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Corelli's Rhythmic Models: Dance Movements in the Seventeenth and Eighteenth Centuries

by Christopher Wintle

Abstract. The author's paper "Corelli's Tonal Models" of 1982 introduced an approach to Corelli's style from the perspective of pitch using Schenkerian progressions "from the bottom up." The new paper complements this with an account of Corelli's comparable use of rhythmic models that can determine (rather than articulate) the character of the pitch ones. Several dance-based elements are involved: odd-even units, templates, models, pyramids, and profiles; and the interface between pitch and rhythmic models admits extensions, contractions, interpolations, substitutions, and echo effects. The majority of examples come from Corelli's gavottes. But a case study based on the Sarabande from J. S. Bach's fourth French Suite, BWV 815, shows how resourcefully a dislocation between pitch and rhythmic models can be handled. The outcome establishes an "irreducible dialectic" for mainstream classical music between odd-numbered linear progressions and even-numbered rhythmic models.

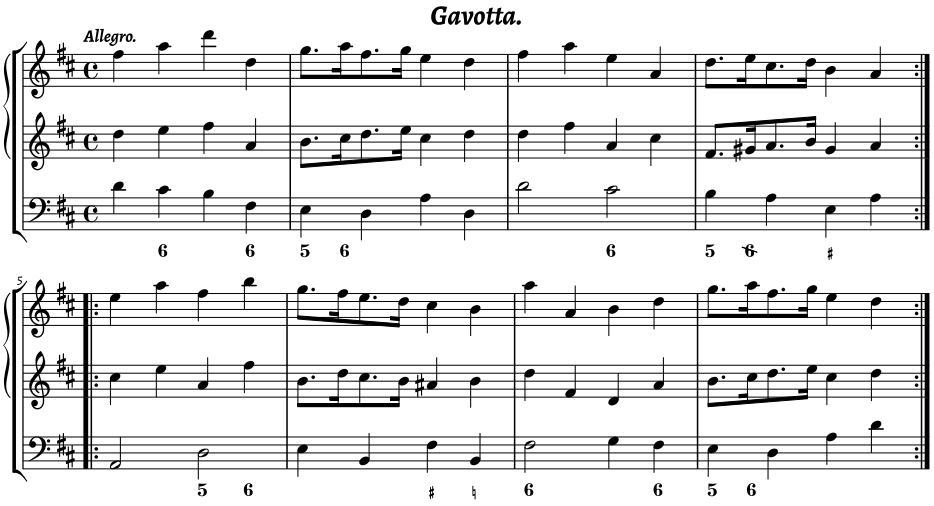
Keywords and phrases: Arcangelo Corelli, trio sonata, gavotte, sarabande, J. S. Bach.

Back in 1982 I wrote a paper on Baroque trio sonatas called "Corelli's Tonal Models."[1] Although it was essentially Schenkerian, it built up movements section by section, showing how concrete shapes were presented and manipulated. Most of these shapes, or "models," took the form of progressions. However, what I did not do was to hypostasize from the outset an *Ursatz*, the overarching authority of which has sometimes struck me as exaggerated; nor did I concur with the kind of crude "monotonality" that overrides the traditional major/relative minor system (and, reciprocally, the minor/relative major one) and defines modulation and its means out of existence. In today's parlance, my approach was resolutely "bottom up." I then showed how these models stood behind Corelli's preludes, dances, and fugal movements. A little later, in 1986, I wrote a study of a prelude from the *Well-Tempered Clavier*, Book 2, by J. S. Bach.[2] Although I began by discussing the surface rhythm of this movement, I concentrated mainly on the differences of rhythm created by the handling of pitch material. In the first part, for instance, an arpeggiation and ascent to the third degree lasting four measures was contracted in the second part into a single measure; other units were comparably expanded.

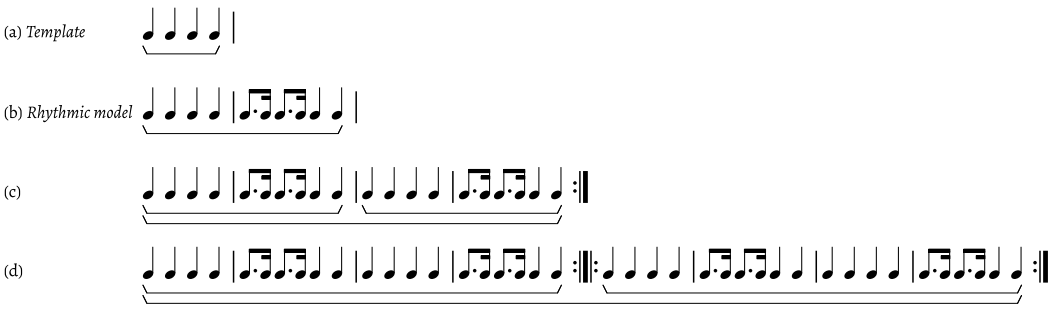
However, in neither study did I address one of the central questions of music from any part of the eighteenth century and beyond: namely, how far the demands of dance rhythms and proportions can *determine* the selection and

[1] Wintle (1982), reprinted in this volume, pp. 31–49. This supplementary essay on the rhythmic models was first given as a paper to the Royal Musical Association on 12 November 2005 at King's College London (UK).

[2] See Wintle (1986).



Example 1. Arcangelo Corelli, Sonate da camera a tre, Op. 2, No. 1 (1685): Gavotta.



Example 2. Rhythmic models for Example 1.

handling of pitch material. Yet it is a burning question. For today we admit multiple starting points for analysis: "holism" is in the ascendant, the single perspective on the wane. So the new agenda is: first the rhythm, then the pitches. This is hardly Schenkerian, of course; yet it is an agenda the music obliges me to adopt. Once again, I shall start with the simplest possible examples. These are drawn from some of the earliest cogent tonal dances, principally Corelli's *gavotta* movements. These appear in the trio sonatas *da camera*, Opp. 2 and 4; as well as in the Violin Sonatas, Op. 5; and the *concerti grossi*, Op. 6. At this stage in its evolution, of course, the *gavotta* was a fast dance in duple time, usually starting on the first beat of the measure, but occasionally introduced by an anacrusis; it was often placed as a last movement but did not necessarily follow on from a *sarabanda*; and it had particular dance steps that are not described here, but which are consistent with the analyses that follow.

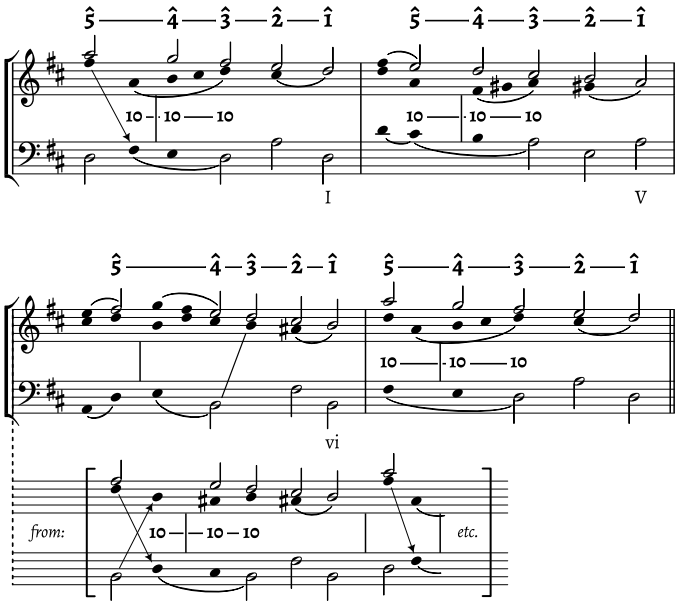
Once I have derived the simple premises from Corelli, I shall move on, as I did in the 1980s, to a case study of a more intricate movement by J. S. Bach, before closing back with Corelli.

1. Rhythmic Templates, Models and Units

We begin with the *gavotta* from Corelli's trio sonata, Op. 2, No. 1, given in Example 1.

Can one imagine a pithier tonal dance than this little allegro? It is cast in simple binary form, so that both parts are of equal length and both are repeated. In this case, each part comprises four measures. Level *a* of Example 2 shows the rhythmic pattern established in m. 1: it comprises four quarter notes that are entirely at one with the pulse and meter. This unit forms a *template* and is repeated with a dotted-note variation in m. 2. These two measures together establish a strong–weak unit or *rhythmic model*, which can also be described as tension–release, subject–predicate, binary pair and so forth. In general, the model can subsume one or more templates (which, as has been said, are simply repeated rhythmic patterns), and is a feature common to countless dance forms. Above all, the model has a clear rhythmic profile: we can tap out its rhythms and remember it independently of pitches.

Level *b* of Example 2 shows how this two-measure rhythmic model acts as a template for the rest of the dance.



Example 3. Tonal models for Example 1.

There are four two-measure units in all, each defined by a distinct close: on I, V, vi, and I. Each unit has a more-or-less identical profile, though there are tiny changes in the bass. The repeated two-measure rhythmic model thus provides the *context* for the tonal events, which are chosen and adapted to fit the available space.

Level *c* shows how the four-measure unit that represents the first part of the *gavotta* becomes the template for the second part, complete with repeats. Level *d* then shows how this eight-measure unit (or sixteen-measure unit if the repeats are included) is itself a complete unit.

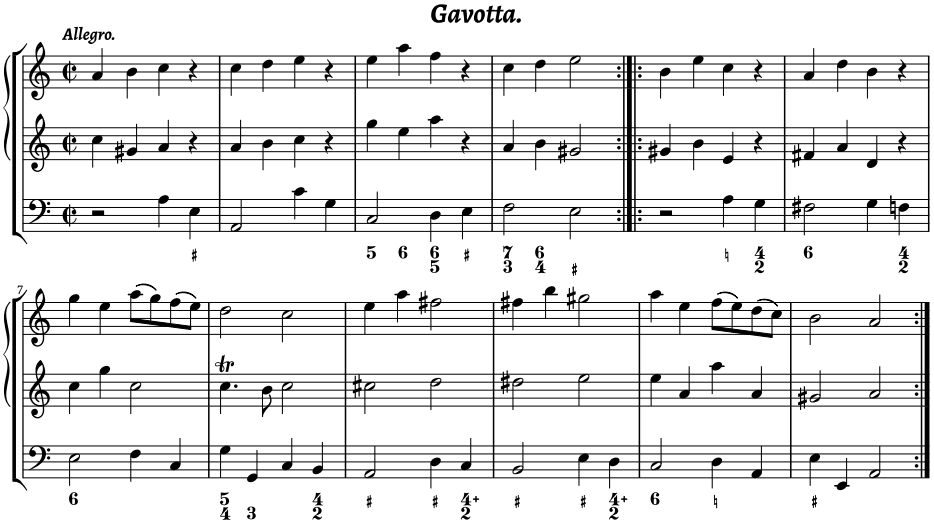
These four levels together describe the time frames that govern the *gavotta*: the accumulation of one-measure, two-measure, and four-measure units into a whole creates, perceptually, a *pyramid* (of a kind). This *principle of the pyramid* dominates thinking about dance forms and dance-based music throughout the eighteenth century and beyond. It is the task of the dance composer to handle, or "play with," such a stack of rhythmic units.

Let us return to Example 1. Example 3 is a representation of the pitches of the piece. These are presented as tonal models of the kind described in my article from 1982. They follow each other as free-standing units; yet "globally" the music does have a hierarchy, in that it begins and ends in the tonic, and the two other intermediate points of closure are measured against it as dominant and relative minor. Nevertheless, this presentation does *not* propose a direct equivalence between rhythmic pyramids and putative tonal ones (as others might). As shown in the example, the second, third, and fourth tonal models have each had to be adapted to link with the preceding model: but the modulatory links all occur within the first (strong) measure of the two-measure rhythmic models.

As we have already noted, the four tonal models fit into their respective two-measure rhythmic models: in other words, there is a broad *congruence* in the *interface* between rhythm and pitch. In other dances this will not always be the case; and how composers coped with the rival demands of rhythm and pitch, especially in the second part of a dance, was as much a concern for them as it is for us, their listeners. But already, the example has yielded a crucial insight. For the rhythmic model lasts eight beats distributed over two measures, whereas in the same space the tonal model has a descending progression through a fifth. The challenge for Corelli is thus to fit five principal pitches into eight beats. Since classical tonal music in general is based on such even-number dance proportions—two measures, four measures, eight measures and so forth—and the principal progressions usually descend through a fifth or a third—odd numbers—Corelli establishes *the irreducible dialectic of main-stream classical music*: the epoch-making need to reconcile the even-numbered proportions of the rhythmic models with the odd-numbered proportions of the tonal models.

2. Playing with Templates, Models and Units

Let us now see a few basic ways in which Corelli handled, or "played with," his rhythmic templates, starting with the *gavotta* from the trio sonata Op. 4, No. 5, shown in Example 4.



Example 4. Arcangelo Corelli, Sonate da camera a tre, Op. 4, No. 5 (1694): Gavotta.

Once again, the first part is in four measures, with a more-or-less exact replication of the opening single-measure template in each measure (equivalent to our previous level *a*). A rest on each fourth beat helps demarcate the template. The (model-defining) strong–weak difference is at the next level (our previous level *b*), between mm. 1 and 2 on the one hand and mm. 3 and 4 on the other. Nevertheless, the variation is only slight, and includes the turning of the last part of m. 4 into a sustained chord.

The second part of the dance, however, is twice as long as the first: that is to say, the *gavotta* is in *expanded binary form* (still with repeats). The eight measures of the second part divide into two four-measure units. The first of these, comprising mm. 5–8, clearly takes as its template mm. 1–4. Only now the last pair of measures, mm. 7–8, is much more pronounced as a counterweight to mm. 5–6 than was the case in the first part of the dance: all three parts are sustained, with added eighth notes. The second unit of the second part, mm. 9 to 12, obviously takes mm. 5–9 as *its* template; only now all four measures are sustained. Over the course of the *gavotta*, the rests have been progressively banished. More still, when we look over all three four-measure units, we see that each unit enriches the previous one (our previous level *c*). This enrichment gives a sense of direction to the whole.

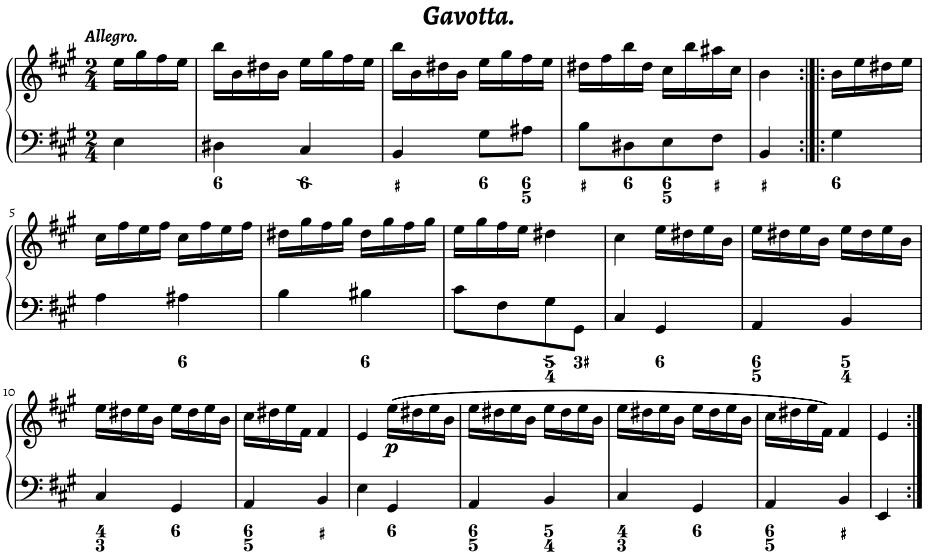
Of course, expansion of the binary dance form allows for greater tonal definition. In this *gavotta*, the first part is built on a bass arpeggiation of a tonic triad: A to C, and then, after a rise through D and E to the Phrygian F, to E. The second part amplifies this: A to the dominant of C and then to C itself; then to D, then to E, and then to a close back in A.

A frequent source of expansion in a dance movement is the repetition of a final unit as an *echo*. This may occur at the end of either or both parts of the binary form. In the little *gavotta* from the violin sonata, Op. 5, No. 11, for example, a four-measure unit in the first part is restated twice in the second part with tiny modifications; see Example 5. The dance ends with a further restatement of the unit within an echo as a four-measure *extension*.

We could find a similar case with the *gavotta* from the *concerto grosso*, Op. 6, No. 9. There, there is not just an echo, but also a further expansion created by repeating units from the *concertino* in the *ripieno*: this expansion, of course, replaces the formal repetition of each part.

It should also be noted that although the majority of binary forms have *longer* second parts, some have *shorter* ones: in addition to *expanded binary* form, there is also *contracted binary* form; see Example 6. For instance, in the *tempo di gavotta* movement from the trio sonata, Op. 2, No. 5, the first part lasts twelve measures with a four-measure echo, whereas the second part lasts eleven measures with a two-measure echo. (There is also an internal one-measure echo over its eighth and ninth measures.) The overall proportions are thus 16 + 13 measures. Here in the second part the busier figuration of the surface may disguise the foreshortening, which in itself involves considerable deviation from the rhythmic templates. This, after all, is merely a gavotte-like piece—*tempo di gavotta*—rather than a "pure" gavotte.

However, for later dances the most familiar type of expansion comes in the *rounded binary form* (the term comes from Donald Francis Tovey). Here, the return to the tonic towards the end of the second part brings back not just the principal key but also a perceptible restatement of opening "material" ("material," of course, is loaded, but will have to do for now): the music "goes back to the beginning," though the recapitulation may be literal or (as is more often the case) varied.



Example 5. Arcangelo Corelli, Sonate da camera a tre, Op. 5, No. 11 (1700): Gavotta.

The *tempo di gavotta* from the trio sonata, Op. 2, No. 8 (shown in Example 7), provides a clear instance of just this; and let us note that once again the piece is merely "gavotte-like." The first part lasts seven measures, and the second part eighteen measures; of these eighteen, the last nine measures include recapitulation of opening material. Within these *irregular* proportions, three elements distort what is an essentially *regular* handling of the rhythmic templates: *extension*, *interpolation*, and *echo*. In the first part, there are six measures, but overlapping the sixth measure by a measure is a further two-measure *extension* to a Phrygian cadence. All this occurs in the tonic B minor. After the double bar, the second part uses the same rhythmic profile of the opening six measures, slightly elaborated with quaver motion and leading to a closing dotted figure, and now in the dominant. Overlapping its last measure, however, is a new four-measure unit in the relative major. This sounds as an *interpolation* of fresh material, though in fact it is a derivative of the second violin line in the preceding four measures.

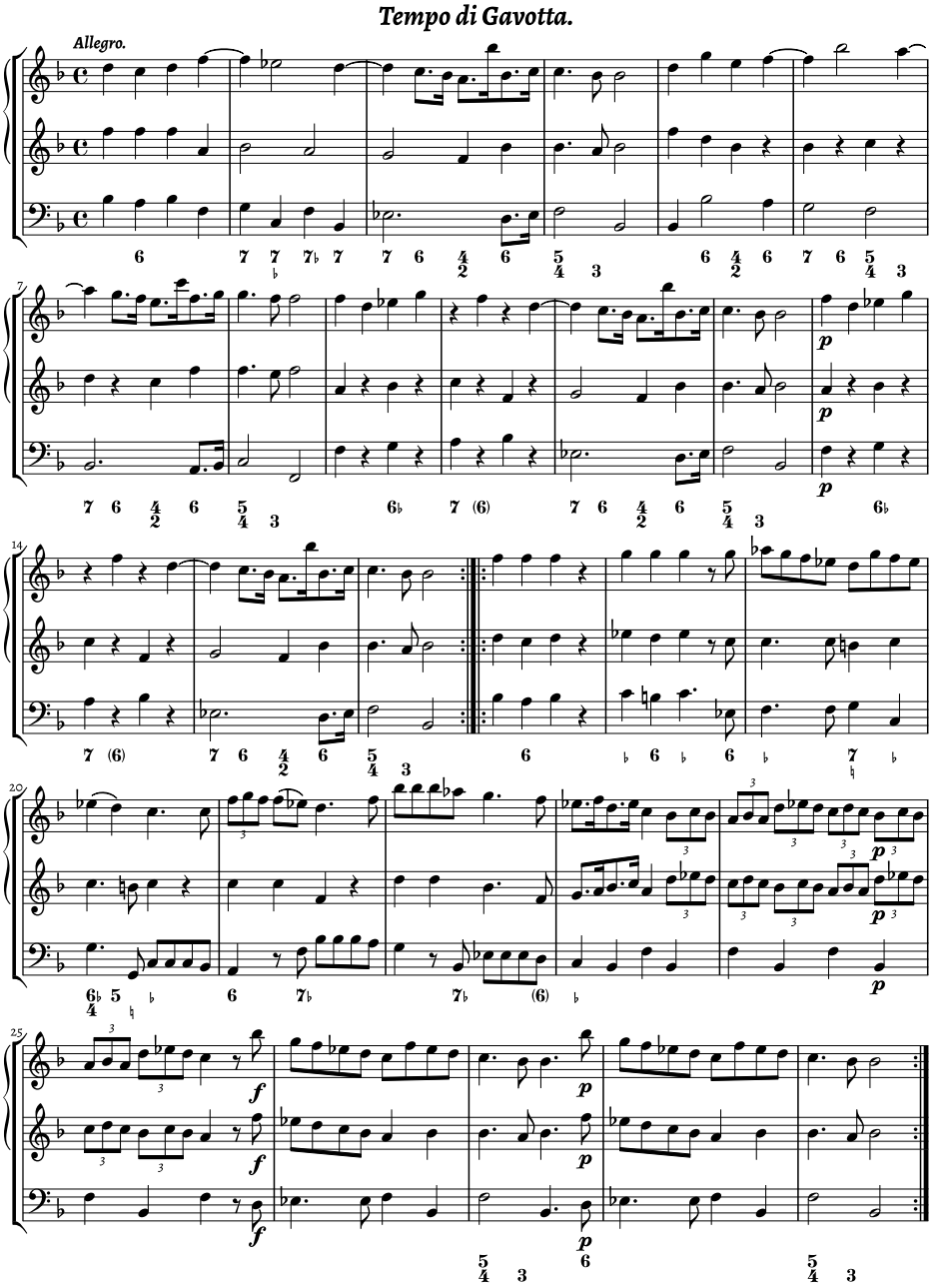
The "recapitulation" brings back the six-measure material from the very opening. To begin with, the repetition is exact. Yet from its third measure it too absorbs the eighth-note motion that has characterized all the templates in this second part. There now follows an adroit synthesis. For the *echo extension* of the last four measures repeats the final four measures of the main template (with a metric realignment); *at the same* time it begins as if it were repeating the extension to the Phrygian close heard at the end of the first part. Only now, the movement closes *in* the tonic rather than *on* the dominant (the distinction again comes from Tovey).

As a final observation, let us notice that this dance offers a striking example of music that goes from one tonal region to another *without* involving any process of modulation. Corelli simply shifts regions. This, of course, makes for easy presentation of the rhythmic units. Yet a composer integrating a process of modulation can sometimes cause a substantial *dislocation* of the relationship between the units (including strong–weak rhythmic models) on the one hand and tonal models on the other. To see this, we need to turn to our case study, taking with us what we have learned from the gavotte into the sarabande.

3. The Interface of Tonal and Rhythmic Models

The *sarabande* from Johann Sebastian Bach's fourth French Suite, BWV 815, appears here in its later version, *Fassung* B in the Bärenreiter edition (see Example 8), though this is not substantially different from the earlier one.[3] Unlike the previous examples, of course, this dance is written for keyboard, with a passing of material between right and left hands. It has a variable texture, which is sometimes as

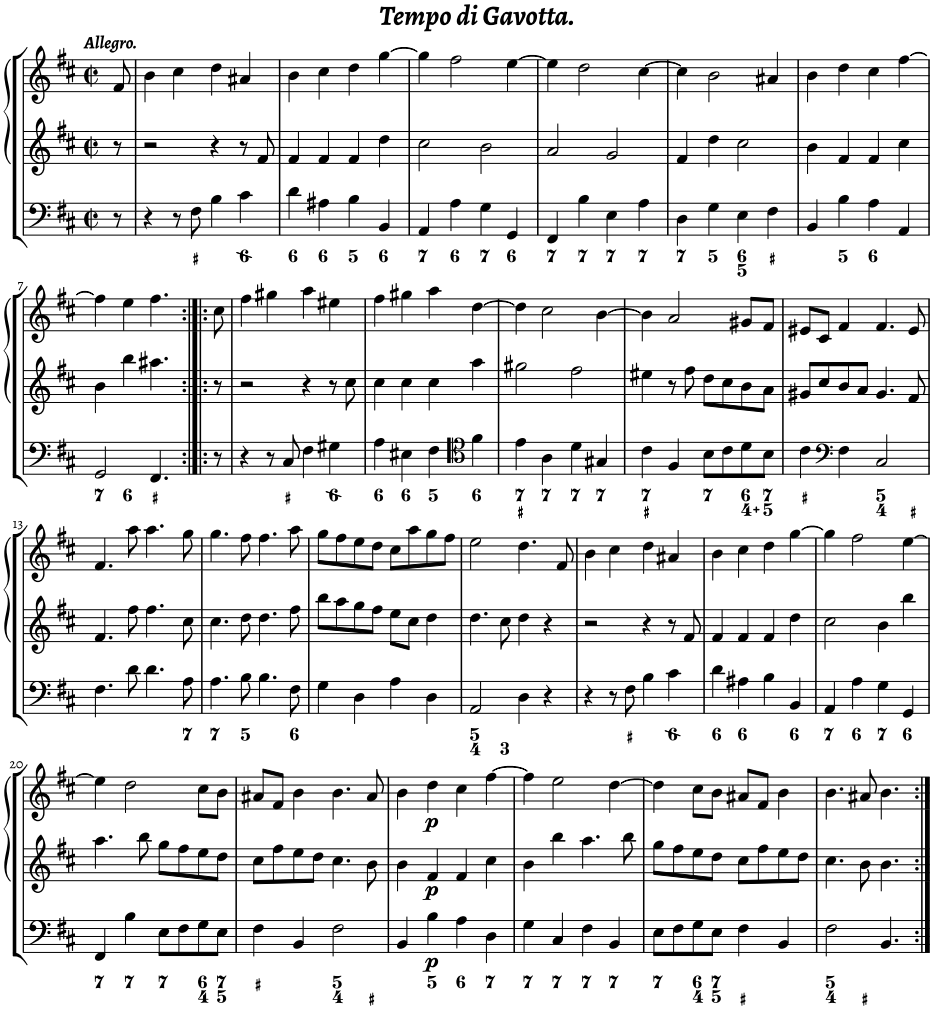
[3] In the preface to this edition, BA 5166 (1984, vii), Alfred Dürr distinguishes "the earlier version transmitted by Altnickol (Version A)" from "the later ornamented version (Version B)." The versions are differentiated in very small ways by ornaments, slurs, and the isolation of pitches in the figuration extended to enrich the harmonic fabric. Version B, in fact, is not always richer in these respects than Version A. Other editions of the time offer their own versions similarly differentiated from other editions in their details—for instance, G. Henle Verlag Urtext (1956/1984) or Schott/Universal Edition Wiener Urtext (1983). None of these differentiations has an impact on the present discussion of rhythm and pitch.



Example 6. Arcangelo Corelli, Sonate da camera a tre, Op. 2, No. 5 (1685): Tempo di gavotta.

thin as two voices and sometimes as thick as six; and its large, undulating line is exceptionally graceful. The dance is once again in rounded binary form—that is to say, with a clear return to the material of the opening at the point the tonic is retrieved towards the end. Only in this case there is a strict adherence to the proportions of the large rhythmic units.

The first eight measures show the stratified approach to the rhythm we saw with Corelli. A one-measure template provides a distinctive rhythmic profile that includes the second-beat emphasis typical of the *sarabandes* of Bach (but not of Corelli): this is what we previously called level *a*. The profile then acts as the template for the second measure. In turn, these two measures together act as a template for the third and fourth measures (our previous level *b*): these two pairs, mm. 1-and-2 and 3-and-4, create an overall strong–weak rhythmic model, which in this case is enhanced by the exchange of material between the hands as well as the voice leading. These four measures then act as a template for mm. 5–8 (our previous level *c*). Only now, in mm. 5 and



Example 7. Arcangelo Corelli, Sonate da camera a tre, Op. 2, No. 8 (1685): Tempo di gavotta.

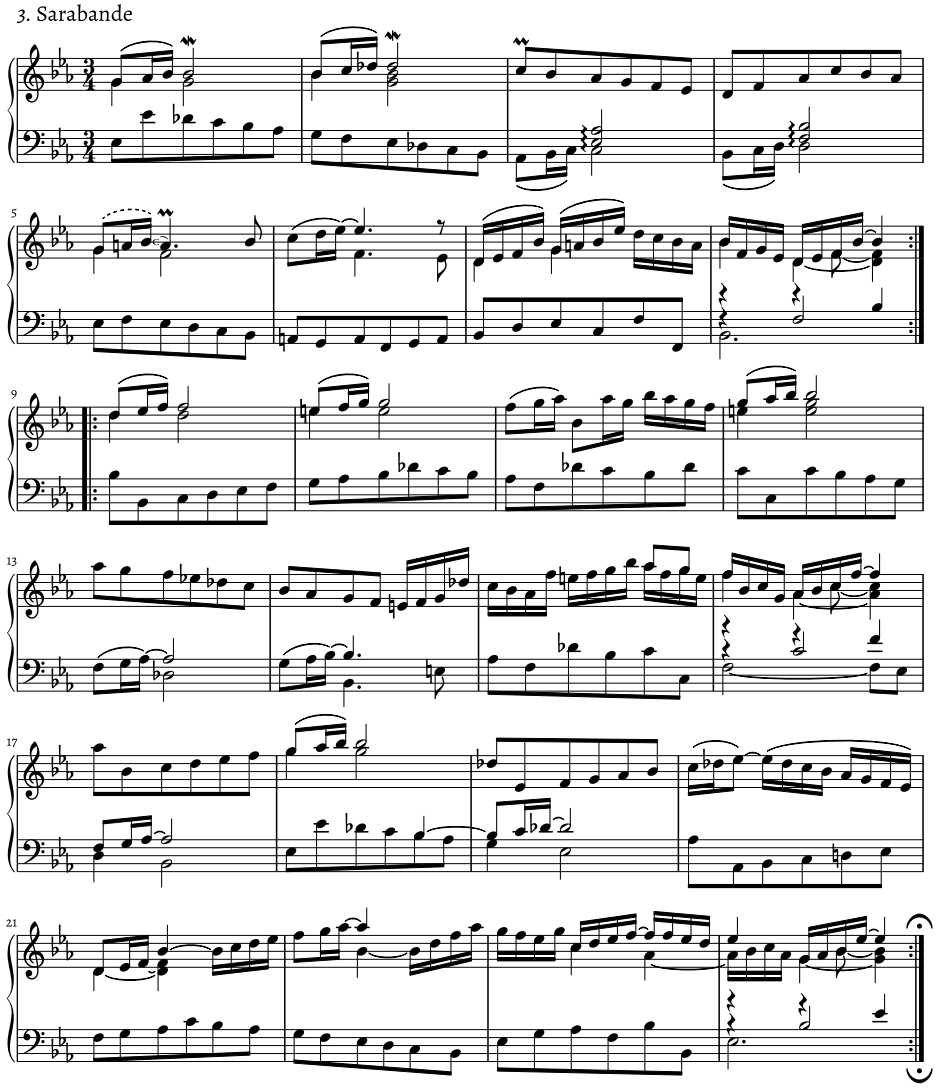
6 there are dotted figures in the rhythmic profile where previously there were only half notes; and in mm. 7 and 8 the music *dissolves* the character of the rhythmic profile into the less characterful regular sixteenth notes that drive the music towards an effective close. Over mm. 1 to 8, the two four-measure units that have emerged form an antecedent–consequent relationship; and whereas the antecedent ends *on* the dominant, the consequent ends *in* it.

So much is obvious. But the fascination comes next, when we see how the eight-measure unit of the first part acts twice as a template for the sixteen measures of the second part (our previous level *d*). In the second part, the first eight-measure unit modulates from the dominant to the supertonic, F minor, with a half-close in F minor after four measures. Thus the antecedent–consequent relationship of the original eight-measure unit is preserved.

In these measures, 9–16, it is obvious that sixteenth-note movement has been enhanced, first in m. 11, and then in m. 14. Less obvious is the changed pattern of distribution of material between the hands. For now the arrangement of the first pair of measures—mm. 9 and 10—is continued into the next pair—mm. 11 and 12; only at mm. 13 and 14 does an exchange take place.

Now follows the third eight-measure unit, covering mm. 17 to 24. In its first four measures, the rhythmic profile is followed as before, though with sixteenth-note movement introduced into the fourth measure. The exchange, however, is intensified, so that material passes from the left hand to the right hand with each measure. In the remaining four measures, from mm. 21 to 24, the original template is also followed, though again with more sixteenth-note movement.

What is startling, however, is the change in the *interface* between pitch and rhythm. Let us look very carefully at mm. 17 and 18: m. 17 contains a V^7 harmony resolving onto the tonic E♭ in m. 18. This V^7 has itself followed on from the F-minor close at m. 16, where the *key* of F minor is treated as a *chord* on the second scale step of E♭. This



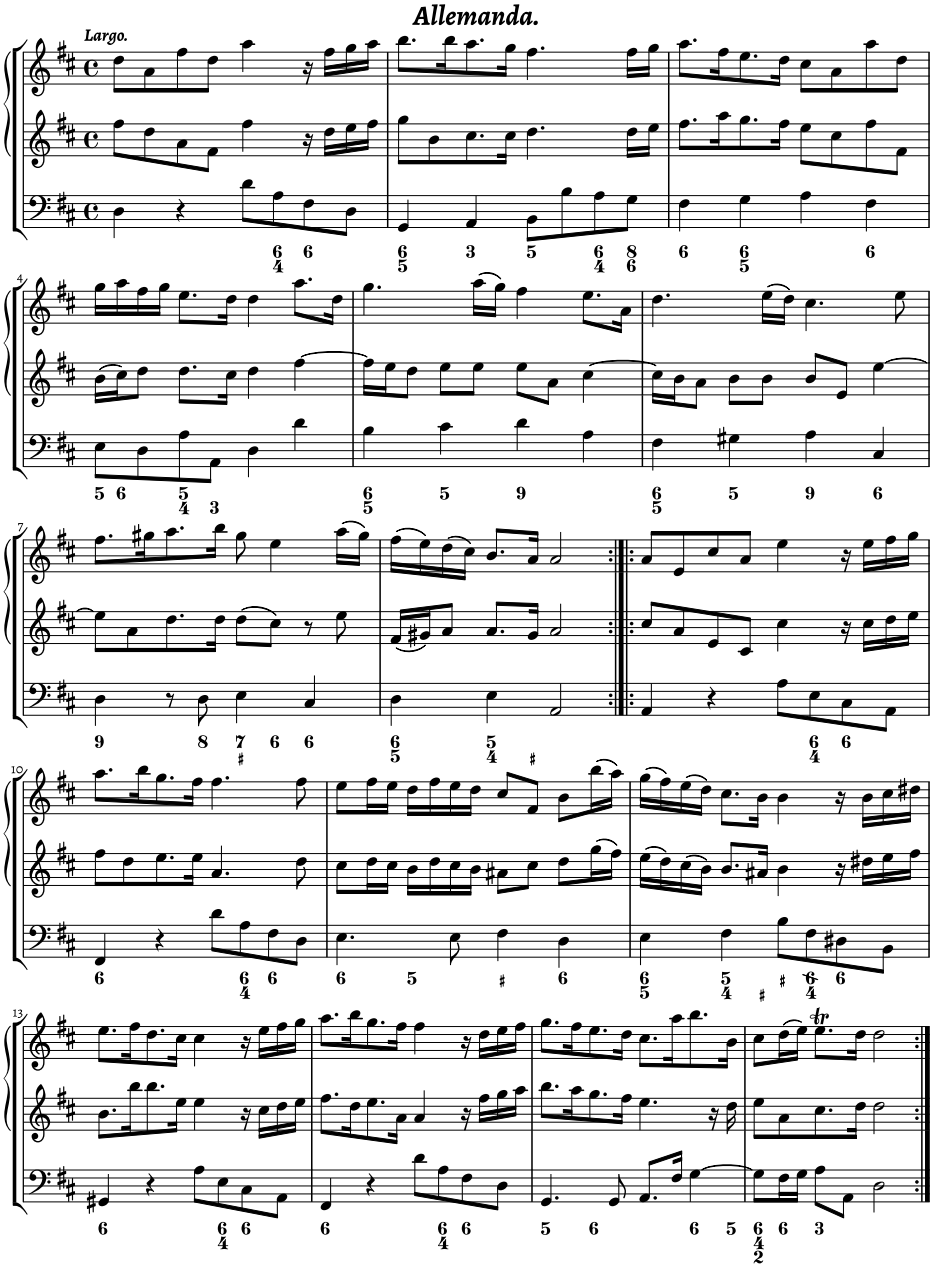
Example 8. J. S. Bach, French Suite No. 4, BWV 815 (1722): Sarabande.

chord takes its place in the ii–V^7–I return to the tonic just described. Moreover, at the end of m. 16, we notice the passing-note E♭ in the bass added to the rhythmic profile to make this very connection. All this means that, although the *rhythm* derived from the very beginning starts at m. 17, the recapitulated *pitch* material from the beginning only starts at m. 18: the relation of rhythm to pitch has come tantalizingly dislocated![4] And in the next four measures—from mm. 17 to 20—this dislocation by a measure continues. The effect of the dislocation recalls our definition of the binary pair of measures (the "rhythmic model"): it is as if the recapitulated tonal material at m. 18 starts on the *weak* part of a two-measure unit, whereas at the very outset it began on the *strong* part of a two-measure unit.

This dislocation forces Bach to make an adjustment. That is to say, he needs his third degree in the upper voice, G$_5$, to appear at the beginning of a "strong" measure, in the same way that the third degree of B♭, a D, had appeared at the beginning of a "strong" measure at m. 7. To this end, he places his G at the beginning of the penultimate measure, m. 23; and he then expands the preceding dominant seventh from one to two measures, so that it takes up the whole of mm. 21 and 22. In other words, whereas the dominant-to-tonic relationship of mm. 3–4 occupied two measures, the parallel dominant-to-tonic relationship between mm. 21 and 23 occupies three.

The outcome of the case study, therefore, is that the tonal model has had to be reworked to cope with the "prob-

[4] See a similar discussion in Schachter (1990) of a Bach reprise that begins with an apparent tonic.



Example 9. Arcangelo Corelli, Sonate da camera a tre, Op. 2, No. 1 (1685): Allemanda.

lem" posed by the strong–weak demands of the rhythmic models within the eight-measure unit. This far exceeds the modulatory adjustments Corelli had to make in the *gavotta* with which we began. Bach's reworking, needless to say, is of utmost virtuosity.

4. The Substitution of Rhythmic Units

This inquiry has not addressed one other prominent feature of dance forms. This comes in those many passages where part of a rhythmic unit is replaced by *substitute* material, usually to allow the pitch material to go its own way. Such is the case, for instance, in the *allemanda* from Corelli's trio sonata, Op. 2, No. 1; see Example 9. Here, the first eight measures form a template for the second eight measures; yet the fifth and sixth measures of each eight-measure unit quite simply do not match. There are other adjustments too in the second eight-measure unit: these accommodate the mismatch and facilitate a return from the relative minor to the tonic major.

Table 1. Summary of Terms.

Profile, Template, Model, and Unit
This involves the definition of a *rhythmic profile* as a small *unit* in one or more voices, and the monitoring of how it acts subsequently as a *template* for later sections. *Unit* and *template* can also be used more generally for larger passages of music:

- Definition of a characteristic *rhythmic profile* as a *unit*
- Identification of the (more-or-less) exact repetition of the unit as a *template*
- Description of a strong–weak unit (incorporating smaller units) as a *rhythmic model*
- Monitoring of a (*varied) repetition* of a larger unit in further units
- *Expansion* of a rhythmic unit with interpolations or additions
- *Contraction* of a rhythmic unit
- *Substitution* of new rhythmic profiles for expected rhythmic profiles within a rhythmic unit

Structure
Structural analysis in this repertory now involves three elements: (i) rhythmic units and models, (ii) pitch models, and (iii) the *interface* between the rhythm and pitch models:

(i) *Structure of the rhythm*

- *Stratification* by templates, models and units of different sizes (one-measure, two-measure, four-measure, eight-measure, etc.) to form a "pyramid" with different levels (*a*, *b*, *c*, *d*)
- *Identification* of a "model" that has a strong–weak character as described above. This character may be replicated at different levels
- *Assembly* of units into a simple binary dance, with each part equal in length
- *Expansion (or contraction)* of a binary dance with the second part extended (or reduced), and possibly including *substitution* of materials (all as described in the section above)
- *Reworking* of a binary dance into a rounded form where the return to the opening key brings back opening "material"

(ii) *Structure of the pitch*

- Formation of tonal (voice-leading) models in light of the allocated dance space
- Movement through related tonal centers, including relative major and minor modes
- Inclusion or absence of the means of modulation
- Reconstruction of opening material at the close

(iii) *Interface between rhythm and pitch*

- Congruence between rhythmic and tonal units
- Lack of congruence between rhythmic and tonal units

In general, these substitutions may or may not alter the overall proportion of the template; and, indeed, in the dances of J. S. Bach they may lead to more far-reaching changes still. But this is another story for another occasion.

Table 1 sums up the terms used throughout.

References

Johann Sebastian Bach. 1956/1984. *French Suites BWV 812–817. HN 72*. Edited by Rudolf Steglich. München: G. Henle Verlag.

———. 1983. *French Suites for Piano BWV 812–817. UT50048*. Edited by Hans-Christian Mueller. New York: Universal Edition.

———. 1984. *The Six French Suites BWV 812–817. BA 5166*. Edited by Alfred Dürr. Kassel: Bärenreiter-Verlag.

Schachter, Carl. 1990. "Either/Or." In *Schenker Studies*, edited by Hedi Siegel, 165–179. Cambridge: Cambridge University Press. Reprinted in Joseph N. Straus, ed., *Unfoldings*, 121–133.

Wintle, Christopher. 1982. "Corelli's Tonal Models: The Trio Sonata Op. III, N. 1." In *Nuovissimi studi Corelliani: atti*

del terzo congresso internazionale, edited by Sergio Durante and Pierluigi Petrobelli, 29–69. Firenze: Leo S. Olschki.

————. 1986. "Skin and Bones: The C minor Prelude from J. S. Bach's Well-Tempered Clavier, Book 2." *Music Analysis* 5 (1): 85–96.