

# MECHANICS OF ORCHESTRAL NOTATION

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LARGELY because of the repertory system, present-day standards of orchestral playing approach the virtuoso level. A group which has played a work many times can quickly grasp a new interpretation. Difficult passages have been worked out in previous performance or learned like concerti at school; the esthetics are clear, the leading and subordinate voices defined. But a composer who writes a new work expecting such virtuoso resources finds, when it comes to the usual short rehearsal time, none of these advantages. It is safer for him to assume that his piece will be played by an inexperienced ensemble, with insufficient rehearsal, and a conductor who doesn't like him.

It is not always possible to solve the problems by scoring. But any device which will retain a musical idea in an easier form is worth consideration. One such trick (at least as old as the overture to the *Nutcracker Suite*) is the transfer to and from similar instruments of portions of a difficult passage. The first example facilitates tonguing in the double reeds; the second solves problems of range and ostinato; the third assists bowing; the fourth gives trumpets the flexibility of an oboe.\*

EXAMPLE 1

Flg.  $\frac{3}{4}$   $D$

FALLA  $\textcircled{7}$

*NIGHTS IN THE GARDENS OF SPAIN*

EXAMPLE 2

Fl. I  $\frac{4}{4}$   $D$

BLOCH  $\textcircled{2}$

"SHELOMO"

EXAMPLE 3

VI.  $\frac{3}{4}$   $D$

PP

PP

RAVEL  $\textcircled{2}$

"TOMBEAU DE WAGNER" PRELUDE #2

EXAMPLE 4

TROMBE (pp)  $\frac{3}{4}$   $D$

$f$

STRAVINSKI  $\textcircled{7}$

"SYMPHONIE DES PSAUMES"

and bar after #

\* Credits for musical illustrations in this article on page 30.

Such transfers are more dangerous than helpful if the entrance of a participating instrument is rhythmically tricky. (In a quick tempo that can mean merely off the beat.) Examples 3 and 5 are thematically alike: 3 is easy to keep even, 5 is hard because of the short-term off-beat entrance of the second clarinet. As for Example 6, the phrases are so short as to make complete co-ordination impossible.

EXAMPLE 5

Cl. in A  
RAVEL PP "TOMBEAU DE COUPERIN" PRELUDE # 10

EXAMPLE 6

(Presto)  
VI  
BEETHOVEN, PP QUARTET OP 131 FIFTH MVT BAR 89

Both 5 and 6 would be made simple to perform (if also vulgar in sound) by doubling the last note of the first instrument with the first of the second, and vice versa. Overlapping for rhythmic security is used consistently in the first four examples. It can also be used for other purposes. Orchestral players, unlike singers, tend to cut off too quickly, leaving uneven gaps in the sound. Example 7 overlaps for suavity, and 8 demonstrates a reasonably well-recognized convention whereby a tie to an arbitrary eighth or quarter note means: "Cut off with the beat."

EXAMPLE 7

2 CLAR  
2 BSSN  
4 HORNS  
BASS CL  
ACCOMPANYING PARTS ONLY, RAVEL, "DAPHNIS & CHLOE" SUITE # 2 after # 191

EXAMPLE 8

HINDEMITH  
"MATHIS DER MALER"  
15 after # 2

An orchestral dynamic which the listener accepts as a *forte* may actually consist of a balanced mixture of *piano* and *fortissimo* through the various voices. This is particularly likely when something thematic happens in the relatively weak lower registers. Mahler (whose fanatically accurate

notation stands as a model) in his *Fifth Symphony*, first movement, ninth bar after rehearsal number 18, writes four flutes *mf*; two oboes, two bassoons, contrabassoon and two horns *p*; two other horns (muted) *ff*; one trumpet *f*; two trombones *pp*; tuba *f*; snare drum *p*; violins and half the cellos *mf*; the other half of the cellos *fff*; and the basses *mf*. This is probably an accurate designation of what should happen; it's still not foolproof. There is no such thing as an objective dynamic – it varies with the tone of the player, the size of the hall, the perspective of the composition. Each player, without knowledge of the markings in the other parts, will play an average of his written dynamics and the conductor's gestures. Ultimately, though such indications are helpful, balance cannot be notated and must be left to the performers.

Another way of dealing less specifically with this problem is to indicate principal and subordinate voices, either by the word *solo* or some version of the Schönberg *Haupt-* and *Nebenstimme* brackets. Given time and a pencil, a careful player will make much the same indications in his part, but seen in print the markings have at first a forbidding rather than a helpful aspect. In contrapuntal music in unfamiliar idioms, from Warlock's transcriptions of Purcell *Fantasias* to Schuman's *Third Symphony*, some judicious use of such marks has proved helpful. In homophonic music they're just a nuisance.

There are in addition almost innumerable conventions in orchestral writing – what might be called the folkways of an orchestra. There is the indispensable requirement that parts must be clear (and not more than twelve staves to a page) and the timid librarian's assertion that pages should be numbered at the top, not the bottom. Bowings, tempos and rehearsal numbers go above the staff, dynamic and expression marks below. Cues are often a good idea, but they must be transposed in the parts of transposing instruments, and they should be either something loud or something near. Flutes like to read ledger lines; clarinets don't.

Rehearsal numbers deserve special mention. They are as important to an orchestral work as a saddle to a horse. An early use, if not the first (Meyerbeer's *Le Prophète*, with an explanatory note) employs letters; this is messy if there are more than twenty-six. Many modern scores number every fifth measure. This jibes only coincidentally with a musical phrase, and the conductor who says, "Bar 348," may find himself in a time-wasting debate as to whether the numbers come on the bar line at the beginning or end of each fifth measure. Numbers at the beginnings of phrases are used in the works quoted in this article: that's perhaps the best way, and twenty measures is probably long enough to go without a new number.

The question of conductors' scores written with all the instruments non-transposing is a vexing one. They're demonstrably easier for a student

to follow, and, for a crucial first few minutes, demonstrably harder for a routined conductor to decipher. In the past sixty years all but two vocal clefs have vanished; in the past twenty, many trumpet parts which are still played on B $\flat$  instruments have moved to C. For instance, in the seventh bar of the Dance from Copland's *Music for the Theatre*, the C trumpet has an F $\sharp$  which is below its range.

Even when transpositions are removed, quite enough complications remain in an orchestral score. Today Prokofiev and Schönberg publish scores in C; most others do not. Parts, at least, must almost certainly remain transposed for another generation. For further simplification Prokofiev does away with the tenor clef; treble and bass serve for the cellos, bass for bassoons, bass and alto for trombones. Violas must have the alto clef, as do the trombones in such not unfamiliar works as the *New World Symphony* and *Scheherezade*. But in riding any hobby-horse the composer should remember that, with an orchestra, time spent in explaining reforms is seldom as immediately useful as time spent rehearsing notes.

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