

A COMPARATIVE ANALYSIS OF PAUL HINDEMITH'S SONATA FOR BASSOON (1938)
AND SONATA FOR TUBA (1955)

by

SIMON RANDOLPH WILDMAN

(Under the Direction of David Zerkel)

ABSTRACT

Paul Hindemith's Sonata for Bassoon (1938) and Sonata for Tuba (1955) are two striking examples from the composer's collection of sonatas for orchestral instruments. The bassoon sonata is generally considered to be characteristic of the compositional framework Hindemith wrote about in his treatise *The Craft of Musical Composition*. The tuba sonata is commonly cited as one of the few works in which Hindemith experimented with twelve-tone themes. Both of these perspectives are valid, but neither describes the full complexity and beauty of the music. Since both these sonatas are standard as solo repertoire, tubists and bassoonists could benefit from an in-depth study of Hindemith's style. This paper analyzes the tuba sonata alongside the bassoon sonata, synthesizing observations from each work to form a broad understanding of Hindemith's style. The contrasts and similarities of the sonatas are highlighted throughout the analysis. The paper also includes a script from the lecture that accompanied a public performance of these sonatas.

INDEX WORDS: Paul Hindemith, tuba sonata, bassoon sonata, analysis

A COMPARATIVE ANALYSIS OF PAUL HINDEMITH'S SONATA FOR BASSOON (1938)
AND SONATA FOR TUBA (1955)

by

SIMON RANDOLPH WILDMAN
BM, West Virginia University, 2008
MM, Ohio University, 2011

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

DOCTOR OF MUSICAL ARTS

ATHENS, GEORGIA

2014

© 2014

Simon Randolph Wildman

All Rights Reserved

A COMPARATIVE ANALYSIS OF PAUL HINDEMITH'S SONATA FOR BASSOON (1938)
AND SONATA FOR TUBA (1955)

by

SIMON RANDOLPH WILDMAN

Major Professor: David Zerkel

Committee: Joshua Bynum
Adrian Childs

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
May 2014

TABLE OF CONTENTS

	Page
CHAPTER	
1 INTRODUCTION AND HISTORICAL CONTEXT	1
Purpose.....	1
Need for Study	2
Methodology.....	4
2 ANALYSIS.....	7
Introduction.....	7
First Movements	8
Second Movements.....	22
Third Movements.....	26
3 SCRIPT FOR A LECTURE-RECITAL	34
Introduction.....	34
Background.....	34
First Movements	35
Second Movements.....	42
Third Movements.....	44
BIBLIOGRAPHY.....	50

CHAPTER 1

INTRODUCTION AND HISTORICAL CONTEXT

Purpose

Paul Hindemith's music is widely performed today, despite his ambiguous place in Twentieth Century music. Many musicians have first-hand knowledge of his music and historians readily acknowledge his prolific output, impact on pedagogy and unique theoretical practices. Still, at the end of his career he diminished in relevance for many scholars. Hindemith biographer Giselher Schubert explained that "his theoretical ideas had played no part in the development of specifically modern music since the mid-century and his compositions were not used as models."¹ History played a major role in the reception of Hindemith's music throughout his career. Germany after World War I is a difficult political and cultural environment to summarize succinctly, and Hindemith came of age as a composer, performer, teacher and music organizer during this period. Terms associated with him and other German composers during this time—"new objectivity," "neo-tonality," "neo-classical," and even "modernist"—can be misleading, and hold gravely different meanings depending on which political lens they are viewed through.

The purpose of this paper is to better understand and appreciate Hindemith's style through an in-depth analysis and comparison of two of his instrumental sonatas: the Bassoon Sonata of 1938 and the Tuba Sonata of 1955. These two works present an excellent opportunity for study for several reasons. First, I intend to perform both sonatas on the tuba, and the pitch

¹ Giselher Schubert. "Hindemith, Paul." *Grove Music Online*. *Oxford Music Online*. Oxford University Press.

range of the bassoon sonata is mostly practical for transcription. Second, the two pieces contrast greatly in overall character. The bassoon sonata may be described as neo-romantic, song-like and generally pleasant. On the other hand the tuba sonata is agitated, densely chromatic, and shocking by comparison. Third, almost twenty years separated the publication of these works, so each is essentially a snapshot of the composer's style in his middle and late periods. However, I will not attempt to infer anything about broad stylistic evolution between 1938-1955, because this would require analysis of a large sample of Hindemith's compositions from that period.

Need for Study

There are several issues that advocate for this study. First, these sonatas are the subjects of relatively little theoretical analysis in English, despite being staples of the bassoon and tuba solo literature. A recent study by Kendall Prinz² is one of the best existing works on the tuba sonata, but it doesn't address how the piece relates to other sonatas in Hindemith's cycle. Additional analyses of the tuba sonata are available in German, but they also do not compare the particular characteristics I have specified. See Elisabeth Kawrza's dissertation "Drei Bläser-sonaten Paul Hindemiths. Eine analytische Untersuchung (Three Sonatas for Wind Instruments by Paul Hindemith: An Analytical Examination),"³ which examines the tuba, alto saxophone, and bassoon sonatas. Also see Andreas Traub's article "Zur Sonate für Basstuba und Klavier (On the Sonata for Bass Tuba),"⁴ which details the twelve-tone theme in the third movement, and draws out some B-A-C-H symbolism in the first movement. Schubert and

² Prinz, Kendall Ray. "A Structural and Aesthetic Study of *Sonate for Bass Tuba and Piano* by Paul Hindemith with Insights into its Performance and its Historical Perspective." DMA diss., The University of Texas at Austin, 2010.

³ Kawrza, Elisabeth. "Drei Bläser-sonaten Paul Hindemiths. Eine analytische Untersuchung." Non-doctoral diss., Hochschule für Musik und Darstellende Kunst, Graz, 1982.

⁴ Traub, Andreas. "Zur Sonate für Basstuba und Klavier." *Musik-Konzepte*, no. 125-126 (July 2004): 137-150.

Neumeyer's article "Hindemiths Auseinandersetzung mit der Reihentechnik" (Hindemith's Engagement with Serial Technique) explores the composer's use of twelve-tone technique in the tuba sonata and in the *Pittsburgh Symphony* (1958). The other existing analyses are mostly examinations of performance practice, and draw on historical scholarship. (See dissertations by Charles Schulz⁵ and Robert Koper.⁶)

Second, music historians typically pay less attention to Hindemith's late works, focusing instead on his most popular orchestral masterpieces, *Mathis der Maler* (1934) and *Symphonic Metamorphosis of Themes by Carl Maria von Weber* (1943). Several significant and experimental pieces are usually left out of the discussion entirely. These include, among others, *Symphony for Band* (1951), the *Tuba Sonata* (1955) and *Die Harmonie der Welt* (1957). These late works are lost in the frenzy of new musical cultures that developed after World War II, including integral serialism and indeterminacy, to name a few.

Third, the tuba sonata deserves extra attention because of its oddities. It was originally conceived as a dodecaphonic work, and contains several important dodecaphonic themes.

Richard Taruskin summarizes the significance of this issue succinctly:

By 1955, however, even Hindemith was sketching fully chromatic twelve-tone themes [...] for use in his sonata for tuba and piano [...] By the time the sonata was fully composed, Hindemith had worked the twelve-tone bug out of his system; the theme

⁵ Schulz, Charles August. "Two European Traditions of Tuba Playing as Evidenced in the solo tuba compositions of Ralph Vaughan Williams and Paul Hindemith." DMA diss., North Texas State University, 1980.

⁶ Koper, Robert "A Stylistic and Performance Analysis of the Bassoon Music of Paul Hindemith." DA Education diss., The University of Illinois, 1972.

eventually chosen no longer coincided exactly with a tone row, even if it did contain representatives of all twelve pitch classes.⁷

It is the first sonata written for tuba and piano, published one year after the first tuba concerto, Vaughan Williams's Concerto for Bass Tuba (1954). It is the last sonata for orchestral instruments in Hindemith's cycle of over twenty, and obscures a sense of tonality more than any other sonata.

Finally, historians often imply that little changed in Hindemith's compositions after he discovered his "mature" musical language in the mid 1930's. Morgan states this directly: "From the middle 1930's until his death in 1963, Hindemith's music remained remarkably consistent in style; once his new theoretical position had been formulated, he adhered to it faithfully."⁸

Burkholder paints a similar picture: "For Mathis and his other works from the 1930's on, Hindemith developed a more accessible neo-Romantic style, with less dissonant linear counterpoint and more systematic tonal organization."⁹ These assertions are contradicted by the tuba sonata, which has a decidedly unromantic, abrasive and complex personality. This discrepancy should be addressed through a comparative analysis of the two sonatas.

Methodology

The bulk of this paper will be the comparison of the two sonatas, focusing on the melodic/phrase design, cadences, harmony, and basic formal structure in each. These elements can all be compared at numerous points in each sonata. I expect more difference to be evident in this comparison than similarity, but some common characteristics will no doubt emerge. I will

⁷ Taruskin, Richard. *Music in the Late Twentieth Century*. (New York, 2010) p. 103.

⁸ Morgan, Robert. *Twentieth Century Music: A History of Musical Style in Modern Europe and America*. (New York, 1991) p. 228.

⁹ Burkholder, J. Peter, Donald Jay Grout and Claude V. Palisca. *A History of Western Music*. (New York, 2010) p. 885.

use elements from David Neumeyer's analytical model to guide my own study of this music. Neumeyer is an eminent theorist and Hindemith scholar who organized a systematic approach for analysis of Hindemith's music in his book, *The Music of Paul Hindemith*.¹⁰ His system combines a number of principles from Hindemith's *Craft of Musical Composition*, Schenkerian theory, and traditional tonal analysis. Neumeyer interprets a given Hindemith work in five stages: controlling structure, pillar chords, harmonic activity, melodic activity, and interaction of all parts. To the extent possible, I will examine excerpts from each sonata with these layers in mind. The stages will be explained in detail in the early goings of the analysis, because they are easier to conceptualize with real music examples.

I will also use terminology from set theory to help clarify elements that are best explained through this method. For example, it is helpful to understand that a chord comprised of two [014] trichords may be related to a primary theme that contains a three-note segment outlining the same harmony, [014]. Of course, Hindemith had his own language for describing such harmonies, and Neumeyer uses a catalog of symbols to illustrate them in his own analyses. In most cases however, I prefer using simple prose as often as possible. When relevant, I will use Neumeyer's or Hindemith's language to describe a particular item.

In addition to the written component of this research, I will perform both sonatas on the tuba in a lecture recital. Each piece will be integrated into the presentation of the paper, so that there is time in between for discussion and demonstration of important analytical concepts. Performing each work is the most personal way I can learn about the music. My interpretation of each sonata will be informed by the analysis. Performing the bassoon sonata on the tuba will be an added benefit of this project. The bassoon has a higher tessitura, so I will have to make some

¹⁰ Neumeyer, David. *The Music of Paul Hindemith*. (New Haven, 1986) pp. 50-75.

informed decisions about octave displacement. As mentioned earlier, the pitch range of the bassoon is similar enough that the piano accompaniment could remain unaltered and still accommodate the tuba's darker timbre.

CHAPTER 2

ANALYSIS

Introduction

If the tuba sonata were given a one-sentence entry in the New Grove Dictionary, it may read “Dissonant twelve-tone work from composer’s late period; virtuosic piano accompaniment.” This description, while unflattering, is mostly true. The tuba sonata’s dissonant quality—the scarcity of traditional cadences, proliferation of chromatically dense passages, and frequently ambiguous tonal centers—is evident from its opening phrase through to the end of the work. The tuba sonata contains several important themes that have twelve pitches, and these dodecaphonic melodies are developed in a manner comparable to composers from the late Romantic period or early Viennese School. The sonata was written in the last decade of Hindemith’s life, although it is hard to describe this piece within the context a true late-period style. The piano accompaniment is very demanding, even when compared to Hindemith’s other brass sonatas, which all contain substantial octave doubling in the piano, presumably to provide balance with its louder partner.

A one-sentence entry on the Bassoon Sonata may read, “Warm and light-hearted, an elegant example of Hindemith’s neo-Romantic style.” Again, this statement accurately describes the work in a nutshell. The opening theme and first movement have flowing melodies which could easily be at home in a late-Romantic lied. The serene second movement has lush harmonies and clearly articulated pitch centers, and at times seems to imitate a texture reminiscent of Debussy. The third movement is a disarming march, which sounds like it could

belong on a Disney movie soundtrack. However, these descriptions shouldn't detract from the refinement of the work. The tonal centers and lyrical melodies are carefully deployed and always considered with regard to counterpoint. The ease of this music belies its meticulous organization.

My goal in analyzing these two apparently contrasting works is to better appreciate Hindemith's style through the simultaneous discovery of both pieces. To focus my analysis, I will use Neumeyer's elements as a model. I believe the most helpful starting point for observing any of these elements is the cadence. Cadential moments are usually easy to identify because Hindemith often adds rehearsal numbers to measures following cadences. We know these rehearsal letters are Hindemith's own because of their presence in the autograph copy of the tuba sonata.¹ I have chosen to analyze cadences that happen at the roughly the same formal boundary in each sonata, so that I can continuously draw out contrasts and similarities between the works. Once a cadence is identified, I will examine the controlling structure (the phrase, theme or section to which the passage belongs), pillar chords (vertical chords that seem to best explain the tonality), melodic activity and harmonic organization of the music leading up to the cadence. These elements are all dependent on each other: cadences can't be analyzed without first determining melodic structure, harmony can't be analyzed without considering cadences, and so on. Once these details are sorted through, we can step back and appreciate a clear and more complete picture of these sonatas.

First Movements

Neumeyer states that for Hindemith, there were no cadential stereotypes, although he was mindful of the traditional variety (Tonic » pre-dominant » dominant » tonic). "The cadence as a

¹ Prinz, Kendall Ray. "A Structural and Aesthetic Study of *Sonate for Bass Tuba and Piano* by Paul Hindemith with Insights into its Performance and its Historical Perspective." DMA diss., The University of Texas at Austin, 2010. See Appendix 2.

rhythmic-formal event is the stereotype, and not a specific succession of chords.”² Hindemith immediately establishes this concept in the early goings of both sonatas, as the first cadence is defined chiefly via melodic motion. The opening phrase of the bassoon sonata begins on B-flat, and the first cadence arrives at the end of m. 4 (Example 1). The melodic motion, E-flat–D–G descending, provides a strong sense of arrival on G in measure 4. The half-step focuses our ear on the D, and the subsequent V-I relationship is apparent. The G in the melody is then briefly supported by a B in the right hand of the piano, creating a minor sixth—a relatively strong interval along Hindemith’s Series 2³—and confirming both the V-I harmonic outline and the centrality of G.

Leicht bewegt (♩ etwa 72)

The image shows a musical score for the first four measures of the Bassoon Sonata. The top staff is for the Bassoon, starting with a melodic line in 6/8 time, marked *mf*. A blue dashed line above the staff is labeled "antecedent..." and spans the first four measures. The bottom staff is for the Piano, with a right hand marked *p* and a left hand with a bass clef. The key signature has one flat (B-flat). The score shows the interaction between the two instruments, with the piano providing harmonic support for the bassoon's melodic line.

Example 1: Bassoon Sonata, mm. 1-4.

The tonal area of mm. 1-4 is B-flat because this is the first sound we hear, and the melodic passage after it is heard in relation to B-flat. The controlling structure is the four-measure phrase, and its length hints at a balanced 8-measure period structure. Theorist William Caplin defines the period as two “four-measure phrases fulfilling *antecedent* and *consequent* functions,

² Neumeyer, David. *The Music of Paul Hindemith*. (New Haven, 1986) p. 61.

³ Neumeyer. *The Music of Paul Hindemith*. p. 31. Neumeyer explains Hindemith’s Series 1 and 2, which are rankings of all 12 pitches and intervals relative to a given tonic. This is a fundamental part of Hindemith’s theory of sound, and is included in his treatise *The Craft of Musical Composition*.

respectively.”⁴ The period in this case does not come to fruition because the phrase that should be the consequent, mm. 5-8, creates a weak pause and immediately jumps into new material (Example 2). This has the effect of a run-on sentence that begins with a well-placed comma, but inserts several fragments before articulating its original point. The pillar chords are the B-flat octaves at the beginning of the phrase, and the G dyad in m. 4. The motion between these pitch centers seems to be a guiding force in this opening melody.

Example 2 : Bassoon Sonata, mm. 8-10.

The first clear cadence in the tuba sonata is set up in a remarkably similar way. Again, the first phrase opens on B-flat, and the cadence occurs before the beginning of m. 10. The melodic motion, G–F-sharp–B descending, again suggests a V-I cadence with an upper neighbor pre-dominant (Example 3).

⁴ Caplin, William E. *Classical Form*. New York: Oxford University Press, 1998, p. 49. Throughout this paper, I will adapt terminology from Caplin’s *Classical Form* because its basic principles help understand Hindemith’s music as a modern version of classical archetypes.



Example 3 : Tuba Sonata, mm. 9-10.

The V-I melodic framework is not supported harmonically by the accompaniment in m. 9, which is a sequence of descending [013] triplets articulated on the upbeats. However, the B on the downbeat of m.10 is supported by octave B's in the accompaniment, in close proximity to F-sharp and D-sharp. This harmonic support combined with rhythmic insistence resets the listener's pitch memory, and the V-I melodic motion becomes a transition to B, the central pitch of the following theme.

A few ambiguities arise when examining the harmonic structure of both passages. The G harmony in m. 4 of the bassoon sonata quickly shifts to an open fifth on D (see Example 1). Now it is unclear whether the phrase has arrived on G, as the melody clearly indicates, or on D, as the accompaniment suggests. Either pitch has a third relationship—a strong interval in Series 2—with B-flat. However, G or D seems to be transitional in the harmonic motion of the first theme, mm. 1-15. Both pitches are prolonged only briefly, while the rest of the theme mostly revolves around F-sharp/G-flat. These pitches could be understood variably as an upper neighbor tone to F-sharp (G–F-sharp), or as an arpeggiation to F-sharp (D–F-sharp). In either scenario, the F-sharp seems to hold the most importance as a secondary tonal area. This importance is confirmed at the cadence in m. 15, where a sustained C-sharp in the solo line is supported by an embellished G-flat major triad in the accompaniment, leading to the tonic B-flat harmony in the

following measure, a repetition of mm.1-4 by the piano (Example 4). The juxtaposition of F-sharp/G-flat and B-flat at this formal boundary highlights their close relationship, and this bVI-I motion will be used elsewhere in the sonata.

The image displays musical notation for Example 4, Bassoon Sonata, mm. 15-16. It consists of three staves. The top staff is a single bassoon line in 6/8 time, containing the notes G#4, A4, Bb4, and G#4. The bottom two staves are piano accompaniment, also in 6/8 time. The right hand plays a quartal harmony, and the left hand plays a bass line. A blue bracket under the piano accompaniment indicates a harmonic motion from bVI to I.

Example 4 : Bassoon Sonata, mm. 15-16.

The harmonic motion in mm. 1-9 of the tuba sonata is less ambiguous, but for complicated reasons. The pillar chord in m. 1 is a stacked quartal harmony in the piano's upper register, so the low B-flat in the solo line immediately has primacy. The subsequent B-flat's in the solo part—on strong beats in m. 4, 7, and 9—retain their importance because the accompaniment continues its quartal gesture in various transpositions, providing no clarity about pitch center. As this description indicates, the accompanimental chords in mm. 1-9 are resolutely non-triadic, and do much less to prolong a B-flat tonal center than the melody. Because the solo and accompaniment are so clearly independent, listeners will most likely gravitate to the tonal center of the more melodic part: tuba. This unambiguously starts in B-flat and ends in B.

The first-theme melodies in both pieces have dramatically different character, but there are some common traits in how they are developed. The biggest contrasts in the melodies are in their expressive markings and articulation. The tuba begins *allegro pesante* with *forte* dynamics, accompanied by piano with staccato articulation at *mezzo forte*. The bassoon begins *leicht bewegt* (light and moving) at *mezzo forte*, accompanied by a soft and connected piano line. The

contour of these two phrases is also quite different. The bassoon melody in the first four measures has an ideal mixture of stepwise motion and resolved leaps, and it comprises a range of less than one octave. It provides a sense of “opening,” in that the first interval is ascending, and is balanced by a descending interval that closes the motion of the phrase. The opening of the tuba sonata is a good deal more agitated. The first four measures span nearly two octaves, and this is covered in a disjunct presentation of ninths. The B-flat–A motion that occurs at the end of m. 4 is the first stepwise material we hear.

However, the apparent contrasts in these two phrases belie their Hindemith characteristics. Although the contour of mm. 1-4 in both pieces is very different, the phrases provide a sense of rest after four measures. This pause gives the listener a mental checkpoint: something has begun, introduced its characteristic sound, and invited the audience to continue experiencing the rest of the work. This strikes me as a technique a novelist or poet might use. In one brief sentence, Hindemith captures the reader’s attention, summarizes the action to follow, and creates syntactic themes that will reappear later in the work. These syntactic themes take on the musical identity of melodic and rhythmic motives.

The bassoon phrase (mm. 1-4), stripped of embellishments and repetition, is essentially a presentation of two halves, each containing 3 notes: B-flat–F–C and E-flat–D–G. Together these pitches form [027] and [015] trichords, respectively. The [027] trichord is characterized by an “open” sound, and seems stable and constant when compared to sequential material in the first theme. The [015] trichord has a more dissonant quality, but when played as a horizontal line it sounds like a distant relative of the [027] sound. Both these trichord motives are developed throughout the sonata and help determine the form of the first movement. The second theme

begins with an ascending fifth and unaccented whole-step, gradually developing the [027] motive into [025] through diminution and dotted rhythms (Example 5).



Example 5: Bassoon Sonata, mm. 20-22.

A variation of the 015 motive reappears inside the first theme, in the ascending D–C-sharp–F-sharp motion between mm. 8-9. The half-step present in 015 may also help inspire the material that immediately follows it in m. 4, a [013] anacrusis on D–E-flat–F—two out of three pitch classes that created the original [015] motion. Much of the balance of the first theme is fleshed out from the [013] structure. These instances of the [027] and [015] motives demonstrate their importance as generative elements, as they provide a base structure for more complex ideas.

These trichords also seem to be used at cadential moments and formal boundaries. The important cadence at mm. 36-37 is immersed in the [015] motive, as is the cadence that precedes the beginning of the second theme at mm. 18-19 (Examples 6 and 7).

Example 6 : Bassoon Sonata, mm. 35-38.



Example 7 : Bassoon Sonata, mm. 18-19.

The melodic design of the solo line, rearranged in a single octave, resembles a Bb natural minor scale missing its primary “minor” characteristic: the D-flat (Example 8). Throughout the movement, many phrases develop and expand this scalar structure. For example, see the descending altered octatonic scale—this could also be considered B-flat minor with raised and lowered sevenths—starting and ending on A in mm. 28-29 (Example 9), or the scalar segments that characterize both halves of the main development melody in mm. 54-57 (Example 10). Like the bassoon sonata, both these excerpts happen at structural markers: the beginning of the subordinate theme and the core of the development.



Example 8 : Tuba Sonata, mm. 1-4.



Example 9 : Tuba Sonata, mm. 28-30, lower stems show octatonic outline.



Example 10: Tuba Sonata, mm. 31-34.

The melodic motive in the accompaniment of the first measure focuses on stacked fourths, articulated in [027] trichords. This reappears throughout the movement accompanying the

transposed versions of the primary theme, at mm. 24-27 and mm. 78-81. The [027] motive is also developed throughout the movement, notably in an over-reaching gesture that accompanies the return of the subordinate theme at m. 88. The descending fourths—the melodic [027]—in mm. 70-73 build to the re-transition at m. 74, with its sudden A major triad standing as the pinnacle of tension in the movement.

The four layers we have just examined (controlling structure, pillar chords, harmonic activity, and melodic activity) give us a large amount of detail about the first theme in each sonata, and illuminate the many elements they have in common that are not easily observed from an initial hearing. If we zoom out and consider all the elements at once, contrasts are more apparent. The differences in character and articulation were already identified, and the two themes have displayed significant differences in melody, harmony and tonality. The proportions of the themes are very different, and this may be because the themes serve different purposes. The first movement of the tuba sonata is generally larger in scope than the bassoon sonata's first movement, mostly due to an expansive sound created by modified sonata form.⁵ This includes a full development section (mm. 49-77) and repetition of the subordinate theme during the recapitulation. The bassoon sonata does not contain a development section, and due to this smaller scope, its form seems closer to a small ternary movement. As a result, the bassoon theme has to cover more action in a shorter period of time, presenting a primary phrase (mm.1-4), contrasting/subordinate phrase with extension (mm. 5-15), and repetition of primary phrase (mm. 16-19) in a shorter span than the tuba achieves. Altogether, mm. 1-19 in the bassoon sonata have the same formal function as mm. 1-27 in the tuba sonata.

⁵ Caplin explains that in sonata form “The second region (the subordinate key) is understood to create a structural dissonance to the first (the home key), one that is intensified throughout the development and is eventually resolved (in favor of the home key) in the recapitulation.” (p.195)

Another stark contrast in these themes is their meter. The bassoon ambles along with calm steadiness, established by its compound duple meter. The regularity of this pattern is adjusted only once, in the stretching of tempo before the recapitulation in m. 38. The tuba and piano practically compete for attention in much of the first theme. Their compound versus duple meter design is peculiar, and its regularity is upset in several instances. The first of these happens in m. 5—a 9/4 and 3/2 measure—when the triplet accompaniment rests while the solo line briefly takes on the triplet motive (Example 11). The 9/4-3/2 measure at m. 9 realigns the solo and accompaniment in the following section. The regularity is upset again in m. 27, where the tuba briefly modulates to 4/4 meter and the piano is given rests in “5-6/8” meter and instructed to approximate the meter to fit what the other instrument is doing (“*Ungefähre Taktvorschrift, dem Metrum des anderen Instruments angepaßt*”). As Kendall Prinz explains, Hindemith was surely aware of alternative metric designs to eliminate the need for approximation.⁶ Perhaps he gave these special instructions to help the performers do less “metric math,” considering that the pianist is not playing during this modulation.

The image shows three staves of musical notation. The top staff is in bass clef with a 9/4 time signature. It features a triplet of notes (two eighth notes and one quarter note) marked with a red bracket and the number '013'. Below this triplet, a red dot is placed on the first note, with the text 'expanding melody' written in blue below it. The middle and bottom staves are in treble clef with a 3/2 time signature. The middle staff has the text 'extra time...' written below it. The bottom staff shows a piano accompaniment with eighth notes.

Example 11: Tuba Sonata, mm. 5-6.

⁶ Prinz, Kendall Ray. “A Structural and Aesthetic Study of *Sonate for Bass Tuba and Piano* by Paul Hindemith with Insights into its Performance and its Historical Perspective.”

Whatever the reason, Hindemith seems determined to preserve the independence of each part, particularly in this first movement. The end result is two contrasting portraits by the tuba and bassoon, one elegant and unadorned, and the other brooding and complex.

Next we will examine the same four layers leading up to the cadences that precede the return of the first theme—or recapitulation/return of primary theme—in the first movement of each sonata: mm.77-78 in the tuba sonata (Example 12), and mm. 36-37 in the bassoon sonata (Example 6).

Example 12 : Tuba Sonata, mm. 75-78.

At least two easily identifiable features unite these cadences: rhythmic expansion and slowed harmonic rhythm. The cadence in measure 77-78 is the tail end of a descending sequence that follows the climax of the development in the tuba sonata. The melodic sequence begun in m. 74, composed of descending 3-note scalar segments, is not exact, but the listener definitely senses a repetitive stagnation as the rhythmic momentum of the passage finally grinds to a halt. The cadence in mm. 36-37 also achieves recessive energy through repetition of the melody. A two-measure motive is introduced in m. 31, and then imitated after one beat by the accompaniment, which eventually dissolves into simple dyads with octave gestures. These melodic passages are also linked to the motives introduced in the main themes. Each of the scalar motives in the tuba sequence of mm.74-77, except for F–E–E-flat, creates a [013] trichord. The [013] motive,

possibly originating from the succession of minor thirds at the end of m. 3, first appeared in m. 5, in the motion between D–B–C (see Example 11). It is an important motivic fragment throughout the sonata, particularly in the third movement. The [015] motive from the main theme of the bassoon sonata also makes a prominent appearance at mm. 36-37. The association with the main theme is stronger here than in the tuba sonata because the contour of the motive is preserved. The displaced octaves in the tuba's [013] motive at m. 5 are transformed into a slowly descending scale made of small minor thirds, beginning on middle C in m.74 and ending on the C two octaves below in m.77. In both pieces, a small fragment from the main theme—[013] and [015]—is used to help generate the material in and around the cadence. This is another example of Hindemith's transformation of small motivic fragments.

The sense of slowed momentum in both sonatas is further emphasized by expressive markings. The performer is directed to play *poco largamente* in m. 74, the beginning of the tuba's dramatic 4-measure cadential sequence, and the *a tempo* at m. 78 is a clear indication of the return of familiar material. In mm. 36-37, Hindemith writes *einleiten* (to initiate or introduce), suggesting the bassoon should emphasize this passage as a signal that something new is about to happen. This fully prepares the recapitulation in m. 38, *wie am anfang* (as at the beginning). These two cadential sections also use harmony to contribute to the sense of slowing. The harmonic rhythm expands from two accompanimental chords per measure in mm 74-76, to one chord in m. 77. The same process happens in the bassoon sonata: two chords in mm. 31-35, reduced to one in mm. 36-37.

Contrasts emerge when comparing the type of harmonies in these cadences, as well as the way they support the melody. Measures 31-37 are a transition between the second theme, in G, and the repetition of the primary theme, in B-flat. The harmony in mm. 31-35 alternates

primarily among F minor, D-flatMaj7, and B-flat9 chords, with the pitch center remaining focused on F throughout. In m. 36 and 37, the accompaniment highlights the chords which have 3rd relationships with F—D-flat and A-flat—although the centrality of F is never in question. This is because the melody outlines a familiar V-I with chromatic neighbor motion encountered elsewhere in the sonata: D-flat–C–F. With the importance of F firmly established, the opening theme's return in B-flat becomes very clearly understood as a tonic-dominant relationship (see Example 6). B-flat achieves long-term centrality as the common pitch of the main themes.

The harmony in the tuba's sequential phrase beginning in m. 74 is striking. The role of solo and accompaniment is essentially reversed, as the tuba plays a sequence comprised of 3-note units ([013] rather than [027]). The piano imitates the contour of the main theme (mm. 1-4) but modifies its melody, primarily through added harmonies. Following the A major triad in m. 74, the chords have at least four pitches—[0237], [0247], [0358], [013469]—coming to rest on a D9 in m. 77. The sense of rest is enhanced because the half-step motion in the highest voice of the chord suggests the 4-3 motion of a cadential 6/4 chord. The roots of these chords—A, F-sharp, A, E, C-sharp, D—seem to revolve around A, but various factors detract from the sense of centrality over the four measures. For example, the piano chord in (see Example 12) contains a closely spaced A major triad in the right hand with the third and fifth doubled in the left hand. The presence of octave B's, plus B-flat, A-flat and G from the solo line, draws attention away from any tonal center. In m. 76, the C-sharp in the bass makes a major sixth with the B-flat in the right hand, but this relatively consonant interval is also obscured by the tritone and minor ninth in the other voices, not including the chromatic density added by the solo line.

The A major triad at the very beginning of this passage is arguably the climax of the entire movement (Example 13). It is the most fully voiced triad in the sonata, with two triads in

root position and the tonic doubled in the highest and lowest registers. The other triadic sounds in the movement (mm. 47, 103) are more rhythmically active and grow seamlessly out of the motives that precede them. By contrast, the A major chord appears suddenly, slamming the dense fugato texture of the development section into a concrete barrier. In this context, Hindemith skillfully draws the listener's attention to the sonata's strongest tonal chord and propels the music toward the more resolute cadence in m. 77. Measure 74 begins clearly on A, and moves to D on its cadential chord, before beginning the recapitulation on C-flat. This harmonic progression is ambiguous and I believe it serves as a retransition, eventually bringing back the home key in m. 88, for the subordinate theme in B-flat. The expectation for a classical sonata would be the return of the home key at the beginning of the recapitulation, but in the tuba sonata C-flat is substituted for this.

Poco Largamente
74

74

fff

Example 13 : Tuba Sonata, m. 74.

The triadic moments are also linked by peculiar trait: a clashing chromatic alteration in place of a diatonic pitch. One type is that found in m. 46 and 103. A descending countermelody accompanies the fragment that appears at the end of the subordinate theme (Example 14). If described in terms of F-sharp or B-flat major, the melody has a raised fourth scale degree, while the accompaniment plays the “diatonic” fourth scale degree. Both parts intersect on this pitch,

and create a grating minor ninth. The dissonance created by the C-sharp in the major triad versus the C in the melody in m. 74 seems to have the same function. This example juxtaposes A minor with A major, and seems to be the another instance of direct clashing between the solo and accompaniment. The relationship between A minor and A major is not developed later in the piece, but A as a pitch center is revisited later in the sonata and is one of its most important secondary keys. All three excerpts seem to be a blemish on the diatonic scheme, and occur at moments that are otherwise explicitly tonal. I am compelled to ask, “Why are these dissonant half steps preferred over a unison or octave?” Perhaps this is a rhetorical question, but it is nevertheless important to consider. This helps us understand what might best be described as an underlying diatonic/modal conflict, especially prevalent at cadences.

The image shows two musical excerpts. The top staff is a single bass clef line. The first excerpt, at measure 46, shows a bass clef with a sharp sign, indicating A major. The second excerpt, at measure 103, shows a bass clef with a flat sign, indicating A minor. The bottom staff is a grand staff (treble and bass clefs). The first excerpt, at measure 46, shows a treble clef with a sharp sign and a bass clef with a sharp sign, indicating A major. The second excerpt, at measure 103, shows a treble clef with a flat sign and a bass clef with a flat sign, indicating A minor. Blue boxes highlight specific dissonant intervals in both excerpts.

Example 14 : Tuba Sonata, m. 46, m. 103.

Second Movements

The second movements these sonatas present striking contrasts in texture, melodic development, harmony, and function. The least obvious feature may be their only common trait. The proportion of the two movements is almost exactly the same in performance. While the tuba movement has 101 measures and the bassoon has 22, the tempo and meter help make the music for each last roughly one and a half minutes. Both movements have a modified ternary form but the tuba sonata seems to have more motivic variety packed into the same space. The bassoon

movement achieves great expressiveness through focusing the listener on the elegant solo line. The rhythmic ostinato of the accompaniment provides a lush and stable harmonic background, and the melody easily drifts among this impressionist texture. The tuba movement behaves very differently, racing through fully chromatic themes in an intricate dance with the piano. Both movements stay more or less in one key, particularly through the triads at their beginning and end. The bassoon movement's home key is D while the tuba's is D-flat, making the harmonic motion of the sonatas tertian: B-flat–D–B-flat and B-flat–D-flat–B-flat.

If we compare the first theme in both movements, the wide contrasts are apparent. Measures 1-4 present the main melody of the bassoon movement, which is centered on D throughout the passage (Example 15).

Example 15 : Bassoon Sonata, mm. 1-4, stepwise motion highlighted.

The pillar chords feature a persistent D in the lowest position, and the strongest intervals above it move in a linear fashion as the harmony changes: A in m. 1 becomes B in m. 2 and G in m. 3, etc. The harmony can be described as D major with added 6th and 9ths, as well as major and minor 7ths. This introductory melody once again *opens*, as the F-sharp grows into the G in the second measure, and the phrase comes to a brief rest with the descending fifth in m. 4. The B–C-sharp–D fragment at the end of m. 3 is developed throughout the movement, appearing in a variety of rhythmic contexts and transpositions. An augmented version occurs at the final cadence of the

movement, emphasizing the motivic unity contained in the main melody. The tonal center is firmly planted on D from beginning to end in this phrase, and does not weaken until around m. 5, the “b” section. In mm. 5-11, although D is less concrete, the melody provides a sense of anticipation for the return of this tonal center, especially in the sustained A in m. 10 that acts as a dominant pedal.

The first phrase in the tuba movement (Example 16) contrasts nearly every feature of the bassoon’s melody. It begins on a D-flat major triad, but this is so brief there is no chance to establish a strong sense of tonality. By the time the phrase comes to a brief pause in m. 8, the melody has traversed 12 pitches, and the accompaniment plucks quartal chords that give no single pitch hierarchy. The phrase closes with an ascending fourth, which could suggest a V-I relationship between C-sharp and F-sharp (see Example 16). F-sharp is given some prominence either as the subdominant to D-flat or a leading tone to G, the starting pitch of the “b” phrase. A descending F-sharp to C-sharp closes the first theme (combined “a” and “b” phrases) in mm. 18-19. This reversed arrangement of F-sharp and C-sharp has less cadential strength than its V-I counterpart, but it does outline a subtle pause. Like the first theme in the first movement, phrases “a” and “b” highlight pitch centers at their beginning and ends, but on the repetition of the first theme in mm. 19-26, the tuba switches to ostinato accompaniment on a B-flat. This pitch acts as a pedal point and disputes the importance of D-flat/C. D-flat does not regain its status until the end of the movement, where the music stops in a sudden flourish capped by the “tonic” triad.

Phrase 'a'

Example 16 : Tuba Sonata, mm. 1-8, new chromatic pitches numbered in blue.

The harmonic activity for these second movements contrasts greatly, and some of the main differences have already been identified. The texture of the bassoon sonata remains stable through most of the movement, changing only slightly in mm. 15-18. Here, the 7th chords become closely spaced and encompass a wider pitch range, as the piano imitates the solo voice, displaced by one beat. The harmonic motion, except for the section just mentioned, is guided by scalar relationships to D. The bass motion in mm. 1-11 is a stepwise descent to A, the dominant of D. The bass is the primary harmonic force, and it tends to support the solo voice at cadential moments, while sometimes conflicting with it on the interior of phrases. The harmonic motion of the tuba movement is guided by the solo melody, which generates fragments that combine to form mostly dissonant harmonies throughout. The thickest texture of the movement occurs in the middle—the subordinate theme, mm. 37-67—and is the most dissonant because of the number of pitches per measure. This section begins less agitated than it ends, starting with [01357] accompaniment chords in m. 37, and peaking on a strangled [012467] chord at the piano's highest register in m. 58. This chord contains two tritones and three minor seconds, helping obscure any root. It still contains stacks of fifths and fourths, in keeping with the accompaniment texture throughout the movement. These intervals are present at the very beginning of the main melody, and this can be heard as a generative link to control the harmonic development of the entire movement. Unlike the bassoon movement, which more or less prolongs D major, the tuba sonata is in D-flat major only at the end. The main key areas have a neighbor tone progression, D-flat–C–D-flat, matching the small ternary form of the movement, A-B-A'. The return of the first theme in m. 68 is marked by the reinterpretation of D-flat as C-sharp (accompanied by an A pedal point instead of B-flat), and placing the theme on the weak beats, which is not realigned until m. 94. These alterations to the theme, along with the ambiguous harmonies throughout the

movement, make the listener struggle to hear any tonal centrality. The main sectional division, at m. 37, is achieved by rhythm and texture. Texture is more neutral in the bassoon movement, and it achieves the sense of expectation and arrival through more traditional harmonic relationships.

Third Movements

The third movements of these sonatas present many points for comparison. They are similar in proportion, tempi, form and motivic development. They also highlight some of the largest contrasts between Hindemith's compositional decisions early and late in his sonata collection. The third movement of the tuba sonata contains the most conspicuous dodecaphonic characteristics, and strays farthest from tonality of all the movements. The bassoon's final movement dovetails with the end of the second movement, making this seem like the slow introduction of a single, continuous movement. Thematic material is developed more thoroughly than the other movements, and the final movement presents the most technical challenges for solo and accompaniment. Although each piece deserves more attention than covered in this paper, I will attempt to highlight the most interesting connections between them.

Let's examine the cadence and the events leading up to it at the first major sectional division in each movement, m. 56 for the bassoon and m. 36 in the tuba sonata. These two cadences illustrate the enormous contrast between the sonatas' final movements. The tuba is repeating a truncated version of the first theme in mm. 32-36. The main tonal area can be roughly designated as C, mostly because of the strong interval created with the last note of the previous section, G. The pillar chords in this passage are dissonant due to the presence of tritones, minor seconds and stacked fourths, but even this is ambiguous because all intervals happen linearly and in counterpoint with the solo line. When the solo and accompaniment do sound at the same time the harmony is brief, not clashing with, but not supporting, the melody. This

texture makes the listener focus almost completely on the solo line, largely ignoring the tiptoeing piano. If we analyze the six-note series in the accompaniment of mm. 35-36 as a hexachord, the result is a colorful [012568] (Example 17). The articulation of this line, descending thirds, suggests interpretation as a modified seventh chord, and it dilutes the dissonance that these pitches would create together. Melodically, mm. 32-36 are an incomplete repetition of the first theme, and they quickly segue back to the home key of D-flat/C-sharp using the A-flat–B-flat–C-flat fragment with the C-flat as leading tone. Minor and major thirds such as this are used throughout the movement to shape the melodic line. This is best demonstrated in the descending minor–minor seventh chord that first appears in m. 4. It alternates minor and major thirds and is repeated in a variety of disguises throughout the movement.

Example 17 : Tuba Sonata, mm. 35-37.

Melodic design is the only common trait shared with the tuba at m. 56 in the bassoon sonata. Measures 52-56 are again a truncated version of the first theme, which is basically cut at its midpoint using the anacrusis as the pivoting motive (Example 18). This leads into a clear cadential gesture in m. 56, which stretches the meter one extra beat (Example 19). The previous section, mm. 39-51, is mostly centered on D and C-sharp, and returns to B-flat for the repetition

of the first theme. The centricity of B-flat is maintained throughout these measures, and it is strongly confirmed by the cadential chords.

The image shows a musical score for Bassoon Sonata, measures 52-54. The top staff is a single melodic line in 4/4 time. A bracketed section of the melody is labeled "abandoned first theme". The bottom two staves show the piano accompaniment in 4/4 time, with a mezzo-forte (*mf*) dynamic marking.

Example 18 : Bassoon Sonata, mm. 52-54.

The image shows a musical score for Bassoon Sonata, measures 56-57. The top staff is a single melodic line in 3/2 time. The bottom two staves show the piano accompaniment in 3/2 time. Chord labels are provided: $G\flat^6$, $A\flat_{sus}^6$, bVI , $bVII$, and I .

Example 19 : Bassoon Sonata, mm. 56-57.

The harmony here is built on the motion in the bass: G-flat–A-flat–B-flat. These pitches have prominence because they are the lowest sound, and they are reinforced by octaves and perfect fifths in the harmony above. The chords contain triads but also sixths above the bass, creating an ambiguous third relationship. This type of chord is common in the accompaniment throughout the sonata, as we have already observed at mm. 36-37 in the first movement. The importance of G-flat, A-flat, and B-flat is not ambiguous at m. 56, however. It highlights the third relationship in the tonal design of the sonata’s movements: B-flat–D–B-flat. The chordal texture of this

measure is perhaps the most obvious contrast with the tuba sonata. While both cadences effectively mark the end of one section and the beginning of another, the tuba sonata relies much more on rhythm and the transformation of small motivic fragments, combined in complex lines. The bassoon achieves the same effect through harmonic emphasis and the tonal organization that precedes it.

The importance of G-flat–A-flat–B-flat is again apparent in the final cadence of the sonata, where it seems to guide the melodic line. The melodic fragment C-flat–E-flat–B-flat appears twice in the solo line, mm 146 and 148, and once in accompaniment in mm. 149-151, where it is expanded by delaying the appearance of C-flat in the left hand. The accompaniment chords do not clearly support a bVI-bVII-I design, as we observed in mm. 56-57, but the melodic pitches could certainly fit into such a scheme (Example 20).

underlying structure

bVI bVII I

Example 20 : Bassoon Sonata, mm. 146-149.

B does have centrality because it is emphasized at the end of the recapitulation; it also begins the coda at m. 121. The harmony in the penultimate measure strongly suggests B major, diminishing any tonic-dominant associations, but still providing a strong melodic relationship and need to resolve, by descending half-step, in the final measure. This sparse texture lets our imagination

fill in the blank. For me, the C-flat–E-flat–B-flat motion sounds equally at home among the solid triads in of m. 56, or the subtle B major sound of the final measures.

A hallmark characteristic of both these final movements is their pervasive melodic transformation. Both formal designs seem to imitate a theme and variations structure, and the tuba sonata even contains the editorial direction “Variationen.” The most notable variations happen in the accompaniments, usually while supporting the second or third presentation of a theme. The piano accompaniment in mm. 66-74 of the bassoon movement supports a repetition of the subordinate theme, first heard in mm. 58-65. A dramatically altered accompaniment occurs in mm. 87-127 of the tuba movement, which is a repetition of the entire exposition, mm. 1-36. Generally, these variations have greater technical demands than the material they correspond to, but Hindemith treats this technique very differently in the bassoon sonata than the tuba sonata.

To illustrate this somewhat drastic difference, let’s compare a few examples. Measures 67-69 of the bassoon finale are part of the repetition of subordinate theme. They correspond to mm. 58-60, and the newfound agitation of the piano part is immediately apparent (Example 21). The rhythmic texture has changed with the addition of triplets, and the harmonic background has become much more chromatic. The passage still prolongs E-flat because of the melody, but the harmony mostly serves as an interesting distraction. The accompaniment material is transformed via melodic sequences, or fragments of sequences that are started but then abandoned. This is demonstrated in mm. 67-68, as the series of [013] triplets is altered slightly, giving the illusion of a sequence. Measure 69 is entirely sequential in the right hand, and it presents [016] triads descending chromatically.

Example 21: Bassoon Sonata, m. 58, mm. 67-68.

The accompaniment variation in the tuba sonata is treated more freely. Compare m. 1 with m. 87 (Example 22). The sparse, two-note gestures become a raging torrent of chromatically driven scales and passagework. These virtuosic lines are so complex and chromatically packed that the already vague harmony in m. 1 becomes saturated with pitches competing for prominence in m. 87. Because the parts are so different, the listener’s ear will probably favor one line, rather than make sense of the aggregate sound. This tendency characterizes both passages, m. 1 and m. 87, but the listener is acutely aware of the accompaniment’s new attitude at the recapitulation. Despite the addition of all the new pitches and seemingly erratic patterns, there is evidence that Hindemith tried to preserve some original sounds in this varied accompaniment. The ascending B-flat–C-flat–D-flat of m. 1 is expanded into an ascending B-flat scale with chromatic alterations.

Example 22 : Tuba Sonata, m. 1, m. 87.

Unlike the bassoon sonata, there are quite a few sequences, freely transposed and developed. One beautifully complex example emerges in the middle of m. 100, and is transposed by half steps and thirds to m. 104 (Example 23). This sequence is immediately followed by another, which could be at home in a ‘hard-bop’ jazz tune (Example 24). The constantly evolving sequential material of the recapitulation keeps the listener highly engaged awaiting the final outcome of the piece. The intensity builds as the left hand part becomes more complex, and the accompaniment seems to finally lose its sense of direction in the last four measures, spinning its wheels up to the very last chord. It’s almost as if the solo line had finished making important remarks but the accompaniment was so busily consumed that it could not take time to notice, and stopped only after tripping on itself.

Example 23 : Tuba Sonata, m. 100.

Example 24 : Tuba Sonata, m. 104.

These two sonatas demonstrate a wide variety of stylistic tools to create music with wildly different moods. In their contrast and similarity, we can admire Hindemith's skill and artistic vision. It is very gratifying to appreciate the innovations of Hindemith's tuba sonata with respect to his earlier work in the same genre. Likewise, it is valuable to hear the bassoon sonata with the knowledge of what lies ahead on Hindemith's musical timeline. If we can understand these contexts, the many merits of these sonatas become clear.

CHAPTER 3

SCRIPT FOR A LECTURE-RECITAL

Introduction

Welcome and thank you for attending this lecture-recital. I'll begin by describing what the next hour will entail. This program has two parts: the first is the presentation of a theoretical analysis. This analysis contains visual aids as well as live performance of musical excerpts. The second part of the program will be a complete performance of the sonatas in question. The purpose of this recital is to efficiently convey the ideas from the analytical research, and then immediately apply those to a performance/listening context. There will be a fair amount of technical terminology in the presentation, and this is somewhat unavoidable. I assume that most of my audience are music majors who have a background in music theory. However, I have attempted to provide clear descriptions and examples for the most complicated topics. Without further delay, let's begin unpacking these sonatas.

Background

Paul Hindemith's music is widely performed today, despite his ambiguous place in Twentieth Century music. Many musicians have first-hand knowledge of his music and historians readily acknowledge his prolific output, impact on pedagogy and theoretical writings. Still, at the end of his career he diminished in relevance for many critics. Hindemith scholar Giselher Schubert explained that "his theoretical ideas had played no part in the development of

specifically modern music since the mid-century and his compositions were not used as models.”¹

The purpose of this analysis is to better understand and appreciate Hindemith’s style through an in-depth comparison of the bassoon sonata of 1938 and the tuba sonata of 1955. These two works present an excellent opportunity for study for several reasons. First, because I intend to perform both sonatas on the tuba, the pitch range of the bassoon sonata is practical for transcription. Second, the two pieces contrast greatly in overall character, as you will soon hear. Third, almost twenty years separated the publication of these works, so each is essentially a snapshot of the composer’s style in his middle and late periods. However, I will not attempt to infer anything about broad stylistic evolution between 1938-1955.

First Movements

A great starting point to compare these sonatas is at their first cadence. The opening phrase of the bassoon sonata begins on B-flat, and the first cadence arrives at the end of m.4 (Example 1). The melodic motion, E-flat–D–G descending, provides a strong sense of arrival on G. The half-step focuses our ear on the D, and a dominant-tonic relationship is apparent.

Leicht bewegt (♩. etwa 72)

The image shows a musical score for the first four measures of the Bassoon Sonata. The score is written for Bassoon and Piano. The Bassoon part is in the bass clef with a 6/8 time signature. It begins with a melodic line starting on B-flat, marked *mf*. A blue dashed line labeled "antecedent..." spans the first two measures of the Bassoon part. The Piano part is in the treble and bass clefs with a 6/8 time signature, marked *p*. The score ends with a cadence in the Bassoon part marked *p*.

Example 1 : Bassoon Sonata, mm. 1-4.

¹ Giselher Schubert. "Hindemith, Paul." *Grove Music Online*. *Oxford Music Online*. Oxford University Press

The G in the melody is briefly supported by a B in the right hand of the piano, creating a minor sixth. This interval helps reinforce G as the central pitch of the measure, and we are expecting this because of the descending V-I motion from the D in the previous measure. The tonal area of mm. 1-4 is B-flat because this is the first sound we hear, and the melodic passage after it is heard in relation to B-flat. The controlling structure is the four-measure phrase, and its length hints at a balanced 8-measure period structure. Theorist William Caplin defines the period as two “four-measure phrases fulfilling *antecedent* and *consequent* functions.”² The period in this case does not come to fruition because the phrase that should be the consequent, mm. 5-8, creates a weak pause and immediately jumps into new material (Example 2).

Example 2 : Bassoon Sonata, mm. 8-10.

This has the effect of a run-on sentence that begins with a well-placed comma (the cadence in m. 4), but inserts several fragments before articulating its original point, marked by a stronger cadence on B-flat in m. 16 (Excerpt 2).

The first clear cadence in the tuba sonata is set up in a remarkably similar way. Again, the first phrase opens on B-flat, and the cadence occurs before the beginning of m. 10. The

² Caplin, William E. *Classical Form*. New York: Oxford University Press, 1998, p. 49. Throughout this paper, I will adapt terminology from Caplin’s *Classical Form* because its basic principles help understand Hindemith’s music as a modern version of classical archetypes.

melodic motion, G–F-sharp–B descending, again suggests a V-I cadence with an upper neighbor pre-dominant (Example 3).

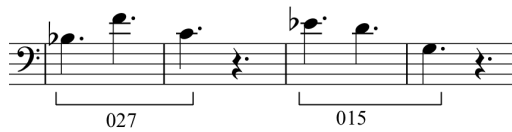
Example 3 : Tuba Sonata, mm. 9-11.

The V-I melodic framework is not supported harmonically by the accompaniment in m. 9. As you can see, the piano is conspicuously *not* supporting the tuba melody. It has a totally contrasting character. However, the B on the downbeat of m.10 is supported by octave B's in the accompaniment, in close proximity to F-sharp and D-sharp. This harmonic support combined with rhythmic insistence gives the listener “tunnel vision” on B, which is the central pitch of the following theme.

As you can hear, the melodies of the first theme in both pieces have dramatically different character, but there are some common traits in how they are developed. The biggest contrast in the melodies is their expressive markings and articulation. The tuba begins *allegro pesante* with *forte* dynamics, accompanied by piano with staccato articulation at *mezzo forte*. The bassoon begins *leicht bewegt* (light and moving) at *mezzo forte*, accompanied by a soft and connected piano line (see Example 1) However, the contrasts in these two phrases belie their Hindemith characteristics. Although the contour of the first phrases in these pieces is very different, the phrases both provide a sense of rest after four measures. This pause gives the

listener a mental checkpoint: something has begun, introduced its characteristic sound, and invited the audience to continue listening. This strikes me as a technique a novelist or poet might use. In one brief sentence, Hindemith captures the reader’s attention, summarizes the action to follow, and creates ideas that will reappear later in the work.

These ideas take on the musical identity of melodic and rhythmic motives. The bassoon phrase (mm. 1-4), is essentially a presentation of two halves, each containing 3 notes: B-flat–F–C and E-flat–D–G. Together these pitches form a [027] and [015] trichord, respectively (Example 4).



Example 4

The [027] trichord is characterized by an “open” sound, and seems stable and constant when compared to sequential material in the first theme. A generic [015] trichord is slightly more dissonant because of the half-step, but when played in this context, as a horizontal line, it sounds like a distant relative of the [027] sound.

Both these trichord motives are developed throughout the sonata and help determine the form of the first movement. The second theme begins with an ascending fifth and unaccented whole-step, gradually developing the [027] motive into [025] (Example 5). A variation of the 015 motive appeared inside the first theme, in the ascending D–C-sharp–F-sharp motion between mm. 8-9 (Example 2).



Example 5 : Bassoon Sonata, mm. 20-22.

The opening four measures of the tuba sonata also have thematic implications for the rest of the sonata. The melodic design of the solo line, rearranged in a single octave, resembles a B-flat natural minor scale missing its primary “minor” characteristic: the D-flat (Example 6). Throughout the movement, many phrases develop and expand this scalar structure. For example, see the descending altered octatonic scale starting and ending on A in mm. 28-29 (Example 7).



Example 6 : Tuba Sonata, mm. 1-4.



Example 7 : Tuba Sonata, mm. 28-30.

These analytical layers give us a large amount of detail about the first theme in each sonata, and illuminate many elements they have in common that are not easily recognized on an initial hearing. However, these themes serve different purposes, and this is mostly due to their length. The first movement of the tuba sonata is generally larger in scope than the bassoon’s first movement, mostly due to an expansive sound created by modified sonata form. The characteristic element of sonata form is the return of the subordinate theme in the tonic key,

usually near the conclusion the movement. The tuba sonata fulfills this requirement with a full development section (mm. 49-77) and repetition of the subordinate theme in B-flat, the tonic key. The bassoon sonata does not contain a development section, and due to this smaller scope (two main themes with a modified repetition–ABA’), its form seems closer to a small ternary movement. As a result, the bassoon theme has to cover more action in a shorter period of time.

Next we will examine the cadences that precede the return of the first theme, or recapitulation, in the first movement of each sonata. The cadence in measure 77-78 is the tail end of a descending sequence that follows the climax of the development in the tuba sonata. The melodic sequence that starts in m. 74 (descending 3-note scalar segments) is not exact, but the listener definitely senses the rhythmic momentum lurching to a halt. The cadence in mm. 36-37 of the Bassoon sonata also achieves recessive energy through repetition of the melody. In both pieces, a small fragment from the main theme—[013] for the tuba and [015] for the bassoon—is used to help generate the material in and around the cadence (example 8, 9). This is another example of Hindemith’s transformation of small motivic fragments.

Example 8 : Tuba Sonata, mm. 75-78.

The image shows a musical score for Bassoon Sonata, mm. 35-38. The top staff is a bassoon line with a blue box highlighting measures 35-37. Below it, a piano accompaniment is shown in two staves. The piano part includes dynamic markings like 'mf' and 'p', and chord symbols like 'Fm'. The text 'einleiten' and 'Wie am Anfang' is written above the piano staff. At the bottom, there is a Roman numeral progression 'V → I'.

Example 9 : Bassoon Sonata, mm. 35-38.

Contrasts emerge when comparing the type of harmonies in these cadences and the way they support the melody. Measures 31-37 are a transition between the second theme, in G, and the repetition of the primary theme, in Bb. The harmony in mm. 31-35 alternates primarily between F minor, D-flatMaj7, and B-flat9 chords, with the pitch center remaining focused on F throughout. The harmony in the tuba's sequential phrase beginning in m. 74 is striking (example 8). Following the A major triad in m. 74, the chords have at least four pitches—[0237], [0247], [0358], [013469]—coming to rest on a D9 in m. 77.

The A major triad at the very beginning of this passage is arguably the climax of the entire movement. It is the most fully voiced triad in the sonata, with two triads in root position and the tonic doubled in the highest and lowest registers (Example 11). The other triadic sounds in the movement (Example 10) are more rhythmically active and grow seamlessly out of the motives that precede them. By contrast, the A major chord appears suddenly, slamming the dense fugato texture of the development section to a halt. In this context, Hindemith skillfully draws the listener's attention to the sonata's strongest tonal chord.

Example 10 : Tuba Sonata, m. 46, m. 103.

Poco Largamente

74

Example 11 : Tuba Sonata, m. 74.

Second Movements

The second movements of these sonatas present striking contrasts in texture, melodic development, harmony, and function. The least obvious feature may be their only common trait. The length of the two movements is almost exactly the same in performance. While the tuba movement has 101 measures and the bassoon has 22, the tempo and meter help make the music for each last roughly one and a half minutes. Both movements stay more or less in one “key,” specifically because of the triads at their beginning and end. The bassoon movement’s home key is D while the tuba’s is D-flat, making the tonal design of the sonatas tertian: B-flat–D–B-flat and B-flat–D-flat–B-flat.

If we compare the first theme in both movements, wide contrasts are apparent. Measures 1-4 present the main melody of the bassoon movement, which is centered on D throughout the passage (Example 12). The harmony can be described as D major with added 4th, 6th and 9ths, as well as major and minor 7ths.

The image shows a musical score for Example 12, Bassoon Sonata, measures 1-4. The top staff is the bassoon part, starting on a D note and moving stepwise. The bottom staff is the piano accompaniment, featuring triplets of chords. The chords are labeled as D⁶⁹, Dmaj⁷⁹add⁶, Dsus⁷add⁶, and D⁶⁹. The piano part is marked *pp*.

Example 12 : Bassoon Sonata, mm. 1-4, stepwise motion highlighted.

The first phrase in the tuba movement, mm. 1-8, contrasts nearly every feature of the bassoon's melody. It begins on a D-flat major triad, but this is so brief there is no chance to establish a strong sense of tonality. By the time the phrase comes to a brief pause in m. 8, the melody has traversed 12 pitches, and the accompaniment taps quartal chords that give no single pitch hierarchy.

The harmonic texture of the bassoon sonata remains stable through most of the movement, changing only slightly in mm. 15-18. Here, the 7th chords become closely spaced and encompass a wider pitch range, as the piano imitates the solo voice, displaced by one beat. The harmonic motion, except for the section just mentioned, is guided by scalar relationships to D. The harmonic motion of the tuba movement is guided by the solo melody, which generates fragments that combine to form mostly dissonant harmonies throughout. The thickest texture of the movement occurs in the middle—the “c” theme, mm. 37-67—and is the most dissonant because of the number of pitches per measure. This section begins less agitated than it ends,

starting with [01357] accompaniment chords in m. 37, and peaking on a strangled [012467] chord at the piano's highest register in m. 58 (Example 13).

The image shows two musical staves for Example 13. The top staff is labeled '58' and 'closely spaced' with a dynamic marking of '8va---'. It shows a piano accompaniment with a series of chords. The bottom staff is labeled 'actual voicing' and shows the chord [012467].

Example 13 : Tuba Sonata, m. 58.

Third Movements

The third movements of these sonatas present many points for comparison. They are similar in proportion, tempi, form and motivic development. They also highlight some of the largest contrasts between Hindemith's compositional decisions early and late in his sonata collection. The third movement of the tuba sonata contains the most conspicuous dodecaphonic (twelve-tone) characteristics, and strays farthest from tonality of all the movements. The bassoon's final movement dovetails with the end of the second movement, making this seem like the slow introduction of a single, continuous movement.

The cadences at the first major sectional division in each movement illustrate the enormous contrast in the sonatas' final movements. The tuba is repeating a truncated version of the first theme in mm. 32-36. The harmony in this passage is dissonant due to the presence of tritones, minor seconds and stacked fourths, but even this is ambiguous because all intervals happen linearly and in counterpoint with the solo line (Example 14).

Example 14 : Tuba Sonata, mm. 35-37.

When the solo and accompaniment do sound at the same time the harmony is brief; not clashing with, but not supporting the melody. This texture makes the listener focus almost completely on the solo line, largely ignoring the tiptoeing piano. If we analyze the six-note series in the accompaniment of mm. 35- 36 as a hexachord, the result is a colorful [012568]. The articulation of this line, descending thirds, suggests interpretation as a modified seventh chord, and it dilutes the dissonance that these pitches would create together.

Melodic design is the only common trait shared at m. 56 in the bassoon sonata. Notice how differently the cadence is prepared and executed. Measures 52-56 are again a truncated version of the first theme, which is basically cut at its midpoint using the descending sixteenths as the pivoting motive (Example 15).

Example 15 : Bassoon Sonata, mm. 52-54.

This leads into the clear cadential gesture in m. 56, which stretches the duple meter one extra beat (Example 16).

The image shows musical notation for Example 16. The top staff is a single melodic line. It begins with a sixteenth-note triplet in a 3/2 time signature, followed by a half note in a 4/4 time signature. The bottom two staves show a harmonic accompaniment. The first staff has a whole rest in 3/2 time, followed by chords in 4/4 time. The second staff has a whole rest in 3/2 time, followed by chords in 4/4 time. Chord labels are placed between the staves: Gb^6 and $Absus^6$ above the first staff, and bVI , $bVII$, and I below the second staff.

Example 16 : Bassoon Sonata, mm. 56-57.

The harmony here is built on the motion in the bass: G-flat–A-flat–B-flat. These pitches have prominence because they are the lowest sound, and they are reinforced by octaves and perfect fifths in the harmony above. The chords contain triads but also sixths above the bass, creating an ambiguous third relationship. This type of chord is common in the accompaniment throughout the sonata, as we have already observed in the first movement. The importance of G-flat, A-flat, and B-flat is not ambiguous at m. 56, however.

A hallmark characteristic of both these final movements is their pervasive melodic transformation. Both formal designs seem to imitate a theme and variations structure, and the tuba sonata even contains the editorial direction “Variationen.” The most notable variations happen in the accompaniments, usually while supporting the second or third presentation of a theme. Generally, these variations have greater technical demands than the material they correspond to, but Hindemith treats this technique very differently in the bassoon sonata than the tuba sonata.

To illustrate this somewhat drastic difference, let's compare a few examples. Measures 67-69 of the bassoon finale are part of the repetition of subordinate theme. They correspond to mm. 58-60, and the newfound agitation of the piano part is immediately apparent (Example 17).

Example 17 : Bassoon Sonata, m. 58, mm. 67-68.

The accompaniment material is transformed via melodic sequences, or fragments of sequences that are started but then abandoned. This is demonstrated in mm. 67-68, as the series of [013] triplets is altered slightly, giving the illusion of a sequence. The accompaniment variation in the tuba sonata is treated more freely. Compare m. 1 with m. 87 (Example 18).

Example 18 : Tuba Sonata, m. 1, m. 87.

The sparse, two-note gestures become a raging torrent of chromatically driven scales and passagework. These virtuosic lines are so complex and chromatically packed that the already vague harmony in m. 1 becomes saturated with pitches competing for prominence in m. 87.

Unlike the accompaniment variation bassoon sonata, there are quite a few sequences, freely transposed and developed. One beautifully complex example emerges in the middle of m. 100, and is transposed by half steps and thirds to m. 104 (Example 19).

Example 19 : Tuba Sonata, m. 100.

This sequence is immediately followed by another line, with a rhythmic profile that could be at home in a ‘hard-bop’ jazz tune (Example 20).

Example 20 : Tuba Sonata, m. 104.

The constantly evolving sequential material of the recapitulation keeps the listener highly engaged awaiting the final outcome of the piece.

These two sonatas demonstrate a wide variety of stylistic tools to create music with wildly different moods. In their contrast and similarity, we can appreciate Hindemith's skill and artistic vision. It is very gratifying to appreciate the innovations of Hindemith's tuba sonata with respect to his earlier work in the same genre. Likewise, it is valuable to hear the bassoon sonata with the knowledge of what lies ahead on Hindemith's musical timeline. If we can understand these contexts, the many merits of these sonatas become clear.

BIBLIOGRAPHY

- Burkholder, J. Peter, Donald Jay Grout and Claude V. Palisca. *A History of Western Music*. 8th edition. New York: W.W. Norton and Company, Inc., 2010.
- Caplin, William E. *Classical Form*. New York: Oxford University Press, 1998.
- Hindemith, Paul. *The Craft of Musical Composition*. Translated by Arthur Mendel. New York: Associated Music Publishers, Inc., 1942.
- _____. *Sonate für Baßtuba und Klavier*. Mainz: Schott Musik International GmbH & Co., 1957.
- _____. *Sonate für Fagot und Klavier*. Mainz: Schott Musik International GmbH & Co., 1938.
- Kawrza, Elisabeth. "Drei Bläseresonaten Paul Hindemiths. Eine analytische Untersuchung." Non-doctoral diss., Hochschule für Musik und Darstellende Kunst, Graz, 1982.
- Koper, Robert "A Stylistic and Performance Analysis of the Bassoon Music of Paul Hindemith." DA Education diss., The University of Illinois, 1972.
- Morgan, Robert. *Twentieth Century Music: A History of Musical Style in Modern Europe and America*. New York: W.W. Norton and Company, Inc., 1991.
- Neumeyer, David. *The Music of Paul Hindemith*. New Haven: Yale University Press, 1986.
- Prinz, Kendall Ray. "A Structural and Aesthetic Study of *Sonate for Bass Tuba and Piano* by Paul Hindemith with Insights into its Performance and its Historical Perspective." DMA diss., The University of Texas at Austin, 2010.

Schubert, Giselher. "Hindemith, Paul." Grove Music Online. Oxford Music Online. Oxford University Press, <http://www.oxfordmusiconline.com.proxy-remote.galib.uga.edu/subscriber/article/grove/music/13053> (accessed October 16, 2013).

Schulz, Charles August. "Two European Traditions of Tuba Playing as Evidenced in the solo tuba compositions of Ralph Vaughan Williams and Paul Hindemith." DMA diss., North Texas State University, 1980.

Taruskin, Richard. *Music in the Late Twentieth Century*. New York: Oxford University Press, 2010.

Traub, Andreas. "Zur Sonate für Basstuba und Klavier." *Musik-Konzepte*, no. 125-126 (July 2004): 137-150.