The Compositional Style of William O. Smith

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by

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Composer and clarinetist William O. Smith has led a dual life in the worlds of jazz and classical music. His name is familiar to clarinetists due to his pioneering work with multiphonics and other extended techniques for the clarinet. As Bill Smith, he is known in the jazz world for his work as composer and clarinetist in the Brubeck Octet, and later, the Brubeck Quartet. Neither of these identities tells the complete story of Smith, whose accomplishments as a performer and composer are wide-ranging and have had a significant impact on American music.

Smith is seldom recognized as an important twentieth-century composer, although his contributions to American jazz and classical composition are considerable. Some of Smith's music is clearly jazz, and some is twelve-tone music in the tradition of the Second Viennese School. Much of his compositional output, though, manages to incorporate these seemingly contradictory styles into a cohesive whole. His sheer virtuosity and creativity as a clarinetist also influences his compositions, which make great demands on the performer. By examining several of his works for solo clarinet, Smith's development as a composer can be traced from his early days as a student of Darius Milhaud, to his experimentation with extended techniques for clarinet, integration of jazz and classical composition, and his later work with double clarinets, theatrical elements, and computer.

### Early Influences

Most musicians focus on either jazz or classical music early in their careers, but William O. Smith has always had one foot solidly planted in both worlds. Born in Sacramento, California in 1926, Smith grew up listening to the big band music of Duke Ellington, Count Basie, Tommy Dorsey, and Benny Goodman (Suther 1997). He began playing clarinet at the age of ten, when a traveling salesman promised a free clarinet if he would take twenty-four clarinet lessons (Monaghan 1996). Although initially motivated by the prospect of becoming a jazz player, Smith was also inspired by Benny Goodman to study classical clarinet playing (Suther). At the age of thirteen he started a dance band that played professionally, and by fifteen he had joined the Oakland Symphony (Monaghan).

After high school, Smith continued on the dual paths of jazz and classical music. He first toured with a dance band, and then spent a year studying clarinet and composition at Juilliard by day and performing with a bebop jazz trio by night (Rehfeldt 1980). Unsatisfied at Juilliard, Smith decided to return to California after learning that Darius Milhaud was teaching composition at Mills College (Monaghan 1996). It was there in 1946 that Smith met Dave Brubeck and the other members of the group that would eventually record as the Dave Brubeck Octet (Suther).

### The Brubeck Octet

It is commonly accepted that Milhaud as a composer was influenced by American jazz, but less recognized is the impact that Milhaud himself had on the development of jazz. Unlike most professors of composition in the 1940s, Milhaud encouraged his students to apply the compositional techniques of European classical music to jazz. The significance of this has been described by Dave Brubeck:

One day Darius Milhaud had invited the jazz musicians in his class to raise their hands and identify the instruments they played. We were all surprised and excited when he said that if we chose, we could write our compositions, and fugue and counterpoint studies to be played by us on those instruments. Because at that time we were not allowed to play jazz in most of the conservatories in the United States and Europe, we were amazed to hear this great French composer encouraging us. He told us that if we wanted to represent the culture of the United States, we should not overlook our jazz roots in our classical compositions. ... Thus, with Milhaud's

encouragement, Bill [Smith] and I, along with six other students, formed a group we called the Jazz Workshop Ensemble. (Suther 1997, p. 45)

This group went on to record a self-titled album as the Dave Brubeck Octet, which featured many of the compositions created under the tutelage of Milhaud. The innovative tracks include William O. Smith's *Schizophrenic Scherzo*, Dave van Kriedt's *Prelude* and *Fugue on Bop Themes*, and a polystylistic romp through different eras of American jazz based on the tune "How High the Moon" (complete with an imitation of Benny Goodman by Smith). Many works on this experimental album fused counterpoint and polytonality with jazz, and it received little notoriety in the jazz world at the time but was widely imitated in later years (Brubeck 1956). Much of this music presaged not only later developments in modern jazz, but also the "third stream" music of Gunther Schuller and others.

Smith describes his *Schizophrenic Scherzo* (1947), written for clarinet, trumpet, alto and tenor saxophones, and trombone, as his "first attempt at writing what was in fact an atonal, written-out jazz piece" (Mitchell 1984). It is one of his earliest compositions, and it exhibits several important characteristics of his compositional style that would continue to be prevalent throughout his career. The short piece has elements of jazz: saxophones, muted trumpet, clarinet glissandos, and swung eighth notes. However, other elements decidedly separate the work from mainstream jazz: lack of a rhythm section, atonality, strict imitation and counterpoint, "scherzando" sixteenth-note lines, and the absence of improvisation. Rehfeldt (1980) describes the piece as "one of the first successful integrations of modern jazz and classical procedures," and indeed, *Schizophrenic Scherzo* precedes Schuller's seminal third-stream work *Transformation* (1957) by ten years. *Schizophrenic Scherzo* also has remarkable similarities to

Stravinsky's *Ebony Concerto*, a jazz "concerto" written in 1945 for Woody Herman and his band. Smith has mentioned the influence of Stravinsky in his non-jazz compositions (Mitchell 1984), but perhaps Stravinsky also inspired some of his writing for the Brubeck ensemble.

### **Continued Studies**

Much of William O. Smith's compositional style can be probably be traced to Milhaud, who encouraged his students to use "classical" compositional techniques while remaining open to different styles. In interviews, Smith has often mentioned Milhaud but has not elaborated on his time studying with Roger Sessions at the University of California, Berkeley, where he received a B.A. in 1950 and an M.A. in 1952 (Rehfeldt 1980). As Sessions was beginning to compose with twelve-tone techniques at that time, it is possible that Smith learned about serialism from him. However, Smith has stated that "[i]t wasn't until 1957 when I played a beautiful twelve-tone jazz line by Ed London that I became attracted to twelve-tone writing" (Smith 1993, p. 101).

Smith received U.C. Berkeley's Prix de Paris, allowing him to study composition and clarinet at the Paris Conservatoire in 1952-53, where he took clarinet lessons with Ulysse Delecluse (Mitchell 2006). He later won the Prix de Rome which brought him to the American Academy in Rome in 1957-58 (Rehfeldt). It is out of this prestigious and eclectic background that one of Smith's most well-known works emerged.

### Five Pieces

William O. Smith's *Five Pieces for Clarinet Alone* is probably his most frequently performed work for clarinet, because it does not require the performer to learn any extended techniques. Written in 1959, the work demonstrates an emphasis on the implication of polyphony in a monophonic line, intervallic collections, and some use of twelve-tone techniques. Smith has named Bartók as an influence on his compositional style (Mitchell 1984), and like Bartók, Smith frequently uses the octatonic scale as a source for pitch collections. In *Five Pieces*, his motives consist of small groups of notes, often in pairs forming a [0,2] dyad (which can create a major second, minor seventh, or major ninth) or in three-note groups forming the pitch collection [0,1,3], a subset of the octatonic scale.

The first movement of *Five Pieces* begins with the pitches G-F-Ab-Bb<sup>1</sup> in note values of quarter and eighth notes, forming the pitch collection [0,2,3,5]. (See Appendix A to reference the full score). This collection is a subset of the octatonic scale, but perhaps more importantly, these four notes create a pair of minor sevenths, a pervasive interval in this piece and in William O. Smith's work as a whole. Additionally, the disjunct nature of the opening motive establishes the registral space for what will become three separate lines, one generally below the staff, one in the staff, and one above.

The opening motive is immediately contrasted in m. 2 with fast, accented sixteenth notes in groups of two or three, also emphasizing the octatonic scale (A-B-C-D-Eb). In mm. 3-4, the longer note values return using the pitches A-G-F#-E, again forming a [0,2,3,5] octatonic subset, or two [0,2] dyads. Next, the three-note groups return in mm. 5-6, this time alternating between the collections [0,1,3] and [0,2,4].

With the pickups to m. 8, Smith begins creating polyphony between three distinct musical lines (see Example 1). In the lower and middle registers, the [0,2] dyad G-F, which began the movement, begins to be repeated, oscillating between G-F (minor

<sup>&</sup>lt;sup>1</sup> All pitches discussed in this paper are written pitches for the clarinet in Bb.

seventh) and F-G (major ninth). This pair moves up to G-A at the end of m. 9, and to Bb-Ab in m. 11. Meanwhile, an incomplete twelve-tone collection begins in m. 8 in the clarion register<sup>2</sup>, with Bb-Ab-Eb-D. The line uses eleven pitches in mm. 8-9 aside from the previously discussed [0,2] pairs in the lower registers, where the missing pitch F appears frequently. In mm. 9-11, the upper line works its way up from A to an altissimo Eb in m. 11. This marks the return of the opening motive in pairs of sevenths; the lower register Bb-Ab pair becomes one of these sevenths.



Ex. 1: Five Pieces, mvt. I, mm. 6-11

As the movement proceeds, Smith continues to exploit the possibilities of the three separate registral lines, while the [0,2] interval predominates. In m. 34 the movement comes to a climax with three fortissimo held notes that further emphasize the three registers. The notes, G#, F#, and E form two consecutive [0,2] intervals. The movement ends with three iterations of the [0,2] interval on A-B: a major second, a minor seventh, and a major ninth.

The second movement, "Flowing," continues to emphasize the interval of the second, while loosely appropriating twelve-tone techniques. For example, measures 11-15 contain a tone row of all twelve pitches, distributed into pairs of major or minor

 $<sup>^2</sup>$  The clarinet is generally considered to have three distinct registers: the chalumeau, spanning from the lowest E to throat Bb; the clarion, from middle-line B to C above the staff, and the altissimo, above high C.

seconds. Measures 25-26 and 27-28 are additional representations of this row. However, this is not a strictly twelve-tone movement.

In the third movement, Smith begins to use serial technique more systematically. The first twelve notes of the movement form the tone row [Eb-Bb-Ab-F-G-E-F#-C#-B-A-C-D] (see Example 2). (See also Appendix A to reference the twelve-tone matrix for this row.) Notably, the row contains no minor seconds, but has six major second/minor seventh intervals, pointing again to the significance of the [0, 2] dyad in *Five Pieces*. Smith's use of the tone row in this movement is subtle at times; it wanders along in the upper or lower voice while quasi-twelve-tone material appears in the other registers. But at m. 22, a canon clearly begins, using the various prime forms of the row (see Example



Ex. 2: Five Pieces, mvt. III, mm. 1-4a

3).



### Ex. 3: Five Pieces, mvt III, mm. 22-24

The use of rows in this canon is not consistent; the first four-note motive is easily followed, but subsequent notes in the row may appear in unexpected registers or belong to more than one row. This movement, then, is an example of how Smith uses tone rows as a basis for pitch content, but alters the method as it suits him. The canon beginning in m. 22 also demonstrates of Smith's "polyphonic" writing for the solo clarinet, by using register shifts to delineate separate musical lines.

A different tone row is used in the fourth movement, but again Smith sometimes alters the row or inserts material. The thirty-second note figures are not part of the row, which begins on the high C and consists of the pitches [C-Bb-Db-Eb-Ab-G-F-D-E-F#-B-A]. This row is immediately followed by its inversion, although the F# is left out and several pitches are used more than once, again demonstrating Smith's flexible appropriation of twelve-tone technique. The final movement, like the first, is concerned more with intervallic collections (especially [0,1,3]) and repetition of motives than with strict adherence to a twelve-tone process.

Analysis of *Five Pieces* reveals a work with recurring motives, attention to intervallic structure and pitch collections, keenly crafted counterpoint, and integration of twelve-tone techniques (if not strict adherence to them). Smith's apparent obsession with writing polyphony for a monophonic instrument is important to note, as it is a theme that continues in his later works and may have sparked his initial interest in multiple sonorities. Of the *Five Pieces*, Smith has stated: "In one of these I tried to give the impression of a three- or four-voiced fugue by having one note in each register – but it had not entered my mind that a woodwind instrument could play more than one note simultaneously" (Mitchell 1984, p. 8).

### **Multiphonics**

William O. Smith's compositional style took a new direction in 1959, when he heard Italian flutist Severino Gazzeloni perform Berio's *Sequenza I* for solo flute in Los Angeles. It was the first time he had heard multiphonics performed on a woodwind instrument, and he immediately began to experiment with the clarinet to see if he could achieve similar sounds (Mitchell 1984). Smith then received a Guggenheim Fellowship

in 1960, which enabled him to spend a year in Europe systematically exploring clarinet multiphonics (Mitchell 1984). Smith describes the experience as follows:

I took every fingering on the clarinet and figured out what single notes that fingering could produce and what combinations of notes could be performed ... I made index cards indicating the notes produced by every possible fingering and the quality (rough beat) and dynamic level (loud, soft) and difficulty (A-F). I ended up with 200 and some odd multiphonics. ... *Variants* was the first piece I wrote that used a variety of these sounds. (Suther 1997, p. 43-44).

In addition, Smith spent some time working at the Columbia Princeton electronic music lab in 1959-60 on his *Duo for Clarinet and Recorded Clarinet*, which used transformed clarinet sounds to create the tape part (Mitchell 1984). This work with electronics surely influenced his concept of new sounds for clarinet.

William O. Smith was not the first to play or compose multiphonics for clarinet; Rehfeldt (1980) noted that John Cage called for "undertones" in the clarinet part to his *Concert for Piano and Orchestra* (1957-8), and every beginner inadvertently achieves multiple sounds as they learn how to produce a tone on the instrument. But Smith was the first to realize the full potential of clarinet multiphonics as a new compositional sound possibility. As Bartolozzi later wrote in his groundbreaking 1967 book *New Sounds for Woodwind*, "there are no longer sounds which are 'ugly', 'unpleasant', 'hard', etc. Rather are there only sound phenomena which are useful in proportion to how much they lend themselves to organized musical usage" (p. 5).

Several of these new sound phenomena appear in Smith's 1961 *Duo for Flute and Clarinet*, but *Variants* for solo clarinet was his first composition based primarily on the use of extended techniques (Smith 2001a). *Variants* consists of six short movements, ranging from 18 seconds to 48 seconds in length as performed by Smith himself on his 1974 recording *Two Sides of William O. Bill Smith*. The instructions take up more pages than the score itself, a fact noted by an indignant reviewer in *The Musical Times* (O'Laughlin 1968). However, these instructions are significant in that they include some of the first published instructions for clarinet timbre trills, key clicks, glissando, and singing while playing, as well as a chart of some of Smith's multiphonic fingerings organized by tone quality.

Another important feature of *Variants* is the use of proportional notation rather than traditional time signature and rhythmic values. This notation was probably another inspiration from Berio, whose *Sequenza I* (1958) is generally considered to be the first work to use spatial proportions to indicate the duration of sounds and silences. Smith (2001a) explains that he used this type of notation "in order to leave the performer as much rhythmic freedom as possible" (p. 4).

The first movement, "Singing," is a study in multiphonics and timbre trills. It consists of six slurred phrases that move smoothly between timbre trills, single pitches, and multiple sonorities. Smith has chosen multiphonics that speak primarily as dyads, with only hints of other overtones. Twice in the movement, Smith writes successive multiphonics in which the upper pitch is maintained while the lower pitch moves; these are certainly a result of his thorough research into multiphonic fingerings. In the second slurred phrase, the F-Eb-F movement in the lower voice sounds like a cadence that resolves to an open fifth (F-C). The fourth phrase similarly "resolves" to a perfect fourth (Ab-Db). The upper and lower voices sound like two distinct, simultaneous lines at times; in this movement, Smith comes closer to achieving true polyphony in a solo clarinet work, through use of multiple sonorities.

Next, Smith features the technique of humming while playing in the second

movement, "Aggressive." Although on the page, the humming and playing would appear to create two separate lines of pitch material (as notated on separate staves), in reality the voice creates a timbral effect of beating and overtones rather than sounding the notated pitches. The intervals between the voice and clarinet in this movement are usually major and minor seconds, which causes a harsh beating effect, so similar in sound to the two multiphonics chosen for use in this movement that without following the score it is unclear which technique is creating the sound.

For the third movement, "Nervous," the clarinet is muted by inserting a cork into the bell. The mute enables the player to perform notes in the extreme altissimo range, extending to a written A two octaves above the staff, and one octave above the A normally considered to be the upper limit of the clarinet range. Smith achieves such a variety of timbres and uses such a wide range that the clarinet almost sounds like an entire orchestra. The rapid legato tonguing gives a tremolo effect quite different from the normal flutter-tongue, and the mute creates flute-like sounds. This movement is more about timbre and diversity of sounds than pitch, but at times there is almost a duet between the upper grace notes and the lower notes.

Movement four, "Tranquil," features two simultaneous lines, one in the low chalumeau range of the clarinet and one in the upper clarion and altissimo. Smith begins the movement with a four-note motive (Db-Eb-E-D) in the upper voice over a constant F-Eb trill in the lower voice (see Example 4). His selection of multiphonics in this movement is remarkable, for they allow one voice to move while the other stays the same. Transpositions of the four-note motive are used twice in the movement; once appearing inverted as F#-E-D#-F, and again in retrograde inversion as B-A-Bb-C to end the movement. All three appearances of the motive are in the altissimo register of the clarinet. This motive forms a chromatic collection [0,1,2,3] and could be seen as a reordered version of the famous B-A-C-H motive, as A-B-C-H.



Ex. 4: Variants, Mvt IV, first phrase

Movement five, "Brilliant," begins with a gesture that is less about pitch than a raucous effect. Then Smith writes extremely fast gestures of slurred notes in groups of two or three, with several other trilled glissandos and multiphonics. The pitch material is based on a tone row stated immediately after the opening glissando: F-E-D-Eb-Db-C-F#-G-A-B-Bb-Ab. (See Appendix B for matrix and score.) Interestingly, this row can be divided into four three-note cells of [0,1,3], a collection also important in *Five Pieces*. In this way, the construction of the row parallels the construction of the piece in small three-note (and two-note) groups. All intervals in the row are major or minor seconds except the tritone between ordinals 6 and 7. Smith uses the row forms RI-5 and R-6, although the rows are interrupted by more trilled glissando gestures. At times the last three notes of the row are re-ordered so it ends with ordinals 12-11-10, or in the last truncated row, 1-2-3-6-5-4. This short movement (Smith plays it in eighteen seconds) is evidence that Smith's use of tone rows was continuing to evolve after his *Five Pieces*.

The final movement, "Dramatic," is a study of contrast between loud single pitches and soft trills and tremolos. In a single movement, Smith uses the extended techniques of flutter-tongue, glissando, timbre trills, key clicks, extreme altissimo, and multphonic trills and tremolos. Such deviation in sound and technique from previously written clarinet music was not always met with enthusiasm; reviewer Niall O'Loughlin for *The Musical Times* had this to say in 1968: "It is hard to come to grips with *Variants*. ... Its elusive character stems from the almost complete lack of rhythm and tempo indications ... and the immense difficulties encountered for accurate performance" (p. 265).

Probably the most remarkable aspect of *Variants* is the sheer virtuosity and detail of Smith's early writing for extended techniques on clarinet. In the early 1960s, many composers began experimenting with new sounds on acoustic instruments, and any one of these composers could have been the first to use a few multiphonic sounds in a piece for clarinet. Smith's exhaustive research and personal experimentation, though, allowed him to deliberately select from a repertoire of multiphonics, as well as other new sounds including timbre trills, humming while playing, and muted effects. The result was a piece that revolutionized clarinet writing by approaching the clarinet as an entirely new instrument, and using an entirely new musical language. With *Variants*, William O. Smith managed to integrate his previous style (based on counterpoint, motivic development, and twelve-tone techniques) with his new experiments involving multiple sounds, timbre, notation, and modification of the instrument itself.

### Jazz Connections

Even as he was composing the avant-garde *Variants*, William O. Smith continued to work on jazz projects with Dave Brubeck as composer and clarinetist. In 1960, Brubeck and Smith, along with Eugene Wright on bass and Joe Morello on drums, recorded the album *Brubeck a la Mode*. All ten compositions on the album were by Smith, and they explored the use of modes other than the major and minor mode. Unlike *Schizophrenic Scherzo*, Smith created only the theme (or "head") of each piece and the general formal scheme, leaving much room for improvisation (Smith 1960).

In 1961, the same group recorded *Near-Myth*, another album of Smith compositions. This album reflects Smith's explorations into extended techniques, as it uses multiphonics on one song, and flutter-tonguing on another. In "Siren Song," Smith uses a mute to enable him to reach extreme altissimo notes. Even more interesting are the techniques Smith used to create musical unity in *Near-Myth*: the opening four-note motive reappears throughout the album, and other motivic connections exist between consecutive tracks (Smith 1961). As Dave Brubeck notes, "Bill [Smith] has always evinced a strange, but not necessarily incompatible, mixture of whimsy and intellectualism" (Smith 1961). *Near Myth* is an example of Smith's ability to bring his classical influences to jazz and create a cohesive musical result.

Smith's 1962 *Concerto for Jazz Soloist and Orchestra* represents another fusion of jazz and classical music, this time using twelve-tone techniques combined with jazz style. Smith had become increasingly interested in twelve-tone jazz improvisation, and with the *Concerto* he created a framework for himself to improvise using a tone row. Recorded in 1964 with Gunther Schuller conducting the Orchestra U.S.A., this concerto

is based on a single tone row that provides pitch material for the orchestra as well as improvisational inspiration for the soloist (Mitchell 1984). Smith discusses the row and its use in the piece in his book *Jazz Clarinet*, pointing out that he chose the simplest row possible to make it suitable for improvisation (Smith 1993). The row (E-F#-A-B-G#-A#-C#-D#-C-D-F-G) is constructed using only major second and minor third intervals and has a limited number of transpositions (see matrix in Appendix C) (Smith 1993). It can also be thought of as three iterations of the four-note motive from Gershwin's "I Got Rhythm" (Smith 1974).

### Jazz Set

Continuing in this tradition, Smith wrote several works titled *Jazz Set* for various instrumentations, all of which use twelve-tone rows together with jazz style. The *Jazz Set* for solo clarinet (1978) consists of five movements based on a single row as stated at the beginning of the first movement: [D-G-A-C-Bb-Eb-Ab-Gb-Cb-Fb-F]. (See Appendix D for matrix of row forms and full score with written-in analysis.) The row contains five perfect fourth/fifth intervals and is notable for its ability to be divided into two hexachords that suggest a diatonic scale and a blues scale, respectively. The first hexachord (D-G-A-C-Bb-Eb) could represent a Bb major or G minor tonality. The second hexachord (spelled Ab-Gb-Cb-Fb-F-C#) could be respelled as (G#-F#-B-E-F-C#), notes which would fit into a B blues scale with no third (B-C#-E-F-F#-G#) or several other diatonic collections with a chromatic alteration.

The first movement features jazz-style licks in eighth notes, triplets, and sixteenth notes. The row is used in a strict manner with several small aberrations. First, P-0 is stated in its entirety. Its last note, C#, is used also as the first note of the next row, P-11

(See Example 5). This process continues through P-10, P-9, P-8, etc. in order until P-0, then cycles again through P-11, P-10, P-9, and part of P-8.



Ex. 5: Jazz Set, mvt I, mm. 1-3

Smith diverges from the pattern several times, perhaps to reconcile the twelvetone method with stylistic jazz considerations. In m. 6, a low E is introduced which belongs to no row but is repeated until m. 13, serving as a drone. In m. 20, three grace notes are added to the repeated B's, and these pitches (G#-F#-C#) do not seem to be related to a particular row. In m. 23, the ninth note of row P-4 (Eb) appears before the eighth note (Bb), and the second note of the next row, P-3 (Bb), appears before the first note (F). In m. 32 a C is implied and would serve as the last note of P-11 and the first note of P-10, and one would assume Smith would have included the note if it were within the range of the instrument. Finally, in the last partial row P-8, the fifth note should be Gb but appears as G natural, and the movement ends with a tremolo between the sixth and seventh notes of the row. At the end of the movement, Smith utilizes the many perfect fourths in the row to create a line of sixteenth notes (mm. 32-33) with a total of eight ascending fourths, some consecutive. The effect is that of cycling through many keys quickly, or of the quartal harmony often used in jazz.

In the second movement, Smith uses only the inversions I-0 and I-1 of the row. These rows appear in the upper voice of the multiphonic trills, while the lower voice provides counterpoint that is not based on a tone row. The only note from a row to appear in the lower voice is the first note of I-0 (D), which sounds simultaneously with the second note (A). As in the first movement, the last note of I-0 also functions as the first note of I-1. Many of the intervals in this movement are twelfths, due to the trilling of the register key and the acoustics of the clarinet, which overblows to the third partial of the overtone series (the twelfth) rather than the second (octave).

The third movement, "Swinging," is a palindrome based on retrograde rows in the upper voice and retrograde-inversion rows in the lower voice. As in the first movement, the last note of one row is the beginning of the next, and the rows proceed in numerical order (R-6, R-7, R-8, R-9, R-10 in the upper voice; and RI-2, RI-1, RI-0, RI-11, RI-10 in the lower). Several aberrations from this technique occur: in the first row of the lower voice, the third pitch comes before the second. Also, in m. 9, the high F serves as a member of the lower voice row and the upper voice, as also with the A-flat in m. 13. Towards the middle of the movement, the separation of upper and lower voice becomes unclear, with the voices actually crossing in mm. 16-18 so that the upper row is in the lower voice. The midpoint of the movement is in the middle of the first half. Pitches and rhythms are exactly alike, but dynamics (consisting only of forte and piano) are reversed, so that what was loud in the first half of the movement is now soft.

Opening with the same tremolo that ended the first movement, the fourth movement features humming on the top stave and a continuous clarinet tremolo on the bottom stave. The tremolo is like a drone, changing from an open fifth (E-B) to a minor seventh (E-D) but maintaining the low E, the lowest pitch on the clarinet. The voice has a slow melody using the rows I-2 and I-3. In m. 9, the last two pitches of I-2 are reversed in order, and the F is used as the twelfth pitch of I-2 and the first pitch of I-3. Only the first nine pitches of I-3 are used, and the movement ends on a G# to form a major triad with the E-B clarinet tremolo.

The row used in *Jazz Set* and its inversion begin with the same three pitches, a trait explored in the fifth movement, which alternates between a transposition of the row and its inversion, in numerical order (P-0, I-0, P-11, I-11, etc.). Unlike in previous movements, the adjacent rows do not share a common tone. An interesting feature of this movement is that Smith repeats groups of notes within a row (as in m. 3, m. 6, m. 8-9), which serves as an interruption or emphasis on a particular "lick". The movement cycles through 21 complete rows and part of another, leaving out only P-1, I-1, and part of I-2 (the final row of the piece).

Out of forty-eight possible row forms, Smith uses a total of thirty-four in *Jazz Set*. Twelve of the prime forms and their inversions appear at least once, and the third movement uses five retrograde rows and five retrograde inversions. Nearly all of the pitch material is derived from the tone row, and as such this work represents a more complete twelve-tone approach to composition than in *Five Pieces* or *Variants*, despite the deviations and repetitions that sometimes appear. The *Jazz Set* certainly exhibits the "mixture of whimsy and intellectualism" that Brubeck observed in Smith's work on the *Near-Myth* album.

### Multiple clarinets

William O. Smith's interest in ancient Greece indirectly inspired another major development in his composition and performance: the idea of the "double clarinet." While on a trip to Greece in 1977, Smith saw images of ancient Greeks playing a doublepipe instrument called the *aulos*, thought to be one of the oldest predecessors of the clarinet (Mitchell 2006). He immediately began experimenting with putting a mouthpiece on the lower joint of the clarinet as well as the upper joint and playing both halves at once – an invention he called the "double clarinet." Soon he had written *Five Fragments* (1977), in which the clarinetist plays the double clarinet and also plays each half ("demi-clarinet") separately. In 1989, Smith took this concept even further with his *Ritual* for A and B-flat clarinets performed simultaneously.

These developments can be seen as a logical outgrowth of Smith's desire to write polyphony for a monophonic instrument. Multiphonics are very restrictive due to the acoustics of the instrument; using two clarinets at once opened up a new world of possibilities for simultaneous sounds.

### Epitaphs

*Epitaphs* (1993) is an eight-movement work written for two B-flat clarinets to be played at the same time. Each movement is preceded by an epitaph to be read aloud, the text by the ancient Greek poet Anyte of Tegea (Smith 2001b). Unlike Smith's *Five Fragments* and *Forest* (1996) for double clarinet, *Epitaphs* never uses one clarinet alone. Instead, the entire work is played on the two B-flat clarinets, with little independence of parts. Smith frequently uses drones and matches articulation between the parts, imitating how as an *aulos* player presumably would have used the instrument. It is definitively a solo piece and would not make sense as a duet; indeed, many of the sonorities sound like single clarinet multiphonics.

In the first movement, the lower clarinet plays an E drone for most of the movement, while the upper clarinet primarily plays phrases in short groups of two to three slurred notes. (See Appendix E to reference the full score.) The second movement is the only movement to use conventional rhythmic notation rather than proportional notation. It also uses a drone—the C in the lower voice—although here the note is articulated rather than held. Major and minor seconds are frequent vertical intervals.

The third movement, "A Soldier," focuses on the [0,2] dyad almost exclusively, especially on the fanfare-like grace-note figures. The major second/minor seventh interval begins and ends the movement and is emphasized throughout. Next, the fourth movement begins with a major second, and the vertical intervals at the beginnings and ends of phrases seem to widen as the movement goes on and then narrow back down to a minor second and then a perfect unison. Smith's interest in twelve-tone composition also reappears in this movement, as no pitch is repeated in the first twelve notes, or in the next set of twelve. The use of tone rows is not strict throughout the movement, though, and it seems that Smith is only loosely basing his pitch material on tone rows.

Movement five, "Erato," features dramatic dynamic contrasts. The pitches are chosen based on twelve-tone collections; no note is repeated until all others have been played, except that what should be the second twelve-tone collection has no D. Thus there is one group of twelve, one of eleven, two more of twelve, and the last group of four. Notably, there is a breath mark between each of these groups (in addition to other breath marks), further emphasizing the twelve-tone groups.

The sixth movement employs a kind of species counterpoint, in which one voice has two or three notes against a held note in the other voice. Taken in groups, these notes often create pitch collections derived from the octatonic scale, especially [0,1,3]. The seventh movement also emphasizes collections from the octatonic scale, but it employs a G drone that is passed between the two clarinets, as is the melodic line. In the melody, no tone is repeated until all twelve have been played. Finally, the eighth movement features one voice trilling while the other holds or moves. Several times during the movement, both voices move in parallel thirds or sixths. Again, the [0,1,3] collection is ubiquitous in the melodic lines.

Even though this piece has a very different style and subject matter from Smith's previously discussed works, it has many of the hallmarks of Smith's compositional style. These include multiple sonorities for clarinet, the use of twelve-tone collections, and the emphasis on the [0,2] dyad and the [0,1,3] pitch collection. *Epitaphs* also uses narration, a theatrical element often found in Smith's later works.

### Conclusion

William O. Smith's influences range from Benny Goodman to Béla Bartók, and from Japanese haiku to Greek mythology. With the eclectic nature of his earlier compositions, it is incredible that he has continued to find new inspiration and new compositional techniques to explore. In recent years, Smith has experimented with the electric clarinet as well as interactivity between clarinet and computer. He has written pieces that use a computer to generate the score and display it on a monitor, and pieces that use theatrical elements and spatialization. Smith has worked with his wife creating music for her art installations, and even once wrote a piece for a mile-long line of clarinetists.

William O. Smith's background in jazz and classical composition contributed greatly to the composer he has become. However, the influence of the clarinet itself should not be overlooked. It could be argued that his obsession with creating polyphony in solo clarinet writing was inspired by the instrument itself; the clarinet seems made for this music, with its easily achieved range of three and a half octaves and a clear variation of tone quality among its three registers. Smith obviously has spent many long hours alone with the instrument, simply exploring. As Bartolozzi noted, "the fact remains that true instrumental conquests have never been the fruit of abstract conceptions, but of toilsome direct experience" (1967, p. 60). William O. Smith will undoubtedly continue to toil away at discovering new possibilities of the clarinet for as long as he is able.

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Matrix for Five Pieces, mvt. 3

	I <sub>0</sub>	<b>I</b> 7	I5	l <sub>2</sub>	I4	I1	I <sub>3</sub>	I <sub>10</sub>	l <sub>8</sub>	<b>I</b> 6	l9	I <sub>11</sub>	
P <sub>0</sub>	₽¢,	A <sup>#</sup> ∕₿,	G‡ A	F	G	Е	₽ <sup>₩</sup> G	<del>ظر</del> ة	В	Α	С	D	R <sub>0</sub>
P <sub>5</sub>	G <sup>#</sup> ∕A♭	ᆙ	¢‡∕₽	A# B	С	А	В	F# G	Е	D	F	G	R <sub>5</sub>
<b>P</b> 7	A‡∕_B,	F	₽ţ E	С	D	В	Ť	G‡ A,	₽ŧ∕ <sub>G</sub> ,	Е	G	А	R <sub>7</sub>
P <sub>10</sub>	ŧ	G <sup>‡</sup> ∕A♭	₽ <sup>ŗ</sup> G	ų, ta	F	D	Е	В	А	G	A#∕_₿	С	R <sub>10</sub>
P <sub>8</sub>	В	F# G	Е	₫⁄å	ᆤ	С	D	Α	G	F	Gŧ∕Ą♭	A#∕B,	R <sub>8</sub>
<b>P</b> <sub>11</sub>	D	Α	G	Е	F‡∕ <sub>G</sub> ,	₽ţ Ŀ	F	С	A‡∕_B,	G <sup>#</sup> ∕A <sup>↓</sup> ,	В	₽, L	<b>R</b> 11
P <sub>9</sub>	С	G	F	D	Е	Ċ,₽	₽¢	A⋕∕_B,	Gł	₽₽Ğ	Α	В	R9
P <sub>2</sub>	F	С	A‡∕_B,	G	Α	F‡/G,	G#A	ᆤ	¢∰	В	D	Е	R <sub>2</sub>
<b>P</b> <sub>4</sub>	G	D	С	Α	В	G‡ A	A‡∕_B,	F	₽ţ E,	₫⁄ŗ	Е	₽ŧ∕ġ,	$R_4$
P <sub>6</sub>	Α	Е	D	В	₫⁄å	A‡∕_B,	С	G	F	₽¢	₽ G	GA	R <sub>6</sub>
P <sub>3</sub>	₽ţ	¢%_b	В	G <sup>#</sup> ∕A♭	A <sup>#</sup> ∕B <sup>↓</sup>	G	А	Е	D	С	ᆤ	F	R <sub>3</sub>
<b>P</b> <sub>1</sub>	Е	В	А	F# G	G‡∕_A♭	F	G	D	С	A‡∕_B,	¢,	₽ţ Eŀ	R <sub>1</sub>
	Rl₀	RI <sub>7</sub>	RI₅	RI₂	Rl₄	RI₁	<b>RI</b> ₃	RI <sub>10</sub>	RI <sub>8</sub>	RI <sub>6</sub>	Rl9	RI <sub>11</sub>	

Full Score:

Smith, William O. 1963. Five Pieces for Clarinet Alone. London: Universal Edition.



















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₫.

 $(\Xi)$ 





































Appendix B: Variants Materials

Matrix for Variants, mvt. 5

	I <sub>0</sub>	I <sub>11</sub>	l9	I <sub>10</sub>	I <sub>8</sub>	<b>I</b> 7	I <sub>1</sub>	I <sub>2</sub>	<b>I</b> 4	<b>I</b> 6	I <sub>5</sub>	I <sub>3</sub>	
P <sub>0</sub>	F	Е	D	₽¢ ₽	¢%å	С	F <sup>#</sup> / <sub>G</sub> ,	G	А	В	A <sup>#</sup> ∕₿,	G <sup>‡</sup> À	R <sub>0</sub>
P <sub>1</sub>	₽ <sup>F</sup> G	F	₽ E	Е	D	°∰	G	G#A	A‡∕_B,	С	В	Α	R <sub>1</sub>
P <sub>3</sub>	G♯∕A,	G	F	F# G	Е	₽ŧ Eŀ	Α	A♯∕_B,	С	D	¢%,	В	R <sub>3</sub>
P <sub>2</sub>	G	F# G	Е	F	며 ()	D	G#A	Α	В	₫⁄å	С	A‡∕_B,	R <sub>2</sub>
<b>P</b> <sub>4</sub>	А	G#	F‡/G,	G	F	Е	A‡∕_B,	В	¢∰	₽₽	D	С	$R_4$
P <sub>5</sub>	A‡∕_B,	Α	G	G <sup>#</sup> A,	F# G,	F	В	С	D	Е	며 ()	<sup>م</sup> ت	R₅
P <sub>11</sub>	Е	ᆙ	¢,	D	С	В	F	F# G	G‡ A,	A‡∕_B,	Α	G	<b>R</b> 11
P <sub>10</sub>	₽ E	D	С	₫⁄å	В	A‡∕ B,	Е	F	G	Α	Gŧ∕A♭	₽, G	<b>R</b> 10
P <sub>8</sub>	₫⁄ŗ	С	A‡∕_B,	В	А	G‡ Ab	D	, 탄	F	G	₽₽́G	Е	R <sub>8</sub>
P <sub>6</sub>	В	A <sup>#</sup> ∕B,	G‡ Ab	Α	G	F‡/G,	С	₫⁄_b	₽, E	F	Е	D	R <sub>6</sub>
<b>P</b> 7	С	В	А	A‡∕_B,	G‡∕_A♭	G	₫⁄'n	D	Е	F# G	F	₽ E	R <sub>7</sub>
P <sub>9</sub>	D	¢,	В	С	A♯∕_B,	А	₽ŧ E⊧	Е	F‡/G,	G♯∕A,	G	F	R <sub>9</sub>
	Rl₀	RI <sub>11</sub>	Rl9	RI <sub>10</sub>	RI <sub>8</sub>	RI7	Rl₁	RI₂	RI₄	RI <sub>6</sub>	Rl₅	<b>RI</b> ₃	

Full Score:

Smith, William O. 1967. Variants for Solo Clarinet. London: Universal Edition.

# VARIANIS FUR SULU CLARINEI VARIANTEN FÜR KLARINETTE ALLEIN

William O. Smith



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Universal Edition Nr. 13986 LW





UE 13986 LW

	lo	l <sub>2</sub>	l <sub>5</sub>	<b>I</b> 7	I4	<b>I</b> 6	l9	I <sub>11</sub>	l <sub>8</sub>	I <sub>10</sub>	I1	I <sub>3</sub>	
P <sub>0</sub>	Е	<del>ال</del> م چ	Α	В	G <sup>‡</sup> ∕A♭	A‡∕_B,	₫⁄å	ᆙ	С	D	F	G	R <sub>0</sub>
P <sub>10</sub>	D	Е	G	Α	F# G	G‡	В	œ <sup>′</sup> 'n	A‡∕_B,	С	ᆤ	F	<b>R</b> 10
<b>P</b> 7	В	¢∕,	Е	F# <sub>G</sub> ,	탄	F	G♯∕A,	A♯∕_B,	G	Α	С	D	R <sub>7</sub>
P <sub>5</sub>	Α	В	D	Е	忿	₽ E	F# G	G#	F	G	A <sup>#</sup> ∕₿,	С	R₅
P <sub>8</sub>	С	D	F	G	Е	F‡/G	Α	В	G‡ Ab	A‡∕_B♭	¢‰	₽ţ Eŀ	R <sub>8</sub>
P <sub>6</sub>	A‡∕_B,	С	₽ţ E,	F	D	Е	G	Α	F‡/G,	G#A,	В	d, ₽	R <sub>6</sub>
P <sub>3</sub>	G	Α	С	D	В	C‡∕⊐	Е	F# G	₽¢ Eŀ	F	G <sup>‡</sup> /Ab	A#∕_B,	R <sub>3</sub>
P <sub>1</sub>	F	G	A‡∕_B♭	С	Α	В	D	Е	¢‡∕₽	₽ E	₽₽ G	G‡∕A♭	R <sub>1</sub>
<b>P</b> <sub>4</sub>	G <sup>#</sup> ∕A <sup>↓</sup> ,	A♯∕B,	Ċ,₽	₽ţ,	С	D	F	G	Е	₽ţ	А	В	R4
P <sub>2</sub>	₽ <sup>₩</sup> G	G <sup>‡</sup> /A,	В	چ∕تٍ	A <sup>#</sup> ∕₿,	С	⊮⊧	F	D	Е	G	А	R <sub>2</sub>
P <sub>11</sub>	₽ E	F	Gŧ∕A♭	A‡∕_B,	G	Α	С	D	В	₽, Ţ	Е	₽,ġ	<b>R</b> 11
P <sub>9</sub>	¢∰	며 문	F‡/G,	G <sup>‡</sup> ∕A,	F	G	A‡∕_B,	С	А	В	D	Е	R۹
	RI₀	RI <sub>2</sub>	RI₅	RI <sub>7</sub>	Rl₄	RI <sub>6</sub>	Rl۹	<b>RI</b> ₁1	RI <sub>8</sub>	RI <sub>10</sub>	RI₁	RI₃	

Appendix C: Concerto for Jazz Soloist and Orchestra Matrix

Appendix D: Jazz Set Materials

Matrix for Jazz Set, all mvts.

	I <sub>0</sub>	I5	<b>I</b> 7	I <sub>10</sub>	l <sub>8</sub>	I <sub>1</sub>	<b>I</b> 6	<b>I</b> 4	l9	I <sub>2</sub>	I <sub>3</sub>	I <sub>11</sub>	
P <sub>0</sub>	D	G	А	С	A <sup>#</sup> ∕₿,	₽ŗ Eļ	G <sup>#</sup> ∕A,	<del>ال</del> م ش	В	Е	F	Ļ∕,	R <sub>0</sub>
<b>P</b> 7	А	D	Е	G	F	A‡∕_B♭	₽ E	¢∽_b	F# G	В	С	G‡∕A♭	R <sub>7</sub>
P <sub>5</sub>	G	С	D	F	☞,	G‡ A	₫ ď	В	Е	Α	A♯∕_B,	₽ţ	R5
P <sub>2</sub>	Е	A	В	D	С	F	A‡∕_B,	G#	Ċ‡∕_	F# G	G	₽ E	R <sub>2</sub>
<b>P</b> <sub>4</sub>	₽ŧ∕G	В	¢∰	Е	D	G	С	A♯∕_B♭	Ľ,	G <sup>‡</sup> ∕A♭	Α	F	$R_4$
P <sub>11</sub>	₫⁄¯	F# G	G‡	В	Α	D	G	F	A‡∕_B,	ᆙ	Е	С	<b>R</b> 11
P <sub>6</sub>	G <sup>#</sup> ∕A♭	<del>ش</del>	₽,	F# G	Е	Α	D	С	F	A‡∕_B,	В	G	R <sub>6</sub>
P <sub>8</sub>	A‡∕_B,	ᆤ	F	G#A,	F# G	В	Е	D	G	С	<del>ب</del>	А	R <sub>8</sub>
P <sub>3</sub>	F	A♯∕_B,	С	₽¢ E,	¢,	F‡/G,	В	Α	D	G	G‡ Ab	Е	R <sub>3</sub>
P <sub>10</sub>	С	F	G	A# B	G <sup>‡</sup> /Ab	¢‡∕_b	F# G	Е	Α	D	ᆤ	В	<b>R</b> 10
P <sub>9</sub>	В	Е	F‡/G,	Α	G	С	F	ᆤ	G‡	₫⁄₽	D	A‡∕_B↓	R9
<b>P</b> <sub>1</sub>	₽ŧ	G‡ Ab	A‡∕_B,	₫⁄₽	В	Е	Α	G	С	F	F# G	D	R <sub>1</sub>
	RI₀	RI₅	RI7	RI <sub>10</sub>	RI <sub>8</sub>	RI₁	RI <sub>6</sub>	RI₄	Rl9	RI <sub>2</sub>	RI <sub>3</sub>	RI <sub>11</sub>	

Full Score:

Smith, William O. 1981. Jazz Set for Solo Clarinet. Rochester, NY: SHALL-u-mo

Publications.



for



Play the eighth notes in I III and V as "jazz eighths"



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\* Finger upper notes (except where other fingerings are given)
and trill with the register key until ⊕





DĦ







\* Notated in  $B^{\flat}$ 

IV



# Appendix E: *Epitaphs* Score

Full Score:

Smith, William O. 1993. Epitaphs for Double Clarinet. Seattle, WA: ravenna editions.

for Isla Hejny

Text by Anyte of Tegea

# WILLIAM O. SMITH

# EPITAPHS

## FOR DOUBLE CLARINET

Performance notes:

1. The performer should have two Bb clarinets, one on the left supported between the knees and the other on the right, held in the normal manner. Each mouthpiece should be in the appropriate side of the mouth. The clarinets should be spread at a fairly wide angle.

2. The right hand clarinet should have all of the holes in the upper joint (middle C and above) closed. Corks, pencil erasers or similar materials may be used to plug the holes. Tape wrapped around match sticks also works well. Rubber bands around the clarinet may be used to depress the keys that will close the remaining holes. One rubber band should be in a position so that it may be slipped up over the octave key in movements III and VII.

3. Slurs and ties are used to suggest the durations of notes except in II, which employs conventional notation.

4. Grace notes are to be played as fast as possible.

5. Accidentals effect only the notes they precede except in the case of notes which are immediately repeated.

6. The texts are intended to be read aloud before each piece by the performer or by an assistant.

# ANTIBIA

I mourn the maiden Antibia, through the fame of whose beauty and wisdom

Many eager young men came to her father's house. Fate, the destroyer, rolls hope far away from all.

I. Slow





# THE HE-GOAT

The childen give you reins, O goat, and set a purple bridle around your shaggy mouth; they imitate the horse-contests around the God's temple and you carry them along gently and happily.





# A SOLDIER

1

The earth of Lydia holds Amyntor, Philip's son; he gained many things in iron battle.

No sickness led him to the house of night; he died, holding his round shield before his friend.





# A BIRD

I

You will never rise up again with a flutter of thick wings and rouse me from my bed in the morning;

For a thief came silently upon you in your sleep and killed you, pressing his finger into your throat.



\* T.K. = Trill Key



# ERATO

١

Erato, clasping her father with her hand and shedding tears, spoke these last words:

"O my father, I am yours no longer, for now black death lays the dusk of the grave upon my eyes."

V. Violent





# PAN OF THE FIELDS

"O Pan of the fields, why do you sit by this lonely shaded wood, playing on your shrill-sounding pipe?"

"So that my young flocks may feed on these dewey hills, nibbling the fair haired plants."







# A HORSE

Damis placed this stone to his horse after blood-red Ares struck his breast. And the dark blood seethed through his tough hide and soaked the heavy turf.



This movement my be omitted



### A DOLPHIN

No more, exulting in the calm sea, shall I rise from the depths and thrust through the waves;

No more shall I rush past the beautiful prow of a fair-rowlocked ship, delighting in the figure-head.

The dark waters of the sea dashed me to land and I lie here upon this narrow shore.



