Kirchner and Time

An Analysis of Linear and Nonlinear Time in Leon Kirchner’s Interlude I

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Abstract: This article aims to analyze temporality in Leon Kirchner’s Interlude I for solo piano, in light of Jonathon Kramer’s book The Time of Music. The first section serves as an introduction to the composer – his biography, influences, and compositional style. The following section introduces Jonathon Kramer’s book and his concepts of linear and nonlinear time in music. Thereafter an analysis of aspects of the Interlude’s linear time, as defined by Kramer, is presented, including linearity manifest through developing variation, step-wise motion, tonal references, changes in tempo, flexion count

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changes, and transpositions. The next section seeks to examine manifestations of nonlinear time in the
_interlude_, such as balance and recapitulation, and discusses the implications of Kramer’s nonlinear
_moment time_. The conclusion summarizes interactions between linearity and nonlinearity in the
_interlude_.

**Keywords:** Kirchner, Kramer, temporality, linearity, nonlinearity

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Composer Leon Kirchner’s individual style, well-grounded in its context yet unique, has
presented difficulty to analysts who seek to comprehend his music through traditional
analytical techniques, such as examining harmonic or melodic procedures, or analysis based
on systems such as serialism. Alexander Ringer explains that one reason for this phenomenon lies in the
fact that Kirchner’s music “seeks above everything else the aesthetic exploitation of dynamic time
relationships... [his] sense of form comes to expression mainly in the treatment of rhythm and tempo...
[his] music thrives upon temporal fluctuations punctuated by changes in volume and intensity” (1957: 7).
The study of time relationships then is an appropriate tool for the analysis of Kirchner’s works, and
this article seeks to analyze Kirchner’s _Interlude_ in light of Jonathon Kramer’s book, _The Time of Music_,
in which Kramer asserts that “music becomes meaningful in and through time” (1988: 1).

**CONTEXTUALIZING THE ANALYSIS OF INTERLUDE I: AN INTRODUCTION TO KIRCHNER’S COMPOSITIONAL PHILOSOPHY**

Leon Kirchner was born in 1919 in Brooklyn, New York, a child of Russian-German-Jewish
immigrants from Odessa. Although his parents had humble circumstances, they had great respect for
education, and his music-loving mother introduced him to the piano at age five. Health concerns
prompted the family’s move to California in 1928, thereby putting Kirchner in a position to have contact
as a young man with compositional greats like Schoenberg, Bloch, Stravinsky and others who had fled
war-stricken Europe. In 1942 as a student at UC Berkeley he was awarded the Prix de Paris, a scholarship
which provided funds for composition study in Europe, but war barred his European studies and he went instead to New York to study with Roger Sessions. In 1954 he joined the faculty at Mills College, California, and in 1961 began teaching at Harvard University, where he taught for 29 years and was mentor and influential teacher to renowned students such as John Adams, Richard Wernick, Lynn Chang and YoYo Ma. His lengthy career included such compositional honors as the Naumberg Award, the Pulitzer Prize, and the Friedham Award; he was sought out for commissions by the New York Philharmonic, the St. Paul Chamber Orchestra, the Boston Symphony Orchestra, the Chamber Music Society of Lincoln Center, and the Ford, Fromm and Koussevitsky Foundations, among others. After his retirement from Harvard in 1989 he remained active as guest conductor and composer, continuing to receive commissions and composing until his death at age ninety (RIGGS, 2010).

While Kirchner was a young college student, Los Angeles suddenly turned into what he termed “a vortex of musical activity,” (RINGER, 1957: 2) unexpectedly housing many of Europe’s most famous musical war-exiles. With such an environment in which to gestate, the young student composer responded to the exchange of musical ideas, reacting, adopting, and developing his individual place among them, eventually forming a compositional credo which would orient his future trajectory.

Kirchner fell under Arnold Schoenberg’s influence while still an undergraduate student, studying with him sporadically from 1937 to 1940, and key aspects of Schoenberg’s compositional philosophy and technique sunk deep into Kirchner’s outlook at this impressionable formative period. Despite Schoenberg’s assertion that tonality was dead leading to his ‘discovery’ and promotion of the twelve-tone system, he maintained a foundational respect for the musical past. Schoenberg saw his own role in the development of new musical systems not in terms of annihilating past developments, but rather as being ‘forced’ to carry music forth to its next necessary evolution: “just as ripe fruit falls from a tree, music has quite simply given up the formal principle of tonality... We couldn’t do a thing about the dissolution of tonality, and we didn’t create the new law ourselves—it forced itself overwhelmingly on us.” (WEBERN, 1963: 45, 54). Webern further qualified this description of Schoenberg’s prophetic yielding to evolutionary forces, or “natural law as related to the sense of hearing,” (1963: 32) as something which developed naturally from all that came before: “you mustn’t imagine it was a sudden moment. The links with the past were most intense” (1963: 39). Commensurate with this attitude, Schoenberg focused exclusively on tonal repertoire in his undergraduate teaching. Kirchner remembered Schoenberg’s total
command of the tonal repertoire, impressed with “his memory of every Beethoven chamber work or symphony, his memory of every Brahms work. I observed that he was able to recognize a work by simply glancing at a measure of it. It was frightening” (RIGGS, 2010: 14). Likewise, this reverence became foundational for Kirchner, who felt permission to extend “into the future because of the balance established in historical precedent” (RIGGS, 2010: 72).

Kirchner also embraced Schoenberg’s ideal of “comprehensibility” as explained by Webern: “In music, as in all other human utterance, the aim is to make as clear as possible the relationships between the parts of the unity; in short, to show how one thing leads to another” (1963: 42). Two of Schoenberg’s key compositional principles, calculated to effect comprehensibility, came to permeate Kirchner’s style, namely those of Grundgestalt and developing variation. Schoenberg’s “laws of musical coherence” mandated that “everything within a closed composition can be accounted for as originating, derived and developed from a basic motive or at the least a Grundgestalt.” A Grundgestalt or “basic shape” is a germinating idea, explained by Schoenberg’s pupil Edward Stein as “not the theme but only its raw material. It is a motif in the most literal and original sense if the word, being the motive power of all melodic and harmonic happenings” (RIGGS, 2010: 72). According to Schoenberg’s philosophy, “whatever happens in a piece of music is nothing but the endless reshaping of a “basic shape” (SCOENBERG, 1975: 290). The reshaping of the Grundgestalt Schoenberg termed entwickelnde Variation (developing variation), and is employed not to produce variety but to “proceed more or less directly toward the goal of allowing new ideas to arise” (SCHOENBERG, 1994: 39). Kirchner adopted and exalted these techniques and Schoenberg’s “laws of musical coherence,” expressing his own philosophy when he wrote the following in the 1956 liner notes for his second commercial recording:

An artist must create a personal cosmos, a verdant world in continuity with tradition, further fulfilling man’s ‘awareness,’ his ‘degree of consciousness,’ and bringing new subtilization, vision, and beauty to the elements of experience. It is in this way that idea, powered by conviction and necessity, will create its own style and the singular, momentous structure capable of realizing its intent (RINGER, 1957: 5, italics added).

In addition to these key compositional approaches, it is worth noting that Kirchner, late in his career, paralleled his early mentor in one more important way. Arnold Schoenberg, self-proclaimed, destiny-chosen pioneer that he was, "forced overwhelmingly" by the powers of evolution to carry western
music forward to its next stage (WEBERN, 1963: 54) after "the end of major and minor," (1963: 36) admitted later in life to feeling nostalgia for the musical past. In his 1949 article published in the *New York Times* entitled *On Revient Toujours*, he confessed feeling a continuous "longing to return to the older style," and defended his late occasional "yield to that urge" (FEISST, 2011: 9). Kirchner too seems to have been torn by such a longing. In program notes he wrote for premieres of several of his late works, he included a quote from Thomas Mann’s novel *Dr. Faustus*, in which a composer who has sold his soul to the devil in exchange for musical genius is instructed by the devil that the "very means of tonality, and thus all traditional music" are "forbidden" through a "historical process no one can reverse." Kirchner, especially toward the end of his life, was unwilling to "accept the devil’s restrictive theory" (RIGGS, 2010: 239). Though trained in the spirit of a younger Schoenberg, who admonished his pupils to write music which "continues [development] into the future, and doesn’t aim to return to the past" (WEBERN, 1963: 61), Kirchner permitted himself to reference and explore the musical past to a greater degree in his late works, tempted, as was an older Schoenberg, by the allure of "the forbidden."

Yet even prior to his late works, Kirchner was not a loyal follower of all of Schoenberg’s “laws” and evolutions. Perhaps traumatized by his mentor’s critical teaching style, Kirchner left Schoenberg’s tutelage in 1941, admitting that the decision “was pretty terrifying but nevertheless I had to leave just for my own survival almost” (RIGGS, 2010: 47). Schoenberg’s own words illustrate the case:

I always called it one of my greatest merits to have discouraged the greatest majority of my pupils from composing. There remain, from the many hundreds of pupils, only 6—8 who compose. I find such who need encouragement must be discouraged, because only such should compose to whom creation is a ‘must,’ a passion, such as would not stop composing if they were discouraged a thousand times (RIGGS, 2010: 19).

Like the attitudes of a critical parent which follow the child wherever she goes, Kirchner may have carried Schoenberg’s “discouragement” with him even after he left. Composer John Adams, Kirchner’s pupil at Harvard, saw traces of Schoenberg’s criticism acting on Kirchner’s personality decades later.

... I got to know him and realized that, like that of his music, restless and volatile and searching was his normal personal mode. I often speculate whether this was the legacy of his studies in Los Angeles with Arnold Schoenberg. Schoenberg seems to have been a nucleus of white heat who blinded and scorched the beings that fell into his personal orbit. Luckily Kirchner didn’t wither into nothing in the presence of the master (as did many others), but he did seem to carry with
him a constant awareness of his own and everyone else’s inadequacies, and that self-knowledge must have caused him a great, Dostoevskian pain (RIGGS, 2010: 5).

It is not surprising then that Kirchner, seeking some distance from his former teacher, adopted from his next mentor at UC Berkeley, Ernst Bloch, an important anti-Schoenbergian tenet, namely the belief that “any system (musical or political), because of its laws and restrictions, was disastrous,” with serial techniques in particular being akin to fascism (RIGGS, 2010: 21). Kirchner never embraced dodecaphonism, and although he continued to use Schoenberg’s organizing principles of Grundgestalt and developing variation throughout his entire composing career, he did not use these techniques in a systematic manner, but rather as generalized approaches lending organic unity to a composition, while at the same time leaving room for great expressive and intuitive freedom (RIGGS, 2010: 73).

Kirchner came to use the octatonic scale extensively in his compositions, “conditioned by his long fascination with both Stravinsky and Bartók, ... [and] drawn to the octatonic sound by an innate predilection for its color and the harmonies that it generates” (RIGGS, 2010: 107). Bartok and Stravinsky can be held to represent a group of composers who, in respect to tonal orientation, offer opposition to Schoenberg in the unself-conscious manner in which they move freely between triadic and non-tonal progressions, while adherents to the Second Viennese School sought to avoid triadic references (BASS, 1994: 155). Scriabin is another composer in this former group, and many of Scriabin’s salient characteristics, besides octatonic use, are mirrored in Kirchner’s style. James Baker remarks on the way in which Scriabin enables “traditional tonal language... and symmetrical non-tonal pitch elements, like the [octatonic] scale, to operate in an integrated manner to create a unified composition” (1997: 77). Kirchner’s style, both generally and in the Interlude I in particular, echoes Scriabin’s use of the octatonic scale as a unifying element, his rhapsodic, improvisatory gestures and further, embodies surprisingly well Bryan Simms’s description of Scriabin’s Tenth Sonata: a “surface... characterized by changes of mood in fits and starts... little feeling of stable meter, and rhythm that changes suddenly from hymnic slowness to frenetic outbursts” (1996: 185-6).

In short, Leon Kirchner, as a child of Russian-German-Jewish immigrants, educated in the war-orchestrated musical melting pot of Europe’s exiles, became a composer who expressed, as observed by Ringer, “aspects of Schoenberg without the row, Stravinsky without ostinati, Bartok without the folk element, Berg without ”Weltschmerz,” and Sessions without excessive intellectual scruples” (1957: 19). Kirchner’s style reflects a complex conversation with the music and attitudes of his mentors, predecessors
and contemporaries, a conversation which acknowledges the position of each, concurring on some matters, disagreeing on others, while never failing to create and contribute something unique, personal and new.

**THE TIME OF MUSIC AS ANALYTICAL TOOL: AN INTRODUCTION TO LINEARITY AND NONLINEARITY ACCORDING TO JONATHON KRAMER**

Aaron Copland, in reading through the printed score of Kirchner’s Duo for violin and piano (1947), remarked on the “inability of the printed score to convey a true impression of Kirchner’s music. Indeed, the full effect of his astute manipulation of ever-changing time relationships can only be experienced in actual performance” (RINGER, 1957: 8). These ‘ever changing time relationships’ are the key then to unlocking the impact of Kirchner’s style, and musical temporality is the focus of Jonathon Kramer’s book *The Time of Music*, a book dubbed ‘seminal’ in Mark Delaere’s 2009 survey of writings on musical time, and called “one of the most influential publications in this field and a source of inspiration to this day” (16-17). Kramer, struck by the irony of “the neglect of time by the theoretical mainstream” (1988: 2) seeks in his book to answer the question ‘what is musical time?’ by analyzing its inherent opposing characteristics, namely the paradox that “musical time is both linear and nonlinear.” As Kramer asserts, most music exhibits more than one species of time, linearity and nonlinearity being the “two fundamental means by which music structures time and by which time structures music” (1988: 20).

**Linearity according to Kramer**

Kramer’s key concepts of nonlinear and linear musical time are, he explains, related to the two extremes of temporal philosophy explored by the East and the West, the Eastern philosophy experiencing time chiefly as *being*, and Western philosophy largely relating time to *becoming*. Kramer’s linearity, or becoming, is processive. Events or characteristics in the music are determined or influenced by previous happenings; one thing leads to another.

Kramer asserts that nearly all Western music has a strong degree of linearity, understandable given
that such ideas as “cause and effect, progress, and goal orientation have pervaded every aspect of human life in the West... from the Age of Humanism to the First World War” (1988: 23). Linear western thinking is classically exemplified in its invention of the tonal system, a language of change communicating melodic, harmonic, and motivic progression.

Kramer explains how Western music’s linearity began to weaken with the chromaticism of the late romantics, who craved the realization of linear goals with heightened urgency yet attained it “only occasionally” (1988: 32). Voice leading came to the foreground as a tool for goal definition, as root movement defining harmonic progression began to fade, until Schoenberg pronounced tonality and its harmonic directedness altogether passé. Voice leading continued to enable desires for linear development, but proved a feeble pillar on which to sustain large-scale goals. Cadences remained, but now had to be created contextually by means of what had formerly been secondary parameters, such as reiteration, emphasis, directional voice leading, and changes in texture, timbre, register, dynamic and rhythm. Goals became difficult to predict, creating their own contexts moment by moment, weakening the linear sense of expectation. Such enfeebled linearity Kramer describes as non-directed: it “carries us along its continuum, but we do not really know where we are going in each phrase or section until we get there” (1988: 40).

Nonlinearity according to Kramer

Even before linear tonality began to disintegrate, Western music always had its nonlinear characteristics as well. “Linearity and nonlinearity are complementary forces in all music,” says Kramer, “coexist[ing] in different proportions and on different hierarchic levels. From their interaction and from their conflict arise the new temporalities of recent music and many of the meanings of all music” (1988: 19). Nonlinearity, or “being,” is what Kramer calls “nonprocessive.” The nonlinear aspects of music have origin not in previous events but rather in constancy, in governing principles which rule a section or entire work. “While linear principles are in constant flux, nonlinear determinations do not grow or change” (1988: 21). A nonlinear aspect of Beethoven’s String Quartet Op. 74, for example, is its instrumentation: in manifestation of its being, the piece simply is for string quartet. This aspect of the music does not change, nor arise from events and developments within the music’s linear unfolding of
themes and tonal harmonies. Similarly, Kramer offers the example of Chopin’s Prelude in C Major opus 28 no. 1 (1839) and Bach’s Prelude in C Major as pieces which maintain essentially constant textures, rhythmic figuration or motivic material throughout, elements which are nonlinear in their lack of development.

The concept of proportion is another nonlinear facet of the Western musical aesthetic. Balance and proportion in form belong in music’s non-sequential dimension, as their perception involves memory and comparison of sections, which do not depend on progression but rather on what Kramer calls “cumulative listening: an all-encompassing, retrospective, atemporal understanding which lies beyond the piece’s time frame” (1988: 43).

The twentieth century brought with it the development of two important influences on nonlinear thinking in Western music, singled out by Kramer for their profound impact: the contact with non-Western music, and the effect of recording technology. Debussy’s exposure to Javanese gamelan music at the 1889 Paris Exhibition introduced him to “sounds unfolding in a different time world... allowed to be themselves, that did not exist primarily in functional relationships to other sounds.” Debussy and later Stravinsky began to experiment with a new time sense, stripped of the urgency and anticipation to move ahead, a harmonic stasis, “the freezing of several parameters into miniature eternities” (1988: 44).

Recording technology delivered a more violent blow to linearity’s hold on Western musical thought by undermining the concert hall’s ritualized monopoly of musical experience. Music was no longer exclusively linked to single, unrepeatable performance-- the listener could tune in at will by radio, record, or tape, and tune out when desired. What’s more, with the tape recorder, music could be spliced, producing a performance that never actually existed in linear time. The invention of film had broad repercussions on contemporary art, regrouping linearity into moments which could be jumbled and reordered, thus losing its “irreversible direction. It [could] be brought to a standstill: in close-ups; reversed: in flash-backs; repeated: in recollections; and skipped across: in visions of the future” (HAUSER apud KRAMER, 1988: 70).

Accordingly, Western music responded with new manifestations of nonlinearity. Persistent musical discontinuities resulted in what Kramer calls *multiply-directed time*, in which the linearity of the music is so “frequently interrupted... the music goes so often to unexpected places, that the linearity, though still a potent structural force, seems reordered” (1988: 46). The cultivation of *moment time* additionally
emerged, explored as mentioned by Debussy, Stravinsky, and others, in which the music “does not really begin. Rather, it simply starts, as if it had already been going on and we happened to tune in on it” (1988: 50). Here discontinuity is replaced by permanence, the ordering of events is arbitrary not hierarchical, expectations are not tended nor fulfilled, tension is not released but simply ceases – unhampered \textit{vertical time}, free of reference to anything but itself.

**Between linearity and nonlinearity**

Despite Kramer’s in-depth classifications of these musical time characteristics, he emphasizes the imperfections of comparing and distinguishing between them. “The temporality of music,” he says, “is far too complex to be explained solely by categorization” (1988: 62). Nevertheless, maintaining the usefulness of even crude categorical tools in evaluating musical temporality, he lays before the reader the continuum between the extremes of linear and nonlinear time, where we may find non-directed linear time and multiply-directed time, elements which, together with those at the extreme poles, may simultaneously be at work on various levels within the music. To summarize Kramer’s concept of this continuum, the following figure is offered.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Fig1.png}
\caption{The continuum between Linearity and Nonlinearity according to Kramer. Source: ADRIANA JARVIS TWITCHELL (2017).}
\end{figure}

**LINEARITY IN INTERLUDE I**

We now turn to an analysis and presentation of elements of linearity in Kirchner’s \textit{Interlude I}, where despite the chromaticism and rhythmical irregularity of the style, the composer succeeds in creating
a palpable sense of linear progression, development, growth, change, goal orientation and process, although the linearity herein is often what Kramer terms non-directed, where goals create their own contexts and the listener cannot predict the destination of goal-driven movement (“we don’t really know where we are going... until we get there” [1988: 40]). These effects are attained through various means, detailed below and including the transposition of octatonic scales, note value changes, time signature changes, step-wise motion, tonal references, flexion count changes, and perhaps most importantly, through Schoenberg’s technique of developing variation based on a Grundgestalt. There is a feeling of dialogue between opposing forces, of struggle and final release, giving the work a strong sense of development in and through time.

**Grundgestalt and Developing Variation**

In homage to Schoenberg’s “laws of comprehensibility,” Kirchner commonly used the opening measures of his compositions to present a Grundgestalt, as discussed in Section 1: a germinating idea, from which all subsequent material is derived and developed (SCHOENBERG, 2006: 27). With this in mind, the first two measures of Interlude I serve as the composer’s Grundgestalt or “basic shape” (see Example I), wherein we are given an abrupt introduction to two contrasting characters or forces, the second character being presented not as independent of the first, but in clear relation to and development of its predecessor. Thus, within the very Grundgestalt we are introduced to the concept of developing variation (Schoenberg’s entwickelnde Variation, or reshaping of the basic shape) which serves as a driving force for the unfolding of these two characters throughout the work. The music begins with a one-measure fortissimo accented ascending motive of six sixteenth-notes from the octatonic scale, terminating in a cluster chord held until the end of the measure. The second measure of the theme repeats this idea, but in variation: the sixteenth notes are dolce, pianissimo, tenuto, played in a higher register and in a slower tempo, and, notably, in a different scale (C# minor). There is no final explosive cluster, but rather, a held, arpeggiated sonority, a pleading D# half diminished seventh with an added fourth (G#)—Wagner’s famous Tristan chord in slight disguise!
These two contrasting characters, the one tumultuous and the other dolce, are the seed from which germinates the “singular, momentous structure... [and] intent” of the remainder of the piece—an alternating conversation, tension and interaction between two sentiments. As remarked before, the dolce material is clearly related to and derived from the tumultuous first statement, consistent with the idea of linearity where “one thing leads to another” (WEBERN, 1963: 42). The very relation of these two themes highlights their contrasts of tempo, dynamic, mood and tonality; one is octatonic and the other minor, juxtaposing a modern chromaticism with traditional harmony. This disagreement between tonalities and reference to the Tristan chord reminds us of Kirchner’s attraction to the “forbidden” musical past, felt especially in his later works and reflecting Schoenberg’s own late-life “longing to return to the older style” (FEISST, 2011: 9). A tension between old and new is thus introduced, which, along with other seeds contained in this two-measure microcosm, serves as an important element in the developing variations to come.

Kirchner divided the score of the Interlude I into nine sections, marking divisions with fermatas and/or double bars. These sections serve as convenient partitions in which to examine the process, growth and change of the two characters from the Grundgestalt as the piece proceeds. For convenience, I will call the turbulent octatonic material from measure 1 “A,” and the contrasting dolce character from measure 2 “B,” and the Tristan-like chord I will label “T.”

As shown in Example 2, Section 2 (m. 7-34) begins with material “A,” restlessly ascending and descending in octatonic scales, and turning in measure 11-12 to a slower, careful, tenuto statement reflecting the dolce “B” character and containing the disguised Tristan chord transposed (a G# half diminished seventh played simultaneously with an A diminished chord), only to return in measure 13 to our turbulent “A” octatonic scales.
The “B” material in measure 12, derived clearly from the Grundgestalt, presents what can be understood as a motif in the sense that Rudolph Reti defines it: “a melodic phrase or fragment or even only a rhythmical or dynamic feature which, by being constantly repeated and varied throughout a work or section, assumes a role in the compositional design somewhat similar to that of a motif in the fine arts” (1951: 11-12). Example 3 shows measure 27 where the three-note motif of eighth notes, repeated and transposed and given emphasis with tenuti, reappears inverted and then compressed, again marked with tenuti and accents.
The section ends with a *quasi cadenza* of dolce “B” character, in which, consistent with the tonal seed suggested in the original “B,” a prominent Tristan chord (C half diminished with added fourth), makes its allusion to the musical past.

Ex. 4: Measures 31-34, Section 2, *Interlude I*

Section 3 (measure 35-46) brings back the “A” material with *Presto attaca* agitation, ending its ragged octatonic unrest pointedly on an upward, yearning, arpeggiated Tristan chord and a breath, followed by *Dolce Allegretto* “B” material which begins Section 4 (see Example 5). The dolce *motif* here repeats itself as before—twice, the second time in transposition, demonstrating a miniature developing variation—but this time the *motif* itself, while still a three-note figure, is expanded in register.

Ex. 5: Measures 42-48, *Interlude I.*
Sections 4 (m. 47-54) and 5 (m. 55-106) then begin a gradual transformation of “B” into “A” character, which proceeds unhindered except by a momentary pause in measure 78, where the dolce Tristan harmony asks for brief consideration (Example 6). As explained before, these moments are better felt and heard than examined in the score, but an excerpt is included here nonetheless for orientation.

Ex. 6: Measures 75-80.

Thereafter “A” material returns and pursues its course of energy accumulation, until finally leading, through accelerando and crescendo, to an explosive fortissimo terminating cluster in measure 107. After the appropriate fermata and double bar, “B” material is revealed in the aftermath (Section 6, m. 108-9). Here we have a tiny, two measure section, slow and pianississimo, which once again repeats and transposes its dolce motif.
Again, the following section (Section 7, m. 110-132) gradually returns to the agitation of “A,” ending on yet another octatonic scalar ascent and crashing cluster (Example 8).

Section 8 (m. 133-150) repeats the sequence, beginning with the dolce motif repeated in transposition, afterward gradually building in speed and tension, producing a new octatonic scale and cluster climax (Example 9).
What follows now is the most prolonged treatment of “B” material so far, in section 9 (m. 150-227), where we remain somewhat suspended in an adagio context punctuated by Tristan chords (m. 161, 165) from measures 150-167. The dolce *motif* descends at first in on a four-note grouping, then reaches upward, shown in Example 10.
The music resumes its ascending and descending “A” restlessness, with a brief “B” hold back and Tristan chord in measure 189, a return to “A” turmoil which in measure 195 (see Example 11) closely resembles opening material from our previous Section 3, and a fortissimo climax in measure 202 that, rather than resulting in a frustrated cluster and discontinuity marked by a fermata/double bar as in the previous three sections, transforms gradually into a glorious extended fruition of B: the tempo is slow, the mood and harmony dolce, as an E-flat mixolydian harmony emerges in measure 210 from the octatonic groundwork. A Tristan chord glimmers (m. 217), but now the harmony seems reinterpreted over an E-flat foundation, and the innate tension of the chord finds repose as a rocking E-flat minor seventh, major
ninth harmony. We remain suspended over the constancy of the E-flat bass, and before the final shimmering tremolo a dolce *motif* ending on d-natural (m. 223) pulls us fully into E-flat major (see Example 12).

Ex. 11: Measures 194-204. Final transformation of “A” into “B.”
Plainly, Kirchner’s “A” and “B” characters from the initial measures are the seed material, the “basic shape,” the “motive power” of happenings in the Interlude I, clearly demonstrating the linear processes of motion, growth, change, and progression. Schoenberg’s principles of Grundgestalt and developing variation used by Kirchner are, as mentioned before, calculated to effect comprehensibility, or more specifically, linear comprehensibility, for as Anton Webern explained, in such musical coherence “the aim is to make as clear as possible the relationships between the parts of the unity; in short, to show how one
thing leads to another” (1963: 42). The content in Kirchner’s *Interlude I* is made coherent by its relation to the two opening measures, and thus reflects a linear temporality which operates within process and growth.

**Octatonic scale use: stability and floating tonality**

Inette Swart, in her dissertation analyzing Kirchner’s *For the Left Hand*, remarks on the effects of stability or non-stability produced by the composer’s use of transpositions of the octatonic scale. The octatonic scale, built on the alternation of whole and half tones, has three possible spellings or transpositions: 1) C-Db-Eb-E-F#-G-A-Bb; 2) C-D-Eb-F-F#-G#-A-B; and 3) C#-D-E-F-G-Ab-Bb-B. Swart observes that when many transpositions of the scale follow in quick succession, a feeling of tumult or "floating tonality" ensues, while stretches where he "uses one version of this scale predominantly again create a sense of stability" (2005:9). This technique contributes to linear temporality in the music, generating a means by which goal-directedness may be supported, tension may accumulate or dissipate, and areas of motion or stability, movement or repose are built.

In demonstration of this effect, we examine Section 2 (m. 7-46, shown in Example 13), which conveys an increase in energy accumulation as the section progresses. The first segment of the section, measures 7-21 (15 measures), contains four octatonic scale transposition changes, while measures 22-46 (13 measures) contain fourteen scale changes. Measures 7-21 begin in version 2 of the scale, and continue firmly here, with only a fleeting passage through versions 3 and 1 in measure 17. Measures 22-46, however, start with version 3 for three and a half measures, switch to 2 for two measures, then 1 for one measure, descend in a chromatic scale to version 2 for one beat, and from thence change repeatedly, including two part-measure excursions to the whole tone scale. The latter part of the section has a feeling of heightened upheaval in comparison to the former, due to its lack of rootedness in one octatonic spelling and lack of exclusive commitment even to the octatonic scale (adding chromatic and whole-tone to the mix). Where the former segment certainly engages in the push and pull of energy due to other factors besides scale transposition, segment 2 succeeds in building to a greater climax than 1, in part because of its numerous scale changes in rapid succession.

Ex. 13: Scale changes in Section 2. Octatonic Scale transposition 1 Octatonic Scale transposition 2 Octatonic Scale transposition 3 Whole-tone scale Chromatic notes

In this rhapsodically chromatic context, devoid of a tonal root and directedness, Kirchner nevertheless succeeds creating a sectional climax in measure 32. Among the various means used to define this climax, we see the composer using the pacing of octatonic transpositions to contribute to an intensification of goal directedness as the section progresses. This does not mean we anticipate where the music is headed precisely, and for this reason it falls within Kramer’s category of non-directed linearity (1988: 39-40) but we do feel that a process of escalation is occurring, propelling us toward some unknown future event.

Tempo and note value changes

Kirchner uses changes in tempo and note values (lengthening or shortening) in conjunction with other elements like dynamics and step-wise motion to strengthen the impression of energy build-up or dissipation, contributing to a sense of linearity.

Example 14 shows this effect achieved with written tempo changes, beginning in measure 17 with poco rit. and hold back, then move ahead, to Presto accelerando and Prestissimo, and so forth.
Example 15 illustrates a right-hand section which spells out an accelerando-ritardando process, beginning with eighth notes in measure 190, which become triplet eighths, then sixteenths in the following measure, reaching maximum compression on accented quintuplets, and returning to triplet sixteenths in 192, then simple sixteenths in 193 as it approaches the ritardando. In this case, the expansion of note values and ritardando serve to dilate time in a way which increases rather than dissipates tension, putting the forward directedness of the phrase under greater pressure similar to the stretching of an elastic band.
In both of these examples we see how Kirchner’s tempo and note value fluctuations serve linearity by making directedness explicit, whether through increasing tension by increasing speed, decreasing tension through slowing, or using deceleration to augment forward pressure.

**Step-wise movement**

Step-wise motion in conjunction with dynamic and tempo fluctuations is another technique by which Kirchner lends linearity to the Interlude, and succeeds in accumulating or dispelling energy, showing process and change.

Example 16 shows a soprano line which ascends in basically a step-wise fashion from D-flat (measure 65) to a high E-flat (measure 68), accompanied by crescendo. Though again the linearity here is what Jonathon Kramer would call *non-directed* in that the listener cannot predict where the music will go next, the sense of connectedness within the line is palpable, as one event gives rise to another. Example 17 shows a similar procedure with a descending stepping line, followed by another ascending line leading to a *molto marcato* forte declamation.
The Interlude is replete with examples of this technique, so commonplace that the music at times seems awhirl with the zigzag of step-wise directionality. This leads us to discussion of the procedure considered next, that of the “flexion count.”
**Flexion count**

Once step-wise movement makes the directedness of lines explicit, we are able to explore what Inette Swart calls the *flexion count*, referring to the "number of changes of direction of melodic or figurative material." Swart observes that in sections where the flexion count is high (at most reaching a change on every note), excitement accumulates, while a low flexion count (one direction only) lowers the excitement (SWART, 2005: 73). Example 18 demonstrates this effect. The soprano of measures 17-19, where the music undergoes a *ritard*, hold back and begins a slow climb contains only two changes in direction, while measure 20-21, where forward-direction attains greater drive in its downward sweep, contains 12 direction changes.

![Ex. 18: Flexion count changes in measures 17-21.](source)

Example 19 offers another illustration of flexion count working together with note value changes, tempo changes, and dynamic changes to create a swelling intensification and subsequent easing. Note that the soprano line of measures 194 and 5, where the *crescendo* is at work, contains no less than eighteen changes in direction, while at 196-9, after the forte dynamic has been attained, the line changes direction only twice.
The flexion count acts as a physical manifestation of excitement, where notes behave like atoms, whose movement becomes more erratic as temperature increases and subdued as things cool down.

**Tonal references**

Rejecting the notion that tonality and references to the musical past are “forbidden,” Kirchner allows the appearance of triadic harmonies, even permitting these harmonies at times to interact with the surrounding chromaticism in a way which exerts a tonicized local pull or gives fleeting breath to a tonal context. These moments work for linear hearings of events in succession, cultivating tension and release even where feeble or short-lived. The concept of “frame tonality,” introduced by Ringer (1957:12) in discussing Kirchner’s use of tonality, brings out the idea of sections “framed,” or referring at beginnings/endings to a particular tonality, while internally containing mostly free chromaticism, or as is the case in the *Interlude*, chromaticism mostly governed by the octatonic scale. Nelita True gives name to another aspect of Kirchner’s individual use of tonality, namely the establishment of a “tonal nucleus,” which exerts a strong “magnetic pull” over neighbor tones, similar to the pull a tonic has for the dominant in traditional tonality (1976: 113). Absolute classification, however, of ways in which Kirchner uses tonal allusions is problematic, since, having adopted his teacher Ernst Bloch’s antipathy for systems, Kirchner’s
methods are, essentially, unsystematic.

Example 20 shows one instance where a traditional tonic progression peeks through. The beginning of Section 3 holds a strong reference to C in measure 35, reinforced by the accented E-flat giving the C a minor flavor. After chromatic transition material in measures 36 and 7, the left hand lingers in measure 38 for two beats on an arpeggiated G major seventh harmony, and following a climb in the soprano voice in measures 39-41, we find the left hand (measure 42) in unabashed C major for another two beats. Sections such as these use many tools, tonal harmony included, to heighten a sense of expectation, relation and progression, demarcating phrase structure.
a specific anchor or center, that serve in any case to move us onward in a sense of progression.

Ex. 21: Major seventh chords in step-wise progression, measures 100-105.

Although there are long sections in the Interlude I which seem utterly untethered to any particular tonality, in other sections the rootedness and establishment is more explicit. Pronounced attention is given to the E-flat in the last section, where frequent returns to it in the bass-line create a nuclear point, exerting a magnetic pull on neighbor tones such as the bass D in measure 165, and reinforced by the subdominant functioning bass A-flat and dominant bass B-flat in measure 168 (Example 22).
Ex. 22: E-flat tonal nucleus in Section 9, measures 162-170.

After measure 207 we have complete surrender to the E-flat sonority which lasts till the end of the piece (Example 23). The E-flat tonal nucleus exerts a “magnetic pull,” as Swart described, on neighbor tone E natural in measure 208: the brief E natural deviation heightens the desire to return to E-flat in measure 210.
Examples such as these show Kirchner’s use of tonal references to lend connection, propel the music forward, create expectation and relate measures together in linear progression.
Conclusion: linearity

Kirchner’s compositional language, chromatic and rhythmically erratic, is harsh ground for the cultivation of linearity. Yet he is successful in outlining a dramatic unfolding on the large and small scale, giving intentionality to phrases through step-wise motion, establishment of tonal references, octatonic scale transpositions, flexion count changes and developing variation. The Grundgestalt introduced in the beginning, Kirchner’s idea which creates through time “its own... momentous structure capable of realizing its intent,” (RINGER, 1957: 5) is spun into a succession of expansions and contractions, experiences and transformations through the linear processes of motion, growth, change, goal orientation, tension, release, and progression.

NONLINEARITY IN INTERLUDE I

Consistent with Kramer’s assertion that “virtually all music utilizes a mixture of linearity and nonlinearity,” (KRAMER, 1988: 20) the Interlude I has its nonlinear aspects, despite its strong linear manifestations. Nonlinear features which especially deserve consideration and will be explored in this chapter include first balance and proportion, and second the implications of the static moment time at the end of the Interlude.

Proportion and balance

Proportion and balance are concepts which lie outside a simple sequential listening of the piece, because their perception requires, as Kramer asserts, “cumulative listening: an all-encompassing, retrospective, atemporal understanding which lies beyond the piece’s time frame.” (Ibid.: 43). These are compositional principle which govern an entire work or section, and as governing principles, do not have their root in former events, do not grow or change, but exist in another dimension, where they simply are, where they even govern the boundaries of the dimension of linear development itself. Consider the proportions found in Mozart’s Piano Sonata in E-flat Major, K 282, studied by Arlene Zallmann and Jane Perry-Camp, as presented by Kramer and summarized in the following table (Figure 2). The abbreviation m.
refers to measures.

<table>
<thead>
<tr>
<th>Movement</th>
<th>Total number of measures</th>
<th>Exposition + remainder</th>
<th>Total number of measures spent in tonic</th>
<th>Total number of measures spent away from tonic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement 1</td>
<td>39</td>
<td>15m. + 21m.</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>Movement 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of second half of Minuet I to first half of Minuet I: 5:3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of length of Minuet II to length of second half of Minuet II: 5:3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movement 3</td>
<td>102</td>
<td>39m + 63m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of 39:63 = 0.61895 (remarkably close to golden-mean: 0.61803)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of measures spent in tonic to measures not in tonic: 1:1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 2: Proportion in Mozart’s Piano Sonata in E-flat Major, K 282.

Proportions such as these are unquestionably functioning independently and outside of the Sonata’s linear dimension and its linking of events in succession.

**Nonlinear Planning: interlude within the Interlude**

Kirchner’s *Interlude* too shows evidence of nonlinear planning, of proportion elevated to a governing role. Remarkably near the center of the piece, not in number of measures but in time, Kirchner places his shortest section, Section number 6, marked off clearly by double bars on each end, measures 108 and 9. This is a simple “B” style motif repeated and transposed, ending with and upward inflection. Depending on the performance, this section appears roughly three and a half minutes into a piece that lasts between seven and eight minutes, and as such seems to function somewhat as a central interlude within the *Interlude*, a “B” intercessory that places itself amid sections of predominantly “A” turbulence. As such it is a fitting central respite of pause or reflection.
Nonlinear Planning: Last Section as Recapitulation

Balance is also revealed in the reappearance, in the last section of the piece, of early ideas. Section 9 seems calculated as a type of “gathering in one” or recapitulation of rhythmic and harmonic motives introduced earlier in the music and then forgotten or abandoned until the final section’s re-visititation of former things. In this sense, these ideas are not ‘developed’ linearly, but rather appear in the function of providing balance or giving a rounding proportion to the work, calculated according to nonlinear planning principles such as those demonstrated in the Mozart Sonata mentioned above. To begin with perhaps the most obvious example, observe the tremolos which finish Sections 1 and 2—a rhythmic motive which is thereafter utterly unused until the very last measures of the piece where it appears to emphasize the music’s closing harmony. Excerpts from these sections are shown below (Examples 25, 26, 27).
Another unmistakable example is found in the triplet presto figuration which begins Section 3 but is never used again until the final section, where it reappears along with its conspicuous left hand arpeggiated tonal progression. Example 28 and 29 show these excerpts in succession.
Ex. 28: Section 3, measures 35-45.
A more subtle but nevertheless distinctive reference in the final measures is made to a motive of repeated notes in dotted rhythm introduced in Section 5 and found nowhere else in the piece. Not all measures which contain these figures in Section 5 are shown here to conserve space, but the dotted figure is a salient and frequent characteristic of the section (see Example 30). The final (and only other) reference to this figure then, in the last measures, is notable (Example 31).
TWITCHELL, Adriana Jarvis; BARROS, Guilherme Sauerbronn. Kirchner and Time – An Analysis of Linear and Nonlinear Time in Leon Kirchner’s Interlude I. Revista Vórtex, Curitiba, v.7, n.1, 2019, p.1-43

Ex. 30: Motive of repeated notes in dotted rhythm, Section 5.

Ex. 31: Motive of repeated notes in dotted rhythm, Section 9.
Reflections on moment time in *Interlude I*

Kramer chooses the term *moment time* in allusion to Stockhausen’s “moment form,” and describes how this type of nonlinearity “does not begin. Rather, it simply starts, as if it had already been going on and we happened to tune in on it.” Neither does it end, but simply stops. This music explores stasis not process, often consisting of “a single extended harmony; “there is “no substantial contrast, change, motion or surprise within sections” (1988: 50-54). Such a description serves well to portray the final page of the *Interlude*. Suddenly a “single extended harmony” (E♭m7M9) is uncovered as if a curtain has been pulled, and the slow rocking repetition of the bass seems to say that change and unrest do not exist. Accents, crescendi and fortissimo markings bring no shadow, for the one harmony pervades all and gives its constant undertone. Gusty tempo fluctuations have ceased; we are suspended in slowness. Even when the pervasive E-flat mixolydian finds a D natural in 223, telling us we are now in E-flat major, the effect is not surprise. Instead, it is as if we have turned our heads to see something that was always there. The harmony then shimmers, but does not end. It only fades from view.

From one perspective, the *Interlude* up to this last moment is fully linear, giving us roughly six minutes of linearity followed by one of nonlinearity, in suspended *moment time*. These first six minutes can be seen as having a basically forward (illustrated as upward in figure XX) motion until the final release. But from another perspective, the restless searching of those first six minutes seems tiresome, predictable, cyclical—not one continuous rise, but an uneasy seeking perpetually interrupted and restarted. Of those eight previous sections, five run themselves into a frustrated punctuating cluster or tremolo, followed by a rest, fermata, double bar, or some kind of discontinuity. The other two, though they end in a more pleading manner, are also followed with a breath or fermata. Each section, despite different methods of developing the Grundgestalt, whether focusing on “A” and punctuating with “B,” attending exclusively to “B,” or creating a process which turns “B” into “A,” reaches an impasse (breath, rest, grand pause, fermata, double bar). The ceaseless rise and fall of churning chromaticism leads nowhere new; it always reaches the same limits, and cannot get beyond its barriers. It is imprisoned in a nonlinear cycle that admits no significant growth. Seen from this angle, the *moment time* of the last page is a blessed release from cyclical churning, a truly significant change. A complex interaction between linearity and nonlinearity emerges: what on close examination looks like linear progression in the first
eight sections, from another perspective is cyclical stasis; what seems from one point of view to be static moment time on the last page is actually a growth, change and release from stagnant insatisfaction.

CONCLUDING REMARKS

Kramer asserts that linearity and nonlinearity, “complementary forces in all music... coexist in different proportions and on different hierarchic levels” (1988:19). This article has been an effort to show how an interaction and conversation between two temporal perceptions is present in Leon Kirchner’s Interlude I. We have found that the piece develops from its germinating idea and unfolds sequentially in linear comprehensibility according to Schoenberian ideals. But the music also presents imprisonment within cyclical time, predictability, essentially changeless repetitive churning, breaking free only in its final moments. The composer’s own Germano-Russian heritage is called to mind in the temporal play of ideas with frequent appearances of Wagner’s Tristan chord and the extensive use of Schoenberg’s developing variation highlighting a Germanic linear tradition where “one thing leads to another” (WEBERN, 1963: 42). The pervasive use of the octatonic scale calls upon a Russian musical heritage, one less bound to the linearity of traditional Germanic music theory, one which explores “repetition and accumulation of single impressions, not thematic development to a climax,” and which, in the tradition of Mussorgsky’s influential opera Boris Godunov, is “not a continuously developed action but a series of episodes welded together” (GROUT and PALISCA, 1988: 778). The Interlude is both linear and nonlinear, both Germanically “comprehensible” in its progressions, and cyclically Russian in its repetitive impressions; organized nonlinearly with summaries of its scope in the beginning and end, and at the same time linear in its realization of a developing idea. There is exploration that, seen from another angle, looks like stasis, becoming coexisting with being. Its very title calls to mind suspension between acts, perhaps a parenthesis between philosophical extremes, an “intervening episode, period, space” (WEBSTER, 1996: 995) between two ideas. T.S. Eliot’s verse from Little Gidding is a fitting expression of such temporal multiplicity, where progress coincides with cyclical return, where linear perspective seeks to conquer the new, and in the conquest discovers that what has been accomplished is a return to what was known before; a return, and yet not to the original paradigm:
We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time. (ELIOT, 2018)

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