Nurturing Your Inner Artist-Conductor

with examples drawn from Hindemith's *Symphony in B flat*

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Foreword

In an article published earlier on this web site, I drew some distinctions between the "directing" and "conducting" facets of our jobs. The aim of the present article is to examine the latter more closely.

Earlier, I pointed out that the etymology of the infinitive *to conduct* suggests a "channeling" of the musical minds of long-gone creators. Needless to say, this places the conductor in a position of awesome responsibility. There's a fair chance that many if not most of the members of our audience will be exposed to those great musical minds *only through our intermediacy*. If we misrepresent the compositions we lead, we thus do a disservice to our audience, to the composers whose music we program, and to the young musicians in our charge, for whom we directors constitute an important means to the enlargement of musical horizons.

This is one of the points made most often and most vociferously by Gunther Schuller in his *The Compleat Conductor*. Let me begin this article by suggesting that this book belongs in every conductor's library, and that it should be read often and its points taken to heart. Along with Mr. Schuller's book, let me also recommend the finest treatise on conducting known to me, Hermann Scherchen's *Handbook of Conducting*, in English translation by M.D. Calvocoressi, published by Oxford University Press. Scherchen's guiding thesis is set forth on page one: "Only when a work has come to absolute perfection within him can [the conductor] undertake to materialize it by means of the orchestra." Again, on the following page, "The conductor, when representing a work to himself, must hear it as perfectly as the creator of this work heard it." And most pointedly, on page 21, "When conductors try to learn their job from an orchestra the orchestra should refuse to play."

Let no reader recoil from the gauntlet Scherchen has thrown. If the medicine seems a bit strong, all the more reason to spend a *lot* of time studying one's scores and standing in front of the mirror practicing the results of that study, asking oneself at every gesture, "If I were sitting on the business end of an oboe, would I know how to respond to that? Would my response be – in the conductor's view – 'on time' and otherwise appropriate?" The present article will focus largely on score study, with a few paragraphs on gestural technique – that most personal aspect of conducting – near the end.

I Score Study

In my capacity as a conducting teacher, I often encounter young musicians who, for all their good will, sincerity and otherwise meritorious accomplishments, clearly have no idea how to begin to study the score of an ensemble work. Since I usually teach only *graduate* conducting students, I must therefore assume that quite a few credentialed and licensed teachers are standing in front of high school musical ensembles without benefit of this most basic skill. To be sure, *I* cannot recall ever having been taught how to do it, and I spent many years struggling to come to a conductor's terms with compositions I loved, not knowing how to assimilate much less communicate them.

Apparently I was not alone. I once played in a college band directed by a man who programmed lots of Wagner transcriptions (I believe he fancied himself a "Wagner specialist"). This particular director was known for his habit of berating students during rehearsals (one of his less-than-honorable methods was to stop the rehearsal any time *he* was lost in his unstudied score, and begin browbeating the horn section, counting it a safe bet that at least one of them had been playing in the wrong partials sometime within the last five measures). One day this director – sensing that his charges were doing a less than perfect job of "following" him – interrupted the proceedings with a fit of pique and declared to his (understandably oblivious) ensemble, "you should *know* by now that I never conduct Wagner the same way twice!"

Some years ago, when I was teaching (but not conducting) at another "institution of higher learning," a student related to me a humorous fiasco that had just happened in a band rehearsal. The director had handed out a new piece to his ensemble and was attempting to "learn" it by swinging a stick in generic duple meter as the band sight-read the notes (a *terrible* way to begin!). My student told me that things were going along OK until the band encountered a 5/8 bar, at which point the members of the ensemble began dropping like flies. My informant – who of course had not been watching the "conductor" (why *should* he?) – looked up to discover that his bemused leader, who had stopped beating time, was muttering to himself, "1, 2, 3, 4, 5…how *would* a person conduct that anyhow?" The players were instructed to leave their folders on their music stands that day, and by the following rehearsal the offending composition had been removed.

What do the two gentlemen described above have to teach us about conducting? An analogy with sculpting comes irresistibly to mind. There are two ways to make a sculpture: either start with nothing and add stuff to it, or start with something and take unwanted stuff away from it. So with learning to conduct: observe others who are doing it, and notice a) **what *to* do** and then do it, and b) **what *not* to do** and then avoid it. (My sympathies would have lain with any musician who had refused to play for either of those esteemed *maestri*. Of course, such a refusal is hardly likely when the man who wields the baton also holds the purse strings – i.e. scholarship awards. So it is that many musically dysfunctional directors are made to look good in performance by the hapless musicians who endure those directors' time-wasting, demoralizing, incoherent rehearsals, year after year *ad nauseum*. We aim at something better.)

Obviously, neither of my cautionary examples above knows (or knew) how to study a score. The best either of them could do is to play a recording and "follow along." Granted, that's better than nothing, *but not by much*. By way of explanation, let me cite a clarifying example that happens to be of particular interest to me. Over the years I have accumulated nine recordings of Vittorio Giannini's Third Symphony – the one for wind band. Every single one of those recordings is abysmal – although in some the abyss is deeper than in others (in a couple of cases the results can only be regarded as comical). To my knowledge, this fine work has *not once* been recorded in a way that comes anywhere close to representing **what's in that score**. (By the way, to give the Giannini Third even an *accurate* performance, one first has to go through every single part in the score – and every single individual extracted part – and find and correct all the mistakes, the list of which fills many pages – and the recent Belwin republication of the work is even worse than the old edition! So here's the situation: this sloppily-published landmark work for wind band has been with us now for almost half a century, and as far as I can tell it's never been performed as its creator intended. If it has, that performance was apparently never documented. A sad state of affairs, isn't it?)

Now, let's suppose a director gets an itch to conduct the Giannini Third and grabs a recording to start "learning" it. Whose recording? Roller's? Dreadful! Fennell's? Bizarre! Revelli's? Grotesque! The list goes on at length, and includes offenses even much worse than those I've named. The fact is, *the Giannini Third doesn't yet exist in a recording – **only distortions masquerading as the Giannini Third** exist in recorded form.* So what kind of performance is our ambitious, hypothetical *maestro* going to deliver if listening to recordings is his sole means of learning a composition?

The same can be said for virtually every ensemble masterpiece you can name: I have yet to hear a recording of *anything* that isn't marred at some point (or many points) by the willfulness of the man on the podium. The inference is inescapable: the conducting profession must be absolutely crawling with people who either lack the skills necessary to read a score and draw the appropriate conclusions, or who just don't give a damn about the composer's conception and go their own merry, arbitrary way in the name of Mozart, Beethoven, Giannini or whomever, thank you very much!

Please don't misunderstand me: there is of course a great deal to be gained by owning and listening to recordings of the music we conduct. In addition to being a convenient way to discover new works, recordings can furnish us one means to come to know better the works we imagine we already "own" (there are always new surprises awaiting discovery in great music). As we can love completely only that which we love *coherently*, it behooves us to listen as often and as closely as possible to the music we wish to share with our charges, but with this caveat: one must learn to differentiate between "Brahms" and "Bernstein's Brahms!" In other words, listening to recordings may legitimately *supplement* score study but it can in no wise *replace* it – still less does listening to recordings *constitute* score study. One had better listen with a skeptical ear and an already well-studied score in hand.

So how should score study be approached? At first blush, a single page of a major orchestral or wind-band work can look hopelessly complicated – so much more so when we start taking into account the transpositions of various instruments. Clearly, being able to look at such a document and form a clear and accurate conception of how it should sound is a very tall order. I will try to shed some light on how it can be done.

Examples drawn from a landmark work for wind band

I have before me the score to Paul Hindemith's 1951 *Symphony in B flat*, published by B. Schott's Söhne, Mainz. I know of no finer composition for wind band. (This work, incidentally, served Vittorio Giannini as a model for his own *Third* about a decade later.) The first page, which includes a mere three measures in 3/2 time, looks pretty daunting. Assuming I wish to confine my closest study to the first page only (and for purposes of this article I *will* make that assumption, although it might not reflect my actual working method on any given day), I would begin much the same way I begin studying a highway map to determine how I'm going to get from here to there. In brief, it pays to notice first *how the map is laid out* (looking at the map upside down, failing to note its scale or misunderstanding half its symbols will not be very helpful). From that point, I identify the largest, most prominent features and gradually "zoom in" to increasingly fine detail. In the Hindemith Symphony's first page, here's what immediately engages my attention:

- The layout of the score from top to bottom is somewhat eccentric. The woodwind family appears pretty much as we might expect; the brasses, however, are presented in a very strange order: the horns are not where we expect them. The timpani are found at the very bottom of the page (later, the other percussion instruments will appear beneath the timpani).
- The transpositions are really quite limited: there are instruments in B♭, E♭, F and C, and the first trombone part is in tenor clef. With a little effort, any good musician can handle these complications.
- Hindemith was living in the United States at the time he composed this symphony. His indications are therefore in unambiguous English, and we do not have to guess at their meanings at all. The music is to be rendered "moderately fast, with vigor," at a tempo of somewhere between 88 and 92 beats per minute (a very narrow range of latitude, probably imperceptible to most listeners). In other words, a breakneck pace of 112 beats per minute is impermissible (I own a recording that goes that fast), as is a snail's crawl of 76 (yep – got one of those too).

To begin with the "big" features: it turns out that there are really only three or four of those:

- Treble woodwinds are clearly involved in a non-thematic wash of sound whose many interesting details will ultimately be absorbed in a kind of glittering backdrop. They sustain their first note (either B♭ or F) for one beat, *forte*, and then proceed with their *mezzo-forte* "chatter" (we will notice finer details a little later).

- Saxophones and low clarinets trill their first (*forte*) note – either B♭ or F – for one beat and then drop out. Notice that the trill is Phrygian in flavor, as all instruments are trilling a half step.
- Bassoons and lower brasses (horns through basses) play an important harmonized motive: B♭–A♮–G♭–D♭–B♭ (the motive itself lies in the bassoons and basses; the other instruments harmonize it). The notes of this motive are all members of B♭ minor – observe that Hindemith calls his work a symphony "in B flat" not "B flat major" or "B flat minor" because he's going to be mixing modes so rapidly that more specific modal designations would make no sense. So it is that the harmonizing instruments (horns, trombones, baritone) all harmonize this important motive in different modes – the baritone, in fact, in two different modes: a brighter one descending, a darker one in the ascent. (The third horn's tight chromatic turn can also be seen as a mixture of Lydian and Aeolian modes.) The timpani belong to this group, hammering away at grounding B♭s – a tonic "foil" to the second trombone's persistent Fs. Note that all of these instruments are marked *fortissimo*, with the exception of the timpani (the dynamic marking is missing in that part, and will have to be supplied – thus we encounter an editorial mistake in the very first measure!). I will have more to say later about the motive that I spelled out above.
- The cornets and trumpets play the principal theme, which is obviously broader, "rangier" and more rhythmically and intervallically interesting than anything else on page one. Despite the 3/2 time signature, it is doubtful that anyone listening to this piece without the benefit of a score to follow or a time-beater to watch would guess *that* for the meter. These thematic instruments begin on the tonic pitch and proceed in B♭ minor (with raised leading tone) until the mode turns noticeably darker at the end of measure 2 – momentarily Phrygian; then, avoiding the tonic pitch altogether, plunge toward a new project in measure 3. Note that this main theme is played *forte* not a strident *fortissimo*. (To fully comprehend this theme, it would of course be necessary to turn the page: this is in fact a great, spun-out compound tune that finally cadences in measure 11, so we see barely more than a quarter of it here. Later on, as we look more closely, we become cognizant of the fact that the span of this noble theme is very wide – a major fourteenth! At one point the first hornist is called upon to reinforce the low trumpets and cornets, with the first trombonist subsequently reinforcing the low horn. Every timbral detail has thus been carefully attended to by this master composer.)

I will now examine the high woodwind "canvas" more closely. Again, there are not quite so many different things going on as might initially appear.

- The piccolo and first flute are paired in a kind of "hocket," supplying each other's omissions in a line that moves in a wave-like fashion but is anchored on regularly-recurring B♭s. Their compound line moves through several modal versions of B♭, hence the chromaticism.
- The second flute appears to be playing a reiterated rhythmic pattern consisting of 10 eighth notes and a quarter note (turning the page confirms this supposition, although an exception occurs in measures 6–7). The pitch content is the same as that of the

piccolo and first flute, but of course the prolation (the division of the beat) is different.

- The oboes share the second flute's duple prolation. The first oboe simply plays athletic octave B♭ leaps on a recurring rhythmic pattern consisting of six eighth notes and a quarter. The second oboe duplicates the pitches of the first flute with a dactylic rhythmic pattern (short-short-long).
- The E♭ clarinet delivers an 8-beat rhythmic pattern: six beats of triplet eighth notes, a quarter note and a quarter rest. This pattern hammers away at the tonic pitch, alternating with the next nearest member of whatever chord is being played at the moment (a comparison with the piccolo and first flute lines, above, will make this last clear).
- The first and second B♭ clarinets are paired in a hocket arrangement closely analogous to that of the piccolo and first flute. They thus provide, one octave lower, the pitch-class complements to what the higher instruments are playing at any given moment (they supply the chord members missing in piccolo/flute lines).
- The third B♭ clarinet's 4-beat pattern (two beats of triplets, quarter note, quarter rest) performs a kind of intermediary function for the 1st and 2nd clarinets, bringing the tonic pitch within the realm of triplet eighth notes an octave below the E♭ clarinet.
- Having saved the best for last, we turn our attention to the solo clarinet's amazing line. That player ranges wildly and freely over the chord tones that are being produced in a more patterned, pedestrian way in the other woodwinds. His is a line of changeable length, with a diminution from five beats to four on the very first page.
- There's something important to notice about this collection of woodwind lines: the piccolo, first flute, second oboe and 1st and 2nd clarinets all have 2-beat patterns; the 2nd flute has a 6-beat pattern; the 1st oboe and 3rd clarinet have a 4-beat pattern; the E♭ clarinet has an 8-beat pattern; and the solo clarinet has a 5-beat pattern that is reduced to four beats following its second iteration. It should be clear that – as in the cornet/trumpet theme – there's not much corroboration of 3/2 time here!

(N.B. My reference to "beats" in the foregoing discussion is of course predicated on the quarter note standard. But the conductor will be beating half notes not quarters.)

It is very tempting to plunge now into a discussion of how to conduct these first three measures, but to do so, wrenching them horribly out of context, would "put the cart before the horse." We must therefore begin pulling the camera back by degrees, so as to establish that context (otherwise the first three measures are meaningless). Before moving on, however, I have a few points to make about the first page.

- Mark some fingerings in the solo, 1st and 3rd clarinet parts! Don't let the players guess and flounder – the left-hand C key is going to be needed *often*.
- Hindemith clearly wanted a colorful mixture of cornets and trumpets to play this theme – and his symphony (later, they are differentiated in important structural ways). Performing this work with trumpets covering cornet parts is simply not an option.
- The foundational motive B♭–A♮–G♭–D♭–B♭ in measure one absolutely *must* be heard. Subtle dynamic adjustments may be necessary in order to achieve this. Incidentally,

this motive (0347) consists of two overlapping (014) cells, Hindemith's favorite cadential figure. If this terminology is unfamiliar to any reader, it will be necessary to brush up on set theory as a precondition for conducting this or almost any other important twentieth-century composition. Otherwise, how will it be possible to – in Scherchen's words – "hear it as perfectly as the creator…heard it?"

A longer shot: the Exposition

The first movement of Paul Hindemith's *Symphony in B flat* is in sonata form. This structural classicism is complemented by the almost unremitting polyphony that characterizes this work from start to finish (Hindemith was one of the twentieth century's most accomplished and committed contrapuntists – a kind of latter-day J.S. Bach – thus the final movement of this symphony is a monumental double fugue). The movement's exposition includes the first 77 measures, which may be divided as follows:

Theme I plus transition to the dominant key, mm. 1–27 (B♭ modulating to F)
Theme II, mm. 28–50 (F)
Closing Group, mm. 51–77 (E♭)

Some broad descriptions are in order here.

Theme I – ambitious, energetic, surging, belonging generally to that category of themes that late 19th-century commentators would have described as "masculine" – is offered in two complete statements (mm. 1–11 and mm. 11–27; there is an elision at m. 11). Structurally, this primary theme is best thought of as being in two large sections: "a," which proceeds from the tonic pitch to the farthest possible remove – a tritone away (mm. 1–7), and "b," which begins at the upbeat to measure 8 and steers the music back to the tonic (upbeat to m. 8–downbeat of m. 11). The fact that the second statement is longer than the first is accounted for by the fact that the "b" portion of the theme (mm. 7–10) is greatly (and contrapuntally) expanded in the second statement (mm. 17–23) and that an appended closing, fashioned from the theme's head motive, is used to conclude this section and finish turning the music toward the dominant key (mm. 24–27).

The "a" portion is clearly longer and more complicated than "b." Although it is continuously spun-out, two sections of "a" (perhaps not actual "phrases") can be discerned: the first three measures, in the course of which the theme establishes B♭, rises to D♭, and falls to G♭ *via* a strong downbeat A♭; and the next four measures, which contain a rhythmically adjusted sequence, dramatic downward leaps and a decorated, upwardly arpeggiated augmented triad culminating in the high E (m. 7). That high E, by the way, completes the chromatic gamut, being the twelfth pitch class sounded in the theme. It seems to me that the only time 3/2 meter is strongly confirmed is during measure 6.

Portion "b," beginning with the upbeat to measure 8, grows out of a local *crescendo* and commences to reiterate a striking four-note pattern in apparent 5/4 time. The pitch-class content of this repeated phraselet is set (0124), a superset of cadential set (014)

mentioned above. Two more local *crescendi* (mm. 8 & 9) raise the temperature of this primary theme until it "bursts through" to its summary conclusion (m. 10–downbeat of m. 11).

Quite a few thematic details command our attention. This highly-chiseled theme could only have been written by Paul Hindemith. It is a virtual catalog of "Hindemithian" gestures, beginning in tight conjunction (m. 1 to the downbeat of m. 3), moving through extreme disjunction (mm. 4 & 5), and returning to a modicum of conjunction (mm. 10, 11). It is important to grasp both the structural whole-tone implications (B♭–A♭–G♭ in the first three measures to high E in m. 7) and the quartal features (mm. 3, 4 & 5) that will become especially prominent during the work's final movement. The dramatic downward leaps in the fourth and fifth measures will find an echo in the first half of the second movement. A carefully-calculated detail in the scoring shows just how imperative it is that the theme be carried by a mixture of cornets and trumpets: unless cornets ("little horns") are present from the outset, blended with trumpet tone, the bolstering appearance of the first horn in measure four will provide a strange, unaccountable new timbre instead of a suave reinforcement. The brief foregoing description by no means exhausts the catalog of first-theme details, but at this point we have to turn our attention elsewhere.

In the course of the first theme's unfolding, the high woodwind backdrop has developed considerably: rhythmic patterns have been altered, melodic contours adjusted, projects re-assigned. (There might be some wrong notes in measures 6 and 7: the cross-relations between the E♭ and 3rd clarinets are hard to justify. I'm afraid any solution I could offer at this point would be premature – but it's certainly important at least to know that the problem exists.) In short, that woodwind "canvas" swarms with fascinating details and increasingly threatens to take on a life of its own (the final two pages of the score – from m. 213 in the last movement – afford a noteworthy contrast: there, the patterns, once having been struck, are rigidly maintained to the end of the Symphony).

The second statement of Theme I is far more complex than the first. I have no intention of scrutinizing it here, but I will offer a few observations:

- The theme, having moved to the upper woodwinds, is now richly harmonized.
- An attractive counter-theme is spun off the first theme's conclusion, passed directly from the cornets and trumpets in measure 10 to the alto saxophones and first horn in measure 11. This counter-theme initially exhibits a strong whole-tone bias (mm. 11–13) and is passed off to increasingly low-pitched woodwind instruments in the course of its unfolding.
- The trumpets and cornets now provide a "chattering" backdrop analogous to the high woodwind project in the theme's first statement – but considerably less intervallically active.
- At the point where the "b" portion of the theme commences, we encounter a new quarrelsome, accusatory and sometimes nagging figure in the alto saxophones (seven fragments of variable length).
- This saxophone figure complements seven soundings of the reiterated (0124) motive discussed above. The motive is begun on the following pitch classes: F (m. 17), C

(m. 18), G (m. 19), A♭ (four times, in mm. 20–22). The following instruments play it: solo cornet (m. 17), 1st trumpet (m. 18), 1st cornet (m. 19), high woodwinds (m. 20), 1st trombone and reinforcing mid-range woodwinds (m. 21), high woodwinds (m. 22), baritone and low woodwinds (m. 23). (Hint: some fine-tuned, assiduously rehearsed conducting choreography is in order here.)

- Four *fp* octave Fs in the horns help to "anchor" this section and prepare the eventual arrival of the dominant key. Notice: at measure 22, where some of the horn pitches change (and the snare drum enters), the *fp* aspect of their presentation is dropped and a *crescendo* ensues.
- From the onset of the "b" portion of this statement of the first theme, the "chattering" background is reassigned to the woodwinds, beginning with the flutes. This, along with the alto saxophone's figure, is gradually reinforced by other instruments.
- The "b" portion of the theme, by means of polyphonic expansion, is here transformed into the modulatory transition one expects to find in sonata-form compositions.
- The closing bars of Theme I, involving the entire ensemble (mm. 24–downbeat of 26), are splendid. They are based on the head motive of Theme I and include a memorable excursion for the first and third horns. The first cymbal/bass drum crash of the piece occurs here also.
- The last portion of measure 25 is cast in the darkest mode of F (F Phrygian, complete with parallel fifths in the lowest instruments); the arrival at measure 26 is in the *brightest* of the modes (F Lydian). This alone will surely have profound implications for our conducting.

I will not labor over the remainder of the first movement – much less the entire Symphony – even to the extent of the cursory observations I've supplied over the first theme. I acknowledge a fair amount of difficulty in tearing myself away from a project of that sort, for Hindemith's *Symphony in B flat* – like so much of the truly superior music we deal with – both invites and *rewards* analytical scrutiny. (Indeed, should the aspiring conductor wish for a calculus by means of which musical "wheat" might be separated from musical "chaff," the last statement above is not a bad one!) For me, one of the greatest joys associated with the fulfilling of conductorial obligations lies in the process of "digging in" and trying to ferret out the mind of the composer.

Briefly, some observations about Theme II:

The theme begins like a fugue, with the subject in the 1st oboe and a modest counter-subject in the 1st bassoon (in tenor clef for awhile). The theme is in apparent 4/2 time, even though Hindemith has restored his 3/2 signature after a brief hiatus (as he had done at m. 12). The head motive of this theme is a transposition of the (0347) motive heard in measure one. Like the first theme, this theme is carefully balanced between disjunct athleticism and conjunct lyricism. It is, however, more intensely chromatic than the first theme: the chromatic gamut is completed with the A♮ on the downbeat of measure 32, after a mere four measures. Its compass – a major 9th – is considerably narrower than that of the first theme, and its general character is such as might have been described by a commentator half a century earlier as "feminine." Small motivic touches –

the "Phrygian scale" in measure 29, the quartal gesture (027) in measure 30 – establish a kinship with Theme I that will prove musically useful at the movement's recapitulation.

The fugue's first (and, as it turns out, *only*) answer begins in the tenor saxophone at measure 33, an octave-displaced major third lower than the oboe's proffered subject; the counter-theme moves to the piccolo. At this point, Hindemith has a novel trick up his sleeve: rather than allowing the second theme to continue as a fugue, he interrupts it with a flurry of head-motive fragments in a welter of instruments, grafted onto an overt first-theme reference, twice (mm. 36–40). An examination of the details of these five measures alone would fill several pages. I leave to the reader the joy of discovering them.

A complete restatement of Theme II, now a perfect fourth lower, begins at measure 41. The theme is in the clarinets, pointillistically reinforced by a "Schenkerian" version in the Glockenspiel. This is accompanied by a whacked-out "oom-pah" figure in the basses and horns and a teasing exchange of the theme's head motive between the first flute and piccolo. At the point where the theme cadences (m. 46), a richly-detailed bridge passage including much familiar material plus two great chromatic waves in parallel thirds propels the music into…

…the Closing Group, which includes what are possibly the two most attractive themes in the entire Symphony. The first of those themes – the one that begins in measure 51 – has by some commentators unaccountably been deemed an *ostinato*. It most certainly is nothing of the sort – and if played as sensitively as the evidence in the score suggests, there's nothing remotely "obstinate" about it!

This beautiful theme appears quietly in three octaves' worth of unison woodwinds. But for its intense chromaticism (the gamut is achieved after a mere two and a half measures, with the A in m. 53), it is arguably the most "classical" theme encountered yet, especially where its phrase structure and arch-like contours are concerned. The theme's quartal flavor is quite prominent and its tonic pitch is open to debate: beginning on F, as we would expect such a theme to do in a "Symphony in B flat," it nevertheless persists in cadencing on E♭, and subsequent statements begin not on F but with an E♭ minor upsweep. Striking a compromise between the wide compass of Theme I and the narrower-compass Theme II, this first closing theme glides gracefully through the range of a perfect eleventh.

With the second iteration of the first closing theme (m. 57), its brush now widened to include a fourth octave (with the entrance of the flutes), its companion theme – I hesitate to call it a "counter-theme" – appears in unison horns. This "second closing theme" is deeply integrated into the thematic content of the whole movement: its first four notes are a restatement of the (0347) motive given at the movement's outset, set forth here beginning on E♭ (note that the first theme's B♭, the second theme's F and the present theme's E♭ constitute a quartal structural underpinning for the Exposition). This great horn theme, consisting of only eight pitch classes and confined to an octave compass, truly the movement's most "classical" feature (note especially its 1 + 1 + 4 phrasing), ends with a broad (014) cadence (m. 61–downbeat of m. 63).

The third iteration of the first closing theme – and second iteration of its companion – begins at measure 63. The preceding *crescendo* has ratcheted the dynamic level up to *forte*, and the piccolo adds a fifth octave to the former's now very broad brush. The second closing theme is here richly harmonized, and a general *crescendo* leads to the final statement.

In that final statement, which begins at measure 69, the second closing theme is more aggressively harmonized and fragmented and the first closing theme is rhythmically compressed – placed under duress. A *fortissimo* dynamic prevails, sharp accents abound, and the meter fluctuates wildly. This is music that is stretched to the breaking point, and the whole dissonant, seemingly out-of-control juggernaut runs head-on into a wall of silence at the end of measure 77.

A still longer shot: the remainder of Movement I

The catastrophe that polishes off the Exposition sets the stage for something completely different. The development section does not disappoint us in this regard. At the outset, it is as if the machines have taken over following the cataclysm of World War VIII.

The Development includes 78 measures, from measure 78 to the return of E♭ at measure 155. It consists of three sections: a kind of rondo with a *fugato* refrain (mm. 78–downbeat of m. 129), a freer, more soloistic passage which develops first-theme elements over a very chromatic running bass line (mm. 129–148), and a glorious retransition passage in which the harmonized second theme appears in splendid augmentation against dancing figures in upper woodwinds derived from the theme's head motive (the generating motive for the entire movement). The climactic chord of the first movement is reached halfway through measure 151: it includes every pitch class except C♯ and E, both of which are trilled to. This chord precipitates a great fall in octave unison brass instruments – a fall that is chockfull of motivic material that has so far proven fundamental to the architecture of this movement.

The Recapitulation, which includes the final 55 measures, begins with two measures of clarinet "chattering" in E♭ and proceeds with what is surely the most remarkable feature of this movement: Themes I and II are brought back *together*. The first theme, presented by flutes and oboes, is modestly harmonized by irregularly-alternating parallel fourths and fifths, while lower-voiced reed instruments carry the second theme. Those instruments' cadence figure coming into letter "L" (m. 168) is, incidentally, the only instance where Theme II is permitted closure. A second statement of Theme I (now grounded in E♭) plus Theme II begins from that point, in solo clarinet and first flute respectively. After six measures the flute "gives up" and Theme I's "b" portion is drawn out into a bridge passage of surpassing tenderness and beauty, gradually melting away into near-silence.

Out of this quietude arises the first closing theme, now a fifth higher than in the Exposition (this, of course, is where Hindemith brings his music back home to B♭). The Closing Group is here set forth in a presentation that is splendid indeed, engaging the whole ensemble with music of almost incredible power, vibrancy and beauty. And rather than disintegrating, as it did at the end of the Exposition, this closing gives way to a summary four-measure coda in which the harmonized cadential set (014) is poundingly reiterated, concluding decisively on a chord of B♭ major.

The longest shot: the *Symphony in B flat*

For his only symphony for wind band, Paul Hindemith adopted a multi-movement scheme not unlike that of César Franck's D minor Symphony, written more than six decades earlier. The closest parallel between these symphonies lies in the structure of their second movements: a deft union of slow movement and *scherzo*. That is to say, the four-movement symphonic cycle established and "expected" from the time of the mature symphonies of Haydn and Mozart through Beethoven's Eighth (some exceptions notwithstanding) here undergoes a "telescoping" of its inner movements. This is even more convincing in Hindemith's work than in Franck's, as we have already seen a juxtaposition of themes in the recapitulation of his first movement; furthermore, this is due to happen in another guise in his finale, when both subjects of a double fugue will appear and undergo development simultaneously.

The second movement of the *Symphony* affords an immediate and striking contrast to the opening movement. There, the tonality of B♭ was argued through large architectonic areas cast in the dominant and subdominant keys in a large-scale sonata-form essay, with a limited amount of motivic material generating all the thematic content. Here, the key is G minor, the thematic material more overtly tuneful, the textures much less dense and the mood oddly cheerful. As in the first movement, the theme begins forthwith, against a sort of slow (decorated) heartbeat in accompanying instruments. In its initial presentation, the theme is divided between alto saxophone and cornet solos (again, it is *unthinkable* that a trumpet should play this material!). At its reiteration, the theme is shorn of its decorative polyphonic content and assigned to alto and tenor saxophones in octaves, and finally to solo cornet alone. A brief codetta (trombones of sorrow and doom, mm. 42–48) rounds out the "slow movement" portion of this movement, and the *scherzo* proceeds without interruption in F minor, *in a tempo exactly twice as fast*. One of the most interesting and unexpected timbres in the *scherzo*, by the way, is that of the tambourine. The *scherzo* material is presented, developed and reprised (its form is exactly the same as the "slow movement" portion of this movement: a kind of sonata form in miniature). Beginning at measure 84, an augmented statement of the *scherzo* theme in horns and trombones signals a change of project: this is in fact the onset of a bridge passage which invites back into the fray the G minor theme that began the movement. From that point on (letter "I" in the score, or measure 91), the "slow movement" and *scherzo* material are juxtaposed – again, as in the Franck D minor Symphony. The movement ends quietly in the tonic major.

For all its daunting conducting challenges, the movement just described has the character of an *intermezzo*, an oasis of relative simplicity in the midst of an otherwise densely polyphonic dissertation. With the onset of the final movement, we return to the realm of the monumental.

That movement is introduced by nine measures of music so thoroughly quartal that exact tonic assignment is impossible. Hindemith's "rather broad" tempo designation is *exactly* defined by a metronome marking of 100 beats per minute. This introduction quickly reaches a climax on a dissonant six-note chord – pitch-class set (014589) – that might be described as superimposed augmented triads on E and F, held *fortissimo* and reinforced by a cymbal crash. Out of this "crisis chord" a great unison fall of overlapped (014) patterns issues: a structural similarity with the final gesture of the opening movement's retransition will not go unnoticed.

From measure 10 the first of two fugues proceeds, *slightly* faster than the introduction (recorded examples offer a rich variety of opinion, despite Hindemith's quite specific metronomization). The tonal center is now clearly B♭, the thoroughgoing quartality notwithstanding. Fugue I, holding the stage uncontested up to measure 66, exhibits exactly the kinds of features one expects from fugues since the beginning of the eighteenth century: a five-voice exposition (mm. 10–40), a contrasting episode (mm. 41–44) and two *stretti* (mm. 45–53 & mm. 54–65).

At measure 66 a new theme appears in the piccolo and first oboe. Combined with the subject of Fugue I in the 1st alto saxophone, this passage (mm. 66–76) serves as a closing and bridge. It should be noted that the piccolo/oboe theme is crafted of motivic materials already familiar from the symphony's preceding movements, and that its delicate *scherzando* character infuses the proceedings.

Fugue II makes its appearance at measure 77. Its subject is as lyrical as that of the first fugue was martial – hence it stands in relationship to the earlier material approximately as second theme to first theme in a sonata-form context. Its contours include an important motive from the opening movement's first theme. This fugue is constructed in a way very different from Fugue I: it begins with two expositions (mm. 77–88 & mm. 89–98) and proceeds with two *stretti* (mm. 98–103 & mm. 104–109). Its subject is then offered as a harmonized "theme" in two statements (mm. 110–121). A *stretto*-ridden development follows (mm. 122–135); it is during this passage that the movement's "farthest-out" harmonies are encountered. The *scherzando* material reappears at measure 136, assigned to the same instruments as before but now a whole step lower and accompanying the subject of Fugue II (again in the alto saxophone). This subject is once again treated in *stretto* – the baritone saxophone becomes involved – and gradually fades from the scene, leaving the *scherzando* material to close down this portion of the movement unaided. That closing (mm. 147–160) is marked *poco a poco allargando*, a very specific and quite modest tempo adjustment. I cannot *believe* the lugubrious crawl I've heard inflicted on this music in some recordings. To put it bluntly, there's a knowable difference between a tempo nuance that's in good taste (that elucidates the music's architecture), and one that's not (that obscures its architecture).

At measure 161, where the basic tempo is restored, the first movement's dotted rhythms return and both fugue subjects are presented together (the parallels with Movements I and II are obvious). There are two expositions. The first of these, cast in relatively dark tonalities, occupies fourteen measures. At measure 178 the second double exposition begins, with the tempo *slightly* slackened to accommodate the reappearance of the primary theme from the opening movement, now in trumpets and trombones. With B♭ tonality restored, all of these elements – the first movement's primary theme, the dotted rhythms, and the two fugue subjects – march along together apace, reaching a tremendous climax in measure 197. At this point both fugue subjects and the dotted rhythms disappear, and the primary theme's "b" material – set (0124) – is gorgeously harmonized (as only Hindemith could have done) over a long chromatic descent in the basses. At its cadence in measure 206, the coda begins.

The coda is laid out in antecedent and consequent sections. The first of these, measures 206–212, treats the primary theme's head motive as a new fugue subject in a brief four-voice exposition. The consequent once again celebrates the (0124) "b" material now in close *stretto* against a fantastic, shimmering high woodwind backdrop. The ending is sheer triumph.

The task of assimilation

The brief accounts of Movements II and III, above, constitute the broadest conceivable descriptions of this fabulous work, barely touching on the particulars. My slightly more thorough treatment of the first movement represents a very modest advance over the sketch you have just read. Only the first three measures of the opening movement received the kind of close scrutiny that is necessary to bring a work "to absolute perfection within [the conductor]." And it must seem by now that the Hindemith *Symphony in B flat* is so rich in structural, motivic, harmonic, thematic, rhythmic, instrumental, ornamental and timbral detail, that – even after having done the countless hours of work necessary merely to *notice* it all – to hold all that in one's mind while *conducting* it must constitute a near superhuman feat. In fact there's nothing superhuman about it: after all, Hindemith himself held all that detail in his mind as he composed the work, and extraterrestrial origins are nowhere hinted at in Andres Briner's biography of the composer.

Our task is admittedly daunting – until we take the time-consuming steps necessary to reduce the level of mystery. And that's what outlines, form charts and other analytical tools are for (i.e. that's *really* why we were all obliged to endure four semesters of music theory in undergrad school!). I will begin with the former.

The beauty of working from an outline, especially as *a work in progress with benefit of a word-processing program*, is that one can fill it in with increasingly fine detail as one's study progresses. Here is how my outline of Hindemith's *Symphony in B flat*, to the extent that I've examined it above, would look:

Paul Hindemith: *Symphony in B flat* (1951)

Published by B. Schott's Söhne, Mainz

Movement I: Moderately fast, with vigor (B♭, sonata form)

(1–77) Exposition

(1–27) Theme I plus transition (B♭ moving to F)

(1–11) Statement 1 of Theme I: Grounded in B♭, played by cornets and trumpets with reinforcing horn and trombone against a glittering high woodwind backdrop. Range is a major 14th, character is masculine.

(1–7) "a" portion of Theme I, proceeding from B♭ to E *via* whole-tone features (including strong emphasis of A♭ and G♭).

(1–3) First section of "a": music begins in B♭ minor, rises to D♭, falls through a Phrygian gesture to A♭ then G♭. Woodwind rhythmic patterns are consistent except for that of solo clarinet, whose pattern changes from five beats to four. The meter is consistently 3/2 time, although this seems uncorroborated in the music itself. During the first beat of measure 1, an important generating motive, B♭–A♮–G♭–D♭–B♭, pitch class set (0347), is presented in bassoons and basses and harmonized by low brasses and timpani. ***Some detail remains to be filled in here.***

(4–7) Second section of "a:" quartal arpeggios appear, wide downward leaps occur in theme, sequences prominent. A decorated, upwardly-arpeggiated augmented triad plus extension leads finally to high E, a tritone away from the tonic and the completion of the first chromatic gamut. First horn reinforces low cornets beginning in the second half of measure 4; first trombone joins in at measure 5. Some of the woodwind projects begin to change (note especially second flute and solo clarinet). There may be some wrong notes in mm. 6 & 7 – cross-relations between E♭ and 3rd clarinets are difficult to justify. A local *crescendo* in the high E in measure 7 leads to the "b" portion of this theme. The music continues in 3/2 time. ***Some detail remains to be filled in here.***

(upbeat to 8–downbeat of 11) "b portion of Theme I, returning the music to B♭. Here, three instances of set (0124) in apparent 5/4 time, each increased over the other by a local *crescendo*, lead to a more conjunct closing in m. 10 (completed at the downbeat of m. 11). The solo clarinet drops out of this section. The final measure of this section is in 2/2 time. ***Some detail remains to be filled in here.***

(12–27) Statement 2 of Theme I, including transition.

(12–17) "a" portion. Theme moves to woodwinds and is richly harmonized. Counter-theme spun off the first statement's closing found in alto saxophones and first horn; this counter-theme begins with a strong whole-tone bias and is passed to lower woodwind instruments as it unfolds. The cornets and trumpets take over the "chattering" background, but in a more static way than its earlier presentation in woodwinds. ***Much detail remains to be filled in here.***

(upbeat to 18–27) "b" portion (Transition). Seven fragments of a quarrelsome, accusatory, nagging figure in the alto saxophones accompany seven iterations of the (0124) figure, which is here expanded into a modulatory transition. The seven iterations of (0124) are on F, C, G and four on A♭, in solo cornet, first trumpet, first cornet, high woodwinds, first trombone with mid-range woodwinds, high woodwinds, and baritone/low woodwinds respectively. The "chattering" moves to the woodwinds beginning with the flutes, and horns contribute four *fp* Fs, later expanding the pitch array, dropping the *fp* aspect and participating in a general *crescendo* at the point where the snare drum enters (m. 22). Two cadential measures (mm. 24, 25) supply a closing based on the first theme's head motive, richly harmonized with a wild excursion in first and third horns. The music cadences through F Phrygian in measure 25 to F Lydian in measure 26; two measures in 2/2 time prepare the entrance of Theme II. ***Much detail remains to be filled in here.***

(28–50) Theme II (F)

(28–40) First statement: interrupted fugue.

(28–33 ff.) Subject in 1st oboe, counter-subject in 1st bassoon, pitch level grounded at F. Subject's head-motive is set (0347) motive found in measure 1, here transposed to F. The character of the subject is feminine and its range is that of a major ninth. Motivic details establish kinship with first theme. ***Much detail remains to be filled in here.***

(33–35) First (and only) answer, a major third lower, subject in tenor saxophone, counter-subject in piccolo. ***Much detail remains to be filled in here.***

(36–40) Interruption of the proceedings: a flurry of head-motives in a welter of instruments, grafted onto an overt first-theme references, offered twice. ***Most detail remains to be filled in here.***

(41–50) Second statement: subject presented as accompanied theme. A perfect 4th lower than first statement, placed in clarinets reinforced by Glockenspiel, accompanied by an irregular "oom-pah" figure in basses and horns plus teasing exchange of the theme's head motive between 1st flute and piccolo. At cadence in m. 46 there begins a bridge passage over two chromatic waves in parallel thirds. ***Most detail remains to be filled in here.***

(51–77) Closing Group (E♭)

(51–56) First iteration of "first closing theme" in three octaves' worth of unison woodwinds, *piano*. Phrasing and contours are "classical," and the range is a perfect eleventh. ***Most detail remains to be filled in here.***

(57–62) Second iteration of "first closing theme," now in four octaves (with addition of flutes); first appearance of "second closing theme" in horn octaves, *mezzo forte*. This new theme begins with a statement of the set (0347) motive. Its structure is the most "classical" in this movement, and its range is an octave. A general *crescendo* raises the dynamic to *forte* at the end of this statement. ***Most detail remains to be filled in here.***

(63–68) Third iteration of "first closing theme," now in five octaves (with addition of piccolo), *forte*. Second appearance of "second closing theme" now richly harmonized. ***Most detail remains to be filled in here.***

(69–77) Final iteration of both closing themes, with the second of those more aggressively harmonized and fragmented and the first rhythmically compressed – placed under duress. *Fortissimo* prevails, sharp accents abound, meter fluctuates wildly. ***Most detail remains to be filled in here.***

(78–154) Development

(78–downbeat of m. 129) First section: a rondo with a *fugato* refrain and two episodes. ***All detail remains to be filled in here.***

(129–148) A development of first-theme elements over a chromatic running bass. ***All detail remains to be filled in here.***

(149–154) Retransition passage featuring an augmentation of the harmonized second theme against dancing upper woodwind figures derived from the theme's head motive. Climax is reached at very dissonant chord halfway through m. 151; great unison fall, chockfull of motivic material so far important to the movement, precipitates the recapitulation. ***Most detail remains to be filled in here.***

(155–212) Recapitulation

(155–184) Simultaneous recapitulation of Themes I & II in E♭.

(155–downbeat of 168) First statement, beginning after two measures of clarinet "chattering). First theme is in flutes and oboes, "harmonized" with irregularly-alternating parallel 5ths and 4ths. Second theme lies in low woodwinds. ***Most detail remains to be filled in here.***

(168–184) Second statement plus bridge passage. First theme is in solo clarinet, second theme in solo flute (who gives up after six measures); "b" portion of theme drawn out into bridge passage, melting away into near-silence. ***Most detail remains to be filled in here.***

(185–212) Closing Group plus Coda, in B♭. Coda is final 4 measures; set (014) motive poundingly reiterated; ending decisive on B♭ major. ***All detail remains to be filled in here.***

Movement II: Andantino grazioso/Fast and gay (G minor, composite form)

(1–48) Part I: "Slow Movement" (*All detail remains to be filled in here.*)

(49–90) Part II: *Scherzo* (*All detail remains to be filled in here.*)
(91–128) Part III: Synthesis (*All detail remains to be filled in here.*)

Movement III: Fugue (Rather broad/Fast, energetic; B♭, double fugue)

(1–9) Introduction (Rather broad; harmonically ambiguous; climax reached on a held "crisis chord" in m. 8, great unison fall into the first fugue.) ***Most detail remains to be filled in here.***
(10–76) Fugue I (B♭, disjunct quartal subject, slightly faster tempo) plus closing/transition

- **(10–40)** Five-voice exposition. ***All detail remains to be filled in here.***
- **(41–44)** Contrasting episode. ***All detail remains to be filled in here.***
- **(45–53)** First *stretto*. ***All detail remains to be filled in here.***
- **(54–65)** Second *stretto*. ***All detail remains to be filled in here.***
- **(66–76)** First closing/transition. New theme in piccolo and first oboe, Fugue I subject in alto saxophone, *scherzando* character prevails. ***Most detail remains to be filled in here.***

(77–160) Fugue II (conjunct subject, including important motive from Movement I, Theme I) plus closing/transition

- **(77–88)** First exposition. ***All detail remains to be filled in here.***
- **(89–98)** Second exposition. ***All detail remains to be filled in here.***
- **(98–103)** First *stretto*. ***All detail remains to be filled in here.***
- **(104–109)** Second *stretto*. ***All detail remains to be filled in here.***
- **(110–121)** Subject offered as harmonized "theme," two statements. ***All detail remains to be filled in here.***
- **(122–135)** Development section featuring *stretto*; "farthest-out" harmonies are encountered here. ***Most detail remains to be filled in here.***
- **(136–160)** Second closing/transition. "New theme" from mm. 66–76 returns a step lower; Fugue II subject in *stretto* between alto and baritone saxophones; subject drops out gradually and leaves *scherzando* material to close this portion of the movement, *poco a poco allargando*. ***Most detail remains to be filled in here.***

(161–225) Synthesis, Apotheosis, Coda.

- **(161–177)** First double exposition: Subjects I & II against dotted rhythms, relatively dark tonalities. ***All detail remains to be filled in here.***
- **(178–197)** Second double exposition plus Theme I from Movement I in trumpets and trombones. B♭ tonality restored, tempo is a little broader. Climax at 2nd beat of m. 197. ***All detail remains to be filled in here.***
- **(197–downbeat of 206)** From the 2nd beat of 197, both fugue subjects disappear and Theme I's "b" section proceeds brilliantly harmonized over a long chromatic descent in the basses. ***All detail remains to be filled in here.***
- **(206–225)** Coda.
  - **(206–212)** Antecedent phrase: head of Theme I treated as fugue subject for a brief four-voice exposition. ***Much detail remains to be filled in here.***
  - **(213–225)** Consequent phrase: "b" portion of Theme I now "celebrated"

in close *stretto* against a fantastic, shimmering high woodwind backdrop; ending is sheer triumph. ***Much detail remains to be filled in here.***

So concludes my outline, to the point that I examined the *Symphony in B flat* in prose, above. It must be obvious that only the first statement of the opening movement's first theme has so far received anywhere near the thorough examination that would be necessary to enable the conductor to "materialize it by means of the orchestra." And keep in mind that, even when the entire Symphony has yielded itself to such careful scrutiny, the results of that scrutiny must be held complete in the conductor's mind in order to qualify as a fully-apprehended *necessary* (but still not *sufficient*) condition for conducting the work.

This last observation suggests we still have plenty of work to do. I propose that we next construct a form chart of the work (this is something all of my conducting students find themselves assigned immediately upon identifying a particular work for study). As I indicated in my earlier article, I start with 11x17" graph paper and place measure numbers (all of them, of course) in a row, leaving plenty of room above and below for useful information. I then delineate the phrasing and other structural details by means of arcs in hierarchies, above the measure numbers. Above those arcs, I fill in other information, also in hierarchies, much as in my outline above. Below the measure numbers I place such useful information as key centers, important sonorities and meter changes. The beauty of such a chart is that, like a road map you've made for yourself, it can be as detailed or as sparse as you wish it to be: *you* decide how much is enough.

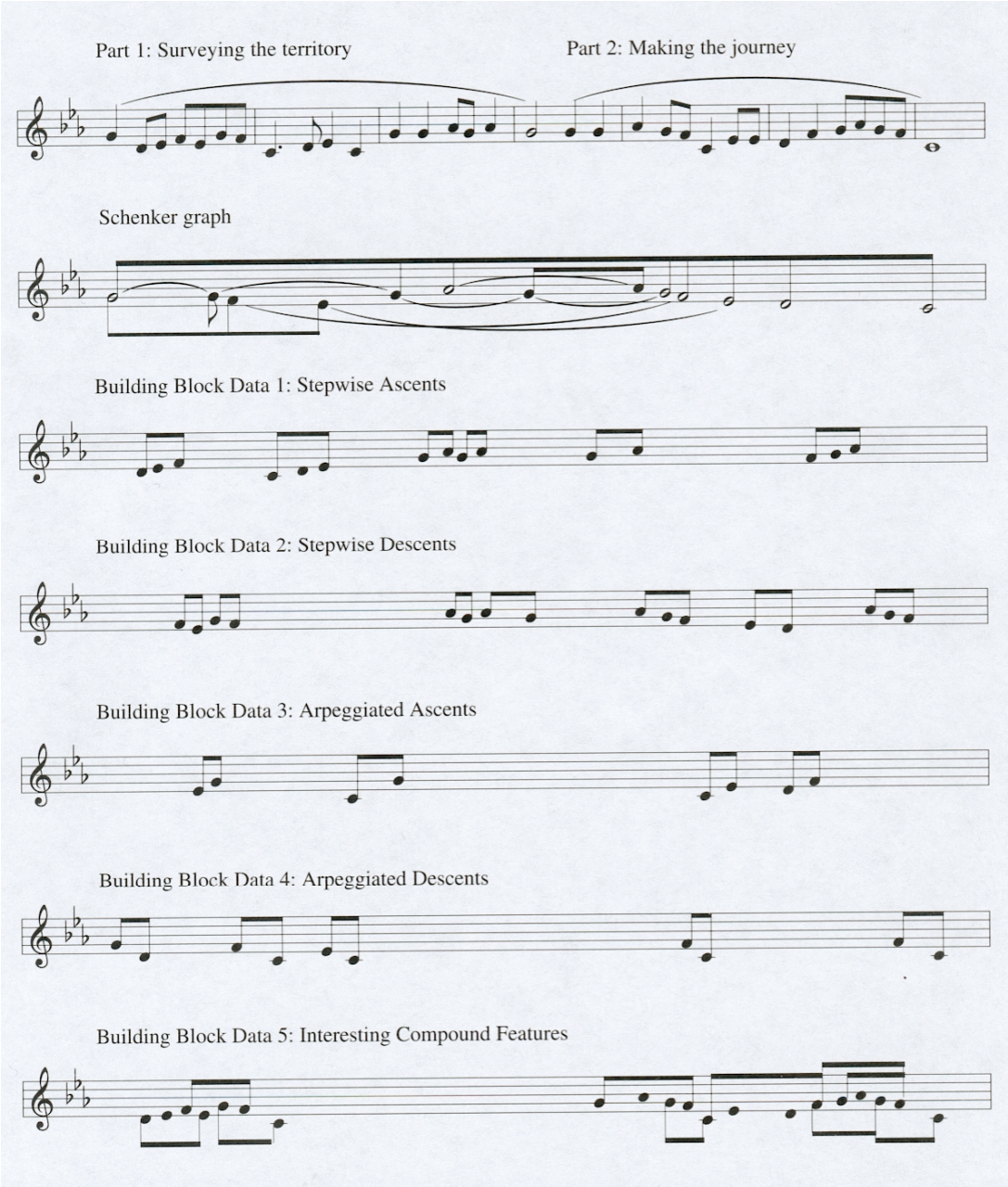
My phrase chart of Theme I from the first movement would look something like this: there would be a long arc spanning from the beginning of measure 1 to the end of measure 27. Underneath that long arc would be two shorter arcs, spanning from the beginning of measure 1 to the end of measure 11, and from the beginning of measure 11 to the end of measure 27. The overlap in these arcs would elucidate the phrase elision that I mentioned earlier in my discussion of Theme I. Beneath the first of those arcs there would be two shorter arcs: one spanning from the beginning of measure 1 to the end of measure 7, and the other spanning from the beginning of measure 8 to the end of measure 11 (these are the "a" and "b" portions of Theme I, respectively). And underneath the first of *those* arcs would be two very short arcs, from the beginning of 1 to the end of 3, and from the beginning of 4 to the end of 7 (I discussed these above as the two parts of the "a" portion of the theme). The second statement of the theme (mm. 11–27) would receive a similar treatment. And so one proceeds, with as much detail as the researcher wishes to supply. (Of course, I would build up the arcs in the opposite order from that in which I described the finished product above.) Above the arcs I would place the following information, in descending order: Exposition, Theme I, first and second statements plus transition and closing at the places where they occur, "a" and "b" under each of the identified statements at the places where they occur. Beneath measure 1, in descending order: B♭, 3/2. Beneath measure 10: 2/2. Beneath measure 12: 3/2. Beneath measures 18–25: an undulating arrow indicating a modulation. Beneath measure 26: F, 2/2. And so forth.

The great virtue of this exercise is that it graphically represents, in a few strokes, a very large, complicated composition, making its architecture clear. It is after doing this exercise that I often discover I have unwittingly "memorized" the work I'm studying, at least in some fairly broad (and certainly useful) outlines.

There are two or three additional tools I either *always* or *often* use in learning a composition. One is complete harmonic analysis, which I consider indispensable. This applies no less to a work like Hindemith's *Symphony in B flat*, which calls for a set theory analysis, than to the symphonies of Haydn and Beethoven, which of course yield to a very different kind of analytical system. Another is Schenkerian or voice-leading analysis, a couple of pared-down examples of which I have supplied on the following pages. The final tool is a "building-block" analysis in which the intervallic content of the music is dissected. I simply notice and isolate the following elements: stepwise ascents, stepwise descents, arpeggiated ascents, arpeggiated descents, and interesting compound features (pitch palindromes, *gruppetti*, interlocking motives, and so forth). It's amazing what one can learn from such a simple exercise.

On the next page you will find the opening horn solo of Tchaikovsky's Second Symphony examined by means of Schenkerian and "building-block" analyses. I have begun this analytical section with this particular theme as a kind of "orientation" in case these analytical tools are unfamiliar to the reader. The Tchaikovsky analysis should be carefully studied and all its points understood before moving on to the similar treatment of the much more complex first theme from Hindemith's *Symphony in B flat*. In both cases, a brief narrative summarizing analytical findings supplements the analysis itself. If these examples are fully comprehended, and a few parallel exercises chosen and dissected by the reader (using either already-familiar themes or additional themes from the Hindemith *Symphony*), I believe the benefits to be derived from such an undertaking will become self-evident.

A Schenker Graph and "Building Block Data" for the opening horn solo in Tchaikovsky's Second Symphony



Narrative: The Tchaikovsky Theme Analysis

The horn theme analyzed above begins in the second measure of Tchaikovsky's Second Symphony. It is entirely unaccompanied. The measure that precedes this excerpt consists of a powerful downbeat G major chord in most of the instruments of the orchestra plus a long preparatory G held by the solo horn. The theme then proceeds in C minor from measure two, as given in my example.

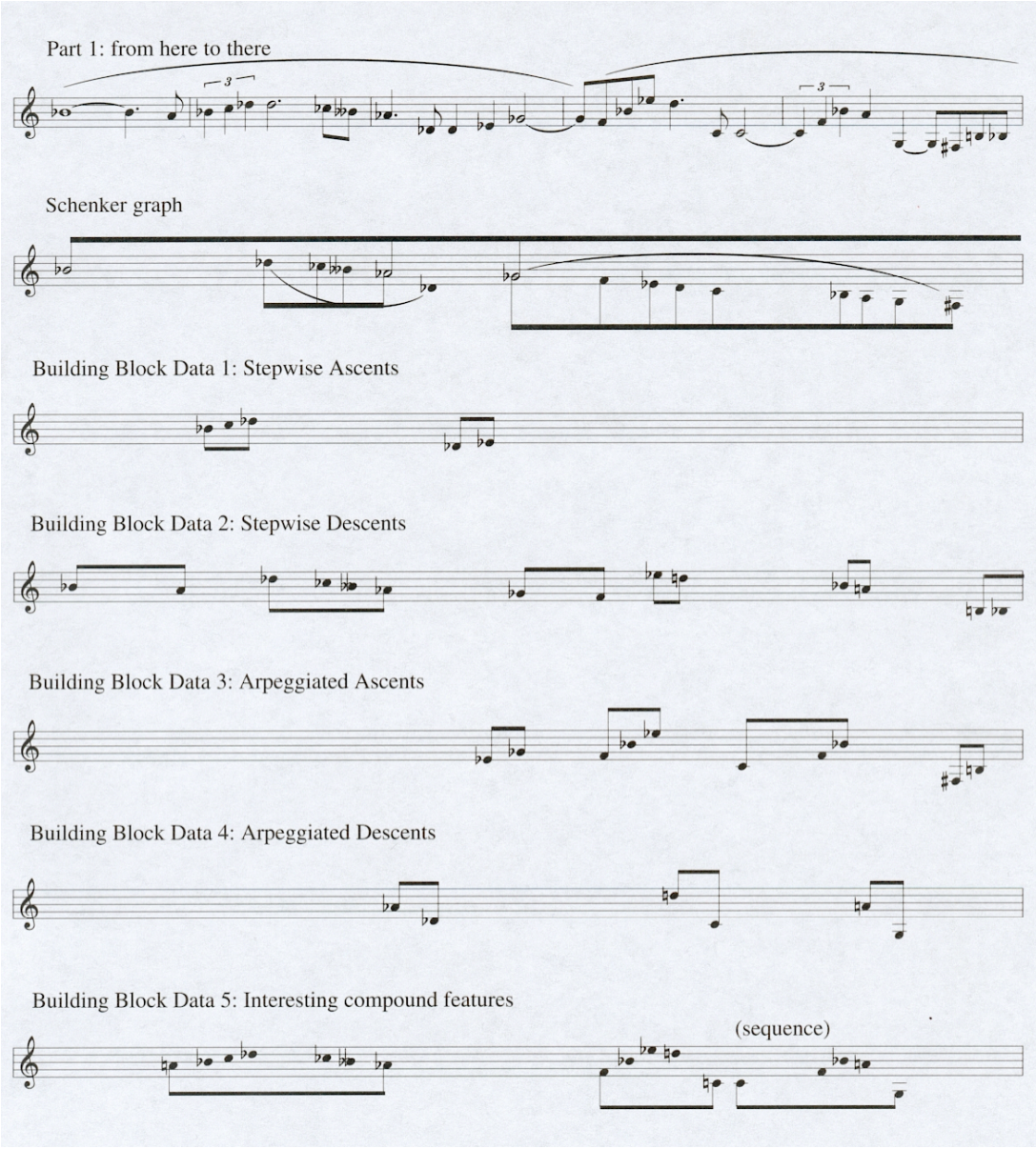
I think of this theme as being in two parts: in the first three and a half measures, the hornist "sizes up" the territory to be traversed; in the remainder of the solo he actually traverses it, arriving at the tonic.

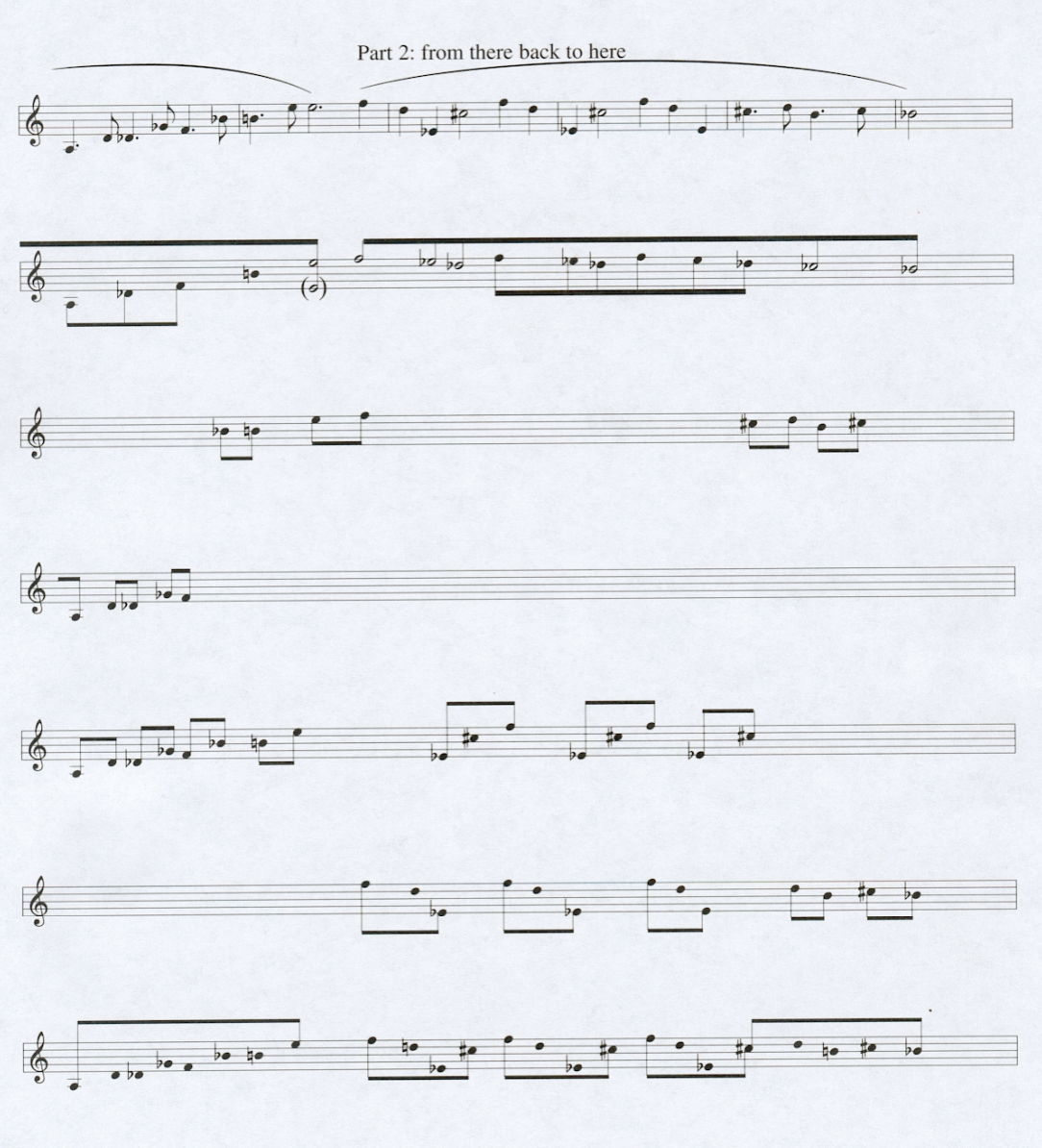
The Schenker graph points up several salient structural points. As in a great deal of western art music, there is a general fall from beginning to end of this theme, and embedded in its details lies conjunct voice leading, or "directed motion." The primary components of that voice leading are represented by half notes, in which the theme begins on G, rises to A♭ and then falls through a series of scale steps to the tonic C. That overarching motion is forecast on a more modest scale in the first two measures, with a fall from G through F to E♭, delineated by a beamed grouping with downward stems. The F and E♭ in the first two measures link up registrally with those in the final descent, as indicated by long slurs below the staff. Other significant linkages are found between Gs and A♭s: it is while the music is in their realm that it is kept "aloft."

In the "building block data" portion of the analysis, the identification of ascending and descending patterns yields a significant conclusion: while conjunct patterns are frequently extended to include three notes, disjunctions are always strictly limited to pairs of notes (i.e. there will always be conjunct motion between any two disjunctive patterns). Simply put, this music is more lyrical than declamatory. This of course has profound implications for the style in which it should be played.

By observing the ways that different types of patterns link up into the kinds of compound features that constitute a composer's "fingerprints," we here discover several that seem to hold developmental promise; moreover, it seems that these features are clustered in two groups, near the beginning and end of the theme, respectively. The first of those groups includes three overlapped patterns: a partial *gruppetto* (D–E♭–F–E♭), a "changing tone" (F–E♭–G–F) and a three-note fall, half conjunction half disjunction: G–F–C (the fall from the subdominant pitch to the tonic is a peculiarly Russian – or perhaps Ukrainian – melodic feature). The second includes a great many more: another partial *gruppetto*, this one a retrograde of the first (G–A♭–G–F), overlapping another G–F–C cadential fall; a rising sequence of thirds (C–E♭–D–F); two overlapping partial *gruppetti* (F– G–A♭–G and G–A♭–G–F), which in combination produce palindrome F–G–A♭–G–F; and the final cadential fall G–F–C. This more prodigal motivic activity near the end of the theme corroborates my earlier observation that the second half of the theme represents a sort of journey in contrast to the first half's more static "surveying" – or, who knows, perhaps it precipitated my understanding of the theme before I discovered why.

A Schenker Graph and "Building Block Data" for Theme I from Hindemith's *Symphony in B flat*, Movement I




Part 2: from there back to here

Narrative: The Hindemith Theme Analysis

Like the Tchaikovsky theme analyzed earlier, Hindemith's primary theme is in two parts – but not so nearly equal in length and weight as Tchaikovsky's. Part 1 ("a" in the text above) takes us from B♭ to the point of farthest remove (E). Part 2 ("b") returns the music to the tonic.

A comparison of the Schenker graph with the theme makes clear the fact that much of Hindemith's apparent disjunction is in fact accomplished by octave displacement. So it is that a stepwise march down an octave from the third measure's G♭ to the fifth measure's F♯ is twice deflected. This principle applies no less firmly to the largest voice-led features; hence the arrival E in Part 1 is elevated an octave, and the reiterated E♭s in Part 2 are lowered. (Incidentally, I have re-spelled the C♯s in Part 2 as D♭s – and a B♮ as a C♭ – to reflect more nearly the conjunction that actually exists: the ear cannot see.)

The information gleaned during the "building block" analysis yields data that I believe are self-explanatory.

II Cultivating an appropriate somatic vocabulary

We turn now to that activity that is most likely to be identified by members of our audience as "conducting:" the actual gesticulations we make when presenting our understanding of a composition to an ensemble in our charge.

In one critical respect, instrumentalists and singers have a real advantage over us conductors: they have a sound source at their disposal for expressing their musicality. All we have is our bodies – and it is most devoutly to be wished that we shall make no sound with them!

That last is not a bad *modus operandi* for rehearsals, by the way. Hermann Scherchen has said that the ideal to which every conductor should aspire is to be "capable, when facing an orchestra for the first time, of conducting a big orchestral work cleanly and intelligently, *without any rehearsal* (emphasis his)." Only then, says he, do "a conductor and an orchestra begin to meet on equal terms." (Scherchen, p. 4) Notice that explanatory speech is not involved.

It seems to me that there are two fundamental, mutually-reinforcing requirements where our gestures are concerned: **they shall be *clear* and they shall be *expressive*.** What they shall clarify is the pulse of the music. What they shall express is the music's design. Nothing else is needed or wanted.

Clarity comes as the result of much carefully-monitored practice. It is achieved through cleanness of time-beating and attention to the *preparatory* aspect of each gesture (see my earlier article). Expression comes as the result of much careful score study:

knowing exactly what is to be expressed at any given time (there is no latitude for arbitrariness here: the composer has called the tune).

Both clarity and expression depend on the conductor's knowing *exactly* where his own physical limits lie: one who attempts to gesticulate beyond his limits only makes a spectacle of himself and contributes nothing to the music – in fact, he probably stands in the music's way.

In my previous article I suggested that as one sings through the parts printed in the score (yet another indispensable facet of score study), one should allow one's body – especially the arms and hands – to move freely in response to the musical gestures one is singing. While refining these motions for later use in conducting, it is crucial that we place them in an appropriate, defining context. It is important, for instance, to notice that in his *Symphony*, Hindemith never explicitly exceeds *ff* and *pp* markings (one does, however, occasionally see a *crescendo* from *fortissimo*, as at the ends of the Exposition and Development sections in the first movement; one might say that *fff* is therefore implied in those cases). The physical limits of musical instruments being what they are, it is inconceivable that the five *f*s or six *p*s of Tchaikovsky should be louder or softer, respectively, than the two (or three) that are called upon to carry the weight of the argument at the most extreme points in Hindemith's work: so it must be that Hindemith allows us a bit more latitude in our understanding of just how loud certain *forte* and *fortissimo* passages are to be *in relation to each other* than Tchaikovsky did (Hindemith's dynamics, in other words, are not so hypersensitively fine-tuned as Tchaikovsky's).

Nevertheless, in *anyone's* vocabulary, *f* is synonymous with neither *ff* nor *mf*. And in the first measure of Hindemith's *Symphony in B flat* we encounter all three of those markings. How are we to manage this? In short, we must give each of three groups of instrumentalists exactly what they need to get them started "on the right foot." Here's how I'd suggest proceeding:

First, assume a powerful, determined stance, in keeping with the character of the Symphony's opening. Raise the right hand – with baton – *decisively* to "ready" position in order to set the tone for the music that is to follow. Sweep the ensemble with your eyes to make sure that everyone is ready. Then, with your attention focused on the bassoon and bass players, give a sharp, *fortissimo* preparatory upbeat at 88 to 92 beats per second. At the top of that beat, momentarily *freeze* – but without interrupting the tempo you wish to establish (this is the only time you'll do this). Then bring the baton down with an explosive *fortissimo* axe-stroke, deflected sharply to the left at the ictus.

Give the second beat clearly with the right hand, but without nearly so much power as the downbeat. Simultaneously, with eyes directed at the high woodwinds, snap the left hand up from its position of rest, palm forward in the woodwinds' direction to encourage their drop to *mf*. Let the left hand drop immediately and, with the eyes suddenly turned toward the cornets and trumpets, give the third beat in a healthy, "inviting" *forte* as they prepare to move their line forward.

From this point, the time-beating gestures should remain conjunct (if not exactly "flowing") for a while: one does not wish to invite *staccato* playing into the theme (the accents are all *tenuto* accents). The left hand should remain inactive. It is perfectly permissible to allow the "frame" of one's time-beating to rise and fall to mirror the theme's progress, provided one doesn't overdo it. It seems to me, for instance, that only a soulless automaton could resist "digging out" the low point of the theme in measure 4 and subsequently raising the gestural frame as that theme rises through the interval of a major 14th to the high F.

We encounter a special set of conducting problems at measure 7: over the next three measures we have to manage three differently-placed *crescendi* plus a stretch of music in apparent 5/4 time in a 3/2 time-beating context. The right hand will beat time (with some specialized motions) while the left hand indicates the *crescendi* and reinforces the "5-beat-ness" of the music. To begin with the latter: the left hand sweeps inward and upward with palm open and fingers curved (and together) during beats 2 and 3 of measure 7, then continues its arc into a circle, dropping rapidly outward. It makes its second inward/upward sweep on beat 2 of measure 8, this time with palm open and fingers extended (but still together). This sweep is executed a little more quickly than the first one: the entire circle must be completed in the span of two and a half beats. The third sweep, beginning right after the downbeat of measure 9, is done with a clenched fist, which is raised to the top of the gestural circle and held firmly in place to the downbeat of measure 11, at which point it opens and invites the alto saxophones and first horn to proceed with the counter-theme. The right hand, meanwhile, continues to beat 3/2 time, but with gestures of syncopation (small but noticeable time-beating "silences" interjected into otherwise conjunct motions) used as preparations in two places: to inaugurate beat 3 of measure 7 and beat 2 of measure 9. The third beat of measure 8 receives a sweeping preparation with no disjunction. The right and left hands will need to be rehearsed both separately and together when preparing to conduct this complicated passage.

Needless to say, the "3" and "2" patterns will be carefully differentiated when the meter changes. In this context, it seems to me that an isosceles triangle is not a bad plan for the "3" pattern, with the "2" pattern, by contrast, rendered very nearly vertically.

I have glossed over some important conducting details, of course (the entrance of first horn and first trombone in measures 4 and 5, for instance), and all the music so far has been at the *forte* end of the dynamic continuum. As the second statement of Theme I is more complex than the first statement, its conducting challenges are more varied and daunting. Beyond reminding the reader of an observation I made earlier – that the modulatory transition based on "b" requires some carefully worked-out and assiduously-practiced choreography – I will not belabor them here; much less will I make explicit recommendations as to how the remainder of the Symphony should be represented in a conductor's gestures. I will instead point out that every gesture I suggested in the preceding five paragraphs was derived from close score study and an active imagination applied to the results of that study (you practically watched me do it). The inference is inescapable: anyone who cares enough about music to want to bring a masterpiece to existential life can find a way to do so.

Conclusion: "Unto whomsoever much is given, of him shall be much required."

The grammatically clumsy sentiment above, first recorded in Saint Luke's Gospel and echoed in equally unwieldy permutations by any number of public figures since, conveys an important truth – and for those who presume to conduct, a heavy responsibility. In a word, in addition to the burdens we (have elected to) shoulder, we hold in our hands a treasure none of the musicians in our charge enjoys: a full score. That score provides both the primary means by which we can come to "know" a composition, and a platform from which we can launch it to an audience. It enables us to chart the progress of a composer's thematic development and harmonic argument – *his mind*, in other words – from beginning to end of a composition, in a way that no extracted individual part with grouped rests could possibly permit. It is understandable that an ensemble musician will occasionally confuse *arsis* with *thesis* – will, where phrase shape is concerned, zig when he should be zagging – considering the severely limited text he has to work from. But if we conductors do it, it's simply inexcusable. If we neglect to bring the members of our ensembles to as full an understanding as possible of the work they are playing – and consequently, to deliver to our audiences as faithful a representation of the composer's work as possible – we cannot be said to have fulfilled our obligations – to have "done our job."

Leonard Bernstein purportedly said, "Music is hard." My gloss on his observation is: the hard work necessary to bring it to life is also very, very interesting and rewarding. As I indicated in my earlier article, every time I study the score of a Haydn symphony to the extent that I've outlined above, I remember all over again why I fell in love with music in the first place. Let's not cheat ourselves – or those who depend on our guidance – out of this joy.