Interval Cycles in György Kurtág’s Post-Dodecaphonic Late Music

Ramin Heydarbeygi
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INTERVAL CYCLES IN
GYÖRGY KURTÁG’S POST-DODECAPHONIC LATE MUSIC

by

Ramin Heydarbeygi

A dissertation submitted to the Graduate Faculty in Music
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

The City University of New York
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Abstract

Interval Cycles in György Kurtág’s Post-Dodecaphonic Late Music

by

Ramin Heydarbeygi

Advisor: Joseph N. Straus

This dissertation examines the use of interval cycles in non-dodecaphonic works of Kurtág. The first chapter identifies the musical objects, and the subsequent chapters connect those elements to certain aspects of Kurtág’s music, including various harmonic gestures (in Chapter 2). Chapter 3 investigates the notion of stratification in some of Kurtág’s harmonies and the formation of harmonic strata that are drawn from different harmonic areas mapped out by the interval cycles. Chapter 4 explores the relationship of symmetry to those elements, and the relationship of tonal centricity to symmetry and cycle segments.
Preface

The Hungarian composer György Kurtág was born in February 19, 1926 in Lugos, Romania. He started piano lesson at five, and later played arrangements of works by Beethoven, Haydn, and Mozart on the piano with his mother. Those early experiences appear to have influenced him throughout his musical life. In 1945 he moved to Hungary and in 1946 begun his studies at the Budapest Academy of Music, where he studied composition with Ferenc Farkas and Sándor Veress. In addition to a degree in composition, he also received two other degrees, one in piano performance, and one in chamber music.

His early compositions are influenced by works of Béla Bartók. In 1946 after he had attended the rehearsals of Bartók’s Violin Concert with Antal Doráti and Yehudi Menuhin, he learned the accompaniment part to the Violin Concerto and performed it with a number of violinists. Kurtág has indicated that this and other works by Bartók have had a decisive influence on his music. Some materials from Bartók’s Violin Concert are incorporated in his Viola Concerto of 1953-54.

After the completion of his studies in Budapest, Kurtág moved to Paris to study with Olivier Messiaen and Darius Milhaud between the years 1957 and 1958. As quoted in Halasz 2002, in an interview in 1993 with Ulrich Dibelius, Kurtág indicated that during his years in Paris (1957-58), he hand copied Webern’s music in order to study it intimately. During this period he also studied Hanns Jelinek’s Anleitung zur Zwölftonkomposition. It is during this period that Kurtág embraces the 12-tone technique (works with early opus numbers); however, he never stickily adheres to the 12-tone principles.
By the early 1970s Kurtág’s harmonic language shifts toward the use of certain interval cycles. The focus of my work is the music that Kurtág has composed since the early 1970s starting with *Játékok I*. Of the works from this era, *Játékok I-IX*, a series of pieces for piano, are of particular interest as they can reveal important information about Kurtág’s musical thinking. (Since *Játékok IX* was published in March 2017, it is, therefore, not included in my analyses.) It appears that in these piano works Kurtág experiments with, and tests, his musical ideas, some of which are then employed in later, larger works.

For example, it appears that before Kurtág composed his “Hommage à Mihály András,” *12 Microludes* for string quartet, Op. 13, which was composed in 1977-78 and published in 1979, he had written three different versions for the piano in preparation of the final version for string quartet. The score indicates 1973 as the date of the composition for “Hommage à Kadosa; 12 Microludes,” *Játékok II*. No specific dates are indicated in the scores for “12 Microludes,” *Játékok II*; and “12 New Microludes,” *Játékok III*. The publication date for *Játékok II* and *Játékok III* is 1979; however, these two pieces are most likely composed about the same time as “Hommage à Kadosa; 12 Microludes,” *Játékok II*, and before “Hommage à Mihály András,” *12 Microludes* for string quartet, Op. 13.

Despite the fact that Kurtág is one of the preeminent composers of our time, there is limited analytical literature about his music. Grmela 2004 is a comprehensive document to date on works of Kurtág, and a part of it is relevant to my work. Grmela’s focus is on the use of quotations, and on the pitch materials. For the latter, she identifies a number of recurring objects, such as the use of “simple diatonic scales,” “simple triads,” and interval classes 1 and 5
as the essential elements in works of Kurtág. She also employs the analytical concepts of Anatol Vieru to measure the diatonicism and chromaticism of PC sets.

Pelo’s focus in Pelo 2009 has been on the nonsymmetricality of harmonic structures in the third movement of *Stele*. He attributes the expressing qualities of the music to its nonsymmetrical formations, and compares Kurtág’s aesthetics to the deliberate distortion of symmetry in other designs from the past, such as those found in Persian carpets.

On the other hand, Clough 2002 examines the use of triads in certain passages from the *Kafka-fragment* in terms of the Neo-Riemannian operations.

The works of other scholars have focused on Kurtág’s approach to setting of texts in his vocal music (see, for example, Blum 2002, Lentsner 2002, and Whithall 2001); or the theatrical elements in his music (see Williams 2002, and Zenck 2002).

Others have discussed his music in terms of what some characterize as the “fragmentary” nature of his music (see, for example, Salvage 2009, and Hodkinson 2004); or have examined the use of quotations and intertextuality, including the reuse of the composer’s own materials (see Frandzel 2002, and Grmela 2002).

Some scholars, however, have focused on works from a particular period in Kurtág’s life and music; Rachel Beckles Willson 2001 has examined the socio-political conditions in Hungary during the time of Kurtág’s early student works, while Halász 2002 has examined his early dodecaphonic music.

The work of Hohmaier with a focus on the study of sketches of Kurtág is particularly interesting (see Hohmaier 2001, and 2002). This area certainly deserves a greater scrutiny and should be explored further, including the influences of Lendvai’s theories on Kurtág’s music.
Acknowledgments

I am grateful to my Committee Members for their involvement. I am grateful to Jeff and Bruce for their support through the years. I would like to thank Steve Blum for his involvement in my dissertation early on, and for sharing his passion and knowledge about Kurtág’s music. I am deeply indebted to my first reader, Phil, who graciously agreed to join the Committee late in the process, for his thoughtful comments. I am particularly grateful to Joe for his wisdom, knowledge, support, and patience; there are no words in any languages I know that can accurately describe my gratitude to Joe.
in memory of Nahid, our Anahid;

in memory of Violet, who was my intellectual guide in life;

in memory of Farzin, . . . it was because of his absence in my life

that I became obsessed with closures and unending closures . . .
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Chapter 1: Interval Cycles and Incomplete Cycle Segments

1.1 — The 5/7-Cycle

The circle of fourths/fifths, and the configurations that can be drawn from it, are central to Kurtág’s harmonic language. This cycle and its derivations can generate harmonies and gestures, and determine tonal centricity in the music of Kurtág. In his interview with Bálint András Varga, Kurtág referred to the interval of the 5th as a symbol of “purity,” which “stand(s) for the zero point.”

Before discussing the manifestation of various segments of the 5/7-cycle in Kurtág’s music, I will describe some aspects of this cycle, including the partitioning and configurations that can be extracted from it to create various cyclic sets. Derivations of the 5/7-cycle can be found in works of many composers. The different set types generated by the 5/7-cycle discussed herein have widespread use in Kurtág’s music. There is only one 5/7-cycle, and in its entirety, it completes the aggregate. It should be noted that all simple 5/7-cycle segments are inversionally symmetrical; sets of odd cardinality have an even index and sets of even cardinality have an odd index.

1.2 — The Pentatonic and Diatonic Collections as Structural Force

Diatonic and pentatonic sets are important structural harmonic units in music of Kurtág. These two sets often mark structural boundaries, and may be viewed as harmonically salient

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1 Varga 2009, 68.
events. Any sequential five-note segment of the 5/7-cycle forms a pentatonic set, and any seven-note segment forms a diatonic set. There are twelve of such pentatonic and diatonic collections. The pentads are members of set-class 5-35 (02479), and heptads of set-class 7-35 (013568T). The two sets are closely related through their subset/superset, and complementary relationships. As complementary sets, they have the same degree of symmetry, and both pentads and heptads are inversionally symmetrical. Each of the twelve heptads shares the same axes with its literally complementary pentad. The symmetrical property of pentatonic and diatonic sets can have implication for tonal centers, and can guide harmonic motions. All sets generated by the 5/7-cycle are generally considered even for their cardinality; the pentatonic and the diatonic collections are maximally even for their cardinality, which quantifies their consonance qualities.2

Figure 1.1 contains a vertical statement of a 5/7-cycle segment (B♭-C-D-F-G, a member of set-class 5-35 (02479)) in m. 24 of “Grabkreuz auf dem Friedhof von Mecseknaádasd,” from Three Old Inscriptions, Op. 25, for voice and piano. On the last beat of bar 24, “God’s will” is a vertical statement of a pentad of class 5-35. This pitch-class set is laid out registrally as a stack of perfect fifths with C4 placed as the midpoint in pitch space.

2 For discussion on evenness and chromaticness of sets, and their relationship to consonant and dissonant qualities of set classes, see Straus 2005.
In the first movement of *Officium Breve in memoriam Andreea Szervánszky*, Op. 28, for string quartet, a pentatonic collection unfolds by solo violoncello. The pitch content of the entire first movement is a white-key pentatonic set, C-D-E-G-A of set-class 5-35 (02479), which unfolds in the 5/7-cycle (see Figure 1.2). Pentachord of set-class 5-35, as a structural force, marks the starting point of the work.
Kurtág starts his *...quasi una fantasia...*, Op. 27, for piano and group of instruments with a diatonic set played by solo piano in scalar order (B-C-D-E-F-G-A), a member of set-class 7-35 (013568T) (see Figure 1.3). In this example, it is the white-key natural diatonic area that marks the starting point of the work.
Figure 1.3: Heptachord of SC 7-35 from the opening bars of *...quasi una fantasia...*, Op. 27.
In “Flowers we are … [embracing sounds],” *Játékok VIII* for piano four hands, the harmony consists of a diatonic heptachord (B-C-D-E-F-G-A), a member of set-class 7-35 (013568T) (see Figure 1.4). The piece starts on G, forms the white-key diatonic heptachord, and ends on C.

Figure 1.4: Unfolding of a diatonic heptad in “Flowers we are … [embracing sounds],” *Játékok VIII.*
1.3 — 5/7-Cyclic Segments of Cardinalities Other than 5 and 7

In addition to the structural forces discussed above, some of the elements that Kurtág uses are 5/7-cycle segments of different cardinalities. Table 2.1 provides a list of all segments of the 5/7-cycle, except the monad and its undecachord complement, and the dodecachord. The sets listed in each row are complementary. Since 6-32 is a self-complementary set, it is stated only once.

<table>
<thead>
<tr>
<th>Set-Classes Generated by the 5/7-Cycle and their Complements</th>
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<tbody>
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<td>2-5</td>
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</tr>
<tr>
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<td>5-35</td>
</tr>
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Table 1.1: List of the 5/7-cycle segments.

The three-bar phrase that begins in m. 21 in “Perpetuum mobile” from *Signs, Games and Messages* for string trio begins with C-G dyad of set-class 2-5 (see Figure 1.5). In this example, the C-G dyad, as a 5/7-cyclic segment, functions as the interval that generates an unfolding of the 5/7-cycle. The pitch content of this phrase is an unfolding in circle of fifths and in registral order from C2 up to C♯7, which proliferates from the C-G dyad. The presence of C2 in the violoncello
line on the downbeat of m. 21 distorts the otherwise symmetrical formation of the phrase around A4.

Figure 1.5: The C-G dyad (SC 2-5) in m. 21 in “Perpetuum mobile” from *Signs, Games and Messages*.

A three-note 5/7-cycle segment forms set-class 3-9 (027). One such example can be found in *Scenes from a Novel*, Op. 19, for soprano, cimbalom, violin, and contrabass, where in the opening bars the violin outlines, on open strings, the trichord D-E-A, a member of set-class 3-9 (027). Figure 1.6 shows this three-note cyclic set in the violin line.
Tetrachords of set-class 4-23 (0257), another 5/7-cyclic segment, are also found in Kurtág’s music. Movement V of *6 Moments Musicaux*, Op. 44, for string quartet begins with tetrachord D-E-G-A, set-class 4-23 (0257); violin-I has the E, violin-II and viola the A, and violoncello the D-G dyad (see Figure 1.7). The inclusion of B in violin-II at the end of m. 2 turns this set into a pentatonic collection. In the third measure, when the harmony moves to a pentatonic set, set-class 4-23 is isolated by tone color. In the third bar, the G is played *ordinario* by violin-I, while tetrachord A-B-D-E of set-class 4-23 (0257) is highlighted by natural harmonics played by other instruments.

Figure 1.6: Trichord of SC 3-9 from the opening bars of *Scenes from a Novel*. 
Figure 1.7: Tetrachords of SC 4-23 (0257) in the opening bars of *6 Moments Musicaux*, movement V.

An example of hexachord 6-32 (024579) in scalar order, C-D-E-F-G-A, can be found in m. 6 of “Kroó György in memoriam” from *Signs, Games and Messages* for solo viola (see Figure 1.8). The work starts with a statement of the diatonic heptachord E-F-G-A-B♭-C-D of set-class 7-35 (013568T), and is followed by two of its subsets: the B♭-C-D trichord of set-class

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3 In this example I am considering broken bar lines as separate measures.
3-6 (024), and the C-D-E-F-G-A hexachord of set-class 6-32 (024579). Kurtág’s *Signs, Games and Messages* is a multi-volume work written for solo string instruments and a combination of instruments. Some works in these volumes have the same title and pitch materials. In this example, I have chosen to show the use of this hexachord in the solo viola version of “Kroó György in memoriam”; however, Kurtág, in addition to the solo viola version, has written two other versions with the same title in *Signs, Games and Messages* series for solo violoncello, and for string trio. Hexachord 6-32 is found in all versions.

![Figure 1.8: Hexachord 6-32 (024579) in bar 6 of “Kroó György in memoriam” from Signs, Games and Messages for solo viola.](image)

The first movement of “12 new microludes,” *Játékok III*, is harmonically dominated by the white-key diatonic area, B-C-D-E-F-G-A heptachord of set-class 7-35 (013568T) (see Figure 1.9). At the closure (the final bar), the F♯ is played by both hands. The inclusion of the F♯ changes the harmonic content of the entire movement to octachord E-F-F♯-G-A-B-C-D-of set-class 8-23 (0123578T), another 5/7-cycle segment.
Figure 1.9: The diatonic octad (SC 8-23) as the pitch content of the first movement of “12 new microludes,” *Játékok III.*
“A Flower for Nuria,” Játékok VI (Figure 1.10) is a palindrome representing the opening and closing gestures of a flower. The pitch content of the piece is octachord A-\(B^\flat\)-\(B^\natural\)-C-D-E-F-G of set-class 8-23 (0123578T). In this example, the white-key diatonic heptachord is conjoined with the \(B^\flat\) to form a member of set-class 8-23.
Figure 1.10: The diatonic octad (SC 8-23) as the pitch content of “A Flower for Nuria,” Játékok VI.
Now I would like to return to “Perpetuum mobile,” which I had discussed earlier and consider the harmonic gesture of the phrase beyond the opening bar. The pitch content of the three-bar phrase (starting in m. 21) in “Perpetuum mobile” from *Signs, Games and Messages* for string trio is nonachord B-C-C♯-D-E-F-F♯-G-A of set-class 9-9 (01235678T) (see Figure 1.11). As noted earlier, this phrase begins with the C-G dyad of set-class 2-5 (i5), which is the interval that generates an unfolding that forms the nonachord of set-class 9-9.

Figure 1.11: Nonachord of SC 9-9 in “Perpetuum mobile” from *Signs, Games and Messages*, mm. 21-23.
Kurtág, at a workshop at Carnegie Hall in 2009, where I met the master, after performing “Flowers we are … [embracing sounds],” *Játékok VIII* for piano four hands (Figure 1.4), talked about the opening and closing gestures of this piece, and the physical gesture of “embracing” that is built in the performance. The right hand of the pianist sitting on the right reaches for the low register of the piano, and the left hand of the pianist sitting on the left reaches for the high register of the piano, and, as the title suggests, the two performers physically “embrace” each other. Kurtág also mentioned that this musical gesture (unfolding of the diatonic collection) can continue (beyond the diatonic heptad presented in “Flowers we are … [embracing sounds],” *Játékok VIII*). The musical examples in Figures 1.4, 1.10, and 1.12 show that this “continuation” beyond the diatonic set takes place in the realm of the 5/7-cycle — expanding from set-class 7-35 to set-classes 8-23, 9-9, and 11-1 (and beyond). In “Flowers we are … [embracing sounds],” *Játékok VIII*, (Figures 1.4), “A Flower for Nuria,” *Játékok VI* (Figures 1.10), and “. . . and Once More: Flowers We Are . . .,” *Játékok I* (Figures 1.12), the use of set-classes 7-35, 8-23, 9-9 and 11-1, show an expansion in pitch class space of the cycle of fifths.

In “. . . and Once More: Flowers We Are . . .,” *Játékok I* (Figure 1.12) after a firm pause at the end of m. 1 (a performance direction instructs to “let the sound die away completely”), a nonachord of set-class 9-9 is gradually formed. After the pause, in parallel fifths (C-G and D-A) the diatonic hexachord C-D-E-F-G-A of set-class 6-32 (024579) is outlined with the black notes. Then the dyad B♮-B♭ in m. 2 shifts the harmony to A-B♭-B♯-C-D-E-F-G diatonic octachord, set-class 8-23 (0123578T), and finally the F♯, as the final note, shifts the harmony to nonachord of set-class 9-9 (01235678T), E-F-F♯-G-A-B♭-B♯-C-D (see Figure 1.12). The G♭-A♭-D♭ trichord of 3-9 (027) that precedes this nonachord is also another 5/7-cycle segment (although not a literal
complement of the 9-9 member). The final note of the piece is an F♯, which is an enharmonic restatement of the first pitch. In a harmonic environment formed by naturals and flats, the spelling of the final note as F♯ visually stands out as an oddity, or, more precisely, as the “wrong” note. Had the final note been an E♭ (the correct note), then the aggregate would have been created. With the “missing” E♭, the pitch content of the piece is set-class 11-1 (0123456789T), a symmetrical undecachord around 3/9.

As the different set types in these examples suggest, in fact the continuation of the music beyond the diatonic collection that Kurtág had referred to occurs in the realm of the 5/7-cycle. It should be noted, however, that the pitch content of all of Kurtág’s “flowers” are not segmentations of the 5/7-cycle. For example, the pitch content of “…flowers also the stars…,” Játékok I is drawn from the 1/11-cycle. For the discussion of the 1/11-cycle, see § 1.6—The 1/11-Cycle.
Figure 1.12: "... and Once More: Flowers We Are . . .," Játékok I; all harmonic formations are 5/7-cyclic segments.
Kurtág begins “Helyettem kis virág (… lovely greetings to Grete Spinnrad),” *Játékok V*, with two different pentachords; F♯-G♯-A♯-C♯-D♯ in the right hand, and F-G-A-C-D in the left hand (see Figure 1.13). Both pentachords are members of set-class 5-35 (02479). In the second system, by including the E and the B to the pentachord of the left hand, Kurtág changes the pitch content of the left hand to the B-C-D-E-F-G-A heptachord of set-class 7-35 (013568T), while the pitch content of the right hand remains unchanged. As a result, in the first system, compositely, the F-F♯-G-G♯-A-A♯-C♯-D♯ decachord of set-class 10-5 (012345789T) is formed; and in the second system the two complementary sets of 5-35 and 7-35 (the two structural forces) partitioned in the right hand and the left hand, respectively, form the aggregate.
Figure 1.13: in “Helyettem kis virág (… lovely greetings to Grete Spinnrad),” Játékok V, two pentads form SC 10-5, and two complementary sets of 5-35 and 7-35 form the aggregate.
1.4 — Triads as derivations of the 5/7-cycle

Triads and triadic combination are common recurrences in Kurtág’s music. The superimposition of two T₃- or T₄-related (or I-related) 5/7-cycles result in construction of compound <3, 4> or <4, 3> interval cycles. Figure 1.14 shows the intervalic structure of two T₃-related 5/7-cycles. Any three-note segment of two T₃-related 5/7-cycles forms a triad.

![Figure 1.14: Intervalic structure of two T₃-related 5/7-cycle. A three-note cyclic segment forms a triad.](image)

Use of triads can be found, for example, in “Organs and bells in memory of Doctor László Dobszay,” *Játékok V* (see Figure 1.15). In the last four bars, Kurtág turns to vertical triadic harmonies. At six bars before the end (m. 21), the E-G♯-B triad is followed by D-F-A, and in m. 25, Ab-C♭-Eb leads to the C-E-G in the final bar. All of these triads are members of set-class 3-11 (037). The A♯-C♯-E of m. 24 is indeed a simple interval 3 cycle, and not a
compound <4, 3> cycle. As noted, these triads can be considered as three-note segments of two interwoven 5/7-cycles that are T₃-related.

Figure 1.15: The triads in the final 6 bars (mm. 21-26) of “Organs and bells in memory of Doctor László Dobszay,” Játékok V as segments of two T₃-related 5/7-cycles.

In the fourth movement of Hommage à R. Sch., Op. 15/d, for clarinet (also bass drum), viola, and piano (shown in Figure 1.16) the music starts in a chromatic environment (mm. 1-3) and moves to a triadic environment (mm. 4-5). In the final two bars, all instruments outline different triads. In m. 4, C-E-G in the piano is followed by D♭-F♭-A♭ in viola, and in the final
bar, after D-F-A is stated by clarinet, the piece is brought to an end with the E♭-G♭-B♭ triad outlined by viola and piano.

Figure 1.16: Movement IV, *Hommage à R. Sch.*, Op. 15/d. The triads as segments of two $T_3$-related simultaneously unfolding 5/7-cycles.

Figure 1.17 shows a two-bar phrase starting in m. 34 from “Hommage à Pierre Boulez,” *Játékok VII*. The harmony at the end of this phrase is made up of two $T_6$-related pentachords that
are compound \(<4, 3, 4, 3>\) intervals cycles; A♯-B-C♯-D♯-F♯ in the right hand, and E-F-G-A-C in the left hand. Both pentachords are members of set-class 5-27 (01358), and together form the D♯-E-F-F♯-G-A-A♯-B-C-C♯ decachord of set-class 10-6 (012346789T). This decachord is constructed as stacks of thirds in registral order from F4 to C♯7, and is bisected into two five-note segments of this compound interval cycle.

![Figure 1.17: Triadic combination in “Hommage à Pierre Boulez,” Játékok VII, m.34-35.](image)

Systematic use of the 5/7-cycle creates harmonic unity, coherence, and consistency; however, at the same time, it can constrain harmonic diversity. Kurtág constructs pitch class materials that are incomplete simple cycle segments, or incomplete compound cycle segments as a way to counter the harmonic constraint imposed by the use of a single cycle. These
segmentations, and derivations of the 5/7-cycle, provide harmonic variety while maintaining consistency within the realm of this cyclic pitch materials.

1.5 — 2/10- and 4/8-Cycles as Derivatives of the 5/7-Cycle

Removal of pitches from established structures has been a stylistic trait of Kurtág’s music. Systematic removal of pitches from the 5/7-cycle results in formation of new intervals cycles — new cycles that are derived from the 5/7-cycle. As shown in Figure 1.18, removing alternate pitches from the 5/7-cycle results in formation of the 2/10-cycles. There are two such cycles. There is a close association between the 2/10- and the 4/8-cycles. Removing alternate pitches from the 2/10-cycles results in formation of the 4/8-cycles. There are four such cycles. Cyclical sets generated by interval 4/8 can be considered as subsets of the 2/10-cycles, as they can be formed by further removal of alternate pitches from the 2/10-cycle. If we can accept this association between the 2/10- and the 4/8-cycles, then we can accept a more remote relation between the 4/8- and the 5/7-cycles. In a harmonic environment dominated by the 2/10-cycle, the use of augmented triads is not unexpected.

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4 See, for example, Grmela 2004 who discusses Kurtág’s “habit” of presenting a circle of fifths, or twelve tone rows with a few missing notes.

5 It should be noted that removing alternating pitches from the 1/11-cycle also results in formation of the 2/10-cycles. Interval 1/11-cycle is discussed below. However, I have chosen to emphasize the relationship of the 2/10-cycles to the 5/7-cycle for the importance the latter plays in Kurtág’s music. Given the prominent role of the 5/7-cycle, the 2/10-cycles appear to be more frequently used in a harmonic environment dominated by the 5/7-cycle.
Figure 1.18: The alternate pitches of the 5/7-cycle form two 2/10-cycles, and alternate pitches of the 2/10-cycles form four 4/8-cycles.

A three-note segment of the 2/10-cycle forms set-class 3-6. Kurtág has referred to his use of set-class 3-6 in song no. 15, “Lesz lágy hús mellé ifjú kalarábé” (There will be tender meat with young kohlrabi) of *Attila József - Fragments*, Op. 20, for soprano solo, and in song no. 6, “A puszta létige szomorúsága” of *S. K. Remembrance Noise*, Op. 12, for soprano and violin as “the same do-re-mi material, note for note.” The song from *Attila József - Fragments* begins with the D♭-E♭-F trichord (see Figure 1.19); and the entire pitch materials for the soprano line of the song from *S. K. Remembrance Noise* consists of trichord F-G-A (see Figure 1.20). (Figure 1.20 shows only m. 2, and not the entire song.) Both trichords are members of set-

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6 Varga 2009, 10.
class 3-6 (024). Of course, there is only one common pitch between the two trichords, the F, but Kurtág’s reference to these sets as the “same,” “note for note” has to be for the fact that both sets are of the same 2/10-cycle.

Figure 1.19: In song no. 15 of *Attila József - Fragments*, the pitches of the opening line are generated from the 2/10-cycle.
Figure 1.20: The soprano entrance in m. 2 of song no. 6 from S. K. Remembrance Noise. The pitches of the soprano line are generated from the 2/10-cycle.

The fifth movement (“In der Nacht”) from Hommage à R. Sch. is in fact saturated with the four 4/8-cycles. At the closure, in the final two bars of the movement, the solo piano brings the movement to an end with three of the 4/8-cycles. Trichord D♭-F-A is followed by C-E-G♯, and trichord D-F♯-B♭ is stated in the final bar (see Figure 1.21). All sets are members of set-class 3-12 (048), and generated from the 4/8-cycle.
Figure 1.21: The fifth movement of *Hommage à R. Sch.* ends with three of the 4/8-cycles.

1.6 — The 1/11-Cycle

I have already discussed the 5/7-cycle and its derivations. Now I would like to turn to another interval cycle favored by Kurtág, the 1/11-cycle. Before I begin my discussion for this part, it would be beneficial to examine the description for the graphic notations included in all volumes of the scores to Kurtág’s *Játékok* for piano (see Figure 1.22). In these descriptions one finds the composer’s graphic notations for set classes that are frequently found in his music. They sum up the most important elements utilized by Kurtág: the white keys and the black keys (the diatonic collection and its complement, the pentatonic collection, as the 5/7-cyclic segments), and the chromatic collection (the 1/11-cycle).
The 5/7- and 1/11-cycles are related to each other through some common properties; these are the only two cycles with the same cardinality, there is only one 5/7-cycle and one 1/11-cycle, and both, as complete cycles, form the aggregate. Conversely, the 5/7- and 1/11-cycles contrast in notable ways. Any 1/11-cycle segment is maximally chromatic for its cardinality; relative to that, any 5/7-cycle segment of the same cardinality is more even — sets of cardinality 5 and 7 are maximally even. These qualities have implications for harmonic consonances and dissonances. The two contrasting cycles together create two related but harmonically opposing poles that allow Kurtág to harmonically navigate between consonant and dissonant harmonies, through even, and chromatic sets.\textsuperscript{7} It should be noted, however, that sets derived from the 5/7-cycle, incomplete 5/7-cyclic segments that are not sequentially formed, are not maximally even for their cardinality; nonetheless, they have more consonant qualities than chromatic sets.

Figure 1.23 shows part of the opening bars from “Цветов осенних увяданье . . .” (Autumn flowers fading . . .), 

Messages of the Late R. V. Troussova, Op. 17, for

\textsuperscript{7} The chromatic/diatonic dichotomy is one of the principle ideas in Lendvai theories and, as has been noted by Grmela in her discussion on Kurtág’s music, in Vieru theories, see Lendvai 1971 or 1983, and Grmela 2004.
large ensemble, where the celeste presents the unfolding of the complete 1/11-cycle (from B to C) in the first measure and forms the aggregate. The same cycle appears in the following bar also in celeste (starting on D♭), as it does in the piano line notated below the celeste line.

Figure 1.23: The 1/11-cycle in the celeste line in “Цветов осенних увяданье . . .” (Autumn flowers fading . . .), Messages of the Late R. V. Troussova.

In a different song from the same work, 1/11-cycle segments are used in a canon for cimbalom and voice in “Великая беда . . .” (Great misery . . .) (see Figure 1.24). In the opening
of this song, the 1/11-interval cycle manifests itself in the cimbalom line, the bass line, and the canon subject. First, segments of the 1/11-cycle are presented in the cimbalom. While the voice plainly sings the pitches of the canon subject (D-F♯-C♯-F♮-etc.), the cimbalom embellishes the melodic line of the canon with 1/11-cycle segments.  As annotated in the score, the canon subject in the cimbalom line is presented as the axes of symmetrical sets formed as different 1/11-cycle segments. In the cimbalom line, the first note of the canon, D, is the axis of the C♯-D-E♭ chromatic trichord, which is followed by F♯ as the axis of F-F♯-G trichord — both trichords are of set-class 3-1 (012). Then the canon continues with C♯ as the axis of the B♭-B♯-C-C♯-D-E♭-E♯ heptachord, and, at the end of the first system, with F as the axis of another chromatic heptachord, D-E♭-E-F-F♯-G-A♭ — both heptachords are members of set-class 7-1 (0123456). The bass line in the cimbalom is also an unfolding of the 1/11-cycle. It outlines a descending chromatic line, the C-B-B♭-A tetrachord of set-class 4-1 (0123). Finally, the 1/11-cycle manifests itself in the melodic line of the canon.

As marked in the vocal line of the example, the canon contains two simultaneous unfoldings of the 1/11-cycle: D-C♯, and F♯-F♮. For clarity, this simultaneous unfolding of the 1/11-cycle in the canon is marked in Figure 1.24 only in the vocal line, and not in the cimbalom line.

8 In this excerpt only the first few notes of the canon are included.
There is a background unfolding of the 1/11-cycle in all four microludes: “Hommage à Kadosa; 12 Microludes,” Játékok II; “12 Microludes,” Játék kII; “12 New Microludes,” Játék kIII; and “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. The tonal centers of each movement chromatically move up from C in the first movement to B in the last. As a result, in each of these twelve microludes, Kurtág creates a background voice leading that unfolds in each movement in the 1/11-cycle.

Figure 1.24: The 1/11-cycle in the opening bars of “Великая беда . . .” (Great misery . . .), Messages of the Late R. V. Trousova.
The fourth movement of 12 Microludes for string quartet is centered around E♭. In this excerpt from the opening measures, harmonies and the motivic materials are segments of the 1/11-cycle. The movement begins with E♭, the tonal center of the movement, played by violoncello (see Figure 1.24). This trichord, D-E♭-E♮ of set-class 3-1 (012), generated by the 1/11-cycle, takes on a motivic function. After the initial statement of the motive in the violoncello line, it is stated by violin-II as E♭-E♮-F (set-class 3-1 (012)), with E as its axis. It is then expanded to a chromatic tetrachord, C-C♯-D-E♭ of set-class 4-1 (0123), in the viola line, and followed by another statement of the motive in violin-I, E-F-F♯ (set-class 3-1 (012)). All these sets are generated by the 1/11-cycle, and preceded by the two sets (played in octave union) that contain semitones, C♯-D-G trichord of set-class 3-5 (016) played by violoncello and violin-I, and G♯-A-C♯ of set-class 3-4 (015) played by violin-II and viola, but the gap is not chromatically filled in these two sets. The B-B♭ dyad of set-class 2-1 (01) played in pizz. by violin-I and violoncello brings the first section to a close with the formation of the aggregate. The next measure continues (in arco) with the C-C♯-D-E♭-E♮ chromatic hexachord of set-class 6-1 (012345), another 1/11-cyclic segment.
1.7 — Funnels

Funnel structures are favored by Kurtág, and appear in various forms in his music. Funnels are an unfolding of a series of inversionally related dyads that are formed around a central pitch (or two pitches). Such structures have been referred to as wedge by Perle and
Lewin, among others, and pyramid by Forte; see Perle 1955, Lewin 1993, and Forte 1998. I adhere to the term historically used in analytical literature on the music of Kurtág.

Kurtág constructs geometric structures formed by unfolding in any interval around a pitch (or two pitches). Those with invariant sums of dyads result in symmetrical formation of funnels. He also constructs funnels that unfold around a pitch (or two pitches) other than the axis tone, in which case, the geometric structures are not inversionally symmetrical around an axis pitch, and the sums of dyads are variant. Nonetheless, the resultant sets, as sequential segments of an interval cycle, in all cases are symmetrical, but not the funnel structure. I will discuss specific examples below.

Frequently found in Kurtág’s music are funnels based on the 1/11-cycle. Figure 1.26a shows the score for “A Hungarian Lesson for Foreigners,” Játékok VI, and Figure 1.26b shows the funnel structure of the piece. The structure of the entire piece is a symmetrical funnel that starts with the E-F dyad (the inversional axes of the funnel) in the first bar, and unfolds in 1/11-cycle in pitch class space.

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9 Perle has considered similar structures with variant dyadic sum as dissonant configuration, see Perle 1996. I, however, consider such dyads desymmetrizing the entire structure.
I have already discussed the diatonic harmony in “Flowers we are … [embracing sounds],” Játékok VIII for piano four hands. Now I would like to discuss the structure of the piece as a whole. The pitch content of the work is the diatonic B-C-D-E-F-G-A heptachord of
set-class 7-35 (013568T), which is inversionally symmetrical about 2/8 (see Figure 1.27a).

Figure 1.27b shows the funnel structure unfolding around G. Since the piece unfolds not around the axis tone, the sum of dyads are variant. The B-E dyad in the third bar at sum 3 deviates from the sum-2 dyads, and this “dissonant” quality breaks the symmetrical structure of the funnel.

Nonetheless, as noted earlier, the resultant set, as a cyclic segment, is symmetrical, but not the structure of the funnel.

Figure 1.27a: Unfolding of a diatonic heptad in “Flowers we are … [embracing sounds],” \(Játékok \text{ VIII.}\)
(The grouping of notes by dotted slurs in the score are Kurtág’s.)
In movement XI of *12 Microludes* for string quartet, the tonal center is B♭. Figure 1.28a shows the annotated score, where the funnel, laid out over the entire movement, is marked; Figure 1.28b shows the funnel structure starting on B♭, with D♯ and F♯ as the boundary notes. The viola starts the funnel in m. 1 with B♭. The structure of the funnel is articulated by the phrase structure. The unfolding pitches of the funnel, except the last three, are marked at the beginning of each phrase that gradually expand from two bars to four bars. The funnel unfolds upward with B♮ in violin-II in m. 3, followed by the C in violoncello in m. 6, and downward with the A of violin-I in m. 10. The unfolding continues in the second system upward with C♯ in m. 12 in viola, and downward with G♯ in violin-II in m. 13. After the D in violin-I in m. 16, the funnel continues not in pitch space but in pitch-class space with the G and F♯, and D♯ in violin-I in mm. 18-19.

In this example, the funnel functions as a harmonic stratum laid out over the movement that starts on the tonal center of the movement, B♭, and unfolds in 1/11-cycle in non-equidistances from the B♭ with D♯ and F♯ as the boundary notes. The funnel radiates from B♭ to form decachord F♯-G♯-A-B♭-B♯-C-C♯-D-D♯ of set-class 10-1 (0123456789). The lack of

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10 The use of stems in Figure 1.28a is to show the unfolding of the 1/11-cycle. It does not suggest a Schenkerian approach.
inversional partner for the D♯ forces the boundary intervals to become non-equidistant from the pitch in which the funnel radiates. As a result, a nonsymmetrical funnel is formed, and the axis slightly shifts to B♭/B♮.
Figure 1.28a: A nonsymmetrical funnel in 1/11-cycle unfolds in movement 11 of *12 Microludes* for string quartet.
The funnel structure in Kurtág’s music often starts on a note and expands by unfolding in two different directions away from the starting pitch; however, in some cases it contracts, closing on the axis. One such example is found at the closure of *S. K. Remembrance Noise*. Figure 1.29 shows the last few bars of this work where the violin brings the piece to a close. The pitches are symmetrically structured around G♯4, and in pitch space unfold in 1/11-cycle. The example starts with the axis G♯4 unfolding chromatically up to C5 and down to E4. In the next system, the funnel contracts in pitch space from B♭4 to F♯4, followed by further contraction from A4 to G4 — all symmetrically placed around the G♯4 axis. Finally, A4-G♯4 in the penultimate measure is followed by the G♯4 *tremolo*, which, with its coloristic effect, signals the closure on the axis note.
Figure 1.29: The funnel structure in the closing of *S. K. Remembrance Noise* is structured around G♯4 axis.

In Kurtág’s music, funnels are also used as small gestures. The use of the 1/11-cycle in movement IV of *12 Microludes* for string quartet was discussed earlier. The chromatic trichord
of set-class 3-1 (012) that takes on a motive role in the piece has in fact a funnel structure in pitch-class space (see Figure 1.30).

Figure 1.30: The motivic gesture in form of a funnel in movement IV of 12 Microludes for string quartet.

As mentioned earlier and as the excerpts discussed above demonstrate, funnels in Kurtág’s music are frequently based on the 1/11-cycle; however, other interval cycles are also used to construct funnels. One such example is found in the first movement of Officium Breve in memoriam Andreæ Szervánszky, Op. 28, for string quartet, discussed earlier, where a pentatonic collection is presented by solo violoncello in form of a funnel (see Figure 1.31). The pitch content of the entire first movement is a white-key pentatonic set, C-D-E-G-A of set-class 5-35 (02479), which is inversionally symmetrical about 2/8. The movement starts with D and unfolds in the 5/7-cycle to form a funnel in pitch-class space. Consequently, the D is implied as the tonal center. The relevance of this tonal center is discussed in Chapter II.
Figure 1.31: In the first movement of *Officium Breve in memoriam Andrea Szervánszky*, a funnel unfolds in 5/7-cycle around its axis tone of D.

In the first movement of *12 Microludes* for string quartet, two funnels are laid over the entire movement as two harmonic strata: one is generated by the 1/11-cycle, and the other by the 2/10-cycle (see Figure 1.32). The viola line contains a funnel in the 1/11-cycle, marked in the example with dotted lines. It starts on the axis tone of A4♯ in m. 5 and unfolds down a semitone to A4♮ and up a semitone to B4. Another funnel unfolds in the 2/10-cycle, which takes place between the two violins with shared pitches in the viola line. In m. 2 violin-II starts the funnel on E4 and moves up to F♯4 in m. 4, and violin-I starts on F5 and moves down to Eb5 in m. 3. The E4 and the F♯4 are restated in the viola line. The funnel ends with the G♯4 of violin-II in m. 7. In this case, the funnel contracts in non-equidistances from F5/E4 down to Eb5 and up to G♯4. Had the funnel continued its downward motion, the next pitch in violin-I would have been
C♯5; however, there is no C♯ in this movement, and the funnel is left as an incomplete statement.

Other aspects of the harmony in this movement will be discussed in Chapter III.

Figure 1.32: Two funnels unfold in 2/10-, and 1/11-cycles in movement I of 12 Microludes for string quartet.
Chapter II: Harmonic Gestures

2.1 — Overview of Gestures

In Kurtág’s music a gesture may be a motion from a small cyclic segment to a complete form of a structural force. In such gestures, an incomplete cycle segment is completed through a gesture within a formal unit that can end with a pentad, a heptad, or the aggregate. However, as noted earlier, Kurtág at times presents incomplete statements of established structures. In such cases, the gestures may be from one incomplete cycle segment to another incomplete cycle segment.

Other gestures may not be focused on the completion of a cyclic segment; instead, the focus may be on harmonic areas. Some gestures may simply establish tonal centers by outlining a structural force of a pentad or a heptad, or by presenting cyclic segments or sets derived from the 5/7-cycle that imply a harmonic area.

Further, other gestures may be a motion from a 5/7-cycle segment (or a derivation of the 5/7-cycle) that represents one harmonic area to another that represents a different harmonic area. Finally, there may not be a closing gesture, which implies the continuation of music after the piece has come to an end.
2.2 — Completing the Cycle

A recurring harmonic gesture in Kurtág’s music has been a motion from a small cyclic segment to a complete structural unit. When the small cyclic segments are generated by the 5/7-cycle, they can be completed in form of a pentatonic or a diatonic set, or, at times, the aggregate; and when the small cyclic segments are generated by the 1/11-cycle, they may be completed in form of the aggregate.

“Bell-fanfare for Sándor Veress,” Játékok V, starts with dyad D-A of set-class 2-5, a 5/7-cycle segment sustained in the opening bars (see Figure 2.1). In the beginning, the D-A dyad is stated in alternate measures. In other measures, it is joined by other pitches to form sets that are larger incomplete 5/7-cycle segments. In m. 7, which marks the end of the first formal unit, pentachord D♭-E♭-F-A♭-B♭ of set-class 5-35 (02479) is formed, a structural force. After the initial statement of the D-A dyad, this pentad is the first sequential formation of the 5/7-cycle, which marks the boundary of the first structural unit; however, since the D-A dyad is not part of the pitch content of this heptad, the end of the first phrase is not considered a completion of the i5.

\[\text{11} \]

11 I consider both solid and broken lines as bar lines.
The opening seven-bar section is followed by another seven-bar section. Changes of character, articulation, meter (marked above the bar line), and rhythm suggest the beginning of a new section (mm. 8-14). But now, a three-note segment of the 5/7-cycle marks this beginning, the A-B-E trichord of set-class 3-9 (027). In the final bar, the heptachord G♯-A-B-C♯-D-E-F♯ of set-class 7-35 (013568T) marks the end of the piece. The final chord contains the D4 and the A4 that marked the beginning of the piece, as well as the A4, B5 and E5 that began the second
section. The final heptad completes the D-A dyad, as well as the A-B-E trichord of the second unit (m. 8), with a statement of a structural force.

The middle section (mm. 8-14) is divided into two parts, and the harmony in m. 12 marks this division by a nine-note segment of the 5/7-cycle, nonachord F#-G#-A-B-C-C#-D (set-class 9-9 (01235678T)). The presence of this chord in m. 12 suggests a different, opposing gesture in the last five bars, a motion from a larger 5/7-cyclic segment (set-class 9-9) to a smaller cyclic segment (set-class 7-35). This gestural change at the end does not change the overall motion of this piece from a small 5/7-cyclic segment (the D-A dyad) to a larger 5/7-cyclic segment (set-class 7-35). In this example, the pentad of 5-35 brought the first structural unit a close in m. 7; its complement, the heptad of 7-35, brought the entire piece to a close.

Previously, in Chapter I, I discussed the harmony in m. 24 of “Grabkreuz auf dem Friedhof von Mecseknádasd” from Three Old Inscriptions. Now I would like to return to the same phrase to examine the harmonies beyond that particular measure. Figure 2.2 shows the entire phrase from mm. 22 to 26. In this example, a three-note segment of the 5/7-cycle is completed through a harmonic gesture that ends the phrase with two hexachords, both members of set-class 6-z26.
After the initial statement of trichord C-D-G of set-class 3-9 (027), an unfolding takes place in a cycle of 5ths that gradually results in formation of sets of larger cardinality. First, the 3-9 trichord moves to the C-D-F-G tetrachord of set-class 4-23 (0257). This is followed by the Bb-C-D-F-G pentachord (set-class 5-35 (02479)), and the diatonic hexachord Bb-C-D-Eb-F-G of set-class 6-32 (024579). The phrase concludes with two statements of set-class 6-z26 (013578) in mm. 25 and 26, G-Ab-Bb-C-D-Eb, and C-Db-Eb-F-G-Ab, respectively.
As a subset of set-class 7-35, this hexachord type can be considered an incomplete statement of the diatonic heptachord. In Figure 2.2 F3 appears in m. 24, but is not part of the chord in m. 25. Stated another way, had the F3 of m. 24 been retained in m. 25, then the harmony of m. 25 would have been a diatonic heptachord. Likewise, had the B♭2 of m. 25 been present in m. 26, then the harmony would have been a diatonic heptachord of set-class 7-35. Of course, it would have been physically impossible to reach those chords with F3 or B♭2 with one hand. In this case, Kurtág completes the harmonic gesture through two diatonic hexads that are subsets of the diatonic heptad and related by T7.

In this phrase, there is a motion from a small 5/7-cyclic set to a larger 5/7-cyclic set; the excerpt begins with trichord C-D-G of set-class 3-9, and, through a gesture that unfolds in circle of 5ths, ends with octachord C-D♭-D♯-Eb-F-G♮-A♭-B♭ of set-class 8-23 (0123578T) compositely formed through the last two hexachords (see Figure 2.2). Therefore, it is not a seven-note diatonic set that completes the structure; rather, the completion is achieved through two T7-related hexachords of set-class 6-z26 that form a superset of set-class 7-35. The formation of this diatonic octad, as a superset of the diatonic heptad, constitutes the completion of set-classes 3-9.

Figure 2.3 shows the outer sections of movement IV of “Hommage à Mihály András,” 12 Microludes for string quartet; the top system shows the opening section, and below it, the closure. The pitch content in the opening section of movement IV was previously discussed; it will suffice here to restate that the first section starts with a three-note segment of the 1/11-cycle (set-class 3-1 (012)), and, through a trajectory that includes various segmentations of the same cycle, ends with the aggregate, which marks the end of the first formal unit.
Similar to the opening, the closing section begins with the three-note motive; this time, the F♯-G-A♭ trichord of set-class 3-1 in violin-I. Then, this trichord is stated at T₃ (I₅) in the viola with A-B♭-B♯, and is followed by other sets that include tetrachord C-C♯-E-F of set-class 4-7 (0145) played by violin-II, trichord D-G-G♯ (set-class 3-5 (016)) played in pizz. by the violins and viola, and the D-E♭-E♯-F-F♯ chromatic pentachord of set-class 5-1 (01234) in the violoncello line. Collectively, these sets create the aggregate by the end of this formal unit; the last note of the violoncello, the E♭, completes the aggregate. In this example, an incomplete cyclic segment in each of the outer sections is completed through a gesture that creates the aggregate.
Figure 2.3: The aggregate completes SC 3-1 in the outer sections of movement IV from “Hommage à Mihály András,” *12 Microludes* for string quartet.
2.3 — Unending Gestures

At times, the expectations for a “completion” may not be fulfilled. In some cases, the gesture may be a motion to a near completion; an incomplete 5/7-cycle segment may arrive at an incomplete statement of a structural unit.

An example of a harmonic gesture from a 5/7-cycle segment to an incomplete statement of the aggregate was already discussed in Chapter I in “. . . and Once More: Flowers We Are . . .,” Játékok I, where the absence of the E♭ nearly formed the aggregate through a gesture that had begun from a trichord of set-class 3-9. This work did not conclude with a complete statement of the aggregate, but a near aggregate. At other times, as a theatrical gesture, there may not be a “completion.” The absence of a closing gesture may imply the continuation of music after the piece has actually ended.

The subject of unfulfilled expectations at closures now brings us to another important characteristic of Kurtág’s musical style. In the series of interviews conducted between 1982 and 1985 with Varga, when discussing the title of the first movement of his Suite for piano (“As if Someone were Coming”), one of his first compositions from the early 1940s, the composer indicated that the movement was a response to Max Eisikovits’s setting of a poem by Endre Ady. Kurtág further indicated that the notion of waiting for someone who does not come was extremely important to him.12 And in his 1996 interview, the composer again comes back to this subject and indicates that waiting in vain has had a decisive influence on his music.13

12 Varga 2009.
13 Ibid
In addition to the early *Suite* for piano (which is different from a work of the same title for piano four hands from 1950-51), in a number of other works Kurtág revisits this gesture and makes explicit references to this notion. For example, at the end of the second movement of *6 Moments Musicaux*, Kurtág notes in the score “… as though someone is coming …” A similar reference is found in his *Officium Breve in memoriam Andree Szervánszky*. The last movement is a twelve-bar quotation from the third movement of Szervánszky’s *Serenade* for string orchestra. The piece ends on pentachord D-F-G-A-\(B_b\) of set-class 5-27 (01358), but there are no double bars at the end of the movement, which indicates to the performers the continuation of music beyond the Szervánszky quotation (see Figure 2.4).
Figure 2.4: The last movement of *Officium Breve in memoriam Andreae Szervánszky* with no double bars at the end.
The pitch content of the Szervánszky quotation up to the last bar is the “white key” diatonic collection, a member of set-class 7-35 and inversionally symmetrical about 2/8. And as noted earlier, the pitch content of the first movement is pentachord 5-35 and inversionally symmetrical about 2/8 (see Figure 2.5 below). Had the Szervánszky quotation in the last movement ended before bar 12, then the outer movements would have been marked by the two structural forces, set-classes 5-35 and 7-35, formed around the same inversionsal axes; however, the inclusion of the B♭ in the final bar suggests the beginning of an unfolding in the 5/7-cycle toward the flat diatonic area. The pattern of unfolding in the 5/7-cycle had already been established as early as the first movement, which unfolded in the form of a funnel around D. In the final movement, the inclusion of the B♭ in this harmonic context invokes the patterns that the composer had established during the course of the work, which brings forth the expectation of a motion toward the flat diatonic area, but this expectation is left unfulfilled. The listeners are left waiting for an unfolding that never comes.

2.4 — Harmonically Static Gestures

Some of Kurtág’s gestures are designed to establish a harmonic area in a single movement. Such harmonic gestures are generally found in shorter movements, and through their trajectory, they establish a harmonic area, or a tonal center. Two such examples have been discussed earlier. One is the brief opening movement of Officium Breve in memoriam Andreae Szervánszky, Op. 28, for string quartet, where the violoncello through a melodic gesture that
begins on D and ends on E establishes a white-key pentatonic collection — this harmonic area is the departure point for this quartet (see Figure 2.5).

Figure 2.5: The first movement of *Officium Breve in memoriam Andreae Szervánszky*, Op. 28, for string quartet. A single harmonic gesture establishes the white-key pentatonic area.

Another example discussed previously is “Flowers we are … [embracing sounds],” *Játékok VIII*, where a single gesture from G to C, distributed between the two pianos, establishes the white-key diatonic area (see Figure 2.6).
Figure 2.6: “Flowers we are … [embracing sounds],” Játékok VIII. A single harmonic gesture establishes the white-key diatonic area.

Musical gestures generally refer to a recognizable motion from one pitch or one chord to another; however, some repeated recognizable events can also be considered to be gestures. Such is the case with the repeated eighth-note pattern in Witold Lutosławski’s Symphony No. 3 (see Figure 2.7), a recognizable gesture that is stated in the opening and repeated throughout the work. Here, the E is repeated four times with no motion to any other note.
Kurtág makes use of such gestures as well. In movement XI of “Hommage à Kadosa; 12 Microludes,” Játékok II, the B♭ tonal center is laid out in pitch space over seven octaves (see Figure 2.8). The pitches are symmetrically placed around B♭3/B♭4, except that the B♭3 as the
inversional partner of B♭4 is missing. In this example, linear symmetry supports vertical symmetry. The first pitch of B♭0 is partnered with the last pitch of B♭7, and the second pitch of B♭1 with the penultimate pitch B♭6. The middle two notes of B♭2 and B♭5 map onto each other.

![Figure 2.8: In “Hommage à Kadosa; 12 Microludes,” Játékok II the gesture is the repetition of the tonal center. The dotted lines connect the inversional partners.](image)

In another example from the same work, the repeated D4 firmly establishes the tonal center of the third movement (see Figure 2.9). In these two examples, the tonal centers are firmly restated with no motion to any other pitches.
In the fifth movement of “Hommage à Kadosa; 12 Microludes,” Játékok II, two decachords, F#-G-G#-A-A#-B-C-C#-D-D# and F-F#-G-G#-A-A#-B-C-C#-D (both members of set-class 10-1 (0123456789)), are inversionally balanced in pitch space around the axis tone of E4 (see Figure 2.10). Here, the single gesture is the presentation of a symmetrical chromatic harmony formed around the tonal center of the movement.
Figure 2.10: In the fifth movement of “Hommage à Kadosa; 12 Microludes,” Játékok II two decachords are 1/11-cyclic segments symmetrically placed around E4.

Above, the pentatonic and the diatonic collections that were outlined through a single gesture were discussed. In other cases, Kurtág may present a subset of such collections, in which case the subsets, as incomplete statements of the pentatonic or the diatonic, represent specific diatonic sets (or diatonic areas). One such example is found in the first movement of “12 Microludes,” Játékok II, where the B-C-D trichord of set-class 3-2 (013), as a subset of the pentad, represents the white-key diatonic area (see Figure 2.11). Through this subset of the diatonic heptad, Kurtág establishes the white-key diatonic area as the departure point of the piece.
2.5 — Gestures as Harmonic Motions

Besides set-class 3-2, discussed above, other subsets of the diatonic collection can take on the task of “representing” a diatonic set. Table 2.1 provides a list of the subsets of the diatonic heptad (and pentad) that can take on such a role. The use of subsets, as incomplete diatonic statements, can create harmonic variety, and enables Kurtág to move between different diatonic sets (or areas) without strict adherence to only T-related pentads or heptads. Among the gestures found in his music is motion from one diatonic set to another set as represented by their subsets.
Table 2.1: Subsets of the diatonic heptad (and pentad).

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Hexachords of set-class 6-z25, and set-class 6-33, which are included in Table 2.1, can be found in the opening phrase of “An apocryphal hymn (in the style of Alfred Schnittke),” Játékok V (see Figure 2.12). The phrase begins with hexachord C♯-D-E-F♯-G-A of set-class 6-z25 (013568), and ends with hexachord G-A-A♯-C-D-E of set-class 6-33 (023579). It should be noted that in this phrase the two hexachords can be considered harmonically salient events since they mark the boundaries of the phrase, and are distinguished as the only hexachords in this excerpt. In this example, the music, through two subsets of the diatonic heptad, moves from one diatonic area mapped out by the 5/7-cycle to another diatonic area mapped out by the 5/7-cycle (T-related heptads or pentads), areas that are represented by incomplete statements of the
diatonic collection. The harmonic gesture is, therefore, a motion from an implied diatonic
collection (C♯-D-E-F♯-G-A), as represented by hexachords of 6-z25, to another implied diatonic
collection (G-A-B♭-C-D-E), as represented by hexachords of 6-33 (the B♭ is enharmonically
spelled as A♯).

Figure 2.12: The first phrase of “An apocryphal hymn (in the style of Alfred Schnittke),”
Játékok V. Hexachords of SC 6-z25 and 6-33 mark the boundaries at the phrase level.
(The broken lines denote the missing pitches of the 5/7-cycle.)
Chapter III: Harmonic Stratification

3.1 — Harmonic Areas

In interviews conducted by Varga between 2007 and 2008, Kurtág stated, “I write something and then compose another layer on top of it, and then another one and another one.”\(^{14}\) In this chapter, I will discuss how the notion of stratification manifests itself in construction of some of his harmonies.

Some of the sonorities created by Kurtág can be partitioned into two separate diatonic subsets, where each subset is of a different diatonic area mapped out by the 5/7-cycle. In fact, in some cases the sets are divided as such, and accounting for this partitioning uncloaks Kurtág’s harmonic thinking, and reveals how the composer expects his music to be heard. Before discussing his harmonic stratification, we will examine the harmonic areas mapped out by the 5/7-cycle, which are fundamental to understanding Kurtág’s harmonic strata, and the larger harmonic areas laid out for the navigation of the music.

Of the twelve diatonic sets, the white-key diatonic area, which can be constructed as a 5/7-cyclic segment with F/B as the boundary notes, is the only seven-note 5/7-cyclic segment with no accidentals (see Figure 3.1). When this set is rotated counterclockwise by one click (or 30 degrees on the clockface), the natural diatonic area maps onto the next diatonic area on the clockface at \(T_7\). This operation shifts the natural diatonic area one position to the sharp area, with C/F\# as the boundary notes. When this set is rotated clockwise, the natural diatonic area maps onto the next diatonic area on the clockface at \(T_5\). This operation shifts the natural diatonic area one position to the flat area, with B♭/E as the boundary notes. If this rotational shift

\(^{14}\) Varga 2009, 49.
continues counterclockwise, the natural diatonic area maps onto other sets in the sharp direction, and if the rotation is clockwise, the natural diatonic area maps onto other sets in the flat direction.

![Diagram of diatonic collections](image)

Figure 3.1: The rotation of a diatonic collection counterclockwise is a shift to the sharp diatonic area, and clockwise, to the flat area.

When a diatonic collection (in this case, the white-key diatonic collection with F/B as the boundary notes) is rotated counterclockwise at seven positions (or clockwise at five positions), then the natural diatonic area maps onto an adjacent diatonic area, with F♭/B♭ as the boundary notes, at T₁₁ (see Figure 3.2.) When the rotation is at seven positions clockwise (or counterclockwise at five positions), then the natural diatonic area maps onto another adjacent diatonic area, with F♯/B♯ as the boundary notes, at T₁. It should be noted that these three related diatonic sets form one continuous sequence generated by the 5/7-cycle.
A similar relationship exists among the twelve diatonic pentads mapped out by the 5/7-cycle. When a set is rotated counterclockwise, the harmonic motion is toward the sharp pentatonic areas; and when the rotation is clockwise, the harmonic motion is toward the flat pentatonic areas. Likewise, adjacent pentatonic sets, $T_1$- or $T_{11}$-related sets, can be located on the clockface by rotation of seven or five positions clockwise or counterclockwise (see Figure 3.3). In case of pentads, the two adjacent sets, at $T_1$ and $T_{11}$, have a complementary relationship with the original set.
As I will discuss below, set class adjacency is manifested in the construction of different chordal structures. Two adjacent diatonic sets (and subsets), a semitone apart, are frequently superimposed by Kurtág to create larger sets. This superimposition creates dissonant harmonies with chromatic properties in diatonic environments dominated by the 5/7-cycle, in contrast to single diatonic or pentatonic collections that are maximally even for their cardinality. Furthermore, because of the chromatic properties of these sets, they can, alternatively, be considered as a combination of the 1/11-cyclic segments, and used in chromatic environments dominated by the 1/11-cycle. It is through such harmonies with properties connected to both the 5/7- and 1/11-cycles that Kurtág can be harmonically consistent even in contrasting harmonic environments.
3.2 — Harmonic Strata in Some Larger Sets

Some of the larger sets found in Kurtág’s works can be partitioned into two diatonic sets or subsets from different diatonic areas. The segmentations may be adjacent set classes. They can also be of different cardinality.

Figure 3.4 shows mm. 8-10 of “For Dóra Antal’s Birthday; 2nd version,” Játékok VI. In this work, while the stratum from the natural diatonic area remains unchanged, its adjacent set from the flat diatonic area at T₀ maps onto the sharp diatonic area. In this excerpt, the pentachord D-E-F-G-A of set-class 5-23 (02357), a subset of the natural diatonic heptad, is presented by the right hand of the piano. In mm. 8-9, the C-D♭-E♭-F-G♭-A♭-B♭ diatonic heptad is presented in the left hand, and, after a short pause, at T₀ the flat diatonic set shifts to the sharp diatonic area with the C-C♯-D-D♯-E-F-F♯-G-G♯-B♭(A♯) heptad in m. 10 (E♯ and A♯ are enharmonically spelled as F♮ and B♭). Both sets are members of set-class 7-35 (013568T).

Kurtág also includes two pitches from the natural area in the flat and the sharp diatonic areas, a G and a D, respectively; however, this addition does not change the nature of the T₀ relation of the sets. Additionally, the C is missing in the natural set, but is included in the other sets (the C in the sharp diatonic area is spelled as B♯).

In this passage, the two adjacent diatonic sets, compositely, construct the C-C♯-D-D♯-E-F-F♯-G-G♯-A-B♭ undecachord of set-class 11-1 (0123456789T) to form a near aggregate. With the missing B, this undecachord is inversionally symmetrical about 5/E. The F is included in all sets from the flat, natural, and sharp areas.
Figure 3.4: Adjacent diatonic areas related at \( T_0 \), form SC 11-1, with the axis tone of F present in all sets in “For Dóra Antal’s Birthday; 2nd version,” Játékok VI, mm. 8-10.

Two adjacent pentads are used in “Helyettem kis virág (… lovely greetings to Grete Spinnrad),” Játékok V. Having already discussed the pitch content of this work in Chapter I, now I would like to revisit the opening measures. This binary work is formally divided into two three-bar sections (or phrases). The pitch content of the opening section comprises two \( T_1 \)-related pentads (see Figure 3.5). The piece begins with a canon that outlines the F\#-G\#-A\#-C\#-D\# pentachord in the right hand, and the F-G-A-C-D pentachord in the left hand. Both collections are members of set-class 5-35 (02479), and, compositely, form the F-F\#-G-G\#-A-A\#-
C-C♯-D-D♯ decachord of set-class 10-5 (012345789T). In this excerpt, two adjacent F♯ and F♮ pentads provide the two harmonic strata that span the first section of the piece.

Figure 3.5: Two adjacent diatonic pentads form SC 10-5 in the opening bars of “Helyettem kis virág (... lovely greetings to Grete Spinnrad),” Játékok V.

In “Enfolding Sounds,” Játékok V, two 4-z15 tetrachords, and two triads form the harmonic content of the closure. Figure 3.6 shows the last three bars of this piece, starting from m. 11. On the downbeat of m. 11, two tetrachords are presented in scalar order. The left hand
outlines the C-D-F-F♯ tetrachord, and the right hand outlines the G-A♭-B-D♭ tetrachord. Both tetrachords are members of set-class 4-z15 (0146), related at T₁I, and symmetrical in pitch space around G3/F♯4, the two pitches on the downbeat of m. 11. The two tetrachords compositely form the octachord F-F♯-G-A♭-B-C-D♭-D of set-class 8-9 (01236789).

In the final bar, two triads of F♯ major and C major in the left hand and the right hand, respectively, are vertically presented, which, compositely, form the hexachord E-F♯-G-A♭-C-C♯ of set-class 6-30 (013679) (the “Petrushka” chord). The 8-9 octachord and the 6-30 hexachord together form the pitch content of the closure, and, collectively, form the decachord E-F-F♯-G-G♯-A♭-B-C-C♯-D (set-class 10-6 (012346789T)). This decachord, inversionally symmetrical about 3/9, comprises two harmonic strata of the E and the A♯ pentachords that map onto each other at T₆ or T₆I. Through a combination of symmetrical and nonsymmetrical sets at the closure Kurtág constructs two strata that are each 5/7-cyclic segments that are drawn from different harmonic areas.

It should be noted that the inclusion of the two major triads (F♯ major and C major) in the final bar breaks the established symmetry of the preceding bars. Had one of the two been a minor triad, then the symmetry of the structure would have remained consistent.

It should be noted further that it is this breaking away from the symmetry in the last bar that results in formation of two harmonic strata drawn from different diatonic areas mapped out by the 5/7-cycle. Stated in another way, had Kurtág not broken away from the symmetry in the final bar, then the closure would have been a large, continuous 5/7 cycle, and not two diatonic areas mapped out by the 5/7-cycle. For the use of triads and their diatonic implications see § 3.3 — Triads and Triadic Combination.
Figure 3.6: At the closure of “Enfolding Sounds,” Játékó V, mm. 11-13, two tetrachords of SC 4-23, and two triads of F♯ and C triads form two pentads of SC 5-35 as two harmonic strata that form SC 10-6.
In Chapter II, the harmonies of “Bell-fanfare for Sándor Veress,” *Játékok V*, was discussed. In m. 15, the hexachord C-C♯-D-D♯-G-G♯ of set-class 6-z38 (012378) is bisected into two adjacent trichords of set-class 3-9 (027) (see Figure 3.7). The C♯-D♯-G♯ trichord in the left hand is one stratum, and the C-D-G trichord in the right hand the other stratum. Each harmonic stratum, a 5/7-cyclic segment, is drawn from a different harmonic area, one from the sharp and the other from the natural area. These two sets are related at T+49 or symmetrical around G4/A♭4.

Figure 3.7: In “Bell-fanfare for Sándor Veress,” *Játékok V*, m. 15, two adjacent trichords of SC 3-9 form hexachord of SC 6-z38.
3.3 — Triads and Triadic Combination

Kurtág, in addition to the structural forces, resorts to various subsets of the heptad (or the pentad), including triads, to forge harmonies that are drawn from different diatonic areas mapped out by the 5/7-cycle. As discussed earlier in Chapter I, triads, as compound interval cycles, can be considered as derivations of the 5/7-cycle, and, in works of Kurtág can have diatonic implications or imply tonal centers — a familiar concept in tonal music. For example, in movement VI of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13, where F is the tonal center, the F major triad is a prominent harmony. Figure 3.8 shows the first system, mm. 1-7, of this movement. The F major triad (set-class 3-11) is distributed between the violin lines throughout the first system, and in m. 1 with the E-G-B♭ diminished triad in the lower strings the hexachord E-F-G-A-B♭-C of set-class 6-z25 (013568) is formed, a subset of the F heptad. The F major triad and set-class 6-z25 both imply the F diatonic area.
Figure 3.8: The F major triad, and the hexachord of SC 6-z25, a subset of the F heptad, establish the F tonality in movement VI of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13.

In movement XII of “12 Microludes,” Játékok II, with B as the tonal center, the B major triad is structurally used. Figure 3.9 shows the first phrase from movement XII of “12 Microludes,” Játékok II, where the formal boundaries are marked by the B major triad. The first phrase begins and ends with a B major triad (set-class 3-11), with the tetrachord B-C♯-E-F♯ of set-class 4-23 (0257) in between the two triads. Compositely, these two chords form the pentachord B-C♯-D♯-E-F♯ of set-class 5-23 (02357). All three elements, the triad and sets of 4-23, and 5-23, individually and collectively, are subsets of the B diatonic heptad.
Figure 3.9: The B major triad and SCs 4-23, and 5-23, as subsets of the B heptad, establish the B tonality in movement XII of “12 Microludes,” Játékok II.

Now that the connection between triads and diatonic areas in works of Kurtág has been established, and that establishing of tonal centers through triads has been shown, we can interpret hexachords that are partitioned as triads, as harmonic strata drawn from different diatonic areas mapped out by the 5/7-cycle.

Harmonies constructed from two $T_6$-related diatonic areas (or their subsets) are not uncommon in music of Kurtág, as they may share axis tones. That includes the formation of the aggregate through, for example, the diatonic heptad of C and the diatonic pentad of F#. One such example is found in m. 5 of movement V in “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13, where the aggregate is partitioned into a diatonic heptad and a diatonic pentad (see Figure 3.10a). In this example, the upper strings are grouped together (playing ord.)
and present the C diatonic heptad of set-class 7-35 (013568T), B-C-D-E-F-G-A, and the lower strings are grouped together (playing harmonics) and present the F♯ diatonic pentad of set-class 5-35 (02479), F♯-G♯-A♯-C♯-D♯.

Figure 3.10a: The C heptad and the F♯ pentad (SCs 7-35 and 5-35) in m. 5 of movement V in “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13.
Figure 3.10b: The F♯ octad (SC 8-23), and the C heptad (SC 7-35) in “Hommage à Farkas Ference (3) (evocation of Petrushka),” Játék V, mm. 4-5.

Figure 3.10c: The F♯ major triad, and the C major triad (SC 6-30) in the final bar of “Enfolding Sounds,” Játék V.
In “Hommage à Farkas Ference (3) (evocation of Petrushka),” *Játékok V*, the two diatonic areas are not superimposed, but instead appear in alternating sections of sharp and natural with two distinguishing tempi for each section. Figure 3.10b shows the end of m. 4 and the entire m. 5. Bar 4 comes to an end with the F♯ diatonic octad of set-class 8-23 (0123578T), A♯-B-B♯-C-D♯-E-F♯-G♯, and bar 5 begins with the C diatonic heptad, B-C-D-E-F-G-A of set-class 7-35 (013568T).

A hexachordal example is set-class 6-30 (the “Petrushka” chord), discussed earlier, which can be constructed by two triads of C major and F♯ major, representing the two T6-related diatonic areas. Hexachord of 6-30 is frequently found in works of Kurtág. Figure 3.10c shows the last bar from the “Enfolding Sounds,” *Játékok V*, where hexachord 6-30 (013679) (E-F♯-G-A♯-C-C♯) is bisected into two major triads of C and F♯.

There is a common thread among the aforementioned three examples. They all contain sets that are representations of two diatonic areas of C and F♯, vertically or side-by-side, and with sets of different cardinality. And that includes the C and the F♯ major triads representing those diatonic areas.

Besides set-class 6-30, there are other hexachords that can be constructed as triadic combinations that are favored by Kurtág. And depending on the harmonic context, some of these larger sets can be considered as superimpositions of different harmonic strata (presented by triads) that are drawn from different diatonic areas mapped out by the 5/7-cycles. This superimposition can create dissonant harmonies with chromatic qualities, and if and when they converge on one diatonic area, the resolution is with a consonant set, evenly spaced.
Convergence on single diatonic areas will be discussed in § 3.4—Convergence of Harmonic Strata.

Figure 3.11 shows two hexachords of set-class 6-z19 at the end of movement four of *Hommage à R. Sch.*, Op. 15/d, for clarinet (also bass drum), viola, and piano. In this example, the hexachord $D^\flat-D^\natural-F^\flat-F^\natural-A^\flat-A^\natural$ of set-class 6-z19 (013478) is partitioned as two adjacent minor triads of $D-F-A$ (in concert pitch) in clarinet, and $D^\flat-F^\flat-A^\flat$ in viola. The movement ends with another hexachord of set-class 6-z19, $D-E^\flat-F-G^\flat-A-B^\flat$. In the last chord, the $D-F-A$ triad in clarinet is paired with its other adjacent triad, $E^\flat-G^\flat-B^\flat$ in viola and piano.

Figure 3.11: *Hommage à R. Sch.*, OP. 15/d, for clarinet (also bass drum) viola and piano. SC 6-z19 is partitioned into two minor triads.
In movement X of “12 Microludes,” *Játékok II*, the hexachord F♯-G-B♭-B♯-C♯-D of set-class 6-z19 (013478) is partitioned as the B-C♯-F♯ trichord of set-class 3-9 (027), a 5/7-cyclic segment from a sharp diatonic area in the right hand; and the G-B♭-D triad of set-class 3-11 (037), a set derived from the 5/7-cycle, and from a flat diatonic area in the right hand (see Figure 3.12).\(^{15}\) In this example, even though the two sets, the G minor triad and the set-class 3-9, are of different set type, nonetheless, they are two strata drawn from different harmonic areas of sharp and flat.

Figure 3.12: A G minor triad and a 5/7-cyclic segment of SC 3-9 form hexachord of SC 6-z19 in m. 3 of movement X in “12 Microludes,” *Játékok II*.

\(^{15}\) Alternatively, this hexachord can be segmented differently and considered as two triads. Cohn 1988 describes SC-z19 not as diatonic subsets drawn from different harmonic areas, but in terms of TC operations as any two minor triads, or any two major triads separated by a half-step.
Another hexachord that can be constructed as a triadic combination, and favored by Kurtág, is set-class 6-20. Figure 3.13 shows the hexachord B♯-C♯-E-E♯-G♯-A (set-class 6-20 (014589)) in the three lower voices accompanying the violin-I in m. 9 of the first movement from 6 Moments Musicaux, Op. 44, for string quartet. In this example, in registral order, the A major triad in violoncello and viola (as the lower stratum) is placed below the E♯ minor triad in viola and violin-II (as the higher stratum), which, together, form set-class 6-20.

This 6-20 hexachord can also be segmented as two augmented triads of E-G♯-B♯ (in violin-I and violoncello), and A-C♯-E♯ (in viola and violoncello). The annotation on the left side of the score marks this possible interpretation. Furthermore, this hexachord can be described as major and minor triads that are related at I9; or as two augmented triads that are inversionally symmetrical in pitch space around E4/F4 axes, or related at T+7. However, what is relevant for my discussion is the fact that this hexachord in registral order is two triads of major and minor superimposed — and spelled as such with B♯ and E♯ instead of C and F. Therefore, with the way in which this hexachord is voiced, Kurtág urges the listeners to hear this hexachord as two triads of major and minor.
Figure 3.13: A combination of A major triad and E\# minor triad form SC 6-20 in m. 9 in movement I of 6 Moments Musicaux, Op. 44, for string quartet.

Now that we have seen how in diatonic environments the set-classes 6-z19 and 6-20 are voiced, it would be beneficial to examine their use in chromatic environments. We have seen the 6-z19 hexachord partitioned as a combination of a 3-9 trichord and a minor triad, and as two adjacent T₁- and T₁₁-related minor triads, and the 6-20 hexachord as a major and a minor triad (or two adjacent augmented triads). One aspect of the intervallic properties of set-classes 6-z19, and 6-20, as adjacent T₁-related triads, is the three recurrences of interval-class 1, which also makes these hexachord types harmonically fitting in environments dominated by the 1/11-cycle.
The composer explores these intervalllic properties in movement X of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. In a chromatic environment, Kurtág chooses to group the pairs of [01] dyads, and by the imitative nature of the passage, the composer places more emphasis on these dyads assigned to each instrument. Figure 3.14 shows m. 8 of movement X from “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. On the downbeat of m. 8, violin-I enters with the G♯-A dyad, followed by the C♯-D dyad in violin-II. The entrance of the viola with its F-F♯ dyad constructs hexachord C♯-D-F-F♯-G♯-A of set-class 6-z19 (013478). In this example, the entrances of each instruments with their [01] dyads bring this interval to the fore.
Figure 3.14: Hexachord of SC 6-z19 partitioned as pairs of [01] dyads in m. 8 in movement X of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13.

Similar to set-class 6-z19, set-class 6-20 has chromatic properties that Kurtág chooses to explore in non-diatonic environments. Figure 3.15 shows hexachord D-E♭-F♯-G-B♭-B♮ of set-class 6-20 (014589) in m. 5 of movement VIII in “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. Here, Kurtág once again chooses to pair the [01] dyads. In this excerpt, the D-E♭ dyad is played by violoncello, the F♯-G dyad by violin-I, and the viola plays the B♭-B♮ dyad.
As demonstrated by the examples of set-classes 6-z19, and 6-20 above, Kurtág chooses to emphasize different intervallic properties of set-classes 6-z19, and 6-20 in different harmonic environments. The hexachords had been grouped in chromatic environments as [01] dyads, and in diatonic environments as triads representing different diatonic areas.
Now that we have seen how triads, and the set-classes 6-z19 and 6-20, as triadic combinations, are used in diatonic environments, I would like to turn to a passage from movement XI of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. Its funnel structure was previously discussed in Chapter I. This funnel structure is another harmonic stratum superimposed over the harmonies. The score in Figure 3.16a marks the hexachordal harmonies in the second half of movement XI. Figure 3.16b shows the partitioning of the hexachords. The unfolding pitches of the funnel at times are part of the hexachords, and at other times are added notes.

In m. 11, two adjacent major triads a semitone apart (the B-D♯-F♯ triad in viola and violoncello, and the B♭-D-F triad in the violins) form hexachord B♭-B♮-D-D♯-F-F♯ of set-class 6-z19 (013478) — one triad from the sharp, and one from the flat diatonic areas (see Figure 3.16b). The harmony in m. 13 is the D-D♯-F♯-G-B♭-B♮ hexachord of set-class 6-20 (014589). This 6-20 hexatonic chord can be viewed as the superimposition of two triads of minor and major from different diatonic areas of flat and sharp with the G-B♭-D triad in violoncello and violin-I, and the B-D♯-F♯ triad in viola and violin-II. Because of registral overlap, it can also be considered as a superimposition of two adjacent augmented triads, G-B-D♯ in the violins, and F♯-B♭-D in viola and violoncello.¹⁶

In m. 14, with C-C♯-E-F-G♯-A, another hexachord of set-class 6-20 (014589) is presented. This 6-20 hexatonic chord, in registral order, is partitioned as two triads of major and

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¹⁶ In Cohn 1991, the author points out at a discourse that has taken place among a number of theorists on the relationship of various sets to the diatonic collection, including those found in Kurtág’s music and discussed herein, such as SCs 6-20 and 6-30.
minor from different diatonic areas of sharp and natural with the C♯-F(E♯)-G♯ triad in violoncello, viola and violin-II, and the A-C-E in violoncello and violin-I. This is followed in m. 15 by another hexachord of set-class 6-z19 (013478), C-C♯-E♭-E♮-G-G♯, which comprises two adjacent minor triads, a semitone apart, and drawn from the flat and the sharp diatonic areas. The C-E♭-G triad is in the violoncello, viola, and the C♯-E-G♯ triad in the violins.

In m. 17, the hexachord A♯-B-C♯-D♯-E-F♯ of set-class 6-z25 (013568) is partitioned as the B-D♯-F♯ triad in violoncello and viola, and the A♯-C♯-E diminished triad in viola and violin-II. This triadic combination is a convergence on one diatonic area that implies a B major diatonic area. This 6-z25 hexachord is a subset of the B heptad. In mm. 18-19, the accompaniment to violin-I is the hexachord A-B♭-C♯-D-E-F of set-class 6-z19 (013478), which is partitioned as two adjacent major triads from the flat and sharp diatonic area, the B♭-D-F triad in violoncello and viola, and the A-C♯-E triad in viola and violin-II (Figure 3.16b).

The pitch content of the violin-I in mm. 16-19 is the pentachord B-D-D♯-F♯-G of set-class 5-21 (01458), the common pentachordal subset of both set-classes 6-z19 and 6-20, and the only cardinality 5 subset of set-class 6-20 (see Figure 3.16a). Consequently, the violin-I pitch materials at the conclusion of this movement can be considered as an incomplete statement of both set-classes 6-z19 and 6-20.

In this excerpt, hexachords of mm. 11, 15, and 18 are T- or I-related, and the highly symmetrical hexachords of mm. 13 and 14 are literal complements; however, what is relevant for my discussion is the fact that these hexachords are partitioned as subsets of different diatonic areas mapped out by the 5/7-cycle. In this harmonic context, by partitioning these chords as diatonic subsets, Kurtág urges the listeners to hear these sets as superimposition of two different
harmonic areas. On the other hand, as was noted above, these set types (6-z19, and 6-20) are not always partitioned as diatonic subsets. Therefore, when the composer chooses to partition them as diatonic subsets, it is a strong indication that his desire is for these sets to be heard as superimposition of triads, derived from the 5/7-cycle, and from different diatonic areas.

Conversely, when the chromatic properties of these sets are emphasized, they are to be viewed not as diatonic segments but as 1/11-cycle segments.

In this movement, the funnel (mentioned earlier), as another harmonic stratum laid over the entire movement, while implies a 1/11-cycle, the chordal harmonies, segmented as triads, imply diatonicism. It is not unusual for Kurtág to simultaneously use both cycles. In “Fifths (2),” Játékok I, discussed in Chapter IV, both cycles are included simultaneously. In that work, interval-class 5 unfolds chromatically; a 5/7-cyclic segment unfolds in 1/11-cycle.

This movement does not end with a strong resolution. The only hint of convergence is the use of set-class 6-z25 in m. 17. However, at times, the different harmonic strata can converge on one diatonic area when a strong closure is intended.
Figure 3.16a: Hexachordal formations in mm. 10-19 of movement XI in “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13.
Figure 3.16b: The partitioning of hexachords in mm. 10-19 of movement XI in “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13.
3.4 — Convergence of Harmonic Strata

As shown in previous sections, Kurtág may construct larger sets whose subsets are derived from the 5/7-cycle or are 5/7-cyclic segments. Such stratified sets, with subsets that are of different diatonic collections, will inevitably have chromatic qualities. To resolve the dissonant, chromatic qualities of these larger sets, the different harmonic strata may converge on a single diatonic area. This resolution may be in form of a diatonic heptad or its subset.

The closure in the final movement of *Stele*, Op. 33, for orchestra, starts in m. 77 with a decachord formed by two diatonic strata, and ends with the convergence on the white-key diatonic area. Figure 3.17a shows the conductor’s score starting from one bar before the beginning of the closure to the end the piece (m. 76 to the end), and Figure 3.17b is a reduction score. For clarity of reference to the full score, the system break in Figure 3.17b corresponds to the page break of the full score; the *tutti* chords are noted in the top two lines, with the composite rhythm indicated under each bar; and the brass chords and clusters are notated in the bottom line. Figures 3.17c-f show the chordal changes in the closure. In Figures 3.17c-f, the upright piano part is used as another reduction score to mark the chordal structures and show their relationships. The pitches that are not included in the upright piano part in Figures 3.17c-f are noted on a separate line below the upright piano part. The occasional tone clusters of unspecified pitches in the cimbalom, grand piano, and upright piano, which appear to have coloristic functions, are excluded in this reduction. They are, however, notated in Figure 3.17b.

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17 Kurtág has revised this work. The version discussed herein is the original version.
Figure 3.17a: The chordal gestures at the closure of the last movement in *Stele*, Op. 33, for orchestra.
Figure 3.17b: The reduction score to the closure of the last movement in *Stele*, Op. 33, for orchestra.
Starting at m. 77, of tutti chords alternate with brass chords to the end of the piece (see the scores in Figures 3.17a and 3.17b). On the downbeat of m. 77, the decachord C♯-D-D♯-E-F-F♯-G-A-A♯-B of set-class 10-4 (012345689T) can be partitioned into two diatonic subsets (see Figure 3.17c). The pentachord F-G-A-B-D of set-class 5-34 (02469) is the stratum in the higher register, and implies the C diatonic area (without the C present in the set), and the A♯-C♯-D♯-E-F♯ of set-class 5-25 (02358) as the lower stratum, which implies the B diatonic area (without the B present in the set) — a partitioning that implies two adjacent diatonic areas. After the tutti chord, the brass instruments sustain another 5-25 (02358) pentachord with B-D-E-F-G, another white-key diatonic subset. The brass chords shown in Figure 3.17c are transposed with the French horn IV in F, the tenor tuba in B♭, and the bass tuba in F; the brass chords shown in Figure 3.17b are notated in concert pitch.

Figure 3.17c: The annotated reduction score of the closure of Stele, Op. 33, for orchestra, mm. 77-78.
(In the column for the bass, the French horn IV is in F, the tenor tuba in B♭, and the bass tuba in F.)
The \textit{tutti} chord returns in m. 79. This time, the decachord C♯-D-D♯-E-F-F♯-G♯-A-A♯-B of set-class 10-5 (012345789T) is partitioned as two pentachords, G♯-A-B-D-F of set-class 5-31 (01369), and A♯-C♯-D♯-E-F♯ of set-class 5-25 (02358) (see Figures 3.17b and 3.17d). Now, the higher stratum (set-class 5-31) is no longer a diatonic subset. In addition to the pitches included in the upright piano, the G-C dyad (set-class 2-5 05) (a 5/7-cyclic segment) is played by other instruments. The G-C dyad in Figure 3.17d is shown under the upright piano line. In m. 79, the G-C dyad (i5) together with the 10-5 decachord form the aggregate. The brass continues to sustain the B-D-E-F-G pentachord of 5-25 over the \textit{tutti} chord up to m. 80.

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<thead>
<tr>
<th>Tutti Chords</th>
<th>Brass Chords</th>
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Figure 3.17d: The annotated reduction score of the closure of \textit{Stele}, Op. 33, for orchestra, mm. 79-80. (In the column for the bass, the French horn IV is in F, the tenor tuba in B♭, and the bass tuba in F.)
Another tutti chord is played on the downbeat of m. 81. The decachord F♯-G-G♯-A-B♭-B♮-C-D-D♯-E of set-class 10-4 (012345689T) is partitioned as two pentachords that are subsets of the diatonic collection (see Figures 3.17b and 3.17e). The pentachord D♯-F♯-G-A-B of set-class 5-25 (02358), as the higher harmonic stratum, implies the E diatonic area, and the B♭-C-D-E-G pentachord of set-class 5-34 (02469), as the higher harmonic stratum, implies the F diatonic area. This time, the added note (not included in the upright piano part) is an F, which with the 10-4 decachord forms the undecachord D-D♯-E-F-F♯-G-G♯-A-B♭-B♮-C of set-class 11-1. After the tutti chord, the brass sustains the pentachord D-D♯-F♯-G♯-B of set-class 5-32 (01469). This is the only pentachord sustained by the brass that is not a diatonic subset, and can be considered as the final dissonant chord before the resolution in the white-key diatonic area at the end.

<table>
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<tr>
<th>Tutti Chords</th>
<th>Brass Chords</th>
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![Diagram of musical chords](image)

Figure 3.17e: The annotated reduction score of the closure of Stele, Op. 33, for orchestra, mm. 81-82.

(In the column for the bass, the French horn IV is in F, the tenor tuba in B♭, and the bass tuba in F.)
The *tutti* chord on the downbeat of m. 83 converges on the C diatonic area with the hexachord B-C-D-E-F-G-A of set-class 7-35 (013568T) (see Figures 3.17b and 3.17f). This *tutti* hexachord is repeated in every other bar through the end of the piece. At the same time, the brass have the pentachord B-D-E-F-G of set-class 5-25 (02358) in mm. 83-88, the pentachord A-C-D-E-F of set-class 5-27 (01358) in mm. 89-90, and, again, the pentachord B-D-E-F-G of 5-25 from m. 91 to the end. All pentachords are subsets of the white-key diatonic heptachord.

The closure of the final movement begins with a decachord that is made up of two harmonic layers that are subsets of the C and the B diatonic collections (two adjacent diatonic set-classes), and before the piece comes to an end, they resolve to the white-key diatonic collection with the convergence on the C diatonic area.
Figure 3.17f: The annotated reduction score of the closure of *Stele*, Op. 33, for orchestra, mm. 83-end.
(In the column for the bass, the French horn IV is in F, the tenor tuba in B♭, and the bass tuba in F.)

The harmonic content of each phrase before the end of “An apocryphal hymn (in the style of Alfred Schnittke),” *Játékok V*, comprises two harmonic strata from different diatonic areas. The final phrase is a convergence on a single diatonic area. Figure 3.18 show the final four phrases. The first phrase of this excerpt begins with the nonachord E-F-F♯-G-A-B♭-B♯-C-C♯ of 9-5 (012346789) and contains two harmonic layers. The hexachord E-F-G-A-B♭-C of set-class 6-z25 (013568), a subset of the F diatonic collection, is presented in m. 36, and in the right hand in mm. 37-38, as one diatonic strata; and the tetrachord F♯-A-B-C♯ of set-class 4-22 (0247), as
the other diatonic strata, is presented in the left hand in mm. 37-38. Since this tetrachord is harmonically connected to the downbeat of the next phrase (the pitches compositely form the E heptad), the tetrachord F♯-A-B-C♯ of set-class 4-22 can be considered as a subset of the E diatonic collection.

The pitch content of the next phrase, m. 39, is the nonachord D♯-E-F-F♯-G♯-A-A♯-B-B♯ of set-class 9-5 (012346789). This nonachord is segmented into hexachord of 6-z25 (013568), D♯-E-F♯-G♯-A-B, on the downbeat, and in the right hand in the subsequent two beats; and the tetrachord E♯-G♯-A♯-B♯ of set-class 4-22 (0247) in the left hand in the last two beats of the bar. The 6-z25 hexachord implies the E diatonic areas, and the 4-22 tetrachord, D♯ (since it harmonically forms the D♯ heptad with the pitches on the downbeat of the next phrase).

The phrase starting on m. 40 begins with hexachord the D♯-E♭-F-G-A♭-B♭, set-class 6-z25 (013568), which implies the E♭ diatonic collection. Another stratum is added in m. 41 with the tetrachord B-C-E-G of set-class 4-20 (0158); however, this time the tetrachord is not connected to the next and final phrase. The two strata compositely form nonachord A♭-B-C-D-E♭-E♯-F-G-A♯ of set-class 9-11 (01235679T), as the pitch content of this phrase.

In the final phrase, starting in m. 44, the music ends with the heptachord C♯-D-E-F♯-G-A-A♯ of set-class 7-32 (0134689). The final resolution is an implied convergence on the D diatonic area. Since the A♯ never resolves to A♮, it prevents the formation of set-class 7-35 as the final chord, and a complete resolution; nonetheless, the D diatonic area is strongly implied. The symmetrical aspects of the harmonies at the closure of this piece will be discussed in Chapter IV.
Figure 3.18: The harmonic strata converge on the D diatonic area at the end in “An apocryphal hymn (in the style of Alfred Schnittke),” Játékok V, mm. 36 to the end.
In “Organs and bells in memory of Doctor László Dobszay,” *Játékok V*, after a series of hexachords that are partitioned as triads and trichords of 3-9, and drawn from different diatonic collections, the harmonic layers converge on single areas in the form of triads at the end of the piece. At first, triads and 5/7-cyclic segments, as subsets of different diatonic areas, are forged vertically to form hexachords. Near the end of the work, the hexachords are deverticalized and segmented as different triads, and bring the work to a close in the white-key diatonic area with a C major triad (see Figure 3.19).

This excerpt begins in m. 15 with the hexachords E-F-F♯-A♭-B-C of set-class 6-z17 (012478), segmented as the trichord E-F♯-B of 3-9 (a 5/7-cyclic segment) in the right hand, and the F minor triad in the left hand. Each harmonic layer implies a different diatonic area; the 3-9 trichord is a segment of a sharp diatonic area, and the F minor triad is drawn from a flat diatonic area. In m. 16, the B-C-D♯-F♯-G hexachord (another set-class 6-z17 (012478)) is segmented into the B major triad in the right hand, and the F-G-C trichord of set-class 3-9 (another 5/7-cyclic segment) in the left hand; the 3-9 trichord is a three-note segment of the natural diatonic area, and the B major triads is a subset of a sharp diatonic set.

The hexachord E-F♯-G-A♯-C-C♯ of set-class 6-30 (013679), in m. 17, is partitioned as two triads of F♯ major and C major (from the sharp and natural diatonic areas), one in the left hand and one in the right hand. This is followed by two triads of C major and B diminished in mm. 18-19, both from the white-key diatonic area. If we consider the two triads together, they form the hexachord B-C-D-E-F-G of set-class 6-z25 (013568), a subset of the white-key diatonic area. This is the first instance that Kurtág deverticalizes the hexachords to form triads. There is a brief return to a hexachordal harmony in m. 20 with the hexachord A-B♭-C-D♭-E♭-F of set-
class 6-z24 (013468), which is partitioned as the A diminished triad in the left hand, and the B♭ minor triad in the right hand — not a diatonic set, but strongly suggests A minor. In the last system, the harmonic resolution is the convergence of harmonies on single areas, and in form triads. After a series of triads of E major, D minor, A♯ diminished, and A♭ minor, the work ends with a C major triad, a subset of the white-key diatonic area. The symmetrical aspect of this resolution will be discussed in Chapter IV.

Figure 3.19: The harmonic strata converge on single diatonic areas before ending on a C major triad in “Organs and bells in memory of Doctor László Dobszay,” Játékok V, mm. 14 to the end.
3.5 — Stratification Beyond Diatonic Sets

So far the primary focus of my discussion has been on sets that are 5/7-cyclic segments or derivations of the 5/7-cycle; however, harmonic stratification is found beyond diatonicism. That includes harmonies that contain several strata of various interval cycles. In the first movement of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13, Kurtág resorts to different interval cycles to construct an undecachord as the pitch content of the movement.

Figure 3.20 shows the harmonic layers of the entire movement. In the lowest stratum, a 5/7-cyclic segment is presented in the violoncello and the viola, with the C-D-E-G-A of set-class 5-35 (02479). The tonic C is in the bass. In the higher stratum, two different 2/10-cyclic segments are presented in the violins; the E♭-F dyad of set-class 2-2 (02) in violin-I, and the E-F♯-G♯ trichord of set-class 3-6 (024) in violin-II. The viola, with the A-A♯-B trichord (set-class 3-1 (012)) in mm. 5-8, states a three-note segment of the 1/11-cycle. Collectively, these cyclic segments form the D-E♭-E♮-F-F♯-G-G♯-A-A♯-B-C undecachord of set-class 11-1 (0123456789T).

In the final measure, D4 in the violoncello line, as the last note, is a dissonant, wrong note, and a semitone from the correct note of C#. With the missing C#, a near aggregate is formed in this movement, which forces the harmony to move forward in search of this missing note to complete the aggregate. Moreover, with the missing C#, the pitch content of this movement is an inversionally symmetrical undecachord about 1/7, which further pulls the music toward the missing note. The resolution of the D, as the final note of the violoncello, comes in the next movement with the C# of the viola line (not included in Figure 3.20); the C# is the tonic, and the first note of the second movement.
Figure 3.20: In movement I of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13, different interval cycles create harmonic layers of the movement.
Previously, in Chapter I I discussed the unfolding of the 1/11-cycle in “Цветов осенних увяданье . . .” (Autumn flowers fading . . .), Messages of the Late R. V. Troussova, Op. 17, for large ensemble. Figure 3.21 shows the first two pages of the conductor’s score. The music is divided into four layers. There are four independent tempi notated in the score, and four layers of sonority (annotated on the second page of the score) with simultaneous unfoldings of three different interval cycles.

The harp and cimbalom unfold in two different 2/10-cycles, and the piano, celeste and woodwinds in the 1/11-cycle. The strings unfold in the 5/7-cycle, and the pitch content of the French horn, in gestopft, is also based on the 5/7-cycle. The fourth layer of sonority is of non-specified pitches. The percussions are non-pitch instruments, and the soprano, alla Apollinaire, has non-specified notes.
Цветов осенних увяданье...

(ad lib. tempo 4)

S.

(ad lib. tempo 3)

Ob.

Cl. (in si)

Cor. (in fa)

VI.

(ad lib. tempo 2)

Cimb.

(ad lib. tempo 1)

Cel.

Arpa

PPPP

Pf.

PPPP

Gong.

TPP

Tam-t.
Figure 3.21: Four layers of sonority and tempo in “Цветов осенних увяданье . . .” (Autumn flowers fading . . .), *Messages of the Late R. V. Troussova.*
Chapter IV: Symmetry and Harmonic Movement

4.1 — Overview

Symmetry plays an important role at different levels of structure in Kurtág’s harmonic language. In some cases, Kurtág turns to symmetrical formations to construct sets of different sizes, phrases, formal sections, and a movement or an entire piece. Additionally, he creates symmetry in larger harmonic areas (e.g., a formal section) through a combination of nonsymmetrical sets. At times, tonal centricity may be defined by Kurtág through the axes of symmetrical structures, and at other times, tonal centers and areas may be established through diatonicism, including diatonic subsets mapped out by the 5/7-cycle.

Interestingly, the composer creates ways to presents his materials in “wrong keys” by hovering around diatonic areas and symmetrical axes other than the expected tonal centers. In the absence of diatonicism in sets generated by the 1/11-cycle, symmetry plays a definitive role — an element that Kurtág uses to move the music forward.
4.2 — Movements Between Symmetrical Sets

Symmetry plays a determinant role in “In memoriam Tibor Szeszler,” Játékok VI. For this piece, we will focus on symmetrical relationships at the phrase level. The piece starts with two diatonic strata of D and D♯ (see Figure 4.1). In the first phrase, mm. 1-5, the left hand plays the C♯-D-E-F♯-G-A-B heptad of set-class 7-35 (013568T), the D diatonic collection; and the right hand plays the tetrachord D♯-E♯-F-A♯ of set-class 4-22 (0247), a subset of the D♯ diatonic collection. These two diatonic sets, collectively, form the inversionally symmetrical decachord C♯-D-D♯-E-F-F♯-G-A-A♯-B of set-class 10-4 (012345689T). This decachord can map onto itself around 4/T axes.

In m. 6, the harmony shifts to two adjacent diatonic hexachords, F and F#. The two diatonic hexachords are interwoven between the two hands in m. 6. The F# hexachord, F♯-G♯-A♯-B-C♯-D♯, starts in the right hand, moves to the left hand, and returns to the right hand at the end of the bar; and the F♭ hexachord, F-G-A-B♭-C-D, starts in the left hand, moves to the right hand, and returns to the left hand. Some pitches are register specific, but not all. Both hexachords are members of set-class 6-32 (024579), and together form the undecachord F-F♯-G-G♯-A-A♯-B-C-C♯-D-D♯ of set-class 11-1 (0123456789T), an inversionally symmetrical set about 4/T, the same as the opening phrase.
Figure 4.1: The symmetrical sets at the phrase level in “In memoriam Tibor Szeszler,”
_Játékok VI._
The harmony in m. 7 particularly stands out in this piece for the use of the 1/11-cyclic segments, a move away from the 5/7-cycle segments. The crescendo that starts in m. 4 ends in m. 7 in ff with the hexachord D-E♭-E-G♯-A-B♭ of set-class 6-7 (012678), a highly symmetrical set. This hexachord is inversionally symmetrical about 0/6-3/9. The 5/7-cycle returns in the next bar with the pentatonic collection of G♭-A♭-B♭-D♭-E♭ (set-class 5-35 (02479)) in the left hand, and the tetrachord A-B-D-E (set-class 4-23 (0257)) in the right hand, which together form nonachord F-G♭-Gb-A♭-A♭-B♭-C-D♭ of set-class 9-1 (012345678), an inversionally symmetrical set about 0/6.

At the closure (the last three bars), the right hand presents tetrachord F♯-G♯-A-CA of set-class 4-22 (0247), a subset of 5-35; and the left hand presents hexachord F-G-A-B-C-C♯ of set-class 6-22 (012468), a subset of 7-35, plus an added C♯. The two sets at the closure form nonachord G♯-A-A♯-B-C-D-D♯-E-F♯ of set-class 9-9 (01235678T). This nonachord is inversionally symmetrical about 3/9. We can divide this works into two parts with the hexachord of m. 7 marking this division. And to summarize, this piece, in terms of inversional axes, begins with two phrases in the first part around 4/T axes, mm. 1-6, and ends with two phrases that are formed around 0/6 axes (mm. 8-10), and 3/9 axes (mm. 11-13). The highly symmetrical hexachord in m. 7 that marks the formal division shares all of the axes in the second half of the piece 0/6-3/9.

In “Fifths (2),” Játékok I, a [05] dyad (a 5/7-cyclic segment) unfolds in the 1/11-cycle to from a larger symmetrical set. “Fifths (2),” Játékok I, starts wth the dyad C4-G4, symmetrical
around Eb⁴/E♯⁴, moves in pitch space chromatically up to dyads Db⁴-A⁵⁴ and D♯⁴-A♭⁴; and down to dyads B₃-F♯⁴, B♭₃-F♯⁴, and A₃-E⁴, all members of set-class 2-5 (05) (see Figure 4.2a). The unfolding of these symmetrical dyads form a symmetrical undecachord, as the pitch content of the piece, around the missing axis note of Eb⁴.

Figure 4.2a shows the inversional partners of the pitches formed around the axis tone. As noted, this formation is in pitch space; however, the symmetry is not vividly substantiated. Since the pairing of the pitches in the score is in 5ths, the pitch symmetry is not reenforced in the music, and, therefore, is obscured. Nonetheless, the pitch content of the entire piece is symmetrical in pitch space, as illustrated at the bottom of Figure 4.2a.

These unfoldings of ic⁵ simultaneously form two nonsymmetrical funnels that span to the boundaries of the funnels non-equidistantly. The top funnel radiates from G⁴, and spans to A⁴ and E⁴; and the lower funnel radiates from C⁴, and spans to D⁴, and A⁴ (see Figure 4.2b), resulting in two symmetrical sets through nonsymmetrical funnels.
Figure 4.2a: The symmetrical pitch content of “Fifths (2),” *Játékok I.*
The tonal center in movement V of “Hommage à Kadosa; 12 Microludes,” Játékok II, is E, which, in this case, is defined both by diatonicism and symmetry. Kurtág starts this movement with the E diatonic collection in scalar order, D#-E-F#-G#-A-B-C#, a 5/7-cyclic segment and a member of set-class 7-35 (013568T) and inversionally symmetrical about 0/6 (see Figure 4.3). This set is followed by the Eb diatonic collection, D-Eb(D#)-F-G-Ab-Bb-C (Eb spelled as D#), another 5/7-cyclic segment and a member of set-class 7-35 (013568T), and symmetrical about 5/E axes. The two heptads in the first half of the piece create the aggregate.
In the second half of the piece (the second system), the music moves to the C♯4-D4-E4-F4 tetrachord of set-class 4-3 (0134), which can be considered as two segments of the 1/11-cycle, and symmetrical around the D♯4 axis. In this harmonic context, provided by the two diatonic collections in the first section, the tetrachord of 4-3 also implies a D minor tonality. For the final sonority, the composer turns to a 2/10-cyclic segment, the trichord D4-E4-F♯4 of set-class 3-6 (024). Now, this trichord implies a D major tonality, but the symmetry implies an E centricity.
The tonal centricity in the beginning is determined by diatonicism, and at the end by symmetry. As noted, in the beginning, a 5/7-cyclic segment that forms the E diatonic collection defines the tonal centricity, and at the end a 2/10-cyclic segment symmetrically formed in pitch space around E defines the centricity.

As has been indicated by the composer in a number of occasions and as is evident by the title of some of his works, Kurtág’s music is influenced by works of Beethoven, Schubert, Mozart, and others. Mostly that influence is acknowledged in the title of a work or a movement, but not in all cases. In 2009, during a rehearsal of his “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13 at Carnegie Hall, Kurtág said that the end of movement VIII are “Mussorgsky-like cadences.” An attribution to Mussorgsky is nowhere indicated in the score.

Although no attribution to Mozart is indicated in the piece discussed, I believe Mozart’s influences can be detected in movement V of “Hommage à Kadosa; 12 Microludes,” Játékok II. The similarity between this movement and a passage from Mozart’s Don Giovanni is striking. In the case of Kurtág’s work, there is a chromatic unfolding of diatonic areas from E to D. In case of Mozart, the chromatic unfolding is from D to E (see Figure 4.4). In the Overture to Don Giovanni, the D- Eb-E♯ unfolding starts in m. 28 with violin-I and the flutes with ascending and descending scales that articulate the three chromatic pitches.
Figure 4.4: The D-E♭-E♭ unfolding in mm 28-29 of the Overture to *Don Giovanni* of Mozart.

In the fifth movement of “Hommage à Mihály András,” *12 Microludes* for string quartet, Op. 13, Kurtág takes a different approach from its parallel movement in “Hommage à Kadosa; 12 Microludes,” *Játékok II*, discussed above. Figure 4.5 shows movement V of “Hommage à
Mihály András,” *12 Microludes* for string quartet, Op. 13. The movement starts with two nonsymmetrical sets, the pentachord G-A-B-C-D in m. 1, a member of set-class 5-23 (02357); and the tetrachord F-G-B-C in m. 2, a member of set-class 4-16 (0157). Both sets are subsets of the white-key diatonic heptad. When the note E (the tonal center of the piece) appears in m. 3, with it comes symmetrical sets, and diatonic collections; however, they do not suggest E centricity. The harmony in m. 3 outlines the C diatonic collection. That diatonic collection, the heptachord B-C-D-E-F-G-A, a member of set-class 7-35 (013568T), is inversionally symmetrical about 2/8. A sharp diatonic area is introduced in m. 4 with the B diatonic hexachord, B-C♯-D♯-E-F♯-G♯ of set-class 6-32 (024579) with inversional symmetry about 3-4/8-9. There is no indication of the E tonality here either.
Figure 4.5: The symmetrical harmonies of movement V of “Hommage à Mihály András,”
The instruments have been divided into two groups: the lower strings playing in harmonics, and the higher strings in ordinario. In m. 5, which is the central point of the movement, the complementary sets are divided between these two groups. While the violins present the white-key diatonic set (B-C-D-E-F-G-A of set-class 7-35 (013568T)), the viola and violoncello present its complement, the black-key pentatonic set (F♯-G♯-A♯-C♯-D♯ of set-class 5-35 (02479)). Both sets share the same 2/8 axes, and together create the aggregate.

In m. 6, the music steps away from the 5/7-cycle segments with tetrachord F♯-G♯-A♯-C of set-class 4-21 (0246), a 2/10-cyclic segment and inversionally symmetrical about 3/9. The white-key diatonic collection returns in m. 7 with another heptachord B-C-D-E-F-G-A of 7-35 (symmetrical about 2/8). The movement comes to an end with pentachord D♯4-E4-F♯4-G♯4-A4 of set-class 5-z12 (01356). This pentachord is symmetrical in pitch space around F♯4, and is a subset of the E diatonic collection, which makes the final chord the only set throughout this movement that makes any references to the E as a tonal center. The tonal centricity in the final chord is defined not by symmetry but by the implied diatonic area through a diatonic subset.

The fact that up to the very end, none of the axes or the diatonic sets make any references to the tonal center of the movement suggests that these elements, which are mostly in the white-key diatonic area and its complement, the black-key pentatonic area, are in fact presented in “wrong keys.” This invokes works of Franz Joseph Haydn, Pyotr Ilyich Tchaikovsky, and others. Odette’s theme in Swan Lake is in B minor, but Tchaikovsky states fragments of this thematic material for Odile in other keys — the wrong character is represented by wrong keys and thematic fragments. Examples of false recapitulations in works of Haydn are abundant. This practice has largely been unavailable to post-tonal composers. In post-tonal music with
transpositions and fragmentation as common recurrences, the idea of presenting materials in “wrong keys” for envious post-tonal composers has largely been an impossibility to recreate. In this movement, however, by establishing a specific pattern of tonal centricity for each movement, and then by manipulating the established expectations, Kurtág is able to present his materials in wrong keys.

4.3 — Symmetrical Formations through Nonsymmetrical Sets

At times Kurtág constructs symmetrical formations through nonsymmetrical elements. The use of triads at the end of “Organs and bells in memory of Doctor László Dobszay,” Játékok V, was discussed in Chapter I. The piece begins and ends with a C major triad. Figure 4.6a shows the opening bar and Figure 4.6b shows the closing. A number of nonsymmetrical hexachords (not included in the excerpts) lead to the closure. Figure 4.6 shows the closure of this work from mm. 21 to the end. In this excerpt, a series of nonsymmetrical triads forms a larger harmonic area inversionally symmetrical about 0/6. This larger harmonic area implies a tonal centricity that is consistent with the tonal implications of the opening and closing triads.

Starting at four bars before the end (m. 23), the D-F-A triad is followed by the A♯-C♯-E trichord, a 3/9-cyclic segment in m. 24. In m. 25, the A♭-C♭-E♭ triad leads to the final C-E-G triad. All sets are nonsymmetrical, and members of set-class 3-11 (037), except the trichord in m. 24, which is a member of set-class 3-10 (036), and symmetrical around C♯2. These sets, compositely, form the G-A♭-A♯-A♯-B-C-C♯-D-E-F undecachord of set-class 11-1
(0123456789T). In this example, in a harmonic area dominated by nonsymmetrical sets, a combination of triads bring the piece to a close with an undecachord inversionally symmetrical about 0/6. And, as noted above, this undecachord implies the same tonal centricity as the opening and closing triads of C major. However, the C centricity in the closing section is not overtly expressed in the score. The conception of the C is, therefore, abstract since the C is not stated as the axis in pitch space.

Figure 4.6a: The C major triad in the opening bar of “Organs and bells in memory of Doctor László Dobszay,” Játékok V.
The hexachords from the beginning of “An apocryphal hymn (in the style of Alfred Schnittke),” Játékok V, were discussed in Chapter II. In the closing section of this piece, marked “pp, perdendosi al fine,” Kurtág moves chromatically from the F to the D diatonic areas. Figure 4.7 shows this harmonic motion from m. 36 to m. 49, where nonsymmetrical sets form symmetrical diatonic areas at the end of the piece.

The first phrase of the closure (mm. 36-38) begins in the F diatonic area, then the E harmonic area is added as the second stratum. The pitch content of m. 36 is the hexachord E-F-G-A-B♭-C of 6-z25 (013568), a nonsymmetrical set and a subset of the F diatonic collection. (Adding D to this hexachord would form the F diatonic heptad of 7-35.) In mm. 37-38, the right hand continues with subsets of the F diatonic collection, while the left hand brings in the
tetrachord F#-A-B-C# of set-class 4-22 (0247), a nonsymmetrical set from a sharp diatonic area. The tetrachord F#-A-B-C# is harmonically linked to the beginning of the next phrase.

On the downbeat of the next phrase (m. 39), another hexachord of 6-z25 (013568), D#-E-F#-G#-A-B, is stated. The tetrachord F#-A-B-C# of mm. 37-38 with the hexachord of m. 39 form the D#-E-F#-G#-A-B-C# heptachord (the E diatonic collection) of set-class 7-35 (013568T), a set with inversional symmetry about 0/1.
Figure 4.7: A harmonic motion from the F diatonic area to the D diatonic area in “An apocryphal hymn (in the style of Alfred Schnittke),” Játékok V, m. 36 to the end.
After the downbeat of m. 39, another 4-22 (0247) tetrachord, E♯-G♯-A♯-B♯, is presented in the left hand (another nonsymmetrical set), while the right hand contains subsets of the 6-z25 hexachord of m. 39 (the E diatonic area). The tetrachord of this phrase, E♯-G♯-A♯-B♯, is harmonically linked to the beginning of the following phrase. (The F-A♭-B♭-C tetrachord from the flat diatonic area in m. 39 is enharmonic spelled as E♯-G♯-A♯-B♯.)

The same pattern continues. With the start of the next phrase in m. 40, the D-E♭-F-G-A♭-B♭ hexachord is stated, another 6-z25 (013568). The hexachord of m. 40 with the E♯-G♯-A♯-B♯ tetrachord of m. 39 form another 7-35 (013568T) heptachord (enharmonically spelled as D-E♭-F-G-A♭-B♭-C), the E♭ diatonic collection, and inversionally symmetrical about 5/E.

As a sign that the piece is coming to an end, Kurtág breaks the established pattern by introducing a different tetrachord type. There is also a pause inserted in m. 42 that signals this break. This time, the left hand presents the tetrachord B-C-E-G of set-class 4-20 (0158) in mm. 41-43. The piece ends with C♯-D-E-F♯-G-A-A♯ heptachord of set-class 7-32 (0134689). The A♯, which appears in m. 45 and is restated through the end of the piece, is an added dissonant note and does not resolve to the consonant note of A♮. Had the A♯ been resolved to the A♮, then the work would have concluded with a heptad of 7-35, a structural force.

In this example, the hexachords of mm. 36, 39, 40, and 44 are related at T11, as are the tetrachords of mm. 37-38, and 39, which result in a chromatic motion between the diatonic areas. As noted, the excerpt begins with a nonsymmetrical hexachord that implies the F diatonic collection (with a missing note), and ends with the D diatonic collection, a near symmetrical set that contains the dissonant note of A#. The subset of the diatonic collection from the end of one
phrase, and the subset of the diatonic collection from the beginning of the following phrase, form symmetrical diatonic sets. The end of the first phrase (mm. 37-38) and the beginning of the second phrase (the downbeat of m. 39) form the symmetrical E diatonic area; and the end of the second phrase (the end of m. 39), and the beginning of the third phrase (m. 40) form the symmetrical E♭ diatonic area, which connect the departure and arrival points of the closing section.

4.4 — Symmetry in 1/11-Cycle Segments

I have already discussed the symmetrical formations of the 1/11-cyclic segments in a number of works in Chapter I; § 1.7—Funnels. Additionally, I have discussed the same formations in movement IV of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. Therefore, I will not discuss those works again, but will only examine movement III of “Hommage à Mihály András,” 12 Microludes for string quartet, Op. 13. Kurtág turns to the 1/11-cycle for the harmonies of this movement. Figure 4.8a shows the harmonic content of the third movement.

The tonal center of this movement is D. On the downbeat, the violins announce the tonic with D4 in double stops, while the violoncello plays C♯4, all in Bartók pizzicato. The viola begins with a repeated sixteenth note figure with the D4-F♯4 dyad (set-class 2-4 (04)). The other instruments reenter in m. 3 with the C♯4-E4 dyad (set-class 2-3 (03)) in violin-II, the C4-E♭4-F4 trichord (set-class 3-7 (025)) in violin-I, and the G4-B♭3-B♮3-C4 tetrachord (set-class 4-4 (0125)) in violoncello. As the pitch content of the opening section of this ternary work, the sets
collectively form the decachord $B^3-B^\#3-C4-C^\#4-D4-Eb^4-E^\#4-F4-F^\#4-G$ of set-class 10-1 $(0123456789)$, a symmetrical set around the $D4-Eb^4$ axes. It should be noted that when the violoncello drops out on the fourth beat of m. 4, then the pitch content at the end of the section becomes the $C4-C^\#4-D4-Eb^4-E^\#4-F4-F^\#4$ heptachord of set-class 7-1 $(0123456)$, a symmetrical heptachord formed around the $Eb^4$ axis.
Figure 4.8a: The symmetrical harmonies in movement III of “Hommage à Mihály András,”

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In the middle section, mm. 5-7, the music moves away from the 1/11-cycle with the D♯-E♯-G♯-B of set-class 4-27 (0258), a diatonic subset. This is followed in m. 6 by the pentachord of set-class 5-35 (02479), F-G-A-C-D, inversionally symmetrical about 1/7, and the most consonant harmony in this movement, as it is maximally even for its cardinality. The music becomes more chromatic in m. 7 with the C♯-D♯-E-F-F♯ of set-class 5-2 (01235). The three sets in mm. 5-7 make up the pitch content of the middle section, and compositely form the undecachord B-C-C♯-D-D♯-E-F-F♯-G-G♯-A of set-class 11-1 (0123456789T), which is inversionally symmetrical about 4/T.

The opening materials return in the final section, mm. 8-10, except that now the violoncello has the same dyad as violin-II, C♯4-E4. As a result the pitch content of the final section is the same as the fourth beat of m. 4, the C4-C♯4-D4-E♭4-E♯4-F4-F♯4 heptachord of set-class 7-1 (0123456). Therefore, the last section, as well as the end of the first section, is symmetrically formed around the E♭4 axis, which is the tonal center of the next movement.
There is an interval expansion in the boundary of each instrument from unison to interval 9. The unison, D4 double stops (m. 1), is found the violins; i1 in the violoncello, the C# against the D4 of other instruments (m. 1); i2 in violin-I, E♭4-F4 (m. 3); i3 in violin-II, C#4-E4 (m. 3); i4 in the viola, D4-F♯4; i5 in violin-I, C-F (m. 4); i7 in violoncello, C4-G4 (m. 3); and i8 and i9 in violoncello, G4-B♭3, and G4-B♭3 (m. 4). The last interval heard at the end of the first section after the violoncello and violin-II drop out is i6 between the C4 of violin-I, and the F♯4 of viola, the boundaries of the final chord. This intervalic expansion is interwoven with the unfolding of the 1/11-cycle, and results in the formation of a funnel that is generated by this cycle (see Figure 4.8b). The upper line of the funnel continues in the middle section with G♯4 (m. 5) and A4 (m. 6) of violin-I. The apex of the funnel leads to the structural force of the pentatonic collection in m. 6. This unfolding of the 1/11-cycle forms a nonsymmetrical funnel that radiates from D4 and expands non-equidistantly up to A4 and down to B♭3.

As noted, this movement begins with a statement of D, its tonal center, and the first section concludes with a heptachord around the E♭4 axis, the tonal center of the next movement. Then the music is anchored around the E/A# axes in the middle section. The E♭4 axis returns in the final section, which moves the music toward the tonal center of the next movement, the E♭.
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