

## Haydn: the Horn, the Hunt, and Hand-stopping

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One of the more contentious issues of historical horn performance practice concerns the invention and implementation of hand-stopping in the eighteenth century. Although it is widely acknowledged that the technique was invented, probably by the Dresden horn player Anton Hampel, sometime around 1750, it is also clear that knowledge of hand-stopping was limited initially to a very small number of highly specialized experts who used the technique sparingly in compositions written specifically by or for them. It was not until the 1780s and 1790s that the technique became common and only in the first decade of the nineteenth century that it became widespread and accepted.<sup>1</sup> Nevertheless, most modern players of the natural horn consider the year 1750 as a turning point and play all horn music written after that date with the hand in the bell regardless of the context or situation in which the music was written. This is problematic for two reasons. First, since hand-stopping requires a significant change in the playing position of the horn, there is a noticeable effect on the sound of the instrument. Second, the decision to use hand-stopping appears to originate from the assumption that the only way to “fix” naturally out-of-tune notes in the harmonic series (specifically the eleventh and the thirteenth partials) or obtain any pitch outside the harmonic series, is by placing the hand in the bell and manipulating it to affect the pitch. A further assumption infers that the natural instrument before hand-stopping was lacking or imperfect and reached its full potential only when played with the hand in the bell (or, to continue this line of reasoning, with the application of valves). In fact, the out-of-tune partials and non-harmonic-series tones appear regularly in horn music written before 1750 and—significantly—in trumpet music as well. Clearly there were other means of achieving these pitches.

As in any era of transition, horn playing in the eighteenth century differed dramatically from place to place and from year to year. Multiple techniques overlapped and were used simultaneously and traditional approaches existed alongside innovative ones. An understanding of horn playing at this time thus resists any overarching conclusions or approaches that might be applied universally to the music of this era. Rather than making general observations, I explore the situation by examining in detail the music of Joseph Haydn, a composer whose writing for horn seems ideally suited to this purpose. In his service to the Esterházy family, Haydn had the opportunity to work closely with a series of accomplished horn players and he responded eagerly and imaginatively to their various talents and strengths. He wrote for the horn in a variety of genres, from chamber to solo to orchestral, and contributed some of the most interesting and innovative passages of horn writing in the eighteenth century. His career spanned the era that saw the implementation and widespread acceptance of hand-stopping. Haydn’s horn parts are challenging and exciting, they present difficult performance problems, yet they are ultimately rewarding to hear and to perform. Although my observations refer specifically to Haydn’s practices,

they nonetheless reveal contemporary attitudes towards the horn and provide insight into the ways the horn was played, heard, and understood in the courtly and public milieus of the eighteenth century.

### Haydn and the Horn

Haydn's writing for the horn reflects his awareness of the instrument's cultural significance in three important areas: obvious references to the hunt, the unusual prominence given to the horn, and the striking virtuosity of the writing. The horn, regardless of context or melodic content, carried powerful associations with the hunt and thus provided a means of glorifying the court and emphasizing its splendor. Haydn exploited this association in one of his earliest compositions as Vice-Kapellmeister to the Esterházy family, Symphony No. 6, "Le matin" (1761), and returned to it in several subsequent works, including Symphony No. 31, "Hornsignal" (1765), Symphony No. 73, "La chasse" (1782), and the opera *La fedeltà premiata* (1781). In Symphony No. 6, the main theme of the first movement is a triadic melody in D major that is typical of contemporary hunting calls and certainly recognized as a stylized hunting call by Haydn's audience. The association with the hunt becomes especially apparent just before the reprise where the orchestra stops dramatically and a single horn plays the theme (Example 1).<sup>2</sup> Since hunting was considered a morning activity, the reference to the hunt supports the program of the symphony by evoking the matinal time of day. In Symphonies Nos. 31, (Example 2) and 73, (Example 4), the hunting references are topical rather than programmatic. Both symphonies contain quotations of authentic hunting calls: a Croatian call used on the Esterházy estates in the first case<sup>3</sup> and a French call, *La vue* (Example 3) from the Versailles repertoire, in the second. The final movement of Symphony No. 73—the only movement containing hunting music—had

The image shows a musical score for measures 84-90 of the first movement of Haydn's Symphony No. 6. The score is arranged in four staves: Flutes/Oboes (top), Horns in D, Violins, and Violas/Celli/Bass (bottom). The key signature is D major (two sharps) and the time signature is 3/4. The Flutes/Oboes part begins with a trill (tr) and a 'Solo' section starting at measure 87. The Horns in D part also begins with a trill (tr) and a 'Solo' section starting at measure 87. The Violins part has a trill (tr) at the end of the section. The Violas/Celli/Bass part has a trill (tr) at the end of the section.

Example 1: Haydn, Symphony No. 6, "Le matin," first movement, mm. 84–90.

**Allegro**

Horn I in D  
Horn II in D

Horn III in D  
Horn IV in D

*f*

*f*

*f*

Solo

6

12

**Example 2:** Haydn, Symphony No. 31, “Hornsignal,” first movement, mm. 1–17.

also been used by Haydn as the overture to the opera *La fedeltà premiata* a year earlier. The hunt here takes on dramatic significance. Proficiency in the hunt is associated with bravery and loyalty. The hunting music and hunting imagery is associated primarily with the hero Fileno, symbolizing these traits in his character. A notable moment occurs in Celia’s aria “Deh soccorri un’infelice,” where a haunting muted horn solo represents her thoughts of Fileno (Example 5).

**Example 3:** “La vue,” attrib. André Danican Philidor.

Horns in D  
(doubling oboe)

33

**Example 4:** Haydn, Symphony No. 73, “La chasse,” fourth movement, mm. 30–37.

**Largo**  
Solo Con Sordino

Hn in E-flat

Violins

Violas  
Basses

Cello

pizz.

pizz.

pizz.

Ma qual

59

vo - cein tor-no iosen-to, che con fle - bi-le-la - men to vienquest' al - maala - ce - rar,

**Example 5:** Haydn, *La fedeltà premiata*, act 1, scene 15, “Deh soccorri un’infelice,”  
mm. 55–64.

The prominence of the horn in Haydn’s *oeuvre* becomes apparent when one considers the unusually large number of works for four horns: Symphonies Nos. 13, 31, 39, and 72

and the Cassation in D. Since the Esterházy orchestra as a whole consisted of only sixteen or seventeen players, the horn section, in these pieces, constitutes a quarter of the orchestra. This proportion, notes David Wyn Jones, was neither achieved nor contemplated by later composers such as Gustav Mahler or Richard Strauss.<sup>4</sup> Haydn featured the instrument by making it a defining sound in the orchestra or through virtuosic writing and used both approaches to glorify and celebrate his courtly patrons.

During his active engagement at the Esterházy court from 1761 to 1790, Haydn worked closely with eighteen individual horn players and wrote for them with a clear awareness of their skills and abilities. He was thus able to develop a profound understanding of the instrument that enabled him to write horn parts that are not only idiomatic but frequently exploit the full potential of eighteenth-century technique. Still, his approach consisted mostly of continuing or extending Baroque practices rather than exploring the more recent innovation of obtaining non-harmonic-series tones through hand-stopping. His general approach to virtuosic writing can be seen in the opening of Symphony No. 72 (Example 6). The high horns (horns 1 and 3) perform brilliant runs in the upper reaches

The image displays a musical score for four horns in D major, 2/4 time. The first system (measures 8-14) shows Horn I and III with rapid sixteenth-note runs in the upper register, while Horn II and IV play a rhythmic pattern of eighth and sixteenth notes. The second system (measures 15-24) continues these patterns, with Horn I and III playing more complex runs and Horn II and IV providing harmonic support with eighth-note patterns.

**Example 6:** Haydn, Symphony No. 72, first movement, mm. 8–24.

of the instrument, while the low horns (horns 2 and 4) demonstrate a fluid agility through rapid descending arpeggio figures in the middle and low ranges.

A summary of Haydn's approach to the horn in the works for four horns allows for the following observations:

1. The four horns are treated as two groups of two players, with each pair divided into high and low parts. The high horns parts (horns 1 and 3) are typical of what Horace Fitzpatrick defines as "the early symphony style of horn playing." Fitzpatrick notes that this was an idiom that "grew out of the florid clarion style of the late Baroque. It was generally less decorated, tending rather towards sustained cantabile melodies in the third and fourth octaves of the horn's range, and abounding in rapid leaps of octaves and fifths."<sup>5</sup> The low horn parts (horns 2 and 4) are scored mostly in the middle and low registers of the instrument. The writing often requires large leaps and rapid arpeggios allowing the players to navigate the gaps between notes in this range of the harmonic series. The two contrasting types of writing can be seen in the opening of Symphony No. 72 (Example 6) and the second movement of Symphony No. 31 (Example 7).

The image displays a musical score for three horns. The top staff is for Horn I in D, the middle for Horn II in D, and the bottom for Horn III in G and Horn IV in G. The music is in 3/4 time with a key signature of one sharp (F#). Horn I plays a melodic line with a fermata. Horn II plays a descending arpeggio figure with an asterisk marking a non-harmonic-series tone. Horn III and IV are silent.

**Example 7:** Haydn, Symphony No. 31, "Hornsignal," second movement, mm. 36–41.

The non-harmonic-series tones in this and all subsequent examples are indicated by asterisks (\*).

2. In the major-mode symphonies, Haydn generally scores all four horns in the same key. This differs from the practice of his younger contemporaries (notably Mozart and Beethoven) who wrote for pairs of horns in different keys in order to exploit two sets of harmonic series and make available more pitches. An exception in Haydn's *oeuvre* occurs in the G-major Adagio movement of Symphony No. 31. Here, the first horn pair is crooked in the dominant key of D and the second horn pair in the tonic key of G (Example 7).

3. In the minor-mode symphony for four horns (No. 39), Haydn scores the two horn pairs in different keys (tonic and relative major). This is consistent with his practice in his minor-key symphonies for a single pair of horns (Nos. 44, 45, 52), in which each horn is crooked in a different key.

4. When filling in the harmony, the horn pairs often play horn fifths, a technique in which the two horns follow each other up or down the notes of the harmonic series to produce a characteristic set of intervals (see Example 7, mm. 39–40). The technique was derived from the practices of hunting horn players who used it to improvise a second or third voice to an existing hunting horn call.

5. Regardless of whether the horns play solo passages or fill in the harmony, Haydn uses pitches drawn almost exclusively from the notes of the harmonic series (Figure 1). Exceptions occur only twice in the five works for four horns. The first exception is found in the Adagio of Symphony 31, where a single written  $b^1$  (a half-step below the eighth harmonic  $c^2$ ) occurs once in a passage for the second horn (Example 7). The second occurs in the Cassation in D (Example 8), where the second horn is required to produce a  $b$  (a half-step below the fourth harmonic  $c^1$ ) and an  $e$  (a minor third below the third

The image shows a musical score for four horns in D major, measures 9-10. The score is written in 2/4 time. Horn I (treble clef) plays a whole note D. Horn II (bass clef) plays a half note G (marked with an asterisk) and a half note F# (marked with an asterisk). Horn III and IV (treble clef) play a half note D and a half note G. The notes for Horn II are marked with asterisks to indicate they are exceptions to the harmonic series rule.

**Example 8:** Haydn, Cassation in D, third movement, mm. 9–10.

harmonic  $g$ ).

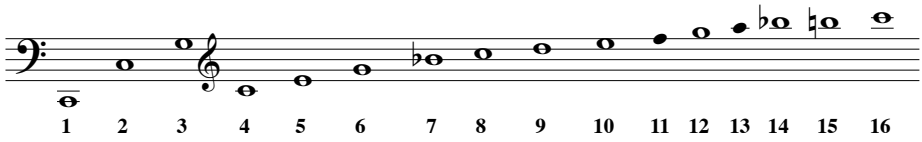


Figure 1: Harmonic series. Out-of-tune pitches are shaded.

The horn writing in the Haydn’s symphonic works for four horns reveals much about his approach to the horn. Further insight is gained by considering these works alongside two

Horn in D

31

35

40

44

48

52

56

The musical score for Horn in D, first movement, measures 31-60. The score is written in treble clef with a key signature of one sharp (F#). It includes various musical notations such as trills (tr), accents (\*), and slurs. The notes are: 31 (C4), 32 (D4), 33 (E4), 34 (F#4), 35 (G4), 36 (A4), 37 (B4), 38 (C5), 39 (B4), 40 (A4), 41 (G4), 42 (F#4), 43 (E4), 44 (D4), 45 (C4), 46 (B3), 47 (A3), 48 (G3), 49 (F#3), 50 (E3), 51 (D3), 52 (C3), 53 (B2), 54 (A2), 55 (G2), 56 (F#2), 57 (E2), 58 (D2), 59 (C2), 60 (B1).

Example 9a: Haydn, Concerto for Horn in D, first movement, mm. 31–60.



Horn in D

82

86

**Example 9b:** Haydn, Concerto for Horn in D, first movement, mm. 82–91.

solo and chamber works from the 1760s: the Concerto in D, Hob. VII d:3 of 1762 and the Divertimento à tre, Hob. IV:5 for horn, violin, and cello of 1767. As with the symphonic works, the writing for horn in both pieces is consistent with music written before the advent of hand-stopping, albeit with a slightly more liberal use of non-harmonic-series notes.

The main theme of the concerto's first movement consists of an ascending arpeggio outlining the notes of the harmonic series. Much of the subsequent material lies in the upper register of the instrument, where melodic writing is more feasible due to the smaller gaps between the notes of the harmonic series (Example 9). The few non-harmonic-series notes in this movement—written  $b^1$ ,  $a^1$ , and  $f$ —occur as notes of short duration (eighth notes or sixteenth notes in an allegro tempo) on weak beats. The slow movement, written in the key of A but with the horn remaining in the key of D, demonstrates Haydn's care and craftsmanship (Example 10). The noble opening theme appears first in the horn's upper register and then in a simplified version two octaves lower where the player must produce two non-harmonic-series pitches:  $f\#$  (a half-step below the third harmonic  $g$ ) and  $b$  (a half-step below the fourth harmonic  $c^1$ ). No non-harmonic-series notes appear in the third movement. The divertimento, likewise, lies mostly in the horn's upper register and

Horn in D

28

33

41

**Example 10:** Haydn, Concerto for Horn in D, second movement, mm. 28–45.

Horn in E-flat

5

14

**Example 11:** Haydn, Divertimento à tre, theme, mm. 1–18.

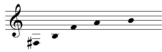


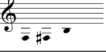




requires a remarkable display of agility in florid scales and arpeggios. The non-harmonic-series notes appear only in the low-range cadential figure that closes each of the first three variations (Example 11). The horn at this point moves suddenly into the low register to produce an *f* and *f*♯ (a whole tone and half-tone below the third harmonic *g*) and *b* (a half-tone below the fourth harmonic *c*<sup>1</sup>).

More surprising than the inclusion of non-harmonic-series notes in these two works is Haydn's treatment of range. Eighteenth-century conventions saw horn players specialize exclusively in the upper or lower ranges of the instrument. This was clearly the practice at the Esterházy court, where horn players are mentioned frequently by pairs and designated by function as high or low in court payrolls.<sup>6</sup> As indicated above, this was also Haydn's practice in the symphonic works. In both the concerto and the divertimento, however, the performer is required to demonstrate agility in the extreme high register of the instrument (up to the eighteenth harmonic in the concerto and the twenty-second harmonic in the divertimento) yet also produce notes, including non-harmonic-series tones, in the low range of the instrument. The unusual technical challenges and virtuosic writing, coupled with the unusual features in the writing, suggest that both pieces were written for a performer of exceptional talents.<sup>7</sup>

### The Non-Harmonic-Series Notes in Haydn's Horn Parts

The non-series notes that appear in the concerto and the divertimento are not typical of Haydn's writing for horn in this decade. In fact, a survey of the non-series tones in Haydn's *oeuvre* (Table 1) reveals a gradual increase in their appearance over time.<sup>8</sup> No non-series tones appear before 1761. After 1761 non-series tones appear occasionally in works featuring the horn in a solo context: Symphony No. 31 (*b*<sup>1</sup>), the Cassation in D (*e* and *f* below the third harmonic *g* and *b* below the fourth harmonic *c*<sup>1</sup>), the Divertimento à tre (*f* and *f*♯ below the third harmonic *g* and *b* below the fourth harmonic *c*<sup>1</sup>), and the Concerto in D

( $f^\sharp$ ,  $b$ ,  $f'$ ,  $a'$ , and  $b'$ ).<sup>9</sup> Beginning in the 1770s and continuing into the 1780s, non-series tones appear even in works in which the horn is not featured. The pitch  $b$  (a half-step below the fourth harmonic  $c'$ ) appears occasionally (Symphonies No. 51, 56, 61, 79), as do several pitches below the third harmonic  $g$  and the second harmonic  $C$  ( $F^\sharp$ ,  $G$ ,  $A$ ,  $B$ ,  $b$  in Symphony No. 51;  $G$ ,  $A$ ,  $B$ ,  $f$ ,  $b$  in Symphony No. 63;  $G$ ,  $A$ ,  $B$ ,  $e$ ,  $f$ ,  $b$  in the baryton octets; and  $e$ ,  $f$  in Symphony No. 53). Still, it is only after the 1790s that non-series notes appear that would be difficult to obtain using any other method than the hand in the bell. These include the  $b'$  and  $a'$  in Symphony No. 92 (fourth movement, mm. 130–32) and especially the  $eb^2$  in Symphony No. 99 (first movement, m. 58), Symphony No. 103

Dates	Works	Non-Series Pitches
1750-1761		None occur
1762	Concerto No. 1	
ca. 1763	Cassatio in D	
1765	Symphony No. 31	
1767	Divertimento à tre	
1774-1776	Symphonies Nos. 51, 53, 61; baryton octets	
1774-1791	Symphonies Nos. 56, 79, 86, 89, 95	
1789	Symphony No. 92	
1793-1798	Symphonies Nos. 99 and 103; <i>The Creation</i>	

**Table 1:** Non-harmonic-series tones as they appear chronologically in Haydn's symphonic, chamber, and concerted works.

(third movement, mm. 13–18), and *The Creation* (see Example 17 below). Despite the presence of these pitches, Haydn's horn parts remain almost exclusively within the confines of the harmonic series, with non-harmonic-series tones appearing infrequently and in isolated passages. Although the pervasive assumption is that non-harmonic-series tones indicate or even prove the use of hand-stopping, the non-series tones that appear in Haydn's compositions in the 1760s through the 1780s are not idiomatic of hand-horn writing. In many cases, hand-stopping is not even the most practical way to obtain these pitches. To understand this fully, it is necessary to consider the non-harmonic-series pitches systematically in separate categories and in the contexts in which they appear in individual works. The categories below address non-series and problematic notes beginning with the most common and progressing to the least common.

1. The eleventh and thirteenth harmonics ( $f^2$  and  $a^2$ ). Although  $f^2$  and  $a^2$  occur as part of the harmonic series, the tuning of both pitches makes them problematic on all natural instruments. Valentin Roeser, in his 1764 essay on composing for the horn and clarinet—possibly the earliest written acknowledgment of hand-stopping—identifies the  $f^2$  as being too high but adds that “one can bring it into tune by placing the hand in the bell of the horn, especially for half notes and quarter notes.” Concerning the  $a^2$ , Roeser indicates that it is too low and advises that “there is no way to render it in tune; because of this, one should not use it in a chord and avoid a unison with other instruments whenever it is possible.”<sup>10</sup> Nevertheless, both pitches appear frequently in horn and trumpet writing throughout the eighteenth century and there is no indication that composers avoided these pitches or altered their approach to them in any way in the second half of the century (that is, after the advent of hand-stopping). Haydn’s use of these two pitches is typical. Neither occurs as a note of long duration but otherwise they are not avoided. Both pitches occur frequently in fast passages where the agility required to hand stop would be impractical. Haydn even requires the horn player, in the obbligato horn solo in the aria “Deh soccorri un’infelice” from *La fedeltà premiata* (Example 5), to produce both pitches while playing a muted horn, thus precluding the use of the hand in the bell to adjust the pitch.<sup>11</sup> It seems highly likely that, in practice, the eleventh and thirteenth harmonics were generally played without using the hand in the bell and players were able to make acceptable adjustments in pitch with the embouchure alone.<sup>12</sup>

2. Low-register factitious notes: non-harmonic-series pitches below the fourth partial. The harmonics in the low register (up to the fourth harmonic) are highly pliable, making it easy to obtain one or more pitches below them by using the lip alone. This is especially true of the notes below the second harmonic ( $G$ ,  $A$ ,  $B$ ) which can easily be lipped down from the open  $c$ . These notes are almost always approached in this way (as in Example 11), and it is likely that they were always obtained without the hand, even in the hand-horn era, to avoid an otherwise muffled sound that would project poorly. Remnants of this approach can be seen in Beethoven’s Sonata for Horn, op. 17, of 1800 (first movement, mm. 160–62) and in the second horn part of the Sextet, op. 81b, of 1785 (third movement, mm. 186–200). Both passages are strikingly similar to what Haydn demands of his players in Symphonies 51 and 63. The pitches below the third and fourth harmonics are more difficult to produce, but they are nonetheless possible. Joseph Fröhlich, writing in 1813, advises that “ $e$  is not impossible on many horns, but it never makes the horn vibrate in such a way that it can make a proper sound. One can also play the  $f$  without stopping ... if it responds it is necessarily stronger and brighter than when it is stopped, but players should only adopt this expedient when playing in slow time.”<sup>13</sup> There is ample evidence to suggest that the low-register factitious notes in Haydn’s horn parts were obtained by lipping rather than with the hand. First, they are always of long duration in a slow tempo. The opening measures of the Adagio from Symphony No. 51, in which Haydn exploits the abilities of each horn to play in the extreme of its register, is typical of Haydn’s approach (Example 12). Second, in pieces where they occur, the non-harmonic-series notes are

found only in the low register. If Haydn's players were accustomed to producing notes in the low register with the hand, why would he not exploit this in other registers too? Notice the awkward change of register in the opening passage of the final movement of the Baryton Octet in D of 1775 (Example 13): if Haydn's players were using the hand to obtain the *b* below the fourth harmonic, why not use the same technique to obtain the *b'* below the eighth harmonic and avoid the awkward register displacement? Of course the baryton octets present a special challenge for the second horn player because he must produce the entire low octave, but the difficult pitches (notably the *e* and *d* below the third harmonic) are not any easier with the hand in the bell. In fact, if they can be produced, they are much clearer without the hand in the bell.

Example 12 shows two staves of music. The top staff is labeled 'Horn I in E-flat' and the bottom staff is labeled 'Horn II in E-flat'. Both are in 2/4 time. Horn I has a melodic line starting with a quarter note, followed by a sixteenth-note run, and then a quarter note. Horn II has a bass line with three asterisks marking specific notes.

**Example 12:** Haydn, Symphony No. 51, second movement, mm. 1–12.

Example 13 shows a single staff of music labeled 'Horns I, II in D' in 2/4 time. It features a sequence of chords and a single note marked with an asterisk.

**Example 13:** Haydn, Baryton Octet, Hob X:2, third movement, mm. 1–8.

3. Written *b'* below the eighth harmonic. Players in the eighteenth century must have had a means of obtaining this pitch without using the hand. Not only does it occur in pre-hand-stopping horn writing, it also occurs in trumpet writing where there was never a possibility of using the hand to adjust the pitch. Bach's approach to this note is typical.

Regardless of whether he is writing for horn, as in the first Brandenburg Concerto (Example 14) of no later than 1721 (that is, long before the earliest reasonable estimate of the first use of hand-stopping), or trumpet, as in the “Et expecto resurrectionem” movement of the B-Minor Mass of 1733 (Example 15), he calls it on a weak beat, for a short duration, and usually in a lower voice. Haydn’s use of this note in Symphony No. 31 (Example 7) and the Concerto for Horn (Examples 9 and 10) reveals an approach similar to that used by Bach. Unlike the low-register factitious notes which occur on strong beats and for a long duration, *b'* occurs only on weak beats and for a short duration (never longer than

**Example 14:** Bach, Brandenburg Concerto No. 1, first movement, mm. 32–34.

**Example 15:** Bach, Mass in B Minor, Credo: “Et expecto resurrectionem,” mm. 2–14.

an eighth note). Precedents for the approach used by Bach and Haydn can be found as early as 1638 in the writings and music of the Italian trumpet virtuoso Girolamo Fantini. Indicating that “certain notes will be found” that lie outside the harmonic series, Fantini advises that they “would be imperfect if you were to hold them, but can be accepted since they go by rapidly.”<sup>14</sup> Based on reports of Fantini’s performances, Marin Mersenne was able to assert that “the best trumpeters can so regulate the breath so as to emit all the individual tones from the third or fifth ascending.”<sup>15</sup> That is, through the use of the embouchure alone they were able to perform all the tones ascending by step, beginning on either the sixth harmonic *g* or the fifth harmonic *e*.

4. Written *a'* and *f'*. Prior to 1789, when Haydn calls for *a'* in Symphony No. 92, the only instance of Haydn requiring a horn player to produce either of these pitches is in the Concerto in D of 1762. Lying just below the naturally flat seventh harmonic, the *a'* is a common stopped note which can be obtained fairly easily. Roeser, writing in 1764, includes *a'* among the “four or five pitches that can be played on the horn by means of the hand,” but adds that they “must be used prudently if one wishes to use them.”<sup>16</sup> The *f'*, by contrast, is an extremely difficult note to produce with hand-stopping. Dauprat, writing in 1824, advises that “certain stopped notes (such as, for example, the *d'* below the first line of the staff, and the *f'* just above) sometimes resist the efforts of beginners for quite a long time, and this may make them feel disgusted with an instrument whose imperfections they learn before they experience its beauties and advantages.”<sup>17</sup> Mozart, despite requiring an advanced facility in hand-stopping, does not require this note in any of the solo works written for Leutgeb.<sup>18</sup> Haydn, however, displays no caution in approaching either pitch. Both the *a'* and the *f'* occur as sixteenth notes in an allegro tempo where they follow and precede an open harmonic (see Example 9a, mm. 44–45 and Example 9b, m. 85). The production of these passages using hand-stopping requires an advanced facility that was very likely unimaginable in the 1760s. However, since the pitches are of short duration and pass quickly, both passages can be produced very acceptably without using the hand at all.

5. The character of the writing. Despite the presence of non-harmonic-series notes, Haydn’s horn writing is not idiomatic of hand-horn writing. Not only are the non-harmonic-series

The image shows two staves of musical notation for Horn in E-flat. The first staff begins at measure 97 and contains several sixteenth-note passages. Asterisks are placed above the notes in measures 97, 98, 99, 100, 101, 102, 103, and 104. The second staff begins at measure 101 and also contains sixteenth-note passages. Asterisks are placed above the notes in measures 101, 102, 103, and 104. The notation includes various accidentals and rests, with some notes beamed together.

**Example 16:** Mozart, Concerto for Horn KV. 495. First movement, mm. 97–104.

notes more easily obtained and practical without using the hand, they do not in any way exploit the timbral or dramatic possibilities of hand-stopping. This becomes apparent by comparing Haydn's horn writing to Mozart's. A good example is the Concerto for Horn K. 495 (Example 16). Unlike Haydn, Mozart exploits the possibilities of the hand horn and clearly approaches the instrument in an entirely different way. This does not mean to imply that Mozart is more adept at writing for the horn than Haydn. Haydn's brilliance lies in the ways he exploits the possibilities of the open notes of the horn and not in the ways he embraced the new technique of hand-stopping.

### Conclusions

Since it appears unlikely that Haydn required hand-stopping in his Esterházy-era horn parts, is there a point later in his career where he began to write for this technique? Although it is subtle, a noticeable change in his approach to the horn is discernible in the 1790s. Significantly, the change in Haydn's writing corresponds exactly to the years in which hand-stopping was becoming widely acknowledged and accepted. There are still very few non-harmonic-series tones in Haydn's horn parts in the 1790s, but those that appear are used for dramatic purposes and are fully idiomatic of hand-stopping. An excellent example occurs in the Prelude ("The Representation of Chaos") of *The Creation* (1798) (Example 17). As the musical depiction of chaos becomes increasingly dissonant and dense in measure 29, the horns play a characteristic horn-fifths figure that is answered in the other winds by a melody falling from *cb* to produce a harsh dissonance of a minor second on the fourth beat. The passage culminates in a fully diminished chord in the second half of the following bar with the first horn playing a half-note *eb*<sup>2</sup> with a *forzando* indication. When played stopped—as this pitch must have been given its duration and the *fz* marking—a strident sound is produced that is entirely appropriate to the situation and adds strikingly to the dramatic effect created by Haydn at this point in the composition. Unfortunately, Haydn did not write for the horn as a solo instrument—the realm in which stopped notes were most characteristic—during these years, but this occasional and idiomatic use of stopped notes in the symphonic repertoire of the 1790s is certainly consistent with the practices of his contemporaries.

Given the current prevailing interest in historically informed performances, our approach to eighteenth-century horn parts generally, and Haydn's horn parts specifically, should be reconsidered, especially when these works are performed on the natural horn. Although specialists definitely existed who could obtain non-series pitches with the hand, it appears this was not the only method of obtaining certain pitches and possibly not even the most common one. In most cases, players were able to perform eighteenth-century horn parts with the bell held high and away from the body. In light of this, should modern players attempt this music without the hand in the bell? One suspects it would now be highly impractical for players to attempt these works exclusively on the open horn: few players today possess the skill to bend notes to the extent that players in the eighteenth century were accustomed, and few audiences today would be forgiving of



29

Fl. I, II

Ob. I, II

Cl. I, II in B $\flat$

Bsn. I, II

Hn. I, II in E $\flat$

Tpts., Tbns.

Vlns., Vla.

Vc., B.

*fz* *fz* *fz* *fz* *fz* *fz*

*p* *p* *p* *p* *p* *p*

*f* *f* *f* *f* *f* *f*

*f* *f* *f* *f* *f* *f*

**Example 17:** Haydn, *Die Schöpfung*, “Einleitung: Die Vorstellung des Chaos,” mm. 29–31.

the inconsistencies in tuning that would probably occur. Still, there are reasonable steps one can take. The most significant step concerns the quality of the sound. Contemporary writings and iconography indicate that, before the introduction of hand-stopping, the horn was held free from the body with the bell in the air. It was only when using the technique of hand-stopping that the instrument was held against the body and the hand inserted in the bell.<sup>19</sup> Since holding the horn with the bell in the air allows for a clear, bright sound, players should strive to achieve this, even if using the hand in the bell. Contrasts of sound, especially in passages that traverse the eleventh and thirteenth harmonics, should be avoided. These pitches should sound bright and clear, not muffled by the hand. An occasional lack of refinement—the horn was, after all, closely associated with the outdoor activity of the hunt—should be celebrated rather than suppressed.

Haydn's writing for the horn reveals his responses to an instrument whose technique was changing and developing over the course of several decades. Concerning his symphonies, Haydn remarked famously, "I was set apart from the world, there was nobody in my vicinity to confuse and annoy me in my course, and so I had to be original."<sup>20</sup> The same can be said of his approach to the horn. Although he did not embrace the new technique of hand-stopping, he explored brilliantly the possibilities of the open horn and found many innovative ways to expand its vocabulary through non-harmonic-series pitches.

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#### NOTES

<sup>1</sup> A serious challenge faced by proponents of hand-stopping in eighteenth-century music is the lack of written documentation concerning the technique. As John Humphries notes, "it is surprising that hand stopping should have remained almost undocumented until the very end of the eighteenth century." John Humphries, *The Early Horn: A Practical Guide* (Cambridge: Cambridge University Press: 2000), 51.

<sup>2</sup> The musical examples are notated in transposed rather than concert pitch, and transposing instruments are designated by their pitch in the examples (for example: Horn in F; Clarinet in A). This has been done to preserve the appearance of the parts written for natural horns and trumpets. All efforts were made to keep the music examples as complete as possible, but some reduction was unavoidable. In some examples, parts that are identical or similar have been combined, or instruments, voices or performance instructions that were deemed superfluous are omitted. The examples are meant only to demonstrate relevant aspects of the music and should not be taken as authoritative reproductions of the composer's full score.

<sup>3</sup> For more on the provenance of this call, see Josef Pöschl, *Jagdmusik: Kontinuität und Entwicklung in der europäischen Geschichte* (Tutzing: Hans Schneider, 1997), 80; and Horst Walter, "Das Posthornsignal bei Haydn und anderen Komponisten des 18. Jahrhunderts," *Haydn Studies* 4, no. 1 (1976): 21–34.

<sup>4</sup> David Wyn Jones, "Horn," in *Oxford Composer Companions: Haydn*, ed. David Wyn Jones (Oxford: Oxford University Press: 2002), 158.

<sup>5</sup> Horace Fitzpatrick, *The Horn and Horn-Playing and the Austro-Bohemian Tradition from 1680 to 1830* (London: Oxford University Press, 1970), 80.

<sup>6</sup> See, for example, the payrolls of June and July 1761 in János Harich, "Haydn Documenta (III)" *Haydn Yearbook* 4 (1968): 42–43.

<sup>7</sup> The identity of the performer for whom Haydn wrote the concerto is unknown. There is specula-

tion that it may have been intended for either Carl Franz or Joseph Leutgeb. See Paul Bryan, "Carl Franz, Eighteenth-Century Virtuoso: A Reappraisal," *Alta Musica* 4 (1979): 67–73; and Daniel Heartz, "Leutgeb and the 1762 Horn Concertos of Joseph and Johann Michael Haydn," in *Mozart Jahrbuch 1988/87* (Kassel, 1988): 59–64.

<sup>8</sup> Paul Bryan has surveyed the non-harmonic-series tones in the works of Haydn and Mozart, albeit with some inconsistencies (the seventh and thirteenth harmonics are listed among the "stopped-factitious notes"). See Paul Bryan, "The Horn in the Works of Mozart and Haydn: Some Observations and Comparisons," *Haydn Yearbook* 9 (1975): 189–255.

Excluded from Table 1 is a single occurrence of the non-series pitch  $eb^2$  in m. 66 of the first movement of the Baryton Octet in A, Hob. X:6. Given its context—a whole note that follows and precedes the ninth harmonic  $d^2$ —it is very possible that this pitch was obtained with the hand in the bell. As with later occurrences of the same pitch in *The Creation* and Symphonies Nos. 99 and 103, it is required of a first horn player whereas all other non-series pitches in Haydn's works prior to 1789 are found only in second horn parts.

<sup>9</sup> I have not included in this discussion the possibly spurious Concerto for Horn, Hob. VIIId:4. It contains only five instances of non-series tones (two occurrences of  $b^1$ , one occurrence of  $a^1$ , and two occurrences of  $b$ ) in the first two movements (there are no non-series tones in the third movement). The treatment of these notes is almost identical to that found in the Concerto VIIId:3.

<sup>10</sup> Valentin Roeser, *Essai d'instruction A l'usage de ceux qui composent pour la clarinette et le cor* (Paris: Mercier, 1764), 14.

<sup>11</sup> A reproduction of the autograph score with the indication *con sordino* can be seen in H.C. Robbins Landon, *Haydn: Chronicle and Works*, 5 vols., vol. 2 (London: Thames and Hudson, 1978), 539. This solo passage was later rescored for the bassoon after the departure of horn player Anton Eckhardt from Eszterháza. *J. Haydn's Werke*, the only published edition of the score, inexplicably gives only this later version.

<sup>12</sup> I have addressed this issue elsewhere at length. See J. Drew Stephen, "To Stop or Not to Stop: Nodal Venting and Hand Stopping on the Baroque Horn," *The Horn Call* 37, no. 3 (2007): 59–65.

<sup>13</sup> Joseph Fröhlich, *Vollständige Theoretisch-practische Musikschule für alle beyrn Orchester gebräuchliche wichtigere Instrumente zum Gebrauch für Musikdirectoren-Lehrer und Liebhaber*, 4 parts (Bonn: Simrock, 1813), Part 3, *Vom Horn*, 7. English translation in John Humphries, *The Early Horn*, 60. Louis-François Dauprat, *Méthode de Cor Alto et Cor Basse* (Paris, 1824; transl. Viola Roth, Bloomington: Birdalone Music, 1994), in the first lesson for *cor-basse*, also suggests playing these pitches with the bell open.

<sup>14</sup> Girolamo Fantini, *Modo per imparare a sonar di tromba* (1638; reprint with a complete English translation and critical commentary by Edward H. Tarr, [Nashville]: The Brass Press, 1978).

<sup>15</sup> Marin Mersenne, *Harmonicorum libri in quibus agitur desonorum natura, causis, et effectibus* (Paris, 1635), 2:109. English translation in Igino Conforzi, "Girolamo Fantini, 'Monarch of the Trumpe': Recent additions to his Biography," *Historic Brass Society Journal* 5 (1993): 164.

<sup>16</sup> Roeser, *Essai d'instruction*, 14. The five pitches named by Roeser are  $b$ ,  $f^\sharp$ ,  $a^1$ ,  $b^1$ , and  $c^\sharp$ .

<sup>17</sup> Dauprat, *Méthode de Cor Alto et Cor Basse*, 34.

<sup>18</sup> Mozart does require this pitch in the Rondo KV 371. See Herman Jeurisson, "Mozart's Very First Horn Concerto," *Historic Brass Society Journal* 3 (1991): 48–55, here 51–52. Note that the  $f^1$  in this instance occurs as a short note after and before the already stopped  $a^1$ . It is easier to produce since it requires only a slight adjustment of the hand.

<sup>19</sup> This method of holding the horn is described in Heinrich Domnich, *Méthode de Premier et de Second Cor* (Paris: Le Roy, 1807), iv; and in the anonymous *New Instructions for the French Horn* (London, ca. 1770). Visual depictions of this method of holding the horn can be found in a 1758

Canaletto engraving of the Imperial Opera Orchestra at Vienna and a 1782 drawing of a musical afternoon at Dr. Burney's house. Both illustrations are reproduced as plates VIIa and VIIb in Horace Fitzpatrick, *The Horn and Horn-Playing*.

<sup>20</sup> Georg August Griesinger, *Biographische Notizen über Joseph Haydn* (Leipzig: Breitkopf und Härtel, 1810). English translation in *Haydn: Two Contemporary Portraits*, transl. Vernon Gotwals (Madison: The University of Wisconsin Press, 1968), 17.