melodies are only the raw material for the composition. For the final version, in particular in the first movement, individual tones and groups of tones have been replaced by *glissandi* to highlight the contour of the melodies; meanwhile, runs and rapid passages are added in the second movement, where, like in *anfár*, all the tone changes of the rhythmic pattern are played (see chapter 2.4.2.). In both movements, small-scale ornaments are added sporadically.

*

The piano part adds a ‘harmonic’ dimension to the texture. It consists of two parts—one played by the right hand, the other by the left hand. The pitch material derives from the same heptachord (including the three ‘manifestations’ in different *genera*) which is also the basis for the trumpet, trombone and cello parts. With the help of a simple arithmetic rule, new pitches are derived from the heptachord, both above and below (right and left hand, respectively) the original pitches:

The image displays two musical systems, each with a right hand and left hand part. The first system is labeled '(diatonic)' and the second '(enharmonic)'. Both systems show a sequence of notes on a five-line staff. The right hand part of each system is written in a treble clef, and the left hand part is in a bass clef. The notes are connected by a line, indicating a scale. The diatonic system shows a major scale with intervals labeled: 'major 7th + minor 2nd', 'major 7th + maj 2nd', 'octave + maj 2nd', and 'etc.'. The enharmonic system shows a minor scale with intervals labeled: 'min. 9th + minor 2nd', 'maj. 9th + maj 2nd', 'min. 9th + min. 2nd', and 'etc.'. The systems are labeled 'right hand' and 'left hand' respectively. The diatonic system is labeled '8^{va}-1' and the enharmonic system is labeled '8^{va}-1' and '8^{va}.....1'.

²⁷³ See chapter 1.2.1.

(chromatic)

Figure 54: šēru IIa: Piano: Scales.

In the right hand part, the first tone of the ‘diatonic’ heptachord (A3) is placed a minor seventh higher (G#4). The derivation of the next pitch is based on the following: the major seventh above the note B3 is added a minor second (A#4+minor second=B4). The resulting octave is stretched to a ninth above the next basic pitch (C4) by adding a major second (C5+major second=D), et cetera. As can be seen in figure 54, the interval sizes of the new scale increase exponentially. The first tone of the ‘chromatic’ heptachord is replaced by the higher octave, while the new ‘enharmonic’ scale begins at an interval of a small ninth; afterwards, the same rules apply as for the diatonic mode. The process is inverted for the left hand: the smallest interval (minor seventh or octave or minor ninth) replaces the highest pitch of the heptachord; again, the intervals increase exponentially with the descending scale.

Since it is not possible to play the microtones of the ‘enharmonic’ *genus* on the piano, the two middle tones are repeated in both tetrachords; the derived tones are nevertheless different from each other. All pitches in the piano part are outside the range of the heptachord, which means that the piano part does not share any pitches with the parts of the three melody instruments.

The selection of the pitches is based on the same principles as the parts of the three melody instruments: the three scales are divided into sections that contain the pitch sets for each section of the melodic manifestation. As in the parts of the three melody instruments, the table is ‘processed’ from top to bottom in each section; the melody moves on to the next group of pitch sets after each fifth tone.

Figure 55: šēru IIa: Piano: Pitch sets (right hand).

The rhythmic organisation of the piano part is similar to that of the trumpet, trombone and cello parts. The six subdivisions of the crotchet on which *šēru IIa* is based are arranged in the following order:

right hand: [cdbeafaebd/AECCE/fbddd]: cAfdEbbCd etc.
left hand: [bddbf/ECCEA/aebdcbbeaf]: bEadCedCb etc.

Figure 56: *šēru IIa: Piano: Rhythmic organisation.*

The durations of the tones are based on the following Meander Sequences:

right hand: [4,3,3/3,4,4,3]: 4 3 3 4 3 4 4 3 3 3 4 4 4 3 3 3 4 4 3 4 3 4 3 3
left hand: [3,4,4,3/3,4,3]: 3 3 4 4 4 3 3 3 4 4 3 4 3 3 4 3 3 4 3 4 4 3

Figure 57: *šēru IIa: Piano: Meander Sequences underlying the tone durations.*

Reflections on Form and Heterophony

The predominantly small steps of the melodic manifestations in the trumpet, trombone and cello parts—as well as their narrow range—made it necessary to ‘open up’ a harmonic space that surrounds the heterophonic processes. While I composed *šēru IIa*, I remembered that the Korean composer Younghi Pagh-Paan, in her ‘Reflections on my work as a composer’ explains that the ‘horizontal-heterophonic’ structure of Asian music involves a ‘harmonic space as a sound space that cannot be heard but that we [i.e. Asians] consistently feel.’²⁷⁴ This is an interesting aspect that is not mentioned in scholarly investigations on heterophony; unfortunately, Pagh-Paan does not elaborate on this.

In my other ‘long’ compositions I also felt that it was necessary to add something to the heterophonic texture, either simultaneously (creating a ‘harmonic’ space) or, more often, successively, i.e. in relation to the form of the composition. Both *ETYM III* and *Lied der Minne* consist of two movements of contrasting texture: the latter ends with a homophonic movement, while the former juxtaposes the ‘ornamental’ heterophony of the first movement with the ‘variant heterophony’ of the second. Finally, *Invocatio* has an extensive solo viola introduction and also a long postlude, both relatively independent from the main part of the composition.

Interestingly, in traditional music heterophonic passages are also often combined with other forms of music-making, especially in ‘presentational’ music.²⁷⁵ Japanese *gagaku* performances, for example, begin with an introduction played by the solo *ryuteki*, followed by a passage where the *ryuteki* is accompanied by percussion instruments. It seems that exclusively heterophonic textures are limited to the genres of ‘utility music’ such as songs, hymns and dance music.

²⁷⁴ Younghi Pagh-Paan, ‘Unterwegs: Reflexionen über meine Tätigkeit als Komponistin’, in *Younghi Pagh-Paan*, ed. by Ariane Westerkamp and Susanne Winterfeldt (Berlin: Musikfrauen e.V. Berlin, 1991), pp. 39–45 (p. 42; my translation).

²⁷⁵ On the terms ‘presentational music’ (*Darbietungsmusik*) and ‘music of social intercourse’ (*Umgangsmusik*) see Heinrich Bessler, ‘Umgangsmusik und Darbietungsmusik im 16. Jahrhundert’, *Archiv für Musikwissenschaft*, 16.1 (1959), 21–43; on their significance within music sociology see Kaden, *Musiksoziologie*, p. 206 and Kaden, *Des Lebens wilder Kreis*, p. 44.

Composers who have used heterophonic techniques in their work seem to have faced similar issues. One of the most significant examples of heterophonic composing in the twentieth century is Pierre Boulez's *Rituel in memoriam Bruno Maderna*. Its 'basic formal principle'

sets up a heterophonic dialectic of horizontality and verticality. Seven heterophonic verses are played in alternation with seven vertical, chordal responses followed by a long conclusion.²⁷⁶

Among the many works of Ștefan Niculescu that deal with heterophony none is based solely on heterophony (see, for example, *Ison I* and *II*); rather, heterophonic passages alternate with passages of different textures. The same applies to William Sweeney's *Tree o' Licht* for two cellos, where the predominantly heterophonic texture is interspersed with 'homophonic' passages and sections where the two parts play more or less independently from each other.

*

Șēru Ila consists of two movements: the first one is built on the first four runs through the melodic pattern (figure 51), while the basis for the second movement consists of the remaining four runs. The rhythmic pattern played by the snare drum reoccurs at the beginning of each run; it is rhythmically independent from the other parts.

The two movements are contrasting in character. Whereas the first one is soft and has many and long rests, the second one is loud and dense; at its end, however, the second movement returns to the softness of the first movement. In movement *I*, fragments of the underlying melodic manifestations surface only occasionally. The pauses become shorter during the first half of the movement until the third manifestation, which sounds in its entirety; in the fourth manifestation, the texture thins out again.

The latter half of the second movement (from bar 35) is dominated by piano arpeggios. The musical 'content' is the reverse-development of the scale of derived tones back to the initial heptachord. This process is based on the continual reduction of the intervals between the pitches of the original heptachords and their derived pitches. With each new run, the intervals are shifted backwards by one tone. The new intervals are generated by the first pitch of the scale. Beginning with the second run, the first pitch gets closer to the original pitch (A) with every new run. This process is based on the 'tonality' of the initial heptachord (exclusively using pitches of the original heptachord). It creates a minor seventh in the second scale, a minor sixth in the third, et cetera (see figure 58).

²⁷⁶ Jonathan Goldman, *The Musical Language of Pierre Boulez* (Cambridge: Cambridge University Press, 2011), p. 103f.

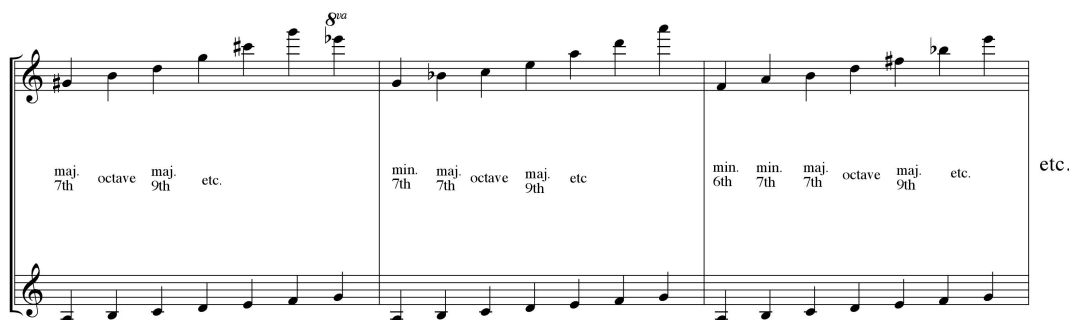


Figure 58: šëru IIa: Piano: Reverse-development of the scale.

The same processes apply to the arpeggios in the left hand. The number of arpeggios is the same in both parts. They are played simultaneously and come from different directions to arrive in the middle of the keyboard at the same time.

2.4.4. ETYM III for soprano saxophone and accordion

ETYM III deals with the rhythmic ambiguity in the simultaneous manifestations of a skeletal melody, as sometimes found in heterophonic music. To achieve this effect I decided to use spatial notation (albeit in a somewhat limited way): most of the tone durations are not represented by conventional symbols, but with the help of lines attached to the note heads. Instead of traditional measures, a time grid made up of units of one second is provided to the performers for orientation. One reason to use spatial notation is the fact that—in my experience—it causes the performers to play in a more ‘relaxed’ way than a precisely notated score allows. This also has an effect on the intended rhythmic ambiguity. To ensure that the interpretation is not too ‘relaxed’ I chose the relatively narrow one-second time grid. It guarantees a limited degree of freedom with regard to the beginnings and endings of the tones and prevents losing the rhythmic connection between the two instruments.

The shorter second movement is written in traditional notation. I wanted the music to be in a constant state of ‘flickering’ motion; the tonal and rhythmic ambiguity of heterophony helped me achieve this. *ETYM III* was therefore less about trying out already established heterophonic ‘techniques’ of other cultures, but rather about using these techniques to realise my own musical ideas. A similar effect could have been achieved with micropolyphonic procedures. The heterophonic composition technique, however, allows for greater flexibility and autonomy of individual parts because the instruments involved play different manifestations of the skeletal melody; this includes additional pitches and an independent rhythmic organisation. Canon techniques, as used in micropolyphony, require a rigid interrelationship between parts.

*

The pitch material is based on a scale that Klaus-Peter Brenner found in Turkish folk music:

Figure 59: Turkish folk music scale (Brenner).

I transposed this scale up a fifth and added two more tetrachords at the lower end of the scale in order to cover the whole range of the soprano saxophone:

Figure 60: ETYM III: Basic scale.

The arrows in figure 59 indicate the possible pitch connections that Brenner found in the music based on this scale; the interval structures in *ETYM III* are based on these rules. The microtones only appear in the saxophone part.

Another important feature of Turkish folk music is used in my composition: according to Brenner, South Turkish folk songs ‘show a clear juxtaposition of two tonal zones, whereby in all cases there is a wide overlap zone.’²⁷⁷ Brenner adds that ‘the tendency to associate the higher zone with the first part of a melody and the lower zone with the later ones is evident.’²⁷⁸ In *ETYM III*, there are two basic tonal zones with a large overlap zone:

Figure 61: ETYM III: Tonal zones.

The first part of the first movement (bars 1–57) is based on the tonal zone D6–G5, while the second part is dominated by the tonal zone C6–A3. In both cases, the range is gradually widened: bars 1–11 are made up of D and C only; the following section (bars

²⁷⁷ Brenner, *Dörfliche Musik*, p. 150 (my translation).

²⁷⁸ *Ibid.*, p. 151 (my translation).

12–23) is built upon D, C and B \flat ; section three (bars 24–34) adds the A; and finally the last section of part one (bars 35 to 57) is based on the entire range D6–G5. The sections in the first part of the movement are clearly marked by caesuras.

In the second part, the range is first fanned out to its full extent and then folded back together again, this time in the other direction: from top to bottom (beginning in bar 135), until at the end it reaches the lowest register (see bars 197–199). Generally, the first movement follows the typical descending melodic movement (*Deszendenz-melos*) of Turkish folk music.²⁷⁹

*

Like *šēru İla* and the Ungaretti songs, *ETYM III* is not based on a pre-existing traditional melody but rather presents simultaneously various alternative ‘ways through the scale’. There are three simultaneous manifestations: one is found in the saxophone part and one each are in the right and left hand accordion parts, respectively. It was my aim to find a sequence of concurrent tones that represent a good mix of unisons, partial unisons (two of the parts play in unison, the third part plays a different pitch) and pitches deviating from each other, so that the sequence does not sound too regular. After a period of experimentation with a variety of Meander Sequences, I finally found a numerical sequence that fulfils these conditions, namely the quite simple sequence 12321 with two subsequent permutations:

Saxophone:	12321,32123,21312
Accordion right hand:	32123,21312,12321
Accordion left hand:	21312,12321,32123

Figure 62: ETYM III: Permutational sequences underlying the pitch organisation.

As the example shows, the three parts begin at different points in the permutation series. In the second part of the first movement, the Meander Sequence is gradually extended to [1,2,3,4,5] and then shrinks back to the original sequence [1,2,3].

The following figure shows the succession of unisons, partial unisons and differing pitches in the third section of the first part of movement I (bars 26–34). According to the traditional Turkish scale, not all pitch connections within one part are allowed (see figure 59). I decided, therefore, to connect ‘forbidden’ intervals by intermediate ‘permitted’ ones; they are indicated by a smaller note engraving. The microtonal pitches in the accordion part are changed to ‘diatonic’ pitches (B \flat) in the composition.

²⁷⁹ Ibid, p. 146 (my translation).

„-“ = matching pitches „o“ = deviating pitches

Figure 63: *ETYM III: Simultaneous pitches and pitch connections.*

The intermediate pitches are sometimes replaced by a rest. Figure 64 shows the realisation of these sequences in the composition (bars 26–34):

Figure 64: *ETYM III: Skeletal pitches in the score (bars 26–34).*

Like in *šĕru Ila* and the two Ungaretti songs (see below, chapter 2.6.), the ‘skeletal melody’ in *ETYM III* emerges from the sequence of ‘perfect’ unisons. It is not a pre-existent traditional melody as in traditional heterophony, but nevertheless it was created before heterophonic processes were applied to it. The ‘imperfect’ unisons as well as the triads that consist of different pitches can be regarded as ‘compound ornaments’; they are indispensable for the individual melodic lines, but their main textural function is to connect the ‘skeletal’ tones. A further melodic layer is created by the pitches that connect ‘forbidden’ intervals; they, too, can be regarded as an equivalent to the ‘compound ornaments’ in traditional heterophonic music. Moreover, I decided to

add 'small-scale ornaments' freely wherever it seemed appropriate and wherever they contributed to the 'flickering' texture that I had in mind for this composition.

Rhythm is treated very freely in the first movement of *ETYM III*. I composed the parts as independent melodies with their own rhythmic shape on the basis of the pitch sequences, but still—especially with regard to the skeletal pitches—in relative synchronicity with each other. The succession of the skeletal tones is sometimes stretched (as in bars 48 to 57), and sometimes compressed as at the end of this movement. As I have described above (see chapter 2.3.1.), I consider the stretching or shortening of a tone as a kind of ornamentation in some heterophonic musics. In contrast to traditional heterophonic practices, in this case it is not the musicians who decide which tone is to be lengthened or shortened, but rather the composer.

Nevertheless, I believe this incorporation of ornamentation as well as the use of the spatial notation has enabled me to create a certain improvisational flair. For the performance, I also suggested to the two instrumentalists that they need not strive for absolute synchronicity. I was rewarded in my hope that a different attitude towards the score would lead to a more improvisation-like interpretation.

*

I felt that the hurried and 'flickering' character of the first movement demanded a complement, which I realised in the shorter second movement. It can be regarded as a simplification or a condensation of the processes underlying the first movement. This is why I chose the subtitle, *Echo*, for the second movement.

Like the first movement, the second movement is based on the [1,2,3] Meander Sequence (see figure 62); the pattern is gradually extended to [1,2,3,4,5] in the course of the movement and then returns back to the original sequence. In contrast to the first movement, however, the second movement is built upon a simple rhythm which is based on quavers. The odd numbers of the Meander Sequences are interpreted as pitches, while the even numbers represent rests. The procedure is similar to that explained in figure 62. On this basis, the scale is repeated a total of five times from top to bottom. Depending on the applied Meander Sequence, the melodic line always appears anew in a slightly altered form. It can be considered as the purified repetition of the more elaborate and ornate manifestation of the basic *Deszendenzmelos* that characterises the first movement.

The second movement is based on the entire scale, so there are no melodic zones as in the first movement. Occasionally, tones are prolonged over the following rest to temporarily add melodic coherence to the texture which is dominated by single events (see bars 220 and 228/229).

2.5. Social Implications:

Due Canti di Ungaretti for Soprano and Bass Flute

The inspiration for both Ungaretti chants are the ‘compositional’ principles of Chinese *Kunqu* opera arias for voice and *dizi*, where the subordinate role of the accompanying *dizi* is based on a number of strict rules (see chapter 1.2.3.2.2.). From a purely musical point of view, the work shows the possible ways to redefine the relationship between two hierarchically organised parts. The rules that govern the interaction between the vocal and the flute part—derived from traditional heterophonic practices—replace Western compositional techniques: the accompanying flute part is neither a mere harmonic background as in homophonic textures, nor is it a counterpart with its own melodic characteristics as in contrapuntal polyphony. Instead, it provides its own manifestation of the underlying skeletal melody; its function, however, is ‘to bring to fore all the nuances and subtleties of the voice’.²⁸⁰ The form of the pre-, inter-, and postludes especially shows new ways to compose the transition from one text passage to the next. These are quite distant from clauses and cadences and their descendants in modern and ‘New Music’.

The two chants are another attempt to incorporate principles of heterophonic music practices in my own composing. Because the same compositional techniques always apply in the creation of *Kunqu* arias, regardless of textual and musical expression, I consider it legitimate to use them for setting Ungaretti poems to music. Both *Emblema* and *Fase* try to capture the mood of the respective text. There are no further structural connections between text and music.

2.5.1. *Emblema*

Ungaretti’s poem reads:

Tale per sempre mi fuggí la pace;
Per strenua fedeltà decaddi a emblema
Di disperanza e, preda d’ogni furia,
Riscosso via via a insulti freddi d’onde,
Ingigantivo d’impeto mortale,
Più folle d’esse, folle sfida al sonno.²⁸¹

*Thus for ever peace escaped me;
through strenuous fidelity I declined to an emblem
of despair and, prey to every fury,
stuck continuously by the cold offence of waves,*

²⁸⁰ Brandl, *Musik als kommunikative Handlung*, p. 55.

²⁸¹ Frederic J. Jones, *Giuseppe Ungaretti: Poet and Critic* (Edinburgh: Edinburgh University Press, 1977), p. 167.

*I grew gigantic with mortal vehemence,
wilder than the waves, a wild challenge to sleep.*²⁸²

Emblema is based on similar compositional principles as *šēru IIa*. The fundamental difference lies in the function of the two parts: the voice part is the main part; it is an independent, self-contained melody that can be performed alone, without accompaniment. The bass flute part, on the other hand, is only an accompaniment and depends on the vocal part.

The pitch organisation is based on a tone sequence spanning a minor seventh E5–F#4, which is built around the two central pitches C and G. The other pitches are the ones that chromatically surround the central tones:



Figure 65: *Emblema*: Basic scale.

Each of the six lines of Ungaretti's poem is assigned a section of the basic pitch material, starting with the first three pitches in the first line and extending the 'pitch set' with every new line. In addition to the central tones of the basic tone sequence, each line has its own central tone (encircled in the example). These temporal central tones are emphasised by the inclusion of their adjacent microtones. In the flute part, there are some places in the pitch sets where a free choice between several tones exists, namely the adjacent semitones and whole tones of one of the notes, thus adding new pitches to the 'tonality' of the piece (see figure 66):

The image shows a musical score for six lines of a poem. It consists of two columns of staves. The left column is labeled 'voice' and the right column is labeled 'flute'. Each line of the poem is represented by a pair of staves. The voice part is written in a simple melodic style. The flute part is more complex, with many notes and slurs. Below the staves, there are two symbols: a circle with a dot inside, labeled '= local central tone', and a square with a dot inside, labeled '= basic central tone'. The basic central tones are circled in the voice part and boxed in the flute part. The local central tones are circled in the voice part.

Figure 66: *Emblema*: Pitch material.

On the basis of these pitch sets a tone sequence is constructed with the help of the following Meander Sequences:

²⁸² Ibid.

Soprano:

[765432123456/123456765432]: 7 1 6 2 5 3 4 4 3 5 2 6 1 7 2 6 3 5 4 4 5 3 6 2

Bass flute:

[123456765432/765432123456]: 1 7 2 6 3 5 4 4 5 3 6 2 7 1 6 2 5 3 4 4 3 5 2 6

Figure 67: *Emblema*: Meander Sequence.

As an additional rule, after every third tone one of the central tones (C or G) must be inserted. The first two lines feature C; the third line alternates C and G; and the last three lines feature G. The resulting 'basic' melody underlying the first line of the poem is shown in figure 68:

first line

voice

flute

Figure 68: *Emblema*: Basic melody underlying the first line of Ungaretti's poem.

These lines serve as the 'raw material' to which the following Meander Sequences are applied to construct the basic melodies:

Soprano: [4334/3443]: 4 3 3 4 3 4 4 3

Bass flute: [2552/5225]: 2 5 5 2 5 2 2 5

Figure 69: *Emblema*: Meander Sequences underlying the basic melodies.

The rhythmic organisation is based on the six subdivisions of the crotchet already used in *šēru līa*. They were put in the following order:

Soprano:

[ABCDEF FEDCB/fedcbabcde/DCEBF AF BEC/cdbeafae**b**d]: AfDc BeCd CdEb etc.

Bass flute:

[DBEAF AEBDC/cebfa**f**becd/EDCBABCDEF/bcdefed**c**ba]: DcEb BeDc EbCd etc.

Figure 70: *Emblema*: Meander Sequences underlying the rhythmic organisation.

With each repetition, the two parts swap rhythmic sequences. Each line of the poem is made up of three repetitions of the Meander Sequences [4334/3443] and [2552/5225],

respectively. The text was assigned freely on the basis of the resulting melodic line. The overall form is based on five repetitions of the rhythmic Meander Sequence.

Like in *'šēru IIa'*, the skeletal melody is the result of heterophonic processes, rather than the pre-existing basis for heterophony. Again, the 'basic number' is 7, meaning that on every 7th note the parts have the same pitch. The first pitches of the resulting skeletal melody are shown in figure 71:



Figure 71: *Emblema*: First pitches of the skeletal melody.

I composed a melody for the soprano part on the basis of the resulting melodic lines: some pitches were omitted or replaced by *glissandi*, small-scale ornaments were added and pauses were inserted all based on subjective decisions. The bass flute part was created later; its melody is also based on the processes described above, but its shape is tuned to the vocal part as the main part. This does not mean that it always follows the vocal part closely; sometimes the bass flute part forms melodic counter-movements to the main melody. Like in *Kunqu* arias, its main purpose is 'to allow all nuances and subtleties of the voice' to come to the forefront (*Chen*).²⁸³ Moreover, the flute is 'required to continue and complete a melody [...] if the singer ends his/her part earlier (*"Bu(qiang)"* in Chinese terminology).'²⁸⁴

The second part is an *Abgesang*: it consists of a vocalise in the vocal part, accompanied by the flute. The parts are based on a descending pitch sequence, made up of the basic pitch material:



Figure 72: *Emblema*, second part: Pitch material.

The second part ends when the two parts arrive at the initial tone E4 together.

2.5.2. Fase

The second Ungaretti song deals with the technical details concerning the rhythmic and formal organisation of heterophony in *Kunqu* Opera (and Beijing Opera). The underlying poem reads:

²⁸³ Brandl, *Musik als kommunikative Handlung*, p. 55.

²⁸⁴ *Ibid.*

Cammina cammina
ho ritrovato
il pozzo d'amore

*By walking and walking
I have rediscovered
the well of love*

Nell'occhio
di mill'una notte
ho riposato

*In the eye
of a thousand and one nights
I have slept.²⁸⁵*

Agli abbandonati giardini
ella approdava
come una colomba

*To the abandoned gardens
she approached
like a dove*

Fra l'aria
del meriggio
ch'era uno svenimento
le ho colto
arance e gelsumini²⁸⁶

*Among the air
of the noontide
that was a fainting
I picked them
oranges and jasmine²⁸⁷*

The melody of the voice part, which, as in *Emblema*, is the main melody, was composed completely freely and without any pre-planning; the only restraint was to the text of the Ungaretti poem. As in *Emblema*, the flute part is based on and subordinate to the main melody which allows all nuances and subtleties of the voice to come to the forefront.²⁸⁸

In *Fase*, my main interest lay in the pre-, inter-, and postludes that the accompanying instrument has to play before, between and after the individual song lines. In *Kunqu Opera* (as well as in Beijing Opera), these elements are based on tonal and rhythmic organisation that follows strict conventions.

The following principles apply to the tonal 'conventions' that guide the transition from one part to another':

- a) the intervallic movement between the last pitch of the instrumental prelude and the beginning pitch of the following vocal line is most often stepwise (in the pentatonic scale), or sometimes unison or a third above;
- b) the first pitch of the instrumental interlude should be the same as the immediately preceding, last pitch of the vocal line;
- c) the last pitch of the instrumental interlude and the first pitch of the next vocal line are often in a fourth or fifth intervallic relationship;
- d) the first bar of the instrumental postlude should be an embellishment of the last pitch of the preceding vocal line.²⁸⁹

The rules concern only a few tones at the beginning and end of the pre-, inter-, and postludes, and the choice of pitch is relatively flexible, as is their rhythmic form. They gave me clues on how to shape the melodic contour and nothing else. Their position

²⁸⁵ Jones, *Giuseppe Ungaretti*, p. 74.

²⁸⁶ Giuseppe Ungaretti, *Vita d'un Uomo. Tutte le Poesie*, ed. by Leone Piccioni (Milan: Arnoldo Mondadori, 1969), p. 32.

²⁸⁷ My translation.

²⁸⁸ Brandl, *Musik als kommunikative Handlung*, p. 55.

²⁸⁹ Liang, *Music of the Billion*, p. 256; cf. Brandl, *Musik als kommunikative Handlung*, p. 56.

within an aria as well as their 'signal effect' could perhaps be compared to cadences in Renaissance and Baroque music.

When composing the flute part of *Fase* on the basis of the vocal melody, I made sure to apply all the rules listed above. In my composition, each of the three 'verses' of Ungaretti's poem starts with an extremely condensed prelude, each consisting of a single tone which is one tone higher than the first pitch of the following vocal phrase (see bars 1/2; 12/13 and 17/18).

The first pitch of the interlude is always identical to the last pitch of the immediately preceding vocal phrase (see bars 2, last crotchet; 4, beginning; 6, beginning; 7, last crotchet; 9, last crotchet; 11, second crotchet; 14, 15, 19, 20, last crotchet in each case; 22, first crotchet; 23, last crotchet; 25, last minim). The last pitch of the interlude is always a fourth or fifth apart from the first pitch of the following vocal line (see bars 3, first crotchet; 5, second quaver; 6, last quaver; 10, first crotchet; 19, last quaver; 21, first quaver; 22, last crotchet; 24, first crotchet). The only exception is the passage in bars 14 to 16, where the melodic phrases of the vocal part form a unit in terms of content and music. In this case, the flute part follows the long descending melodic line and does not divide it into individual parts as the rule dictates. Finally, the short postlude in bar 26 is an extended embellishment of the last pitch of the main melody.

In a *Kunqu* aria, the rhythmisation of the text is also subject to certain rules. Musical rhythm in both Beijing and *Kunqu* opera is based on 'three general types of meter': '1/4, duple 2/4 and 4/4, and free meter.'²⁹⁰ Regarding 'melodisation', there are 'two kinds of stanza construction: seven and ten syllables.'²⁹¹ Liang continues to explain:

The seven-syllable stanza, whether in 2/4 or 4/4 meter, is usually divided into a poetic meter of 2-3-2 syllables. The ten-syllable stanza commonly is divided into 3-5-2 syllables.²⁹²

Figure 73 illustrates the rhythmisation of the text in relation to the underlying meters:

²⁹⁰ Liang, *Music of the Billion*, p. 245.

²⁹¹ *Ibid.*, p. 249.

²⁹² *Ibid.*

Seven Syllables	2/4 <i>yuanban</i> meter	
	Poetic meter Syllables	
Ten Syllables	2/4 <i>yuanban</i> meter	
	Poetic meter Syllables	
Seven Syllables	4/4 <i>manban</i> meter	
	Poetic meter Syllables	
Ten Syllables	4/4 <i>manban</i> meter	
	Poetic meter Syllables	

◇ = Instrumental bridge, which is sometimes expanded.

Figure 73: Rhythm in a Kunqu aria.

Of course, the Ungaretti poem is not based on meters as found in Chinese opera; nor is it possible to divide the individual lines syllabically according to the traditional Chinese scheme. I therefore used the patterns shown in figure 73 as models for the temporal organisation of *Fase*. Since the syllable subdivisions are not useful for my purposes, I have combined the individual note values into superordinate note values (see fig. 74).

Figure 74: *Fase*: Basic durational patterns.

These could be augmented or diminished in the composition, depending on the musical and textual content. Even within the pattern, a pause or a group of notes could be diminished or augmented, while the surrounding tones maintain the original note values. The 'new' basic note values could again be freely subdivided into smaller note values. The composition is indeed only loosely based on Chinese rhythmic patterns. The principles of Beijing and *Kunqu* Opera serve as an inspiration or as a point of orientation rather than as a strict model for my composition. The following extract from *Fase* may illustrate the rhythmic processes underlying the composition:

Figure 75: *Fase*: Basic rhythm underlying the beginning of the vocal part.

The heterophonic ‘response’ of the flute part to the main melody is an intuitive realisation of my rather subjective ideas of heterophony at that time (2016). It is intended to be a simultaneous but subordinate alternative to the main melody. Heterophony in *Fase* consists mainly of the use of small-scale ornaments (see for example bars 1, 15, 16), ‘reduction’ of the main melody to structurally important tones (bars 8/9, 14), and ‘attempted unisons’ (bars 7, 25).

2.6. Ornamental Heterophony

2.6.1. *Ghasel* for voice and piano

The short composition *Ghasel* for voice and piano is the first work to reflect my theory on ‘ornamental’ heterophony, as described in chapter 1.2.3.2. *Ghasel* is a setting of a poem by August von Platen (1796–1835):

Der Strom, der neben mir verbrauchte, wo ist er nun?
 Der Vogel, dessen Lied ich lauschte, wo ist er nun?
 Wo ist die Rose, die die Freundin am Herzen trug,
 und jener Kuss, der mich berauschte, wo ist er nun?
 Und jener Mensch, der ich gewesen und den ich längst
 mit einem anderen Ich vertauschte, wo ist er nun?²⁹³

The river that was rushing beside me, where is it now?
The bird whose song I listened to, where is it now?
Where is the rose that the friend bosomed,
 and that kiss that befuddled me, where is it now?
And the person I used to be and whom I have long since
 exchanged for another me, where is he now?

²⁹³ August von Platen, *Wer wußte je das Leben? Ausgewählte Gedichte*, ed. by Rüdiger Görner (Frankfurt am Main: Insel, 1996), p. 96.

The most important element in the basic structure of *Ghasel* is the ‘segment’, as defined by Judith Becker (cf. chapter 1.2.3.1.1.). The segments in this piece are ornamented tone steps: two ‘main’ pitches are connected by predefined ornamental notes. For each tone step there are several possible ornamentations, based on a strict system of regulations. In my composition, the ornaments are produced artificially on the basis of contemporary composition techniques (see below).

The underlying scale is loosely based on the Burmese tonal system. Burmese scales are made up by diatonic pitches; in some scales, B and E are slightly lower and F is approximately a quarter tone higher.²⁹⁴ In *Ghasel* B and E are lower, however, they are used only in the vocal part. The reason for this is that I relish the idea of a slight friction between the two parts; it adds a certain ‘flavour’ to the well-tempered sound of the piano.²⁹⁵ Moreover, the piano in Burmese music ensembles, where it sometimes replaces the traditional harp, is never retuned.²⁹⁶ The scale underlying *Ghasel* is shown in figure 76.

Each of the six sections of the composition (derived from the ‘meaning units’ of the poem) is based on another segment of the scale, the segments becoming gradually larger with each new section. The first section is based on the pitches A, B and C; the second on G, A, B, C and D, et cetera. With each new section, two pitches are added—one at the top and one at the bottom of the preceding scale segment. The scale grows symmetrically before regressing back to the initial three-tone segment within the last ‘meaning unit’ (page 2, last two lines, voice solo).



Figure 76: *Ghasel*: Basic scale and melodic sections.

The pitches for the melody of the vocal part are selected on the basis of a Meander Sequence. The underlying progression in *Ghasel* is made up of the two intertwined numerical series 4321234 and 123432. The resulting Meander Sequence is therefore: 4 1 3 2 2 3 1 4 2 3 3 2 4 1 4 2 3 3 2 4 1 etc. (see figure 77).

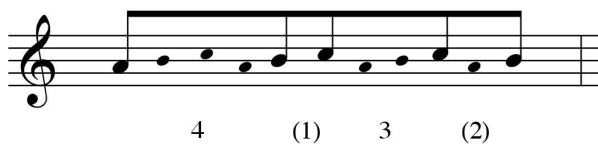


Figure 77: *Ghasel*: Formation of the beginning of the melody.

²⁹⁴ Wolf, *Bamarische Musik*, p. 88.

²⁹⁵ The “out-of-tune” flavor’ is ‘as essential an ingredient in Chinese music as spice is to its cuisine.’ Liang, *Music of the Billion*, p. 23.

²⁹⁶ Wolf, *Bamarische Musik*, p. 89.

The piano part represents a ‘compound ornamentation’ of the vocal melody, based on the segments mentioned above. Each possible tone step within the given scale is provided with 1–6 ornaments, each of which consists of at least one note.

The ornaments are formed on the basis of the pitches that lie between the two ‘main notes’ of a tone step according to the scale segment that underlies the respective section. The ornamentation of the tone step D5–B4 in the second section, for example, is based on the tone row G-A-B-C-D (see section 2 in figure 76), whereas in the third section the tone row is F-G-A-B-C-D-E (section 3 in figure 76):



Figure 78: *Ghasel: Ornamentation Ia.*

In cases where no pitches lie between the two main notes (for example in adjacent main notes) a complete ‘extra run’ was carried out until the second main note was reached a second time. The same applies to tone steps with only one ‘connecting’ note:



Figure 79: *Ghasel: Ornamentation Ib.*

The selection of the tones for the ornaments is based on symmetrical patterns. Either the first, second, or third of the ‘connecting’ tones serves as the starting point for the pattern. There are often several options to create symmetry. This implies that for most tone steps more than one ornament is available (see figure 80).²⁹⁷



Figure 80: *Ornamentation IIa.*

Since the individual sections of the composition are based on different scale segments, each tone step has different ornamentations in each section (see figure 81). This can be seen as an equivalent to the varying ‘function’ of the segments in Southeast Asian music, as described in chapter 1.2.3.1.1.

²⁹⁷ Only after I had completed *Ghasel I* learned that according to Robert Lach the first ornaments in musical history (in the ‘primary aesthetic stadium’) were built symmetrically (Lach, *Geschichte der ornamentalen Melopöie*, p. 7f.).

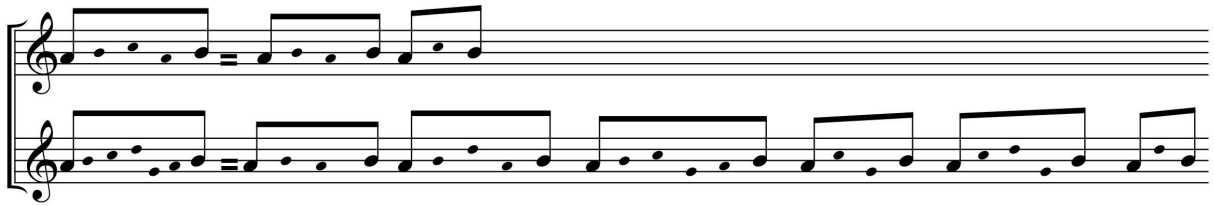


Figure 81: Ornammentation IIb.

The symmetrical patterns described above are also applied to the tone steps within the ornaments, so that there are two 'levels' of ornamentation. The resulting 'ornaments of the ornaments' appear as grace notes in the score; however, not all of them are used.

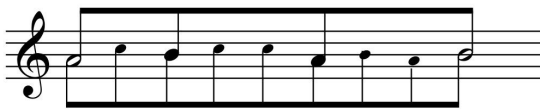


Figure 82: Ghasel: Ornamentation of ornaments.

The duration of each ornament is one crotchet. The number of pitches in an ornament determines the division of the crotchet: three tones (including the first 'main' note) generate a triplet, five tones generate a quintuplet, et cetera. In some cases the ornaments are stretched to minims.

A Meander Sequence controls the succession of the symmetrical patterns throughout the composition. In the first section numerical series is 1 2 2 1 2 1 1 2. The numbers represent the note in the ornament that serves as the starting point for the symmetrical pattern: 1 is the first tone; 2 is the second tone (compare figure 80). In the subsequent sections, where longer tone rows are involved, the Meander also contains the '3', representing the third pitch as the starting point for the symmetrical pattern.

It proved to be necessary to 'shape' the piano part; a simple succession of the ornamented steps would have been too mechanical. Larger phrases, usually congruent with verses and meaning units of the poem, are internally divided into shorter phrases, the ending of which is often marked by a fermata.

This is also the reason that some crotchets are stretched to a minim. The piano part therefore is rather independent from the vocal melody; there are only occasional accordances indicated by dotted lines in the score. Like in Burmese music, the accompaniment is sometimes 'deviant enough to be called contrapuntal.'²⁹⁸ The vocal part carries mainly the basic melody; it is only slightly embellished. The focus in this piece was on instrumental ornamentation, as described by musicologists such as Judith Becker and Felix Hoerburger. The compositional technique, which is based on heterophonic music practices, makes it possible to redefine the relationship between the vocal and piano parts. Heterophony replaces the traditional harmonic

²⁹⁸ Becker, 'Anatomy of a Mode', p. 278.

accompaniment that is conventionally found in works for voice and piano and opens up new possibilities for the genre of *Klavierlied*.

It is important to point out that the segments in *Ghasel* are not based on *Spielfiguren*—whose impact on the formation of ‘segments’ I described in chapter 2.2.3. This is because I consider it challenging to use folk music playing techniques in the context of contemporary ‘art music’. In my experience most interpreters of New Music appreciate some kind of challenge in the music they play, and the ‘programmatic’ elementariness of traditional ornamentation would have been too simple in the context of *Ghasel*.²⁹⁹ However, in a different aesthetic context traditional ornamentation can be interesting. Additionally, many of the segments in *Ghasel* are in fact shaped according to the playing hand and may therefore be considered as *Spielfiguren* (see, for example, the beginning of the second line on page 2).

The arpeggios in the left hand of the piano part mark the ending of a meaning unit of the text and accompany the recurrent words *wo ist er nun?* (‘where is it/he now?’). Because they consist of pitches not present in the rest of the texture they add a ‘different colour’ to the overall harmonic context.³⁰⁰

During rehearsals it turned out that it is difficult for the performers to find the balance between independence and interaction that is so characteristic of heterophonic music-making. In order to achieve this ‘relative independence’ between the two parts, I decided to draw the musicians’ attention to the skeletal melody and asked them to sing/play it in unison. As a result, the musicians attempted to sing/play the pitches of the skeletal melody exactly at the same time when performing *Ghasel*. Only in the course of further rehearsals did the performers develop the ability to play the parts relatively independently and yet consciously of the melody underlying both parts.

With other compositions, too, I have experienced that the musicians found a better approach to the work after I explained the concept on which it is based. I used a similar approach to *ETYM III* (cf. p.101), and even with conventionally notated scores, the information about how the music is made seems to have influenced the performers’ interpretation: one of the musicians of the Ensemble Ascolta told me after the first rehearsal of *šēru IIa* that my explanation of the concept underlying the composition, which I had given at the request of the ensemble, had been helpful.

2.6.2. Study VI

This study was created after I realised that in ornamental heterophony the characteristics of the underlying melody are preserved; this concerns both the pitches and the rhythm. *Study VI* is based on the *Kernmelodie* of *šēru* (1). Like in *ETYM III* I was interested in creating a certain limited rhythmic ambiguity and decided to use the same

²⁹⁹ The composers of the Viennese classical period for example, whose music is often clearly based on elements of folk music, use *Spielfiguren* only as a starting point for more elaborate textures.

³⁰⁰ Liang, *Music of the Billion*, p. 256; cf. Brandl, *Musik als kommunikative Handlung*, p. 56.

time grid consisting of units of one second. In this time grid, the pitches of the skeletal melody were set in their original durations; this is the identical basis for heterophonic processes in both parts.

In order to create rhythmic ambiguity also in relation to the skeletal melody, *Study VI* goes a step further than *ETYM III* in that the two parts are not presented as a score but separately. This is intended to prevent exact synchronicity, to which the performers surely would aim if their parts were written on top of each other. Furthermore, certain independence of the parts from each other makes a different, more 'relaxed' interpretation possible.

The ornaments are created as in *Ghasel* (see figures 77–82): they are built on the pitches that connect two 'main notes' of a 'skeletal' interval and in accordance to the scale segment underlying the respective section. The selection of the actual pitches is based on symmetrical patterns (see figure 80). In the upper part all symmetries are based on '1'; this means that the first of the connecting pitches is the starting point for the pattern. The part of the second performer is based on '2'. For most intervals there is more than one possible ornament which is based on the 'symmetrical processes' described above. Figure 83 may illustrate the procedures on which the ornamentation in *Study VI* is based:

Figure 83: *Study VI*: Ornamentation.

In both parts I normally provide two options, from which the performers can choose freely.

2.6.3. *Lied der Minne for Five Singers*

Like in *ETYM III* and *Study VI*, the focus of *Lied der Minne* (Middle High German: 'Song of Love') is the rhythmic ambiguity that characterises some heterophonic styles. It is created on the one hand by the notation, and on the other hand by simultaneous different ornamentations of the same melody by several parts. The text is by Mechthild of Magdeburg, a German medieval mystic, whose book *Das fließende Licht der Gottheit* describes her religious visions:

O edeler arn, o suesses lamp, o fúres gluot, entzúnde mich!
 Wie lange sol ich alsus dúrre sin?
 Ein stunde ist mir alze swere,
 ein tag ist mir túsent jar, so du mir froemedede woeltest sin.
 Solte es ahte tage wern,
 ich woelte lieber zer helle varn –
 da ich doch inne bin!
 Wand das got der minnenden sele vroemde si,
 das ist pine úber menschlichen tot
 und úber alle pine, das glovbent mir!
 Die nahtegal dú muos ie singen,
 wan ir nature spilet von minnen al;
 der ir das beneme, so were si tot.
 Eya grosser herre, bedenke min not!
 Eya edele juncfrouw,
 bereitent úch,
 úwer lieber wil komen.³⁰¹

*O noble eagle, o sweet lamb, o fire, light me!
 How long shall I be deserted?
 An hour is too long for me,
 a day is like a thousand years if you are alienated from me.
 If it should be eight days, I'd rather go to hell—
 where I already am anyway!
 For if God is estranged from the loving soul,
 it is greater pain than human death
 and worse than all pain, believe me!
 The nightingale must always sing
 because her nature is love;
 if you took that away from her, she would be dead.
 Oh, great lord, remember my misery!
 Oh noble virgin,
 prepare yourself,
 your love will come.*

The musical model for *Lied der Minne* is Gaelic Psalm Singing. It is based on a pre-existing melody, in this case a tune from the Genevan Psalter. Gaelic Psalm Singing is often based on tunes from the Genevan Psalter, many of which were incorporated into the Scottish Psalter. I followed the practice of Gaelic Psalm Singing in which every psalm text can be sung to almost every melody. The contents of Psalm 46 has no relation to Mechthild's text. I chose the tune because its intervallic structure and overall melodic shape match the structure of the text and promised to create an interesting sound effect when sung heterophonically. Figure 84 shows the original melody:

Figure 84: Psalm 46 of the Genevan Psalter

³⁰¹ Mechthild von Magdeburg, *Das fließende Licht der Gottheit. Eine Auswahl. Mittelhochdeutsch/Neuhochdeutsch*, ed. by Gisela Vollmann-Profe (Stuttgart: Reclam, 2008), p. 50.

GENF 1551 Psalm 46



1. Gott ist uns Zu-ver-sicht und Stär-ke
und naht sich uns in sei-nem Wer-ke;
ja, uns-re Hilf ist un-ser Gott, der stets zu
fin-den ist in Not. Wenn gleich der Him-mel
schrecklich wit-tert und un-ser gan-zer Erd-ball
zit-tert, der Sturz der Ber-ge Mee-re bricht:
Wir har-ren, doch wir be-ben nicht.

In *Lied der Minne*, I follow the general contour of this melody; however, the intervals that comprise the tune are often modified. For example, the opening interval sequence—a major second up, followed by a major third down—is replaced by the sequence minor second up – diminished third down (bars 3–4). The upward leap in bar 3 is omitted. The gap between *E_b* and C is frequently filled by a ‘neutral step’, a pitch that is ‘larger than the semitone but smaller than the whole tone’.³⁰² There is no rule or tonal concept behind this—I simply wanted the old melody to appear in a different guise. The use of the ‘neutral’ step is not meant to include elements of non-European music; rather, it adds a certain out-of-tune ‘flavour’ that can often be heard when ‘amateurs’ sing. The occasional free choice of a pitch within a certain limited (microtonal) range contributes to this sound effect.

Lied der Minne can be transposed down a semitone or up any interval. The reason for this is that Gaelic Psalm Singing ‘works best when it’s at the top end of the scale’, as Calum Martin puts it.³⁰³

The rhythmic organisation is similar to that of *ETYM III*, however, the temporal units are longer than those in *ETYM III*, consisting of between two and fourteen seconds. This ensures that the tonal and rhythmic deviations between the parts within a time unit are even greater than in *ETYM III* but maintain certain limits. In order to guarantee the desired rhythmic ambiguity during a performance, there are only parts and no score of *Lied der Minne*; this helps prevent exact synchronicity. In addition, the

³⁰² Hormoz Farhat, *The Dastgah Concept in Persian Music* (Cambridge: Cambridge University Press, 1990), p. 16.

³⁰³ Martin, ‘Session 6’ (my transcription).

work is to be performed without a conductor and the positioning of the performers should make eye contact impossible. The use of stopwatches is not permitted.

All parts have the same sequence of rhythmic units in order to enable the singers to orient themselves during a performance. Furthermore, in each part the basic melody is provided in a line in smaller print above the line that contains the individual part; it serves as a reference point for all singers.

The tune is sung twice throughout the first movement, each time in a different heterophonic interpretation. The parts are conceived as individual manifestations of the skeletal melody; some parts stretch or shorten tones and/or add small-scale ornaments such as grace notes, mordent-like figures and *glissandi*.³⁰⁴ Only rarely do all singers sing at the same time; the tune rather shifts from one group of two or three singers to another. Like in Gaelic Psalm Singing, there is no hierarchy among the parts, however, throughout the composition some parts are more active than others. While in Gaelic Psalm Singing differences in activeness are due to the singers' individual expressiveness, in my composition it is the result of careful consideration with regard to the sonic shape.

My composition is an imitation of the processes underlying Gaelic Psalm Singing with the aim of creating a similar sound effect: the sound of Gaelic Psalm Singing is treated as an aesthetic event in my composition, while in congregational singing it is the *result* of communication. As I have mentioned above, Calum Martin pointed out that Gaelic Psalm Singing is 'vertically a worship between you and God' and 'horizontally' 'amongst the whole group'.³⁰⁵ The discrepancy between traditional music and my compositions in terms of the *function* of heterophony is clearly present in all works in my portfolio.

On the other hand, the imprecise notation in compositions such as *Lied der Minne*, *ETYM III* and some of the *Studies* forces the singers to remain attentive and communicate *through* the music, as might be found in traditional heterophonic practices (cf. chapter 1.3.3.: 'Performance Situation'). Finally, it is also quite possible that the performers of traditional heterophonic music enjoy the 'sound effect' of their music-making.³⁰⁶

In contrast to *Ghasel*, the skeletal melody in *Lied der Minne* is provided in a separate staff above each part; the singers are therefore aware of the common pitches. *Lied der Minne* was premiered by a student ensemble at the Hochschule für Musik Hanns Eisler Berlin. Due to their education and the repertoire they study (mostly Western operatic music), the students are accustomed to performing as soloists, but they also know how to sing in an ensemble and are therefore able to listen to each

³⁰⁴ The positioning of the tones indicates their duration within a temporal unit.

³⁰⁵ Martin, 'Session 6' (my transcription).

³⁰⁶ The fact that there are now many CD recordings of Gaelic Psalm Singing commercially distributed by the parishes themselves seems to indicate that the singers are aware of the peculiar 'sound effect' of their music.

other during a performance. In a way, these conditions resemble the situation in Gaelic Psalm Singing where everyone sings for themselves while at the same time feel part of the community. The main difference is that Gaelic Psalm Singing is not intended for performance in front of an audience; as described above, it is simultaneously a form of individual communication with God and with the other parishioners (cf. p. 47). It was nevertheless necessary to encourage the performers to sing their parts less soloistically and to listen more to each other. My hint that the piece is to be sung *pianissimo* almost throughout proved to be helpful. It took the students a while to acclimate to the unusual positioning that made eye contact with the other singers impossible. Even more difficult was the lack of a conductor. During the first rehearsals I therefore gave cues to mark the beginning of each time unit.

*

The second movement is the setting of the last sentence of Mechthild's text; it can be understood as the response of God to the virgin's pleas. As mentioned before (chapter 2.4.3.: 'Reflections on Form and Heterophony'), the second movement has a completely different, indeed opposite texture: it consists of (cluster) chords and is homophonic and syllabic. I felt that the linear texture of the first movement demands a 'complement' to open the harmonic space. It also seemed necessary to guide the aimlessly wandering melodic line of the first movement to solid ground; for reasons beyond my understanding, a syllabic setting and a homophonic texture seem to be more 'focused' than any other texture.

2.7. Rhythm / Ornamental Heterophony: Study VII

This study was inspired by the widespread idea that heterophony is caused by rhythmic variability: the parts involved sing or play the same skeletal melody, but with slightly different rhythms.³⁰⁷ As I explained in chapter 2.3.1., I do not believe in this theory. To be sure, there is rhythmic variability in heterophonic music, but I do not think it is the only or even the most important characteristic, nor that it is the *cause* of heterophony.³⁰⁸ However, since I am interested in the rhythmic ambiguity that is typical for many types of heterophonic music, I also wanted to explore this idea.

The score consists of one stave which serves as the basis for both parts. Above and below the stave, different durations are given for each bar: the above figure applies to

³⁰⁷ Cf. Lomax, *Folk Song Style*, p. 44; Malm, *On the Meaning and Invention of the Term 'Disphony'*, p. 248.

³⁰⁸ The simultaneous sounding of skeletal tones in all parts is an important trait in Vietnamese music (Van Khê, *Musik Vietnams*, p. 68f.). David Morton states that in Thai traditional music '[i]ndividual lines of melody and variants sound in unison or octaves only at specific structural points [...]. Between the structural points where the pitches coincide (unison or octaves) each individual line follows the style idiomatic for the instrument playing it.' (Morton, *The Traditional Music of Thailand*, p. 21).

performer 1, the lower figure to performer 2. In most bars, the upper and lower values differ by half a second and the parts alternate in terms of length or shortness of duration. It is thus entirely in line with Alan Lomax's idea that in heterophony one part 'lags behind' while the other 'pushes forward'.³⁰⁹ Approximately every two or three bars, the durations of part 1 and 2 add up to the same sum; all in all, the two parts have the same performance duration.

The *Kernmelodie* of *šēru* (1) serves as the skeletal melody. It is embellished by both 'small-scale' and 'compound' ornaments, according to similar principles as in *Ghasel* (see chapter 2.6.1.). This challenges the notion that heterophony is based only on rhythmic differences: Alan Lomax and other advocates of this theory do not consider ornamentation at all; for them, rhythmic variability only refers to the skeletal melody. However, as described above, this theory only served as a starting point for another approach to rhythmic ambiguity.

The compound ornaments—those that connect two adjacent skeletal tones with each other—are based on symmetrical patterns as described in the analysis of *Ghasel*. The underlying Meander Sequence is:

3 1 2 2 1 3 2 2

The small-scale ornaments connecting the pitches of the compound ornaments are based on the following Meander Sequence:

1 3 2 2 3 1 2 2

Each bar contains more tones than can possibly be played in the short time span. The performers are instructed to play as many tones as they can, but at least one tone—the skeletal tone—in each bar. This 'overload' of the interpreters should help to avoid the occurrence that identical sound material is simply played with a time delay, and thus gives the impression of (contrapuntal) imitation. There is too much musical material for the two performers to play exactly the same. The slightly unusual notation also contributes to this. The spatial rhythmic notation makes it impossible to copy the other performer exactly. Moreover, the arrangement of the notes underneath and above each other is intended to challenge the interpreters to an individual and creative approach to the score—even the order of the tones is no longer important.

2.8. Melody/Ornamental Heterophony/Improvisation: *Das ander Lied*

Das ander Lied was written during the first weeks of my studies. It examines the possible uses of a basic melody in different multilinear contexts. It can thus be seen as an attempt to define heterophony in the context of related plurivocal textures. The piece was

³⁰⁹ Lomax, *Folk Song Style*, p. 44.

written for a concert project about the Thirty Years' War. The singer and organiser of the project, Claudia van Hasselt, had discovered previously unpublished manuscripts and leaflets in Berlin archives and made them available to me to set to music. I chose a text that was handed down without melody:

- I. Traurig bin ich / Trauren kräncket mich / Trauren bringt mich umbs Leben / Ob der Mund schon lacht / Thut ers mit Ungemach / Das Hertz in Trauren schwebet.
 - II. Ach helffet trauren mir / O ihr wilden Thier / die ihr herumb thut waiden / Alle Element / Ja alle Fürmament / bewegt euch zu mitleiden.
 - III. Adi mein gwesne Freud / also verwendt in Leid / in Leid sol es beharren / sehe euch nimmermehr / so sprech ich denn Ade / last euch mein Schmetzen erbarmen.
- I. *I am sad. Mourning burdens me. Mourning kills me. If the mouth laughs, it does so with grief. The heart floats in mourning.*
 - II. *Oh, help me grieve, you wild animals that graze here. All elements, yes all firmaments, suffer with me.*
 - III. *Goodbye, my past joy, which has turned into suffering. Let it persist in suffering. Never see you again. So I say goodbye now. Have mercy on my pain.*

I invented a melody in the style of the seventeenth century, which is shown in figure 85. Its original form is nowhere used in the composition. Particularly in verses 2 and 3 the melody is strongly modified and serves only as a structural background for the melodic contour of the vocal part. It is important to me that the basic melody itself is never played or sung; it should only shine through, so to speak. I want it to be as impalpable as the lost melody that was originally sung to the text. Its intangible nature may also symbolise the impossibility of truly feeling another person's suffering, especially when considering that the person suffered nearly 300 years ago.

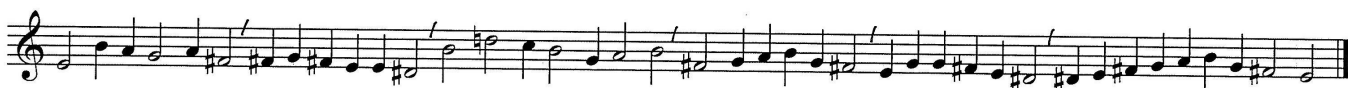


Figure 85: *Das ander Lied*: Basic melody.

The first movement, entitled *Bicinium*, uses the pitch sequence of the original melody almost unchanged in the vocal part, but in a different rhythm. The recorder part forms a 'counterpoint' to the vocal *cantus firmus*, but does not always follow the traditional doctrine.

Regarding rhythm, the vocal and the flute parts together create the vague metrical feeling typical of Renaissance and early Baroque vocal music. In some places (bars 10 to 12 and 22 to 25) the imitative entries follow each other so closely that tonal friction occurs which may resemble heterophonic textures. It is reminiscent of Mark Kopytman's technique of 'heterophonic shifting', which I had not yet learned when I composed *Das ander Lied*.³¹⁰

³¹⁰ Cf. chapter 1.3.1.

In the second movement, *Motet*, the vocal part reveals a very agitated melodic line, following the contour of the basic tune. In simultaneity with the first two melodic lines of the vocal part, the recorder plays an ostinato-like motif consisting of the first five pitches of the basic melody. In the second half of this movement, the recorder part consists of several 'chords'—low notes whose overtones are successively sounded by overblowing. The slow rhythm of these 'chords' contrasts with the lively vocal part.

The two parts are rhythmically independent from each other to a limited extent; this already points to my later handling of the notation of heterophonic textures as for example in *ETYM III* or *Lied der Minne*.

The last movement presents only the melodic frame of the basic tune. The vocal part contains microtonal intervals; the drone, played simultaneously by the flute, allows these intervals to emerge even more distinctively.³¹¹ The motif of a fifth, with which the original melody begins, is repeated several times—whenever the word *Ade* ('Farewell') appears in the text. Together with the drone in the recorder part, this gives the movement a static character. In addition to normal singing tones, the vocal part also contains a kind of *Sprechgesang* which is less inspired by Arnold Schoenberg and more by Marius Schneider's idea of 'primitive' singing, where different degrees of 'brightness' [*Helligkeit*] instead of 'proper' intervals [*Tonigkeit*] prevail.³¹² Because it is less 'artificial' than singing, it should make the content of the text more tangible.

Although I had originally intended not to make the basic melody accessible, I eventually shared it for an improvisation performed by recorder player Susanne Fröhlich and violist Zhechao Xie during the concert in which *Das ander Lied* was premiered. Before the concert I worked out the improvisation together with the instrumentalists. In the improvisation, the basic melody is even less recognisable than in *Das ander Lied*; it follows the general contour of the melody in very slow movements and enriches the texture with contemporary playing techniques, but also with traditional ornamentation like vibratos, *glissandi*, et cetera. Whether traditional or contemporary, the ornamentation is always based on the playing technique of the respective instrument: for example, *glissandi* and tremoli can be found in the viola part, while in the recorder part, key clicks, air sounds, *chevroté* et cetera predominate. In fact, the musical practice on which this improvisation is based must be regarded as ornamental heterophony as I later defined it.³¹³

³¹¹ Cf. Hoerburger, *Musica Vulgaris*, p. 22.

³¹² Schneider, *Geschichte der Mehrstimmigkeit*, p. 15f.

³¹³ It would be more precise to call it 'pre-composition' instead of 'improvisation' (cf. Nettle, 'Contemplating the Concept of Improvisation', p. 2). What we agreed on in the working process was that the basic melody should be the 'model' (Nettl, 'Thoughts on Improvisation', p. 12) and that it should be played very slowly, with only approximate synchronicity among the instrumentalists and filled with ornaments, tonal deviations etc. The actual realisation during the concert was left to the spontaneity of the musicians. It was rehearsed several times and sounded different each time.

Summary and Outlook

My investigations have shown that a great—so far largely unexploited—potential lies in heterophony as a way of composing plurivocal music. I have created a concept of heterophony to occur in a way that, until now, was normally reserved for contrapuntal polyphony, homophony and other Western composition techniques. My approach addresses the questions of what ‘New Music’ would sound like if heterophony, rather than counterpoint, had been the dominant force in Western music. This opens up a new artistic and discursive space. The definition presented in chapter 1 forms only the basis for an understanding of heterophony; as Rudolf M. Brandl notes in his essay on ‘Universal Basic Definitions’, the musical conventions of the respective culture in which heterophonic music occurs must be overlaid on this fundamental definition.³¹⁴ In most of the compositions submitted with this thesis, I have closely followed culture-specific characteristics of heterophonic music-making in non-European music; I have tried to make heterophony usable for ‘New Music’ in a way that was previously reserved for homophony and contrapuntal polyphony.

However, the generality of my basic definition makes it possible to use this research as a starting point for completely different compositional processes, thus producing results that may only remotely recall ‘original’ heterophony. In this case the focus is no longer how faithfully traditional heterophony can be (re)produced, but rather how to explore heterophony as a universal fundamental model of multilinear music-making, as has long been the case with contrapuntal polyphony. It is possible to use a completely different approach to the individual components that comprise a heterophonic texture, instead of following a traditional heterophonic structure.

For example, there are endless possibilities in the construction of a skeletal melody: it could be made of noises or even non-musical elements instead of pitches; it could be multilinear in itself and thus be the basis for a ‘super-heterophonic’ texture. The same applies to ornamentation: as I have shown in chapter 1.2.3., traditional ornamentation is based on instrumental playing techniques or vocal techniques; in contemporary music, advanced playing techniques (such as those used by Helmut Lachenmann) could be used. Even an attempt to make traditional forms of ornamentation usable for contemporary composing would revolutionise today’s Western music practices: since we no longer have generally accepted rules known to everyone involved, as in traditional and non-literate music, a composer would have to develop their own ‘tradition’ and develop this with musicians throughout a long learning process. This would entail new forms of collaboration between composer and performers as well as a new performance situation. It would also require new forms of notation. Finally, the social implications associated with many heterophonic styles can also inspire a new approach to heterophony.

³¹⁴ Brandl, ‘Universale Basis-Definitionen’, p. 22f.

My own focus in the near future will be on further research into the possibilities of ornamental heterophony. The inclusion of sounds and alternative sound productions in the basic melody—such as in the music of the Ainu, where sobs, breathing sounds, et cetera, are a natural part of the sound repertoire—is of particular interest to me.³¹⁵ Furthermore, I would like to delve deeper into the communicative aspect of heterophony and its relationship to notation, as I tried for the first time in *Lied der Minne* and *Study VI*. This will include new forms of performance; the different ways of presentation in traditional heterophonic music practices, as described in Chapter 1.3.3. ('Performance Situation'), should be an inspiration.

I am particularly interested in the challenge of using heterophonic textures in contemporary concert music, as outlined in the last chapter. As demonstrated, an exclusively heterophonic texture seems to be acceptable only in very short compositions. In the future it will therefore be important for me to find a meaningful use of heterophony in larger contexts and in combination with other textures. In his essay on 'Heterophonie', Ștefan Niculescu states:

In the course of music history, homophony has developed in various homophonic forms (song, rondo, sonata, etc.), while polyphony has created the various polyphonic forms (motet, ricercar, fugue, etc.). We take it for granted that over time heterophony will generate various forms that correspond to its sonority: heterophonic forms.³¹⁶

It is quite possible, perhaps probable, that heterophony will only be one of many textures and possibilities of expression that depend on the content and expressiveness of the respective composition.

³¹⁵ Nobuhiko Chiba, 'The Music of the Ainu', in *The Ashgate Research Companion to Japanese Music*, ed. by Alison McQueen Tokita and David W. Hughes (New York, NY: Routledge, 2008), pp. 323–344 (p. 328).

³¹⁶ Niculescu, 'Heterophonie', p. 67.

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Appendix: Transcriptions

1. Laos, male singer: recording has been removed from YouTube.
2. Taiwan, female singers: <https://www.youtube.com/watch?v=5pRGr-jgMU8>, 29:13–31:06
3. Taiwan, female and male solo singers: recording has been removed from YouTube.
4. Taiwan, male singers: <https://www.youtube.com/watch?v=5pRGr-jgMU8>, 37:52–39:49
5. Gaelic Psalm Singing: <https://www.youtube.com/watch?v=fMqKxppq6QAE>, 00:00–01:20
6. Myanmar, flute and harp parts: <https://www.youtube.com/watch?v=KudQXuFZQuU>, 20:53–21:17
7. Bhutan, *Zhungdra*, female singers: www.youtube.com/watch?v=K38v9y7Sdio, 00:19–1:39
8. Japan, *Etenraku* (*Gagaku*), flute and hichiriki parts: www.youtube.com/watch?v=rRM_FNooJHo, 28:40–29:28
9. Japan, *Gagaku*, flute, hichiriki and percussion parts: www.youtube.com/watch?v=NoKP-o-cXak, 09:00–10:48

1. Laos, male singer

$\text{♩} = 63$

meno mosso

Handwritten musical notation on a single staff. It begins with a treble clef and a common time signature. The notation includes several groups of notes with fingerings: $r37$, $r37$, 5 , and $r57$. There are also some notes with a downward-pointing arrow below them.

Handwritten musical notation on a single staff. It includes performance markings: *poco meno mosso* above a group of notes with a 6 fingering, and *a tempo* above another group with $r37$ fingerings. There are also some notes with asterisks below them.

Handwritten musical notation on a single staff. It includes performance markings: *accel.* above a group of notes with 3 fingerings, and *a tempo* above another group with 5 and $r37$ fingerings. The notation ends with a double bar line and a flourish.

A series of ten empty musical staves, each consisting of five horizontal lines, arranged vertically on the page.

2. Taiwan, female singers

$\text{♩} = 76$

First musical staff in treble clef. It begins with a treble clef and a tempo marking of quarter note = 76. The melody consists of eighth and sixteenth notes. A triplet of eighth notes is marked with a '3' and a slur. The staff ends with a double bar line and a fermata over the final note. A circled 'a)' is written below the final note.

Second musical staff in treble clef. It continues the melody with various rhythmic patterns. A circled 'b)' is under the first note, 'c)' is under a pair of notes, 'd)' is under a pair of notes, 'e)' is under a triplet of eighth notes, and 'f)' is under the final note.

Third musical staff in treble clef. It continues the melody. A circled 'g)' is under a pair of notes, 'h)' is under a pair of notes, and 'i)' is under a pair of notes. The staff ends with a double bar line and a fermata over the final note.

Fourth musical staff in treble clef. It continues the melody. A circled 'j)' is under the first note. The staff ends with a double bar line and a fermata over the final note.

3. Taiwan, female and male solo singers

$\text{♩} = 120$

1 2 3 4

5 6 7 8

9

14

17

21

slower *rit.*

24 *a tempo*

Musical notation for measures 24-27. The system consists of two staves. Measure 24 begins with a treble clef and a whole rest. Measure 25 contains a triplet of eighth notes in the treble staff and a triplet of eighth notes in the bass staff. Measures 26 and 27 continue with similar rhythmic patterns and triplets. The key signature has one sharp (F#).

28

Musical notation for measures 28-31. The system consists of two staves. Measures 28-31 feature continuous eighth-note patterns in both staves, with various accidentals (sharps and naturals) and a triplet in measure 30. The key signature has one sharp (F#).

32

Musical notation for measures 32-35. The system consists of two staves. Measure 32 starts with a treble clef and a whole rest. Measures 33-35 contain eighth-note patterns with triplets in both staves. The key signature has one sharp (F#).

34

Musical notation for measures 34-37. The system consists of two staves. Measures 34-37 feature eighth-note patterns with a circled '4' above the treble staff in measure 35. The key signature has one sharp (F#).

38

Musical notation for measures 38-41. The system consists of two staves. Measures 38-41 include first and second endings, indicated by '1.' and '2.' above the staves. The key signature has one sharp (F#).

rit.

Musical notation for measures 42-45. The system consists of two staves. Measures 42-45 feature a slower tempo, indicated by the *rit.* marking. The key signature has one sharp (F#).

4. Taiwan, male singers

$\text{♩} \approx 66$

solo:

[e:] [e:] - [a6] [ə]

tutti:

[e:]

(solo)

[e:] [e:]

solo:

[c] [o]

[e:]

solo:

[e:] [c]

5. Gaelic Psalm Singing

$\text{♩} = 72$

solo

Handwritten musical score for the first system. It consists of a solo line and four accompaniment staves. The solo line features a triplet of eighth notes in the first measure, followed by a slur over several notes. The accompaniment includes chords and notes with 'port.' markings. A vertical dashed line is present in the second measure.

Psalm Tune ('Martyr')

solo

Handwritten musical score for the second system. It consists of a solo line and four accompaniment staves. The solo line includes a slur with '(9)' above it and a triplet. The accompaniment includes chords and notes with 'port.' markings. A vertical dashed line is present in the fourth measure.

solo

Handwritten musical score for the third system. It consists of a solo line and four accompaniment staves. The solo line includes a slur with '(6)' above it and a triplet. The accompaniment includes chords and notes with 'port.' markings. A vertical dashed line is present in the second measure.

solo

Handwritten musical score for a solo piece. The score is written on a treble clef staff and four bass clef staves. The notation includes notes, rests, and various musical markings. A vertical dashed line is drawn through the score, and a wavy line is present on the right side.

Key markings and notations include:

- Top staff (Treble Clef):** Starts with a treble clef and a key signature of one sharp (F#). The first measure contains a triplet of eighth notes (G4, A4, B4) with a '3' above and a '4' below. This is followed by a quarter note (C5), a quarter note (B4), and a quarter note (A4). The second measure contains a quarter note (G4), a quarter note (F#4), and a quarter note (E4). The third measure contains a quarter note (D4), a quarter note (C4), and a quarter note (B3). The fourth measure contains a quarter note (A3), a quarter note (G3), and a quarter note (F#3). The fifth measure contains a quarter note (E3), a quarter note (D3), and a quarter note (C3). The sixth measure contains a quarter note (B2), a quarter note (A2), and a quarter note (G2). The seventh measure contains a quarter note (F#2), a quarter note (E2), and a quarter note (D2). The eighth measure contains a quarter note (C2), a quarter note (B1), and a quarter note (A1). The ninth measure contains a quarter note (G1), a quarter note (F#1), and a quarter note (E1). The tenth measure contains a quarter note (D1), a quarter note (C1), and a quarter note (B0).
- Second staff (Bass Clef):** Contains a quarter note (G2), a quarter note (F#2), and a quarter note (E2). The second measure contains a quarter note (D2), a quarter note (C2), and a quarter note (B1). The third measure contains a quarter note (A1), a quarter note (G1), and a quarter note (F#1). The fourth measure contains a quarter note (E1), a quarter note (D1), and a quarter note (C1). The fifth measure contains a quarter note (B0), a quarter note (A0), and a quarter note (G0). The sixth measure contains a quarter note (F#0), a quarter note (E0), and a quarter note (D0). The seventh measure contains a quarter note (C0), a quarter note (B0), and a quarter note (A0). The eighth measure contains a quarter note (G0), a quarter note (F#0), and a quarter note (E0). The ninth measure contains a quarter note (D0), a quarter note (C0), and a quarter note (B0). The tenth measure contains a quarter note (A0), a quarter note (G0), and a quarter note (F#0).
- Third staff (Bass Clef):** Contains a quarter note (G2), a quarter note (F#2), and a quarter note (E2). The second measure contains a quarter note (D2), a quarter note (C2), and a quarter note (B1). The third measure contains a quarter note (A1), a quarter note (G1), and a quarter note (F#1). The fourth measure contains a quarter note (E1), a quarter note (D1), and a quarter note (C1). The fifth measure contains a quarter note (B0), a quarter note (A0), and a quarter note (G0). The sixth measure contains a quarter note (F#0), a quarter note (E0), and a quarter note (D0). The seventh measure contains a quarter note (C0), a quarter note (B0), and a quarter note (A0). The eighth measure contains a quarter note (G0), a quarter note (F#0), and a quarter note (E0). The ninth measure contains a quarter note (D0), a quarter note (C0), and a quarter note (B0). The tenth measure contains a quarter note (A0), a quarter note (G0), and a quarter note (F#0).
- Fourth staff (Bass Clef):** Contains a quarter note (G2), a quarter note (F#2), and a quarter note (E2). The second measure contains a quarter note (D2), a quarter note (C2), and a quarter note (B1). The third measure contains a quarter note (A1), a quarter note (G1), and a quarter note (F#1). The fourth measure contains a quarter note (E1), a quarter note (D1), and a quarter note (C1). The fifth measure contains a quarter note (B0), a quarter note (A0), and a quarter note (G0). The sixth measure contains a quarter note (F#0), a quarter note (E0), and a quarter note (D0). The seventh measure contains a quarter note (C0), a quarter note (B0), and a quarter note (A0). The eighth measure contains a quarter note (G0), a quarter note (F#0), and a quarter note (E0). The ninth measure contains a quarter note (D0), a quarter note (C0), and a quarter note (B0). The tenth measure contains a quarter note (A0), a quarter note (G0), and a quarter note (F#0).



6. Myanmar, flute and harp parts

$\text{♩} = 63$

faster ($\text{♩} \approx 84$)

flute

harp

This system contains the first two staves of music. The flute staff (top) begins with a treble clef and a 4/4 time signature. It features several triplet markings (indicated by a '3' over a bracket) and accents (indicated by a tilde '~' over a note). The harp staff (bottom) uses a treble clef and contains a series of chords and arpeggiated figures, some marked with 'x' above them.

This system continues the musical notation. The flute staff includes a 'gliss.' marking below a series of notes. The harp staff continues with complex chordal textures and arpeggios.

This system shows the final notes of the piece. The flute staff has a few notes with a tilde '~' above them. The harp staff has a few notes with a 'k' below them. A 'rit.' marking is present in the flute staff, indicating a ritardando.

This section consists of several empty musical staves, indicating the end of the page or a continuation on another page.

7. Bhutan, Zhungdra, female singers

$\text{♩} \approx 294$

Voices

dramnyen

The musical score is written on seven systems. Each system consists of two staves: the upper staff is for the voices (treble clef) and the lower staff is for the dramnyen (bass clef). The tempo is indicated as $\text{♩} \approx 294$. The key signature has one flat (B-flat). The first system shows a vocal line with a fermata and a dramnyen line with a tremolo-like pattern. The second system features a vocal line with a melodic phrase and a dramnyen line with a rhythmic accompaniment. The third system has a vocal line with a melodic phrase and a dramnyen line with a rhythmic accompaniment. The fourth system has a vocal line with a melodic phrase and a dramnyen line with a rhythmic accompaniment. The fifth system has a vocal line with a melodic phrase and a dramnyen line with a rhythmic accompaniment. The sixth system has a vocal line with a melodic phrase and a dramnyen line with a rhythmic accompaniment. The seventh system has a vocal line with a melodic phrase and a dramnyen line with a rhythmic accompaniment.

Musical notation for piano accompaniment. The upper staff is in treble clef and contains a melodic line with various note values and rests. The lower staff is in bass clef and contains a bass line with a series of notes, some of which are beamed together. The key signature has one flat (B-flat).

Voices

Musical notation for the first voice part. It is written in treble clef and features a melodic line with a long note followed by a rest, and then a phrase of notes. The key signature has one flat.

Musical notation for the second voice part. It is written in treble clef and features a melodic line with a long note followed by a rest, and then a phrase of notes. The key signature has one flat.

Musical notation for the third voice part. It is written in treble clef and features a melodic line with a long note followed by a rest, and then a phrase of notes. The key signature has one flat.

A series of empty musical staves, likely intended for further notation or as a placeholder for other parts of the score.

8. Japan, Etenraku (Gagaku), flute and hichiriki parts

$\text{♩} = 82$

Ryūteki:

Hichiriki:

9. Japan, Gagaku, flute, hichiriki and percussion parts

$\text{♩} = 90$

flute

hichiriki

Shōko
kakko
Taiko

(Shō)

$\text{♩} = 69$

6

3

$\text{♩} = 104$

3

$\text{♩} = 69$

rit.-----, a tempo

ip