PAUL HINDEMITH (1895-1963)

Five traits characterize the man Paul Hindemith: his extensive experience as a performing artist; his endeavors to bring contemporary music to a wider audience; his enthusiasm with education; his respect for, and active promotion of, early music; and his outstanding wit and sense of humor. Hindemith began as a violinist, being appointed concert-master at the Frankfurt Opera at age 19. Later he had a brilliant career as one of Europe's foremost viola soloists and founded the famous Amar Quartet with whom he toured widely. Other instruments on which he was an accomplished performer include the viola d'amore, the piano and the clarinet.

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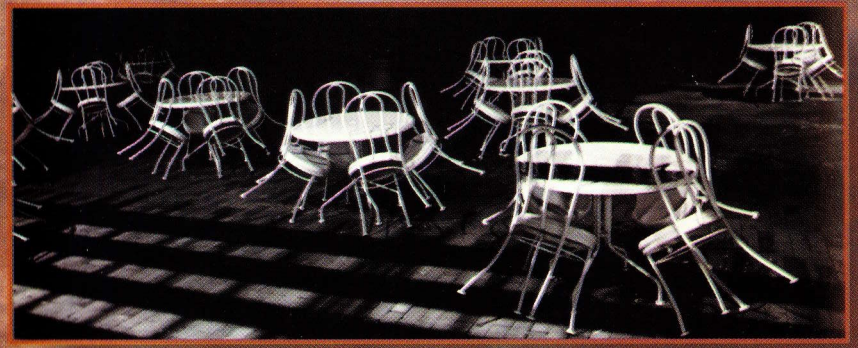
PAUL HINDEMITH

Ludus tonalis • Reihe kleiner Stücke



Siglind Bruhn
Piano

SYMMETRY AND DISSYMMETRY IN PAUL HINDEMITH'S LUDUS TONALIS

Five traits characterize the man Paul Hindemith (1895-1963): his extensive experience as a performing artist; his endeavors to bring contemporary music to a wider audience; his enthusiasm with education; his respect for, and active promotion of, early music; and his outstanding wit and sense of humor. Hindemith began as a violinist, being appointed concert-master at the Frankfurt Opera at age 19. Later he had a brilliant career as one of Europe's foremost viola soloists and founded the famous Amar Quartet, with whom he toured widely. Other instruments on which he was an accomplished performer include the viola d'amore, the piano, and the clarinet.

As a composer, Hindemith wrote for almost every type of musical medium, from large orchestral scores, operas (*Mathis der Maler, Cardillac, The Harmony of the World,* 3 one-act operas), oratories and ballets to concertos (see *Four Temperaments* for piano and strings, *Funeral Music* for viola and strings), chamber music for all instruments, and song cycles (see, e.g., *The Life of Mary*). His work also includes music of deliberately functional intent (for which he coined the word *Gebrauchsmusik,* music that was to be useful and would be used as part of people's enjoyment). At age 28, he was appointed professor of composition at the prestigious *Hochschule für Musik* in Berlin. Hindemith was one of the leaders of the Donaueschingen Festival for New Music where, apart from contributing his own compositions, he commissioned and premiered works by numerous other composers of his time. In his effort to make contemporary music more easily accessible to the audience, he wrote very spirited introductory articles, enlivened with his own witty illustrations.

Banned by the Nazis as musically 'degenerate', he emigrated to the United States. Teaching at Yale University as a professor of music theory (1940-1953), he founded and coached several ensembles for early music, stressing the students' awareness of both early music compositional techniques and performance practices.

The title *Ludus Tonalis* can be translated as "Tonal game". However, such a rendition gives only part of the meaning implied in the Latin wording. The term *ludus* (from Latin *ludere* = to play) can refer to three different scenarios: the playing of an instrument, the playing of a drama on stage, and the playing of games. (Historically, the word *ludus* most often described medieval liturgical dramas.) It will be shown that Hindemith probably had all three meanings in mind when he chose this particular title. The work contains an almost complete array of keyboard techniques and performance "colors"; many of the fugues and interludes suggest dramatic characters; and the entire cycle expresses wonderful fun—fun for the composer, who wrote this significant work within a few weeks, and fun for the performers, especially for those who undertake to play the entire cycle.

The *Ludus Tonalis* consists of twelve fugues that are linked by eleven interludes, and all of it is wrapped by a praeludium and a postludium. This layout, with pieces on each of the twelve semitones, recalls several forerunners. However, the tonal organization of the fugues is neither chromatic (as in Bach's *Well-Tempered Clavier*) nor in fifths and their relative minors (as in Chopin's or Scryabin's 24 Preludes). Instead, Hindemith uses a tonal organization in which the succession of pitches is determined by their continually lessening relationship to the central C.

Of particular interest are the framing pieces. The Praeludium is built on two contrasting central notes: C (bars 1-32) and $F^{\#}$ (bars 34-37). This piece thus anticipates, as it were, the entire tonal argument of the composition in contraction. It leaves us where the fugues will eventually leave us—at the tritone.

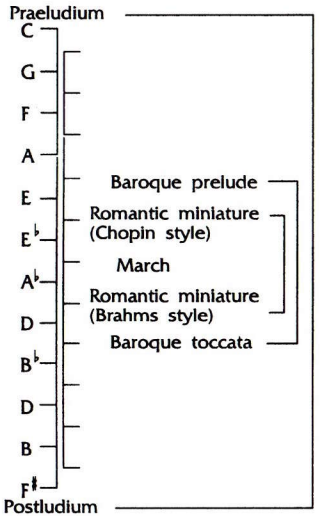
Having launched the *Ludus Tonalis* with a piece so fraught with allusions to the main body of the work, the question arises—and must have arisen to Hindemith—what kind of *finale* would be a match, rounding off the cycle in a meaningful way. Hindemith's solution is ingenious; he composed the Postludium as a special kind of retrograde inversion of the Praeludium: one in which the page can literally be turned upside down and read backwards!

This may seem like a fancy game, but it constitutes one of the most daunting compositional tasks—quite certainly one reason why, since Bach's *Art of the Fugue*, no work of similar dimensions has been written in this technique. That Hindemith struggled to meet his own demands can be seen from his sketch book. A prolific composer, he usually took down no more than one draft, followed by a correction and a fair copy. But while this is true for each of the fugues and interludes in the *Ludus Tonalis*, there are more than twenty sketches for the Prelude-Postlude pair. What is at stake is this: an ascent in the lowest part must make musical sense when recurring as a descent in the upper part; the opening of a phrase must sound convincing when appearing, upside down and read backwards, as a close; strong beats must be useful as weak beats and vice versa; even dynamic and agogic motions must literally be designed as reversible. (The only adjustments allowed are the accidentals which must necessarily be relocated before the note.) As if this was not enough, the true problem for such an undertaking lies in the tonal organization. Hindemith's sketches reveal that he discovered after several attempts that there are only five scales which, when read in retrograde inversion, give the same pitches: C, C$^{\#}$ and C$^{\flat}$ major, and Phrygian on C and on C$^{\#}$. In Hindemith's final solution, each of the two pieces appears as beautifully accomplished music in its own right: a triumph of art over technique and a fitting frame for this major work.

SYMMETRY AND DISSYMMETRY IN THE INTERLUDES

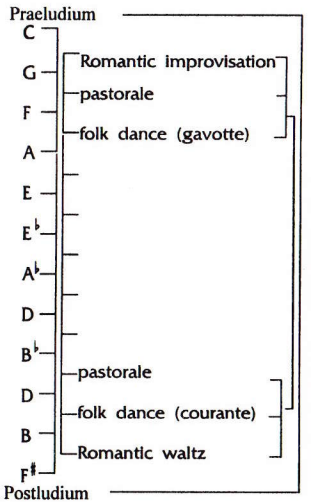
The twelve fugues and eleven interludes framed by these remarkable examples of musico-visual symmetry are arranged in such a way as to establish various kinds of intricately mirroring patterns, all the while attentive to the other aspects of the title word *ludus*. Let us first take a closer look at the interludes.

In the center of the cycle we find a March. This interlude differs from all others in almost every respect and thus constitutes a genuine, "unique" center piece. The tonal language is very easy to grasp, containing predominantly consonant chords, double octaves, and many superimposed fifths or fourths. These prime intervals, together with the somewhat raucous rhythm in the main section, ensure an unmistakably humorous atmosphere. In conjunction with the stilted melody in the middle section that is suggestive of tin soldiers (and, perhaps, their tin brides), this march strikes us as a wonderful parody, reminiscent of fair grounds and the like.



The interludes preceding and following the central March correspond symmetrically with one another in that both are Romantic piano miniatures. Interlude 5 imitates—in Hindemithian tonal language, of course—the typical melodic gestures of a Chopin piece; Interlude 7 with its heaviness and thick texture recalls the keyboard style of Brahms. On either side of the symmetry center, Hindemith placed interludes in "Baroque" style. Interlude 4 with its rhythmic uniformity and swift finger-work is reminiscent of preludes from the turn of the 18th century, and Interlude 8 with its texture built significantly on an attack pattern of alternating hands is a typical *toccata*. Both are fast; both are virtuoso in their design, with lines that do not form melodic motifs. Meanwhile, the layouts of the two pieces, while symmetric in themselves, are unusual: the "toccata" appears in bridge form (A B A′), while the "prelude" comes as a rondo, complete with three recurrences of a

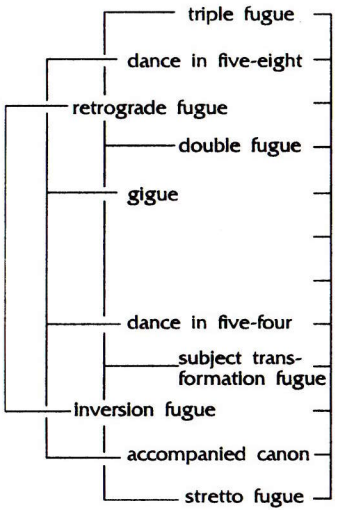
refrain, a first episode rooted in the lowest ranges of the keyboard and a second episode that explores the extremely high register.



The central symmetry among the interludes is flanked on either side by three romantic pieces that create a significant and charming dissymmetry. Interludes 3 and 10 (not 9) are folk dances; interludes 2 and 9 (not 10) are pastorales; and the Romantic improvisation that constitutes the very first interlude is counter-balanced by a Romantic waltz in the final interlude. Between the two folk dances, the earlier one is conceived as a *Gavotte*. Like the French peasant dance that, in the course of the 17th century, was adopted by the courtiers as an expression of "forthright and unsophisticated charm", Hindemith also gives the dance a somewhat heavy duple time with a half-measure upbeat. As a counterpart, the other folk dance is reminiscent of the *Courante*. A *Courante* is traditionally characterized by a metric surprise: while through most of the piece the 6 beats of each bar appear in an order of - · · - · | - · · - · ·, there are invariably a few bars that disturb this order by stressing - ¨ - ¨ | - ¨ - ¨. Hindemith exacerbates this phenomenon. The regular sextuple time of the outset (- · · - · | - · · - · ·), here emphasized with a bass *ostinato* (a "stubborn" figure that keeps repeating), is interrupted by various metric arrangements that offset the initial order: stresses on every fourth beat (- ··· - · | ¨ - ···), on every third beat (- ¨ - ¨ | - ¨ - ¨), and even at two points on every fifth beat. (The latter would logically remain out of sync for quite a while,

but the composer makes the unruly voice rejoin the metric order by "cheating.") The two pastorales are both in slow and languishing character and feature treble voices in flute style. The "improvisation" of the initial interlude, while actually notated with a time signature, contains so many elements that overrun the metric order that one hears the piece as if "without bar lines". By contrast, the final interlude is an elegant waltz very much reminiscent of those written for the piano in the middle of the 19th century.

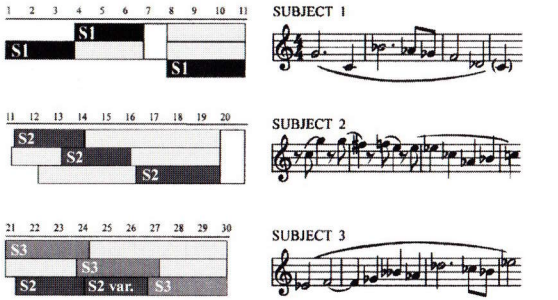
SYMMETRY AND DISSYMMETRY IN THE FUGUES

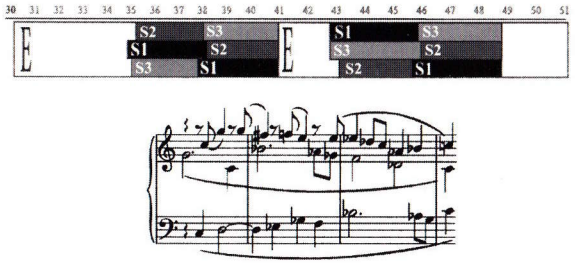


The symmetric patterns in the fugues are laid out differently. Textures, rhythmic particularities, symmetry transformations and styles are employed in such a way as to allow us to distinguish four groups. Here is a short overview, followed by a more detailed discussion.

One group contains the first and last, as well as the fourth and fourth-from-last fugues; these are determined by contrapuntal play. Another group combines the second and fifth with the second-from-last and fifth-from-last fugues, all distinguished metrically, often in the form of dances. A third group contains the third and the third-from-last fugues; they share the fact that in both, the second half is a mirror image of the first half: one presents a horizontal, the other a vertical mirror image. The conspicuous symmetry is broken in the two central fugues, which have no functional features in common.

In the first group, it helps to know a little about contrapuntal devices. The word contrapuntal, from *punctus contra punctum*, describes one answer to the question 'what is set against what.' Fugues 1 and 4 constitute a triple and double fugue respectively; these fugues do not build, as is normal, on a single subject, but instead feature two (or, in the case of the initial fugue, even three) independent subjects.





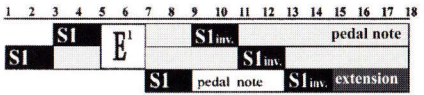
Ludus Tonalis, Fugue no. 1 in C

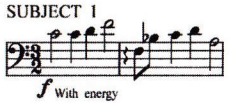
While "subject" is commonly used to designate the recurring melodic phrase of a fugue, in the context of Hindemith's *Ludus* (= play) the word takes on additional meaning. Given the composer's characterization,we are invited to discern these subjects as personas put on stage. Each of these personas has a distinct character, and each character has considerable impact on its surroundings. Subject 1 appears as serene and composed; it envelopes itself with harmonious chords. Subject 2 is sorrowful; wrapped in 'unresolved' intervals and diminished chords, it expresses itself in a series of sighs followed by gradual appeasement. Subject 3 is aggressive; not surprisingly, it generates harsh dissonances (including those particularly distorted-sounding intervals like the augmented octave and the minor ninth). When all three subjects finally meet, the laments of subject 2 and the aggression of subject 3 are absorbed by the soothing calm of subject 1. (See the illustration on page 8.)

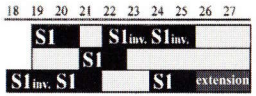
In the scenario of the other multiple-subject work, the fourth fugue, the outcome is quite different. A distinctly "male", somewhat rough-hewn first subject dominates the first section, while the second section exposes a very graceful, soft and fragile second subject. As the graphic representation shows, the first subject portrays a person who is fairly uninhibited and fond of himself. He makes a great many entrances and even reflects himself in a mirror (see bars 24/25). The second subject, by contrast, portrays a gracious person, very much restrained, interrupting herself for long episodes. When these two very different characters intertwine in the third section, one of them obviously has to adapt. As it happens here, the soft and gentle "female" turns into an angry bitch, causing some of the worst clashes in the entire cycle—clashes that only subside as "she" leaves the scene (with bar 69) and "he" regains sole control. (See the graph on page 10.)

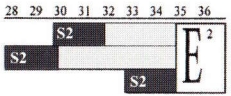
The cycle's final fugue (illustrated on page 11) is a *stretto* fugue, featuring the subject always in overlay with itself. (*Stretto* means "contracted"; the device used is a regular overlap of two consecutive subject entries, whereby one is still unfolding when the "head" of the other appears.) The *stretto* entries are separated by episodes.

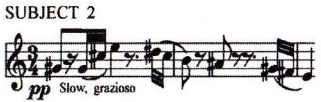
The subject swings very gently in nine-eight time. The repeated attempt, as it were, to leave the initial $C^{\#}$, the fifth of $F^{\#}$, for the sixth degree of the minor scale, gives the fugue its particular color. This step would sound languishing in any

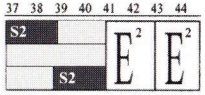


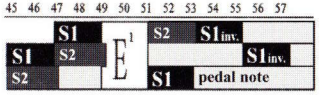


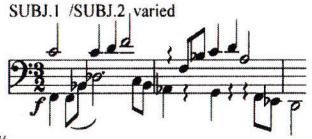


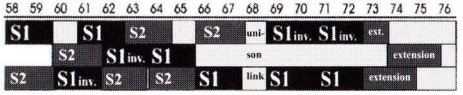




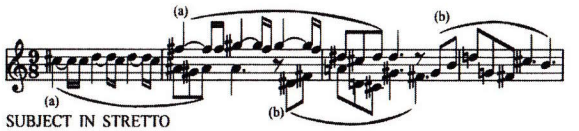


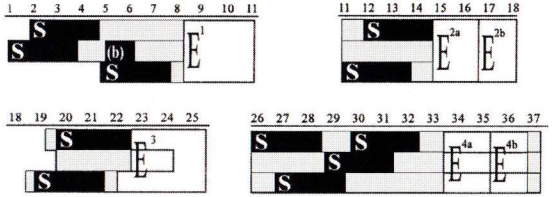






Ludus Tonalis, Fugue no. 4 in A

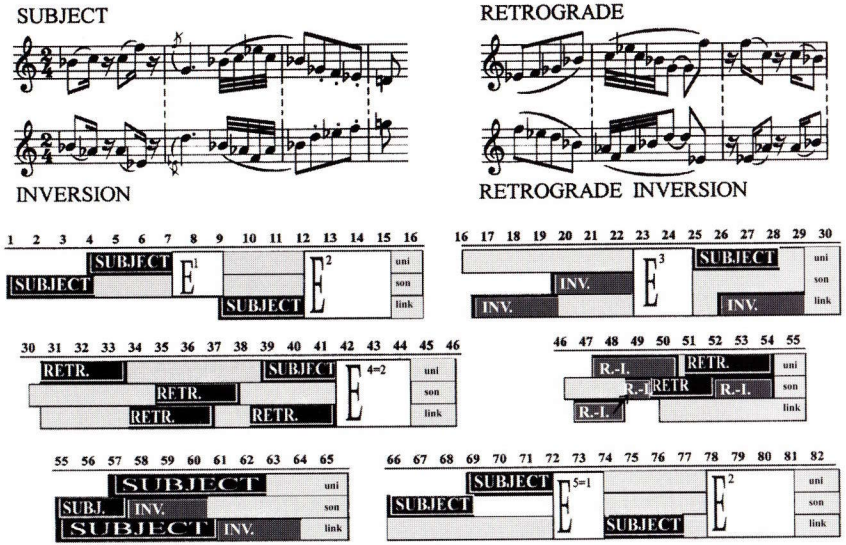




Ludus Tonalis, Fugue no. 12 in F♯

compositional context; it does so all the more if it is followed not by the minor but by the major third. Later in the piece, the two identical episodes that conclude both halves play in a similarly subdued way with the major/minor modal interpretation of the central pitch $F^{\#}$. Thus Hindemith's tonal argument, ostensibly designed to conclude uncompromisingly on the pitch that is farthest removed from the cycle's central C, reveals second thoughts by presenting the piece on the tritone as the mellowest fugue of the entire *Ludus Tonalis.*

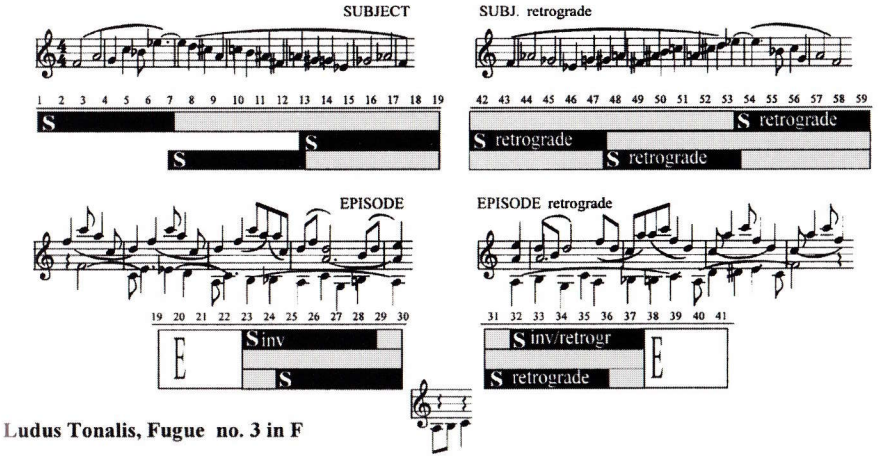
The fourth-from-last is a transformation fugue in which the subject, charming with a hint of Viennese classic style, undergoes a number of reflection processes. Section I presents it in each of the three voices in the original; section II follows with



Ludus Tonalis, Fugue no. 9 in B♭

three entries of the inverted shape, one of them overlaid with an extra entry of the original. Section III introduces not only the next transformation, the retrograde, in all three voices, but at the same time complicates the situation with a *stretto* and a juxtaposition of the retrograde with the original. Section IV is even more complex. It introduces the retrograde inversion which wanders, however, from one voice to another and appears in *stretto* as well as in overlay with the simple retrograde. Section V brings the climax, with two entries of the augmented subject (stretched to twice its length) set against part of an original entry and two inversions. Finally, section VI brings a relaxation in which the simple state of the initial section, exclusively original entries with no overlay, is reinstated.

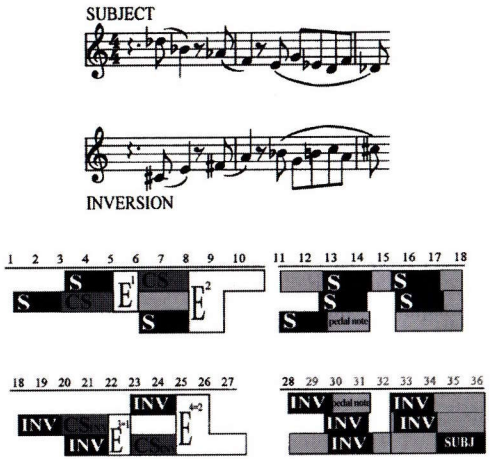
The next pair of fugues I wish to discuss encompasses the two pieces that employ mirror reflection. The pace in fugue 3 is slow, the pitch pattern is highly chromatic, and all notes are linked under *legato* slurs. (The persona thus represented can usefully be pictured as a seeker.) The score excerpts give both the subject and the main episode as they appear in each half of the fugue. They show that Hindemith reads the entire musical phrase backwards, retaining all rhythmic values. After three subject entries and an episode, as he approaches what is to be the middle of the piece,



Ludus Tonalis, Fugue no. 3 in F

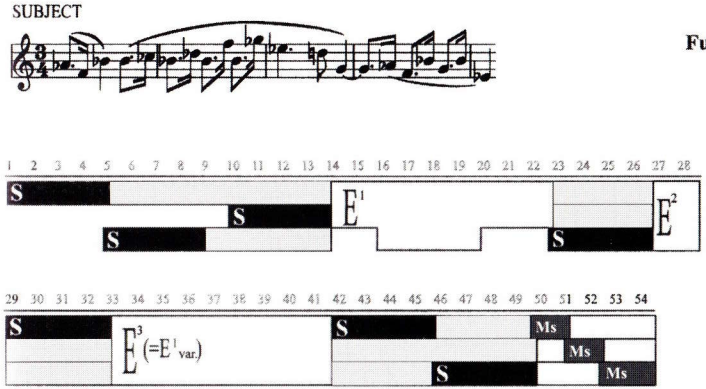
the composer adds an overlay of the subject inversion over the original form of the subject. The midpoint itself is marked by a little three-note gesture, sounding single-voiced and distinguished from the remainder of the piece by the sudden absence of the otherwise all-pervasive slurs.

In the third-from-last fugue, the composer employs the mirror reflection. As the graph confirms, the initial fifteen bars of the first section recur in exact correspondence in the second half; only towards the end of each half is there a very slight irregularity. (The fact that the first half is notated in $D^{\flat}$ and the second half in $C^{\#}$ is probably a concession to performers; the second half written with $D^{\flat}$ as a tonal center would have been crowded with accidentals, as would the first half in $C^{\#}$.) The character of this fugue is given as *grazioso*, and the gestures in subject and counter-subject and in the lovely episodes confirm this gracefulness.

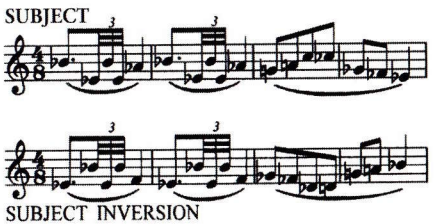


Ludus Tonalis, Fugue no. 10 in D♭

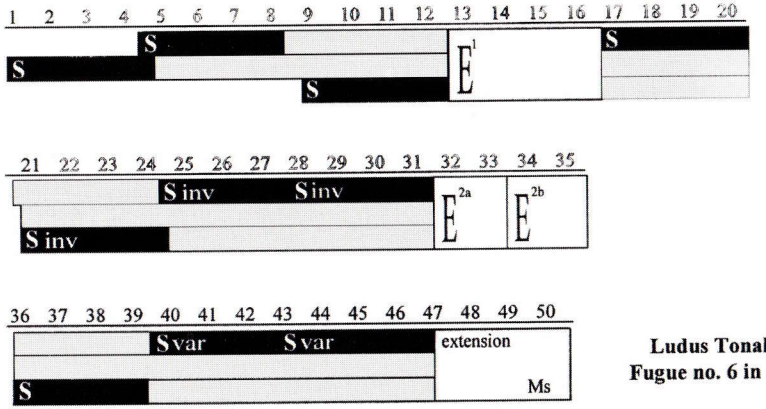
The two remaining fugues, central in the *Ludus Tonalis*, share no structural, contrapuntal or rhythmic features, and thus create another gentle symmetry-break within the layout of the cycle. Fugue no. 7 strikes us as a piece in Rococo fashion. This impression is achieved by the lilt of the many dotted-note rhythms and, especially in the two initial bars, the strikingly frequent return to the pitch $B^{\flat}$. One imagines an 18th-century courtier with white-powdered wig and black patent leather shoes, dancing towards his porcelain-faced, fragile-waisted lady. The melodic line is soothing and easily memorable, owing to the fact that its first motif is repeated in bar 2 and that these two bars are complemented with another two bars to form a very regular phrase. The structural layout of the piece is also unpretentious, so that the listener believes to have been led into a dream rather than into a three-part polyphonic composition.



Ludus Tonalis, Fugue no. 7 in A♭



Fugue no. 6, despite its dense chromaticism (it employs all but one of the semitones between E♭ and C), is heard as strikingly tonal in language. It contrasts the Rococo style of the other "dissymmetric" fugue with a distinctly Romantic mood. Where the subsequent piece is charming and coquettish, this fugue is dreamy.



Ludus Tonalis, Fugue no. 6 in E♭

AFTERTHOUGHT ON TONAL PLAYS

After this detailed discussion, it may surprise many that Hindemith's *Ludus Tonalis* is not generally known as a play with symmetries! The curiosity that the postlude is a visual retrograde inversion of the prelude is regularly mentioned in the literature, and the two fugues using mirror-reflection strike the eyes (not the ears!) of most people who spend time with the score. However, all the other structural devices used by Hindemith for grouping the fugues, as well as the striking symmetry in the characterization of the interludes, is not established wisdom; much less so the fact that what Hindemith created is not an artful yet lifeless construct of perfect man-made order, but a skillful mix of correspondence and deviation, regularity and freedom, symmetry and symmetry breaking. In the interludes, the switched order of the pair pastorale / folk-dance constitutes a gentle, almost tongue-in-cheek irregularity. In the fugues, the complete absence of any correspondence among the two central fugues appears as a conscious "no" to ultimate consistency. One wonders, then, about the prelude-postlude relationship that seems the strictest of them all. And here is the charm: the postlude, after having retraced the entire prelude upside-down and backwards, adds an "extra" chord at the very end. This unexpected C major chord, syncopated and suddenly hushed after the energetic *martellato*, can be translated as the composer's slightly mischievous smile.

AN UNKNOWN FORERUNNER OF THE LUDUS

In the 1940s, having developed his theoretical model for tonal relationships, Hindemith decided to revise, if not rewrite, some of his earlier pieces so that they would conform with his new-found understanding of the *gestalt* every larger work should have. Among the pieces he transformed was his song cycle *Das Marienleben*. Its second version, completed in 1948, differs from the original of 1923 (which remains in the repertoire) above all in the new and deliberate choice of tonal structure.

There is an exactly equal lapse of time between Hindemith's *Ludus Tonalis* and an almost unknown forerunner. In 1927, fifteen years before his conscious play with tonalities, the composer had written a piano cycle whose title and publication history worked against it. Conceived as part 2 of op. 37 (whose part 1 contains five-finger exercises), the cycle was unlikely to attract attention; entitled *Reihe kleiner Stücke,* it may have discouraged concert pianists from even seeking it out. The title, however, is one of the most treacherous ones ever given a piece of music. These thirteen "little" pieces are neither short nor easy. In fact, their individual duration, musical complexity and technical difficulty hardly pales in comparison with the *Ludus*.

To give just a few hints in this limited space: Hindemith sets out with a beautiful "Introduction and Lied." The introduction, beginning in the style of a French overture, embraces a slower middle section as well as a virtuoso *cadenza*; the Lied, in two slightly varied stanzas, is calm and gently expressive. No.2 is a lively two-part canon, followed in no. 3 by a graceful minuet. No.4, solemn and beautiful, anticipates some of the *Ludus* technique: its second half is an almost literal inversion of the first. As a contrast, no. 5 comes as an "utterly lively" *gigue*.

These are highly interesting pieces, different from the *Ludus* in that they are earlier works in the career of a composer who was forever evolving. Interestingly, this is most evident in technical regard. Hindemith, the virtuoso violinist and violist who learned so many additional instruments in the course of his life, did not, in 1927, have quite the judgment about what was and was not feasible in the two hands of a pianist. Thus there are, regrettably, three pieces that only modern recording technology allows to capture as they were meant to sound; any concert performance would find the struggling pianist frustrated, having to let go of one of three voices that spread joyously across the entire keyboard. Despite these reservations about its use in the concert hall, this cycle is a delicious work, undeservedly forgotten.

Notes by Siglind Bruhn

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