

Music Theory for Eurythmists

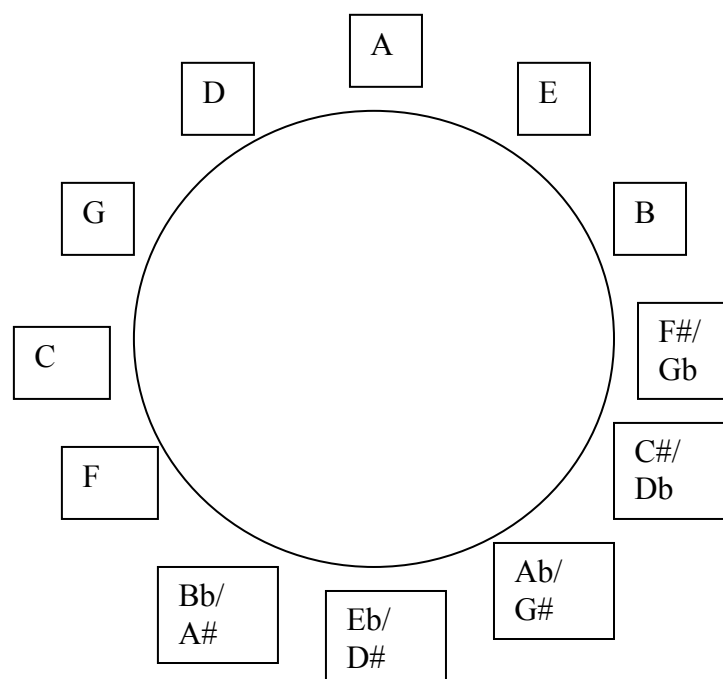
An outline of topics covered by Gregers Brinch at Peredur School of Eurythmy in 2013

Chapter 1. Introduction

This booklet has been compiled specifically for the benefit of students of Eurythmy. There are many descriptions of qualities here which are always to be understood as suggestions. It is understood that all labels of musical phenomena are temporary and must remain generally subjective in some way or other. This is why so many musical properties have borrowed their names from other fields of human experience. The experience of music prompts us to associate widely and the skill of the music student lies in understanding the nature of analogy. Thus the many analogies in this handbook are deliberate and the intention is to stimulate the development of an aesthetic understanding of music without the restrictions of natural scientific criteria. Music is arguably our most immediate and direct experience of the spirit and as such I believe it is to be treated in a spiritual scientific manner of the spirit. This means finding meaningful correspondences which seek to deepen our understanding of the mystery we confront when we are musically engaged.

Aspects of melody, harmony and rhythm will be treated in this handbook, and tasks are given at the end of every chapter.

Chapter 2 The Circle of 5ths.



With the circle of 5ths we have an order of the 12 notes of the diatonic system. This circle is in actual fact a potentially endless spiral similar to a slinky. From each note to its neighbouring notes in the circle there is a distance of the interval of a perfect fifth. So from C – G is a perfect 5th upward, and from C – F is a perf. 5th downward.

There are 12 tonal places in total and yet when we move in a clockwise from Gb through Db, Ab, Eb, Bb, F, C, D, A, E, B we arrive at the same tonal place of Gb again but need to name it F#. This is because the naming of the notes is done according to the context of neighbouring notes. So a 'B' (place) when a minor third in a Ab minor chord is actually a Cb. In turn an F in a C# major chord would be called an E#.

It is important to maintain the tonal structure of the sequence of the various scales from whence we derive the names of the notes in the first place. Hence from one letter to the next there will always be a 2nd, be it major, minor, augmented or diminished. So for instance in the key of G major we have the sequence G, A, B, C, D, E, F# and G we would not call the F# Gb, as that would have the consequence of having two values of G on separate degrees of the scale, and we would have to call the step from the 6th to the 7th note an diminished third (E – Gb {an 'e' to a 'g' will always be a third, E-G is a minor 3rd, Eb-G= major3rd E-G#=major 3rd, Eb-G# augmented 3rd hence E-Gb=diminished 3rd) So adhering to the sequence of the letters with their corresponding sharps and flats is very important in order to identify the intervals and so confirm their effect.

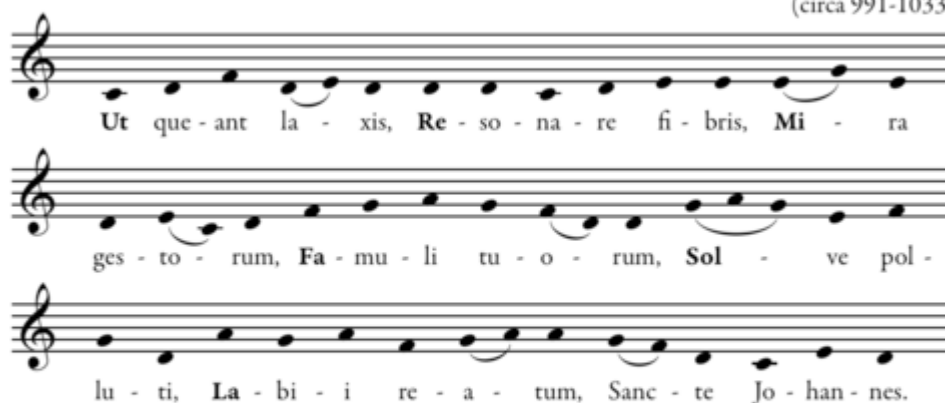
The structure of the major scale makes use of 7 consecutive notes in the circle of 5th. So the 7 natural notes are the ones which make use of the letters (or take the ancient names of Do[Ut], Re, Mi, Fa, Sol, La, Si, Do[Ut]). From the Gregorian prayer:

Ut queant laxis, resonare fibris, Mira gestorum, famuli tuorum, Solve polluti, labii reatum, Sancte Iohannes..

It may be translated: *So that your servants may, with loosened voices, resound the wonders of your deeds, clean the guilt from our stained lips, O Saint John.*

Ut Queant Laxis (Hymn to St. John the Baptist)

Guido of Arezzo
(circa 991-1033)



Ut que - ant la - xis, Re - so - na - re fi - bris, Mi - ra
ges - to - rum, Fa - mu - li tu - o - rum, Sol - ve pol -
lu - ti, La - bi - i re - a - tum, Sanc - te Jo - han - nes.

Translation:

So that your servants may, with loosened voices, resound the wonders
of your deeds, clean the guilt from our stained lips, O Saint John.

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version by Matthew D. Thibeault, October 31, 2008

The above naming of this notes in this major structure is transferred to any Tonic note (ie. starting and ending note – the name-giving home-note).

The structure of this major scale is

1-2 = maj.2nd, 2-3 = maj.2nd, 3-4 = min.2nd,

4-5 = maj.2nd,

5-6 = maj.2nd, 6-7 = maj.2nd, 7-8 = min.2nd

The pattern thus is major2, major2, minor2; major2, major2, minor2 separated by a major 2nd.

List of Major scales: Blue notes are flat, green notes are natural red notes are sharps.

Gb major = Gb, Ab, Bb, Cb, Db, Eb, F, Gb

Db major = Db, Eb, F, Gb, Ab, Bb, C, Db

Ab major = Ab, Bb, C, Db, Eb, F, G, Ab

Eb major = Eb, F, G, Ab, Bb, C, D, Eb

Bb major = Bb, C, D, Eb, F, G, A, Bb,

F major = F, G, A, Bb, C, D, E, F

C major = C, D, E, F, G, A, B, C

G major = G, A, B, C, D, E, F#, G

D major = D, E, F#, G, A, B, C#, D

A major = A, B, C#, D, E, F#, G#, A

E major = E, F#, G#, A, B, C#, D#, E

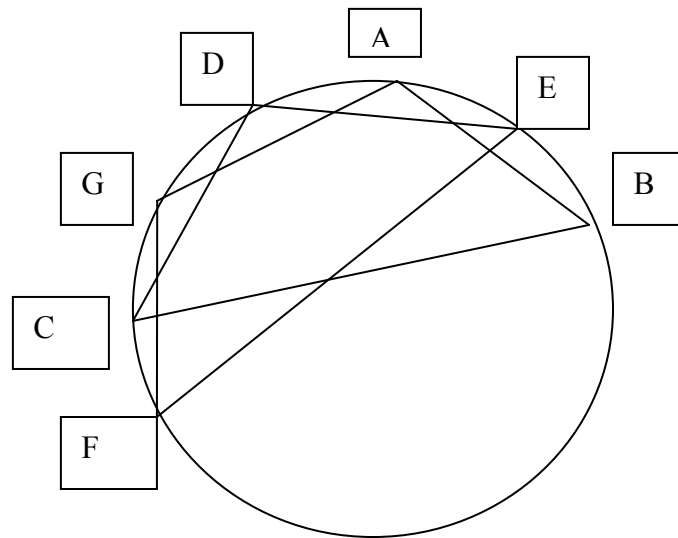
B major = B, C#, D#, E, F#, G#, A#, B

F# major = F#, G#, A#, B, C#, D#, E#, F#

(Note the similarity in pattern from Gb to G in terms of flats to naturals compared with naturals with sharps.)

The path that a major scale makes through the 7 consecutive notes in the circle of 5ths is shaped in the following interesting manner:

This shape is identical from all 12 positions of the circle of fifths and represents the movement of the scale from one note to the next and the consistency of the structure of that journey as outlined above.



!Task! Learn the sequence of notes in the Circle of 5ths

Chapter 3 MAJOR and MINOR

The quality of major and minor is often simplified and confused as the terms are used in a variety of contexts. We must learn to distinguish between major and minor qualities, which are used in a vague descriptive way from the precise terms used for intervals and chords/harmonies.

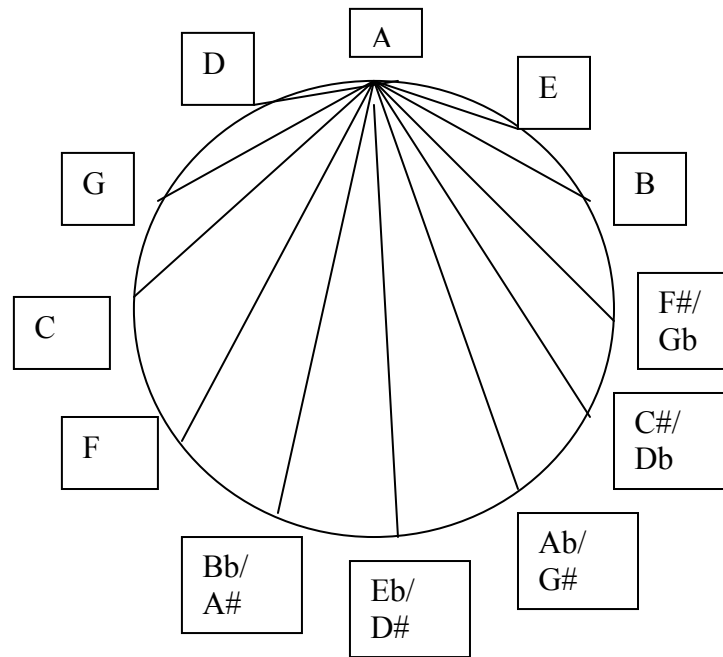
Initially we need to survey the elements which we encounter in a simple piece of music.

Aspects of rhythm, beat, pulse, tempo and structure we will deal with in a later chapter. As far as the notes and their relationships are concerned we have the relationships of the notes, one to another which we call **intervals** and in addition to these we have combination formed by 3 or more notes in what we call **triads, chords** and/or **harmonies**. Harmonies are dissonances as well as consonances (please note that the word ‘harmony’ is often used to describe a consonance).

Consonances are combinations of notes which unfold simpler stable relationships.

Dissonances unfold complex, unstable relationships.

Let us first investigate the **intervals**. Initially we need to mention the two forms of intervals, melodic and harmonic. Melodic unfold in time from one note to the other, the harmonic is a simultaneous sounding of two notes unfolding (analogously) in space. We can establish the sum of possible major and minor (and a few augmented and diminished) tonal relationships by relating one single note to all the others in a logical fashion as follows.



If we proceed from 'A' in all directions we have the following list of combinations, however as the list will demonstrate there are always two ways of combining two notes due to the fact that all the notes have endless octaves above and below (the octave representing the simplest and most perfect relationship between two notes offering the experience of unity – hence the difference between the male and female vocal timbre is that of an octave). Here are two sets of examples from the note 'A':

Major intervals in the upward direction:

- A up to E = perf. 5th
- A up to B = maj. 2nd
- A up to F# = maj. 6th
- A up to C# = maj. 3rd
- A up to G# = maj. 7th
- A up to D# = augm. 4th

Minor intervals in the downward direction.

- A up to D = perf. 4th
- A up to G = min 7th
- A up to C = min 3rd
- A up to F = min. 6th
- A up to Bb = min 2nd.
- A up to Eb = dim. 5th.

Major intervals in the Downward direction:

- A down to D = perf. 5th
- A down to B = maj. 2nd
- A down to C = maj. 6th
- A down to F = maj. 3rd
- A down to Bb = maj. 7th
- A down to Eb = augm. 4th

Minor intervals in the upward direction.

- A down to E = perf. 4th
- A down to B = min 7th
- A down to F# = min 3rd
- A down to C# = min. 6th
- A down to G# = min 2nd.
- A down to D# = dim. 5th.

Again the sequence above from the note A is identical from all other notes when arrived at in the same way. As is demonstrated here a major interval will unfold in pitch adhering to the sequence the notes are to be found in the circle of 5ths. I.e. A – C when played/sung downwards unfolds a major 6th. If, however, the C is played above the A then a minor 3rd will unfold. Hence all minor intervals unfold counter to the sequence the notes are to be found in

the circle of 5ths. This is very important and as a result we can confirm that the perfect 5th is a major interval and the perfect 4th is a minor interval.

Practicing identifying major in minor intervals in both directions is vital to any practical understanding of harmony. Notice here that intervals beyond the opposite note in the circle of 5ths are omitted. This is necessary for now, as these produce further augmented and diminished relationships! The study if these can be undertaken at a later stage.

In conclusion we can say that the quality of major can be said to be a striving to reach for the octave. When striving towards a higher octave the unfolding of a major interval can be expressed as analogous to levity, light and expansion. We can experience this in particular in the upwards direction. When striving or falling towards a lower octave the major interval can be experienced as descending unhindered into the 'Earthly Realm' and the natural downward flow is created.

Major gives us the analogous experience of *incarnating into the spirit* when experienced upwards and the analogous experience of *incarnating into the earthly* when experienced downwards.

Minor is quite different and gives us the experience of turning towards the prime (the source of existence) thereby enhancing the experience of the centre. Minor reflects our human experience of ambiguity and duality. We may have an intention in one direction but the reality we unfold is quite the opposite. When performing a minor 3rd in the downwards direction we arrive at a note which unfolds more levity more than the note from which we set out. A minor experience is akin to going onto a going the wrong way on an escalator. The most general analogy here could be that of **contraction**, as it applies to both the melodic and the harmonic interval.

!Task! Learn to know the intervals and their complementary intervals

Prime – Octave
Min 2nd – Maj 7th
Maj 2nd – Min 7th
Min 3rd – Maj 6th
Maj 3rd – Min 6th
Augm. 4th - Dim. 4th

Chapter 4 Tetrachords

A tetrachord is a sequence of 4 adjacent notes. A true Tetrachord needs to hold a minor 2nd and two major 2nd within the structure. The 8-fold sequence of notes which we experience as a journey from the prime (the source of life and movement) to the octave (the goal of our striving) is called the scale from the Italian word 'scala' which means ladder. Hence the name for this sequence is an analogy. When we investigate the scale we come to upon the two groups of 4 notes which unfold to complete sequence. These groups of 4 notes, denoting the 1st, 2nd, 3rd and 4th degree of the scale and the 5th, 6th, 7th and 8th degree of the scale, are called Tetrachords.

The 'Dorian' mode

If we make **D the tonic** of our sequence, we can determine that there are 3 notes A, E and B situated higher than the tonic as well as 3 notes G, C and F that are below the tonic. So we have the first Tetrachord extending from D-E-F-G where the minor 2nd is between the 2nd and 3rd degree. The 2nd Tetrachord extends from A-B-C-D, where the minor 2nd is between the 6th and 7th degree. The Tetrachords are identical but this sequence creates a different overall structure to the major scale. There is an overall balance of major and minor intervals from the tonic: **major 2nd minor 3rd fourth, perf. fifth, major 6th minor 7th** - three of each.

The 'Mixolydian' mode

If we make **G the Tonic**, the first tetrachord of the structure would be a major one followed by a minor Tetrachord. Hence G, A, B, C – D, E, F, G with the minor 2nd between the 3rd and 4th degree in the first tetrachord and between the 2nd and 3rd in the latter tetrachord. This gives the feeling of an upward striving in the first half of the sequence and a lessening of that effort. The overall balance is of major and minor degrees of the mode shows that there are more major and fewer minor degrees.

The 'Phrygian' mode

If we make the **E the tonic**, both tetrachords have the minor 2nd from the 1st to the 2nd note. This creates a very dark and contracting sequence of notes where the only note to be lighter than the tonic.

The 'Aeolian' mode

If we make **A the tonic** we are in a familiar territory of the minor scale but with a minor 7th or leading note as it is called. The two tetrachords are different, the lower being of the minor variety and the higher being a '*Tragedy to triumph*' variety. The notes A, B, C, D make up the first tetrachord and E, F, G A making the higher tetrachord. This mode is generally experienced as being melancholy but beautiful.

This leaves us with two further tetrachords, both of which have a tetrachord which does not include a minor 2nd.

The 'Lydian' mode

Starting on F is made up of a lower tetrachord which is larger than a perfect 4th, it is made up of 3 consecutive major 2nds. The higher tetrachord is a major tetrachord. This mode is extremely uplifting, but problematic as the fourth interval is abnormal. Only few examples exist in this mode.

The 'Locrian' Mode

Is made when starting and finishing on B. This mode was not used in practice but was named as it did present a theoretical possibility. The lower tetrachord is of the '*Tragedy to triumph*' variation, whereas the higher tetrachord is made up of 3 consecutive major 2nds. This again presents a practical difficulty as there is no perfect which is vital for the establishing of the tonic tonality. As a result of this the Locrian mode was not used, and no authentic examples exist.

Here we have the modes:

Ionian (major)	C, D, E, F, G, A, B, C
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Dorian	D, E, F, G, A, B, C, D
Phrygian	E, F, G, A, B, C, D, E
Lydian	F, G, A, B, C, D, E, F
Mixolydian	G, A, B, C, D, E, F, G
Aeolian (minor)	A, B, C, D, E, F, G, A
Locrian	B, D, C, E, F, G, A, B

!Task! Learn the Dorian, Phrygian, Mixolydian and Aeolian modes by heart.

Chapter 6

The diatonic scales

The major scale has come to be the accepted main carrier of tonality, perhaps because this mode represents the strongest striving towards the octave without sacrificing the perfect 4th or 5th which are so vital to the experience of the harmonies of Dominant and Subdominant.

In the English music-theory the notes of the major scale are named as follows.

1. the Tonic, 2. the Supertonic, 3. the Mediant, 4. the Subdominant,
5. the Dominant, 6. the Submediant, 7. leading note, 8. Octave.

The major scale has been looked at already and much can be gleaned from this two fold structure. The first tetrachord unfolds away from the prime and creates a space that relates strongly to the prime (*the source of life and movement*), which can be experienced to have a gravitational effect on the other notes. This first tetrachord can be denoted as the space of the *personal self*.

The upper tetrachord starts on the fifth and extends upwards towards the octave (the goal of our striving). The octave has the power of levity, which is experienced from the fifth upwards! (This can explain the enigmatic indication to skip on the spot in tone-eurhythmy on each note from the fifth to the octave.) This upper tetrachord can be called *super-personal* striving towards a future aim.

The minor scale, however, has two versions - the Harmonic minor and the Melodic minor scale.

The Harmonic Minor scale gets its name from the fact that it has a raised 7th degree of the scale thus making this note a leading note. This note gives the dominant its full driving-force, whereas the Subdominant is in minor rendering it with its full potency. So the notes in A minor are A, B, C, D, E, F, G#, A. This alteration of the Aeolian mode brings with it an awkward interval between the 6th and 7th degrees of the scale, it being an augmented 2nd.

The Melodic Minor scale is altered to a greater extent which allows for a greater variety of harmonies based on the notes of the scale. The ascending melodic minor scale raises the 6th and the 7th degree of the scale and the descending scale is identical to the Aeolian scale with minor 6th and 7th degrees. This means that the lower tetrachord is constant and is the minor variation, whereas the higher tetrachord ascending is the major variation, and the descending through the higher tetrachord is the Phrygian (*'Tragedy to triumph'*) variation. From A the sequence goes as follows

A, B, C, D, E, F#, G#, A. ascending
 A, G, F, E, D, C, B, A. descending.

!Task! Learn to sing the harmonic and melodic minor scales ascending and descending.

Chapter 7

The triads (the harmonies within the scale)

The triad is the technical term for a chord/harmony which has a maximum of 3 different notes. Chords can have numerous notes and is a less specific term. The triad consists of a perfect 5th with a third within. This creates two thirds to be experienced, a lower primary third and an upper secondary third. In a major triad the lower primary third is major and in a minor triad the lower primary third is minor. The triads unfold on the degrees of the major scale and are named in the following way.

Tonic triad	Major		C, E, G,
Supertonic triad	Minor	Subdominant parallel	D, F, A,
Mediant triad	Minor	Dominant parallel	E, G, B,
Subdominant triad	Major		F, A, C,
Dominant triad	Major		G, B, D,
Submediant triad	Minor	Tonic parallel	A, C, E,
Leading note triad	diminished		B, D, F,

As we can see there are 3 major and 3 minor triads as well as a diminished triad. This diminished triad we will leave for the time being, and only describe by saying that this triad in combination with the Dominant becomes what is known as the Dominant 7th which is a very important and common harmony.

In order to understand the underlying relationships between the triads of the major scale we will change the name of the three minor triads and name them as parallels of the three major chords with which they in turn have two notes in common.

The three major chords are adjacent to each other in the circle of fifths. Subdominant, Tonic and Dominant are a 'cadencial group' where the Tonic is the centre. The same situation occurs around the tonic parallel and the Subdom. Parallel, and Dom.Parallel.are subsequently above and below the tonic. The two 'cadencial groups' are thus similar in their structure.

The Subdominant has its fifth in common with the root of the Tonic, which in turn shares its fifth with the root of the Dominant.

In turn the Subdominant parallel shares its fifth with the root of the Tonic parallel, and the fifth of the tonic parallel is shared with the root of the Dominant Parallel.

The Tonic triad shares its lower third in common with the upper secondary third of the Tonic parallel.

The Subdominant shares its lower primary third in common with the upper secondary third of the Subdominant parallel.

The Dominant shares its lower primary third in common with the upper secondary third of the Dominant parallel.

The role of the Tonic is to provide a tonal centre.

The role of the Subdominant is to draw us away from the tonal centre.

The role of the Dominant is to bring us back to the Tonic.

Hence in the harmonic minor scale we have the raised 7th degree which allows for a true dominant which can thereby fulfil the function outlined above.

Further chapters to come:

Chapter 7

Beginnings and Endings (cadences)

Chapter 8

Pentatonic modes

Chapter 8

The organisation of beat (2s and 3s)

Chapter 9

The upbeat and the downbeat

Chapter 10

The dotted rhythm and the lilting rhythm.