

MARCEL BITSCH'S *VINGT ÉTUDES POUR TROMPETTE UT OU SI^b*:

ANALYSIS AND PEDAGOGICAL PRACTICES

BY

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Submitted to the faculty of the
Jacobs School of Music in partial fulfillment
of the requirements for the degree,
Doctor of Music in Brass Pedagogy – Trumpet
Indiana University
December 2014

Accepted by the faculty of the
Indiana University Jacobs School of Music,
in partial fulfillment of the requirements for the degree
Doctor of Music in Brass Pedagogy – Trumpet

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08 December 2014

Table of Contents

Table of Contents.....	iii
List of Examples.....	iv
Chapter 1: Analytical Overview of <i>Vingt études</i>	1
Chapter 2: Individual Etude Analyses.....	30
Chapter 3: Addressing Playing and Pedagogical Concerns.....	99
Appendix: Exercises for <i>Vingt études</i>	112
Bibliography.....	156

List of Examples

Example 1.1: Motives from Etude 18.....	3
Example 1.2: Compound Melody in Etudes 10 and 14.....	4
Example 1.3: Contrary-Motion Wedges in Etudes 5 and 13.....	5
Example 1.4: Oblique-motion Wedges.....	6
Example 1.5: Embellishment of a Theme in Etudes 8 and 9.....	14
Example 1.6: Stages of Diminution in Etude 15.....	20
Example 1.7: Changing Triple/Duple Subdivision in Etude 4.....	28
Example 2.1: Metric Displacement in Etude 1.....	32
Example 2.2: Metric Displacement in Etude 1.....	33
Example 2.3: Triadic Outlining of Motive <i>x</i> in Etude 2.....	36
Example 2.4: Metric Displacement of Motive <i>z</i> in Etude 2.....	37
Example 2.5: Elision of Motive <i>w</i> in Etude 5.....	43
Example 2.6: Metric Displacement of Motive <i>w</i> in Etude 5.....	44
Example 2.7: Proposed Change to m. 13 in Etude 5.....	45
Example 2.8: Metric Displacement of Motive <i>z</i> in Etude 6.....	48
Example 2.9: Inverted Contour of Motive <i>y</i> in Etude 7.....	51
Example 2.10: Variations of the Oblique Wedge in Etude 7.....	51
Example 2.11: Metrically-displaced Ornament in Etude 8.....	54
Example 2.12: Embellished Melody in Theme A' of Etude 8.....	55

Example 2.13: Expanding Wedge from a Transformation of Motives <i>w</i> and <i>x</i> in the Coda of Etude 9.....	58
Example 2.14: Cadential Implications in the Closing of Etude 10.....	60
Example 2.15: Metric Displacement within a Single Motive in Etude 12.....	66
Example 2.16: Re-barring Theme B of Etude 12.....	68
Example 2.17: Chromatically Ascending Line in Etude 13.....	71
Example 2.18: Diminution of Thematic Material in Etude 13.....	72
Example 2.19: Transposition and Fragmentation of Motive <i>x</i> in Etude 13.....	73
Example 2.20: Fragmentation and Displacement of Motives <i>y</i> and <i>z</i> in Etude 13...	73
Example 2.21: Fragmentation and Displacement of Motive <i>u</i> in Etude 13.....	74
Example 2.22: Exact Inversions within Motives <i>y</i> and <i>z</i> of Etude 14.....	76
Example 2.23: Proper Rhythmic Interpretation of Theme B in Etude 16.....	84
Example 2.24: Embellishment of Motive <i>x</i> in Etude 17.....	87
Example 2.25: Lead-in to Motive <i>x</i> in Etude 17.....	88
Example 2.26: Inverted Contour of Motives in Theme C of Etude 19.....	94
Example 2.27: Variations of the Beginning of Motive <i>v</i> in Etude 20.....	96
Example 2.28: Traveling 16 th -note Groupings in Theme C of Etude 20.....	97
Example 3.1: Displacement of Motive <i>w</i> in Etude 11.....	104

Chapter 1: Analytical Overview of Marcel Bitsch's *Vingt études*

Biographical Information

Marcel Bitsch (1921–2011)—native to Paris—was a composer, author, and pedagogue. In 1939, he entered the Paris Conservatoire, where he studied several subjects, including counterpoint, harmony, fugue, musicology, and composition. He received many accolades while in attendance, culminating in the Prix de Rome in 1945. In 1956, two years after publishing *Vingt études pour trompette ut ou sib*, Bitsch became a full-time professor at the Conservatoire. His tenure ran until 1988.

Bitsch published 64 compositions, mostly solos and chamber music for wind instruments. A complete list of Bitsch’s compositional output can be found in Evan Duke’s dissertation “Language as a Performance Parameter: The Marcel Bitsch *Vingt Etudes*.”¹ In addition to his compositional output, Bitsch also wrote several analytical papers on works by Bach, Chopin, and Debussy, as well as books on harmony, counterpoint, and fugue.

Introduction

An important element to successful musical performance is understanding how the composition is constructed. With 20th and 21st-century trumpet music, the individual components of a piece’s construction are not always transparent to the

¹ Evan Duke, “Language as a Performance Parameter: The Marcel Bitsch *Vingt Etudes*,” DMA diss., University of Kentucky, Lexington, 2011, http://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1001&context=music_etds, pp. 113–16.

performer. Works may also lack a traditional tonal schema, which makes them difficult to recall aurally. Without an internalized concept of the melody, it is extremely difficult to master a work. For this reason, it is helpful to take a more in-depth approach to analysis. This will, in turn, aid the ear's ability to 'hear' the music before it is played, helping in the overall preparation and execution of these works. Marcel Bitsch's *Vingt études* contain largely atonal, angular, and rhythmically challenging melodies, which warrant this type of in-depth analysis.

This chapter gives a detailed look at some of the overarching compositional traits that are woven into the framework of Bitsch's etudes. The following concepts will be addressed: 1) motives, 2) form, 3) transposition and other intervallic transformations, and 4) rhythm and meter. Recognizing these concepts will better equip musicians with the knowledge to effectively prepare these works for performance. With the proper knowledge, musicians will be capable of creating an enhanced musical experience for themselves and their audiences.

Motives

Bitsch's etudes are commonly constructed around motivic ideas. Motivic involvement ranges from minimal to an entire work being constructed around them. Etude 18 can largely be explained through four motivic ideas and their transformations (see Example 1.1).

(w)

(x)

(y)

(z)

Example 1.1: Motives from Etude 18

Motives in Bitsch's trumpet etudes frequently fall into at least one of several categories: 1) compound melody, 2) wedges, 3) octave displacement, 4) scalar passages, 5) arpeggiated patterns, 6) prevalent interval patterns, and 7) articulation patterns. Identifying these motive-types within individual etudes will help one to better understand the music and also effectively recognize practice methods to address inherent technical and musical problems.

The first motivic category is compound melody. Compound melody or 'unfolding' is a concept from traditional tonal theory where two or more voices are joined together into one melody line, often alternating between distinct registral voices. This technique allows an otherwise single-voiced instrument to represent two or more voices. Example 1.2 provides examples of this compositional technique.

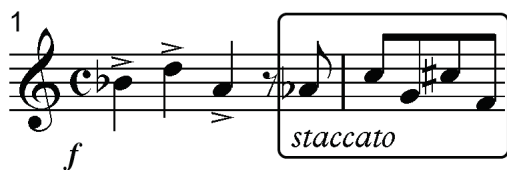
Etude 10 *dim.* Etude 14 *expressif*

Example 1.2: Compound Melody in Etudes 10 and 14

In Etude 10, the motive appearing in mm. 5–7 represents an overall descending line, but the melody alternates between two registers, or voices, as it descends. This particular example does not have a strict pattern for alternating between voices, which allows each voice to be represented on both metrically strong and weak beats for a measure at a time. There is also no consistency as to which voice begins the motive. These variances make it difficult to establish a dominant voice. Etude 14 has a motive that behaves similarly. The material in m. 1–2 alternates between voices without a particular pattern. Each voice is also capable of starting and/or ending the motive, and no one voice is metrically strong or weak on a consistent basis.

A subcategory of a compound melody is the wedge. It, too, involves two or more voices that are brought together into a single melody line. The main distinction of a wedge is that the two lines move in either contrary or oblique motion from or toward one another, usually by half or whole step.

The contrary-motion wedge involves two or more voices moving toward or apart from each other, often by stepwise motion, seen in Example 1.3.



Expanding wedge in Etude 5



Contracting wedge in Etude 13

Example 1.3: Contrary-motion Wedges in Etudes 5 and 13

Two-voice contrary-motion wedges occur in Etudes 5, 9, and 13. In Etude 5, the wedge initially appears with the pickup to m. 2. Here, the wedge is expanding, generally by a combination of half and whole steps. This type of expanding wedge is seen throughout the etude, either as 8th or 16th-note figures. The second half of Etude 5 (mm. 21–34) also includes contracting wedges, contributing to an overall feeling of inversion and retrograde in this portion of the work. A similar event, though to a lesser extent, occurs in Etude 13. The wedges exclusively expand until m. 37, more than halfway through the piece, before a contracting wedge is introduced.

The best example of contrary-motion wedges with two or more voices occurs in Etude 9. The first A theme (mm. 1–9) is largely made up of contracting contrary-motion wedges. This motivic idea gets expanded in the return of Theme A, starting in m. 19. In the return, Bitsch has four independent voices that are contracting inward. The bottom three voices are moving up by step or semitone, and the top is moving down by step or semitone. As the section continues, the four voices collapse into two, as seen in mm. 21 and 27. An expanding three-voice wedge can also be viewed in mm. 28–29.

Oblique-motion wedges are also common in Bitsch's etudes. Unlike the contrary-

motion wedge, the oblique-motion wedge has two or more voices where at least one voice remains stationary as the other(s) expand or contract by step or semitone (see Example 1.4).

5 *cresc.*
Expanding wedge with stationary upper voice in Etude 1

8
Contracting wedge with stationary lower voice in Etude 7

Example 1.4: Oblique-motion Wedges

Oblique-motion wedges occur in Etudes 1, 7, and 15. In Etude 1, the oblique-motion wedge is seen initially in mm. 5–7. The stationary voice is the top note G, which behaves as an upper pedal. It is also possible for the stationary voice to occur in the lower voice, as seen in m. 8 of Etude 7. As with the contrary-motion wedge, the oblique-motion wedge can also involve more than two voices. Etude 15, mm. 26–29, uses a four-voice wedge, where the top voice remains on C, and the bottom three voices ascend, mostly by step.

Some compound melodies result when one or more voices are displaced by an octave (or two octaves) above or below the original voice. Examples of octave displacement occur in Etudes 5–9 and 14. In Etude 5, the motive from m. 1 is later embellished using octave displacement. Measure 11, beats 2–4, is an inverted representation of the original motive. The added octave displacement changes the contour of the line and disguises the original motive. Measure 13 behaves similarly—also an inversion of the original motive—but, unlike the first example, the motive begins in the lower octave, completely changing the contour of the line.

In some cases, octave displacement can be a defining motivic feature, rather than the result of a transformative process. In Etude 7, the motive in m. 3 contains two distinct registers. If the upper voice were dropped an octave, it would act as semitone lower neighbors to the lower voice or create unisons. The lower neighbor motive will be addressed again later in this chapter.

In other cases, octave displacement can transform a previous motive or theme into a new motive. The lower octave displacement in mm. 13–15 and 23–25 of Etude 14 helps to define a new motivic idea that would otherwise just sound like a variant of mm. 1–3. The lower octave G's (mm. 13–15) and A's (mm. 23–25) of this motive also act as a pedal, helping to give a pitch center to an otherwise largely atonal work.

Bitsch also uses scalar passages as a common motivic idea. Scales, with few exceptions, are not presented in conventional forms of major or minor. One such exception occurs in Etude 10. The first half of the etude uses a melodic minor scale. The second half, starting with m. 26, uses ascending major and Lydian scales from $\hat{1}-\hat{7}$, as well as descending Dorian and Mixolydian scales from $\hat{7}-\hat{1}$.

In Etude 6, the ascending scale motive, which generally occurs in pairs, is based on one of two different scales. The first of the pairing is usually a Mixolydian scale; the second is a Lydian scale with a lowered $\hat{7}$, also known as the 'acoustic' scale. In most cases, the two scale-types are presented in direct succession. However, the Lydian scale also appears in fragments throughout the etude (mm. 23–24 and 29–30), and the Mixolydian scale is presented twice in a row in mm. 34–36.

The scalar motion in its entirety in Etude 12, starting with m. 13, does not fit any conventional scale form. It can, however, be broken into representations of both

whole tone scales, connected by semitone halfway through. The F[#] down to B^b represents one form of the scale, and the A down to D^b represents the other. One can only assume that the G at the start of the motive would belong to the next higher five-note representation of a whole tone scale. The motive is fairly consistent; when it is revisited, it is almost always an exact transposition of the original or a fragment thereof. The main exception is the introduction of the descending chromatic scale in m. 29.

Along with scalar motion, arpeggiated patterns are also common in Bitsch's etudes. The arpeggios may or may not be derived from a conventional scale form. For those that are, they range from arpeggiating triads to extended tertian harmonies. An example of triadic arpeggiation occurs in Etude 15. The opening motive, starting with the pickup to m. 1 through the end of that measure, is always an ascending, second inversion minor arpeggio. Etude 1 represents the other end of the spectrum. It arpeggiates ninth chords, both ascending and descending. While all the ninth-chord motives are derived from a conventional scale pattern, the quality of the chord is not consistent throughout—for example, mm. 23–24 includes three qualities of ninth chords.

It is, perhaps, more common that the arpeggios in Bitsch's etudes do not follow a traditional scale pattern. This is seen in Etudes 4, 18 and 19. With these arpeggiations, they almost always involve extended tertian harmonies. In Etude 18, the motive in mm. 20–22 has an overall descending line, with minimal direction change. The motive uses G₄ and G[#] and E₄ and E^b but is otherwise largely stacked in thirds. Etude 19 also shows that the arpeggiations are not limited to tertian

harmonies. The opening motive of Etude 19 is based on the interval of a fourth, representing a quartal arpeggiation.

Arpeggiations can occur in both closed and open position. Closed position involves a series of pitches stacked into the smallest range possible, according to a given starting note. Etudes 1, 15, and 18 are all examples of this type. When arpeggios do not adhere to the smallest-range principle, they are considered to be in open position. Etudes 2 and 19 provide examples of open position arpeggios. In Etude 2, the opening motive and its transformations arpeggiate various qualities of triads and other chords that can span intervals up to a m13 from the top of the motive to the bottom. In Etude 19 the motive starting in m. 25 uses open-position triads with intervals up to a P11 between two notes of a given arpeggiation.

As seen with the opening motive of Etude 19, certain motives contain prevalent intervals within them. The motive may move in a single direction or may change direction. Some of the arpeggios discussed previously from Etudes 1, 4, 15 and 18 would be examples of motives based on thirds, most of which move in a single direction. Etude 19 uses multiple motives based around the interval of a fourth, which move in a single direction, like m. 1, or change direction, like m. 13. A direction-changing motive based on fourths also occurs in Etude 8, first seen in m. 6. Sevenths are also a prominent interval in some motives. The motive in m. 3 of Etude 7 and, to a lesser extent, the motive in m. 1–2 of Etude 14 both rely on this interval.

Another classification of motives in Bitsch's music involves the consistent use of an accent-type to help define the motive. The addition of these accents helps one to distinguish a particular motive from other material. The accents may be staccato

(·), staccatissimo ('), tenuto (-), a traditional accent (>), or registral. In Etude 3, Bitsch uses the staccato accent to further distinguish the upper line of the compound melody, which is already registrally accented. The use of accents in this motive emphasizes an underlying rhythm that sets it apart from other material in the etude.² In Etude 1, Bitsch uses both staccatissimo and marcato accents to distinguish different motivic and thematic material. The motives occurring in mm. 1–2, 4–6, and 19–21 are assigned staccatissimo accents, where ascending and descending thirds are always given the marcato. Etude 13, m. 22 and Etude 15, m. 2 also use the staccatissimo to distinguish new motivic material.

The use of the tenuto accent in Etude 8 makes the motive from m. 1 easy to visually distinguish, even when it is later embellished, as it appears in m. 43. Adding the tenuto to this motive also gives an added level of importance to the material. The frequency and stress of the articulation in this motive allow it to act as a unifying factor for the entire etude.

The marcato accent is the most prominently used in Bitsch's etudes to create motivic differentiation. Etudes 1, 5, 7, 12, 13, and 18 all use it consistently with certain motives. Much like the tenuto accent in Etude 8, the marcato used in Etude 5 helps to make the motive recognizable. The motive appears in various forms, using techniques like octave displacement, inversion, metric displacement, and augmentation. Regardless of its transformation, the use of this accent remains a constant with this motive throughout the etude.

Etudes 7 and 12 both use the marcato to create a hemiola pattern. In Etude 7, the

² Rhythmic events such as this will be explored in more depth later on.

hemiola is shown in three forms: first, seen with both a marcato and registral accent, like the repeated G's in m. 2; second, seen as a registral accent, as in m. 5; and third, seen with just the marcato accent, as in m. 18. The accent pattern in Etude 12 occurs in mm. 19–22, as a part of a digression section. This section transitions the piece back to the original theme, using the accents to help set up the sparse quality of the original motivic material.

Form

Bitsch's etudes, while progressive in pitch structure, often resemble older Classical forms, such as binary, ABA', or some form of rondo. New formal sections, or, themes, can be defined by the introduction of one or more of the following: a new style or character, new motivic material, different dynamics, and/or different rhythms. In some cases, the new theme brings entirely new material, while in others, the new theme may carry over one or more traits from a previous theme. Themes in these etudes can be broken down into one of four categories: 1) monothematic, 2) two contrasting themes, 3) combining the first two themes into a third new section, and 4) three contrasting themes.

Only one etude can be categorized as monothematic. Etude 5 maintains a fairly consistent character, having only a few measures of contrasting transitional material in mm. 19–21. Like Etude 18, Etude 5 heavily relies on four individual motives to hold the piece together. Those motives include the first three quarter notes, contrary-motion wedges, ascending scalar passages, and descending lines

with lower neighbors.³ Even the transitional measures can be explained motivically as a derivation of the motive in m. 1.

Most commonly, Bitsch's etudes contain two contrasting themes.⁴ The level of contrast between themes varies. Etudes 9 and 12 provide considerable contrast, changing the character, dynamics, rhythms, and prominent motives from Theme A to Theme B. Both etudes also include written instructions at the start of Theme B, marking a change in style. Theme A of Etude 9, mm. 1–9, is to be played staccato while Theme B (mm. 10–18) is marked "espressivo" with slur markings. Etude 12 gives instruction to play Theme A staccato and Theme B "léger" (light or airy).

Other etudes have subtler changes in themes, such as Etude 17. In this example, the character and dynamics are relatively consistent throughout. A slight change in rhythm occurs with the new syncopated motive in m. 19, designating the start of Theme B. However, other motivic transformations borrowed from Theme A are introduced as early as m. 20, consistent in rhythm and metric placement with m. 1.

Some of Bitsch's etudes use two themes throughout, but a third theme is created by combining elements from the two themes.⁵ In some cases, themes are combined at the very end of the etude, as in Etudes 6, 13, and 14. The themes act as a culmination of the thematic material, helping to unify the work and bring it to a decisive conclusion. The third section can also occur immediately following Theme B, as happens in Etude 1. This section behaves like an abridged development section of a sonata form or a digression section of a rounded binary. Using fragments from

³ See the Motive section of Etude 5 in Chapter 2.

⁴ See Etudes 3, 7–12, and 16–17.

⁵ See Etudes 1, 6, and 13–14.

each theme in short succession intensifies their conflict, which is eventually resolved with the return of Theme A in m. 22. When themes are combined, their fragments may appear in varying lengths. Shorter fragments are used in quick succession in Etudes 1, 6, and 14. Conversely, Etude 13 uses longer portions of the theme, ranging from 5 to 12 measures in length.

Bitsch also occasionally uses three contrasting themes.⁶ In all cases, the third theme occurs in the middle of the form. Etude 2 loosely follows a seven-part rondo form (ABACABA). While Etude 4 acts similarly, it tacks on a second representation of Theme C in mm. 32–33, leaving an ABACABAC form. The addition of the second C theme allows one to interpret the form as a hybrid of rondo and binary. Etudes 3, 15, and 20 all use an ABCA' form. In Etude 3, Theme C behaves as a retransition. It is based rhythmically on fragments from the motive in m. 1 from Theme A, but the true return of A does not occur until m. 47. With the other two etudes, 15 and 20, the C theme operates on new motivic material, still working to bridge Theme B to the return of Theme A.

Another common formal occurrence in Bitsch's etudes is the embellishment of an original theme or themes.⁷ In most cases, it is Theme A that is embellished. The only exception is Etude 16, where Theme B is instead embellished. In some cases, the entire theme is changed, either by subdividing rhythmic values of the original theme or by adding new melodic notes to make the line more florid and ornate (see Example 1.5).

⁶ See Etudes 2–4, 14, and 20.

⁷ See Etudes 4, 8–9, 11–12, 15–16, and 19–20.

Subdivided rhythmic values

Etude 8: Original and Embellished Melody

Adding melody notes

Etude 9: Original and Embellished Melody

Example 1.5: Embellishment of a Theme in Etudes 8 and 9

The former of these types can be seen in Etudes 8 (mm. 43–48), 11 (mm. 34–51), 19 (mm. 54–78), and 20 (mm. 51–62). The latter occurs in Etude 9 (mm. 19–27).

Embellishments also occur on a smaller scale in Etudes 4, 12, and 15. Etude 4 only embellishes half of Theme A in mm. 19–21. Etude 12 changes just the return of the opening motive in m. 24 and the descending line in m. 29. Etude 15 adds grace notes to new areas of the melody with the return of Theme A and quickens the rhythm from two quarter notes to two 8th notes in mm. 36 and 42.

While Bitsch's etudes are not tonal in a traditional sense, they do contain properties that tie them to more traditional, tonal music. Joseph Straus outlines six characteristics of tonal music in his book *Introduction to Post-Tonal Theory*: key, key relations (modulations), diatonic scales, triads, functional harmony, and voice leading.⁸ Of these characteristics, the first four commonly occur in post-tonal music

⁸ Joseph Straus, *Introduction to Post-Tonal Theory*, 3rd ed. (New Jersey: Upper Saddle River, 2005), 130–31.

in non-traditional ways.⁹ Examples of all four of these characteristics can be found in Bitsch's etudes.

In several of the etudes, there is a feeling of a tonal center or *pitch centrality*. Straus describes pitch centrality as, "notes that are stated frequently, sustained at length, placed in a registral extreme, played loudly, and rhythmically or metrically stressed."¹⁰ In Etude 10, Bitsch frequently uses the pitches E^b and B^b throughout the work. Their repetitions, combined with their rhythmically, metrically, and structurally strong locations allow the listener hear E^b and B^b as $\hat{1}$ and $\hat{5}$ and ultimately E^b as the overall "key."¹¹ In addition, Bitsch tends to begin and end his etudes with the central tone, which occurs in Etude 10 as well as several others.

Bitsch also "modulates" or, more accurately, changes the pitch centrality within many etudes. In Etude 2, the first sixteen measures use E^b as the central tone. After Theme C (mm. 17–26), which briefly uses G^b and F^b as the central tones, Bitsch returns to the original A theme material, only the centrality has been shifted from E^b to F[#]/G^b. In m. 37, the central tone becomes less stable, and it remains that way until Bitsch arrives back at E^b in the final measure.

Bitsch also commonly closes an otherwise non-functionally-tonal work with more familiar tonal, cadential-like material. In m. 36 of Etude 6, the scalar motion from C up to A, followed by F, contains V→I cadential-like motion. The scale from C to G outlines a V chord, while the last note of the scale, A, anticipates the final

⁹ Ibid., 130.

¹⁰ Ibid., 131.

¹¹ See Example 2.14.

motion to the tonic, F. Bitsch uses similar cadential closing material in Etudes 2–3, 10, and 14–15. However, more commonly, etudes will simply close with a $\hat{5}$ to $\hat{1}$ motion. This occurs in Etudes 1, 4–5, 7–9, 11–13, 16–17, and 19–20.

Occasionally the $\hat{5}$ to $\hat{1}$ completion of an etude does not involve a direct motion between the two scale degrees. Etudes 5 and 13 are both examples of this. In Etude 5 the ear wants to hear the pickup into the final measure as F ($\hat{5}$) to B b ($\hat{1}$); however, instead of creating a tonic arrival on beat one with octave B b 's, Bitsch makes the first 8th note of m. 34 an A ($\hat{7}$). The A relates to the previous F as part of a V chord, leading into the following B b tonic. Traditional voice leading expects the leading tone to move up to tonic, but Bitsch adds a twist by displacing the B b down an octave to create a more unexpected ending. Etude 13 also does not directly move from $\hat{5}$ to $\hat{1}$, but the expanding wedge in m. 55 begins on A ($\hat{5}$), expands to C $^\sharp$ ($\hat{7}$), and moves to D ($\hat{1}$) in m. 56.

Other common tonal elements used in Bitsch's music involve the use of scale collections and triads.¹² Scales of various collections appear in Etudes 6, 10–11, 13, 15–16, and 18. Etudes with clearly-outlined triads include Etudes 1–2, 4, 9, 13, 15, and 18–20.

Transposition and Other Intervallic Transformations

Bitsch's etudes commonly contain transpositions and other intervallic transformations of motives and themes. Transpositions may be exact, where an

¹² See the Motive section of Chapter 1 for specific examples of scalar and triadic usages.

entire motive or theme is transferred up or down by one specific interval. They may also be non-exact, where certain intervallic variances are present. Typically, transpositions of this type are identifiable with the original motive or theme by maintaining the same or similar contour, rhythm, and/or articulation. Bitsch also uses other intervallic transformations to manipulate thematic material, such as retrograde, inversion, and inverting the contour of the line.

Transpositions occur at both the motivic and thematic level. Examples of motivic transposition occur in Etudes 1, 3–6, 8–10, 14, and 17–20. Etude 1 uses both exact and non-exact transpositions at this level. Exact transpositions of the motive in m. 2 occur in mm. 9, 11, 14, and 31. This same motive is also transposed with a non-exact intervallic relationship in mm. 7 and 24, offering a different chord quality than the motive in m. 2. Measure 29 further transforms the motive. It is still recognizable by rhythm, articulation, contour, and the presence of the flutter tongue on the half note A^b , but the motive is no longer stacked in thirds. When the contour, rhythm, and/or articulation remain consistent, one can still recognize the connection with the original motive.

Transposition also frequently occurs at the thematic level, appearing in Etudes 1, 3, 13, and 16. Theme A of Etude 16 (mm. 1–6) is transposed, almost entirely through exact intervals, when Theme A returns (mm. 13–17). Measures 13–14 are transposed up a $m3$ from the original, except the $B\sharp$ in beat 3 of m. 14.¹³ Bitsch then replays the original pitch classes from m. 3 in m. 15 and transposes the next two

¹³ If the transposition were exact, the $B\sharp$ would be the D above it. While this note is likely in many advanced players' range, Bitsch never exceeds $C6$ at any point in these etudes.

measures (mm. 16–17) down a M2 from the original (mm. 4–5). Changing the levels of transposition in Theme A's return reinvents the material and eventually takes the pitch center full circle to its final arrival on D.

In addition to the types of transposition discussed above, Bitsch also transforms the motives and themes through retrograde, inversion, and inverting the contour of the line. Retrograde occurs only at the motivic level and is most prevalent in Etude 5. The wedge motive that begins with the pickup to m. 2 is found in retrograde in the second half of the etude (mm. 24–25 and 27–28).¹⁴ In the original motive, the wedge is expanding, whereas later on, it contracts. One recognizes it as a transformation of the original motive because the two representations are consistent in articulation and rhythm.

Inversion is a much more common transformation in Bitsch's etudes. At the motivic level, inversion is seen in Etudes 1, 6–7, 9–10, 15, and 19. Measures 42–43 of Etude 10 invert the contour of the motive found in m. 1. While the representation of the motive in its entirety is a non-exact inversion, the individual beats of mm. 42–43 are each exact. Each beat is simply inverted at a different pitch level.

Inversion at the thematic level is found in two etudes, 9 and 11. In both cases, Theme A is inverted. Etude 9, mm. 1–3, shows up in inversion in mm. 7–10. The inversion is subtle, both working as contracting contrary-motion wedges. However, one will notice that the first representation in mm. 1–3 begins in the lower octave, whereas the next in mm. 7–10 begins in the upper octave. The inversion is more

¹⁴ At first glance, m. 22 appears to also be a wedge motive in retrograde, but upon closer inspection this measure is merely using octave displacement of the original pitches from m. 2.

apparent with the return of Theme A. In mm. 19–21, the original theme is embellished through arpeggiating the leaps from the lower to upper octave. These additional notes allow one to clearly see the change in direction when the theme is inverted in mm. 25–27. The use of inversion in Etude 11 is similar to Etude 9, with a few exceptions. The original theme from mm. 1–9 is immediately inverted in mm. 10–18 without any connecting material. The inversion is also exact, with the exception of the A^b in m. 11, which would need to be an $A\sharp$.

Rhythm and Meter

Bitsch's etudes often contain rhythmic and metric events that create points of interest and cohesiveness in a work. These events occur on both a large and small scale. Large-scale rhythmic and metric categories include the following: 1) written meter changes, 2) use of a prevalent rhythm, 3) rhythmically-challenging sections, and 4) disguising the meter through metric displacement and irregular phrase lengths. Small-scale rhythmic categories include 1) changing the rhythm of the original motive, 2) changing the subdivision of a motive from duple to triple (or vice versa), 3) using hemiola, and 4) using accents to create new rhythmic patterns.

Despite their rhythmic complexity, Bitsch's etudes only occasionally incorporate written meter changes within a single work. This is found only in Etudes 7 and 15 and with varying degrees. In Etude 15, written meter changes away from $\frac{4}{4}$ time only occur in three measures (mm. 26–27 and 45). The change to $\frac{3}{8}$ in mm. 26–27 helps to outline the form, creating a clear delineation for the start of Theme C in m. 26. Here, the motive from m. 2 through the downbeat of m. 3 is reinterpreted using octave

displacement and diminution, a shortening of the original rhythmic values. The diminution of the motive happens in stages, shown in Example 1.6.

The image shows three musical staves illustrating the stages of diminution of a motive. The first staff, labeled 'Original motive', shows a five-beat phrase in 3/4 time starting at measure 2. The second staff, labeled '1st stage of diminution', shows a three-and-a-half-beat phrase in 3/8 time starting at measure 28. The third staff, labeled '2nd stage of diminution', shows a two-beat phrase in 3/4 time starting at measure 28. Each staff includes a measure number (2, 28, 28) and a key signature of two flats.



Example 1.6: Stages of Diminution in Etude 15

The original motive from m. 2 is five beats in length, if one includes the rest on the downbeat of m. 3. Measures 26–27 represent the middle stage, now three-and-a-half beats in length by shortening the last two quarter notes to 8th notes and the quarter rest to an 8th rest. The motive undergoes further diminution in mm. 28–29. Here the motive is only two beats in length by shortening the first two quarter notes to 8th notes and eliminating the rest entirely.


The second meter change happens in m. 45 when Bitsch cuts the return of Theme A short to bring the etude to a close. The meter change causes the motive from m. 1—ordinarily starting on a metrically weak beat—to start on a strong beat, helping to bring finality to the piece.

In Etude 7, the meter changes occur much more frequently than in Etude 15. The meter alternates between $\frac{3}{4}$ and $\frac{2}{4}$ time signatures eighteen different times. Typically, Bitsch is consistent in pairing the same motives with the same time signature, and motives also tend to occur in the same metric location each time they are used.

In some etudes, a single rhythm or rhythmic grouping pervades an entire theme or etude. These prevalent rhythmic ideas can be viewed at the thematic level in

Etudes 10 and 20. In Etude 10, the rhythm  monopolizes Theme A (mm. 1–14) and is also used in Themes B (mm. 15–25) and C (mm. 26–46) to a lesser extent. Themes B and C disguise the rhythm through ties and the use of a 16th rest in place of a dot (m. 19). Etude 20 uses distinct rhythmic patterns for each theme to clearly delineate the form. Theme A (mm. 1–21) is based around the  rhythm, Theme B (mm. 22–37) around 8th notes and 8th-note triplets, and Theme C (mm. 38–50) and A' (mm. 51–63) are each based around 8th and 16th-note patterns.

Etudes 16 and 18 work, almost exclusively, with a single rhythm or rhythmic grouping. Etude 18 is based on 16th-note patterns throughout every theme. With very little rhythmic variation in the work, Bitsch must rely on other means to define sections of the form. Thematic material is distinguished instead through notated key signature changes and the transposition and inversion of original motives.

Etude 16 is in $\frac{5}{4}$ and uses the quintuplet as a rhythmic grouping and subdivision of nearly every beat throughout the entire etude. In this case, the form is delineated by a change in rhythm and articulation pattern, starting in m. 7. Bitsch only notates the quintuplet pattern on the first beat of m. 1, but it is clear that he intends for the quintuplets to continue, even through the rests in mm. 8–10 and different articulation pattern in mm. 9–12. The  rest on the downbeat of m. 10 helps to clarify any ambiguity about the intended rhythm. If it was intended for one to play a 16th-note triplet followed by two 16th notes (or vice versa), then the rest in this measure should only be an 8th rest, not a dotted one. Additionally, Bitsch presumably would have written a “3” over the first triplet, given that it would be a new rhythmic value to the etude. The only breaks in the quintuple subdivision are

the staccatissimo 8th notes that are typically followed by 8th rests (e.g., the downbeat of m. 3) and beat 3 of the etude's final measure.

In some etudes, it is clear that Bitsch wants to rhythmically challenge the performer. Etude 11 is written in $\frac{5}{8}$ and is a mix of short motivic bursts with a series of 8th rests. It is a challenge—especially given the rests—to keep good time, rhythm, and phrasing throughout. The rhythm, however, is not as random as it first appears. Bitsch uses the same rhythmic sequence from mm. 1–4 in mm. 10–13. Measures 5–9 and 14–18 also use the same sequence, only metrically displaced by two 8th notes. The same pattern is also maintained with the return of Theme A (mm. 34–51). Theme C of Etude 2 (mm. 17–26) also incorporates challenging rhythms through its use of rests and ties. Like Etude 11, note that some of the rhythmic groupings repeat themselves.

The challenging rhythms of Etudes 2 and 11 are due in part to Bitsch's ability to disguise the meter. The main ways he does this are through motivic or phrase displacement and irregular phrase lengths. In some cases, the two work in tandem, but they may also act independently of one another.

Motivic or phrase displacement occurs in several of Bitsch's etudes, including Etudes 1–3, 5, 11, 13, 15, and 19. An example of displacement at the motivic level occurs in Etude 13. The motive in mm. 3–4 appears again in mm. 19–20, but it has been displaced by a beat. The displacement, however, may be difficult to perceive as a listener, as a result of the preceding fragmentation of motive x in mm. 15–18 that obscures the meter.

Displacement at the phrase level can be found in Etude 11. As briefly discussed

above, the same rhythms and pitches from mm. 1–4 are used in mm. 5–9, but the latter measures have been displaced by two 8th notes as a result of the two 8th rests at end of the phrase. Measures 10–18 follow the exact rhythms from mm. 1–9, and the return of Theme A in mm. 34–51 is the same as the original A theme, save the 8th notes that have been subdivided into 16th notes. A similar displacement by two 8th notes occurs in Theme B. The material in mm. 19–21 is repeated and displaced by two 8th notes in mm. 22–25, and the material in m. 26 is repeated and displaced by one 8th note in mm. 27–28.

Motivic/phrase displacement can also result from irregular motive/phrase length. Phrase lengths may be a less-conventional odd number of measures (e.g., the first three measures of Etude 1 or the first five measures of Etude 4), or they may even begin or end mid-measure. To come back to the discussion involving Theme C of Etude 2, one will see that the same motivic idea from m. 17 through the first two 16th notes of m. 18 gets immediately repeated, but because the motive length is irregular (one measure and two 16th notes), the repetition of the material is displaced by two 16th notes. The same concept happens on a larger scale with Theme A in Etude 5. The opening phrase is two-and-three-eighths measures long. The phrase is immediately repeated, this time displaced by one-and-a-half beats.

In addition to an overall motive/phrase length being irregular, other irregularities should be noted. With the previous examples, the lengths, while atypical, remain the same throughout the etude. However, it is also common for Bitsch's etudes to change the length of the original motive or phrase. Common devices he uses are extension, fragmentation, diminution, and elision.

Motive/phrase extension involves additional melodic material being added to a motive or phrase. The extension length may vary, but it can have a similar effect to an irregular motive/phrase length, discussed above. It is capable of disguising the meter by changing the length of the pre-established motive or phrase, usually causing it to end in an unexpected location. This may cause subsequent melodic material to begin in unusual metric locations. Etudes 12 and 19 have examples of this type of extension. In Etude 12, beat 3 of mm. 16 through beat 1 of m. 17 extends the phrase that begins in m. 15. The extension causes the next phrase to begin on beat 2 of m. 17, instead of beat 1, as seen with the original version in m. 12. In Etude 19, extensions occur on beat 3 of m. 23 and beat 2 of m. 43. In both cases, the extension causes Theme C (mm. 25–35 and 44–53) to start a beat later than it would otherwise.

Etude 6 also uses extension. The original B-theme material from mm. 9–12 is extended when the material returns in mm. 21–26. The extension in mm. 24–26 differs from the other two examples in a couple of ways. First, the length spans a few measures, instead of just one or two beats. More importantly, it actually clarifies the meter, rather than disguising it, by allowing the new theme to start on beat 1 of m. 27 instead of beat 2 of m. 24 (where the phrase extension begins). The extension also behaves as a transition into Theme C (mm. 27–37).

Another device Bitsch uses to change the length of a given motive or phrase is fragmentation. Etudes 8–9, 13, 15, 18, and 20 all use fragmentation to alter the length of a phrase. In Etude 15, the motive from mm. 1–2 is frequently fragmented in other areas of the piece. Measures 26–27 and 33–34 only use the first measure of

the motive. In each of these cases, the motive is inverted but is recognizable by using the same accent and articulation patterns.

The original theme found in mm. 1–14 of Etude 18 also appears in fragmented versions, particularly toward the end of the etude, starting on beat 2 of m. 37. Fragmenting the motive not only disguises the meter; it also enables the etude to come to a close. The fragments continue to get shorter and shorter, eventually separated by rests, until only one note remains. This, combined with a softening dynamic level, causes the piece to slowly decay until nothing remains.

Bitsch also uses fragmentation in sequential patterns, which can be found in Etudes 8 and 13. In Etude 8, the sequences occur during Theme B (mm. 15–35). In each case, the motive starts at one length and continues to be shortened as it is repeated. In the first two sequences (mm. 17–21 and 24–28), the motives start as one measure in length, get shortened to a half measure, and are further shortened to a third of a measure. The third sequence (mm. 29–34) starts with a motive that is one-and-a-half measures in length and is eventually shortened to two-thirds of a measure. In each case, the sequence decreases in intensity as the fragments get shorter and shorter, helping to bring the phrase to a close. In Etude 13, the opposite occurs. The sequence in mm. 15–18 fragments the motive similarly to Etude 8, but with each fragmented repetition, the intensity builds.

A third way that Bitsch varies motive and phrase length is through diminution. It differs from fragmentation in that all the melodic content is still present; it just uses one or more shortened rhythmic value, so the motive occurs over a shorter duration. Diminution was previously mentioned in reference to Etude 15 but also

exists in Etudes 9–10, and 17. Sometimes, only one rhythmic value is shortened, as is the case in Etude 9. Theme B (mm. 10–18) is rich with fragmentation of the motive from mm. 10–11. In two instances, the rhythmic value of a single note is shortened by one 8th note. In both cases, two 8th-note G's are tied together, where the corresponding note from the original motive is written as a dotted-quarter note. The first occurrence begins with the last 8th note of m. 15, tied to the first 8th note of m. 16. The second occurrence is in m. 17.

An additional technique that affects the phrase length is phrase elision, used in Etudes 5, 10, and 14. With phrase elision, it is difficult to define where one phrase ends and another begins. In Etude 5, the first phrase—mm. 1–3—begins and ends with the same three-note motive. The motive in m. 3 can play a dual role, working as an ending to the first phrase and also the beginning of the next. The same type of elision occurs in mm. 5–6, 8–9, the retrograde version in mm. 23–24, and the inverted version in m. 32.

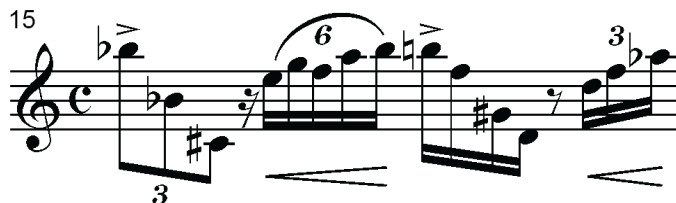
In Etude 14, an elision occurs between the first phrase in mm. 1–3 and the second phrase in mm. 3–5. The phrases are grouped under large phrase markings; however, the last note of the phrase, like the quarter note A in m. 3, also acts as the first note of the second phrase. The note length, tenuto, articulation, and relation to the material that follows all support the presence of phrase elision. The same type of elision also presents itself in mm. 5 and 21. In m. 21, however, it should be noted that the tenuto quarter note is under the phrase marking of the subsequent phrase, rather than the previous one. This subtle difference, perhaps, helps to delineate the form and bring back the Theme A material.

Occasionally a motive combines phrase elision with other length-altering techniques. Etude 10 provides one such example, where both phrase elision and diminution are present in the same phrase. Measure 36 draws on the motive from mm. 6–7. However, the E \sharp on beat 6 is shortened by one 8th note. The E \flat that follows, on the downbeat of m. 37, finishes the motive from m. 7, but m. 37 also brings back the motive from m. 1. This means the E \flat must behave as both the end of one phrase and the beginning of the next. By using diminution of the motive in m. 36, the meter is allowed to reset and start the next phrase on the downbeat, the same location as the motive from m. 1.

Rhythmic variances do not always impact the larger structure of an etude. In some cases small rhythmic divergences and ideas only impact a single motive. While only affecting a single idea, these devices help to diversify and add interest to an etude.

One small-scale rhythmic event Bitsch employs is changing the rhythm of the original motive when it is reintegrated later in the piece. Etudes 2 and 20 both offer examples of this. In Etude 20, alteration occurs on two levels. First, the thematic material from mm. 51–63 uses the exact same pitch classes from mm. 9–21, but the rhythm has been changed to match Theme C (mm. 38–50). The other variance also involves Theme C. In m. 40, the 16th notes are now subdividing the second 8th note instead of the first, as in m. 38. The subdivision continues to migrate to the third and fourth 8th notes in subsequent measures. One could view this as disguising the meter, implying $\frac{3}{8}$ by placing 16th notes on every fifth 8th note. Similar ‘traveling’ 16th notes are seen with the return of Theme A through the end of the etude.

Motives occasionally change their internal subdivision back and forth between duple and triple meters. Etude 4 provides many examples of this. Measure 15, seen in Example 1.7 below, moves from a triple subdivision (beats 1 and 2) to a duple subdivision (beats 3 and 4) at the 8th-note level.



Example 1.7: Changing Triple/Duple Subdivision in Etude 4

The motive in m. 10 also switches from a duple to triple subdivision. This same motive is also written exclusively in duple in mm. 11 and 28, where the triplet 16th notes are changed to 32nd notes.

The subdivision may also imply both duple and triple subdivisions simultaneously, as is the case with the hemiolas found in Etudes 7, 10, and 12. In Etude 10, the hemiola occurs in the second measure of the motive that is originally found in mm. 5–7. This includes mm. 6, 13, 30, and 36. The measure is beamed to suggest a duple subdivision, but the longer note values are on the first, third, and fifth 8th notes, implying a triple subdivision.

Accents may also provide interesting rhythmic events, as seen in Etudes 3, 7, 10, and 12. Etude 12 uses accents to regroup the 16th notes in mm. 19–22. The accents help to emphasize the top voice and create a feeling of three in an otherwise duple subdivision. In Etude 3, the staccato and registral accents of the upper line in mm. 2–3 give the motive a feeling of syncopation in an otherwise steady 16th-note

pattern. This accent pattern creates rhythmic interest and helps define the motive. The syncopation felt in this motive is present in other areas of the etude, as well. In Theme B (mm. 24–38) marcato and tenuto accents are used on the second 8th note of several measures (25, 27, 29, 31, 33, and 37) to emphasize an otherwise metrically weak location.

Conclusion

Bitsch's *Vingt études* presents some of the more difficult concepts associated with 20th and 21st-century trumpet music. Developing a better understanding of the etudes' construction by studying motives, form, transposition and other intervallic transformations, and rhythm and meter can be a valuable resource for attaining mastery of these works. The ability to analyze and identify details of a composition will also prove to be a helpful endeavor that one can translate to other pieces of music.

Chapter 2: Individual Etude Analyses

Etude 1

Motives

The image displays five musical motives labeled (v) through (z) in G major, C major, and C minor. Motives (v), (w), and (x) are in G major. Motives (y) and (z) are in C major. Motive (z) includes a C minor section. Motives (v) and (w) are boxed. Motives (v) and (z) have upward-pointing arrows above them. Motives (v), (w), and (x) have downward-pointing arrows below them. Motive (z) has a double bar line below it.

Form

Three themes occur in this etude, the third of which is a combination of the first two. Theme A (mm. 1–3, 8–10, 22–25, 30–34) is jovial and is defined by a forte dynamic level and prominent use of motives *v*, *w*, and *x*. Theme B (mm. 4–7, 11–15, 26–29) is darker and more mischievous. The dynamic level for Theme B begins piano and is often followed by a crescendo. Motives *y* and *z* are most commonly used during these measures, but *x* is also used occasionally. Theme C (mm. 16–22) contains a conflict between Themes A and B, using fragments and transformations of motives *v*, *w*, and *z*. The overall form of the work is ABA'B'CA''B''A'''.

Two main tonal centers occur in this etude, G and A. G and its $\hat{5}$ (D) are the central tones in mm. 1–10, followed by a transition to A (and E) in mm. 11–22, and a retransition to G (and D) in mm. 23–34. Theme A is generally associated with G (and D), Theme C is associated with A (and E), and Theme B appears in both tonal centers. In addition to frequency, note length, and range, Bitsch uses arpeggios to

highlight certain pitches. Many of the arpeggios begin or end with the tonal center or its $\hat{5}$. The arpeggios otherwise have little harmonic functionality.

Transpositions and Transformations

Inexact transpositions and transformations occur at a smaller, motivic level in this etude. One of the more significant transformations is the inversive relationship between motives v and w . While the motives are connected through inversion, they diverge from one another in chord quality and usage. Motive w is predominantly $mMmM9$ chords but also contains $MmmM9$ (mm. 2 and 23), $mMMm9$ (m. 24), and $mmMm9$ (also in m. 24). Motive v most frequently appears as a descending $MmMm9$ chord but has an occasional $mMmM9$ (mm. 17, 18, and 34).

Motive w appears in several locations, beginning on various pitches throughout the etude. Conversely, motive v almost always begins on the same pitch (A). The one exception appears in the etude's final measure, where the motive begins on B on beat 2. The final measure connects two v motives together, arguably through elision, where A acts as the end of the first motive and the beginning of the second. Starting the motive on B on beat 2 allows the continuation of the motive on beat 3 to use the same pitch classes as the original motive in m. 1. Thus, the etude ends as it began.

Rhythm and Meter

Bitsch disguises the meter in this etude through various means, most prominently through the metric placement and displacement of its motives. At the beginning of the etude, motive v begins on beat 1, followed by motive w on beat 2 of

the following measure. Motive *w* is accented, preceded by a breath mark, and has a strong relationship to motive *v*, which may confuse the ear into hearing it begin on a metrically strong beat. The resulting meter would be $\frac{5}{4} + \frac{3}{4}$ or $\frac{5}{4} + \frac{5}{4}$, instead of the indicated $\frac{4}{4}$.

In addition to metric placement, motivically similar material is often metrically displaced. Measures 11–13 contain similar melodic material to mm. 13–15, except in the latter measures the material occurs two beats later (see Example 2.1).

Example 2.1: Metric Displacement in Etude 1

In Theme C, mm. 16–17 are repeated, only they are metrically displaced a beat later in mm. 17–18, and another beat later in mm. 18–19 (see Example 2.2).

Example 2.2: Metric Displacement in Etude 1

Theme A's return in m. 22 is also displaced by two beats from the original but later resets to the original metric location in m. 26.

One additional metric event of note is that m. 24 has *five* beats, even though the meter is written in $\frac{4}{4}$. There are several proposed ways to “fix” the passage to fit within the designated meter. One may simply leave the fifth beat out, making the B \flat only an 8th note in length at the start of m. 25. Another suggestion would be to shorten the quarter notes on beats 1 and 3 to 8th notes to rid the measure of the extra beat.¹⁵ While both these suggestions create a metric solution, they also involve an unprecedented rhythmic use of motive *w*. In each case throughout the etude, motive *w* begins *on* the beat and ends with a ♩ rhythm. Eliminating beat 5 creates an abrupt diminution to the end of the motive that arguably disrupts the meter

¹⁵ David Baldwin, Program notes to *The Etudes of Charlier and Bitsch*, performed by David Baldwin, trumpet, International Trumpet Guild ITG 03-04, CD, 1993, 17. Baldwin proposes this alteration to m. 24, as was suggested to him by Raymond Crisara.

more than if no alterations were made. Changing the quarter notes on beat 1 and 3 to 8th notes also subjects the motive to diminution but more importantly causes the motive to begin on an *offbeat*. For these reasons, it is proposed that m. 25 be played as a $\frac{5}{4}$ measure with all the rhythms remaining as notated. Playing the measure in $\frac{5}{4}$ is also consistent with the $\frac{5}{4}$ - $\frac{4}{4}$ conflict heard throughout the etude.

Etude 2

Motives

(x)

(y)

(z)

Form

The overall form of this etude is ABA'. Theme A (mm. 1-16 and 27-42) contains various transformations of motives x and y and is mostly based on triadic and quartal harmonies.¹⁶ Theme B (mm. 17-26) contains many repetitions of motive z and is largely scalar.

¹⁶ See the *Form* section of Chapter 1 for more information on tonality and use of scales and triads in Etude 2.

Each A section can also be further divided into a smaller aba' design. The aba' form is defined by its usage of motives *x* and *y*. Theme *a* (mm. 1–6 and 27–32) employs motive *x* with the contour shown in the example above. Conversely, Theme *a'* (mm. 11–16 and 37–42) inverts the contour of motive *x*. Theme *b* (mm. 7–10 and 33–36) acts as a bridge or transition, using motive *y* as its main thematic material.

In addition to motivic usage, themes can also be established by their use of dynamics. Themes *a* and *a'* are written piano. Theme *a* also has written “hairpin” crescendos and decrescendos that follow the contour of the melody. Themes B and *b* both begin at a louder, mezzo-forte dynamic, also with hairpins that follow the contour of the line.

Theme B has a brief instance (m. 20 through the downbeat of m. 22) at the piano dynamic. Measures 22–26 are technically notated piano but one may consider playing them mezzo forte. To explain: throughout this etude, motives are consistently played at the same dynamic level. Measure 20 through the downbeat of m. 22 are written piano because it is an isolated interjection reminiscent of motive *x*, which is always played at a softer dynamic. Measure 22 uses the same motivic material as m. 17—motive *z*—only transposed down a M2. The mezzo-forte dynamic would be more appropriate with the return of this melodic material.

Transpositions and Transformations

Etude 2 is ripe with various transpositions and transformations of the thematic material on a micro and macro level. Theme A contains both levels of transformation. From the micro-perspective, each representation of motive *x* has

pitch transformations within it, taking the first measure and expanding the range in its second measure. The expanded range changes the chord being outlined but still represents an open-positioned triad, shown in Example 2.3.

Example 2.3: Triadic Outlining of Motive x in Etude 2

From a macro-perspective, Theme *a'* resembles an inverted transformation of Theme *a*. At an even larger level, Themes *A* and *A'* are laid out similarly (each containing the smaller *aba'* form), but Theme *A* centers around E^b and Theme *A'* centers around F^\sharp/G^b .

Themes *B* and *b* also alter the motivic material, usually through exact transposition. As previously mentioned, Theme *B* features motive *z* beginning on G^b (mm. 17–20) and later down a M2 (mm. 22–24). Additionally, in Theme *b* (mm. 7–10), mm. 7–8 are transposed up a P4 in mm. 9–10. On a larger level, Theme *b'* (mm. 33–36) transposes the entire *b* theme up a m3 from the original.

Rhythm and Meter

The rhythms associated with each motive help tie together thematic material throughout all of the many transformations. In general, motivic rhythms remain consistent, making it easier to recognize the return of previous material. On a

smaller scale, some variance occurs. For example, just as motive *x* transforms melodically from the first measure to the second, it also transforms rhythmically. The 16th notes in the first measure occur an 8th note later in the second measure.

While rhythms within a motive do not vary, motive *z* does get metrically displaced, as seen in Example 2.4. The second appearance of the motive occurs an 8th note later in the measure than the previous one.

Example 2.4: Metric Displacement of Motive *z* in Etude 2

The same displacement occurs when the motive is transposed down a M2 (mm. 22–24). Recognizing that the motive repeats, only displaced, helps to simplify this more rhythmically complex section.

Etude 3

Motives

Form

Etude 3 is in ABA' form. Theme A (mm. 1–23 and 47–57) is distinguished by a mezzo-forte dynamic level, prevalent use of the tritone and P4 intervals, and prominent usage of motives *x*, *y*, and *z*. Theme B (mm. 24–46) draws motivically from Theme A and happens in two parts, the first of which (mm. 24–38) is piano with the instruction *staccato leggiero*. Bitsch disguises what would be a largely stepwise (mm. 24–25) or triadic (mm. 28–29) melodic line through octave displacement. The stepwise motion combined with the *staccato leggiero* instruction mimics the top tetrachord of motive *y*. The triadic element is also present in various transformations of motive *y*.

The second part of Theme B (mm. 39–46) transitions the music back to Theme A'. Bitsch uses fragments of motives *x* and *y* from Theme A that ascend by step, gradually shortening until Theme A' arrives in m. 47. The primary changes between Themes A and A' are the dynamic level—from mezzo forte to forte—and the pitch centers are generally a M3 higher in Theme A' than the original. Theme A' diverts from this in mm. 55, working the pitch center back to the original (C) and helping to bring the etude to a close.

Transpositions and Transformations

The three motives are commonly transposed, and with few exceptions, the transpositions are exact. The exceptions, when they do occur, contain only minor differences. The first exception is in m. 6, where the majority of the line has been

transposed up a m3 from the original.¹⁷ The second is in m. 12. This contains both a melodic and rhythmic transformation of the motive, rather than simply a variance in the transposing interval. The last exception is in the final measure. Here the pitches are altered to outline a tonic-sounding C Major chord instead of moving to a different pitch center.

While transposition is exact, the interval of transposition may change midway through a motive. In the original motive *z*, the first four 16th notes are presented in exact repetition in the second four 16^{ths}. However, there are also instances where the second set of 16th notes is a transposed version of the first set. This occurs in mm. 20 and 22. In each case, the second group of 16^{ths} is a M3 higher than the first.

Rhythm and Meter

The rhythm and meter are relatively consistent throughout this etude. Themes A and A' have a feeling of perpetual motion with very few rests, little variance in rhythmic values, and the phrases use motive *x* to elide together (mm. 5, 17, 21, and 50). Though the rhythms remain steady, Bitsch deliberately highlights the upper tetrachord of motive *y*. In addition to the registral accent, he also uses a staccato articulation marking. To draw visual attention to the line, a secondary beam is used in the opposite direction of the rest of melody. Highlighting this tetrachord emphasizes an underlying syncopated rhythm, which is a distinguishable trait of the motive.

Metric displacement also occurs in Etude 3. In Theme B, mm. 32–33 are

¹⁷ The second 16th note of m. 6 is a M3 higher.

displaced by a quarter note in mm. 35–36. A similar type of displacement occurs when mm. 39–40 is displaced by a quarter note in mm. 41–43. Displacement also occurs locally within motives. The second measure of motive *y* (first occurring in m. 3) has staccato accents displaced by one 16th note from the previous measure.

Etude 4

Motives

The image displays four musical motives labeled (v), (w), (x), and (z) on a treble clef staff in common time (C). Motive (v) consists of a sixteenth rest followed by a sixteenth note, then a sixteenth-note triplet of G4, A4, and B4, and finally a quarter note G4. Motive (w) begins with a sixteenth-note triplet of G4, A4, and B4, followed by a quarter note G4, a quarter note F4, and a quarter note E4. Motive (x) starts with a sixteenth-note triplet of G4, A4, and B4, followed by a quarter note G4, a quarter note F4, a quarter note E4, and a quarter note D4. Motive (z) begins with a sixteenth-note triplet of G4, A4, and B4, followed by a quarter note G4, a quarter note F4, and a quarter note E4. The key signature has one sharp (F#).

Form

The form of this etude is AB(A)C | A'B'(A')C'. Theme A (mm. 1–9, 13–14, 17–26, and 30–31) is characterized by its usage of motives *v*, *w*, and *x*. The overall dynamic range is piano to mezzo forte. It features smaller crescendos and decrescendos that follow the rise and fall of the line, as well as a larger crescendo into the next theme. The A's listed in parentheses (mm. 13–14 and 30–31) represent small fragments of

the original theme.

Theme B (mm. 10–12 and 27–29) relies on motive *y* for the bulk of its melodic material. Each B theme uses the motive twice. The theme features hairpin dynamics following the rise and fall of the line, ranging from piano to mezzo forte. Theme C (mm. 15–16 and 32–33) is louder, with a crescendo to forte in both cases. This theme creates a sense of finality and arrival, first to a pitch center of C (m. 16) and eventually to D at the conclusion of the etude. The arrival to D in m. 33 sounds more final, using a $\hat{5} \rightarrow \hat{1}$ motion several times. Measure 16 only uses this motion once, followed by octave displacements of $\hat{1}$.

Transpositions and Transformations

Etude 4 includes both exact and non-exact transpositions. The exact transpositions occur most frequently with motive *v*. Motive *v* is transposed exactly in three different locations. Measure 13 is down a M2 below the original, m. 23 is up a P4, and m. 30 is down a P5. Non-exact transpositions of motive *v* also occur in mm. 2, 14, 17, 18, and 31. While the pitches differ slightly from those in the original motive, mm. 2 and 18 are exact transpositions of each other, as are mm. 14 and 31. In mm. 2–4, motive *w* occurs at three different pitch levels, where each repetition is almost exactly transposed a P4 lower than the previous.

Rhythm and Meter

The rhythm and meter of this etude, while instructed in three languages to be of a free nature—“Tres libre_Very freely_Sehr frei”—maintain a level of consistency.

Motives are generally not metrically displaced and motivic rhythms rarely differ. Motives *y* and *z* provide the occasional exceptions to this. In mm. 19–21, Bitsch embellishes the original *x* motive, turning the 8th-note triplets into 16th notes and 16th-note septuplets. The pitches are the same as the original motive, but Bitsch anticipates many of the interior notes through subdivided 16^{ths}. A similar situation occurs with motive *z* in Theme C. In both cases, the second iteration of the motive changes the triplet figure to four 16th notes.

Etude 5

Motives

The image displays four musical motives labeled (w), (x), (y), and (z) on a single treble clef staff. Motive (w) consists of a quarter note followed by an eighth note triplet. Motive (x) consists of a quarter note followed by an eighth note triplet, with a box around the triplet and the word "staccato" written below it. Motive (y) consists of a quarter note followed by a sixteenth note septuplet, with a box around the septuplet. Motive (z) consists of a quarter note followed by a sixteenth note septuplet.

Form

Etude 5 is the only etude that can be classified as monothematic. The same four motives are used throughout, undergoing various permutations as the piece progresses. The character is fairly consistent, to be played marked and separated, with the exception of three smoother, contrasting measures (pickup to mm. 19–21). This brief contrast in character, however, is not deserving of its own thematic labeling. It is a transformation of motive *x* and behaves as a transition to the second

These three pitches are the same pitch classes as the first representation of motive *w*, only the middle note has been displaced by octave. The octave displacement creates an inverted contour that sets the tone for the rest of the etude. The majority of the remaining presentations of motives *w* and *x* feature similar displaced octaves. Octave displacement also occurs in at least two other places earlier in the etude; mm. 11 and 13 contain inversions of motive *w* that are also displaced by an octave. These measures foreshadow the later transformations of the motive.

Rhythm and Meter

Motivic displacement is abundant throughout this etude making the common time meter difficult to feel. Combinations of different motives vary in length, usually averaging two-and-a-half to three measures. These variances combined with the immediate presentation of additional motives—no rests in between—cause motives to be displaced. Motive *w*, as seen in Example 2.6, begins in several different locations of the measure, including offbeats.

The image displays four musical staves, each showing a different starting point for motive *w* in Etude 5. The first staff, labeled '1', shows the motive starting on beat 1 with a dynamic marking of *f*. The second staff, labeled '5', shows the motive starting on beat 3. The third staff, labeled '8', shows the motive starting on beat 4. The fourth staff, labeled '3', shows the motive starting on the offbeat. Each instance of the motive is enclosed in a rounded rectangular box, and the notes within the box have accents (>) above them. The notation includes treble clefs, a common time signature (C), and various note values and accidentals.

1 Starting on beat 1

5 Starting on beat 3

8 Starting on beat 4

3 Starting on the offbeat

Example 2.6: Metric Displacement of Motive *w* in Etude 5

Motive *x* is presented in diminution. The wedge pattern used in the original presentation (mm. 1–2) is quickened to 16th notes and fragmented to include only three or four pitches in mm. 16. What was originally a C[#] is now a D^b. These pitches are then repeated through non-exact transposition one-and-a-half more times in the measure. A similar fragmentation and diminution occurs in m. 29, though with slightly transformed intervals. The general contour, however, remains the same as the original representation of motive *x*.

As with Etude 1, a measure of $\frac{3}{4}$ is presented with five beats in the measure.¹⁸ Unlike Etude 1, however, the motivic material justifies a change to the written rhythms. Beats 2 and 3 should be condensed to a single beat, making the G and F two 16^{ths} and the E an 8th note (see Example 2.7).

(a) Measure written in the score with 5 beats

(b) Proposed change to make the measure 4 beats

Example 2.7: Proposed Change to m. 13 in Etude 5

Changing the rhythm keeps the meter intact, and it also creates motivic continuity with the similar octave-displaced presentation of motive *w* in m. 11. In the proposed change, the motive itself is exclusively 8th notes and is preceded by running sixteenth notes, just as in m. 11.

¹⁸ The extra beat in m. 13 is likely created by a flaw in the printed copy. The same location is missing the top line of the musical staff, which would also house the missing beam of the rhythm ♩♩ . Instead the rhythm appears to be printed as ♩♩ .

Etude 6

Motives

The image displays four musical staves, each representing a different motive. Motive (w) is a quarter-note scale in 6/8 time, starting on F4 and ending on C5. Motive (x) is a quarter-note scale in 6/8 time, starting on F4 and ending on C5, with the final two notes circled. Motive (y) is a half-note scale in 6/8 time, starting on F4 and ending on C5, with an accent mark over the first note. Motive (z) is a half-note scale in 6/8 time, starting on F4 and ending on C5, with a hairpin dynamic marking over the first note.

Form

Etude 6 is in ABA'B'C form, where Theme C is comprised of thematic material from the first two themes. Themes A and A' (mm. 1–8 and 13–20) are consistently longer than Themes B and B' (mm. 9–12 and 21–26). Theme A mainly consists of motives *w*, *x*, and *y* and ranges in dynamics from piano to mezzo forte. The first iteration of the theme is centered on pitch class F, while the second centers on pitch class C.

Theme B is comprised almost exclusively of motive *z*. The corresponding dynamic is piano with hairpin dynamics following the rise and fall of the melodic line. The scales are either Mixolydian or acoustic and do not fit under the F or C pitch-class centers that dominate the rest of the etude. The scales are, however, related with their starting pitches being a semitone apart. This occurs between mm. 9–10, 21–22, and 34–35. The last of these examples is a fragment of Theme B, occurring during Theme C. Theme C (mm. 27–37) uses all four motives in various transformations. The dynamic is piano but does include slight crescendos and

decrescendos. The pitch class center has once again returned to F, including hints at a cadential idea ($V \rightarrow I$ in F in mm. 36–37) to close the etude.

Throughout, the etude is generally lyrical and connected. Nearly every note is under a phrase or slur marking. The exceptions are the first note of each occurrence of motive x and the first note of mm. 25 and 26. In mm. 25 and 26, the majority of the notes have tenuto markings over them. The two that do not are the highest notes and are always preceded (and proceeded) by a large leap, loosely relating the measures to motive x .

Transpositions and Transformations

Etude 6 has many examples of transposition and transformation. Exact transposition takes place with all four motives. Each presentation of Theme A and B is similar in content; however, the interval of transposition is not consistent throughout. Motives w , x , and y are transposed up a P5 from the originals (mm. 1–2) in mm. 13 through the first half of 15. The second half of m. 15 through m. 16 is also an exact transposition but is up a M2 from the corresponding place in the first A theme (second half of m. 3 through m. 4). Motive z is transposed exactly in mm. 21–22 (up an +3), 34–36 (down a P4), and 36–37 (down a m3). Non-exact transposition also occurs, particularly noticeable in the return of Theme A (mm. 17–20). While still recognizable as motives w , x , and y , the motivic language becomes more varied from the original as it approaches Theme B'.

Theme C transforms all four motives, using fragmentation, octave displacement, and inverted contour. Examples of fragmentation include motive y in m. 28 and

motive *z* in mm. 29–30. An additional example of fragmentation involves the presentation of multiple motives. Typically, motives *w*, *x*, and *y* appear in direct succession, acting as a thematic idea. However, in mm. 32–33, motives *w* and *x* are immediately followed by another presentation of *w* and *x* without using motive *y* in between.

Bitsch also transforms motives *x* and *y* in mm. 31–33 through octave displacement and inverted contour. In the first example (m. 31), Bitsch reverses the direction of the individual 16th-note groupings of motive *w*. The two-note groupings are an inverted contour from the original, but the overall line still ascends. However, in the next two examples (mm. 32–33), Bitsch also inverts the overall contour of the *w* motive, by displacing notes by an octave (or more), in some cases higher and in others lower. This changes the main contour from ascending to descending.

Rhythm and Meter

Rhythm and meter is fairly consistent in Etude 6, particularly in Theme A. However, in Theme B motive *z* does get displaced and always by two 8th notes, as shown in Example 2.8.

9

p *mf*

Motive *z* starting on beat 1 Motive *z* starting on beat 3

Example 2.8: Metric Displacement of Motive *z* in Etude 6

Later, the five-note fragments of motive *z* (mm. 29–30) also occur in multiple metric

locations.

The other metrically interesting element of this etude is the use of phrase extension. When Theme B returns, it is two measures longer. Bitsch uses mm. 24–26 to transition to the culminating C theme. The extension consists of heavily transformed versions of motives *x* and *y*. Both motives keep their original contours, but motive *x* undergoes augmentation and motive *y* is fragmented.

Etude 7

Motives

The image displays five musical motives labeled (v) through (z) in 3/4 time. Motive (v) is a six-note phrase starting with a quarter rest, followed by eighth notes, and ending with a triplet of eighth notes. Motive (w) is a six-note phrase with accents over the first three notes. Motive (x) is a six-note phrase with a sharp sign over the second note. Motive (y) is a six-note phrase with accents over the first three notes and a sharp sign over the fourth note. Motive (z) is a six-note phrase with triplet markings over the first, third, and fifth notes.

Form

The majority of Etude 7 uses C and its $\hat{5}$ (G) as the tonal centers. Repetition, metric location, and register help to highlight these pitch classes throughout the etude. The form of Etude 7 is ABA'. Theme A (mm. 1–16) uses motives *v*–*y*, ranges in dynamics from piano to forte, and is marked and separated. Theme B (mm. 17–24) uses motives *w* and *z*. The dynamic is piano with small crescendos and

decrescendos. In contrast to Theme A, Theme B is marked *leggiro*. It contains many transformed versions of motive *w*, which has taken on a new, lighter character. The presence of motive *w* constantly reminds the ear of the earlier Theme A, but the original character of the motive and theme do not return until mm. 25–38 (Theme A').

Transpositions and Transformations

Exact transpositions happen at a motivic level. In m. 5, motive *y* is a P4 higher than in m. 4. When the corresponding passage happens in A', m. 29 is also a P4 higher than in m. 28. Other motivic material is transposed in a similar fashion. In m. 8, motive *y* is a P4 lower than in m. 7. Motives *w* and *x* in mm. 15–16 are a M2 higher than in mm. 2–3.

Exact transpositions also occur in Theme B, although the interval of transposition often changes partway through the motive. Motive *z* in m. 17 corresponds to m. 20. Measures 17 and 20 are related by a P4 until the last two pitches when the interval of transposition changes to a m3. Similar occurrences happen with m. 18 and m. 21 (partially related by $^{\circ}4$), and m. 19 with 22 (partially related by semitone).

The other common type of transformation found in this etude is inverted contour. In mm. 31–36 of Theme A', motive *v*, *w*, and *x* change their original trajectories from Theme A. Motive *y* is also transformed through inverted contour. The 32nd notes at the end of the motive appear in both descending and ascending forms (see Example 2.9).

7

Descending 32nd notes

Ascending 32nd notes

Example 2.9: Inverted Contour of Motive *y* in Etude 7

As seen in Example 2.10, the oblique wedge can also have the static pitch at either the top or the bottom of the motive. In either case, the initial octave interval collapses inward as the motive continues.

4

Static pitch above

7

Static pitch below

Example 2.10: Variations of the Oblique Wedge in Etude 7

Rhythm and Meter

Bitsch highlights rhythm and meter as an important element of Etude 7. The beginning tempo marking is “*moderato con ritmo*,” translating to “moderately with rhythm.” This should indicate to the player that the tempo should remain constant throughout, unless otherwise indicated. Additionally, this is the first etude in this collection to incorporate changes in time signature (not including the un-notated $\frac{5}{4}$ measures in Etudes 1 and 5), alternating between $\frac{3}{4}$ and $\frac{3}{4}$.

One of the primary ways rhythm is highlighted is through the use of accents. The

accents in motive *w* create a hemiola pattern, helping to drive the rhythm forward. Registrational accents through octave displacement and wedges (motives *w* and *x*) also contribute to this drive.

An additional metric event of note relates to Theme A'. Theme A' returns one beat too early (and a M3 lower than the start of Theme A) in m. 24. Bitsch resets the meter by adding four 16th notes to the end of motive *v* on beat 3 of m. 25, allowing motive *w* to begin in its normal location at the start of a $\frac{3}{4}$ measure.

Etude 8

Motives



Form

This etude is in ABA' form and is the most tonally centered of all the 20 etudes. Theme A and A' (mm. 1–14 and 36–49) are centered around F. Theme B (mm. 15–35) is developmental in nature. Tonal centers stop at A and D, amidst sequential-like material, before arriving at $\hat{5}$ of F in m. 35. Theme A suggests a major “key”, where Theme B has a minor or, at times, even Phrygian quality.

While tonal implications are stronger in this etude, Bitsch still frequently uses chromaticism to expand the harmonic language beyond any one tonal center. In Theme A, most examples deviate from the tonal center for a measure at a time before abruptly resetting to the original “key.” Motive *z* is an example of this. In m. 6,

motive *z* momentarily derails the stable F Major by adding four flats to the first two beats of the measure before returning to C (or V of F). Theme B is far less stable but still makes similar momentary shifts through added accidentals (e.g., mm. 19 and 26). One longer exception is the diatonic sequence based on the three-flat collection in mm. 29–35.

Other characteristics of Theme A are a piano dynamic with slight crescendos and decrescendos and its use of all three motives. Theme B uses a mezzo-forte dynamic level and motives *x* and *y*. It reuses thematic material from the opening, primarily motives *x* and *y*, and has characteristics of a developmental section.

Transpositions and Transformations

Exact transpositions are sparingly used. A transformation of motive *x* occurs at the beginning of Theme B (m. 15). That transformation is transposed up a P4 in m. 22. Other transpositions include m. 39 transposing the material from m. 4 up a m3 and m. 48 transposing the material from m. 13 up a m2. Motive *z* in m. 41 is almost an exact transposition of m. 6, written up a M2, but Bitsch changes the final 8th note to a G (the same pitch as the original motive). This change helps bring the motive back to C (or V of F). Motive *y* is also frequently transformed throughout the etude. The most notable transformation is in Theme B, where motive *y* is sequenced down in a stepwise motion (mm. 17–19, 24–26, and 29–34).

Rhythm and Meter

In addition to Bitsch transforming melodic material by reordering pitches, he

also uses rhythm and meter to reorder the music.¹⁹ Motive *y* is distinguished by its rhythm, but more importantly, the use of a mordent. The presence of a mordent adds more weight and interest to a given beat. Placement of the mordent frequently changes throughout the etude. Example 2.11 shows occurrences of the mordent on beats 1, 2, and 3.

Beat 1 Beat 2 Beat 3

Example 2.11: Metrically-displaced Ornament in Etude 8

The mordent may be played either on the beat or before it, though the musical flow is likely less interrupted if played on the beat.

In addition to the seemingly arbitrary metric placement of the mordent, Bitsch has other methods of altering the meter. The first involves phrase construction. There are seven seven-measure phrases in this etude. Themes A and A' are fairly consistent with each other but subphrases within each theme are not. Measures 1–7 can be broken into subphrases of 3+4 measures, but when similar melodic material returns in mm. 8–14, the subphrases break down into 4+3. Theme A' also breaks the subphrases into 3+4 (mm. 36–42) and 4+3 (mm. 43–49). The first two Theme B phrases are 2+5 (mm. 15–21 and 22–28) but in the last phrase (mm. 29–35) can be read as either $4\frac{1}{2}+2\frac{1}{2}$ or 4+3. The irregular $4\frac{1}{2}+2\frac{1}{2}$ grouping is due to the irregular length of each iteration of the descending sequential material (transposed mostly by

¹⁹ Compare the order of pitches found in motive *y*, mm. 2 and 9.

step and occasionally semi-tone), which are each $1\frac{1}{2}$ measures in length. The phrase can also be viewed as 4+3, based on the phrase markings and the new four-8th-note sequence. This new sequence is based on a fragment from the sequence at the beginning of the phrase.

Other notable rhythmic and metric properties involve fragmentation and subdivision. Fragmentation is prevalent in Theme B. As similarly noted with the sequence in mm. 29–34, the first two sequences of motive *y* (mm. 17–19 and 24–26) also get shorter in length as they progress. In these two examples, the sequenced material starts at one measure-per-iteration and is then reduced to cover only one beat-per-fragment.

Another rhythmic event in this etude is subdivision. It occurs in mm. 43–47 by taking quarter notes from the existing Theme A material and dividing them into 8th notes. Bitsch does not simply keep the change of pitch with the change of beat, however. The second 8th of every subdivided beat either anticipates or delays the pitch on the following beat from the earlier example (see Example 2.12).

1
43

Anticipating the pitch from the next beat

11
46

Delaying the pitch from the next beat (*pitches slightly altered from the original)

Example 2.12: Embellished Melody in Theme A' of Etude 8

Etude 9

Motives

Four musical motives are shown in treble clef, common time. Motive (w) consists of four notes: G4, A4, B \flat 4, C5. Motive (x) consists of six notes: G4, A4, B4, C5, B4, A4. Motive (y) consists of four notes: G4, A4, B4, C5. Motive (z) consists of six notes: G4, A4, B4, C5, B4, A4, with a triplet of the last three notes.

Form

Etude 9 is structured as an ABA' form with a coda. Themes A (mm. 1–9) and A' (mm. 19–27) are played staccato and in strict meter. The dynamic range varies from mezzo forte to forte in Theme A and piano to forte in Theme A'. Like Etude 2, Themes A and A' can each be further broken into thematic subgroups, leaving a smaller-scale *aba'* within each larger A theme. These subgroups are best defined by their motives and occasionally by their dynamic levels. Subgroups *a* (mm. 1–3 and 19–21) use motives *w* and *x*, which are closely related to one another; motive *x* simply displaces the top voice of the wedge down an octave.²⁰ The subgroup is mezzo forte in Theme A and piano in Theme A'. Both are contracting wedges, with similar interval representation that centers on pitch class C. Subgroups *b* (mm. 4–6 and 22–24) use motive *y*, are centered on pitch class E, and are always played forte. Subgroups *a'* (mm. 7–9 and 25–27) use transformed versions of motives *w* and *x*.

²⁰ Subgroup *a* is reminiscent of a sentence. It contains a basic idea, which gets repeated, and is fragmented toward the cadence.

Theme A is forte and Theme A' is piano. In both instances, the tonal center follows A and its $\hat{5}$ (E).

Theme B uses motive *z* throughout. It is the espressivo portion of the etude. The overall written dynamic is piano but hairpin dynamics follow the rise and fall of the melodic line. The coda (mm. 28–30) uses transformations of motive *w* and crescendos from piano to fortissimo in just three measures.

Transpositions and Transformations

A handful of examples of transposition occur in Etude 9. From the start, motive *w* gets transposed down a M3 from m. 1 to m. 2. The same interval of transposition occurs in Theme A' in mm. 19 and 20. Motive *z* also gets transposed, though not exactly, in mm. 15–17. These measures are generally down a M2 from the original motive in mm. 10–11.

Transformations are more common than transpositions in this etude, particularly involving motive *w*. The first example occurs in mm. 7–9 when the motive is inverted; it begins with the upper note of the melody line instead of the lower. Despite the inversion of the line, the overall wedge still contracts, just like the original.

When Theme A' begins, Bitsch transforms motive *w* again, only this time through an embellished arpeggiation of the original melody line. Upon closer inspection, the inner voices also move in a wedge with the top voice, each ascending by step or half step. The embellishment of motives *w* and *y* continues in a similar fashion throughout Theme A' and the coda.

The coda transforms motive *w* a step further. Up until m. 28, wedges have generally contracted. The coda marks the first time a larger-scale expanding wedge is used. Instead of alternating between voices with every other note, the wedge is formed from the high and low points of individual figures, as seen in Example 2.13.²¹



Example 2.13: Expanding Wedge from a Transformation of Motives *w* and *x* in the Coda of Etude 9

Rhythm and Meter

Etude 9 is thematically symmetrical, each theme being nine bars in length. Theme A is further broken down into three three-measure subgroups. Even the addition of the coda, while changing the symmetry of the work as a whole, keeps the precedent of a three-measure grouping. Theme B does not break as neatly into symmetrical subgroups.

Metrically, Theme A closely adheres to the $\frac{4}{4}$ meter, where motives are typically four beats in length and always begin in the same location of the measure. Conversely, Theme B contains successive repetitions of a motive that is six beats in length, so it is constantly being displaced metrically. Additionally, the motive undergoes fragmentation in mm. 13–15, adding another layer of displacement to the motive. Over the course of nine measures, motive *z* begins on the ‘and’ of beats 1, 2, 3, and 4.

²¹ It should also be noted that an inner voice moves in parallel fourths with the upper line of the wedge.

Etude 10

Motives



Form

This etude is in ABA' form. Theme A (mm. 1–14) and Theme A' (mm. 26–45) are characterized by the $\frac{6}{8}$ rhythm and a piano dynamic that crescendos and decrescendos with the rise and fall of the melodic line. In Theme A, motives *x*, *y* and *z* are all used. Motives *x* and *y* are most prevalent, while motive *z* is used only once (m. 10). Motive *z* can be seen as an embellished version of motive *x*, foreshadowing Theme A' in mm. 26–35. However, motive *z* also encompasses all ascending scale patterns, including the less-rhythmically-stable septuplets in Theme B (mm. 15–25). In addition to the septuplets, Theme B is also characterized by a piano dynamic with crescendos and decrescendos that mimic the melody's contour.

While not strictly in any key, Bitsch hints at E^b as the tonal center. In addition to frequently starting motive *x* on E^b , Bitsch also uses E^b and B^b as important beginnings and endings of formal sections (E^b in mm. 1, 7, 26, 37, 45 and B^b in mm. 14, 25, 44). Furthermore, the etude ends with a common tonal cycle of $VI \rightarrow II \rightarrow V \rightarrow I$, shown in Example 2.14.

42

C (VI) F (II) B^b (V) E^b (I)

mf *dim.* *p*

Example 2.14: Cadential Implications in the Closing of Etude 10

Transpositions and Transformations

Exact transpositions occur with motives *x* and *z* but are not prevalent. Motive *x* is transposed exactly up a P5 in m. 38 and up a M2 in m. 39. One other isolated transposition is m. 2 being replicated a M2 higher in m. 9. Motive *z* is transposed down a M3 in m. 26 (exact except the A₄) and up a $^{\circ}4$ in m. 34.

Transformations are far more common in this etude, using non-exact transposition, inverted contour, and fragmentation. An example of non-exact transposition of motive *x* occurs in mm. 39–40. The contour is consistent with the original motive but the intervals are not. Likewise, mm. 41–42 refer back to motive *x*, but this time the contour has been inverted. Measures 36–45 are also an example of fragmentation of motive *x*, and motive *y* gets fragmented in the return of Theme A (mm. 30–31 and 36).

Rhythm and Meter

The rhythm and meter generally follow the notated $\frac{6}{8}$. Most measures are subdivided into $\downarrow \downarrow$ groupings. Exceptions to this regular rhythmic subdivision occur several times in Theme B (mm. 17, 20, 23, and 25) where the measures are



Form

The form of Etude 11 is ABA' and is centered on D and its $\hat{5}$ (A). Theme A (mm. 1–25) uses repetitions of motive *w* and is sparse and angular. The overall dynamic level is piano with small crescendos on rhythmic values longer than an 8th note.²² Theme B (mm. 26–33) is less sparse and, in some cases, less angular. It contains presentations of the last three motives, *x*, *y*, and *z*. The dynamic level remains at piano with isolated crescendos as part of motive *y*. The scales in this section are either Lydian with a raised $\hat{5}$ (or mode 3 of the melodic minor scale) or from an octatonic collection. Theme A' (mm. 34–51) is an embellished version of the original Theme A, keeping the same pitches, pitch centers, and motives until three measures from the end.

Transpositions and Transformations

Transpositions are prevalent in mm. 19–30, though most are not exact. Examples include a fragment of motive *w* in mm. 19–20 and 22–23, motive *x* in mm. 26–27 and 27–28, and motive *y* in mm. 29 and 30. Motive *z* in mm. 31–33 contains the only exact transposition in the etude. Measure 32 is a tritone lower than m. 31, and m. 33 is an octave lower (or an additional tritone below m. 32). Some pitches are enharmonic, such as the C[#] at the end of m. 33. This particular enharmonic switch

²² The crescendo in m. 9 should begin an 8th note sooner to remain consistent with other presentations of motive *w*.

creates a more logical visual lead-in back to D in Theme A' by acting as the leading tone instead of \hat{b}^1 .

Transformations are common in this etude, especially those that involve motive *x*. Bitsch inverts the contour of the motive in mm. 10–18 and again in Theme A', mm. 43–51. Additional smaller-scale transformations also occur. The first is in mm. 19–25, where Bitsch alters the original motive *w* to create new fragmented groupings. Motive *x*, originally presented in mm. 26–27, appears in inverted contour to close out the etude in mm. 52–53. In the latter example, many of the same pitches are used, but octave displacement and some reordering allows for the change in contour.

Rhythm and Meter

Rhythm plays a central role in the character of this etude. Theme A and A' are incredibly sparse. At first glance, the notes and rests seem arbitrary. However, closer inspection reveals that Bitsch is simply taking the same rhythms from motive *w* and repeating them over and over in mm. 1–19 and later in mm. 34–52.

Each iteration is separated by two or three 8th rests. This causes a metric displacement of the motive. Metric displacement also occurs in other areas of the etude, such as the melodic material in mm. 19–25, as well as motive *x* in mm. 26–28. In mm. 19–20 and 22–23, the melody represents the first six pitches of motive *w*, only compressed to create a new, but related melodic idea.

Theme A' embellishes the original Theme A. The exact pitches are used in Theme A', but Bitsch has subdivided some of the 8th notes into two 16th notes that repeat

the same pitch. The 16th-note subdivisions are articulated in the same manner as the 16^{ths} in motive *x* and *z*. These notes should be played slightly less staccato than the other 16th notes original to motive *w* in Theme A.

Etude 12

Motives

The image displays five musical motives in 3/4 time, key of D major (one sharp). Motive (u) is a single line of music with an accent (^) over the first note and dynamic markings. Motive (v) is a single line with a slur over the first two notes. Motive (w) is a single line with a slur over the first two notes and a triplet of eighth notes. Motive (x) is a single line with a slur over the first two notes. Motive (z) is a single line with a slur over the first two notes and dynamic markings.

Form

Etude 12 is in ABA' form with a coda. Theme A (mm. 1–11) is characterized by staccato articulations and has a wide dynamic range. Most of the theme resides at a mezzo-forte dynamic, but the range spans from piano to forte. Motives *u*, *v*, and *w* are used during this section. The first two motives prominently feature the interval of a 7th or its inverse, a 2nd (or 9th). Both A themes are tonally centered on pitch

classes E and B (5̂).

Theme B (mm. 12–23) is marked *léger* and is to be played piano throughout. Theme B uses the remaining motives—*x*, *y*, and *z*—and is centered on D. This theme also features scales that use the whole tone collection, if the first pitch of each descending scale were omitted (i.e., omit the A from m. 16). Theme A' (mm. 24–32) is dynamically similar to the original A theme, and it also returns to motives *u* and *v*. The Coda (mm. 33–35) ranges in dynamics from forte to piano. It draws on motives from both Themes A and B.

Transpositions and Transformations

Transposition occurs most prominently in Theme B and involves motives *x*, *y*, and *z*. The first four notes of motive *x* appear in two forms; the first occurs in mm. 12 and 15 and the second occurs in mm. 17, 19 and 20. In the second form, the first two notes are transposed down a M6 and the last two notes down a m3 from the original motive.

In m. 15, the second part of motive *x* and the following motive *y* in m. 16 are transposed up a M2 from the original presentations in mm. 12–13—the B^b in m. 16 is the only interruption. Motive *y* is fragmented later in m. 16 and restarts a P4 below the preceding version. In m. 18, motive *y* also appears a P4 below the version from mm. 15–16. The last example of transposition occurs with motive *z*, where beat 3 of m. 21 is a m2 lower than the original in m. 19. The F minor arpeggios later in that measure become E minor arpeggios by the end of m. 21 and B^b major arpeggios in mm. 22–23.

Other transformations in this etude occur, as well. The sextuplet figure in m. 29 relates back to motive *w*, only it has been extended and appears in an inverted contour. In m. 31, Bitsch uses transformed fragments of motive *v*, recognizable by the articulation markings. This is immediately followed by an extended version of the motive in m. 32, also distinguishable by the articulations used. Motives *x* and *w* form a hybrid version in m. 23. Here, the rhythm remains consistent with motive *x*, while the melodic line resembles motive *w*.

Rhythm and Meter

The meter in Etude 12 is not rigidly felt in $\frac{3}{4}$, largely due to metric displacement. In this etude, some motives contain repetitions of smaller sub-motives. Motives *v* and *z* are partially characterized in this way. In both cases, repetitions of note patterns occur at different metric locations, so the note grouping is metrically displaced within the motive (see Example 2.15).

The image contains two musical staves in 3/4 time with a key signature of one sharp (F#). The first staff, starting at measure 4, shows a melodic line with a circled sub-motive. This sub-motive consists of a quarter note followed by a dotted quarter note, which is then repeated. The second staff, starting at measure 19, shows a similar melodic line with a circled sub-motive consisting of a quarter note followed by a dotted quarter note, also repeated. The circled sub-motives illustrate how these smaller patterns are repeated at different metric positions within the larger motives.

Internal note repetitions of motive *v*

Internal note repetitions of motive *z*

Example 2.15: Metric Displacement within a Single Motive in Etude 12

Another case of displacement and repetition occurs in Theme B when motive *y* is immediately repeated in m. 16. When motive *x* returns in m. 17, it begins on beat 2

instead of beat 1.

A rhythmic technique that is not unique to this etude—most notable in Etude 5—is the use of accents or articulation markings to create rhythmic patterns. In this case, the accents in motive *z* create a hemiola. The hemiola is even more metrically interesting because it begins in multiple metric locations. In m. 19, it starts on beat 3, then on beat 1 (m. 21), and once again on beat 3 (m. 21). In order to have the last two presentations occur on the beat and occur on beats 1 and 3 of the same measure, the first presentation of motive *z* is cut a 16th note short.

The metric displacement of motives in this etude disguises the meter. Without visual confirmation from looking at the etude, one could hear the meter reset, particularly in Theme B, whenever a motive begins or repeats. Example 2.16 offers one possible way to re-bar the passage.

12

Example 2.16: Re-barring Theme B of Etude 12

Etude 13

Motives

(u)

(v) (w)

(x) (v) (z)

Form

Etude 13 is written in ABC form. Theme A ranges in dynamics from piano to forte, and 16th notes and 16th-note triplets dominate the rhythmic values. Theme A (mm. 1–21) uses motives *u*, *v*, *w*, and *x*. Motive *u* creates a contrary-motion wedge which is, at times, symmetrical as the pitches fan out (e.g., the original motive in m. 1). This symmetry creates a pitch axis and assigns importance to the midpoint, in this case, the first pitch in the wedge motive. Most commonly, these symmetrical wedges start on A, which is $\hat{5}$ of the final tonal center D.

Theme B (mm. 22–33) uses motives *y* and *z*. It is consistently at a piano dynamic level with gestural hairpin dynamics. The character of Theme B is contrasting, having a much lighter and less forceful quality. The rhythmic values are also less busy, incorporating more rests and more 8th-note values. Many of the 8th notes have a corresponding staccatissimo articulation, adding to the spaciousness of this section.

Theme C (mm. 34–57) draws from both Theme A and B in a smaller-scale *aba* form. Motives from Theme A appears in mm. 34–46, followed by motives from Theme B in mm. 47–51, and more A theme motives in mm. 51–57. Theme *a* (mm. 34–46) uses motives *w* and *x* prominently, while Theme *a'* (mm. 51–57) uses motives *u* and *v*.

Transpositions and Transformations

Exact transpositions are common in this etude, occurring in single measures and occasionally over larger stretches of material. The smaller examples occur at the

motivic (or motivic fragment) level. One such example occurs with the material from beat 2 of m. 29 through beat 1 of m. 30, where it is transposed down a P4 in m. 31. Another instance involves mm. 38–39. The ascending triplet figure on beat 1 of m. 38 is transposed up a M2 on beat 2 and up another M2 on beat 1 of the next measure. A third example occurs with a fragment of motive *z*; the descending 16ths in m. 31 are a P4 lower than the descending 16ths in mm. 29–30.

A larger example of transposition occurs during transformations of motive *x* in mm. 15–18. The material relates to the second half of motive *x* in rhythm and loosely through articulation. The transformation changes the contour of the line, as well as fragmenting the motive further and further until it becomes the second half of motive *u*.²³ Each repetition of the motive gradually gets higher, first by a M2 (mm. 15–16), then by half step (mm. 17–18). The motion up by M2 or m2 is consistent with the upper line of an expanding wedge, which relates this passage to motives *u* and *v*.

While each of these transpositions sound exact to one another, the pitches are occasionally written enharmonically.²⁴ A similar enharmonic spelling occurs in mm. 34–35. The majority of this presentation of motive *x* sounds a M3 apart from the original motive in m. 12–13.²⁵ However, some of the pitches have been written enharmonically as a °4. Another transposition that is nearly exact involves mm. 47–51. All the pitches are a M3 higher than the original in mm. 22–25, except the last 8th

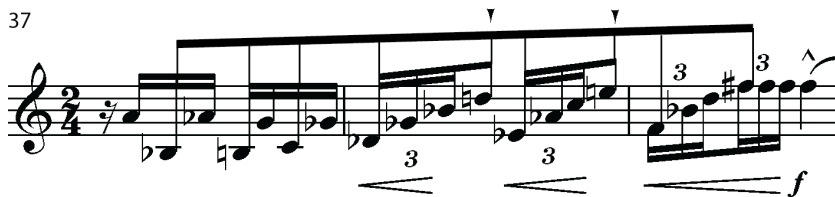
²³ See Example 2.19.

²⁴ The D[#] in the second beat of m. 15 and the F[♯] in beat one of m. 16 are written a °3 apart but enharmonically sound a M2.

²⁵ The exception is the first 16th note A on beat 2 of m. 34.

note of mm. 47 (written a m3 higher).

In addition to the previously-mentioned transformation of motive *u*, other altered versions can also be found. In mm. 37–39, motive *u* is recognized primarily through rhythm. The melody has become a contracting wedge (instead of expanding), followed by ascending triplet 16^{ths} (instead of descending). Additionally, rather than the triplet 16^{ths} repeating the same pitches in subsequent beats, the second beat is transposed up a M2 from the first, and the third triplet is up an additional M2 in m. 39. A similar transformation of motive *u* appears in mm. 44–45. The ascending triplets serve as a part of a chromatic ascent that begins with the B^b in m. 37 and ends with the F[#] in m. 39. In Example 2.17, the longer secondary beam notates the ascending chromatic line.



Example 2.17: Chromatically Ascending Line in Etude 13

Another interesting transformation occurs with the repetitions of motive *v* in mm. 41–43. The motive begins a semitone lower than the original in mm. 5–7. However, several of the pitches throughout the passage are the same as the original. In addition to pitch alterations, Bitsch also condenses the passage from seven beats to six beats, as shown in Example 2.18.

The image displays two staves of musical notation in 2/4 time. The top staff begins at measure 5 and contains a sequence of eighth and sixteenth notes. The bottom staff begins at measure 41 and shows a fragmented version of the material from the top staff. Arrows point from the top staff to the bottom staff, illustrating how the original thematic material is broken into smaller pieces and displaced in time.

Example 2.18: Diminution of Thematic Material in Etude 13

Rhythm and Meter

Motives are commonly metrically displaced in this etude. Motive *w* (mm. 5–7) is displaced simply because its length is two-and-three-quarter beats. When the motive is immediately repeated, subsequent iterations are displaced three-quarters of a beat each time. The motive comes back in mm. 41–44 and is further displaced through the use of fragmentation. The displacement of motive *x* in mm. 34–36 occurs without having to transform the motive or the motive previous to it. It simply begins a beat earlier than the original. The meter resets in mm. 37–38 with a transformation of motive *u*.

Fragmentation is one of the main reasons for metric displacement of motives in this etude. Three specific examples of displacement through fragmentation occur: 1) motive *x* mm. 15–18; 2) most appearances of motives *y* and *z* (mm. 22–30 and 47–51); 3) motive *u* at the end of the etude (mm. 52–56). As already discussed, the motive *x* in mm. 15–18 is repeatedly transposed and fragmented before transforming into the second half of motive *u* (see Example 2.19).

Example 2.19: Transposition and Fragmentation of Motive x in Etude 13

The fragmentation puts subsequent repetitions of the motive in different metric locations, obscuring the meter further with each presentation.

Fragmentation of motives y and z uses different methods to displace the meter. First, instead of taking away material from the end of the motive, Bitsch eliminates from the beginning. Motive y traditionally involves three staccatissimo 8th notes but is reduced to include only the last two in m. 24.

Another use of fragmentation involves motive z. In mm. 25–26, Bitsch follows motive z with an immediate repetition of only the last four 16th notes of the motive. The combination of subtracting an 8th note and adding four 16^{ths} to the motive results in the next motive y and z being displaced by half a beat, shown in Example 2.20.

Example 2.20: Fragmentation and Displacement of Motives y and z in Etude 13

A third example of displacement through fragmentation involves motive *u* at the end of the etude. The wedge motive begins with a duration of two beats in mm. 52–54 and gets fragmented to one-and-a-half beats in mm. 54–56, as seen in Example 2.21. Fragmentation displaces the motive, but it also allows the last iteration to end on the downbeat of a measure, adding a sense of proper closure.

Example 2.21: Fragmentation and Displacement of Motive *u* in Etude 13

Etude 14

Motives

Form

Etude 14 is in ABC form, where C is comprised of motives from both themes. Theme A (mm. 1–12) is almost entirely made up of motive *y*. This motive uses compound melody and has a serial-like quality, often going through 10–11 pitches before repeating any pitch class. Motive *y* often elides into its next repetition, where

the last note of one phrase simultaneously acts as the first note of the next phrase. The phrase marking suggests it is a part of the previous motive, while the tenuto articulation implies it is the beginning of a new motive. Dynamically, Theme A has a gradual crescendo from piano to forte, followed by a decrescendo back to piano.

Theme B (mm. 12–21) introduces motive *z* to the etude. Motive *z* is also a compound melody but the final note ends in a much lower register. This low pitch acts as a pedal and tonal center through each section it appears. In Theme B, motive *z* ends on G, and in Theme C (mm. 21–28) it ends on A. Theme B begins at a piano dynamic level, followed by a crescendo to forte, and a diminuendo back to piano to start Theme C.

Theme C is a combination of transformed versions of motives *y* and *z*. This theme follows the same dynamic arch as the other themes, beginning piano followed by a crescendo to forte and diminuendo, this time, to pianissimo. The escalation and relaxation happen more quickly due to the shorter length. Though the piece is largely atonal, A and E play a significant role in the early measures of the etude, and A is also central to mm. 22–28. The prominence of A, in particular, helps to set up the ear to hear the C[#] in the last measure as $\hat{3}$ in A.

Transpositions and Transformations

The majority of this etude is made up of motives *y* and *z* and their transpositions and transformations. It should be noted that an exact inversion appears in portions of the original motives (see Example 2.22), which makes later fragments of the

motives in Theme C difficult to distinguish from one another.²⁶

The image shows two staves of musical notation in treble clef with a common time signature. The first staff, labeled (y), contains a sequence of notes: a whole rest, a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, a quarter note F4, a quarter note E4, a quarter note D4, and a quarter note C4. A box highlights the segment from G4 to C5. A long slur spans from the first note to the last. The second staff, labeled (z), contains a sequence of notes: a quarter note C4, a quarter note D4, a quarter note E4, a quarter note F4, a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. A box highlights the segment from G4 to C5. A long slur spans from the first note to the last.

Example 2.22: Exact Inversions within Motives *y* and *z* of Etude 14

Transpositions of motive *y* are common. The motive (or a fragment thereof) gets transposed exactly up a P4 (mm. 3–5), up a P8 (mm. 5–7 and 23–24*), up a m7 (mm. 24–25*), and up a m6 (mm. 25–26*).²⁷ Non-exact transpositions of motive *y* also occur. Measures 9–11 provide one such example. Additionally, the material in the *animando* (mm. 17–20) contains two non-exact transpositions. The first is up either a m3 or M3 (m. 18). The second is up either a +5/m6 or M6 (m. 19).

Motive *z* is never transposed exactly in this etude, but it does undergo transformations. The first four pitches of m. 17 represent the last four pitches of the original motive *z* (originally in m.13), only transposed up a P4 and in retrograde. The D from the original motive is displaced by octave in the retrograde version.

One reliable consistency with motive *z* is the contour of its last three notes. It is always in a downward trajectory and spanning large intervals. When Theme C combines fragments of motives *y* and *z*, the last three notes of motive *z* are the only

²⁶ The inverted version from motive *z* is an exactly-transposed retrograde of the original version in motive *y*.

²⁷ The * denotes a fragmented version of the motive.

clearly discernable part of the motive. As mentioned previously, motive *y* also appears in fragments. The first four notes appear in m. 21 (except the F is an octave higher than would be expected), and a fragment from the middle of the motive appears in each of the measures from 23–26.

Rhythm and Meter

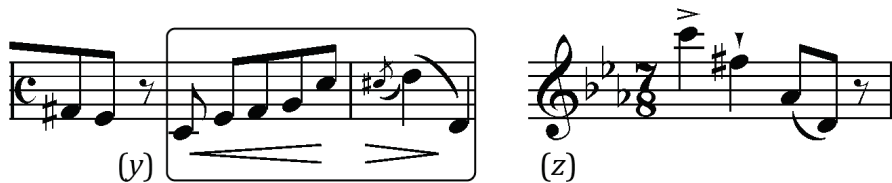
Despite the fragmentation, motive *y* manages to remain metrically consistent. Each presentation, even fragments, appears in the same metric location as the original motive. Motive *z* is also fairly consistent. In mm. 12–14, the phrase always ends on the downbeat of a measure. Measures 22–25 are consistent with each other, but they occur a beat later in the measure than in mm. 12–14.

Displacement also occurs on a more localized level. Measures 8–9 immediately repeat their material, but the repetition occurs one beat earlier in the measure than the original. Measures 11–12 have a similar displacement where the repetition of the material is also one beat earlier than the original.

Etude 15

Motives





Form

Etude 15 resembles a rondo form, structured as ABACA. Theme A is generally focused around the same pitch center, C. While several accidentals are indicated, the first three notes of the x motive almost always reset back to G–C–E^b.²⁸ The strong $\hat{1}$ – $\hat{3}$ motion at the beginning of the motive gives the impression that the piece is *in* C minor and eventually C Major in the final measure.

Theme A (mm. 1–12, 19–25, and 34–47) consists entirely of motives x and y. Dynamically, the first Theme A is piano with minor crescendos up to mezzo forte and decrescendos back to piano. The second A theme starts piano and crescendos to forte. The third and final A theme is much like the first A with an overall piano dynamic and minor crescendos and decrescendos. Theme B (mm. 13–19) is rhythmically consistent with Theme A, containing transformed versions of motives x and y. Like the beginning and ending A sections, Theme B hovers around a piano dynamic with slight crescendos and decrescendos.

Theme C (mm. 26–33) is dominated by motive z and its transformations. This theme presents the most contrast to the other themes. The character is more forceful with marked accents, and it contains the only forte dynamic level in the entire etude. Bitsch also introduces a $\frac{7}{8}$ time signature for two measures, bringing

²⁸ The exceptions occur in mm. 19–20, 34–35, and 46.

even more attention to this place in the music. One additional point of interest is the scale in m. 32. It forms a symmetrical pitch-class set (0124678), centered on E^b. The E^b is then further featured in the following measure as the highpoint of the ascending scale.

Transpositions and Transformations

Motive *x* appears several times, usually with its original pitch and register; however, it does get transposed. Measures 19–20 represent a non-exact transposition. The line has moved up a tritone from the original, except the last two notes of the motive (which are transposed up a M2). In mm. 24–25 the motive is transposed up an octave from the original.

Another exact transposition occurs with the ascending 8th-note line in mm. 29–30. The last four 8th notes in m. 29 are transposed up a P5 starting on beat 1 of m. 30 and then up another P5 starting on beat 3. The transposition contains an enharmonic tone (i.e., the G^b in m. 29 would need to be an F[#]) but the sounding pitches reveal an exact transposition.

Several transformations take place in this etude. While motive *x* is known for its stability and regularity, motives *y* and *z* are constantly being transformed. Motive *y* generally has the same 8th-note lead-in pitches (C–E^b–F[#]–G–C). However, the grace-note measure continually evolves. The grace note always approaches the downbeat as a chromatic lower neighbor, but Bitsch uses different pitches on the downbeat each time (except m. 40).

It should be noted that motive *z* begins as an extension of motive *x*. The pitch classes from m. 2 have been displaced by an octave and, in some cases, rhythmic durations have been altered. Motive *z* also occurs in rapid succession, and each of the first five repetitions is slightly different than the last. The upper-register C is consistent, but the remaining three voices move up by half step with each presentation, creating an oblique wedge.

Occasionally multiple types of transformations are used at one time. In one example (mm. 33–34), motive *x* uses fragmentation, inverted contour, and retrograde. Starting on beat 1 and beat 4 of the measure, three-note fragments of motive *x* appear. The first is in an inverted contour, while the second is in retrograde of the original motive. The bottom note, A^b , on the downbeat of m. 34 elides directly into another three-note fragment of motive *x* in mm. 34–35.

Rhythm and Meter

Etude 15 is one of only a few etudes where Bitsch notates a meter change. He incorporates two measures of $\frac{7}{8}$ and one measure of $\frac{2}{4}$ into the otherwise-notated common time meter. The measures of $\frac{7}{8}$ accommodate the rhythm of the altered motive, allowing it to restart itself on the downbeat of subsequent measures. The $\frac{2}{4}$ measure works similarly in that it allows the last iteration of motive *x* to start on a downbeat instead of on beat 2 or beat 4. This meter change creates finality and closure by allowing motive *x* to start on a downbeat, when it typically would occur

on beat 2 or beat 4.²⁹

Diminution is common in this etude. In mm. 21–22, motive x undergoes various examples of this transformation type. The first example involves the last two notes of motive x, where the quarter notes become 8th notes. The second example involves the pickup to m. 22. This 8th note is normally a quarter note. Motive z also undergoes diminution. Initially, Bitsch changes the A^b and D from quarter notes to 8th notes in m. 26. The motive experiences additional diminution in mm. 28–29 and 31 when all four of the quarter notes have been condensed down to four 8th notes.³⁰

Etude 16

Motives

The image displays five musical motives labeled (v) through (z) in 5/4 time. Motive (v) is a six-measure phrase starting with a five-measure rest, followed by a sequence of eighth notes. Motive (w) is a four-measure phrase of eighth notes. Motive (x) is a four-measure phrase starting with a quarter rest, followed by eighth notes. Motive (y) is a four-measure phrase of eighth notes. Motive (z) is a four-measure phrase of eighth notes.

²⁹ Measures 33 and 34 provide exceptions to this when two separate fragments of the motive occur on downbeats in consecutive measures.

³⁰ See Example 1.6.

Form

This etude is written in ABA' form. As is true of most of Bitsch's etudes, Etude 16 begins and ends on the same pitch, in this case, D. Themes A (mm. 1–6) and A' (mm. 13–19) are comprised of motives *v*, *w* and *x*. Dynamically, these sections are written piano with hairpin dynamics throughout. The score does not indicate a gradual crescendo over the course of this Theme A, so the contrasting forte at the end of m. 6 should feel somewhat sudden.

Theme B (mm. 7–12) is mostly comprised of motives *y* and *z*. Motive *y* is always played lightly. Bitsch indicates the French "*léger*" in mm. 7–8 and later (mm. 10–11), the Italian "*leggiero*." In addition to the *light* expression, the dynamic is also indicated as piano with no additional dynamic instructions. Motive *z* is a constant 16th-note quintuplet, like motives *w* and *x*, but Bitsch has chosen to beam the 16^{ths} as 2+3 instead of 5 under one beam. Motive *y* is bracketed similarly in mm. 11–12. Motive *z* stands apart from other motives in other ways: it is written forte, is more pointed, and has more rests than any other motive.

Transpositions and Transformations

Etude 16 is ripe with transpositions, particularly in Theme A. On a motivic level, motive *v* is frequently transposed twice in immediate succession up by a third. In most cases, the first note of each transposition spells a major triad. Theme A returns (mm. 13–19) motivically, though transposed, much as it began. The first two full measures of Theme A' (mm. 13–14) transpose the material from mm. 1–2 up a m3. The one exception to this is the B \flat during beat 3 of m. 14. If it were to maintain the

interval of transposition, the B \sharp would have been the D \sharp above it. As previously noted, the range in Bitsch's etudes never extends beyond an upper-register C. This, more than motivic variance, may have driven his note choice here. The following two measures' (mm. 15–16) use of motive *w* is an exact replica of mm. 3–4. In the two subsequent measures (mm. 17–18), the material is transposed down a M2 from the original until Bitsch redirects the music into closing material during beat 5 of m. 17.

The closing material manages to represent motives *v*, *w*, *x*, and *z*. Beat 5 of m. 17 contains a fragment of motive *w* in inverted contour. This creates almost a mirror image between beat 4 of that same measure and beat 1 of m. 18. Beats 2, 3, and 5 of m. 18 resemble the second half of motive *x* in retrograde. Measure 19 uses a fragment of motive *w* on beat 1 and the first five pitches of the original motive *v* on beat 2. The etude finishes with a fragment reminiscent of motive *z*.

Theme B exclusively uses motives *y* and *z*, but the repetitions are never exact. Bitsch uses various transformations in these measures, including fragmentation, octave displacement, inverted contour, and subdividing rhythmic values. Motive *y* is commonly fragmented when it appears in beats 4–5 of the measure: this can be seen in mm. 7–8 and 11–12. Motive *z*, in its original form, already incorporates octave displacement. In its repetition on beat 4 of m. 9, the motive has been inverted.³¹ The final transformation type in Theme B appears in mm. 11–12 when motive *y* subdivides the 8th notes into two 16^{ths}.

³¹ The same transformation of motive *z* appears on beat 3 of the final measure.

Rhythm and Meter

Etude 16's rhythmic process is almost entirely based on the number five, both in a $\frac{5}{4}$ meter and use of the quintuplet-16th rhythm. The only exceptions to this rhythm occur at the end of a phrase or just before an 8th rest, such as the first beat of m. 3. In these cases, the break in the quintuplet subdivision is not really felt. The only audible case where the rhythmic subdivision changes is beat 3 of the final measure where the beat is subdivided into four 16^{ths} instead of five, helping to signal the end of the etude.

In Theme B, Bitsch challenges the performer to keep the subdivision as five 16th notes per beat instead of four. He alternates between 8th notes and 16th notes, as seen in mm. 7–8. The performer must resist the urge to play these beats as an 8th followed by a triplet instead of an 8th and three 16th notes all under a quintuplet subdivision. Example 2.23 notates both incorrect and correct interpretations of these measures.

The image shows two musical staves in 5/4 time, labeled 'Incorrect' and 'Correct'. Both staves start with measure 7, which contains a triplet of eighth notes. Measure 8 in both staves begins with an eighth note, followed by a quintuplet of sixteenth notes. In the 'Incorrect' staff, the eighth note and the first three sixteenth notes of the quintuplet are grouped together with a bracket and a '3' below them, while the last two sixteenth notes are grouped with a bracket and a '5' above them. In the 'Correct' staff, the eighth note and the first three sixteenth notes are grouped together with a bracket and a '5' below them, while the last two sixteenth notes are grouped with a bracket and a '5' above them.

Example 2.23: Proper Rhythmic Interpretation of Theme B in Etude 16

The second way Bitsch rhythmically challenges the performer is through phrase markings and bracketing. In mm. 9–12, the quintuplet subdivisions (including rests) are generally divided through separate beams into 2+3 or 3+2 groupings, making it easy for the performer to be deceived into treating the groupings as separate

rhythmic values. As noted above, to do so would be incorrect: the quintuple subdivision should be kept throughout this section (and the etude as a whole).

The final rhythmic challenge is through the use of rests and displacement. Some of the rests surrounding motive *z* create metric displacement, forcing a role reversal between the 2+3 and 3+2 quintuplet-16th-note grouping. Initially, the grouping of 2 begins on the beat (m. 9), but following the rest in m. 10, the grouping of 3 begins on the beat.

Etude 17

Motives

The image displays three musical motives labeled (x), (y), and (z) on a single treble clef staff in common time. Motive (x) is a 16-note quintuplet spanning two measures, with a slur above and a brace below. Motive (y) is a 16-note quintuplet spanning two measures, with a slur above and a brace below. Motive (z) is a 16-note quintuplet spanning two measures, with a slur above and a brace below. The notation for (z) includes a '3' above the first three notes, indicating a triplet, and an 'or' followed by an alternative notation for the last three notes.

Form

Etude 17 is in ABA' form. Theme A (mm. 1–18) is mostly comprised of various forms of motives *x* and *y*. It also previews motive *z* in m. 14. Theme A ranges dynamically from piano (most often associated with motive *x*) to forte (usually associated with motive *y*).

Theme B (mm. 19–32) uses all three motives, but motive *z* is most prominent.³² Dynamically, the pattern is similar to Theme A, beginning piano and ranging to forte. Motive *z* appears at both piano and forte dynamics, depending on the connecting motive. A connection to motive *x* typically involves a piano dynamic, while a connection to motive *y* involves a louder, up-to-*forte*, dynamic.

Theme A' (mm. 33–37) is much shorter than the original A section. In some ways, the overall form better represents a balanced binary, instead of a rounded binary. In addition to the length of Theme A', the thematic material most closely represents what occurs in mm. 4–5 instead of returning to the opening measures.

Transpositions and Transformations

Exact transpositions are common with motive *x*. In Theme A, it first appears in a transposed state in mm. 9–11, down a P4. The version of motive *x* in mm. 4–5 appears transposed down a P8 in m. 33 and again in mm. 35–37. Transformations of motive *x* are also commonly transposed in Theme B. The same pitch relations associated with m. 2 in the original *x* motive are combined with the rhythmic values of motive *z*. The first example occurs in m. 22, where the pitches of the motive are almost the same as the original, except the C[#] would need to be a C₄. Similar transpositions occur in m. 24 (almost exactly up a P4), mm. 25 and 27 (up a P5), mm. 29 and 30 (up an octave), and m. 31 (up a m6).

Several other transformations exist in addition to the above-listed transformation of motive *x*. From the very beginning, motive *x* sees alterations to its

³² Motive *z* is defined by its rhythm and always appears on beat 1 of the measure.

pitch relations and overall length. Measures 4–5 fragment the motive, shortening it by a measure, and using different pitches over the same contour. Motive x is further disguised and transformed in Theme B. Through decoration of upper and lower neighbors and occasional pitch adjustments, mm. 21–24 creates an embellished version of mm. 1–5 (see Example 2.24).

The image displays two staves of musical notation. The top staff contains measures 1 and 4, both marked with a '1' above the first measure. The bottom staff contains measures 21 and 23, both marked with a '1' above the first measure. Arrows point from the notes in measures 1 and 4 down to the corresponding notes in measures 21 and 23, illustrating the transformation of Motive x. Measure 21 includes a triplet of eighth notes, indicated by a '3' below the notes. The notation includes various accidentals (sharps, flats, naturals) and rests.

Example 2.24: Embellishment of Motive x in Etude 17

Additionally, two presentations of the material in m. 2 are elided (C being the common note) to close the etude in mm. 36–37.

Motives y and z are also transformed throughout. Motive y (originally in m. 6) appears in a similar contour in m. 15, as well as changing the direction of the line in m. 8, where the triplet ascends instead of descends. Motive z is presented using several different intervals and contours. As previously mentioned, it is defined by its rhythm and metric location (always starting on beat 1).

Rhythm and Meter

Like motive z, motive x also typically starts on the first beat of a measure. Bitsch frequently achieves this by creating lead-ins or pick-ups to start the motive in its

proper place (see Example 2.25). This occurs leading into mm. 9, 12, 21, and 33.

Example 2.25: Lead-in to Motive x in Etude 17

While motives *x* and *z* can be partially defined by metric location, motive *y* frequently appears displaced. The original motive (m. 6) is three beats in length and is immediately repeated, forcing the second repetition to start in a different metric location. Additionally, the motive is commonly fragmented, usually by omitting the triplet (e.g., mm. 7–8).

Etude 18

Motives



Form

Etude 18 is in ABA' form. It is almost entirely comprised of the four motives outlined above and their transformations. Theme A (mm. 1–14) includes all four motives and ranges dynamically from mezzo forte to forte. Most of the section implies C minor or C Major, until m. 12 when new accidentals are incorporated and C is no longer a prominent tone.

Theme B (mm. 15–22) also uses all four motives, including various transformed versions. Dynamically, the section follows a large arc, ranging from piano to forte and back to piano. The key signature changes from three flats to no sharps or flats, but it does not imply either C Major or A minor. The lack of key signature more likely signals a lack of tonal stability.

The four motives also appear in Theme A' (mm. 23–43) and are similarly organized to the original Theme A. The dynamics, however, are more similar to Theme B; they follow an arc from piano to forte, then down to pianissimo. While the three-flat key signature has returned, the tonal center begins on D^b (mm. 23–26), followed by D[♯] (mm. 27–33), and finally returning to C (mm. 34–43).

Transpositions and Transformations

Transpositions are rarely exact in this etude. The most significant exception is when a portion of motive *w* is transposed up a P8 in mm. 36–39. Other less

prominent exact transpositions occur with motives *x* and *z*. Motive *x* is transposed up a M2 in mm. 9–10, and motive *z* is transposed up a M3 (m. 11), up a P4 (m. 26), and down a M2 (m. 33).

In addition to beginning on pitch-class C, motive *w* begins on D^b (m. 23), $D\sharp$ (m. 30), and F (m. 39). All the examples of motive *w* are based on the three-flat diatonic collection, except when the motive starts on D^b (it uses the four-flat diatonic collection). The examples starting on D^b and $D\sharp$ contain different intervallic relationships than the original motive. Most notably, the leaps up a P5 and P4 in the original motive occasionally become a +4 and P5.

Similar transformations occur with the other motives, as well. Several motives are intervallically the same except for one or two notes, or they may alternate between major and minor versions of the same interval. Some examples include motive *x* in mm. 24–25, motive *y* in mm. 32, and motive *z* in mm. 11–12.

Motive *y* is transformed by using four variations of ascending and descending lines. This includes ascending by thirds (mm. 3, 5, 7, 10, 25, 28, 29, 32, 34, and 36), ascending by step (m. 18), descending by thirds (mm. 5, 18, 25, 28, and 34), and descending by step (mm. 3, 11, 28, 32, and 36). In each presentation of the motive, one variation of the ascending line and descending line are used.

Other common transformations in this etude are fragmentation, extension, and inverted contour. Fragmentation frequently occurs with motive *x*, usually involving the last three notes. Examples of this occur in mm. 4, 6, 12, 13, 27, 33, and 35.

Extension is common with motive *z*, occurring in mm. 11–12, 20–22, and 26–27.

Finally, inverted contour occurs on a larger level with motives *w*, *x*, and *y* in Theme

B, specifically mm. 15–20.

Rhythm and Meter

Etude 18 contains very few rests and is predominantly made up of 16th-note values, which give it a feeling of constant motion. Displacement is common with all the motives due to fragmentation and immediate repetition. Motive *w* consistently starts on beat 1 of a measure until the etude is brought to a close in mm. 36–43. In m. 36 a fragmented version of the motive, using the original pitch classes, starts on beat 3 of the measure. The fragment simultaneously acts as the last beat of motive *y* and the second beat of motive *w*. Fragmentation followed by immediate repetition of another fragment causes the motive to start on beats other than beat 1 until the end of the etude. The last two fragments even begin on an unprecedented offbeat. From mm. 41 to the end, Bitsch incorporates rests after each fragmented repetition. The fragments continue to get shorter and shorter until only a single note remains.

Etude 19

Motives

The image shows three musical motives labeled (x), (y), and (z) in 3/8 time. Motive (x) is a sixteenth-note sequence starting on the first beat. Motive (y) is a sixteenth-note sequence starting on the third beat. Motive (z) is a sixteenth-note sequence starting on the second beat. The notation includes stems, beams, and accidentals (sharps and naturals).

Form

Etude 19 is in ABCA'B' form. Themes A (mm. 1–12) and A' (mm. 54–65) are comprised largely of motive *x*. In Theme A, the overall dynamic level stays at piano with slight hairpin dynamics that follow the melody line. Theme A' also starts at piano but crescendos to forte. Themes B (mm. 13–24) and B' (mm. 66–78) are predominantly made of motive *y* and occasionally motive *x*. It is worth noting that there is a strong relationship between motives *x* and *y*. The prevalent interval of a fourth that rises and is under a slur marking occurs in both motives, though it occurs on the offbeat with motive *x* and on the beat with motive *y*. Additionally, the second measure of each motive is rhythmically similar.

The dynamic level of each Theme B is mezzo forte with slight crescendos and decrescendos that follow the melody line. In the first Theme B, the dynamic level diminuendos to piano. Theme B' conversely features a crescendo to bring the etude to a close. In each case, Themes A, A', B, and B' all form parallel period structures.

Theme C (mm. 25–53) is the most substantial section of the etude. It uses all three motives but motive *z* is most prevalent. Motive *z* is a three-voice compound melody line that outlines open-positioned, usually minor, triads. In general, the notes that appear under a single slur in this section span a much larger interval than either Theme A or B. The dynamic level centers at piano with hairpin dynamics that follow the line. Unlike many of Bitsch's etudes, Etude 19 does not start and end on the same pitch, nor does it necessarily outline an obvious key. The etude begins with quartal harmonies and no real pitch center, and it ends centered on pitch class D.

Transpositions and Transformations

Some small-scale exact transpositions occur in this etude involving motives *x* and *y*. The motive *x* from mm. 3–6 is transposed up a M2 in mm. 9–12. A portion of motive *y* is transposed down a M2 in mm. 15 through the downbeat of m. 16. While transposition plays a minor role in this etude, other transformations are plentiful.

Bitsch uses fragmentation, inverted contour, and embellishment to transform various motives. Fragmentation occurs during Themes B and B' whenever motive *x* is used (mm. 17–18, 23–24, 70–71, and 76–77). The majority of transformations take place starting with Theme C. Theme C transforms all three motives using inverted contour. Motive *x* appeared inverted in mm. 35–39, motive *y* experiences a type of inversion in mm. 39–43, and motive *z* is inverted in mm. 44–53. With the transformation of motive *y*, the overall trajectory is inverted from the original, but the individual two-note groupings are still ascending. The inversion of motive *z* is also not exact, particularly because of the first note. The subsequent notes of the motive have an inverted trajectory when compared with the original motive *z* (see Example 2.26).

35
Motive x in inverted contour

39
Motive y in inverted contour

44
Motive z in inverted contour

Example 2.26: Inverted Contour of Motives in Theme C of Etude 19

Additionally, the same pitches from the original appear here reordered. In m. 44, the A is in the same location but the F and D appear in reverse order. The three notes from mm. 45 and 46 are each in retrograde, though the rhythm of m. 46 remains consistent with the original motive.

The last type of transformation involves the embellishment of motives *x* and *y* in Themes A' and B' (mm. 54–78). The original motives are embellished by replacing the two 16th-note figures with triplet 16^{ths}. Additionally, motive *y* incorporates 32nd notes into its second measures. In most cases, the pitches from the melody line are unchanged, with the exception of pitch repetition and the occasional upper neighbor tone.

Rhythm and Meter

Meter is fairly consistent throughout all the A and B themes. Rhythmically, Themes A' and B' mainly vary from the original by the above-mentioned embellishments. Theme C, however, is less regular. It uses metric displacement of

transformed versions of motives *x* and *y*.³³ Motive *x* is displaced in mm. 35–36 and 37–38. In each case, it occurs two 16th notes later than the original motive. Motive *y* also experiences displacement, shifted by two 16th notes in mm. 39 and 41.

Etude 20

Motives

Form

Etude 20 is in ABA' form. Throughout, the tonality is quite unstable. However, the etude does begin and end with pitch class B, which is arguably the most significant pitch class in the work. Theme A (mm. 1–21) uses motives *v* and *w*, making the $\frac{1}{2}$ the predominant rhythm. Dynamically, Theme A ranges from piano to mezzo forte. Theme B (mm. 22–37) uses motives *x* and *y*, and its dynamics range from mezzo forte to piano. Theme A' (mm. 38–63) uses motive *z* along with transformations of the material from Theme A—starting with m. 41–42 mimicking the material from m. 1. The dynamics begin at piano, crescendo to forte, and then gradually taper back to piano by the end of the piece.

³³ Motives *x* and *y* both appear in inverted contour.

Transpositions and Transformations

Each motive experiences an exact transposition in Etude 20. Motive *v* is frequently transposed and transformed. The first two measures are followed immediately by a repetition transposed down a P4. Measures 13–14 repeat the motive down a P4 from the original, followed by the first half of the motive down m7 (m. 15) and the second half down an octave (m. 16).

Though the rhythm has changed, mm. 51–63 directly correspond in pitch with mm. 9–21. Furthermore, mm. 41–50 also relate back to mm. 1–6. The individual notes of the first six measures appear in mm. 41–50 in a somewhat augmented version and as part of a multiple-voice compound melody. Most of the original pitches occur on successive beats and are part of the middle voice of the compound melody.³⁴ Any previously discussed transposition from the corresponding measures in Theme A would also apply to these measures.

As shown in Example 2.27, Bitsch will occasionally fragment motive *v* slightly by replacing the first note with a rest of equal value (mm. 5 and 17). A similar event happens in mm. 55 and 57, except the rest is shorter, and it is followed by a condensed version of the beginning of the motive.

5 Missing the first note of motive *v*

55 Diminution at the beginning of motive *v*

Example 2.27: Variations of the Beginning of Motive *v* in Etude 20

³⁴ The last two notes of motive *v* are presented in successive 8th-note values instead of quarter notes. Additionally, the middle voice of the compound melody does not encompass the last pitch of each motive *v*.

Bitsch occasionally uses displacement in this etude but to a lesser extent than other etudes in this collection. Motive *y* is displaced throughout Theme B. It begins on beat 1 but also appears on beat 2 in mm. 25, 26, and 33. One can also view the traveling 16th notes as a form of metric displacement. The motive is traditionally the length of one bar but the location of the 16ths is constantly changing.

Chapter 3: Addressing Playing and Pedagogical Concerns

Vingt études, in conjunction with other 20th-21st century trumpet literature, presents challenges in the form of disjunct, wide-ranging, and often atonal melodic lines. Unlike conventional harmonies and scales, the material found in these compositions is less likely to be a part of most musicians' daily practice routine and maintenance. The melodies found in Bitsch's etudes lack the familiarity of traditional tonal music, making it feel less approachable and more difficult to master.

The individual components of the music do not present the musician with any note, rhythm, or gesture that is beyond his or her capabilities. However, an etude in its entirety becomes much more imposing. The main cause of insecurity is an inability to naturally hear where the music is heading. The often disjunct melody and lack of conventional pitch schemes and patterns make the music feel less rational, predictable, and, therefore, seemingly less attainable. Successful performance of these etudes is, in part, a result of the ability to hear the melody before it is ever played on the instrument. Brian Frederiksen discusses this through Arnold Jacobs' approach to a musical concept of sound:

Jacobs has always said that he plays two tubas simultaneously—one in the hand and the other in the mind. The tuba in his hand is the mirror image of his thought. It plays a pitch a split second after the proper signal is sent from the tuba in the mind—the brain. "It does not matter what octave you sing in the mind. What comes out of the instrument should be a mirror image of the conceptual thought of the brain. It is a conceived sound."³⁵

³⁵ Brian Frederiksen, *Arnold Jacobs: Song and Wind* (Gurnee, IL: WindSong Press, 1996), 137.

Frederiksen goes on to say:

Unfortunately, many musicians play without a concept of the end result—the sound coming from instrument. Their concept is like a builder with no plans. They play with the instrument in their hand but no instrument in their mind and many mistakes occur. Instead they should conceptualize on the end product—the sound coming from the instrument.³⁶

While the above quotations relate Jacobs' method to creating a beautiful, quality musical sound through first conceiving this sound in the mind, it also applies to being able to hear the melody line before it is physically played on the instrument.³⁷

Without this internalized sound/melody concept, common shortcomings in the performance of these etudes include playing out-of-tune, pitch inconsistency, lack of phrasing, and ultimately, less-efficient playing. The challenges of melodic lines may cause notes to be played somewhere other than the resonant center of the pitch (or to be altogether missed). Players may also resort to placing individual notes and, in the process, lose all sense of phrasing. The overall result is less-efficient playing, which wears on a player's endurance and creates a substandard end product. Through a number of different techniques, one can train the ear to internalize these challenging melodic and rhythmic events, resulting in greater efficiency, endurance, and overall performance.

Practicing Aurally and Technically Challenging Passages

Striving for greater aural proficiency of a work starts with the manner in which one practices. Mastering a challenging work will likely take more than just one

³⁶ Ibid.

³⁷ Ibid., 140–41.

practice session and will also likely require more than just repeatedly playing the work from start to finish. While practicing in this manner may provide some continuity and level of competency, it is neither the most efficient nor effective means of mastering a work.

Methods of practice for compositional techniques found in Bitsch's music will be discussed later in this chapter, but first, there are general practice techniques that can be applied to aurally or technically challenging passages. These techniques are universally helpful, some more than others, depending on the individual player and the challenge being addressed. Techniques such as *passage isolation, playing out of time or at a slower tempo, changing rhythms, changing meter, changing the articulations, playing a passage forward and backward, playing a passage left-handed, transposing the passage, singing, listening to a recording, and recording oneself* represent just some of the many ways to vary the practice of a challenging passage. These and other techniques are explored in greater detail in the Appendix.

Jacobs referred to these techniques as incorporating "strangeness" into one's practice, meaning finding new ways of approaching and perceiving the music to overcome bad habits and replace them with good ones.³⁸ Each technique listed above is designed to help the player concentrate and hear the music better. The more one varies practice techniques, the better likelihood one has of overcoming bad habits and mastering a challenging passage or work.

Often, the first step with any challenging work is identifying and isolating the challenging passages. What makes a passage difficult may vary widely: it may be

³⁸ Ibid., 144–45.

melodically disjunct and difficult to hear, resulting in missed notes; it may be a faster passage that requires efficient finger dexterity and technique. In either case, isolating the problematic area will help a player get to the root of the issue. Passage isolation can involve as much (or more than) an entire phrase or as little as one or two notes. Identify any consistent issues with specific notes, hearing certain intervals, or playing certain finger patterns. Once comfortable with the isolated passage (which may require use of additional practice techniques), gradually start adding notes—as few as one at a time—to the passage until it is back into the context of the work.

Each technique mentioned above offers a contrasting method for breaking down and reorganizing the music. It is imperative to successful practice that a player does not move too quickly when addressing a difficult passage. Doing so may undermine one's practicing, leaving a player no closer to achieving his or her goals. Be patient and diligent when applying these techniques. Aural and muscle memory develop over time and, often, over many practice sessions.

Achieving Accurate Rhythm and Meter

The first step in achieving accurate rhythm and meter is using a metronome. There is no better alternative for ensuring a steady tempo while practicing. Tapping one's foot, toe, or anything similar gives a false perception of playing in time. Similar techniques used with aurally and technically challenging passages will also be helpful with rhythmic and metric issues. Passage isolation, playing at a slower tempo, and practicing the passage backwards can all be beneficial. One of the main

additional techniques with challenging rhythmic passages is the use of subdivision.

When working with a challenging rhythmic passage, subdivide at the shortest note value (or rest value) found in the passage that makes sense. For example, if a passage contains several 16th notes but also contains fleeting grace notes, a player's underlying subdivision would be the 16th notes. Some metronomes are capable of subdivision, even at faster tempos, which may prove to be a worthwhile investment. Using a metronome with subdivision alleviates ambiguity and helps keep a player rhythmically honest.

Subdivision within the scope of practicing and performance involves taking longer written note values and applying a subdivided rhythm to them. For instance, if the decided subdivision is at the 8th-note level and the given note value is a ♩, one would articulate each subdivision (♩♩) on the same pitch in place of the written value. Subdivision is particularly helpful when it is difficult to discern a beat. Often times the passage contains multiple ties, rests, or some combination of the two. When the beat is obscured in the music, it can be helpful to pencil in where the larger metric beats occur in a measure. It may also be helpful to mark the smaller subdivisions.³⁹

Subdividing notes is a helpful tool and is equally helpful in counting through rests. In Etude 11, rests are the most prominent feature. The rests combined with the $\frac{5}{8}$ meter make performing accurate rhythms a challenge. In this case, consider slowing the tempo and setting the metronome to beat the 8th-note value. In addition to the slower tempo, one may replace the rests with notes of the same value. The

³⁹ See Exercise 2 for Etude 2 in the Appendix.

note(s) played during a rest(s) can be a static, pre-determined note. For example, play a low C for each rest. Another option would be to play the same pitch as the last written note during the rests.⁴⁰ With this example, consider emphasizing the notes originally written in the etude to help distinguish them from the other subdivided pitches.

In addition to subdivision, another helpful practice technique is looking for rhythmic patterns in the music. Remember that Bitsch has a tendency to displace motives, starting them at varying metric locations. Again, looking at etude 11, take note that mm. 1–4 use the same rhythms as mm. 5–9. The only rhythmic difference is that the motive starts two 8th notes later than the original presentation (see Example 3.1).

1
p *staccato leggiero*
 Original Motive w

5
 Motive w displaced by two 8th notes

Example 3.1: Displacement of Motive w in Etude 11

On closer inspection, one will see that the entire etude has very few rhythmic ideas, simply reusing the same idea in different metric locations. Metrically displacing a motive impacts how it is interpreted by the ear, but knowing that the internal rhythmic relationships of each motive are identical helps give the work continuity. A

⁴⁰ See Exercise 1 for Etude 11 in the Appendix.

similar rhythmic repetition is found with motive *z* in Etude 2 (mm. 17–26).⁴¹

Awareness of repeated rhythmic ideas helps one to organize the music and makes practicing more efficient.

Motives

Recognizing motives and understanding their development broadens one's comprehensive organization of a work. Bitsch uses several compositional techniques within his motives, outlined in Chapter 1: *compound melody, wedges, octave displacement, scalar patterns, arpeggiated patterns, prevalent interval patterns, and use of accents*. Each of these compositional techniques presents its own challenges. Designing exercises to address these challenges will help train the ear and make the music more familiar.

The first compositional technique is compound melody. When initially practicing a work or passage that uses this technique, playing and hearing the line accurately can be a tedious process. Simply playing the melody as it appears on the page may result in frustration and take an inordinate amount of time to master. Rather than thinking of the passage as a single melody, separate the voices and play them independently from one another. In Baldwin's commentary of Etude 9, he advises, "Think of [the compound melody] as two melodic lines at the same time [...]. Play each separately to get the feel on the lip and ear [...]." ⁴² The ear is more likely to comprehend the voices individually. Once comfortable with the individual voices, play them again as written for greater continuity.

⁴¹ See Example 2.4.

⁴² Baldwin, *The Etudes of Charlier and Bitsch*. 19–20.

Wedges are a specific type of compound melody and can be addressed using the same exercise outlined above.⁴³ Playing the voices separately makes the direction of each voice and overall direction of the phrase more transparent. Generally, the more drastic the range between voices, the more challenging the line becomes.

One such extreme case, Etude 9, involves leaps spanning up to a P15. In addition to separating the voices into individual melody lines, one should also practice the voices in a closer range.⁴⁴ The upper voice can be displaced down an octave while the lower voice is left as written. This saves endurance and allows the ear to hear how the individual voices interact with one another. A more challenging option would be to play the bottom voice up an octave, leaving the top voice as written. When working with large intervals as seen with a compound melody, wedge, or octave displacement, explore several different octave combinations. This may also include inverting the contour of the intervals.⁴⁵ The more comfortable each octave combination becomes, the better the ear will internalize the line. This will help with accuracy and overall phrasing of the line.

Linear motion is also common in Bitsch's music, though it does not always follow a conventional scale type. Traditional scale practice—referring to modes of major, whole tone, and diminished scales—can be a great tool in achieving proficiency with less conventional scales. Familiarity with traditional scales makes it easier to relate to altered scale types in Bitsch's and other music. After isolating an individual scalar passage in the music, determine what scale it is or what it most closely resembles. If

⁴³ See Exercise 2 for Etude 13 in the Appendix.

⁴⁴ See the exercises for Etude 9 in the Appendix.

⁴⁵ See Exercise 1 for Etude 2 in the Appendix.

the scale is unconventional, compare it to the traditional scale type, and take note of any alterations. Practice the scale both ascending and descending, regardless of how it appears in the music.⁴⁶ It will aid in muscle memory, as well as familiarize the ear with the sound of the scale.

In addition to unconventional scales, Bitsch also uses unconventional arpeggios. Like the scales, it is beneficial to master traditional arpeggios to provide a baseline for comparison. One possible exercise is to alternate between a close-resembling traditional arpeggio and the altered arpeggio from the music. Practice all combinations, both ascending and descending. It will help the ear to adapt to the new sonorities. Additional exercises could involve practicing the arpeggio in different inversions, in different octaves, or creating a hypothetical scale around the existing intervals. With the scale exercise, consider emphasizing the written pitches through a traditional accent (>). With both the scales and arpeggios, it may be difficult to settle on one relatable conventional scale. Consider similar scales and arpeggios in the etude, as well as if the etude has any tonal center(s). Choose an option that will most easily follow the established framework of the existing music.

Prevalent interval patterns employ many of the same practice techniques already discussed. As with arpeggios, create exercises where all inversions are explored. In the case of large leaps or direction changes, play all the intervals within the smallest range possible or change the order of the intervals to make them single-directional. One may also use the scale fill-in technique discussed with the arpeggios.

⁴⁶ See Exercise 3 for Etude 10 in the Appendix.

Bitsch commonly uses accents to define motives, as is outlined in Chapter 1. Playing all the accents as written is vital to keeping the integrity of certain motives. Accents can affect the perception of hypermeter and may even be the only distinguishable trait a motive has. To improve accuracy in playing the written accents, the following practice techniques can help: 1) isolate accented passages and play it under tempo; 2) simplify the passage by playing the written rhythms on a single pitch—allowing the player to focus on the accented material without hindrance of a melody line; 3) only play the accented notes, replacing all the unaccented notes with rests.

Transpositions and Other Intervallic Transformations

Other compositional techniques frequently found in Bitsch's music are transposition and other intervallic transformations. The transformations range from exact transposition to retrograde and various types of inversion. Recognizing the types of transformations and their occurrences in the music will help to codify motivic relationships and help the player to hear and internalize the melodic line.

To become better acquainted with transpositions in an etude, locate all the iterations of a motive and place them into a single exercise.⁴⁷ If the music contains fragments of a motive, flesh it out into a complete motive and include it in the exercise. It will add continuity to the exercise and help one's aural memory to hear the motive each time in its entirety and at many different pitch centers. One may

⁴⁷ See Exercise 1 for Etude 3 in the Appendix.

also consider expanding the exercise to include motives that start on all 12 pitch classes.

Slightly altering the transposition of a motive is quite common in Bitsch's etudes. The etudes are, in most cases, not tonally driven, so the alterations are not done to accommodate a specific key. Instead, the alterations allow the motive to organically transform itself throughout the etude. As with exact transpositions, isolate the transposed passages and string them into a single exercise. Non-exact transpositions, however, have an additional level of aural complexity. Take note of what intervals differ from one presentation of the motive to the next. Isolate the different interval(s), and play them back and forth with the corresponding interval(s) from the original presentation of the motive. Once one is comfortable with the isolated intervals, put them back into the context of the larger motivic exercise.

Other transformations, including retrograde and inverted contour, can benefit from the same exercises outlined for transposed motives. Create exercises that string together the isolated transformations. With all transformations, especially retrograde, play each passage—including the original motive—both forward and backward. Create larger exercises to embody all transformations of a motive, regardless of type. These will improve the player's aural memory and give a better sense of motivic continuity.

Form and Musical Goals

In discussing specific practice techniques for Bitsch's music thus far, focus has

been at a localized level, involving motivic construction as well as motivic-level rhythmic and intervallic transformations. However, these individual components fit together to create themes and eventually complete compositions. Recognizing form in the music is another essential step in understanding the work and achieving one's musical goals. As mentioned in chapter one, Bitsch's etudes can be characterized as *monothematic*, having *two contrasting themes*, *two contrasting themes with a third hybrid of the first two themes* or *three contrasting themes*.

Themes in Bitsch's music are characterized by a number of indicators. One should look at motivic material, articulations, dynamics, tempos, phrasing and other expressive instructions. All of these direct the player toward an appropriate mood or character for each theme. Assigning moods, individual characters, stories, colors, or some other classification can be helpful to create an appropriate musical contrast between themes. Also, practice by varying the level of contrast between themes. This may pertain to dynamics, length or type of articulation, tempo, and so on. Test the extremes of each component, exaggerating in either direction, until a desirable quality is reached.

Recognition of each theme becomes particularly important when Bitsch combines two existing themes into a third new theme. In these circumstances the third theme presents fragments of motivic material from the previous themes. Each time a fragment is presented, recall the character originally associated with that theme. The fragments can alternate rapidly, requiring heightened attention to maintain the integrity of each theme's character. Physically notating the thematic fragments on the page can also be helpful.

Phrasing is an additional stylistic element of the music. Bitsch uses phrase markings sparingly, leaving the phrasing largely up to the musician. Consider writing phrase markings in the music. Bitsch disguises motives and phrases through metric displacement, irregular phrase lengths, diminution, fragmentation, and elision. This makes the study and recognition of motivic material crucial to determining the proper beginning and end to a musical idea. Changing a phrase by even a single note may create a completely different interpretation of how motives interact. While the beginning and end of a phrase often coincide with the beginning and end of an individual motive—or group of motives—this is not universally the case. When motives are presented in fragments or some other form of transformation, their role in a phrase may change. There is often more than one way to interpret the phrasing of a composition. Considering the structural integrity of motives and themes will help ensure that an informed and musical decision is made.

Conclusion

Bitsch's *Vingt études* are a challenging collection of modern trumpet literature, but the difficulties of these works are possible to overcome and master if one takes the proper steps. Practicing the techniques outlined in this chapter, as well as understanding of the etudes' construction and organization, will provide the tools to successfully perform these works.

Appendix: Exercises for *Vingt études*

Etude 1 Exercises

#1—This exercise addresses the ascending and descending arpeggios found throughout Etude 1. Octaves have been displaced to help keep the melody line of the exercise conjunct. Rhythmic durations have been lengthened and repeats have been added to help internalize pitch relationships and the musical line.



#2—This exercise draws from m. 16 and is designed to help hear the passage better, as well as work on finger dexterity.⁴⁸ The material is repeated forward and backward at increasingly shorter rhythmic values. The final two beats of the penultimate measure represent the material as it appears in the etude.



⁴⁸ For any of the exercises addressing finger dexterity, also practice the exercise left-handed.

#3—The same explanation as exercise #2 also applies here, only the content pertains to mm. 17–18.



#4—The same explanation as exercise #2 also applies here, only the content pertains to mm. 21–22.

Musical notation for exercise #4, measures 21–22. The notation is on three staves in treble clef, 4/4 time, with a key signature of one sharp (F#). The first staff contains measures 21 and 22, primarily consisting of quarter notes. The second and third staves contain measures 21 and 22, featuring eighth and sixteenth note patterns.

Etude 2 Exercises

#1—This exercise is based on the open-position chords that appear throughout the etude, originating in mm. 1-3. The rhythms have not been altered, but some of the pitches have been displaced by octave to put the melody in a more similar and lower range.

#2—This exercise applies to mm. 17-26. The written note values have been subdivided at the 16th and occasionally 8th-note level. The larger note-heads represent the written pitches from the etude that either move and/or are rearticulated. The markings above each staff represent where the six subdivisions of the measure occur. The larger markings represent beats 1 and 4 of the measure.

Etude 3 Exercises

#1—This exercise addresses the descending tetrachords that appear throughout the etude. The tetrachord represents the top line of the compound melody, first appearing in mm. 2–3. The range has been optionally displaced to keep the exercise in a more similar range. The original range is notated in the ossia staff. The rhythm has also been altered to quarter-note values.

The image shows two staves of musical notation. The top staff is the original etude material, featuring a descending tetrachord in the first measure. The bottom staff is the exercise version, which uses a displaced range and quarter-note values for the tetrachord.

#2—This exercise draws from m. 4 and is designed to help hear the passage better, as well as work on finger dexterity. The material is repeated forward and backward at increasingly shorter rhythmic values. The final two beats of the penultimate measure represent the material as it appears in the etude.

The image shows a single staff of musical notation. It contains a sequence of notes followed by a final measure with a whole note, representing the material as it appears in the etude.

#3—The same explanation as exercise #2 also applies here, only the content pertains to m. 8.

The image shows a single staff of musical notation. It contains a sequence of notes followed by a final measure with a whole note, representing the material as it appears in the etude.

#4—The same explanation as exercise #2 also applies here, only the content pertains to m. 16.



Etude 4 Exercises

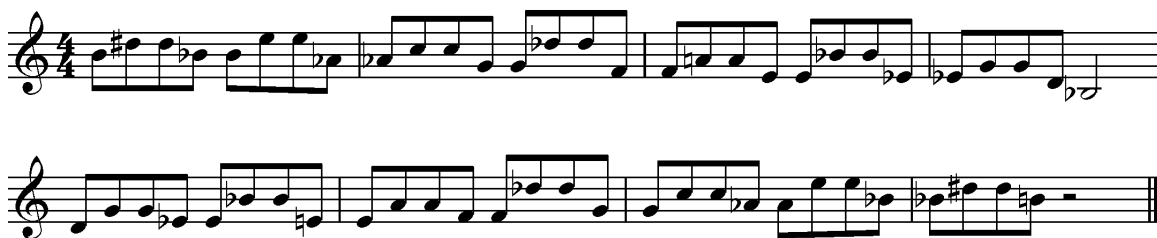
#1—This exercise is based on the two consecutive 8th-note triplet figures, first appearing in mm. 2–3. The meter has been changed to $\frac{6}{8}$ from the written $\frac{4}{4}$. The ossia staff contains the original pitches, while the main staff offers a reduced-range version. The second half is a retrograde of the first half.

The musical score for Exercise #1 consists of four systems, each with two staves. The top staff represents the original pitch, and the bottom staff represents a reduced-range version. The first two systems show the original material, and the last two systems show the retrograde. The meter is 6/8.

#2—This exercise addresses mm. 15–16. The range has been reduced to bring more attention to the rhythmic activity. The meter has been modified to address the juxtaposition between duple and triple subdivisions. The first three measures of the exercise are immediately repeated in retrograde, and the last three measures are identical to the first three.

The musical score for Exercise #2 consists of two systems, each with two staves. The top staff represents the original pitch, and the bottom staff represents a reduced-range version. The meter is 6/8. The first three measures of the exercise are immediately repeated in retrograde, and the last three measures are identical to the first three.

#2—This exercise is based on mm. 15–16. The rhythmic value has been lengthened from a 16th to an 8th note to help the player internalize pitch relationships and the musical line. This exercise offers an alternative way to approach a wedge in the music. However, the exercise could easily be played like exercise #1, where the individual sides of the wedge are played separately from one another. The first four measures of the exercise are repeated in the second four measures, only in retrograde.



#3—This exercise is also based on mm. 15–16. The rhythmic value is still lengthened but without repeating any of the notes. Here, the exercise begins in retrograde so the final two measures appear as written in the etude.



#4—The same explanation as exercise #2 also applies here, only the content pertains to mm. 29–30.



#5—The same explanation as exercise #3 also applies here, only the content pertains to mm. 29–30.



Etude 6 Exercises

#1—This exercise represents all the iterations of the motive originally found in the first half of m. 1. The motive often appears twice throughout the etude using the same pitches, as this exercise would indicate. Isolating the motives in close succession helps show its progression through the etude. The exercise uses the original rhythms and range from the etude.



#2—The same explanation as exercise #1 also applies here, only the content pertains to the ascending scale motive originally found in m. 9.



#3—This exercise is based on the material originating in the pick-up to m. 2. The rhythm has been altered to steady 8th notes but the range is consistent with the original music.

Exercise #3 consists of three staves of music in 6/8 time. The first staff begins with a treble clef, a key signature of two flats (B-flat and E-flat), and a 6/8 time signature. It contains six measures of music with eighth notes. The second staff continues the melody with six more measures of eighth notes. The third staff concludes the exercise with six measures, including a final whole note chord and a double bar line.

#4—This exercise covers the material that originally appears in the second half of m. 1. Original rhythms and range are used throughout.

Exercise #4 consists of two staves of music in 6/8 time. The first staff begins with a treble clef, a key signature of two flats, and a 6/8 time signature. It contains four measures of music with eighth notes. The second staff continues the melody with four more measures, ending with a double bar line.

Etude 7 Exercises

#1—This exercise follows the motive that first appears in m. 2–3. This motive undergoes several subtle transformations *within* each repetition, which are represented in the exercise by every 2 to 3 measures. The motive also undergoes several substantial pitch transformations over the course of the etude but is always recognizable by its accent (>) pattern. The rhythmic duration has been lengthened and the meter has been altered from $\frac{3}{4}$ to $\frac{6}{8}$.

#2—This exercise involves the direction-changing 32nd-note motives, first appearing in m. 4. The original motives from the etude are directly followed by its retrograde. The rhythmic values have been lengthened and the meter has been changed from $\frac{3}{4}$ to $\frac{4}{4}$.

#3—Repetitions of the 32nd-note motive are occasionally linked by the material found below. The first linking material occurs in m. 6 (represented on the first staff). The second instance is in m. 30 (represented on the second staff). The rhythmic values begin longer but shorten in the last two measures of the exercise to more closely match the etude. Like the previous exercise, the original material is followed immediately by its retrograde.

The image displays two staves of musical notation in 3/4 time. The first staff contains six measures of music. The first measure is the original 32nd-note motive. The second measure is a linking material. The third measure is the original motive again. The fourth measure is a linking material. The fifth measure is the original motive. The sixth measure is the retrograde of the original motive. The second staff also contains six measures. The first measure is the original 32nd-note motive. The second measure is a linking material. The third measure is the original motive. The fourth measure is a linking material. The fifth measure is the original motive. The sixth measure is the retrograde of the original motive.

Etude 8 Exercises

#1—This exercise follows the sequence-like material from mm. 17–21. The exercise focuses on the areas with leaps. Rhythmic durations are initially lengthened to a quarter note but are always followed by the original rhythm (8th notes). Each fragment of the melody, both at the quarter and 8th-note level, is immediately repeated in retrograde.

The musical notation for Exercise #1 consists of four staves. The first staff is in 3/4 time and contains a sequence of notes: quarter, quarter, quarter, quarter, eighth, eighth, eighth, eighth, quarter, quarter, quarter, quarter, eighth, eighth, eighth, eighth. The second staff shows the same sequence with some notes lengthened to quarter notes. The third and fourth staves show the retrograde of the original sequence.

#2—The same explanation as exercise #1 also applies here, only the content pertains to mm. 24–28.

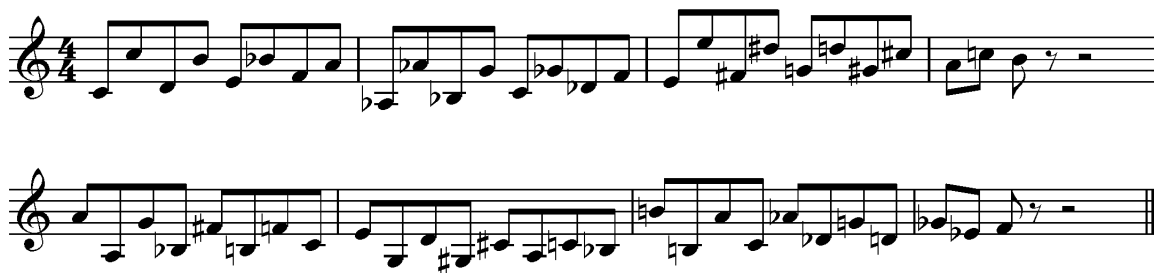
The musical notation for Exercise #2 consists of four staves. The first staff is in 3/4 time and contains a sequence of notes with some leaps. The second staff shows the same sequence with some notes lengthened to quarter notes. The third and fourth staves show the retrograde of the original sequence.

#3—The same explanation as exercise #1 also applies here, only the content pertains to mm. 29–35.

The image displays a musical score for exercise #3, consisting of three staves of music. The first staff begins with a treble clef, a key signature of one flat (B-flat), and a 3/4 time signature. The melody consists of eighth and quarter notes. The second staff continues the melody with similar rhythmic patterns. The third staff concludes the exercise, featuring a double bar line and a repeat sign. The key signature changes to two flats (B-flat and E-flat) at the beginning of the third staff, and the time signature changes to 4/4. The melody continues with quarter and eighth notes.

Etude 9 Exercises

#1—This exercise is based on a wedge motive. The first four measures of the exercise pertain to mm. 1–4 and 18–20. The last four measures pertain to mm. 7–9 and 24–26. The range has been reduced to keep intervals within an individual wedge to an octave or less. The exercise lowers the octave of the top voice, but one can also practice the same exercise up an octave. In that case, the upper voice of the wedge would be in its original octave. For additional practice, play through the individual voices of the wedge separately to help hear the movement of each line.⁴⁹



#2—The next three staves address mm. 19–20 and 25–26. The rhythms are unchanged from the original etude, but the meter is changed to $\frac{2}{4}$ to allow each measure of the exercise to represent one measure from the etude. Each system addresses two adjacent voices in the music. The first represents the bottom two voices, the second represents the middle two voices, and the third represents the top two voices. With the exception of the first two measures of the third system (which are 8va basso from the etude), everything appears in its original range. Just as suggested with exercise #1, play through the individual voices of the wedge separately for added practice.

⁴⁹ See Exercise #1 for Etude 5.

#3—This exercise also pertains to mm. 19–20 and 25–26, except it now involves the bottom three voices. Each fragment of the melody is immediately followed by its retrograde. The meter has been switched to $\frac{8}{8}$ to change the musical flow and keep the focus on hearing the intervals.

The musical notation for exercise #3 consists of three staves. The first staff shows a melody of eighth notes: C4, D4, E4, F4, G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The second staff shows the retrograde of this melody: C4, B3, A3, G3, F3, E3, D3, C3, B2, A2, G2, F2, E2, D2, C2. The third staff shows a new melody of eighth notes: C4, D4, E4, F4, G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The retrograde of this melody is not present in this exercise.

#4—The same explanation applies here as exercise #3, except the retrograde of each fragment has been removed.

The musical notation for exercise #4 consists of two staves. The first staff shows a melody of eighth notes: C4, D4, E4, F4, G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The second staff shows the retrograde of this melody: C4, B3, A3, G3, F3, E3, D3, C3, B2, A2, G2, F2, E2, D2, C2.

#5—The same explanation as exercise #3 also applies here, except this exercise involves the top 3 voices of the same measures.

The musical score for exercise #5 consists of three staves of music in 6/8 time. The first staff begins with a treble clef and a key signature of one sharp (F#). The second staff begins with a treble clef and a key signature of one flat (Bb). The third staff begins with a treble clef and a key signature of two flats (Bb, Eb). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests, with some notes marked with accidentals.

#6—The same explanation as exercise #4 also applies here, except this exercise involves the top 3 voices of the same measures.

The musical score for exercise #6 consists of two staves of music in 6/8 time. The first staff begins with a treble clef and a key signature of one sharp (F#). The second staff begins with a treble clef and a key signature of two flats (Bb, Eb). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests, with some notes marked with accidentals.

Etude 10 Exercises

#1—This exercise is based on the material from mm. 5 and 12. The compound melody line may first be played in separate voices to help hear the direction of the individual voices.⁵⁰ The range, rhythm, and meter match the original measures, but the last two measures repeat the same material in retrograde—both in pitch and rhythm.



#2—This exercise is based on the material from mm. 6–7, 13–14, 30–31, and 36. The compound melody line may first be played in separate voices to help hear the direction of the individual voices. At the start of the exercise and at each new double bar line, the range, rhythm, and meter are very similar to the original measures. This material is then presented in retrograde—both in pitch and rhythm.



⁵⁰ See Exercise #1 for Etude 5.

#3—This exercise is based on the material originally appearing in mm. 1–4. The rhythm has been changed to steady 8th notes. Lengthening the second note of the three-note grouping to an 8th instead of a 16th note helps the player to hear the pitches of all three notes equally. This will help ensure that when the 16th notes are played as written, they will be centered in pitch and will have the same tone quality as the longer rhythmic values.



#4—This exercise is inspired by a suggested exercise in the liner notes of David Baldwin’s *The Etudes of Charlier and Bitsch* recording. Baldwin suggests playing the first six notes of the seven-note grouping “in good rhythm”—assuming he means playing the first six notes as regular 16th notes—followed by the entire seven-note grouping.⁵¹ The exercise is designed to help one internalize the difference between the group of six 16th notes and the septuplet 16^{ths}. The first three bars appear in retrograde in mm. 4–6, and the final two measures represent each of the septuplets as they appear in the music.

⁵¹ Baldwin, *The Etudes of Charlier and Bitsch*, 20.

Etude 11 Exercises

#1—This exercise addresses the issue of accurate rhythm in the A sections of Etude 11. The larger noteheads represent the written pitches from the music, while the smaller ones represent the rests. Some of the notes have been displaced to a lower or higher octave to make the melody less disjunct. Play this exercise under the etude's suggested tempo and slowly work it up to speed.

The image shows four staves of musical notation for Exercise #1. The first staff is in 3/8 time and contains a sequence of notes and rests. The second staff continues the sequence. The third staff continues the sequence. The fourth staff concludes the exercise with a double bar line. The notation includes various note values and rests, with some notes displaced to different octaves to create a less disjunct melody.

#2—This exercise addresses the relationships between the intervals in mm. 1–4. The intervals are presented in three-note fragments with even rhythm and a $\frac{4}{4}$ meter. The fragments rock back and forth between their original pitch order and their retrograde. The last quarter note of each three-note grouping simultaneously acts as the first note of the next three-note grouping.

The image shows two staves of musical notation for Exercise #2. The first staff is in 4/4 time and contains three-note fragments. The second staff continues the sequence. The notation shows three-note fragments with even rhythm, alternating between original pitch order and retrograde. The last quarter note of each three-note grouping simultaneously acts as the first note of the next three-note grouping.

#3—The same explanation as exercise #2 also applies here, except this exercise pertains to mm. 5–9.



#4—The same explanation as exercise #2 also applies here, except this exercise pertains to mm. 10–13.



#5—The same explanation as exercise #2 also applies here, except this exercise pertains to mm. 14–18.



#6—The same explanation as exercise #2 also applies here, except this exercise pertains to mm. 19–21.

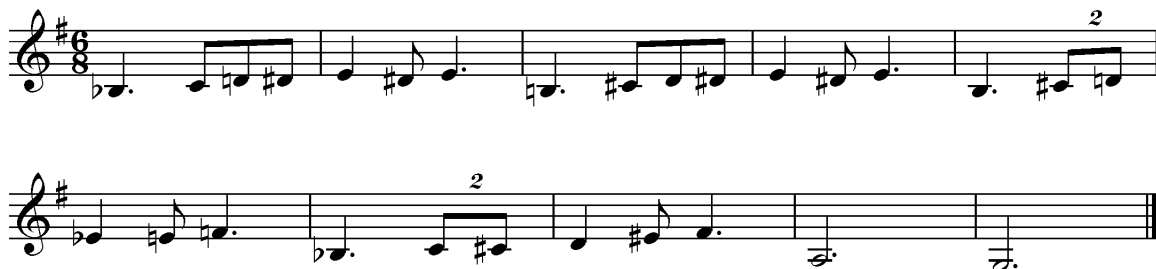


Etude 12 Exercises

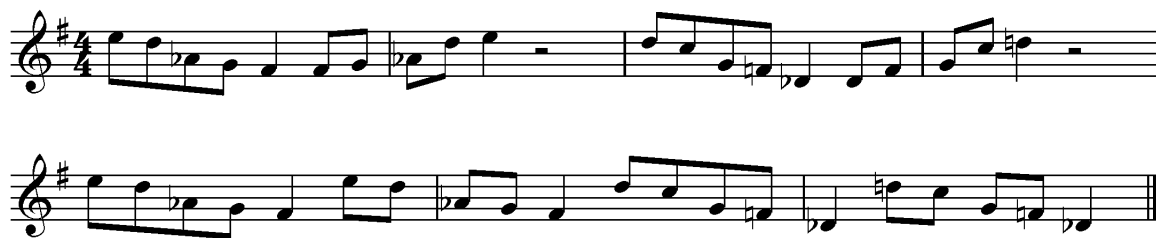
#1—This exercise is based off mm. 2–4 and 25–27. The intervals have been broken into three-note groupings in a $\frac{6}{8}$ meter. The melodic fragments are immediately followed by their retrogrades.



#2—This exercise is based on mm. 7–11. The meter has been changed to $\frac{6}{8}$ and the rhythms are generally longer. Some of the notes have been displaced to a lower octave to accommodate a more conjunct melody.



#3—This exercise represents the material from mm. 4–5 and 27–28. The rhythmic values have been lengthened. Each melodic fragment also appear in its retrograde during the first 4 measures. The last four measures repeat each melodic fragment once, which mimics the original measures of the etude.



Etude 13 Exercises

#1—This exercise is based on the different transformations of the descending 16th-note triplet figure, first appearing in m. 2. The rhythms have been lengthened and the meter has changed from $\frac{2}{4}$ to $\frac{3}{8}$. The pitches appear in the same order and range as the etude and also appear in retrograde. The lowest note of each melodic fragment simultaneously acts as the last note of the original fragment and the first note of the retrograde. Practice this exercise single and triple-tongued.⁵²

The musical notation for Exercise #1 consists of three staves of music in 3/8 time. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 3/8 time signature. It contains a descending 16th-note triplet figure. The second staff continues the exercise with the figure in retrograde. The third staff shows further transformations of the figure, including a final measure with a whole note rest.

#2—This exercise separates the wedge motive, originally in m. 1. The lower voice is played first, followed by the upper voice. The exercise uses all the original pitches in their original range and rhythm.

The musical notation for Exercise #2 consists of four staves of music in 2/4 time. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. It contains a wedge motive. The second and third staves show the lower voice and upper voice respectively. The fourth staff shows the exercise in retrograde.

⁵² Keith Johnson, *The Art of Trumpet Playing* (Ames, IA: Iowa State University Press, 1981), 75. When multiple tonguing, practice not only the traditional *tu-tu-ku* or *tu-ku-tu* but also *ku-ku-tu*, *ku-tu-ku*, and *ku-ku-ku*. Johnson states that this practice technique helps to achieve “control, flexibility, and smoothness” when multiple tonguing.

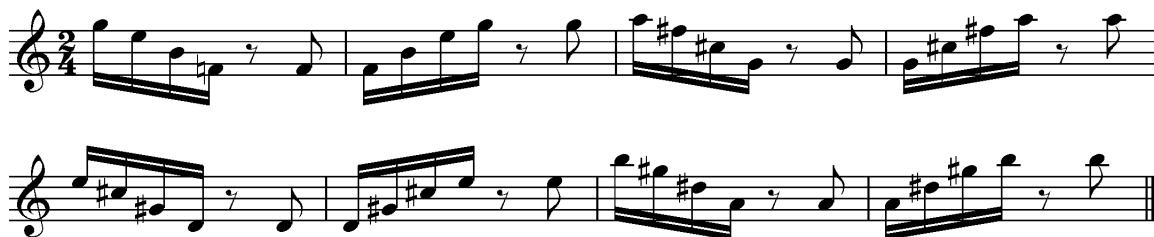
#3—This exercise is based on mm. 15–18. Like exercise #2, it divides the voices of the compound melody—in this case three—into single voices. The top voice is presented in mm. 1–2, the bottom in m. 3, and the middle in mm. 4–5 of the exercise. The lowest voice only requires a single measure because it appears only twice in the etude due to fragmentation.



#4—This exercise is based on the ascending portions of mm. 23, 27, and 48. Each of these lines is repeated one additional time in the music. Here, they appear in their original range, rhythm, and meter, and also include a retrograde version.



#5—The same explanation as exercise #4 also applies here, except this exercise contains the descending portions of the measures listed above (as well as a part of mm. 28 and 32–33).



Etude 14 Exercises

#1—This exercise is based on the three notes that follow the tenuto accent, first seen in m. 1.⁵³ The intervals appear as written in the music, as well as in retrograde. Some of the fragments have been displaced 8va basso with the option of playing the original pitches in the ossia staff.

⁵³ The last six measures of the exercise do not follow tenuto accents in the etude. Each of these is part of fragmented motives that clearly relate to the opening motive in m. 1.

#2—The same explanation as exercise #1 also applies here, except the intervals in this exercise pick up where exercise #1 left off. The first three 8th notes of this exercise correspond with the last three 8th notes of m. 1 in the etude.

The musical score for exercise #2 is presented in three systems. The first system consists of a single staff with a treble clef and a key signature of one sharp (F#), containing two measures of music. The second system consists of two staves with a treble clef and a key signature of one flat (Bb), containing four measures of music. The third system consists of two staves with a treble clef and a key signature of one flat (Bb), containing four measures of music. The notation includes various intervals and rests, with some notes marked with accidentals (sharps and flats).

#3—The same explanation as exercise #1 also applies here, except the intervals in this exercise pick up where exercise #2 left off. The first three notes of this exercise correspond with the first three notes of m. 2 in the etude.

The musical score for exercise #3 is presented in three systems. The first system consists of a single staff with a treble clef and a key signature of one flat (Bb), containing four measures of music. The second system consists of two staves with a treble clef and a key signature of one flat (Bb), containing four measures of music. The third system consists of two staves with a treble clef and a key signature of one flat (Bb), containing four measures of music. The notation includes various intervals and rests, with some notes marked with accidentals (flats).

Etude 15 Exercises

#1—This exercise is based on the motive originally appearing in m. 2. The pitch classes are kept in the same order but use octave displacement to vary the intervals. Hearing the notes relate to one another in multiple ways help the ear to prepare for the pitch classes when separated by larger intervals.

#2—This exercise is also based on the motive originating in m. 2, but it is designed to help with transformations of the motive in mm. 26–31 and 47. The meter and rhythms have been altered to help hear each pitch equally. Like exercise #1, the pitch classes are kept in the same order as the music but use octave displacement to vary the intervals between notes. This exercise also adds the retrograde of each repetition of the motive.

#3—This exercise also corresponds with mm. 26–31. Here, the meter simulates the etude. However, the range has been altered through octave displacement. Keeping the range within a lower octave will still help internalize the pitch relationships without requiring as much energy or endurance. Pitch, not rhythmic, retrogrades immediately follow each melodic fragment.



Etude 16 Exercises

#1—This exercise is based on the motive found initially on the first three beats of m. 1. The meter has been changed to $\frac{6}{8}$ and the quintuplet 16th notes have been changed to six steady 8th notes. The motive has been reordered with an additional note added to form part of an ascending scale. The extra note occurs on the first 8th note of beat 2 and bridges the gap in the scale.

#2—The same explanation as exercise #1 also applies here, except it involves the material originally on beat 4 of m. 1. The extra pitches used to fill in the scale occur on the third and fifth 8th notes of the measure in this exercise.

#3—The same explanation as exercise #1 also applies here, except this exercise pertains to mm. 3–4 and 15–16. Extra notes have been added accordingly to fill in the scales.

#4—This exercise addresses the rhythm in mm. 9–10. In the first eight measures of the exercise, some pitches have been displaced to a lower octave to minimize the range within the motive. The first 16 measures contain a new motive at the beginning of each measure. The last four measures incorporate rests to simulate the actual etude.

#5—This exercise addresses the material originally found on beat 3 of m. 7. The material appears as written in the etude, as well as in retrograde.

The image displays two staves of musical notation. The top staff is in treble clef with a key signature of one flat (B-flat). It contains four measures of music, each starting with a five-fingered chord (marked with a '5') and followed by a sequence of eighth notes. The notes in the first measure are G4, A4, Bb4, C5, D5, E5, F5, G5. The second measure is A4, Bb4, C5, D5, E5, F5, G5, A5. The third measure is Bb4, C5, D5, E5, F5, G5, A5, B5. The fourth measure is C5, D5, E5, F5, G5, A5, B5, C6. The bottom staff is in bass clef with a key signature of one flat (B-flat). It contains four measures of music, which is the retrograde of the top staff. The notes in the first measure are C6, B5, A5, G5, F5, E5, D5, C5. The second measure is B5, A5, G5, F5, E5, D5, C5, B4. The third measure is A5, G5, F5, E5, D5, C5, B4, A4. The fourth measure is G5, F5, E5, D5, C5, B4, A4, G4. Both staves end with a double bar line.

Etude 17

#1—This exercise is based on mm. 6–8. The first four measures of the exercise use octave displacement to keep the melody more linear. The final seven measures of the exercise use the original ranges from the etude, and each repetition of the motive is immediately followed by its retrograde.

Exercise #1 consists of three staves of music in 4/4 time. The first staff contains measures 6, 7, and 8, featuring a melodic line with triplet markings and octave displacement. The second staff continues the melodic line with more triplet markings. The third staff shows the retrograde of the motive, also with triplet markings.

#2—The same explanation as exercise #1 also applies here, except this exercise pertains to mm. 14–18.

Exercise #2 consists of four staves of music in 4/4 time. The first staff contains measures 14, 15, and 16, featuring a melodic line with triplet markings. The second staff continues the melodic line with more triplet markings. The third staff shows the retrograde of the motive, also with triplet markings. The fourth staff shows the retrograde of the motive, also with triplet markings.

#3—This exercise explores all the versions of the material first found in mm. 1–2 of the etude. All repetitions are in their original range, rhythm, and meter.

Musical notation for exercise #3, consisting of three staves of music in 4/4 time. The first staff contains two measures of music. The second staff contains two measures. The third staff contains two measures, ending with a double bar line.

#4—This exercise addresses the material that first occurs in the second half of m. 21. Similar material can be found up through m. 30. The exercise uses the original ranges and rhythms from the etude. Each repetition is immediately followed by its retrograde.

Musical notation for exercise #4, consisting of two staves of music in 4/4 time. The first staff contains two measures of music with triplets. The second staff contains two measures of music with sextuplets.

#5—The same explanation as exercise #4 also applies here, except this exercise is based on the material originally found in m. 22.

Musical notation for exercise #5, consisting of three staves of music in 4/4 time. The first staff contains two measures of music. The second staff contains two measures. The third staff contains two measures, ending with a double bar line.

Etude 18 Exercises

#1—This exercise addresses the motive originally appearing on beats 2 and 3 of m. 3. The rhythms have been lengthened from 16th notes to 8th notes.

The musical score for Exercise #1 consists of four staves of music in 4/4 time. The key signature has two flats (B-flat and E-flat). The first staff contains a melodic line with eighth-note patterns. The second staff contains a bass line with eighth-note patterns and rests. The third staff continues the melodic line. The fourth staff continues the bass line. The piece concludes with a double bar line.

#2—This exercise represents the material originally found on beats 1 and 2 of m. 4. The rhythms have been lengthened from 16th notes to 8th notes. The fragments appear as originally written and are immediately followed by their retrogrades.

The musical score for Exercise #2 consists of three staves of music in 4/4 time. The key signature has two flats (B-flat and E-flat). The first staff contains a melodic line with eighth-note patterns. The second staff contains a bass line with eighth-note patterns and rests. The third staff continues the melodic line. The piece concludes with a double bar line.

#3—This exercise addresses the material originally found in the pickups to m. 3 through beat 1 of the same measure. The rhythm is consistent with the original motives, but the meter has been changed to $\frac{5}{8}$. The metric change allows the original motive to elide into its retrograde and fit in one measure.

The musical score consists of three staves of music in 5/8 time. The first staff begins with a treble clef, a key signature of two flats (B-flat and E-flat), and a 5/8 time signature. It contains four measures of music, each with a pickup note. The second staff continues the melody with four measures, ending with a double bar line. The third staff begins with a whole rest in the first measure, followed by three measures of music, ending with a double bar line. The key signature changes to one flat (B-flat) in the second measure of the third staff.

Etude 19 Exercises

#1—This exercise is based on all the presentations of the motive originating in m. 1. The subdivisions and repetitions of a single note have been removed, as have all decorations. The exercise uses the original pitches for each motive.

The musical notation for Exercise #1 consists of four staves of music in 4/4 time. The first staff begins with a treble clef and a key signature of one sharp (F#). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. The second staff continues the exercise with similar rhythmic structures. The third staff introduces more complex rhythmic groupings. The fourth staff concludes the exercise with a final measure containing a whole note and a double bar line.

#2—This exercise is based on mm. 13–15. The intervals have been broken into three-note groupings in a $\frac{6}{8}$ meter. The fragments are immediately followed by their retrogrades.

The musical notation for Exercise #2 consists of three staves of music in 6/8 time. The first staff begins with a treble clef and a key signature of one sharp (F#). The music is characterized by three-note groupings, each followed by its retrograde. The second staff continues this pattern with different rhythmic groupings. The third staff concludes the exercise with a final measure containing a whole note and a double bar line.

#3—This exercise is based on mm. 25–30, 33–34, and 44–52. Ranges have been altered through octave displacement. The rhythms have been changed to steady 8th notes to help the player properly center each pitch and keep an even tone.



#4—This exercise also pertains to mm. 25–30, 33–34, and 44–52. The rhythms are still altered, however, the range of each motive is now consistent with the etude. Each melodic fragment is immediately followed by its retrograde.

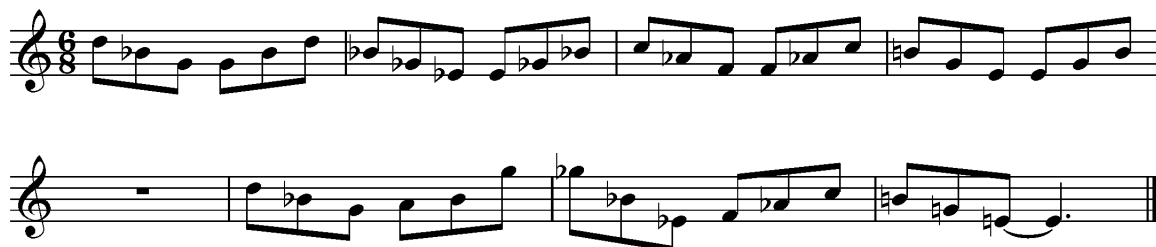
Exercise #4 musical notation, consisting of four staves. The first staff is in treble clef with a key signature of one sharp (F#). The second staff is in bass clef with a key signature of one flat (Bb). The third and fourth staves are in treble clef with a key signature of one sharp (F#). Each staff contains melodic fragments followed by their retrograde.

Etude 20 Exercises

#1—This exercise represents the material originally found in m. 2. The rhythm has been changed to steady 8th notes to help the player center the pitch and keep an even tone. All the pitches are in their original octave. Each repetition is immediately followed by its retrograde.

#2—This exercise is based on mm. 27–30 and 34–37. The range has been altered through octave displacement in the first four measures of the exercise, as well as mm. 12–15. Rhythms have also occasionally been altered. Measures 5–11 and 16–22 of the exercise incorporate the retrogrades of the etude’s melodic material.

#3—This exercise pertains to the triplets, first seen in m. 22 of the etude. Repetitions of notes have been removed. The written pitches appear both forward and in retrograde through the first four measures of the exercise. The final three measures represent mm. 22–26, but occasionally pitches are reordered within individual beats to keep the flow of the exercise.



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