

Some remarks on the analysis of classical music

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Cadences

A cadence is a harmonic formula used to end a musical phrase. We distinguish:

- the authentic cadence: ends with V - I (dominant going to tonic); two subtypes:
 - the perfect authentic cadence (PAC): the melody ends on the root note of the scale
 - the imperfect authentic cadence (IAC): the melody ends on the third or fifth note of the scale

The image shows two systems of musical notation for Mozart's piano sonata in C major, K. 330, first movement. The first system (measures 5-8) shows a phrase ending with an imperfect authentic cadence (IAC). The second system (measures 9-12) shows a phrase ending with a perfect authentic cadence (PAC). Harmonic analysis labels are provided below the notes: I6/4, V, 7, and I for the first system; I6/4, V7, and I for the second system. The IAC and PAC are boxed.

Mozart, piano sonata in C major, K. 330, first movement

- the half cadence: ends on V

The image shows a system of musical notation for Mozart's piano sonata in D major, K. 576, first movement, marked 'Allegro'. The phrase ends with a half cadence (HC) on the dominant (V). Harmonic analysis labels are provided below the notes: II6, I6/4, and V. The HC is boxed.

Mozart, piano sonata in D major, K. 576, first movement

- the deceptive cadence: suggests an authentic cadence, but doesn't bring the final tonic; often V - VI

18

dim.

p

V 7 VI

DC

Chopin, prelude in E minor, opus 28 no. 4

- the plagal cadence: ends with subdominant going to tonic, e.g.: IV - I, II6/5 - I, etc.

p

IV I

PC

Illustration 1: Mozart, violin sonata in G major, K. 301, first movement

Extensions

An extension is a segment of music that could theoretically be removed without affecting any crucial structural information in the piece as a whole. We distinguish:

- the interpolation: used in the middle of a musical process that still needs to be ended with a cadence
- the post-cadential extension: used directly after a cadence, as a strong confirmation of the last chord of that cadence

An example of an interpolation:

shortened version:

Mozart, piano sonata in Eb major, K. 282, second movement

An example of a post-cadential extension:

Mozart, piano sonata in C major, K. 545, first movement

Ornamental notes

An ornamental note is a note that is not part of the chord that sounds at the moment the note is heard, i.e. it is a non-chord tone. We distinguish:

- the passing tone: between two or more different chord tones
- the neighbour tone: between two same chord tones
- the anticipation: belongs to the next chord, played early
- the suspension: delays a chord tone, which is reached stepwise; if the suspension is held over from the previous chord, it is called prepared, otherwise unprepared.

The passing tone, neighbour tone, and anticipation come on a relatively weak moment. The suspension comes on a relatively strong moment.

Example:

The musical example is in 4/4 time, D major. The melody consists of the following notes: D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C#5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter). The bass line consists of: D3 (half), G2 (half), D3 (half), G2 (half), D3 (half), G2 (half), D3 (half), G2 (half). Chord symbols are placed below the staff: I (under D4), V7 (under G4), I (under D4), II6 (under G4), and I (under D4). Ornamental notes are labeled: 'p' under E4, 'n' under F#4, 'ps' under B4, 'p' under C#5, 'a' under B4, and 'us' under D4.

(p = passing tone; n = neighbour tone; a = anticipation; ps = prepared suspension; up = unprepared suspension)

Special cases:

- the accented passing tone: a passing tone on a relatively strong moment (sometimes resembles the suspension)
- the incomplete neighbour tone: a neighbour tone that is approached or left freely (i.e. with a skip instead of a step)

Example:

The musical example is in 4/4 time, D major. The melody consists of the following notes: D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C#5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter). The bass line consists of: D3 (half), G2 (half), D3 (half), G2 (half), D3 (half), G2 (half), D3 (half), G2 (half). Chord symbols are placed below the staff: I (under D4), V7 (under G4), and I (under D4). Ornamental notes are labeled: 'p' under E4, 'p' under F#4, 'ap' under G4, 'ap' under A4, and 'in' under B4.

(p = passing tone; ap = accented passing tone; in = incomplete neighbour tone)

Sonata form

Classical pieces in sonata form usually follow the following formal and tonal plan:

Formal sections		tonal plan in major mode sonatas	tonal plan in minor mode sonatas
Exposition (usually repeated)	First theme (group)	home key	home key
	Transition	modulates to dominant key (stays sometimes in home key)	modulates to relative major key (sometimes to dominant key)
	Second theme (group)	dominant key	relative major key (sometimes dominant key)
Development		not fixed (often relative minor key)	not fixed
Recapitulation	First theme (group)	home key	home key
	Transition	home key	home key
	Second theme (group)	home key	home key (sometimes parallel major key)

Development and recapitulation are sometimes repeated together. More details are discussed below.

Introduction

The exposition is sometimes preceded by a slow introduction. A well-known example can be found in the first movement of Beethoven's first symphony.

Note that an introduction always has a slow tempo indication, after which the exposition (and development and recapitulation) are fast. If such a tempo organisation is absent, there is no introduction and the piece starts directly with the exposition and the first theme.

First/second theme (group)

A theme is a segment of music in one key which is closed with a cadence. It often contains a recognisable melody, but that need not be the case.

When multiple themes are presented in direct succession, and all are in the same key, then all themes together are called a theme group. Theme groups are very common in the second theme area. In such a case, we can distinguish for instance a theme 2A, theme 2B, etc., all of which are ended with a cadence.

Closing section

A theme can be followed by a closing section. A closing section is often short, following simple harmonic formulas. Often, a closing section is no more than a post-cadential extension. Closing sections can be found very often after a second theme group. They are more rare after a first theme group.

Transition

The transition is found between the first and second theme groups, and has the function to bring the music to the key of the second theme. The transition ends with a half cadence, to create anticipation for the new theme. This half cadence is usually followed by a post-cadential extension (sometimes called a dominant lock). There is often a caesura at the end of the transition; this is called the medial caesura. Note that, often, the half cadence and the medial caesura are not at exactly the same spot.

For example: the transition of the first movement of Mozart's piano sonata K. 454 features a half cadence, followed by a post-cadential extension, and finally the medial caesura:

There are two types of transitions: the modulating and the non-modulating transition. The modulating transition moves to the key of the second theme and ends with a half cadence in that key. The non-modulating transition stays in the home key and ends with a half cadence there, after which the second theme reinterprets the final chord of the transition, which was V in the home key, as I in the dominant key.

For example: in a sonata in C major, a modulating transition would end on a D major chord (half cadence in the dominant key of G major); a non-modulating transition would end on a G major chord (half cadence in the home key of C major), after which this chord is reinterpreted as I of G major. The Mozart example above is from a non-modulating transition.

The transition in the recapitulation usually differs from the one in the exposition, since there is no need to modulate in the recapitulation. Theoretically speaking, the transition could be removed altogether from the recapitulation, but usually it is retained. It often features chromatic harmony to compensate for the lack of a real modulation.

Retransition

A retransition is a relatively short, modulating segment that brings the music back to a previously heard theme. It is sometimes found after the second theme group, to smoothen the return to the beginning of the piece:

1st theme - transition - 2nd theme - retransition - 1st theme - transition - 2nd theme - development - etc.

Development

The development usually develops motives from the exposition. In major mode sonatas, it often features the relative minor key. It is typically the most dramatic moment in the whole movement. Like the transition, it usually ends with a half cadence, followed by a post-cadential extension.

Recapitulation

The recapitulation brings back the themes from the exposition. For the analyst, the most important aspect of the recapitulation is how it differs from the exposition. Since the exposition contains a modulation while the recapitulation stays in the home key, the composer must make sure to avoid a modulation. For this reason, the transition in the recapitulation is often different from the one in the exposition, but sometimes the themes are also changed or varied upon. Such changes tend to touch upon the subdominant key, but that need not be the case.

Coda

The recapitulation is sometimes followed by a coda. A coda is strictly speaking not necessary to close the structure of the music. Note that coda and closing section are not the same thing. Often, the exposition and recapitulation end with a closing section. A coda, on the other hand, can only be found at the very end of the piece, and may follow a closing section which is still part of the recapitulation.

Other forms

Besides sonata form, there are several other important classical form types:

- Ternary form
- Sonata form without development
- Sonata-rondo
- Concerto form

The last three resemble sonata form in some ways. The forms are discussed in more detail below.

Ternary form

Ternary form, or ABA form, is the simplest form type. It contains two themes, labeled A and B, in two different keys. The label ABA is somewhat of an oversimplification, though, since there is often a transition between the first A and the B section, and/or a retransition between the B and the second A section. A (separate) coda can sometimes be found at the end.

Sonata form without development

The sonata form without development differs from the regular sonata form in that 1) it contains no development, and 2) the exposition is not repeated. Instead of a development, a short retransition is usually used that modulates back to the home key. The overall formal plan then becomes:

first theme - transition - second theme - retransition - first theme - transition - second theme [- coda]

This form is mostly found in slow movements, and is sometimes also called a binary form, since it follows an ABAB pattern, in which A corresponds to the first theme, and B to the second theme. The tonal plan is the same as in sonata form.

Sonata-rondo

A sonata-rondo is a kind of rondo form that also resembles sonata form. A rondo form consists of a recurring refrain (a main theme) that is alternated by couplets (also called episodes), as in the scheme ABACA.

The sonata-rondo follows the scheme ABACABA, which corresponds to sonata form as follows:

rondo labels:	A	B	A	C	A	B	A
sonata labels:	1st theme	2nd theme			1st theme	2nd theme	
	Exposition			Development	Recapitulation		Coda

The tonal plan is as in regular sonata form, with the second theme in the dominant key in the exposition (or, in case of a minor mode sonata, in the relative major key), and in the home key in the recapitulation. All occurrences of A are in the home key, and the C section usually brings one or more other keys. Of course, the second occurrence of the A section (and the return to the home key that comes with it) does not have a counterpart in sonata form.

Note that in most cases there will be transitions and retransitions between the parts of the form, which are not included in the above overview.

Concerto form

Concerto form is the standard form used in first movements of classical solo concertos. It is a derivation of the baroque ritornello form, but also resembles sonata form. (A ritornello form features a refrain, called the

ritornello (little return), which is played by the orchestra, and alternated by passages featuring the soloist(s).)

The overview below shows the standard formal plan of a concerto form, and indicates how this form corresponds to ritornello form (on the left of the overview) and to sonata form (on the right).

Ritornello form	Concerto form	Sonata form
Ritornello	First theme group (orchestra)	"Orchestra exposition"
	Transition (orchestra)	
	Second theme group (orchestra)	
Solo section	First theme group (soloist + orchestra)	"Solo exposition"
	Transition (soloist + orchestra)	
	Second theme group (soloist + orchestra)	
Ritornello	Closing section (orchestra)	
Solo section	Development (soloist + orchestra)	Development
	First theme group (soloist + orchestra)	Recapitulation
	Transition (soloist + orchestra)	
	Second theme group (soloist + orchestra)	
Ritornello	Closing section (orchestra), including cadenza (soloist)	

The orchestra exposition does not modulate, and presents two themes in the main key. The remainder of the form (from the first theme group for the soloist and the orchestra together onward) then follows the tonal plan of regular sonata form.

The solo exposition is usually longer than the orchestra exposition, and typically includes new themes that were not heard in the orchestra exposition. The second theme group played by the soloist is usually concluded with a bravura theme, in which the soloist displays their virtuosity. The bravura theme usually ends with a trill-cadence (a stretched-out PAC with a trill for the soloist), after which the closing section (the ritornello) sets in, with the orchestra playing tutti.