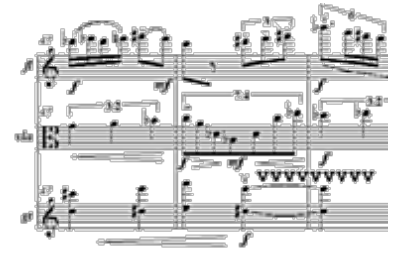


# Bach's Chaconne in D minor for solo violin

## An application through analysis

### Music Theory and Performance

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## How Analysis Reveals Music Beyond the Notes

Should music theory be applied to benefit a musical performance? And if it is not, does that leave something lacking in a performance? What is the relationship between analysis and interpretation? If there is more to music than just what is visible on a page, how do we find the invisible music within the score? And, if this music is there, isn't it the responsibility of the performer to bring it out in a performance? What does it say about a performance (and performer) if it is not?

These questions are best addressed through an example, and the example chosen is J.S. Bach's *Chaconne* from the *Sonata* (or *Partita*) in D minor for solo violin.

If theory applied through analysis is not the basis for interpretation, then what is? Reliance solely on personal taste for an interpretation has long been known to be inappropriate. Differing styles and periods of music require different interpretations, and certainly research into historical performance practices can help. But, using purely personal taste as a basis for interpretation reveals more about the performer than it does about the music. Oppositely, a strictly accurate, or mechanical performance abdicates any interpretive responsibility. Both are poor performance decisions.

To understand the requirements for an interpretation that is sensitive to musical content, one must rely primarily upon what is in the music itself. What is there was created by the composer for a purpose. So, analysis is essential, and analysis reveals structural relations. Only these relationships can reveal how the music should be performed, for without them there would be nothing but unorganized notes.

A composer conveys something to the performer even with the title of a composition, and interestingly many of these titles, especially in instrumental music, designate abstract formal structures: sonata, rondo, variations, passacaglia, concerto, symphony, etc. Performers who ignore or omit an understanding of these structures in their performance deprive the music, and their own performance, of an important dimension. If it's there, it deserves to be made audible, and that is, after all, the primary mission of a performer.

## Form

The fifth and last movement of the second solo violin sonata, or *partita*, Bach titled a *chaconne*. Titles like this are often taken for granted by performers. Why would a composer choose to name a piece this way unless it was meant to convey something important about its realization, its performance? It certainly was not addressed to a non-technical audience. The chaconne is an abstract musical structure and its rubric needs to be understood. Bach had something very specific in mind, but surprisingly many performers have, at best, only a vague idea about the nature of a chaconne. Bach's chaconne, as found in and defined by his own music, is as follows:

- The chaconne is a special type of continuous Theme and Variations where a fairly short subject (normally 4 measures) is relentlessly repeated and varied.
- The subject or theme occurs either as a repeating melodic bass line or as a harmonic progression.
- It is a slow dance in simple triple meter, often in a minor key, using the rhythm of a Sarabande, with an agogic accent on the second beat.

With **A** representing the theme, the form of the chaconne can be diagrammed:

**A A1 A2 A3 A4 A5 . . . . . A**

So, the form consists of a thematic statement and a series of variations of the theme, identical in length, and continuous (without a break). A subject, **S**, that is the essence of the theme is omnipresent in one form or another. Each of the numbers above represents a variation. Notice the repeat of the theme at the end.

The most fundamental questions about the D minor chaconne are: [1] exactly what and where are the subject and theme?, [2] How long are they?, [3] How is the subject treated in the variations?, [4] Is the standard form strictly observed? To my surprise, performers of the chaconne are often not able to answer these questions (neither are students after having heard it performed.)

### Ex A. Theme

1 2 3 4 5

d: i ii<sup>6</sup><sub>4</sub> V<sup>6</sup><sub>5</sub> i VI iv i vii<sup>o</sup> i

The theme occurs at the very beginning in the first four measures, and recurs in the form of a subject every four measures throughout the composition. Although the basic harmonic scheme is the same throughout, there are many changes in the variations, mostly by the use of thematic transformations and chord substitutions.

This piece is in D minor and simple triple time. Agogic accents fall on the second beat, the prescribed Sarabande rhythm. No tempo is indicated, but it is clear that due to the harmonic rhythm, the tempo must be fairly slow.

The subject consists of a well-known four-measure bass line that descends stepwise from tonic to dominant. This basso figure was known as the *Romanesca* in the Renaissance and occurs in music today, even in popular styles, as a ground for a set of variations.

### Ex B. The Subject (S)

So, the subject is one note per bar and four measures long descending from tonic to dominant. However, it does not occur in a pure form at the outset. Notice that the subject conforms to the descending melodic minor and recurs in that form later on, e.g., in (57-60) as the bass notes of each measure.

S is altered at the beginning, because the passage is harmonic; i.e., the violin plays chords. Thus, the harmonic minor is used. If the harmonic minor were played melodically, the subject would become D C# Bb A, and an augmented second would result. In order to avoid this forbidden interval, Bach circumvents it as D C# D Bb A, returning to D before descending to Bb, an interesting evasive maneuver (see Ex A). The subject occurs this way, every four measures, until (49), where the lines become more melodic (linear). Exceptions to this *harmonic bass* occur when there is a chromatic descent, as in the two variations of (33-40).

37

In (41-44) the subject temporarily shifts to the soprano, chromatically descending.

41

In (45-48) it's back in the bass. From this point there is an alternation of S between bass and soprano for a while.

S repeats relentlessly throughout the entire chaconne, and by doing so one would think that it would get tiring. That it does

not is a testament to the skill that Bach wields in the composition, specifically the techniques of variation and the methods of hiding the subject, even though it will be shown to be ubiquitous.

In (49) S shifts again to the soprano, occurring off the beat, but accentuated, nevertheless, by the leaps that precede each subject-note. From this point the subject shown in Ex B is used in the primarily linear texture. In (53) the subject goes back into the bass, but still off-beat. In this variation and the next (57-60) it consists of the bass notes of each measure.



In (61-64) the bass descends chromatically, and in (65-68) it returns to the diatonic form, which continues until (89).

In measure 89, arpeggiated chords return, and the *harmonic bass* resumes. Bach wrote the arpeggiations as block chords, as in a Schenkerian reduction. The arpeggios are to be improvised. In the next variation (93), Bach made the bass melodic, and the diatonic form resumes. S switches to the soprano in (97) and back to the bass in var 26 (105).



It picks up some alto notes in var 27 (109), finishing in the bass. S is in the soprano once more in var 28 (113), descending chromatically and resumes in the bass in var 29 (117) in its normal form with diminutions.

The Theme returns in (126). This marks a half way point in the form. The next variation, var 31(129) is the last one in a minor key for a while, because var 32 (132) changes to D major, and the music remains in major until (209). The major key variations follow the same pattern of bass variations that occurred in minor up to this time. S switches to an upper voice in (169), but resumes in the bass in var 42, (173). Var 47 (194) contains an omission of C from S, which should occur in (194).



The minor key resumes in var 51 (209), and stays until the end. A new variation commences every four measures, just as before. There is no break from this pattern. The Theme returns in (249) and finishes the piece with one extra cadential variation in (253-257).

Thus, the subject is ubiquitous throughout the composition. The work has an overall symmetrical binary structure:

|| Theme | 30 variations || Theme | 30 variations ||

It then ends with || Theme, cadential variation ||.

It is interesting that the 30 variation pattern used here was also used for the Goldberg Variations. (I don't know the significance of the number 30, but it seems unlikely that this is a coincidence.)

## Variation Techniques

Bach was fond of using the symmetric thematic transformations of transposition, inversion, retrograde, and retrograde inversion. These are normally supplemented with diminution, augmentation, interpolation, fragmentation, octave displacements, and elision operations. All of these are found in the chaconne.

Other parts of the music are generated using these operations on S. The following are some examples of time diminution (faster notes) and transposition:

1. Subject 2.50,150,155 3.36,149,153 4.43 5.46 6.229-230

t-dim  
(time diminution)

transposition:  
t-dim:

Measure numbers are shown in these examples. Ubiquitous instances of similar diminutions occur throughout the composition.

In some other cases S is not just diminished, but transformed by using a larger interval between the first two notes, usually a perfect fourth (the outline interval of S) (exs 7-8) or by turning S's direction (U) on one of the notes (exs 7,9). Interval augmentation is also used (exs 10-11).

7. 34,37-39 8.49,43,40,51 9.40-41 10.38 11.41

↑4

↓4  
cpt (implied counterpoint)

U (turn)

i-aug  
(intervals augmented)

↓4

S is further diminished, and a note is added (interpolation) in ex 12. Other examples of interval augmentation are shown in exs 13-14. Ex 15 shows an elision which is the inverted interval of S's outline, while ex 16 has an octave displacement and turns. Ex 17 extracts just the rhythm of S.

12. 65-67 13.153-155 14.160 15.57-59 16.165,166-167 17.169-172

add  
(interpolation)

i-aug

i-aug

↓5  
eli  
(elision)

↑ <8>  
(inverted & octave displaced)

rhythm

Various fragmentations of S are usually achieved by bisection of S's four notes into two, as shown in the following examples.

18. 2-note fragmentations 19.48

34 35 36 etc etc etc

fra (fragment)

fra add

Inversions are frequent:

21. 41,47,225 22.124 23.28 24.31 25.37,52-56

↑ cpt

↑ cpt

fra

↑ ∩

i-aug ↑

i-aug ↑

Turns, sometimes more than once, and other transformations are also common.

In order to perform what is clearly scored and designed, the performer needs to be aware of these transformations of the basic four-note subject. Not only does S repeat every four bars in implied dotted half notes, but Bach restated and transformed it in many condensed versions, in sixteenth and eighth notes, and the performer should be aware that these segments divide the music into basic motifs, basic statements. Therefore, the whole piece begins to emerge as a multileveled musical fractal, with the same basic shape being reiterated in multifarious forms and sizes.

## Implied Counterpoint

Counterpoint for solo violin? That is exactly what Bach achieved. It is primarily implied counterpoint, or "compound melody". The most obvious example is in var 8 (33).

The phrase marks show how the phrasing is divided. There is a clear allusion to three voices in dialogue, within a single line. The four-note figures are transformations of S, while the two-note figures in the bass are binary fragments answering the soprano voice, s1. The bass figures accrue to form the basic subject, S, descending chromatically. A longer soprano line is created as s2.

A subtler example follows.

Some half notes have been added here to show the location of S, in the soprano. Below this are two other voices, s2 and a1 (alternating slurs), each of which state a variant of S in diminution (S<sup>o</sup>). These alternate in a question/answer dialogue. A bass line moves in parallel tenths with the soprano. Thus, within a single unassuming solo line Bach projects four-part counterpoint.

What looks at times like a simple scale often divides into motivic counterpoint between two voices.

Measure 41 contains an ascending D melodic minor scale, but it is actually two voices, each of which has S<sup>o</sup>/I (subject diminished and inverted). Measure 43 is similar but with S<sup>o</sup> (slurs). Measures 45-46 shows a similar conversation, and 47 has a G melodic minor scale that divides similarly into two voices with S<sup>o</sup>/I .

A variation that looks like two-part counterpoint but is actually six is var 14:

Once again, half notes are inserted to display S as a hidden voice in the bass. The soprano (s1) has two-note fragments of S. An alto (a2) also has two-note fragments. The tenor (t1) has two-note downward fifths, and a second tenor (t2) has a four-note turning figure derived from S. Finally, the bass has the Subject.

The arpeggio variations (89-120) and (201-208) are clear examples of three and four part counterpoint notated as a kind of Schenkerian reduction in the score. There are times, however, when the arpeggios are written out, yet are still four parts.

Here, the arpeggio original is shown followed by a reduction to four parts.

One of the most remarkable variations is number 40.

Here we have as many as seven voices. 1) the subject is shown in half notes in the bass; 2) an alto, a1, has the three repeating As. A soprano, s1, has the first upper slur, a four-note figure, echoing S<sup>o</sup>/I; 3) a second alto, a2, taking the second alto slur; 4) a two-note fragment in another soprano voice, s2; 5) a tenor with a two-note fragment, t1; finally, another soprano, S3, moves in parallel tenths with the bass.

## Performance Suggestions

What does all this have to do with performance? First, it has been shown that the music has dimensions beyond the notes. A computer could play the score more accurately than a human, but a computer performance is far from adequate and would be insensitive to the formal structure, subject transformations, and the implied counterpoint.

The implied counterpoint simulates a conversation among voices. This needs to be evident in a performance; otherwise much of the music will be lost. In many cases this takes the form of a dialogue between voices and needs to be performed in a way that will make the parts conversant.

An awareness of thematic transformations is also important in a performance. Here, the subject is a downward stepwise, four-note line, and downward lines have a different character than their inversions, upward lines. Although this is a general performance characteristic, without a sensitivity to the boundaries of the subject it could not be affected properly. Up lines tend to be questioning, assertive, gathering energy, whereas down lines are answering, gentler, and relaxed. Often, there is a gender association with these motions: ↗ = masculine, and ↘ = feminine, thus varying dialogues are created; ↗ ↘ = masculine/feminine conversation, ↘ ↘ = feminine/feminine conversation, and ↗ ↗ = masculine/masculine conversation.

Augmentations of S (both time and interval types) broaden the subject and therefore should be played with greater breadth and import. Diminutions have the opposite effect. Elisions are abbreviated versions of the subject, yet carry the weight of S. Interpolations are elaborations of S. All these transformations are related to S, and the way that they are related needs to be considered and effected in a performance. The implied dotted-half notes of S, occurring every four measures, can be slightly emphasized dynamically or by agogic accent, although this should be subtle. In some cases, the way Bach sets these notes creates an automatic accent in performance, as in the large leaps to these notes in var 20 (81).

The rhythmic structure of S and its transformations is also an important performance parameter. The many diminutions of S begin off the beat and end on the beat. This takes the form of three "pickup notes" followed by a goal note. Since the pickups are more dynamic, more energetic, they should be slightly more emphasized than the goal note.

A performer needs to understand the composition to be able to project what is inherent in music clearly designed by a composer. This does not mean, however, that breaks in phrasing should be obvious. Obvious breaks will make the performance brittle and predictable. The phrasing and motivic development should be in the mind of the performer, and by being so will be projected into the performance naturally and automatically. In other words, once the designs are heard, they are difficult or impossible to avoid. A performance should not sound contrived or exaggerated, so phrasing should be more apparent in some places than in others; this will provide variety and interest. In many cases the large leaps written by Bach provide automatic changes in phrasing by their sheer physical breaks. Of course, the performer should try a variety of different phrase shadings and decide upon a personal touch. But, if the performer is not aware of the structure of the variations, phrases, and counterpoint, it cannot be expected to come about by itself, i.e., by happenstance.

The Bach violin chaconne is a rich work, with multifarious relationships. It deserves much thought and analysis, which can only add to the richness of its performance.



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