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Joseph N. Straus
CUNY Graduate Center

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An Analytical Example for Bob

Joseph N. Straus

In the fall of 1981, I was the greenest, most naïve young music theorist you can possibly imagine. The ink on my doctoral diploma was still wet, and I had just started my first job, at the University of Wisconsin. It was a simpler, less demanding time for music theorists: I had never attended a conference, much less presented at one. But I found myself at the 1981 meeting of the newly formed Society for Music Theory in Los Angeles, giving my first-ever theory paper. I recognized Milton Babbitt, the keynote speaker for the conference, sitting right in front of me, in the first row. Seated next to him was an imposing, large man with a bushy, white beard (Bob Morris, as it turned out, but I didn’t know that at the time—I told you I was green). When my paper ended, the imposing, large man with the bushy, white beard asked me a question. I didn’t know much at that time, but I knew enough to know that I didn’t know exactly what I was being asked. When the question ended, Babbitt piped up, “Quite right, Bob!”—and I knew I was in big trouble. I muddled through an
answer, as people who are out of their league often do, but that was the moment when I began to learn from Bob Morris, and that process has never stopped since. I don’t believe I’ve written a music theory article in the past twenty-five years that didn’t cite Bob and draw on his thinking in some significant way. For someone with intellectual hunger, Bob’s work has provided an endless feast.

I want to give one current example of how my work has drawn on his. Bob’s well-known article on “voice-leading spaces” has been an important source of stimulation for me (Morris 1998). It is right at the core of all of my own work on atonal voice leading; I have read it many times and assigned it to generations of students. There’s an idea in there that Bob deals with mostly in passing, something he calls “total voice leading”: “Given two pcs sets A and B, the total voice-leading from A to B includes any and all moves from any pcs of A to any pcs of B—that is, all the ways one can associate the pcs of A with those of B” (178). I had never paid much attention to that idea—the article is full of other fascinating things—but it recently occurred to me that that there was significant intersection between Bob’s “total voice leading” and Lewin’s IFUNC, and that both offered ways of talking systematically about all of the intervals formed between pcsets A and B and for thinking of that total intervallic package as a sort of voice leading.

I began to realize that you can gather the package of intervals formed between pcsets A and B into a multiset and think usefully about its properties. These interval-multisets can be related by transposition and inversion as members of an imultiset-class. When we talk about the transposition or inversion of an imultiset, we’re really talking about the intervals between the intervals, or the indexes of inversion that relate the intervals. In other words, we’re talking about hyper-T and hyper-I, very much in the sense those terms are used in discussions of Klumpenhouwer networks, and with similar possibilities for recursion. Furthermore, it turns out that these imultisets all have Cohn’s TC (transpositional combination) property, and that many of them can be generated by more than one pair of set-classes A and B, something Cohn refers to as “multiple parentage” (see Cohn 1988 and 1991).

Example 1 illustrates some of these points with reference to two four-note segments in the opening melody of “Linee,” one of Bob’s Fourteen Little Piano Pieces (2002). These two segments, G♭-E-D-Db and C-A-Ab-G, are expressed as RI-related contour-segments, <3021> and <2130>. I have parsed both of them into a trichord and an overlapping dyad. Although these represent two quite different pairs of set types—(024) and (01) versus (012) and (03)—the total voice leading within each pair of sets is the same: i[789TE0]—that is Cohn’s
“multiple parentage,” but applied here to sets of intervals rather than sets of pitch classes. These imultisets are thus $T_0$-related forms of imultiset-class (012345). In short, the progression from [D, E, G²] to [Db, D] involves the same bunch of intervals as the progression from [A, C] to [G, Ab, A].

Because the basic theoretical idea here is really Bob’s (and also David Lewin’s), I can say with all due modesty that this is a fascinating way of thinking about the connection between two pcsets. I recently wrote an article about all of this with the clever, original title, “Total Voice Leading,” and Bob’s influence can be felt throughout (it will appear soon in Music Theory Online). I deal there with the range of
challenging theoretical and perceptual questions that this approach entails, and I will therefore gloss over most of that here. Instead, as a brief homage to Bob, I’d like to use the idea of total voice leading as a way into the rest of the passage cited above. In particular, I am interested in the harmonies formed between the melody just discussed and the counterpoint in the lower voices (see Example 2).³
On the score, I have identified four pairs of sets (a couple of the segmentations may appear a bit sketchy—I am confident I could defend them, but I won’t try to now). Each of the four notes of the melody is supported by one of the four pairs, and both sets in each pair contain one melody note. The pairs of sets are either (012) + (03) or (024) + (01)—the same two pairs we found in the melody. And, as in the melody, the total voice leading within each pair of sets is a member of imultiset-class (012345). The four imultisets are related by $T_n$, which measures the amount by which the contour of intervals within the imultiset is shifted to the right (wrapping around to the beginning). So, for example, the intervals within the first imultiset are [789TE0]; those within the second imultiset are [89TE01]. All the intervals have shifted one place to the right, so the two imultisets are related at $T_1$. As noted in the box at the bottom of the example, the hyper-$T$ numbers to some extent recursively reflect the intervals formed within the melody. (Again, the perceptual issues here are challenging but not insuperable, and I won’t consider the matter further now.) In these ways, total voice leading offers a perspective on the melody and on the relationship between melody and accompaniment that is highly suggestive: the intervals and the sets vary, but the total voice leading, understood as the characteristic gesture that takes us from one place to another, remains the same. For this valuable concept, and for a very great deal more, I owe Bob a lot, and so does the field of music theory.
NOTES

1. Lewin (1987) describes IFUNC as follows: “IFUNC(X, Y)(i) tells us in how many different ways the interval i can be spanned between (members of) X and (members of) Y” (88). Lewin (1977a) refers to the potential for IFUNC to reflect the “total potential counterpoint” between two harmonies (203); Lewin (1977b) speaks similarly of the usefulness of IFUNC in reflecting the “overall sound’ of the counterpoint” between two pitch-class sets (40).

2. The terminology and concepts for talking about contour are from Morris (1987).

3. I have written about this piece before—I included it in my book, *Twelve-Tone Music in America*, as part of a demonstration that twelve-tone music came in all shapes and sizes and was still being written in stimulating, fascinating, and beautiful ways (Straus 2009). There, in keeping with the focus of my study, I talked mostly about the twelve-tone aspects of the music, and I drew on a then-unpublished paper by Bob (“Music as Poetry: A Talk on My Fourteen Little Piano Pieces,” now in Morris 2010). As I mentioned, I have had frequent occasion to draw on Bob’s work.


