A PRACTICAL GLOSSARY
for Twentieth-Century Music

additive chords — harmonies, usually triadic, that contain one or more added tones (such as a ninth or a sixth above the root). This technique is common in the music of Debussy and Ravel.

aggregate — in music, generally refers to the collection of all twelve pitch classes. The idea may be applicable to both serial and non-serial compositions.

aleatoric — making use of chance or indeterminacy, either in the compositional process or during the performance. Examples include rolling dice to determine pitches or instructing a performer to play three melodic figures in any order. The term is closely associated with John Cage, but many composers have included a degree of aleatory in their music.

all-combinatorial row — a row that is combinatorial both with some transposition of itself and with some inversion of itself. The term usually refers to hexachordal combinatoriality.

all-interval row — a twelve-tone row containing all eleven intervals. (Note: refers to *intervals*, not *interval classes*.)

atonality — the absence of tonality (not the absence of tones). Sometimes people use "atonal" to refer specifically to non-serial music, such as that written by Schoenberg between 1909 and 1923.

axis of symmetry (also known as **axis of inversion**) — the pitch (or pitches) around which a composition (or part of a composition) is inversionally symmetrical.

bimodality — the use of two modes simultaneously in a composition (or some portion of a composition). The modes must be separated in some way (for instance, one instrument plays in one mode while another instrument plays in another mode) in order to be perceptible.

bitonality — the use of two keys simultaneously in a composition (or some portion of a composition). The keys must be separated in some way (for instance, one instrument plays in one key while another instrument plays in another key) in order to be perceptible. (Note: the individual keys are not just collections of notes; they should have the typical characteristics of tonality.)

canon — a composition (or some portion of a composition) in which one voice (called the *dux* or "leader") is strictly imitated by another voice (called the *comes* or "follower"). While the imitation is strict, it may be consistently altered (for instance, by inversion or rhythmic augmentation).

cluster — a harmonic structure composed of seconds (rather than thirds).

combinatorial row — a twelve-tone row whose first hexachord has no pitch classes in common with the first hexachord of either a transposition or an inversion of itself.
Example: P2 = <D C♯ A B♭ F E♭   E C A♭ G F♯ B >
          I7 = <G A♭ C B E F♯   F A C♯ D E♭ B♭>
Tetrachordal combinatoriality involves three row forms that have no pitch classes in common in any of their corresponding tetrachords. Example:
          P0 = <C D C♯ G   G♯ F♯ F E♭   E B B♭ A >
          P4 = <E F♯ F B   C B♭ A G   A♭ E♭ D C♯>
          P8 = <A♭ B♭ A E♭   E D C♯ B   C G F♯ F >
Trichordal combinatoriality involves four row forms that have no pitch classes in common in any of their corresponding trichords.

complement — all of the pitch classes that are not included in a particular set. For instance, the complement of {C D E F G A B} is {D♭ E♭ G♭ A♭ B♭}. Complements may be either literal or abstract.

degree of symmetry — the number of distinct ways in which a given set can be transposed and inverted onto itself. This is often expressed an ordered pair $\langle x, y \rangle$ where the first number reflects the number of distinct transposition levels that produce complete invariance and the second number reflects the number of distinct inversion levels that produce complete invariance. For instance, {C E G♯} is invariant under T_0, T_4, T_8, T_0I, T_4I, and T_8I, so its degree of symmetry is $\langle 3,3 \rangle$.

derived row — a twelve-tone row whose segments are all members of the same set class (for instance, four successive [014] trichords). Example:

       B B♭ D   E♭ G F♯   A♭ E F   C C♯ A

dyad — any pair of pitches

expressionism — applies to music, the visual arts, and literature. The expressionists felt that art should reflect the inner consciousness of its creator. The emphasis is on the artist's feelings about something rather than an accurate portrayal of it, so distortion and exaggeration are important features. The term is closely associated with Schoenberg.

extended tertian chord — a chord built from major and minor thirds that go beyond the seventh (for instance, the ninth, eleventh, or thirteenth). Such chords may be found in the music of Debussy.

golden section — a proportion that occurs when one divides something in such a way that the ratio between the whole and its larger subsection is identical to the ratio between the larger subsection and the smaller subsection. The golden section is approximately 0.618 and is frequently found in nature.

Hauptstimme — literally "chief voice." Designates the voice in a musical texture that is intended to be most prominent.

hexachord — any collection of six distinct pitch classes

hexatonic scale — literally, a scale with six notes per octave. The name is used specifically to refer to a scale with alternating intervals 1 and 3. Example:

       C C♯ E F G♯ A

The hexatonic scale is a *mode of limited transposition*.

impressionism — in music, refers to the musical style cultivated by Debussy. Analogous to impressionism in the visual arts, in which details and sharply-drawn contours are undermined by haziness or blurriness. Impressionistic music tends to emphasize orchestration, nonclimactic melodies, and complex textures while suppressing functional harmony.

index number — generally, the specific transposition level applied to an operation (for instance, T_3 refers to transposition up three half-steps). In twelve-tone music, the number used to designate the transposition level of a row form (including inverted row forms) is sometimes called an index number. (For example, P4 refers to a prime row starting on E, while I2 refers to an inverted row starting on D.)

interval — the distance between two notes. Also see *pitch interval*, *pitch-class interval*, and *interval class*.

interval class — unordered pitch-class interval (i.e., the smallest possible distance between two pitch classes). Only integers 0-6 are possible. A major second and a minor seventh are said to be members of the same interval class (ic 2).

interval-class vector — an ordered six-digit tally of all the interval classes contained in some set or set class. The first digit represents the number of ic1s, the second digit represents the number of ic2s, etc. The set {B C D} (a member of set-class [013]) has an interval-class vector of $\langle 111000 \rangle$.

invariance — in general, pitches or pitch classes that two musical events have in common. In twelve-tone music, refers to identical segments of different row forms. Invariance may be either ordered or unordered.

inversion — in atonal and serial music, refers to turning some musical event (for instance, a melodic fragment, a twelve-tone row, or a chord) "upside down" so that its contour is a mirror image of the original form. For instance, a descending half step becomes an ascending half step. See also *axis of symmetry.*

matrix — a convenient way of representing the 48 members of a given twelve-tone row class (all transposition levels of prime and inverted rows as well as their retrogrades).

modes of limited transposition — a group of scales so-named by Messiaen because of their limited number of distinct transpositions. (For instance, there are only two distinct transpositions of the whole-tone scale; the rest are duplications.)

Nebenstimme — designates the voice in a musical texture that is intended to be less prominent than the *Hauptstimme.* (Note that the *Nebenstimme* is still more important than voices with no marking at all.)

neoclassicism — in music, a style that emphasizes motivic clarity, textural transparency, formal balance, and reliance upon stylistic models (or even existing compositions from the Baroque and Classical eras). The term is commonly associated with Stravinsky's works composed between 1920 and 1951.

nonretrogradable rhythm — term used by Messiaen to describe rhythms that sound the same when played backwards.

octatonic scale — literally, a scale with eight notes per octave. The name is used specifically to refer to a scale with alternating whole and half steps. Example:

      B   C♯ D   E   F   G   G♯ A♯

The octatonic scale is one of Messiaen's *modes of limited transposition.*

pandiatonicism — a twentieth-century technique involving the use of a particular diatonic scale without regard to the usual functional relationships or traditional treatment of dissonance.

pentachord — any collection of five distinct pitch classes.

pentatonic scale — literally, a scale with five notes per octave. The name is used specifically to refer to a scale composed exclusively of major seconds and minor thirds, as represented by the black keys of a piano.

phasing — technique in which two subgroups of an ensemble begin by playing the same pattern, but one group either gradually speeds up or suddenly drops a beat so that the two subgroups are playing the same pattern "out of phase." The term is most closely associated with Reich.

pitch — a note in a particular register, including enharmonic equivalents.

pitch-centric — having a tonic-like note, but lacking other important features of tonality.

pitch class — a note plus all of its octave duplications, including enharmonic equivalents. Middle C, the C two octaves above, and the lowest B♯ on a piano are different pitches, but they are all members of the same pitch class. To eliminate enharmonic confusion, pitch classes are often represented with the numbers 0-9, plus A and B (or T and E) to represent 10 and 11: 0 = C, 1 = C♯ or D♭, 2 = D, 3 = D♯ or E♭, etc.

pitch-class interval — the distance between two pitch classes, expressed as the number of half-steps separating them mod 12. Generally understood to be ordered (reflecting contour, in which case only integers 0-11 are possible). Also see *interval class.*

pitch interval — the distance between two pitches, expressed as the number of half-steps separating them. May be ordered (reflecting contour, in which case negative integers are possible) or unordered (ignoring contour, in which case only positive integers are possible).

planing — the parallel movement of harmonic structures (for instance, major triads or dominant seventh chords). Debussy and Satie frequently used this technique.

pointillism — a twentieth-century compositional technique in which long melodic lines are replaced by fragmented figures in different instruments and registers, producing a disjointed sound.

polychord — a harmonic structure consisting of two or more different chords (usually triads). The polychord should be spaced or orchestrated so that the identity of each chord is retained.

prime row — the original form of a twelve-tone row or any of its transpositions.

prime form — an abstract representation of a set's structure, often used to designate a set class. The prime form of any set is its most closely-packed arrangement that is transposed or inverted to begin on pitch class 0.

quartal harmony — harmonic structure built upon the interval of a perfect fourth instead of major and minor thirds. Often includes harmonic structures built upon both perfect fourths and perfect fifths.

quintal harmony — harmonic structure built upon the interval of a perfect fifth instead of major and minor thirds.

retrograde — the statement of a melodic figure, a twelve-tone row, or a rhythmic pattern in reverse order (that is, backwards).

rotation — in twelve-tone composition, a systematic reordering of the row by moving the first pitch class (or pitch classes) to the end of the row. Example:

$$< \text{C} \quad \text{D} \quad \text{F}\sharp \quad \text{F} \quad \text{A}\flat \quad \text{C}\sharp \quad \text{E} \quad \text{A} \quad \text{B} \quad \text{B}\flat \quad \text{E}\flat \quad \text{G} >$$
$$< \text{D} \quad \text{F}\sharp \quad \text{F} \quad \text{A}\flat \quad \text{C}\sharp \quad \text{E} \quad \text{A} \quad \text{B} \quad \text{B}\flat \quad \text{E}\flat \quad \text{G} \quad \text{C} >$$

row class — in twelve-tone composition, the family of all rows that are related by transposition, inversion, and/or retrograde.

row form — a specific member of a row class.

segmentation — generally, the way in which music is divided into smaller units. In twelve-tone music, this is sometimes understood as a technique in which the row is divided into fragments (which are often treated in a motivic fashion). This practice is closely associated with Webern.

serial — refers to music in which at least one parameter (such as pitch or rhythm) is subjected to an ordering principle.

set — an unordered collection of elements (usually pitch classes). This is distinct from a series or row, in which the elements are ordered.

set class — the family of all sets that are transpositions and/or inversions of one another. For instance, {C C♯ D}, {G F♯ F}, and {B A B♭} are all members of set class [012] — three adjacent notes from a chromatic scale.

Sprechstimme — a type of vocal recitation in which specifically notated pitches are approximated in performance. The result is half way between speech and song.

subset — a group of elements that forms part of some particular set. For instance, {D! E} is a subset of {C D E F B♭}. Subsets may be either literal or abstract.

superset — a group of elements that includes some particular set. For instance, {D! F♯! A! C} is a superset of {D F♯ A}. Supersets may be either literal or abstract.

symmetry — the property of a set whose elements may entirely be mapped onto one another through a specific operation (in other words, some operation produces total invariance). Sets that can be transposed onto themselves (at some transposition level other than T_0) are described as transpositionally symmetrical (T-symmetrical); sets that can be inverted onto themselves are described as inversionally symmetrical (I-symmetrical). See *degree of symmetry*.

synthetic scale — any scale other than the major or minor scales and the church modes that is invented for use in a particular musical composition.

tetrachord — in non-tonal music, any collection of four distinct pitch classes.

trichord — any collection of three distinct pitch classes.

twelve-tone row — an ordered series of all twelve pitch classes (no duplications).
whole-tone scale — a scale consisting exclusively of whole tones. This is one of
      Messiaen's *modes of limited transposition.*
Z-related sets — a pair of sets that are not members of the same set class, yet have the
      same interval-class content (and therefore share the same *interval-class vector*).