Paul Hindemith: *The Craft of Musical Composition* (1937)

Series I—Hierarchical relationship of scale degrees:

![Diagram of scale degrees for Series I]

Series II—Hierarchical relationship of intervals (with inversions):

![Diagram of intervals for Series II]

- Tonal principle considered to be a “natural force, like gravity.”
- All pitch and intervallic relationships are graded according to their “absolute” degree of consonance and dissonance.
- The system was intended to accommodate principles of not only traditional tonal music, but any type of “meaningful” music.
- Used to attack the music of Hindemith’s contemporaries, most notably Stravinsky and Schönberg.
- Hindemith applied this approach to his own works, the earlier ones of which were subsequently revised according to these principles.
- Reflects interwar tendency toward greater compositional rigor and systemization.
Chord Structures Based on Interval Type

Chords may be constructed of intervals other than thirds (triadic harmony):

**3rds** (tertian)

Extensions of traditional triads: 7th, 9th, 11th, and 13th chords.

**4ths** (quartal)  **5ths** (quintal)

Most distinctive as perfect interval stacks.

**2nds** (secondal)

Also referred to as “tone clusters.”
Successive inversions of Fourth (a) and Fifth (b) Chords
Planing

- Parallel chord motion, typically consisting of extended tertian, quartal, or quintal sonorities.

- Emphasis on color over harmonic functionality.

- Commonly used by Impressionist composers (e.g., Debussy, Ravel), but may also be found in works by Stravinsky, Hindemith, Bartók, et al.

- Two varieties of planing:
  - **Diatonic** planing: notes in the chord are within a single “key”; i.e., intervallic relationships within a series of chords is not fixed.
  - **Chromatic** planing: chord structure is fixed; i.e., chords do not fit into any one particular “key.”
Planing

Planing with extended tertian chords:

Claude Debussy: “Canope” from Preludes, Book II (1913)

Claude Debussy: “Fêtes” from Nocturnes (1899)
Planing

Planing with parallel fourth chords:

Claude Debussy: “La Cathédrale Engloutie” from *Preludes*, Book I (1910)

Alban Berg: *Wozzeck*—Act I, Scene 4 (1917-21)
Claude Debussy: “Sarabande” from *Pour le Piano* (1901)
Charles Ives: *The Cage* (1906)

A leopard went around his cage from one side (repeat 2 or 3 times)

back to the other side; he stopped only when the keeper came around with meat;

A boy who had been there three hours began to wonder, "Is life anything like that?"
Paul Hindemith: *Ludus Tonalis* (1942)—Interludium
Secondal Sonorities ("Tone Clusters")

Diatonic clusters:
Charles Ives: "Majority" from 114 Songs (1922)

Chromatic clusters:
Henry Cowell: Tiger (1910)
Secondal Sonorities ("Tone Clusters")

Chords in parallel major seconds:

Béla Bartók: *Mikrokosmos*, No. 107—"Melody in the Mist" (1926-37)

![Chord Diagram]

Alternating "black key" and "white key" clusters:

Béla Bartók: Piano Concerto No. 2 (1931)

![Chord Diagram]
Secondal Sonorities ("Tone Clusters")

Use of "clusterboard":

Joseph Schwantner: *Aftertones of Infinity* (1977)
Henry Cowell: *Tides of Manaunaun* (1912)

Largo, with rhythm

Basso 15 with pedal...

Basso 15

Basso 8va...
Extended Tertian Sonorities

Parallel diatonic ninth chords:

Maurice Ravel: *Sonatine* (1903)

Parallel chromatic ninth chords:

Claude Debussy: “Feuilles Mortes” from *Preludes*, Book II (1913)
Extended Tertian Sonorities

Eleventh chords:

Igor Stravinsky: *Petrouchka* (1911)

![Eleventh chords example](image)

Thirteenth chords:

Maurice Ravel: *Piano Concerto in G* (1931)

![Thirteenth chords example](image)
Quartal and Quintal Sonorities

Free application of fourth chords:
Charles Ives: “Majority” from *114 Songs* (1922)

Two streams of parallel fifth chords in contrary motion:
Béla Bartók: Piano Concerto No. 2 (1931)
Quartal and Quintal Sonorities

Chord mixtures utilizing fourths and fifths:

Howard Hanson: *Lament for Beowulf* (1925)

Arnold Schönberg: *Klavierstücke*, Op. 11 No. 2 (1910)
Alexander Scriabin’s “Mystic” Chord

Four arrangements of the “mystic” chord:
  a. As a series of stacked fourths (original form)
  b. As a scale: related to the whole-tone scale (with A-natural instead of A-flat)
  c. As a dominant thirteenth/sharp eleven chord (with added G)
  d. As a chord with mixed intervals

Use of the “mystic” chord in Scriabin’s *Poème*, Op. 69 No. 1 (1913):