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**A Gesture of Expansion. The Limited Enlargement of the Tessitura  
in Beethoven's Piano Sonata Op. 53 as a Further Development  
of Procedures Essayed in His Early Chamber Music**

This essay follows on from an examination, begun elsewhere, of the relationship between the range of the piano keyboard and compositional structure.<sup>1</sup> There, among other topics, we investigated why Beethoven's Waldstein Sonata in C major Op. 53, his first work written for the Érard piano that he was given in the summer of 1803, in fact uses only part of the extended range that this instrument offered when compared to contemporary Viennese pianos. By taking some of his earlier chamber music works as our starting point here – the Violin Sonata in E♭ major Op. 12 No. 3 and the Gassenhauer Piano Trio in B♭ major Op. 11, both of which were written a few years earlier and were still intended for the standard Viennese piano keyboard (reaching up to f6) – we may observe that the 'gesture of expansion' introduced there is the same that reappears in the Sonata Op. 53. We shall here consider the implications of this gesture for the formal design of the works in which it occurs.

**Developments in instrument construction open up new compositional possibilities** Beethoven's emerging compositional style in the years around 1800 tended to result in works that were both longer in duration, and more complex in their use of different keys, than had hitherto been customary. These developments also made use of the fact that the piano's range was being extended at the time; longer compositional structures incorporating more modulations naturally require a more extensive tonal range. While Beethoven's Viennese contemporaries generally respected the traditional five-octave range of the piano (f1 – f6), accepting it as a 'natural' limitation within the canonised forms employed for piano music (and despite the existence already of several pianos that reached up to g6 or even a6),<sup>2</sup> Beethoven repeatedly made this very limitation the subject of unusual compositional procedures (see Music Example 1):<sup>3</sup>

- 1 Martin Skamletz: "Man hat diese Erweiterung des Tonumfanges seit ein paar Jahren an den Tasteninstrumenten sehr weit getrieben". Der Umgang mit Grenzen beim späten Mozart und beim frühen Beethoven, in: *Rund um Beethoven. Interpretationsforschung heute*, ed. by Thomas Gartmann and Daniel Allenbach, Schliengen 2019 (Musikforschung der Hochschule der Künste Bern, Vol. 14), pp. 263–290. This essay also includes a more comprehensive discussion of the examples discussed briefly in the following footnotes here, and demonstrated in Music Example 1.
- 2 "Das 19. Jahrhundert beginnt noch mit dem Fünfknoten-Umfang, der gelegentlich, bei Walter, bis g3, dann von Schantz bis a3 und um 1805 von den meisten Herstellern bis c4 erweitert wird". ("The

**MUSIC EXAMPLE 1** Piano Sonatas Op. 14 No. 1, 1st mvt, mm. 152f.; Op. 2 No. 1, 1st mvt, mm. 33 and 132; Op. 10 No. 1, 1st mvt, mm. 64–67, 223–226 and 126–129; Op. 14 No. 1, 1st mvt, mm. 41 f. (in reduced notation)

The lower boundary of the keyboard,  $f_1$ , is less often the focus of attention, and is only occasionally thematised; harmonic and dynamic aspects can here exercise a mutual influence on each other.<sup>4</sup> At the upper boundary,  $f_6$ , Beethoven's early works often present surprising solutions in their treatment of the melodic line, especially in connection with the transposition of the second subject in the recapitulation,<sup>5</sup> or in the sequence of keys employed,<sup>6</sup> which might be interpreted as a 'deformation' of the configurations expected,

nineteenth century began with a [keyboard] range of five octaves, which was extended by Walter to  $g_6$ , then by Schantz to  $a_6$  ..."). Gert Hecher: Designentwicklung und bautechnische Datierungsmöglichkeiten, in: *Das Wiener Klavier bis 1850. Bericht des Symposiums "Das Wiener Klavier bis 1850"*, ed. by Beatrix Darmstädter, Alfons Huber and Rudolf Hopfner, Tutzing 2007, pp. 179–194, here p. 192. All English translations in this article by Chris Walton.

- 3 In order to be reader-friendly, the following observations give the bar numbers used in modern editions, though they present the musical text of the original edition in each case. This is especially relevant at the extremities of the keyboard, where 'missing' notes have often been added in later editions.
- 4 For example, at the end of the first movement of the Sonata in E major Op. 14/1 (mm. 151–154), a *sforzato* is placed on the octave  $f_1/f_2$ , but the ensuing lead back into pianissimo is given on a single note,  $e_2$ , whose lower octave would exceed the range available on the keyboard. Here, the lowest note on the piano,  $f_1$ , appears unexpectedly as a component of the dominant of E major. This is unexpected for two reasons that serve to emphasise it all the more: first in terms of the dynamics, as the lower note of a *sforzato* octave on an unstressed beat of the bar, and secondly in harmonic terms, as the chromatically lowered second degree of the scale in E major, resulting in an altered dominant with an augmented sixth in relation to the fundamental note. This chord is resolved harmonically on a stressed beat of the bar, but comes across as unstressed, due not least to the fact that no lower octave is available under the note  $e_2$ .
- 5 In the first movement of the Sonata in f minor Op. 2/1, the melody takes almost the exact same course (utilising the highest available note,  $f_6$ ) at the end of both the exposition (mm. 33/37) and the recapitulation (mm. 132/136), despite the fact that it is given in  $A\flat$  major the first time and in f minor the second time.
- 6 In the first movement of the Sonata in c minor Op. 10/1, the second subject (given in the exposition from m. 56 onwards in  $E\flat$  major) is initially transposed in the recapitulation into the unusual key of F major (from m. 215 onwards) because this enables Beethoven to employ the note  $f_6$  at its climax (see

and which occur because the notes needed are not extant. Whereas the highest note available for the melodic line,  $f_6$ , is elsewhere seldom exceeded, such an act of 'expansion' might in rare cases be suggested as a 'missing' note,<sup>7</sup> and in exceptional cases it might even actually be notated.<sup>8</sup> The obvious necessity of expanding the range of the keyboard is often emphasised with reference to the fact that the traditional, limited tessitura was exploited by Beethoven at an earlier moment within a movement and less economically than one might expect in the customary formal dramaturgy.<sup>9</sup>

These observations refer primarily to works intended for publication and thus for performance on standard instruments of the time outside the direct control of the composer. Published works for a lay audience who played the piano themselves had to respect the normal range of common-or-garden instruments – in contrast to pieces that were published later or even posthumously. Such works might in certain circumstances have originally been conceived for very specific, special instruments, either within a private teaching context,<sup>10</sup> or for the exclusive use of the composer himself – such as in solo concertos with orchestral accompaniment. Works like these, which were 'custom-made' products, did not have to adhere to the standards of the aforementioned instruments, even if they were in some cases adapted in a later printing for the traditional range of the instrument. Certain passages in Beethoven's Piano Concertos in C major Op. 15 and in

m. 225 compared to m. 66 in the exposition); only later (as of m. 233) does it appear in the tonic key of c minor.

- 7 In the development of the first movement of the Sonata in c minor Op. 10/1,  $g\flat_6$  is implied but not notated (m. 128). The way this passage is composed – the note  $g\flat$  is unstressed and given in a long melodic line in octaves, piano – means that we either seem to 'hear' this note, or its absence is at the very least obscured. The similar passages in the Violin Sonata in  $E\flat$  major Op. 12 No. 3 and in the Piano Trio in  $B\flat$  major Op. 11 that are discussed later in this article both fall into this category.
- 8 The second subject of the first movement of the Sonata in E major Op. 14/1, whose context is otherwise comparable to the passage quoted here in Op. 10/1 (m. 128), indeed gives an  $f\sharp_6$  (m. 41).
- 9 We can see this, for example, in the early, frequent appearance of what was customarily the highest note available,  $f_6$ , which was traditionally used in small doses and only towards the end of a formal section. We find it thus, for example, in the first movements of the Sonatas Op. 10/1 (mm. 6 f. and 28) and Op. 53 (mm. 9–11). Regarding the traditional, economical dramaturgy in the use of this  $f_6$ , see the analysis of the first movement of Mozart's Sonata in  $B\flat$  major K. 570 in Skamletz: "Man hat diese Erweiterung ...", pp. 266–274.
- 10 See, for example, Mozart's Sonata for Two Pianos in D major K. 448/375a, which calls for a single  $f\sharp_6$  in the first piano in its third movement (m. 98). This first piano part was played on various occasions by his pupils Josepha Auernhammer and Barbara Ployer on their own, private pianos (together with Mozart himself at the second piano). This work was only printed posthumously; the first edition appeared in 1795, and included this  $f\sharp_6$  (*Sonate pour deux clavecins, œuvre 34<sup>me</sup>*, Vienna: Artaria [PN 550], *Clavicembalo primo*, p. 12). This instance might well have inspired Beethoven to do something similar.

**MUSIC EXAMPLE 2** Piano Concerto Op. 15, 1st mvt, mm. 171–174 (exposition) and 386–389 (recapitulation)

c minor Op. 37, for example, are to be seen in this light (see Music Example 2 and Figure 1).<sup>11</sup>

It is notable that the Sonata in C major Op. 53 no longer exceeds the traditional keyboard range only in selective, more or less negligible cases. Its third movement, for example, begins with g6 and returns to this note throughout. This meant that anyone wanting to buy the printed edition and actually play the piece would have to purchase a new instrument with a larger range. However, this sonata still does not yet utilise the entire, extended range of Beethoven's new Érard grand piano (f1 – c7), which he had been using since 1803 (his Sonata in f minor Op. 57, written slightly later, makes full use of its extended keyboard). The Sonata Op. 53 still limits itself to using the extra notes between f#6 and a6.<sup>12</sup> These notes are demonstratively introduced in chromatic steps, and their use at the close of the first movement (mm. 275 f.) is especially striking. Here, the highest

- 11 The use of f6 instead of the f#6 expected in the first movement of the Piano Concerto in C major Op. 15 (m. 172) reveals an interesting interaction of keyboard range, harmony and orchestration. In the context of the dominant key of G major, it produces an appoggiatura on a perfect fourth above the fourth degree of the scale in the bass where an augmented fourth would have been the expected, diatonic option (cf. the parallel passage in the recapitulation, with an appoggiatura on an augmented fourth, m. 387). This instance might well seem “awkward”, as Tilman Skowronek suggests, but it certainly is not exclusively negative and merely “a restriction for the publication of the piece” (Tilman Skowronek: *Beethoven the Pianist*, Cambridge 2010, p. 83 f.), for the unexpected f6 is emphasised by a reduction in the orchestration at this point (see Music Example 2). The first edition of the Piano Concerto in c minor Op. 37 (Vienna: Bureau d'Arts et d'Industrie PN 289 [1804]) assumes a keyboard range of up to g6 throughout, but prints all passages of the piano part beyond this in small, ossia notes (1st mvt, mm. 225–227 and 440 f.; 2nd mvt, mm. 36 and 77 [see Figure 1]; 3rd mvt, mm. 86–90, 346–349 and 438–442).
- 12 Sonata Op. 53, 1st mvt, mm. 73 (f#6), 207 (g6), 229–234 (g6 – a♭6 – a6) and 275 f. (g6 – g#6 – a6); 3rd mvt (g6 passim), mm. 27 f. and 140 f. (a6), 203 and 230 (a♭6), 262 (g#6 – a6) and 386 (a♭6). For an initial assessment of this circumstance (interpreting it as a cautious announcement of an intended extension of the keyboard range, also in piano works published for general use) and a discussion of its interpretation by Skowronek (in *Beethoven the Pianist*, pp. 103–115), see Skamletz: “Man hat diese Erweiterung ...”, pp. 286 f., with Music Example 9 (ibid., p. 285).



FIGURE 1 Piano Concerto Op. 37, 2nd mvt, mm. 58–77, piano part of the first edition, Vienna: Bureau d’Arts et d’Industrie PN 289 [1804], here in an identical re-issue “au Magazin de J. Riedl” [1814], with ossia notation for pianos with a larger compass, up to c7

Op. 53, 1st mvt

275

*ff* *f* *fp*

C I<sup>6</sup> I<sup>6</sup> IV

Op. 12/3, 1st mvt

56

*ff* *f* *sf*

Op. 11, 1st mvt

157

Cl./Vl. Vc. B<sup>b</sup> I<sup>6</sup> I<sup>6</sup> IV

MUSIC EXAMPLE 3 Piano Sonata Op. 53, 1st mvt., mm. 275–278; Violin Sonata Op. 12 No. 3, 1st mvt, mm. 56–58; Piano Trio Op. 11, 1st mvt, mm. 157–164. In all these music examples, the other instrumental parts (violin, violin/clarinet, cello) have been included in small print in the piano part.

note used,  $a_6$ , is reached chromatically and is part of the subdominant F-major triad that also contains the lowest available note,  $f_1$ , in bar 277 (Music Example 3, line 1).

This harmonisation of the upper part  $g_6 - g\sharp_6 - a_6$  in C major represents, as it were, the definitive version of the expansion of the keyboard range used in this sonata. The fifth degree of the scale in C major is altered upwards and leads into the sixth degree, thereby extending the hitherto customary range upwards, chromatically, by a whole tone. In harmonic terms, this is achieved by altering the fifth of the tonic triad, which thus becomes an intermediary dominant of the subdominant.

**A gesture of expansion** What in the context of the Sonata Op. 53 would appear to be a singular instance of placing the highest point shortly before the end of the movement proves in retrospect to be a repeat instance of a 'gesture of expansion' that we can already find in two of Beethoven's chamber music works from 1797/98.<sup>13</sup> However, given the state of piano construction and the prevalence of the instrument at the time, these instances are one tone lower than in Op. 53, and they are in any case 'virtual' expansions, since the notes  $f\sharp_6$  and  $g_6$  are not notated, but merely suggested (see Music Example 3, line 2). In both the Piano Trio in B $\flat$  major Op. 11 and the Violin Sonata in E $\flat$  major, Op. 12 No. 3, the sequence of notes  $f_6$  [ $- f\sharp_6 - g_6$ ] is implied in striking, almost identical fashion in the first movement in each case. In Op. 11 this occurs at the beginning of the recapitulation (mm. 157 f.) and in Op. 12 No. 3 towards the end of the exposition (mm. 56 f.). In other words, in both cases we are in the region of B $\flat$  major and thus, as in the Piano Sonata Op. 53, we are dealing with the stepwise melodic sequence ⑤ -  $\sharp$  ⑤ - ⑥. In bars 161 f., Op. 11 also provides a harmonised version of this melodic motion, which is exactly the same as in Op. 53. The principal difference between them lies in the fact that the upper limit of the keyboard in 1797/98 was still  $f_6$ , whereas in 1803/04, Beethoven sets it at  $g_6$ , which in Op. 53 he exceeds with the use of  $g\sharp_6 - a_6$ . In what follows below, these passages in Op. 11 and Op. 12 No. 3 are understood in such a way that they both demand an expansion of the range of the piano keyboard and essentially announce the imminence of that expansion – which becomes a reality from the Sonata Op. 53 onwards; this sonata, conversely, refers back to that earlier pronouncement in the form of a quotation.

**Op. 12 No. 3: A necessary expansion with an unsatisfactory solution?** In the first movement of the Violin Sonata Op. 12 No. 3, this gesture of expansion is given in exactly the right place – at least when it occurs in the exposition – namely in the context of one of

13 Kurt Dorfmueller/Norbert Gertsch/Julia Ronge: Ludwig van Beethoven. Thematisch-bibliographisches Werkverzeichnis, Munich 2014, Vol. 1, pp. 56–60 (Op. 11) and pp. 60–66 (Op. 12).



the concluding cadences in the dominant key (mm. 56–58). It thereby enables this first formal section to find a clear climax. The ‘virtual’ use of  $f\sharp 6$  and  $g6$  seems a well-nigh necessity, since the exposition has already used the actual top note  $f6$  all too often in all manner of contexts (contexts that were unusual at the time) – not yet in the region of the first subject (until m. 13), but:

- already at the beginning of the modulation towards the dominant,  $B\flat$  major (m. 18),
- thereafter numerous times after reaching the dominant of the new key (mm. 23–28),
- during the second subject (three times in mm. 37–41) and
- during the ensuing passagework (m. 47),
- and this  $f6$  is also given twice in the closing section and after the ‘expanded’ cadence (mm. 62 and 66).

Music Example 4 gives several of these instances.

**MUSIC EXAMPLE 4** Violin Sonata Op. 12 No. 3, 1st mvt, excerpts from the exposition (mm. 5–13, 22–28, 43–48) and the recapitulation (mm. 108–115, 122–124, 139–144), in direct comparison

At least at first glance, the recapitulation of this movement seems to distribute these top notes quite normally in the context of transposing the exposition. They now appear in those passages in which they were not stated during the exposition:

- already in the first subject (mm. 110 and 113 f.) in connection with its unexpected slip into the key of A $\flat$  major, which continues
- at the beginning of the transition (f6 in m. 117).
- When the dominant of E $\flat$  major is reached, the f6 can be employed just as well as it was in the exposition in B $\flat$  major (mm. 122 f.),
- and also towards the close of the movement, the traditionally highest note is once again used in a different place from in the exposition (m. 172).

Only when the second subject is transposed to the fundamental key of E $\flat$  major in the recapitulation is its dramaturgy of the highest note no longer completely convincing: The theme proper (in the piano at mm. 133–140) is transposed downwards throughout when compared to the exposition, which is why it could not employ the highest note of the keyboard at all, if it were not abruptly transposed up an octave in the penultimate bar (m. 139). In the ensuing passagework, the f6 can be utilised appropriately once more (in m. 142, as a transposition of m. 46), though immediately afterwards (in mm. 47/143), the melody is transposed irregularly in a manner that is not immediately comprehensible, and which does not generate a new top note. The cadence with its ‘gesture of expansion’ (mm. 152 f.) is also transposed downwards almost exactly in the recapitulation, and cannot even incorporate the former top note f6, let alone suggest a new, higher note.

Thus, unlike the exposition, which introduced the virtual f $\sharp$ 6 and g6, the recapitulation remains without an unambiguous highpoint and leaves an impression that is not entirely satisfactory in this regard – at least according to this initial analysis, which refers only to the use of the traditional top note f6. This note occurs almost stereotypically, and in almost every part of the movement it appears as a component of the same chord, namely the dominant of c minor, often as the first note of a *fonte* model (V): II V I in B $\flat$  major:

- in the exposition, when the modulation to the dominant key begins in bars 18–21,
- in the second subject in bars 33 f. and 41 f.,
- and also – though not in a *fonte* – in bar 47 in the ‘irregularly transposed’ passagework mentioned above, and
- at the opening of the development in bars 68–70.

With regard to the expansion of the keyboard range suggested by Beethoven using f $\sharp$ 6 to g6, several further aspects are perhaps of interest for the harmonic implications of this



melodic ascension. After all, our concern here is with the connection between expanding the range of the keyboard and changes in compositional structure:

- the note  $f\sharp$  as the leading note in the key of  $g$  minor, the parallel key of the dominant key of  $B\flat$  major, is found primarily in the development, where this key plays an important role (mm. 72–81).
- In the closing section of the exposition, several  $f\sharp$  are hidden among chromatic auxiliary notes (mm. 60 and 62).

Overall,  $g\flat$  is found much more often, which – unlike the  $f\sharp$  – does not lead upwards to  $g$ , but has no place in the diatonic keys of the scale of  $E\flat$  major, and instead occurs in various keys that are related to the variant key of  $e\flat$  minor: Thus, in the development, a regular model sequence begins in bar 81 in  $g$  minor/ $c$  minor/ $f$  minor that proceeds via  $b\flat$  minor (m. 90) and  $e\flat$  minor (m. 93) to  $C\flat$  major (m. 94), a key that initially sounds very distant, but then employs a minor seventh that is reinterpreted as an augmented sixth (m. 102) and thereby leads quite uncomplicatedly back into the recapitulation in  $E\flat$  major. In the exposition, the  $g\flat$  is the bass note of an augmented sixth that leads to the dominant of the dominant key of  $B\flat$  major (mm. 22 f. and 26 f.). Such a brief shift to the minor, both before the confirmation of the dominant key (namely  $b\flat$  minor, mm. 21–28 and then again in mm. 51–54) and in the recapitulation in the home key (here  $e\flat$  minor in mm. 147–151) is very common.

In the other movements of the Sonata Op. 12 No. 3 – only a few aspects of which can be addressed here – keys from the tonal area of their respective variant key are also used: In the Adagio (in  $C$  major), these are  $f$  minor and  $D\flat$  major, which occupy themselves extensively with the lowest note on the piano,  $f_1$  (mm. 24, 26, 28, 32, 34); in the final Rondo, which is back in  $E\flat$  major, the middle couplet (mm. 95–162) spends most of its time in  $G\flat$  major,  $e\flat$  minor and  $b\flat$  minor.

Our initial impression was that the use of a ‘gesture of expansion’ in Op. 12 No. 3 is an anecdotal element occurring only once, and that it could not positively influence the course of the work in any meaningful way in terms of employing a traditional dramaturgy of the highest notes, especially in the first movement. However, at the close of our comments here, we shall relativise this assumption by viewing things from a different perspective.

**Op. 11: Does it make a thorough case for expanding the tonal space?** When compared with the first movement of the Violin Sonata Op. 12 No. 3, in which this ‘gesture of expansion’ tends to occur in an unrelated manner, the Piano Trio Op. 11 by contrast seems to have been composed in a far more consistent fashion: its first movement almost gives the impression that its whole structure is derived from the ‘gesture of expansion’

that has been adopted from Op. 12 No. 3. This figure thus stands like a motto right at the beginning of the movement (mm. 1 f., Music Example 5) – though it is still an octave lower than in the version that actually exceeds the range of the keyboard and that opens the recapitulation (mm. 157 f.). On the other hand, however, it becomes perceptible in bars 3 f. that there is a need to extend the piano's tonal compass downwards as well – which was traditionally f1–f6. The intensification that takes place from the exposition to the recapitulation in Op. 11 works better dramaturgically than the unique appearance of the corresponding 'gesture of expansion' at the end of the exposition of Op. 12 No. 3. The introduction of this figure in a striking unison is immediately followed by a harmonised version of the motion in the upper voice, f–f#–g, which has already been discussed above in the context of Op. 53 (mm. 5 f. and then also mm. 161 f. – see again, in this regard, Music Example 3). The use of this chromatic motion is not limited to the top part but can also occur in the bass (see mm. 16 f.), which in turn brings other harmonic implications with it. It can occur both within a cadence in the home key of B♭ major (mm. 16–19) and in the context of the second subject in the dominant key of F major, either as the sequence e–f to f#–g and back again (mm. 55–63), or in the form of a proper *fonte* (V): II V I (mm. 84 f., Music Example 5). In the coda of the first movement, there is a 'definitive' version of the cadence with an integrated 'gesture of expansion' as the bass line (mm. 247–254); here, bar 252 offers a further virtual downward extension of the tonal range.

The close of the coda from bar 247 onwards is already present in exactly the same form in a sketch in the *Kafka Sketchbook*, as are the complete development section and the beginning of the recapitulation.<sup>14</sup> Several aspects here are worthy of note:

- The development (mm. 106–156) is notated there in the form of a largely one-part continuity draft that lays down both the temporal proportions and the basic key areas; this was presumably an initial draft, though it completely matches the final, published version. This means that a specific element within the development that the composer was free to determine, namely the path that the modulations take in the model sequence, was in fact fixed from the beginning. It takes us from D♭ major (m. 123) via e♭ minor (m. 125), f minor (m. 129) and g minor (m. 133) to the dominant of b♭ minor/B♭ major (m. 143) – thus for long stretches it proceeds through ascending major seconds. This progression can also be associated with the chromatic 'gesture of expansion'.

<sup>14</sup> GB-Lbl Add. Ms. 29801 ("Kafka"), fol. 146v. Facsimile: Ludwig van Beethoven: Autograph Miscellany from circa 1786 to 1799 (the "Kafka Sketchbook"), ed. by Joseph Kerman, London 1970, Vol. 1, fol. 146v. Transcription: *ibid.*, Vol. 2, p. 23 f. Regarding all the sketches assigned to op. 11, see Ludwig van Beethoven. Thematisch-bibliographisches Werkverzeichnis, Vol. 1, p. 57.

The image displays four staves of musical notation for Piano Trio Op. 11, 1st movement. The notation includes various musical symbols such as notes, rests, trills (tr), and dynamic markings (f, sf, ff, p, cresc., staccato). The staves are labeled with measure numbers: 1, 13, 57, and 247. The notation is in a key signature of one flat (B-flat major or D minor) and a 3/4 time signature. The staves are labeled with instrument abbreviations: CL/Vl. (Clarinet/Flute) and Vc. (Violoncello). The first staff (measures 1-12) shows the beginning of the exposition with a forte (f) dynamic. The second staff (measures 13-56) continues the exposition with a crescendo (cresc.) and a trill (tr). The third staff (measures 57-84) shows the beginning of the recapitulation with a piano (p) dynamic and a staccato marking. The fourth staff (measures 247-254) shows the coda with a piano (p) dynamic and a trill (tr).

**MUSIC EXAMPLE 5** Piano Trio Op. 11, 1st mvt, excerpts from the exposition (mm. 1–8, 13–19, 55–63, 84 f.), the recapitulation (mm. 157–160) and the coda (mm. 247–254)

- The beginning of the recapitulation (mm. 157–184) is also sketched out on the same sheet. It was probably made very early in the compositional process, though the only deviation between this sketch and the final version is the fact that the melodic line  $f - f\sharp - g$  in mm. 161 f. has already been transposed to  $b\flat - b - c$  and is intended to use a diminished seventh to lead towards c minor; in the final version, however, it remains untransposed at this point (see Music Example 6).
- Afterwards, this sketch corresponds precisely once more to the printed version. Thus the transposition down a fifth, which is already found in the transition (to  $E\flat$  major, from m. 166 onwards), plus the shift to c minor (from m. 177 onwards), which does not occur in the exposition, seem to have been determined in the initial stages of the work's conception. The stepwise melodic sequence ⑤ –  $\sharp$  ④ – ⑤ (in  $B\flat$  major in the exposition, at  $f - e - f$  from m. 20 onwards, in  $E\flat$  major in the recapitulation, at  $b\flat - a - b\flat$  from m. 169 onwards) can become the sequence  $g - f\sharp - g$  through its transposition to c minor.

This comparison with the sketch provides convincing arguments that incorporating the sequence of notes  $f - f\sharp - g$  as a kind of 'idée fixe' on all possible structural levels constitutes

157 *CL/Vl.*  
*ff sf p*  
*Vc.*

[fol. 146v, line 4]

171 [line 5]

181 [line 6]

**MUSIC EXAMPLE 6** Piano Trio Op. 11, 1st mvt, mm. 157–187 (beginning of the recapitulation): A comparison of the printed version with the sketch *GB-Lbl Add. Ms. 29801* (Kafka), fol. 146v. Transcription as given in *Beethoven: Autograph Miscellany ...*, Vol. 2, p. 23, with the bar numbers of the published version added here

the basic idea of the entire movement and was correspondingly planned by Beethoven from the very beginning.

The de facto ‘extension’ of  $f_6$  by  $f\sharp_6$  and  $g_6$  is only suggested once in this movement, namely at the beginning of the recapitulation – unless one has an instrument with the additional notes  $f\sharp_6$  and  $g_6$  available and decides to play bars 177–180 an octave higher in the right hand. Otherwise, allusions to the new possibilities opened up by these two notes must be limited to the lower octaves of the piano keyboard.

Given that the range of the piano keyboard available to him remained limited from the perspective of 1798, it therefore seems reasonable to suggest that Beethoven decided to focus on other parameters in order to create the impression of an expanded tonal space. Plausible examples of this are the transition in the exposition (from m. 39 onwards) and the beginning of the development (from m. 106). Here, two foreign keys, D major and  $D\flat$  major, enter quite unexpectedly and abruptly, neither of which is proper to the scale of  $B\flat$  major, but which are both mediant keys in which the note of  $f\sharp$  /  $g\flat$  plays a significant role (see Music Example 7). D major can subsequently be understood as the dominant of g minor, and the whole, in retrospect, as the beginning of a *fonte* modulation (V): II V I to F major; it is out of  $D\flat$  major that the abovementioned model sequence in ascending seconds develops (and in mm. 113 f., we can hear once more the descending sequence of notes  $g - g\flat - f$ ). What is decisive here, however, is the element of temporal stretching in an unexpected tonal space that is clearly perceptible in these two instances: it is initially irritating, but then remains in the memory in the long term. This observation may serve as an example of the connection that occurs here between an expansion of the keyboard

The image displays a musical score for Piano Trio Op. 11, 1st movement, showing excerpts from the exposition, development, and recapitulation. The score is written for Violin I/Clarinete (Vl./Cl.), Violoncello (Vc.), and Piano (p). The key signature is one flat (B-flat major or D minor). The tempo is marked 'p' (piano). The score is divided into four systems, each with a label on the left: 'Ex-pos.' (Exposition), 'De-vel.' (Development), 'Actual recap.' (Actual Recapitulation), and 'Proposed recap.' (Proposed Recapitulation). The measures are numbered 39, 106, 67, 204, 88, 225, and 227. The notation includes various musical symbols such as notes, rests, trills (tr), and dynamic markings (pp, p, sf, cresc.). The 'Proposed recap.' system shows an alteration to the recapitulation, with measures 204 and 225 marked 'cresc.' and 'p'.

**MUSIC EXAMPLE 7** Piano Trio Op. 11, 1st mvt, excerpts from the exposition (mm. 39–48, 67–71, 88–90), the development (mm. 106–116) and the recapitulation (mm. 204–208, 225–227), with a proposed alteration to the recapitulation

range and an expansion of the formal dimensions, though the sheer physical limitation of the keyboard means that expansion here takes place by means of deferment: what cannot expand upwards has to expand outwards instead.

In view of the continuation of the second subject (mm. 67/88 in the exposition, mm. 204/225 in the recapitulation, see Music Example 7), we ought to consider whether an expansion of the tonal range to  $a_6$  is in fact already anticipated in Op. 11, not merely in Op. 53. The trill figures from bars 67/204 onwards – each time rising by a fifth – are arranged in such a way that they both contain  $f\sharp - g$  and  $g\sharp - a$ , in F major in the exposition and transposed to  $B\flat$  major in the recapitulation; in the recapitulation, however, in contrast to their surroundings, they are transposed downwards so as not to exceed the traditional range of the keyboard. In the final system of Music Example 7, we offer an example to demonstrate how the second half of bars 205 and 206 could actually be played an octave higher, which would also result in a literal transposition of the figure in question from the exposition. A contemporary pianist with a keyboard stretching to  $a_6$  would surely have played this passage an octave higher than printed.

We shall now return to the issue of key relationships. In bars 70 f. (and several times in the following bars, alternating with cadences in F major), the melodic sequence  $g\sharp - a$

is actually also given in the form of a cadence in a minor – which is not a diatonic key in the context of B $\flat$  major (which usually has a diminished triad on the seventh degree), and which remains rather unusual even in the dominant key of F major as it is the key of the third degree of the scale. But in a certain sense, it is a transference of the ‘gesture of expansion’ g $\sharp$  – a onto the level of tonality. Beethoven seems to be suggesting that expanding the tonal space might also be accompanied by an expansion of the system of available diatonic keys.

The descending sequence in bars 88/225 is also melodically altered when it is transposed. In the exposition, the right hand of the piano plays the same part as the violin/clarinete (mm. 88f.), but in the recapitulation (mm. 225f.) it is given a tenth above the bass. This intervention is also due to the upper limitations of the tonal space, and a ‘proposed’ version on our part would look like the one given in the bottom system of Music Example 7; it would also go up to a6. Anyone with a piano that has keys above f6 (including all modern pianists) ought to play this version.

It is hopefully not an act of over-interpretation on our part to say that the first movement of the Trio Op. 11 is a utopian meditation on the part of the composer on the imminent introduction of an expanded piano keyboard and, above all, that those new possibilities would not impinge solely on the melody, timbre and the act of playing in the piano’s highest register, but would also prompt new solutions for harmony, modulation and, ultimately, musical form too.

**Op. 53: key transformation as a process** The fact that there is a connection between expanding the formal sections and key complexity in Op. 53 has already been demonstrated by Anton Förster.<sup>15</sup> Our aim here is to go beyond this to point out the interaction between these structural changes and the expansion of the tonal space – taking our cue from our observations above on the early chamber music in which a ‘gesture of expansion’ was established with regard to the limitations of the keyboard, and which was also implemented to varying degrees in other parameters, such as the key structure and temporal expansion.

Given the exact harmonic reiteration of the ‘gesture of expansion’ demonstrated above, it seems obvious that Op. 53 refers back to Op. 12 No. 3 and Op. 11. It remains to be seen whether or not we might identify further references – such as the unexpected B $\flat$ -major triad in bar 5 of the first movement as a possible anecdotal reference to the ‘gesture of expansion’ in its earlier forms in B $\flat$  major. Often, the C-major chord in bar 1

15 Anton Förster: *Grande Sonate durch Erweiterte Tonalität. Harmonik und Form im ersten Satz der Klaviersonate op. 53 von Ludwig van Beethoven*, in: *Festschrift Ulrich Siegele*, ed. by Rudolf Faber, Anton Förster, Hans Ryschawy, Jutta Schmoll-Barthel and Rolf W. Stoll, Kassel 1991, pp. 135–165.



is interpreted as the “subdominant [of] G major” (m. 3), which makes B♭ major (in m. 5) the subdominant of F major (m. 7).<sup>16</sup> In any case, the B♭-major triad in bar 5 joins a series of alternative harmonisations in this work of the traditional *lamento* model of a chromatically descending bass from the 1st to the 5th degrees of the scale (here in the 1st movement in mm. 1–9, then – perhaps more unusually – in the 2nd movement in mm. 1–6). Does the extended tonal range thus also transform such traditional compositional models?

The main difference between Op. 53 and the earlier works discussed above is that the keyboard range, which was formerly limited to f6, is actually exceeded in Op. 53. Accordingly, higher notes are no longer merely suggested here and there, nor is the melodic course in the upper register cut off where it was clearly intended to ascend. Instead, it becomes possible for Beethoven to unfold a generally more complex compositional structure within a larger tonal space and in an undisturbed fashion.

On the one hand, this aids Beethoven in handling the transposition of the exposition during the recapitulation and reduces any need for special acts of adaptation such as we have seen in his earlier works. On the other hand, it also now means that he can embark on finding new solutions for formal relationships in which an expanded approach to employing different keys corresponds to an expansion of the tonal space, and also results in an expansion of the formal structures.

As an example of this new conception of these aspects of musical form, we shall comment here on how Beethoven deals with the second subject, first in relation to the keys used in it (Music Example 8): For a sonata movement in C major, it is unusual to choose the key of E major for the second subject (from m. 35 onwards); it is the mediant of the tonic, just as was the case with D major in Op. 11, where the tonic was B♭ major; however, in contrast to the latter, the mediant key is here prepared in regular fashion and thus does not come as a surprise.

The transposition of this E-major passage in the recapitulation is first carried out in A major (from m. 196 onwards); this is a fifth lower, as was to be anticipated, but also creates a further mediant relationship to the tonic instead of transposing this passage into the tonic key itself. Expanding the tonal space range is thus accompanied by an expansion of the modulatory radius; embedding these new keys in the course of the movement takes more time, and, conversely (in the context of the expansion of the length of these movements) it also requires the use of a greater number of different keys so that these movements – normally rather restricted to the tonic and dominant keys – do not come across as in any way redundant.

16 Ibid., p. 137f.

The musical score is presented in three systems. The first system, labeled 'Ex-pos.', covers measures 35 to 50. The second system, labeled 'Rec-cap.', covers measures 196 to 211. The third system, labeled 'Coda', covers measures 284 to 295. Each system consists of a treble and bass staff. The upper voice (treble staff) contains diminutions in small print. The lower voice (bass staff) contains reduced notation except for mm. 204 (f6) and 207 (g6). The score is in E major and 3/4 time.

**MUSIC EXAMPLE 8** Sonata Op. 53, 1st mvt, second subject in the exposition (mm. 35–50) and the recapitulation (mm. 196–211) and its reappearance in the coda mm. 284–295). Diminutions in the upper voice are given in small print: reduced notation except for mm. 204 (f6) and 207 (g6), basso continuo reduction of the middle voices.

The connection between this innovative way of dealing with structurally significant key relationships and the expansion of the tonal space lies in the fact that substituting A major in the recapitulation for the E major of the exposition can be interpreted as a composed-out ‘gesture of expansion’ (g –) g# – a. In Op. 11, too, Beethoven’s experiments with the sequence of notes g# – a had resulted in the unusual key of a minor.

The key of a minor also occurs in the exposition of Op. 53. After the last cadence in E major (m. 74), Beethoven has to return us to C major for the repeat of the exposition. He does this by means of repeated cadences in e minor (touching on a minor each time), the last of which ends in an interrupted cadence onto a C-major chord (m. 84).

Several aspects are notable here with regard to the formal design of the second subject:

- The form of this passage is as regular as its key of E major is irregular: It is an eight-bar period (with two half-sentences beginning in the same way, a half-cadence in the middle and a perfect cadence at the close), which is repeated immediately afterwards with diminutions in the upper voice. The most striking element – apart from the key – is the fact that the consequent passage is lowered by an octave. The upper voice is dissolved into triplet diminutions during the repetition of the upper part, so the tenor part, which begins a sixth lower, becomes our focus of attention.
- The transposition of the second subject to A major in the recapitulation adopts the entire periodic structure of the exposition, also simply transposing the consequent

passage down, though it acquires a completely different key structure compared to the version given throughout in E major in the exposition. Only the antecedent phrase is given in A major, having been transposed regularly; after the half-cadence (m. 199), the consequent phrase begins with an a-minor chord, then after two bars that hover modally between a minor and C major, the music finally cadences in C major. Despite allusions to a minor generated by the notes  $g^\sharp - a$  in the bass and tenor (mm. 204f./208f.), the repetition is even more insistently cast in C major. Whereas the beginning of the antecedent phrase at bar 204 can theoretically still be heard as either C major or a minor (the notes  $g$  or  $a$ , which would be decisive for the one or the other, are here absent), in the consequent phrase from bar 208 onwards the tenor voice, which is now also present, begins with  $g$  and thereby definitively confirms that we are in C major.

- On the one hand, the key structure of the second subject is altered unusually in the recapitulation, though on the other hand, C major is reached, which is the ‘correct’ key for the recapitulation.

This dialectical process is enacted calmly and comprehensively in Op. 53 by means of relatively simple, largely imperceptible interventions:

- We have already mentioned the almost crude redefinition of the chord sequence  $A E f^\sharp C^\sharp D$  (mm. 196f.) into the ‘modal’  $a e F C d$  (mm. 200f.), while maintaining unaltered the framework of the outer parts.
- The modulation to C major is undertaken by a simple shift of bars 41f. a third higher in bars 202f. (see Music Example 8 again for a direct comparison of the exposition and recapitulation).
- In the ‘repetition’ from bar 204 onwards (which is no longer quite so literal), the upper part is not embellished by triplets as in the exposition (compare here mm. 35 and 43), but instead this occurs in a part lying a third higher (see mm. 204 and 196). At the same time, the bass part also proceeds a third higher.

However, this process only reaches a convincing conclusion in the coda of this movement: The fact that this formal section contains ‘definitive’ or ‘corrected’ versions of themes that have remained problematic over the course of this movement is a phenomenon found in many of Beethoven’s works (see also Op. 11, the close of the first movement from m. 247 onwards, Music Example 5).

Op. 53 also offers a definitive version of the second subject in the coda from m. 284 onwards.<sup>17</sup> It now brings the version of the ‘repetition’ from the recapitulation twice (as

17 We use the definition “second subject” for this section of the coda after the manner of Ratz, who in

in m. 204) and is thus even more clearly in C major, which means the process of ‘correcting’ the originally ‘incorrect’ key of E major can now be brought to completion.

In the coda, the embellishments at the third above that were introduced in the course of the recapitulation (from m. 204 onwards) are now also given as the definitive upper part from the very start (as of m. 284).

In all these complex key processes within an extended form, certain aspects that are related to the expansion of the keyboard up to  $a_6$  also play a role:

- In all three versions of the second subject, the sequence of notes  $g^\sharp - a$ , which we have already encountered as the ‘gesture of expansion’, occurs not only in the middle and upper voices in keys such as E major and A major (in which such a progression would naturally occur), but also repeatedly as a bass line that provides the foundation of the harmony. The prerequisite for this is the harmonic language of the second subject, which is strongly characterised by secondary dominants and interrupted cadences. In the exposition,  $g^\sharp - a$  in the bass generates A major after a dominant of  $c^\sharp$  minor (mm. 36/40/44/48). In the recapitulation,  $g^\sharp$  is the root of a diminished seventh chord that leads into a minor (mm. 204/208); this is also adopted in the coda (mm. 284/288). Even in the definitive C-major version of the second subject, the progression  $g^\sharp - a$  remains present.
- Raising the upper voice by a third in the recapitulation (from m. 204 onwards) also makes it possible to extend it beyond the former top note of the keyboard,  $f_6$  (m. 204) by reaching up to  $g_6$  (m. 207).
- The repetition of the dominant in the final cadence – which is given a retarding effect by means of fermatas (m. 290/292/294) – flirts with  $c$  minor within C major, and seems unable to decide between  $a_b$  and  $a^\sharp$ ; it remains an open question whether we might be justified in seeing this as a reference to the gesture  $g^\sharp - a$ .

On the basis of this excerpt from the first movement alone – which is surely convincing enough – it will have become clear that the reason for Beethoven’s somewhat hesitant use

the context of the Sonata in  $f$  minor Op. 57 wrote of “a kind of strophic division, in which not only the development re-traces the lines of the exposition through the introduction of a second model based on the material of the second subject, but the coda too is consciously constructed as a counterpart to the development, and thus acquires the significance of a further principal section of equal weight” (“eine gleichsam strophische Gliederung, indem nicht nur die Durchführung die Linien der Exposition nachzieht durch Einführung eines zweiten Modells, dem das Material des Seitensatzes zugrunde liegt, sondern auch die Coda bewußt als Gegenstück zur Durchführung gebaut wird und so die Bedeutung eines gleichwertigen Hauptteils erhält”). Erwin Ratz: Einführung in die musikalische Formenlehre. Über Formprinzipien in den Inventionen und Fugen J. S. Bachs und ihre Bedeutung für die Kompositionstechnik Beethovens, Vienna <sup>3</sup>1973, p. 156.

of the newly available keys up to  $a_6$  has to do with the fact that the ‘gesture of expansion’ with which he stages his act of reaching beyond the old limitations has also influenced the harmonic twists employed in this movement, its key structure and its temporal expansion.

The sketches for the Sonata Op. 53 that are extant in the *Eroica Sketchbook* (Landsberg 6) also reveal traces of the advent of these new top notes.<sup>18</sup> Since the complex chronology of these sketches was extensively investigated and clearly presented by Barry Cooper back in 1977,<sup>19</sup> and then again by the editors of this sketchbook,<sup>20</sup> we shall focus on only a few details here (in Music Example 9, the relevant passages in the final, printed version and in the sketch are presented directly one above the other).

The final trills of the second subject in the exposition (m. 72 f.) and the recapitulation (m. 233 f.) are notated in the sketches without the additional notes that lie above them in the final version, and which go beyond the traditional piano range of the time. In the recapitulation (p. 129, stave 12), this is undertaken on an even more rudimentary basis than in the exposition (p. 122, stave 4). In the coda, the  $a_6$  at least is notated (m. 276 = p. 131, stave 16), though not the preparatory upper voice  $g_6 - g\sharp_6$  (m. 275 = p. 130, stave 18). This late appearance of a note that exceeds the old range of the piano leads Cooper to conclude “that Beethoven did not initially intend to use notes above  $f_6$ , and it was only [...] when he came to revise the coda sketch, that he at last admitted them”.<sup>21</sup> In so doing, Cooper includes quite compelling considerations about the pianos that were available in Vienna and about the enlargement of their range, and refers to an article by William S. Newman<sup>22</sup> to bolster his arguments.

We argue here that the idea of the gradual extension of the tonal range by means of the transposed quotation of a ‘gesture of expansion’, already developed in earlier works, was from the outset a constitutive factor in the first movement of the Sonata Op. 53 and even encompassed parameters such as modulatory goals. In light of this, we propose the

18 Beethoven’s “Eroica” Sketchbook. A Critical Edition, ed. by Lewis Lockwood and Alan Gosman, Urbana/Chicago/Springfield 2013, Vol. 1: Commentary and Transcription, Vol. 2: Facsimile.

19 Barry Cooper: The Evolution of the First Movement of Beethoven’s “Waldstein” Sonata, in: *Music & Letters* 58/2 (1977), pp. 170–191.

20 Cooper identifies seven stages of composition (*ibid.*, pp. 173–177, 182 f. and 184–186), in which the *Eroica Sketchbook* p. 122 belongs to stage II, p. 129 to stage V, the first coda sketch on p. 130 to stage VI and the second continuity draft of the coda to stage VII (the final autograph of the sonata being stage VIII). Lockwood/Gosman condense these seven stages of composition into four and count p. 122 as part of stage 2, and everything from p. 129 f. as part of stage 4. See Lockwood/Gosman: *Beethoven’s “Eroica” Sketchbook*, fig. 22/23, pp. 66–68.

21 Cooper: *The Evolution*, p. 184.

22 William S. Newman: Beethoven’s Pianos versus His Piano Ideals, in: *Journal of the American Musicological Society*, Vol. 23 (1970), No. 3, pp. 484–504.

31 *decresc.*  
Print  
8<sup>va</sup>  
[p. 122, st. 1] *dolce e molto legato* [p. 122, st. 3]

68 *p*  
Sketch  
[p. 122, st. 3] [p. 122, st. 4] *[de]cresc.* *pp* *cresc.* *fp*

192 *decresc.*  
Print  
8<sup>va</sup>  
[p. 129, st. 5] *dolce* [p. 129, st. 6]

229 *p*  
Sketch  
[p. 129, st. 11] *decresc.* *pp* *cresc.* *fp*

275 *ff*  
Print  
[p. 130, st. 18] [p. 131, st. 16] *ff*

**MUSIC EXAMPLE 9** Sonata Op. 53, 1st mvt, top notes in the exposition (mm. 68–74), recapitulation (mm. 229–235) and coda (mm. 275–278), comparison of final version (print) and sketch (Eroica Sketchbook), pp. 122, 129 and 130 f.)

hypothesis that while Beethoven might not have committed these new high notes to paper in his sketches, he very much had them in mind at all the places mentioned above. The concluding trills mark the precise moment at which the exposition and recapitulation were to reach their climax, and as we have shown above, Beethoven had already ‘used up’ the traditional climactic note of  $f^6$  in the initial bars of the movement.

In fact, Beethoven had already notated a high  $f^{\sharp 6}$  at an early stage of the sketch (p. 122, stave 1 = m. 34, see also Music Example 9), though Cooper does not recognise it as such, according to his hypothesis: “One note on p. 122/1 looks like an  $f^{\sharp 6}$ , but it could be a  $d^{\sharp 6}$ , which would make equal musical sense”.<sup>23</sup> But it does not “make equal musical sense”,

<sup>23</sup> Cooper: *The Evolution*, p. 184.



because the  $d\sharp$  at this point (m. 34) belongs to the bass voice. While Beethoven indeed changed the  $f\sharp$  in the upper voice in his final version, he did not do so by lowering it by a third, but by remaining on the  $a$  already in bar 33, which is thus a third higher than the  $f\sharp$  at the end, and as the seventh in a dominant seventh chord it provides a sensible harmonic lead into the opening note of the second subject,  $g\sharp$ . This thereby generates a third part in the texture here, together with the  $d\sharp$  in the bass.

Cooper's interpretation of the parallel passage in the recapitulation (p. 129, stave 5 = mm. 192–195) can also be doubted with respect to the voice-leading. What Beethoven writes in his sketch in the treble clef is probably the fourth bar of the bass part, not the third bar of the upper part as Cooper assumes. Cooper adds a fourth bar by continuing the line upwards with  $a - b - c\sharp - d$ , but in so doing he once again mixes up two different parts of the texture.<sup>24</sup> Even if an element of guesswork is inevitable when trying to decipher how the process of composition as documented in the sketches (albeit in fragmentary form) actually relates to the completed work, it nevertheless becomes clear that taking aspects of Beethoven's compositional technique into consideration can provide relevant information in this context.

**Op. 12 No. 3 once more: extending the keyboard to  $a\flat 6$ ?** In our above discussion of the Violin Sonata Op. 12 No. 3, we gained the impression that the 'gesture of expansion' stood in the 'wrong' place in the close of the exposition, was free of any consequences in the recapitulation, and was thus ineffective with regard to the first movement's overall dramaturgy for the topmost notes of the keyboard. In particular, the use of the second subject in the recapitulation raised questions that have hitherto remained unanswered here.

This was possibly due to our approach being limited to the tone sequence ( $f\flat -$ )  $f\sharp 6 - g\flat$ , and we shall now reconsider this to conclude our investigations (see Music Example 10):

At first glance, the upward transposition of bar 110 in the recapitulation (the 'actual version' shown here) makes sense as it means that the top note of the keyboard,  $f\flat 6$ , can also be employed in the first subject. However, if we imagine the piano to possess a larger range (say, up to  $a\flat 6$ ), then this adjustment seems like a restricted version of what was actually intended as a shift an octave upwards to  $a\flat 6$  (as given in our tentative 'proposed version' in Music Example 10).

If a putative  $a\flat 6$  were our top note, the content of bar 114 could easily be transposed as in bar 11 (see our 'proposed version'). The transposition by a fifth in the recapitulation already begins – unexpectedly – in bar 112, which results in the first subject (in  $E\flat$  major) being shifted to the subdominant key of  $A\flat$  major.

24 Ibid., p. 182 (with Ex. 13).

Finally, the passage in the second subject, bars 47/143, described above in the context of a range limited to  $f6$  as an ‘incomprehensible irregular transposition’, can even be adapted in two ways to a keyboard that extends to  $a\flat6$ . In our ‘proposed version 1’, its first occurrence in the exposition would be adapted thus: shifting the right hand of bar 47 up by a third would restore the ‘normal’ parallel movement in tenths between the right hand and the violin part in this passage, while we could avoid the octaves that in certain places are particularly conspicuous here (m. 47 in the “actual version”). Our ‘proposed version 2’ could even begin by smoothing out the violin part by having it play scales in sequences a third lower each time (thus avoiding the broken chord in between that results in the same climactic note being played twice). Also in this case, the right hand of the piano would be placed a tenth above it.

And in the closing section too (from mm. 58/154), we would also have an opportunity to present bars 157–159 an octave higher. This would provide an unambiguous highpoint for the whole movement in the form of  $b\flat6$  (Music Example 10; the *all’ottava* sign is given here in square brackets). In parallel with this, there is also a change in the violin part, where falling fifths an octave below the right hand of the piano contrast with the ascending sixths in the exposition (mm. 61–63). This could be understood as supporting the possible use of a higher octave in the piano part, but also as a possible substitute for it, since doubling the octaves at this point serves to emphasise the piano part, even if the lower transposition (compared to the exposition) results in a loss of tension.

Here, too, we can add certain specific observations about the use of the note  $a\flat$  in this sonata:

- The abovementioned transposition of the second part of the first subject downwards in the recapitulation from bar 112 onwards leads to a long passage in  $A\flat$  major that is structured quite differently from the transition in the exposition (for example, there is a sequence of 7-6 suspensions in mm. 119–121 instead of the *fonte* model of mm. 18–21).
- In the long  $g$ -minor section in the development (mm. 72–81), the Neapolitan note  $a\flat$  is used (m. 77).
- The second and third movements of the sonata (in mm. 15 f. and m. 40 respectively) employ the note  $a\flat$  with a striking emphasis, these instances being prepared by a short  $g$  (see m. 40 in Music Example 11); in some cases they turn back onto  $g$ , while in others they are led further upwards.

In the Violin Sonata Op. 12 No. 3, the version that we tentatively propose would solve most of the piece’s structural problems described here by introducing a keyboard range of up to  $a\flat$ ; this would actually have been perfectly playable on a piano with a range up to  $a6$  such as was required for the Sonata Op. 53 (with the exception of a single ‘virtual’  $b\flat6$  at



the very end of the first movement of Op. 12 No. 3). There can be no doubt that anyone owning such an instrument would not merely have played Op. 53 as notated, but would also have taken every opportunity offered to use the highest keys of his piano in Op. 12 No. 3 and Op. 11 as well – and not just in the two instances in these works where an  $f\sharp 6$  and a  $g6$  are quite obviously ‘missing’.

In this sense, and in the context of historically informed performance practice, we ought to include the actual musical text in our considerations. This is rarely questioned, but is far more dependent on instrumental realities than is often assumed, and ought not to be regarded as sacrosanct. It would seem that, as early as 1798, Beethoven was anticipating the construction of an instrument with a keyboard range of up to  $a6$  or, better still, to  $b6$  or even  $c7$ , and that he provided at least some of his works with corresponding options for such an extension. (From the perspective of his own day, the availability of a  $b\flat 6$  would have been desirable inasmuch as it would have meant that all those figures involving the top note  $f6$  in a traditional exposition could have been transposed upwards in the recapitulation without any limitations).

Similarly, no modern edition of these works may simply limit itself to adding these ‘missing’ notes in brackets just because they are playable on a modern instrument, without taking into consideration the compositional structure. For the various projected ‘complete editions’ of his piano works during his lifetime, Beethoven himself would have “altered” his older pieces and “adapted them to the contemporary pianoforte”:<sup>25</sup> His piano builder Johann Andreas Streicher expressly asked him to “change here and there all the piano pieces that were written before the introduction of the pianoforte of  $5\frac{1}{2}$  or 6 octaves, and adapt them according to today’s instruments”.<sup>26</sup> Beethoven never set about doing this himself – after all, it would not have sufficed simply to add the ‘missing’ notes  $f\sharp 6$ ,  $g6$ , et cetera.

Perhaps we can even revisit the old argument about whether music is always composed exactly for the instruments of its time, or whether Beethoven was in fact dissatisfied with the instruments at his disposal and would gladly have used a modern instrument, had one actually been available to him. The answer is surely yes, he would have done – but he would indubitably have adapted his works to these instruments in turn. He would have made use of their greater range, he would have modulated into more distant keys

25 German original: “verändert, den jetzigen Pianoforte angepaßt”. Johann Andreas Streicher to Carl Friedrich Peters (25 September 1824), in: Ludwig van Beethoven: Briefwechsel. Gesamtausgabe, ed. by Sieghard Brandenburg, Munich 1996–1998, Vol. 5, pp. 371–373, here p. 372.

26 German original: “alle Clavier-Stücke, welche vor Einführung der Pianoforte von  $5\frac{1}{2}$  oder 6 octaven, geschrieben worden, hie und da umändern und nach den jetzigen Instrumenten einrichten”. Johann Andreas Streicher to Beethoven (5 September 1824), in: Beethoven: Briefwechsel. Gesamtausgabe, Vol. 5, pp. 358–360, here p. 359.

in more complex ways, and his works would have been considerably longer overall. And conversely, from the point of view of advocates of period instruments, no single appropriate instrument for them seems to exist – especially since the way Beethoven wrote for the piano, at least in his early works, as we have demonstrated here, often reveals a certain degree of utopianism.

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MUSIKFORSCHUNG DER  
HOCHSCHULE DER KÜNSTE BERN

Edited by Martin Skamletz  
and Thomas Gartmann

Volume 16

# BEETHOVEN AND THE PIANO

Philology, Context and Performance

Practice • Edited by Leonardo Miucci,  
Claudio Bacciagaluppi, Daniel Allenbach  
and Martin Skamletz



Dieses Buch ist in gedruckter Form im September 2023 in erster Auflage in der Edition Argus in Schliengen/Markgräflerland erschienen. Gestaltet und gesetzt wurde es im Verlag aus der Seria und der SeriaSans, die von Martin Majoor im Jahre 2000 gezeichnet wurden. Gedruckt wurde es auf Eos, einem holzfreien, säurefreien, chlorfreien und alterungsbeständigen Werkdruckpapier der Papierfabrik Salzer im niederösterreichischen Sankt Pölten. Das Vorsatzpapier Caribic cherry wurde von Igepa in Hamburg geliefert. Rives Tradition, ein Recyclingpapier mit leichter Filznarbung, das für den Bezug des Umschlags verwendet wurde, stellt die Papierfabrik Arjo Wiggins in Issy-les-Moulineaux bei Paris her. Das Kapitalband mit rot-schwarzer Raupe lieferte die Firma Dr. Günther Kast aus Sonthofen im Oberallgäu, die auf technische Gewebe und Spezialfasererzeugnisse spezialisiert ist. Gedruckt und gebunden wurde das Buch von der Firma Bookstation im bayerischen Anzing. Im Internet finden Sie Informationen über das gesamte Verlagsprogramm unter [www.editionargus.de](http://www.editionargus.de), zum Institut Interpretation der Hochschule der Künste Bern unter [www.hkb.bfh.ch/interpretation](http://www.hkb.bfh.ch/interpretation) und [www.hkb-interpretation.ch](http://www.hkb-interpretation.ch). Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über [www.dnb.de](http://www.dnb.de) abrufbar. © der zeitgleich erschienenen digitalen Version: die Autorinnen und Autoren, 2023. Dieses Werk ist lizenziert unter einer Creative Commons Namensnennung-Nicht kommerziell 4.0 International Lizenz ([CC BY-NC 4.0](https://creativecommons.org/licenses/by-nc/4.0/)).

DOI [10.26045/kp64-6180](https://doi.org/10.26045/kp64-6180) ISSN 2700-8681 ISBN 978-3-931264-96-3