Understanding Bach, 12, 59–84

Creating Clarity and Contrast: A Dialogue with Rachel Podger on the Analysis and Performance of Implied Polyphony in Bach's Unaccompanied Violin Works*

STACEY DAVIS

In the preface to his treatise *The Art of Playing on the Violin* (1751), Geminiani shared the following perspectives on the goals and objectives of performing music:

> The Intention of Musick is not only to please the Ear, but to express Sentiments, strike the Imagination, affect the Mind, and command the Passions. The Art of playing the Violin consists in giving that Instrument a Tone that shall in a Manner rival the most perfect human Voice; and in executing every Piece with Exactness, Propriety, and Delicacy of Expression according to the true Intention of Musick … and I would besides advise, as well the Composer as the Performer, who is ambitious to inspire his Audience, to be first inspired himself; which he cannot fail to be if he chooses a Work of Genius, if he makes himself thoroughly acquainted with all its Beauties; and if while his Imagination is warm and glowing he pours the same exalted Spirit into his own Performance.[1]

Within these thoughts, Geminiani mentions three underlying ingredients of a 'true' performance: a deep understanding of the attributes of the piece, an ability to execute those features faithfully, and an intention to communicate expressively and move the audience. In the spirit of making connections between these three components, this paper explores the structure and performance of J. S. Bach's *Sei Solo a Violino senza Basso accompagnato* (BWV 1001–1006). Focus is placed on the analysis of implied polyphony, which is an important feature of Bach's solo string writing. After a brief summary of compositional and perceptual approaches to understanding the creation and effects of implied polyphony, specific instances of this feature within Bach's unaccompanied violin works are analysed. These

Full references to standard Bach literature, and abbreviations used in *Understanding Bach*, 12 (2017) can be found at bachnetwork.co.uk/ub12/ub12-abbr.pdf

* This article is an extended version of a paper presented at the 17th International Conference on Baroque Music (Canterbury, UK, 13–17 July 2016).

1 Francesco Geminiani, *The Art of Playing on the Violin* (London, 1751).

analyses are presented alongside the insights of an elite professional violinist, who offers ideas for how a performer might use various expressive devices to bring out that implied counterpoint. The product of this collaboration is a direct dialogue on the intersections between analysis, performance practice, and expressivity within this remarkable repertoire.

Compositional and perceptual approaches to understanding implied polyphony

Bach's unaccompanied violin pieces were once described as 'perhaps the greatest example in any art form of a master's ability to move with freedom and assurance, even in chains'.[2] One of these chains is no doubt the chosen instrumentation of a single, unaccompanied violin. But Bach's mastery of harmony and polyphony, along with his knowledge of the technical and expressive capabilities of the violin, allowed him to create pieces of structural complexity and technical brilliance within that supposed constraint. According to Christoph Wolff in his biography of Bach,

> Indeed, both collections of unaccompanied violin and cello pieces create the maximum effect with a minimum of instrumental 'tools.' Once again, Bach the quintessential instrumentalist raises and redefines the technical standards of performing by fully exploiting the idiomatic qualities of the violin and cello … [these pieces] also epitomize virtuosity, and, on account of their singularity, to a degree even greater than his keyboard works for comparable technical demands. Both sets of solo pieces demonstrate Bach's command of performing techniques but also his ability to bring into play, without even an accompanying bass part, dense counterpoint and refined harmony with distinctive and well-articulated rhythmic designs, especially in the dance movements.[3]

Amongst the many noteworthy features of Bach's solo string writing is his treatment of texture, with instances of monophony, homophony, and polyphony occurring throughout the pieces. The homophonic and polyphonic textures are most often created through the use of multiple stops. For example, the multiple stops in the Andante of solo violin Sonata No. 2 in A minor (BWV 1003) produce homophony and clearly distinguish the melodic line from its pulsating accompaniment. Multiple stops are also used to create sophisticated polyphony in each of the fugues from the three unaccompanied violin sonatas (BWV 1001, 1003 and 1005). However, Bach also created an impression of polyphony by

[2] This description occurs in an 1805 review of Joseph Benda's *Etudes de Violon ou Caprices* (Hoffmeister & Kühnel). 'Diese Capricen können ernstliche und fleissige Violinspieler zu den grossen Violinsonaten des unsterblichen Sebastian Bach, ohne Bass, vorbereiten, die in demselben Grade schwerer sind, als die Arbeit daran grosser und correcter ist, und **die vielleicht das grösste Beyspiel in irgend einer Kunst auffteilen, mit welcher Freyheit und Sicherheit der grosse Meister sich auch in Ketten zu bewegen weiss.**' (Emphasis added.) Johann Friedrich Reichardt, *Jenaische Allgemeine Literaturzeitung*, 2. Jg, Bd 4, Nr. 282 (Nov. 1805), Sp. 390–1, at 391. Eng. trans. in Wolff, *The Learned Musician*, 471.

[3] Wolff, *The Learned Musician*, 232.

suggesting multiple voices within a monophonic melody. This textural manipulation is typically called implied polyphony or compound melody.

Eighteenth-century composers and theorists were aware of implied polyphony and included instructions for its creation in their treatises. Many of their descriptions illustrate how a composer could use arpeggiation to transform a multi-voiced harmonic progression into fewer voices (or even a single voice). Mattheson explained this practice in a chapter entitled 'On Broken Chords':

> Now if in contemporary melodic-harmonic composition, to obtain clarity, not as many different instrumental voices are used as in earlier times, and yet, if the harmony is still to be treated properly, then one often produces the full yet broken chord with three to four pitches in succession in a single voice. Breaking here means that the pitches are not perceived together all at once but one after another. Not only does great ornamentation arise from this in the mentioned instrumental parts, but also at the same time endless variation, indeed, so to speak, an inexhaustible source of inventions. And that is the reason or the occasion for these breaks as well as their usefulness and superb application.[4]

Example 1 contains Mattheson's demonstration of how the three original voices in Example 1a could be 'spun out' through arpeggiation, including combining two voices into one while leaving the third unchanged and fusing all parts into a single voice. In reference to the monophonic variation in Example 1f, Mattheson stated that 'this fifth and last breaking is actually called the harp-type, in Italian: *Arpeggio*, and is used a great deal'.[5]

Like Mattheson, Kirnberger explained implied polyphony as a product of arpeggiation.[6] But he also understood it to be a way to disguise unacceptable melodic intervals, stating that 'when a single-line melody is composed in such a way that its harmony is implied and sounds like a two- or three-part piece, the forbidden progressions no longer sound bad'.[7] The concealment of less desirable intervals is also addressed in Niedt's *Musicalische Handleitung* (1721), a treatise which Bach is known to have used when teaching. Within the many pages of instructions for varying a thoroughbass, Niedt included the bass line shown in Example 2a. The original notes of that bass line are varied by the addition of conjunct motion, dotted rhythms, and quavers (see Exx. 2b and 2c). Niedt called both of those variations 'displeasing to the ear', with Mattheson interjecting that the variation in Example 2c is 'against nature' and 'unsingable'.[8] A more 'appealing' option is shown in Example 2d, where an implication of two voices

4 Johann Mattheson, *Der vollkommene Capellmeister* (Hamburg, 1739). Eng. trans. in Ernest Harriss, *Johann Mattheson's 'Der vollkommene Capellmeister': A Revised Translation with Critical Commentary* (Ann Arbor: UMI Research Press, 1981), 670.

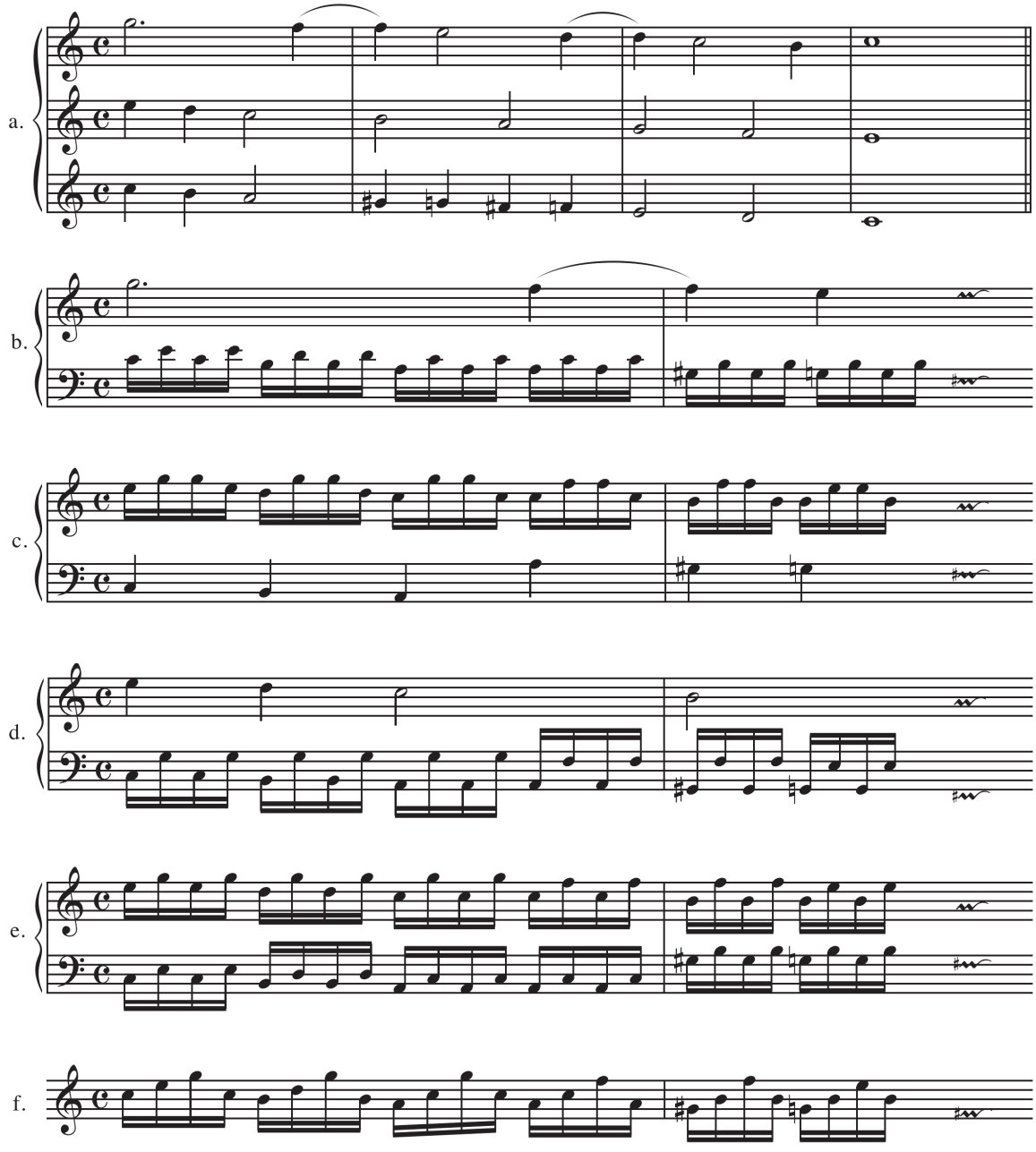
5 Harriss, *Johann Mattheson's 'Der vollkommene Capellmeister'*, 674.

6 Johann Philipp Kirnberger, *Die Kunst des reinen Satzes in der Music* (Berlin, 1774–9). Eng. trans. in David Beach and Jürgen Thym, *The Art of Strict Musical Composition by Johann Philipp Kirnberger* (New Haven, CT: Yale University Press, 1982), 218.

7 Beach and Thym, *The Art of Strict Musical Composition*, 156.

8 Friedrich Erhardt Niedt, *Die Musicalische Handleitung* (Hamburg, 1721). Eng. trans. in Pamela L. Poulin and Irmgard C. Taylor, *The Musical Guide* (Oxford: Clarendon Press, 1989), 95.

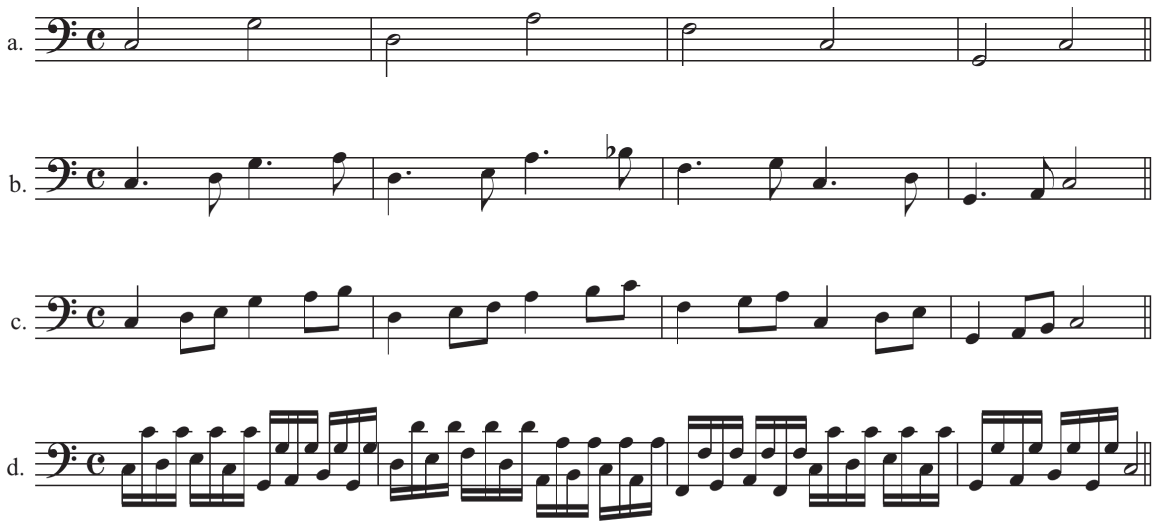
was created by interspersing the previously objectionable intervals with pedal notes. Niedt inferred the importance of learning this type of variation when he said that 'the eager learner will achieve facility in this and similar pleasing *inventiones* through diligent application and through this introduction, after he has practised it a hundred times'.[9]



Example 1: Mattheson's illustration of using arpeggiation to transform a three-voice progression (a) into one or two voices (b–f)[10]

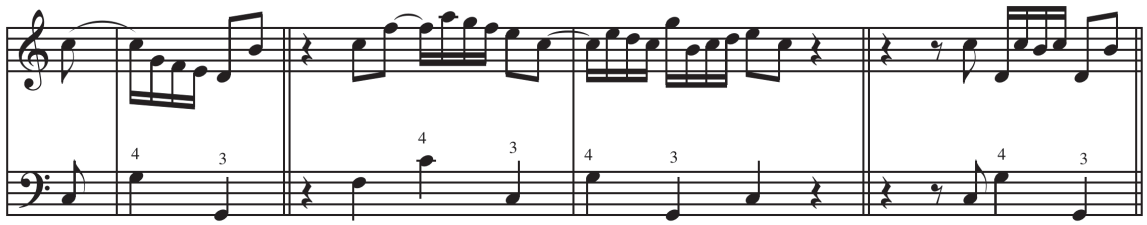
9 Poulin and Taylor, *The Musical Guide*, 96.

10 Transcribed from Mattheson, *Der vollkommene Capellmeister*, 354–5.



Example 2: Examples of Niedt's variations (b, c, and d) on an original bass line (a)[11]

Heinichen proposed another source of implied polyphony in his discussion of a freer treatment of dissonance, suggesting that a sense of multiple voices could be created if a suspension is ornamented prior to its resolution and large intervals separate the notes of dissonance and resolution from the ornamental notes.[12] He therefore considered the resolution of the suspensions in Example 3 to be acceptable even though the notes of resolution do not immediately follow the suspended notes. The intervening notes exist in a different implied voice and simply delay the moment of resolution.



Example 3: Heinichen's examples of delayed dissonance resolution[13]

The principles of arpeggiation, interval disguise, and dissonance resolution best explain instances of implied polyphony in which there is a constant presence of a consistent number of implied voices, thereby allowing a listener to imagine the original multi-voiced, often homophonic material. Bach's unaccompanied violin pieces certainly contain these types of passages. But they also contain more varied and ambiguous examples of implied polyphony, in which 'implied voices seem to emerge and then vanish' and where 'a lack of voice continuity can present challenges for following the content of each implied voice over the course

11 Transcribed from Poulin and Taylor, *The Musical Guide*, 94–6.

12 Johann David Heinichen, *Der General-Bass in der Composition* (Dresden, 1728). Eng. trans. in George J. Buelow, *Thorough-Bass Accompaniment according to Johann David Heinichen* (Ann Arbor, MI: UMI Research Press, 1986), 381–90.

13 Transcribed from Heinichen, *Der General-Bass in der Composition*, 590.

of an entire piece'.[14] Previous research therefore turned to empirical studies of melody perception in order to offer an additional analytical approach. Studying implied polyphony from that perspective shifts the emphasis 'back toward the original monophonic sequence and away from a reduction that reflects an imagined substrate of fully contrapuntal, previously composed material'.[15]

This perceptual approach is grounded in principles of Gestalt psychology and auditory stream segregation, which explain the simple features that either fuse a series of notes into a single melody or cause them to split into multiple perceptual streams. In general, this research shows that segregation typically occurs when melodies are played at fast tempos, contain intervals larger than a perfect fourth (especially when surrounded by conjunct motion), and have sudden changes of contour.[16] These contrasts of interval size and contour give emphasis to certain pitches, thereby adding phenomenal accents to the isochronous rhythmic patterns that typically occur in passages containing implied polyphony.

In his solo string works, Bach often placed transitions from one implied voice to another in metrically weak positions. The resulting phenomenal accents therefore create a sense of syncopation and ensure that the surface rhythms of these pieces are not perceived as 'a mere stream of activity filling the space between downbeats'.[17] Combinations of accents on certain foreground notes instead create 'inherent rhythms', which Carterette and Kendall define as:

> patterns that emerge from the overall melodic-rhythmic complex and are not produced directly by any musicians. Prerequisites of these inherent auditory patterns are a very quick sequence of notes; many jerky intervals with an ensuing split into pitch layers; and a regular internal structure of an entire passage so that high, low, and middle pitch layers form distinct rhythmic melodies.[18]

[14] Stacey Davis, 'Stream Segregation and Perceived Syncopation: Analyzing the Rhythmic Effects of Implied Polyphony in Bach's Unaccompanied String Works', *Music Theory Online,* 17/1 (2011).

[15] Ibid.

[16] An analytical system based on these principles can be found in Stacey Davis, 'Implied Polyphony in the Solo String Works of J. S. Bach: A Case for the Perceptual Relevance of Structural Expression,' *Music Perception,* 23/5 (2006): 423–46. For additional research on auditory stream segregation, see Albert Bregman, *Auditory Scene Analysis: The Perceptual Organization of Sound* (Cambridge: MIT Press, 1990); Albert Bregman and Jeffrey Campbell, 'Primary Auditory Stream Segregation and the Perception of Order in Rapid Sequences of Tones', *Journal of Experimental Psychology,* 89 (1971), 244–9; George A. Heise and George A. Miller, 'An Experimental Study of Auditory Patterns,' *American Journal of Psychology,* 64 (1951), 68–77; and L.P.A.S. van Noorden, 'Temporal Coherence in the Perception of Tone Sequences', PhD dissertation, Eindhoven University of Technology (1975).

[17] Joel Lester, *The Rhythms of Tonal Music* (Carbondale, IL: Southern Illinois University Press, 1986), 153.

[18] Edward C. Carterette and Roger A. Kendall, 'Comparative Music Perception and Cognition', in Diana Deutsch (ed.), *The Psychology of Music,* 2nd edn (San Diego, CA: Academic Press, 1999), 760–1. Schachter proposed a similar idea when distinguishing between the actual durational patterns of a piece and 'tonal rhythms' that 'flow from the succession and combination of tones' and 'are most easily perceived where there is little or no durational patterning'. See Carl Schachter, 'Rhythm and Linear Analysis,' in Felix Salzer and Carl Schachter (eds.), *The Music Forum* (New York: Columbia University Press, 1976), 313, 315.

This concept of inherent rhythms provides an additional explanation for how implied polyphony relates to and affects other aspects of musical structure. While some instances of implied polyphony outline harmonic progressions or create voice-leading patterns, others impact rhythm and metre perception.[19]

Baroque performance practice and implied polyphony

In addition to being included in compositional treatises and analytical articles, implied polyphony is mentioned in the writings of noted violinists and pedagogues. For instance, Baroque violinist Jaap Schröder stated that 'Bach and Telemann knew that a single melodic line, as well as two juxtaposed melodic lines, could suggest polyphony and would be perceived as such by the listener if the player were skilful. The skill lies in knowing which notes are to be stressed'.[20] Schröder not only acknowledged the existence of implied polyphony, but also referenced the 'skilful' performer's important role in both understanding this feature and communicating it to the listener.

The remainder of this article addresses this art of skilful communication by presenting analyses of the implied polyphony in selected excerpts from Bach's unaccompanied violin pieces.[21] Interwoven with those analyses are insights on musical structure, performance practice, and expressivity from internationally renowned violinist Rachel Podger. One of today's foremost Baroque performers and pedagogues, she is the recipient of the 2015 Bach Prize from the Royal Academy of Music, has made numerous award-winning recordings with Channel Classics, and is the founder and artistic director of the Brecon Baroque ensemble. Podger visited the University of Texas at San Antonio in January 2016 for a one-week residency that included two solo recitals, a performance with a student chamber orchestra, two masterclasses, a Baroque performance-practice lecture, an improvisation workshop, and a joint pre-recital lecture with the author of this paper. During this residency, Podger also participated in multiple research sessions where semi-structured interviews and live performances were recorded to gather information about the analysis and expressive performance of Bach's unaccompanied violin works.[22]

Podger's perspectives on expressivity are informed by an understanding of Baroque aesthetics and performance practice, much of which is grounded in the

[19] See Davis, 'Stream Segregation and Perceived Syncopation' for analyses of the rhythmic effects of implied polyphony.

[20] 'Jaap Schröder Discusses Bach's Works for Unaccompanied Violin,' *Journal of the Violin Society of America,* 3 (1977), 12.

[21] Observations on the analysis and performance of these pieces can also be found throughout the following books: Joel Lester, *Bach's Works for Solo Violin: Style, Structure, Performance* (Oxford: Oxford University Press, 1999); Jaap Schröder, *Bach's Solo Violin Works: A Performer's Guide* (New Haven: Yale University Press, 2007); David Ledbetter, *Unaccompanied Bach: Performing the Solo Works* (New Haven: Yale University Press, 2009); and Stanley Ritchie, *The Accompaniment in 'Unaccompanied' Bach: Interpreting the Sonatas and Partitas for Violin* (Bloomington: Indiana University Press, 2016).

[22] I am deeply grateful to Rachel Podger for her participation in this project, her insights on Baroque style and expression, and her superb performances.

art of rhetoric. Quantz encapsulated the main aims of rhetorical performance by likening a musician to an orator.

> The orator and the musician have, at bottom, the same aim in regard to both the preparation and the final execution of their productions, namely to make themselves masters of the hearts of their listeners, to arouse or still their passions, and to transport them now to this sentiment, now to that. Thus it is advantageous to both, if each has some knowledge of the duties of the other.[23]

To be persuasive, orators must clearly articulate the language of a well-constructed and stimulating argument. Musicians have a similar task. They must understand the language and structure of a piece, then deliver it with clarity and with the intent of moving their audience. As Podger described:

> Baroque performance practice is a language that we need to learn in order to do the music justice … We need to know the grammar of the language in order to construct sentences and to give things meaning … The rules are just a way of doing things and they are in total service to the expression and the content of the music, so that the listener understands the story line. This is right at the top in everything we do, that we get the meaning across.[24]

When summarising the relationship between the grammatical features of Baroque music and the conveyance of their meaning, Podger focused on the communication of the architectural or structural aspects of each piece. For example, the metric hierarchy dictates that some beats are naturally stronger than others. String players tend to convey these differences by using down-bows on strong beats. Harmonic tension, dissonance, and chromaticism also deserve special attention. A cadential dominant is therefore played more strongly than the tonic, and a dissonance is given more emphasis than its resolution. In addition, performers often coordinate melodic contour and dynamics, with increases in loudness following rising contours and vice versa. Changes of articulation, on the other hand, can highlight motivic relationships, clarify metre, or distinguish conjunct and disjunct intervals. Variations in dynamics, articulation, and tempo can also call attention to motivic figurations, sequential repetition, and phrase length, with *rubato* being an effective device at moments of surprise or interruption.[25] Whether provided by the composer or the performer, the overall goal is to create contrast. According to Podger, 'smoothness does not really exist as an ideal. You want variety and contrast. The idea is not to make it

[23] Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversiere zu spielen* (Berlin, 1752). Eng. trans. in Edward R. Reilly, *On Playing the Flute,* 2nd edn (London and Boston, MA: Faber and Faber, 1985), 119.

[24] Rachel Podger, 'Research, Teaching, and Performance Residency' (series of research interviews, lectures, masterclasses, and performances, University of Texas at San Antonio, San Antonio, TX, January 26–30, 2016). All ensuing quotations from Podger within this article are taken from transcripts of the events that occurred during this residency.

[25] For a summary of Baroque performance practice principles as applied to string playing, see Judy Tarling, *Baroque String Playing for Ingenious Learners,* 2nd edn (St. Albans: Corda Music, 2001).

even-sounding. It is actually to bring things out. When you add variety, you add beauty to something.'

Violinist Yehudi Menuhin addressed the importance of 'bringing things out' in passages that contain implied polyphony. As he stated:

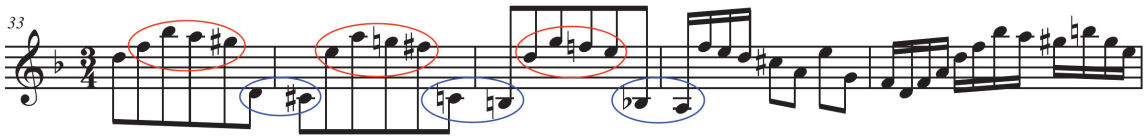
> But certainly the most important thing is to observe the clear and clean conduct of the individual voices. This also applies in the many movements which are only one voice, for that is only a superficial aspect, and there may in fact be two, three or four voices within that one voice so that, like a ventriloquist, the violinist on his four strings must continually change colour and strings to achieve this oral clarity … the counterpoint and the harmony are in fact implied and every effort must be made to bring the different voices out clearly, even though there is never more than one voice sounding at a time.[26]

In order to bring out these implied voices clearly, performers must be aware of how they interact with the other structural features of Bach's pieces. Is the impression of multiple voices a product of harmonic arpeggiation? Does the entrance of a new voice delay the resolution of dissonance? Are the different voices clearly distinguished by register, contour, or voice-leading? Or do the registers overlap, thereby highlighting the rhythmic effects of implied polyphony that are created by the placement of voice changes on weak beats? The following excerpts provide examples of the variety of the implied polyphony in Bach's unaccompanied violin pieces. Analyses of these excerpts are accompanied by insights from Podger, thereby demonstrating that a knowledge of Baroque performance practice and a familiarity with the intricacies of this feature offer performers an assortment of options for creatively and convincingly communicating the implied counterpoint.

Analysing and performing Bach's implied polyphony

The Chaconne from Bach's solo violin Partita No. 2 in D minor (BWV 1004) provides an initial example of the relationship between implied polyphony and expressive performance. As shown in Example 4, the contrast between conjunct motion and large intervals creates two clear implied voices in bars 33–7. The upper voice begins on the second quaver of each bar and follows an arch contour created by an ascending perfect fourth and three descending steps (circled in red). Compound intervals separate this upper voice from the implied bass line, which contains a two-note descending semitone pattern that enters on the last quaver of each bar (circled in blue). The sequential repetition of these two motives in bars 33–5 produces a descending chromatic scale in the implied bass line, while the highest notes in each statement of the upper-voice motive outline a descending diatonic scale. Bach concluded this variation with a cadential figure in bar 36, followed by a tonic arrival in bar 37 that also acts as the beginning of the next variation.

[26] Yehudi Menuhin and William Primrose, *Violin and Viola* (New York: Schirmer Books, 1976), 116, 119.

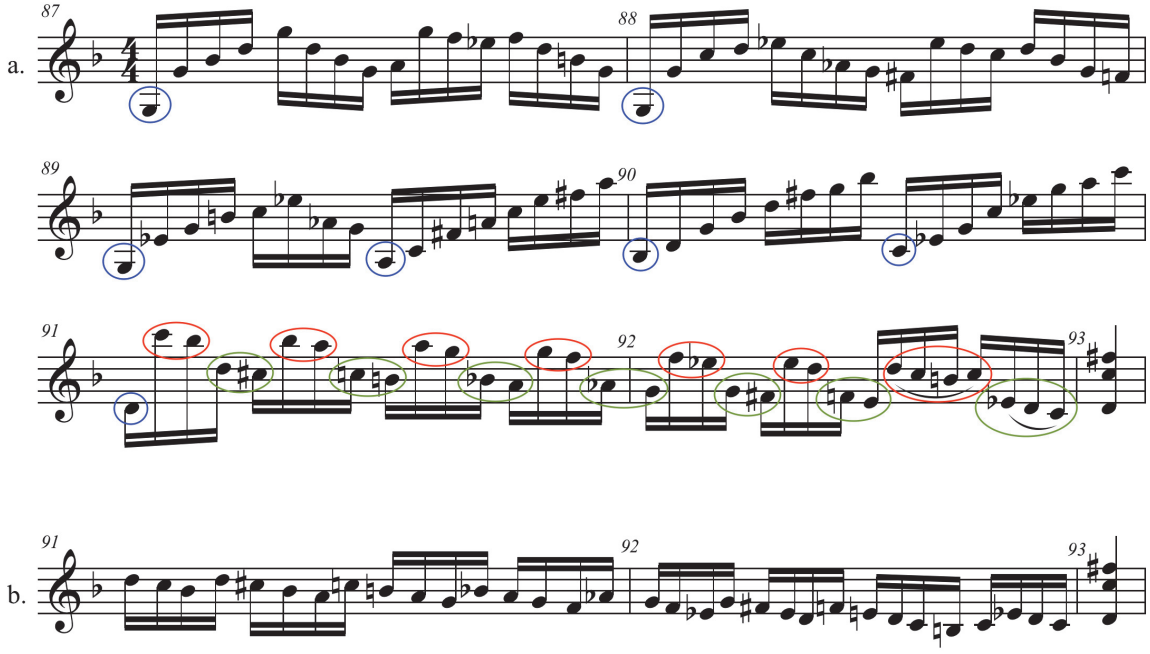


Example 4: J. S. Bach, Chaconne from solo violin Partita No. 2 in D minor, bb. 33–7

When discussing this passage, Podger focused on bringing out the figuration, contour, and metric accents within each implied voice. For the bass, variations in dynamics aid in clearly outlining the metric hierarchy. Although the last quaver of each bar acts as the entrance of the implied bass voice, it is also an upbeat and should therefore be played more softly than the subsequent downbeat. As Podger stated, 'in order to make that an upbeat, you need to make the next one stronger.' For the upper voice, she uses dynamic changes to lead to and away from the highest note in each bar. Again, rather than placing emphasis on the note that marks the entrance of an implied voice, the aim is to follow the tessitura and gesture of its entire melodic figure. Both of these voices are therefore performed according to their individual metric and melodic characteristics, resulting in a performance that sounds as if the two voices are truly in duet. According to Podger, the overall objective is to 'get under the skin of each voice' in passages like this, making sure to 'perfect each voice before putting them back together'. The reassembled figure is then performed with a general difference in volume between the two implied voices and an overall *decrescendo* across the entire passage to reflect the descending sequence. See Example 5 for an audio recording of Podger performing this excerpt in the January 2016 recital.

Example 5: Audio of Podger's January 2016 performance of the Chaconne from Bach's solo violin Partita No. 2 in D minor (BWV 1004), bb. 33–7

Another example of two implied voices occurs at the end of the Fugue from solo violin Sonata No. 1 in G minor (BWV 1001; see Ex. 6). In bars 87–8, Bach sequenced a one-bar arpeggiated motive twice above a tonic pedal note in the implied bass voice (circled in blue in Ex. 6a). These arpeggiations are often dissonant against the tonic pedal, thereby adding harmonic tension. After a transition figure in the first two beats of bar 89 that maintains the tonic pedal, the motive changes to an ascending arpeggiation and the implied bass line moves up by step every two beats. That stepwise ascending bass line arrives at the dominant on the downbeat of bar 91, at which point the texture changes to two clearly implied voices that each contain conjunct motion. Large intervals, changes of contour, and distinct pitch ranges distinguish the two voices from each other. The upper voice is a descending diatonic scale (circled in red) and the lower voice is a descending chromatic scale (circled in green). As confirmed by perceptual research, large intervals are essential to the creation of implied polyphony. Modifying bars 91–2 of the fugue further verifies this notion. If octave transfer is used to reduce the size of the large intervals, there is no longer a clear delineation of two implied voices or of multiple simultaneously descending scales (see Ex. 6b).



Example 6: Fugue from solo violin Sonata No. 1 in G minor, bb. 87–93; a) score excerpt; b) modified version of bb. 91–2 using octave transfer

Podger described the tonic pedal in bars 87–9 as 'a kind of organ point'. She lengthens its initial occurrence on the downbeat of bar 87, then lingers less on each restatement since the pedal note appears to be present throughout and thus needs less emphasis as the passage continues. Podger then characterised bars 91–2 as being similar to a cadenza, with the figure seeming 'to want to gather momentum because it is like two voices chasing each other'. She prolongs the downbeat of bar 91 to signify its role as a point of arrival on the dominant, then gradually increases the tempo of bars 91–2. Even though Baroque performance practice tends to give weight to downbeats and down-bows, she feels that in this passage the 'actual affect of the motion seems to override that rule'. Communicating that affect therefore takes precedence over emphasising the downbeat of bar 92. She performs as if there is no bar-line between bars 91 and 92, playing the figure out of time and speeding up with a sense of metric freedom.

In addition to conveying her intended affect, Podger's expressive choice in bars 91–2 corresponds with the suggestion that Baroque performance practice allows for greater freedom of tempo in the solo or upper parts as compared to bass lines and accompaniments. As Tarling stated:

> When the bass is static, or ceases to play, the soloist or upper part may adopt an attitude of 'free time' or fantasy until the bass starts moving regularly again. A held pedal note in the bass indicates that a soloist may play with a certain rhythmic freedom.[27]

[27] Judy Tarling, *Baroque String Playing*, 31.

Although the dominant pedal in this fugue passage technically only occurs on the downbeat of bar 91, the implication is that it is sustained underneath the upper two voices throughout bars 91–2. That inference of a solo part and static bass validates the decision to linger on the dominant pedal and then perform the two upper voices with tempo flexibility. According to Podger:

> You might think you need to hold some of the notes in order to get the pedal point or the dissonance with the next chord that follows. But physically you can't do it. I think a lot of it is implied. And he [Bach] trusts that we are going to keep that in mind. It is not going to go away, even if you are not hearing that particular pedal point. So it is up to us [the performers] to be conscious of it and then to portray it that way.

Example 7 contains both audio and video recordings of Podger performing this excerpt from the G minor Fugue. The audio (a) is from her 1999 Channel Classics recording,[28] while the video (b) is from her January 2016 recital. Although both performances reflect her idea of a gesture gathering momentum, that idea is more pronounced in the 2016 performance. The increase in tempo starts sooner, without any lengthening of the second and third beats of bar 91, and the speed of acceleration is greater overall. These differences reflect a tendency for expert performers to maintain a consistent understanding or interpretation over time, but vary the scope of their expressive variations in order to exhibit creativity or spontaneity in each performance.

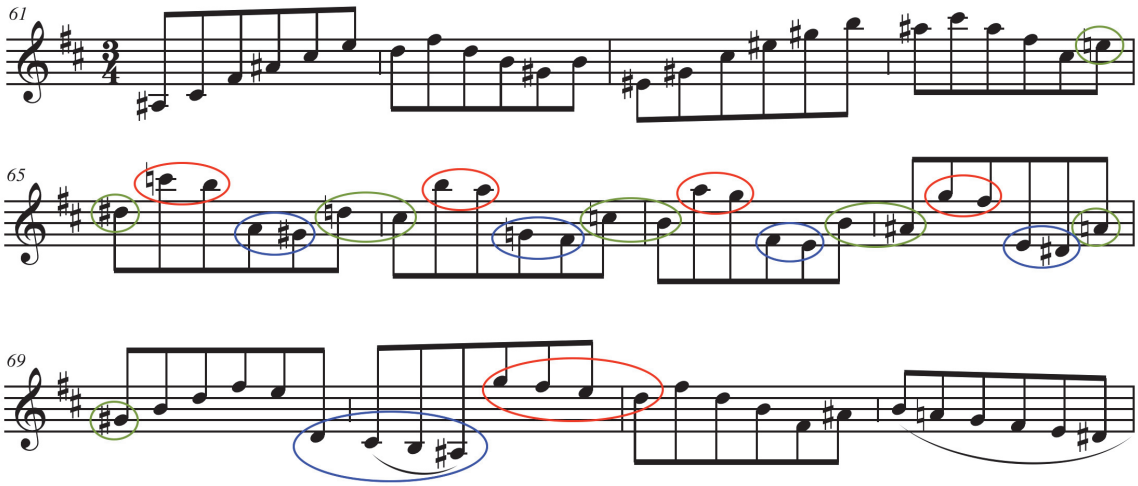
a. 

b. 

Example 7: Podger's performances of the Fugue from Bach's solo violin Sonata No. 1 in G minor, bb. 87–93: a) audio from 1999 Channel Classics recording; b) video from January 2016 recital

[28] Rachel Podger, *Johann Sebastian Bach: Sonatas and Partitas for Violin Solo, Vol. 1* (Channel Classics, CCS 12198, 1999).

Bach used a similar device in the Corrente from the solo violin Partita No. 1 in B minor (BWV 1002). Arpeggiations of dominant and tonic chords occur in bars 61–4, first in B minor and then in F♯ major (see Ex. 8). The subsequent sequence in bars 65–8 consists of three implied voices and resembles the sequence in bars 91–2 of the previously described G minor fugue (see Ex. 6). An arpeggiation in bar 69 momentarily gathers the voices together, after which only the soprano and bass voices are present. Another arpeggiation occurs in bar 71, the last two notes of which outline the dominant of B minor and lead to the elided cadence in bar 72, with the arrival on *b*′ acting as both the end of the previous phrase and the beginning of the next.



Example 8: J. S. Bach, Corrente from solo violin Partita No. 1 in B minor (BWV 1002), bb. 61–72

Both the Fugue and Corrente excerpts contain a stepwise descending sequence, with a sense of implied polyphony created by contrasts between conjunct motion (within voices), large intervals (between voices), and changes of contour. However, the two passages differ in metre, number of implied voices, and rate of sequential repetition. Bars 91–2 of the Fugue are in quadruple metre and contain three implied voices. But one of those voices is the dominant pedal in the bass line, leaving only two voices to participate in the sequential repetition and the 'chasing' figure. Part of that chasing affect is created by the overall descending contour both within and between voices, with ascending motion only occurring when the two-note motive moves back up to the soprano voice before descending again. The swiftness of the sequential repetition also plays a role, with motivic repetition occurring on every beat.

In contrast, bars 65–8 of the Corrente are in triple metre and contain three implied voices that all participate in the sequential repetition. Without the alto voice (circled in green in Ex. 8), the passage would be nearly identical to bars 91–2 of the Fugue. But the addition of a third implied voice alters the overall contour of the repeated quavers that are now part of a slower moving sequence, with motivic repetition occurring by bar rather than by beat. Instead of having two voices in a rapid, chasing descent over a pedal note in the bass, the Corrente has three voices that are passing a two-note motive from alto to soprano to bass (then back again).

When combined with the general character of a *corrente*, these differences rid this passage of the cadenza-like features that prompted Podger to play the end of the fugue with rhythmic and metric freedom. She instead performs bars 65–8 of the Corrente with a fairly strict tempo. A study of *rubato* in commercial recordings of eight professional violinists confirms that others employ the same approach in this passage. These performers did not use any significant timing variations to bring out the three implied voices, nor did they need additional time to manage the physical aspects of playing a passage that contains large intervals, changes of contour, and necessary string crossings.[29]

This lack of rubato could be explained by the metric placement of the implied voice changes. Each voice transition is created by a large interval and a change of contour, which place accents on weak parts of the beat and produce a sense of syncopation against the surface rhythm of repeated quavers. Previous research has shown a 'trading' relationship between *rubato* and syncopation, with music containing syncopation typically performed without much *rubato*.[30] This is because the perception of syncopation relies on some degree of tempo stability, with accents in weak metric positions occurring against a steady beat. Using *rubato* and lengthening a note that is intended to be syncopated creates an agogic accent that could cause listeners to experience a metric shift, perceiving that note as a strong beat instead of a weak beat. This metric shift could certainly occur in bars 65–8 of the Corrente. The highest notes in each bar mark the entrance of the soprano voice and receive contour and register accents. If performers add an agogic accent by lengthening those notes, listeners might perceive them as downbeats that act as the beginning of the motive rather than as weak beats within the bar.

Performers can avoid the metric obfuscation of *rubato* by using other expressive devices to bring out the counterpoint in passages with this type of implied polyphony. Podger suggests using slight changes of volume to clarify the triple metre in bars 65–8 of the Corrente, placing emphasis on the first and third beats. The distinct registers of each implied voice and the interval separations between voices naturally bring out the implied polyphony, particularly the upper voice due to its placement on the highest string. Bach therefore composed and sequenced this motive in a way that allows the implied polyphony to emerge clearly on its own, without requiring timing variations that could potentially disrupt metre. The implied polyphony itself is expressive.[31] See Example 9 for a video recording of Podger's January 2016 performance of this Corrente excerpt, as well as the subsequent concluding bars of the movement.

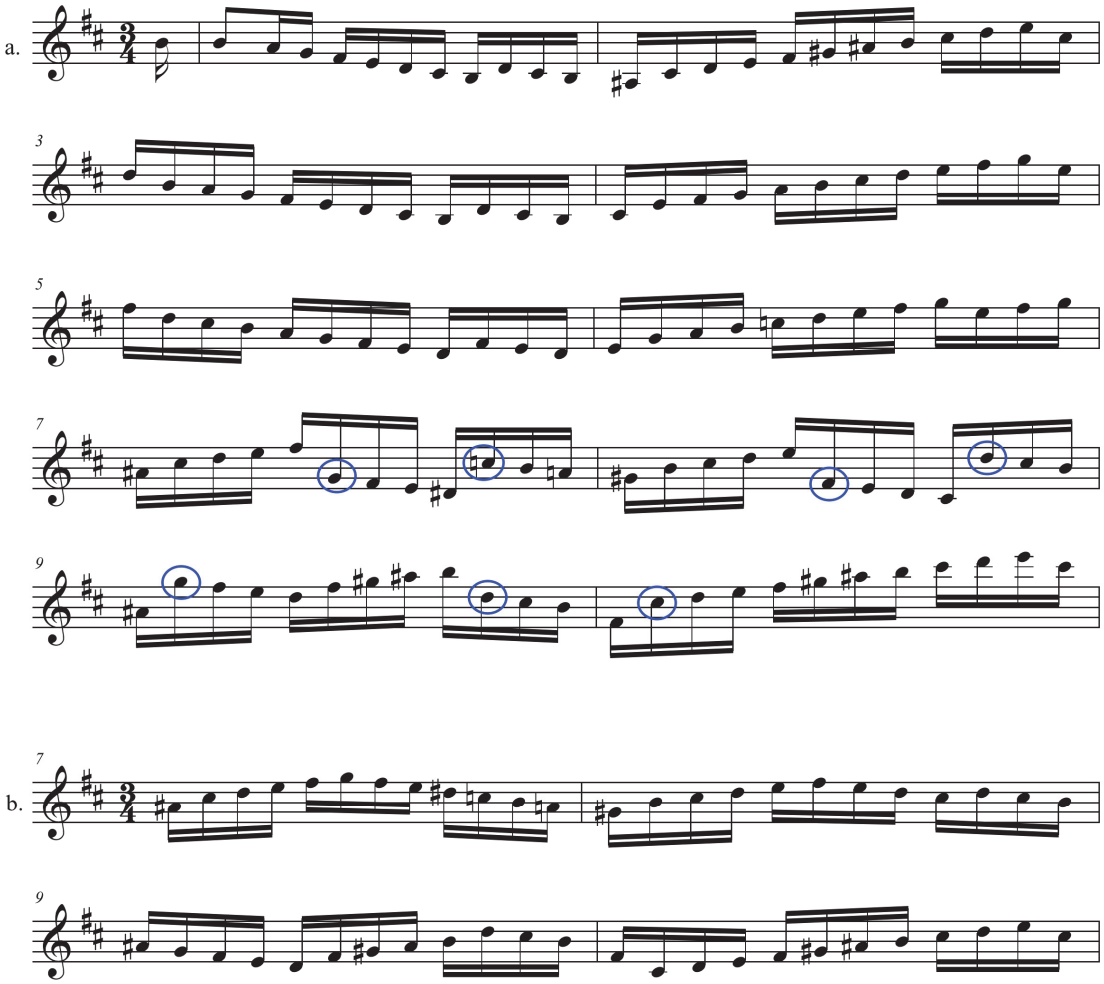
[29] Stacey Davis, 'Bring out the Counterpoint: Exploring the relationship between implied polyphony and rubato in Bach's solo violin music', *Psychology of Music*, 37 (2009), 301–24. The eight violinists whose recordings were studied for this article are Arthur Grumiaux, Jascha Heifetz, Yehudi Menuhin, Nathan Milstein, Shlomo Mintz, Rachel Podger, Jaap Schröder, and Henryk Szeryng.

[30] David Temperley, 'Communicative pressure and the evolution of musical styles', *Music Perception,* 21 (2004), 313–37.

[31] The slurs in the B minor Corrente are also a source of expressivity. For an elegant analysis of the role of slurs in delineating the motivic and metric structure of this piece, see John Butt, *Bach Interpretation: Articulation Marks in Primary Sources of J. S. Bach* (Cambridge: Cambridge University Press, 1990), 200–6.

Example 9: Video of Podger's January 2016 performance of the Corrente from Bach's solo violin Partita No. 1 in B minor (BWV 1002), bb. 61–80

Each dance movement in Bach's B minor Partita is paired with a *double* or variation. In the Double of the Corrente, the originally disjunct and angular motives are replaced with sweeping scalar passages that explore the different tessituras of the violin (see Ex. 10a). After presenting these scales in the opening six bars, Bach interrupts the conjunct motion with large intervals and sudden contour changes in bars 7–9 (circled in blue). These modifications certainly have a melodic effect, creating the impression that fragments of the conjunct motives are now being passed between different implied voices. But Podger asserts that the large intervals also 'add rhythm' by creating accents against the continuous semiquavers. Using octave transfer to remove these large intervals eliminates both the implied polyphony and the perceived accents, leaving the passage almost entirely conjunct again (see Ex. 10b). This instance of implied polyphony was therefore not created by arpeggiating a previously multi-voice harmonic progression, but is instead a clever manipulation of originally conjunct motion. As in bars 65–8 of the Corrente, Podger avoids any significant use of *rubato* in bars 7–11 of the Double. She instead uses bow weight and speed to accentuate focal notes in different implied voices, such as the *g*'' that marks the entrance of the soprano voice on the second semiquaver of bar 9 and the bass notes that occur on the third beats of bars 7 and 8. See Example 11 for a video of her January 2016 performance of this excerpt.

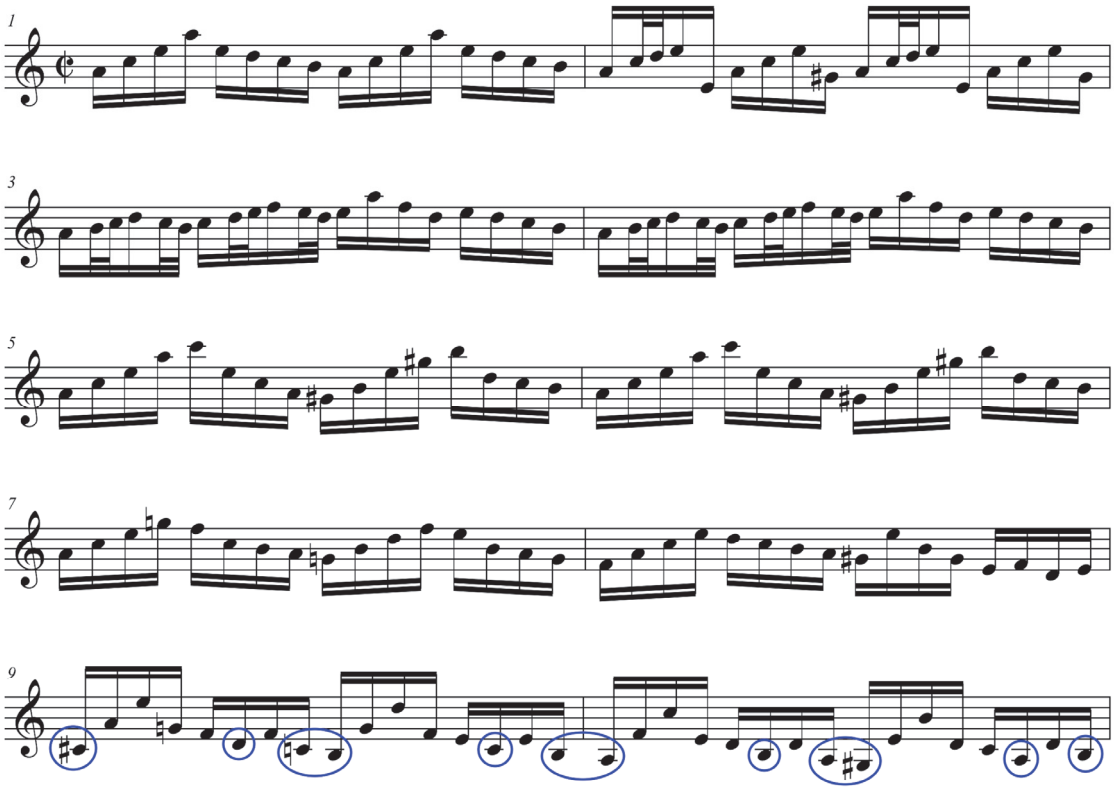


Example 10: J. S. Bach: Corrente Double from solo violin Partita No. 1 in B minor (BWV 1002), bb. 1–10: a) score excerpt; b) modified version of bb. 7–10 using octave transfer

Example 11: Video of Podger's January 2016 performance of the Corrente Double from Bach's solo violin Partita No. 1 in B minor (BWV 1002), bb. 1–10

Another example of the rhythmic effects of implied polyphony occurs in the Allegro from solo violin Sonata No. 2 in A minor (BWV 1003). This movement opens with a repeated semiquaver motive that contains an ascending arpeggiation and a descending four-note scale, followed by the introduction of demisemiquavers in bar 2 that provide rhythmic contrast throughout the piece (see Ex. 12). Bach composed a stepwise descending sequence of the arpeggiated motive in bars 7–8, with repetition occurring every two beats. A similarly paced sequence occurs in bars 9–10, but the sudden and frequent contrasts between arpeggiation and stepwise motion now create an implied bass line (circled in blue). Some of these bass notes occur in strong metric positions (the first and third beats of each bar), thereby outlining the sequential repetition. But others occur on the second and fourth semiquavers of the second and fourth beats, which are the weakest parts of the weakest beats in each bar. The implied bass line therefore feels syncopated against the continuous semiquavers.

a.



b.

Example 12: J. S. Bach, Allegro from solo violin Sonata No. 2 in A minor (BWV 1003), bb. 1–10: a) score excerpt; b) audio from Podger's 1999 Channel Classics recording

Podger's approach in this passage reflects an awareness of the trading relationship between syncopation and *rubato*. Rather than using timing changes to bring out the implied counterpoint, she employs Tartini's 'articulation rule' to clearly distinguish the bass line from the rest of the sequenced motive. In his

Rules for Bowing, Tartini suggested that performers play conjunct notes more connected and disjunct notes more separate. According to Tartini:

> In performance it is important to distinguish between cantabile and allegro music. In cantabile passages the transition from one note to the next must be made so perfectly that no interval of silence is perceptible between them; in allegro passages, on the other hand, the notes should be somewhat detached. To decide whether the style is cantabile or allegro, apply the following test: if the melody moves by step, the passage is cantabile and should be performed legato; if, on the contrary, the melody moves by leap, the passage is allegro and a detached style of playing is required.[32]

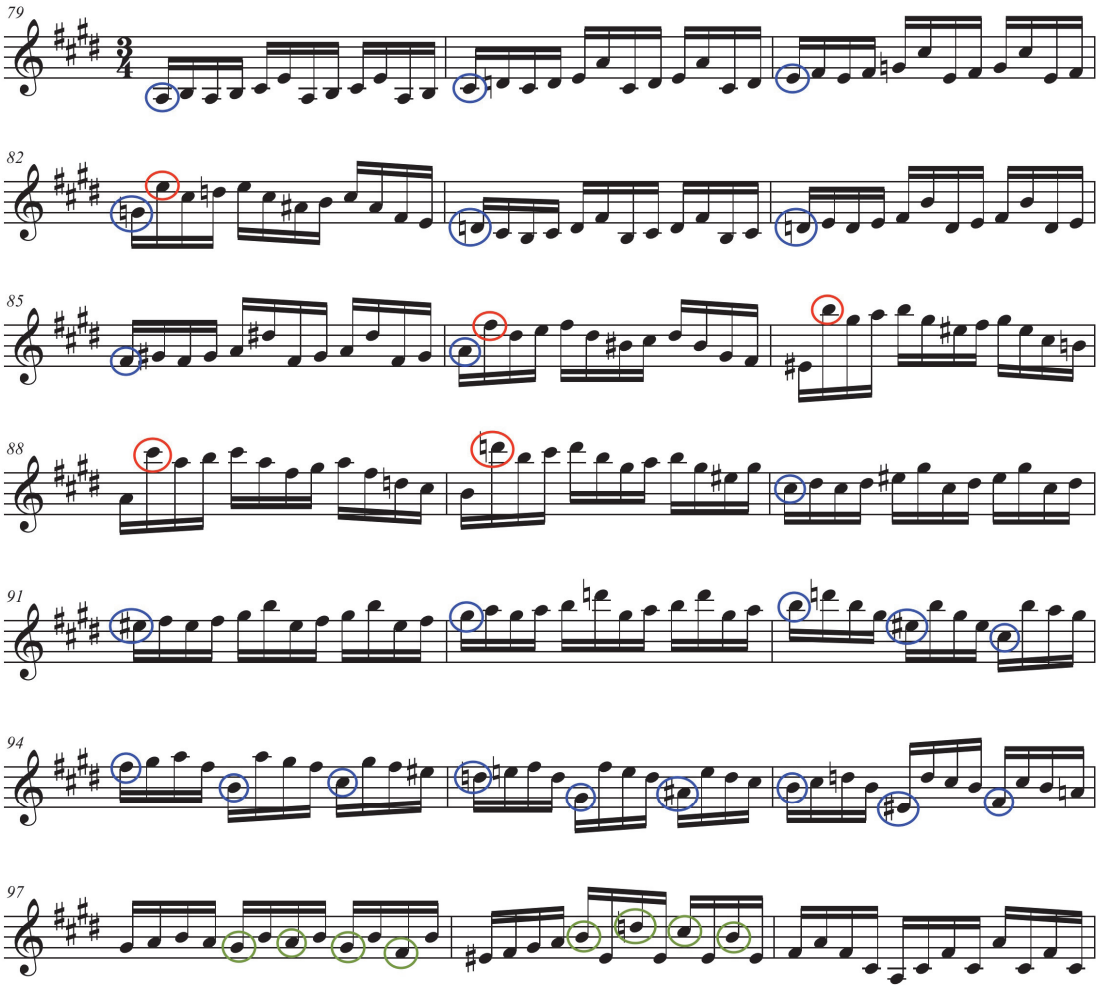
Given that the creation of implied polyphony necessitates a juxtaposition between stepwise motion (within voices) and large intervals (between voices), this articulation strategy is an effective approach to bringing out the different voices in many instances of implied polyphony. In this excerpt from the A minor Allegro, the use of different articulations avoids the disruption of metric regularity that *rubato* might cause, while still distinguishing between the conjunct notes that belong in the implied bass voice and all the other notes (which do not necessarily create a clear, second implied voice). Podger suggests that varying articulation in this way can create a three-dimensional effect that produces a performance with clear shapes and expressive contrasts, particularly when combined with a different dynamic level for each implied voice.

The previous examples show that Bach varied his approach to implied polyphony between pieces. But that variety also exists within single movements, where the characteristics of different motives, the repetition and sequencing of those motives, and the effects of implied polyphony create an assortment of melodic, rhythmic, and textural contrasts. An awareness of these contrasts offers performers a wealth of expressive possibilities. For instance, with the exception of the opening motive in the first two bars and a cadential figure in bars 134–5, the Preludio from solo violin Partita No. 3 in E major (BWV 1006) consists entirely of continuous semiquavers. Bach used arpeggiation, sequences, pedal notes, and implied voice-leading to create variety within those relentless surface rhythms.

Bars 79–99 begin with a motive that was first presented in the tonic key in bar 29, but is now transposed to the subdominant A major (see Ex. 13). Bach sequences that motive in bars 79–82, with the downbeats of each bar creating an implied bass line that outlines an A dominant seventh chord. That chord resolves on the downbeat of bar 83 to D, which becomes the third of a B minor chord, and begins another presentation of the same motive (see blue circles in bb. 79–86 of Ex. 13). Within the context of the motivic repetition, Bach added an ascending sixth on the second semiquaver of bar 82 (circled in red). That ascending interval provides the basis for the motive presented in bars 86–8, with the original sixth increasing to intervals larger than an octave.

[32] Eng. trans. in Erwin R. Jacobi and Willis Wager, 'G. F. Nicolai's Manuscript of Tartini's *Regole per ben suonar il Violino*', *The Musical Quarterly*, 47 (1961), 215.

a.



b.

Example 13: J. S. Bach, Preludio from solo violin Partita No. 3 in E major (BWV 1006), bb. 79–99: a) score excerpt; b) audio from Podger's 1999 Channel Classics recording

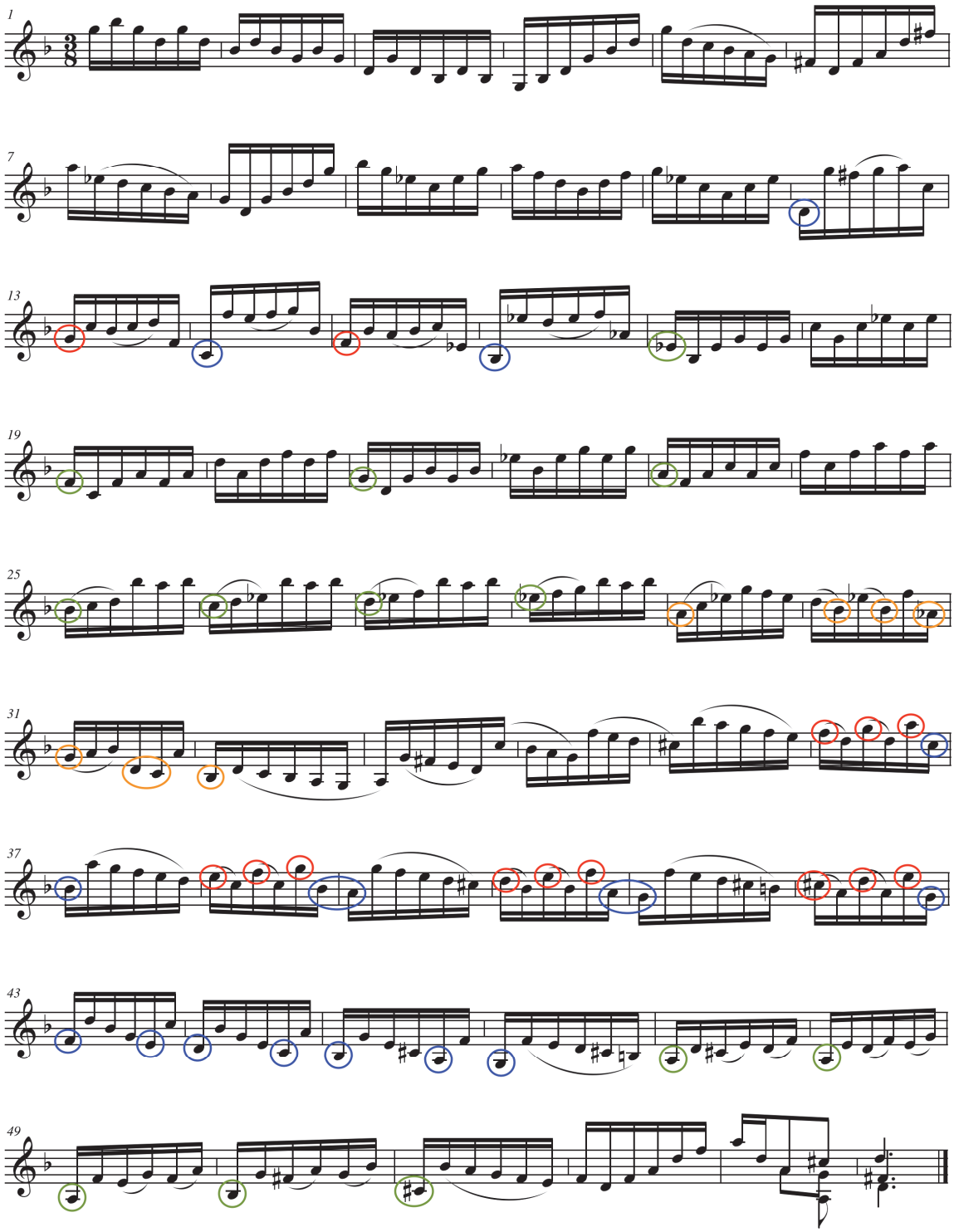
All presentations of this motive overlap in register, therefore preventing a perception of stepwise voice-leading or a sense of multiple, simultaneously streamed, implied voices. Each large leap and subsequent contour change instead creates the impression that a new implied voice enters the texture and momentarily takes over stating the motive. Podger recommends using *rubato* and lengthening each of the bass notes that precede the large intervals. Not only do these timing changes accommodate the physical act of moving between strings, they 'give a change of rhythm and act as a break, even though you're still playing'. The use of *rubato* is also appropriate here given that the lengthened notes occur on downbeats rather than on weak beats, thereby making it unlikely that listeners will experience any metric ambiguity.

The motive from bar 79 returns in bars 90–2, with the downbeats of each bar outlining a C♯ major chord. Bach then modified the harmonic rhythm in bars 93–6, changing from the previous rate of one harmony per bar to chord changes on

every beat. This faster harmonic rhythm causes the notes on each beat to emerge as an implied bass line, a perception that is strengthened by the large intervals and contour changes that follow the second and third beats of each bar and by the stepwise motion that continues towards each downbeat (see blue circles in bb. 93–6 of Ex. 13). Podger stressed the importance of recognizing and 'appreciating' these large intervals, pointing out that they naturally aid a performer in communicating the faster harmonic rhythm and the implied bass line. Following this passage, Bach created a different type of implied polyphony. In bars 97–8, repeated notes produce a pedal point (first on *b*′, then on *e*♯′) against a moving voice that is originally presented in the bass and then moves to the soprano (circled in green). See Example 13b for audio from Podger's 1999 recording of this Preludio excerpt.

The Presto from solo violin Sonata No. 1 in G minor (BWV 1001; see Ex. 14) also contains a variety of different types of implied polyphony, each of which contributes to what Podger called 'constant, relentless change' within the context of continuous semiquavers. The first instance of implied polyphony in this movement occurs in bars 12–16, where the downbeats of each bar receive metric accents and outline two implied voices that together create a circle of fifths pattern. Each of these downbeats is approached by a descending perfect fourth that acts as a pickup (circled in blue and red in Ex. 14). Interspersed between these two voices is a conjunct motive that enters on the second semiquaver of each bar and alternates between two registers. Each metrically weak entrance of the new register and motive receives a contour accent since it is higher than the preceding notes. But that motive also includes a slur that isolates its three conjunct notes from the surrounding interval leaps and places an articulation accent on the third semiquaver of each bar. This five-bar sequence therefore contains an assortment of structural accents that produce rhythmic complexity within uniform foreground durations.

An awareness of the metric hierarchy necessitates playing each downbeat in bars 12–16 more strongly than its accompanying pickup, which also highlights the harmonic pattern of descending fifths. Within that context, Podger recommends playing the notes in the implied bass line (circled in blue in Ex. 14) more strongly than those in the implied alto line (circled in red). 'Lifting the higher register' in this way distinguishes the two voices and clearly shows that the sequenced motive is actually two bars long. An appreciation of both motivic repetition and implied polyphony is therefore communicated by differentiating the downbeats in this passage. Although all downbeats are typically strong, they need not all be the same. There is a hierarchy of beats within a bar, as well as between implied voices and across bars in a phrase.



Example 14: J. S. Bach, Presto from solo violin Sonata No. 1 in G minor (BWV 1001), bb. 1–54

The notated metre of this piece supports this idea of differentiating downbeats. Bach chose a time signature of $\frac{3}{8}$, but his alternation of full and half bar-lines implies a hypermetre with two-bar units. Rather than suggesting that the piece is actually in $\frac{6}{8}$, this notational choice implies that performers should avoid playing every written downbeat the same. Instead, more weight is given to the first bar of each pair. As Ledbetter proposed, 'The beat after the half bar-line is a lighter

downbeat, not an upbeat as in $\frac{6}{8}$ time'.[33] The motivic and harmonic patterns within this movement tend to coincide with these pairs of bars, but Bach also composed three-bar units, interrupted sequences, and elisions that disrupt the hypermetric regularity. The sequence in bars 12–16 is an example of this irregularity. Preceding that passage is a three-bar sequence (bb. 9–11). This uneven number of bars causes the beginning of the subsequent sequence in bars 12–16 to follow one of Bach's short bar-lines and therefore coincide with the weak half of the two-bar hypermetric unit created by bars 11 and 12. Given that bar 12 is the beginning of a new motive and sequence, that expected weak hyperbeat suddenly feels strong. This hypermetric shift is further strengthened by the strong-weak pattern created by the alternation between implied bass and alto voices on each of the downbeats in bars 12–16. Podger's suggestions for communicating the motivic and voice-leading patterns within this particular sequence therefore allow a performer to highlight the hypermetric ambiguity which is created by motivic patterns and sequences that contradict the regularity suggested by Bach's consistent alternation between full and half bar-lines.

Further irregularity occurs at the end of this sequence. Bars 12–15 contain two repetitions of a two-bar motive, thereby causing listeners to expect that the third repetition will continue in the same manner. This expectation is fulfilled harmonically, with the *e'* on the downbeat of bar 17 continuing the descending fifths pattern. But that same note is part of a motivic and metric surprise. Bach left the previous two-bar motive incomplete and elided his interruption with the beginning of a new motive and sequence. In addition to the unexpected arrival of the new motive, that elision creates another metric shift, this time realigning the perceived hypermetric downbeats with Bach's notated two-bar units. Performers can react to these surprises by lengthening the downbeat of bar 17, thereby using *rubato* to bring attention to a moment that is simultaneously an unexpected end, a new beginning, and a hypermetric shift. Given that lingering on an unexpected moment can heighten its impact, Podger suggested that 'the rhetorical device of surprise always invites *rubato*'.

Another sequence occurs in bars 17–24, but its presentation is more predictable. Each pair of bars contains an ascending arpeggiation, with descending sevenths separating each of the four sequential repetitions. Those large intervals draw attention to the downbeats of every other bar, which coincide with harmonic changes and create a stepwise ascending bass line. The subsequent sequential repetition in bars 25–8 moves more quickly, with a one-bar motive repeated four times and a suggestion of two implied voices. The lower voice contains a three-note ascending scalar figure that rises by step at the beginning of each bar, continuing the bass line ascent that began in bar 17 and creating a one-octave E♭ Lydian scale in bars 17–28 (circled in green in Ex. 14). Larger intervals and a change in articulation separate that scale from a three-note auxiliary-note figure in the implied upper voice.

Bach created contrast between the two sequences in bars 17–28 by varying the motives, the rate of sequential repetition, and the type of implied polyphony.

[33] Ledbetter, *Unaccompanied Bach*, 107.

Podger also sees implied dynamics in these two sequences on account of the different figures and registers. A performer could therefore create additional contrast by means of a *crescendo* during the ascending sequence in bars 17–24, then a *dimuendo* in bar 25 in order to allow room for another ascent and *crescendo* in bars 25–8.

In addition to the hypermetric irregularity created by sequences that are three or five bars long, this Presto contains metric shifts within certain bars. Although the movement is written in simple triple metre ($\frac{3}{8}$), some of Bach's motives impose a perception of compound duple metre ($\frac{6}{16}$). The alternation between the moving voice and the pedal point, along with the three-note slurs, imposes a perception of compound duple metre in bars 25–8. The two-note slurs in bar 30 shift perception back to triple metre, with that bar also functioning as the beginning of a rhythmically irregular cadence in which large intervals and contour changes create a syncopated implied bass line (circled in orange in Ex. 14). To ensure awareness of this bass line, Podger suggests that performers first practise it separately from the other notes. Once that understanding has been established, differences in articulation can distinguish the bass line from the upper notes, with conjunct notes played more smoothly and larger intervals more separately.

Following that cadence is a passage whose implied polyphony is clearly not the product of arpeggiation, nor does it yield a sense of stepwise voice-leading or a distinct register for each implied voice. The implied polyphony in bars 32–5 is instead created by the repetition of a single motive in various registers. This motive contains uneven groups of descending semiquavers, with emphasis placed on the first (and highest) note of each group due to a preceding large interval, a change of contour, and a new slur. When combined with overlapping pitch ranges between each group, this combination of accents creates the impression that each statement of the motive occurs in a new implied voice while the other voices remain momentarily silent. It also creates two possible perceptions of the sequential repetition, one determined by harmony that aligns with written bars, and the other coordinated with articulation and contour that shifts the pattern forward by one semiquaver.

Using octave transfer to modify bars 32–5 generates a simple, extended descending scale that exceeds the lowest note of the violin (see Ex. 15). The changes of interval size and contour therefore allowed Bach to 'create an interesting perceptual illusion by having literal descending motion occur in a passage that ascends in overall pitch height'.[34] Bach's slurs also play an important role in the perception of this figure. Modifying those slurs, either by coordinating them with written bars, having them cross the interval leaps, or eliminating them altogether, would change the fundamental rhythmic and metric character of the passage. Given a facsimile of the autograph score as the source, Ritchie reminded violinists to 'always bear in mind that slurs in this music are not to be regarded as bowings but as part of the language and an essential ingredient of the texture'.[35] According to Butt:

[34] Davis, 'Stream Segregation and Perceived Syncopation'.
[35] Ritchie, *The Accompaniment in 'Unaccompanied' Bach*, 79.

> The performance implications of slurs are thus of particular importance in the interpretation of the music. They may relate to features which are already inherent in the notes, such as a sequence of conjunct notes which seems to run against the metrical pulse. Slurs confirm that this melodic grouping is also rhythmically important. Clearly Bach is acting here as the supreme interpreter of his music. His activity as a performer is literally a further stage in the compositional process[36]

Example 15: Modified version of bb. 32–5 of the Presto from solo violin Sonata No. 1 in G minor (BWV 1001), with octave transfer used to reduce the size of the large intervals

Podger described the passage in bars 32–5 as chaotic, which captures the metric ambiguity created by repeating a motive at irregular intervals of time and across notated bar-lines. In order to participate in this metric chaos, Podger first lengthens the *b*♭ on the downbeat of bar 32. Although it occurs in the weak half of Bach's two-bar units, it deserves emphasis because it acts as a harmonic cadence and marks the transition between the previous motive and the next. Following that hypermetric shift, Podger suggested that performers can appreciate the way in which Bach 'shoves you around like a gust of wind' by employing the typical approach to playing slurs. The beginning of each slur is strong, followed by a decay. This naturally gives emphasis to the highest notes, the uneven repetitions of the motive, the changes of bow direction, and the entrance of each implied voice, all of which occur in metrically weak positions. It also coincides with Ritchie's suggestion that, in this movement, 'the virtuosity … has less to do with velocity than with the enjoyment and artistic exploitation of the articulations'.[37]

Another elision connects this passage and the next, with bar 35 serving as both the end of the previous figure and the beginning of the subsequent two-bar motive that is sequenced four times in bars 35–42. This motivic overlap also realigns the two-bar hypermetre with Bach's notated full and half bar-lines. The lower voice in this passage contains a two-note descending motive that acts as a pickup and downbeat to the strong bar of each pair (circled in blue in Ex. 14), while the upper implied voice contains three ascending steps that occur on each of the three beats in the weak bars (circled in red). Podger views the sequential repetition of this figure as having a 'kind of latent shape … You have the shape of each one and then you have the overall shape, because you are coming down in register. So you have it in miniature form and then you have it over the overall phrase as well'.

Podger uses variations in dynamics and articulation to communicate this overall and latent shape. To reflect the metric hierarchy within each bar, the

[36] Butt, *Bach Interpretation*, 191.
[37] Ritchie, *The Accompaniment in 'Unaccompanied' Bach*, 79.

downbeats of bars 36, 38, 40, and 42 are played more strongly than their respective second and third beats. This creates a *decrescendo* on each instance of the three-note motive in the upper implied voice. The notes of the lower voice are also played with differences in dynamics, with the downbeats given more weight than the upbeats. The second note of the bass figure is therefore performed louder than the first, based on their respective metric positions. Articulation also serves to distinguish between the implied voices, with both two- and five-note slurs played more strongly at the beginning and with a decay towards the end. All this detail is done within the context of the notated two-bar units, where the first of each pair of bars is stronger than the second, and with an overall *decrescendo* for the entire sequence, since it is descending in tessitura. Bringing out the counterpoint in this type of passage therefore requires that the performer recognize the shapes of each individual implied voice, between the different implied voices, within the two-bar hypermetre, and for the sequence as a whole. There is a hierarchical structure to the music and to the performer's expressive nuances.

The downbeat of bar 43 elides the end of the previous sequence with the beginning of the next, with bars 43–5 containing a faster moving sequence in which motivic repetition occurs in each bar. In this new sequence, the implied bass voice continues the stepwise descent that began in bar 36 (circled in blue in Ex. 14), with bass notes occurring on the first and third beats of each bar and an arrival at the lowest pitch of the violin on the downbeat of bar 46. The following bars contain a bass-line ascent (circled in green) that leads to the cadence in the dominant in bar 54. See Example 16 for a video recording of Podger's January 2016 performance of the entire A section of this Presto.

Example 16: Video of Podger's January 2016 performance of the Presto from Bach's solo violin Sonata No. 1 in G minor (BWV 1001), bb. 1–54

Conclusion

Although this is not a comprehensive collection of excerpts, it still captures the variety of the implied polyphony in Bach's Sonatas and Partitas for unaccompanied violin. When combined with an analysis based on perceptual tendencies and a familiarity with Baroque compositional practice, Podger's insights and performances reveal that a violinist who is aware of this variety does not treat all instances of implied polyphony in the same way, nor have a single approach to 'bringing out' the counterpoint. Performers must be cognizant of a myriad of structural features, including changes in interval size and contour, the individual characteristics of each implied voice, motives created by the combination of implied voices, the pace of sequential repetition, the hierarchy of metre and phrasing, the role of slurs, and any moments of surprise or interruption. Each of these structural features inspires different expressive nuances, with some calling for variations in dynamics or articulation and others better communicated through *rubato*. An understanding of Baroque performance practice, a knowledge of the general features of each piece, and an awareness of the specific context of the implied polyphony therefore reveals expressive options that are as rich as Bach's figurations and compositional ideas.

Menuhin stated that 'there can be no allowance in the music of Bach for arbitrary effects and personal indulgence'. But he also reminded performers that 'there is every justification for a flexibility, a fluidity of line, a play of accent, colour and stress within a given series of notes, but only of course when these are justified by a sensitive and disciplined musical intuition and by an intellectual awareness'.[38] That intuition and awareness emerge as performers learn the grammar and language of the music, then combine their understanding with the technical and expressive skills necessary to fluently deliver that content in a manner that is clearly communicative and filled with expressive contrasts. Just as Geminiani desired that violinists execute every piece with 'exactness, propriety, and delicacy of expression according to the true intention of music', Podger views performers as a 'channel for what is here on the page'. As she described:

> If you don't bring out the counterpoint, then you are not really honouring what is on the page. And the whole point, of course, of playing anything that someone else made up and created is to try and replicate that as closely as possible to how they might have thought it. That is our role. We need to understand the language, portray it, and deliver it. And we need to move the listener.

[38] Mehuhin and Primrose, *Violin and Viola*, 119.