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Chapter 10: First Inversions of Primary Triads

10.1 Definition and Notation

We know that the first inversion of a triad is called a sixth chord. The notation for a sixth chord is to add a number 6 below the functional marking, for example, T_6 , S_6 , D_6

10.2 Doubling and Spacing of Sixth Chord

First inversions of primary triads can double the root or the fifth. It is best to avoid doubling the third, though it can be done under certain conditions (see Section 9). The spacing of sixth chords can be classified into three types: close, open, and mixed. As the name suggests, in a mixed spacing, one pair of voices in the upper voices forms a close spacing (unison or fourth), while the other pair forms an open spacing (fifth or octave).

Example 10-117

Mixed Spacing

The musical notation shows five measures of C Major triads in first inversion (D6) and second inversion (T6, S6). The notation is in 2/4 time, with a treble and bass clef. The first measure is labeled 'C Major' and shows a D6 chord with a close spacing of 4 between the upper voices and an open spacing of 5 between the lower voices. The subsequent measures show D6, T6, S6, and S6 chords, each with a close spacing of 4 or 5 and an open spacing of 5 or 1.

10.3 Application of the Sixth Chord

The sixth chord is not as stable as the original triad in terms of its sound, so it is mainly used in the middle of the structure to make the statement more fluent. Generally speaking, any termination used to end a phrase or section does not use the sixth chord as the ending chord.

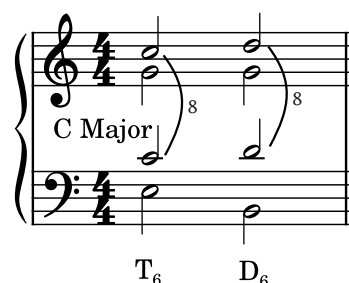
If the sixth chord is placed before the ending chord of a structure, it will turn the original authentic cadence, plagal cadence, or perfect cadence into an imperfect cadence. Therefore, it is best used in the beginning of the structure (such as the first phrase).

10.4 Voice Leading: Parallel Octaves (Unisons)

Due to the greater freedom in doubling and spacing the tones of the sixth chord, its potential connections with both third and sixth chords become more diverse.

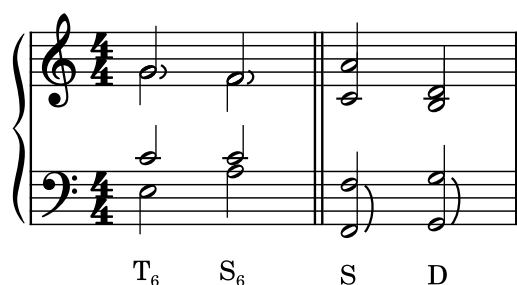
In the voice leading, some new relationships and characteristics have also appeared as a result. As follows:

Example 10-118



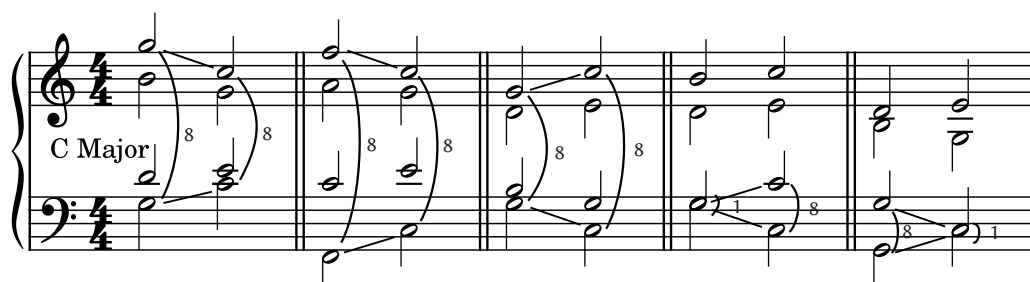
If we look at each voice individually, it seems that each voice is proceeding correctly, following all the rules of voice leading. There are no problems with the doubling or spacing of the two chords. However if the bass, alto, soprano voices each have their own independent voice leading here, the tenor voice is repeating the soprano voice one octave lower. This overlap is caused by the parallel octave (or unison) between the two voices. Parallel octaves (or unisons) destroy the independence of voice leading, so they are prohibited in four-part harmony. Parallel octaves (or unisons) are not allowed between any two voices.

Example 10-119



Reversed octaves, whether from unison to octave or from octave to unison, are also prohibited.^①

Example 10-120



^① The most common exceptions will be discussed later.

Do not confuse parallel octaves with octave doublings within a single voice. In four-part harmony, each voice has its own independent line of motion. Any parallel octaves that occur are the result of poor voice leading and are artistically unjustified. On the other hand, octave doublings deliberately woven by the composer within a single part serve to reinforce that voice.

The use of octave doublings to reinforce one or two voices is a very common technique in four-part harmony. The following example clearly illustrates how octaves can be "added" to the melody and bass:

Example 10-121

Allegro un poco maestoso

舒曼《升f小调钢琴奏鸣曲》作品11末乐章

The musical score for Example 10-121 is presented in two systems. The top system shows a piano accompaniment in F# minor, 3/4 time, with a tempo marking of 'Allegro un poco maestoso'. The piano part consists of a treble and bass staff. The bottom system shows a four-part harmony formula, with a label 'Four-part Harmony Formula of This Example' pointing to the first two measures. The four-part harmony is written in the same key and time signature, with a treble and bass staff. The piano part in the top system features a melody in the treble staff and a bass line in the bass staff. The four-part harmony in the bottom system shows a similar structure, with a melody in the treble staff and a bass line in the bass staff. The piano part in the top system is marked 'f minor'.

Example 10-122

塔涅耶夫《约安·达马斯金》第三乐章

10.5 Parallel Fifths

When connecting a triad and a sixth chord (and in other cases as well), another forbidden progression, parallel fifths and contrary fifths, may occur (if not careful). Parallel fifths are caused by the root and fifth of a chord (triad) proceeding to the root and fifth of another chord in the same pair of voices: ②

Example 10-123

Example 10-124

② Parallel fifths have been gradually disappearing from compositional practice since the 17th century due to their hollow sound. However, there are still cases in some musical works where parallel fifths are intentionally used to express a certain idea of the composer.

穆索尔斯基《特列帕克舞曲》

The musical score is in 2/4 time, key of d minor. It consists of two systems. The first system has a grand staff (treble and bass clef) with a piano (*pp*) dynamic. The second system has a grand staff with a treble clef and a single bass line. The text "four-part harmony formula" is written between the two systems. The score shows a sequence of chords connected by dashed lines, indicating a harmonic progression.

Example 10-125

Andantino mosso

普契尼《艺术家的生涯》第三幕

The musical score is in 2/4 time, key of C Major. It consists of a single system with a grand staff (treble and bass clef). The tempo is marked "Andantino mosso". The score shows a sequence of chords connected by dashed lines, indicating a harmonic progression.

10.6 Connection of Sixth Chords with Triads of Fourth or Fifth Relationship

The connection of sixth chords with triads of fourth or fifth relationship uses the harmonic connection method, and the voices proceed smoothly without leaps:

Example 10-126

The musical score is in 2/4 time, key of C Major. It consists of a single system with a grand staff (treble and bass clef). The tempo is marked "C Major". The score shows a sequence of chords connected by dashed lines, indicating a harmonic progression. Below the score, the chords are labeled: T, D₆, T, S₆, T₆, D, T₆, S, D₆, T, S₆, T.

Example 10-127

Allegro con spirto 格林卡《鲁斯兰与柳德米拉》第二幕

D₆ T T₆ D

10.7 Connection of Sixth Chords with Triads of Second Relationship

When S₆—D is connected, regardless of whether the root or fifth of the first chord is doubled, all voices must proceed smoothly.

Example 10-128

S₆ D S₆ D S₆ D S₆ D S₆ D

When S—D₆ is connected, the bass should descend by a diminished fifth rather than ascend by an augmented fourth. The bass should make an upward movement in the opposite direction after the diminished fifth leap. This can make the voice leading more natural. It is unnatural for the bass to continue in the same direction after making an augmented fourth leap upward, so it should be avoided when harmonizing a melody:

Example 10-129

correct Progression in bassline incorrect

S D₆ T S D₆ T

Example 10-130

C Major

S D₆ S D₆ S D₆ S D₆ S D₆

Example 10-131

Andante

里姆斯基-科萨科夫《萨特阔》

bE Major

S D₆

In the S–D₆ progression, if the subdominant chord place the fifth tone on soprano position, then the sixth chord of the dominant chord must repeat the fifth to avoid parallel fifths:

Example 10-132

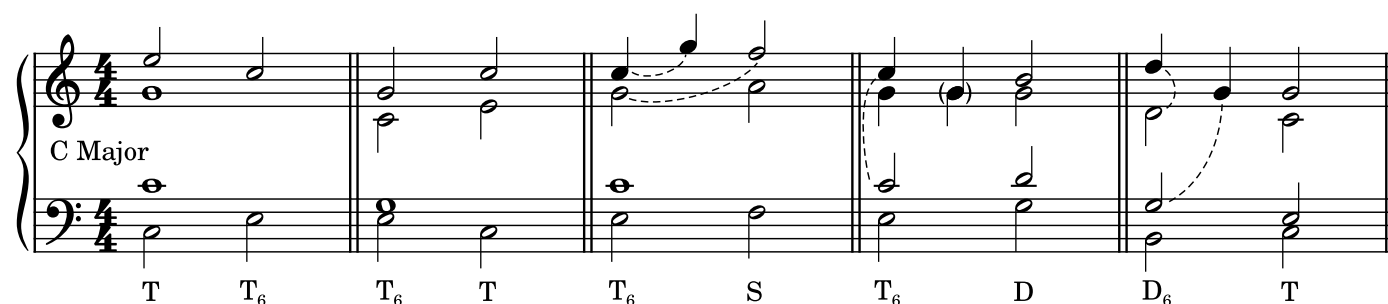
C Major

S D₆ T

10.8 Transition

Another form of chord transition is the connection of a triad and a sixth chord (or a sixth chord and a triad) of the same function (e.g., T–T₆, D–D₆). The bass moves from the root to the third tone (or vice versa), while one of the upper voices (for example, the soprano) moves relatively from the third to the root (or vice versa). The sixth chord can also transit itself (without the participation of the root-position triad) by changing the soprano position, the spacing, or the repeated tone:

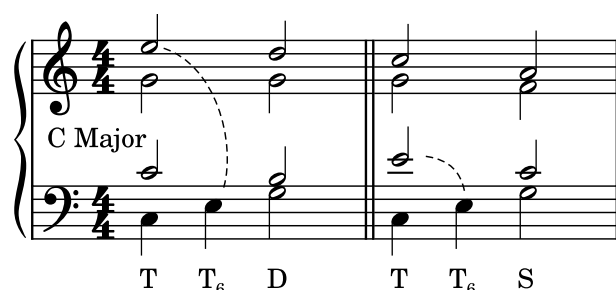
Example 10-133



10.9 Repeating the Third Tone of the Sixth Chord

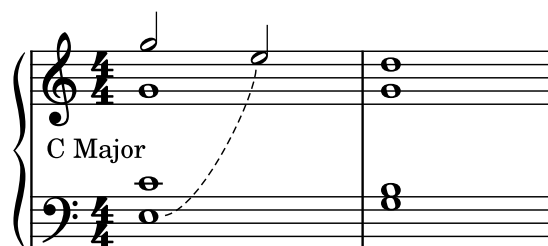
When the sixth chord follows its own triad (often with the upper voices remaining stationary), the third tone of the sixth chord can be repeated.

Example 10-134



Sometimes, the third tone of the sixth chord can also be repeated when a sixth chord itself is transposed (see example 10-127).

Example 10-135



In both cases, it is crucial to ensure that the independence of voice leading and to avoid the formation of parallel octaves resulting from the repetition of the third tone.

10.10 The Bassline

The application of sixth chords has significantly enriched and diversified the melodic line of the bass, which is second only to the soprano part in importance. Therefore, it is necessary to pay attention to the melodic line of the bass when harmonizing. To this end, the following should be done:

- Alternate between T, S, and D chords and their sixth chords.
- To meet the needs of cadence, reduce the use of root position triads.
- Avoid simultaneous leaps in the soprano and bass.
- In the second phrase, the root position tonic triad should be used only at the beginning and end of the phrase whenever possible.
- Have a comprehensive layout when harmonizing (this has been discussed earlier).

Examples of harmonizing:

Example 10-136

Example 10-136 is a musical score for a piano accompaniment. The score is in 3/4 time and the key signature is one flat (Bb). The melody is in the treble clef, and the accompaniment is in the bass clef. The chords are labeled below the bass staff: t, D₆, t, S₆, D, t, —, S₆, t₆, D, S, —, D₆, t, S, t₆, —, D, t.