

Expanded Rhythmic Resources

“The word rhythm, as used in everyday language and also in science, usually refers to some kind of periodicity — a series of events that recur at regular time intervals. We speak, for instance, of the rhythm of the seasons or of day and night; the rhythm of breathing, of the heartbeat, of walking; the rhythm (period) of a pendulum or of the vibrations of a string. Rhythm as a musical term has a much broader meaning; it is used to refer to the many different ways in which time is organized in music.”

Jeanne Bamberger, *Developing Musical Intuitions*

Part I

Ametric music
Asymmetric meter
Bulgarian rhythm
Changing meters
Composite meter
Cross rhythm
Displaced accent
Dotted bar lines
Fibonacci sequence
Fractional meter
Golden proportion
$$\frac{a+b}{a} = \frac{a}{b}; \text{ where } a > b$$

Golden ratio
$$\frac{1+\sqrt{5}}{2}; \text{ or } 1.618:1$$

Golden section
Hemiola
Implied meter
Isorhythm
- *talea* (rhythmic series)
- *color* (melodic series)
Metric modulation (tempo modulation)
Nonmetrical rhythmic organization
Ostinato and ostinato technique
Perceived meter
Polymeter
Polyrhythm
Polytempo
‘Tyranny of the barline’
Shifting accents
Symmetric meter
Tempo (metric)
Tempo canon
Unmeasured music (no bar lines)

Important Primary Sources

Cowell’s *New Musical Resources* (1930)
- Rhythmic implications of the harmonic series
- Duration note series notation

Messiaen’s *Technique of My Musical Language* (1944)
- Added value
- Augmentation/diminution (by any ratio)
- Nonretrogradable rhythm (rhythmic palindrome)

Part II

Aleatory and rhythm
Mechanical rhythm
Process music (Reich)
- Irrational canon
- Phasing technique
- Pulse
- Resultant melody
- Tape loop
Proportional notation
Serialization of rhythm
- Duration series (Boulez)
- Time-point series (Babbitt)
Tempo canon (Nancarrow)

Innovators

Babbitt, Milton (b. 1916)
Bartók, Béla (1881-1945)
Boulez, Pierre (b. 1925)
Carter, Elliot (1908-1993)
Cowell, Henry (1897-1965)
Debussy, Claude (1862-1918)
Ives, Charles (1874-1954)
Ligeti, Györgi (b. 1923-2006)
Messiaen, Olivier (1908-1992)
Nancarrow, Conlon (1912-1997)
Reich, Steve (b. 1936)
Stravinsky, Igor (1882-1971)
