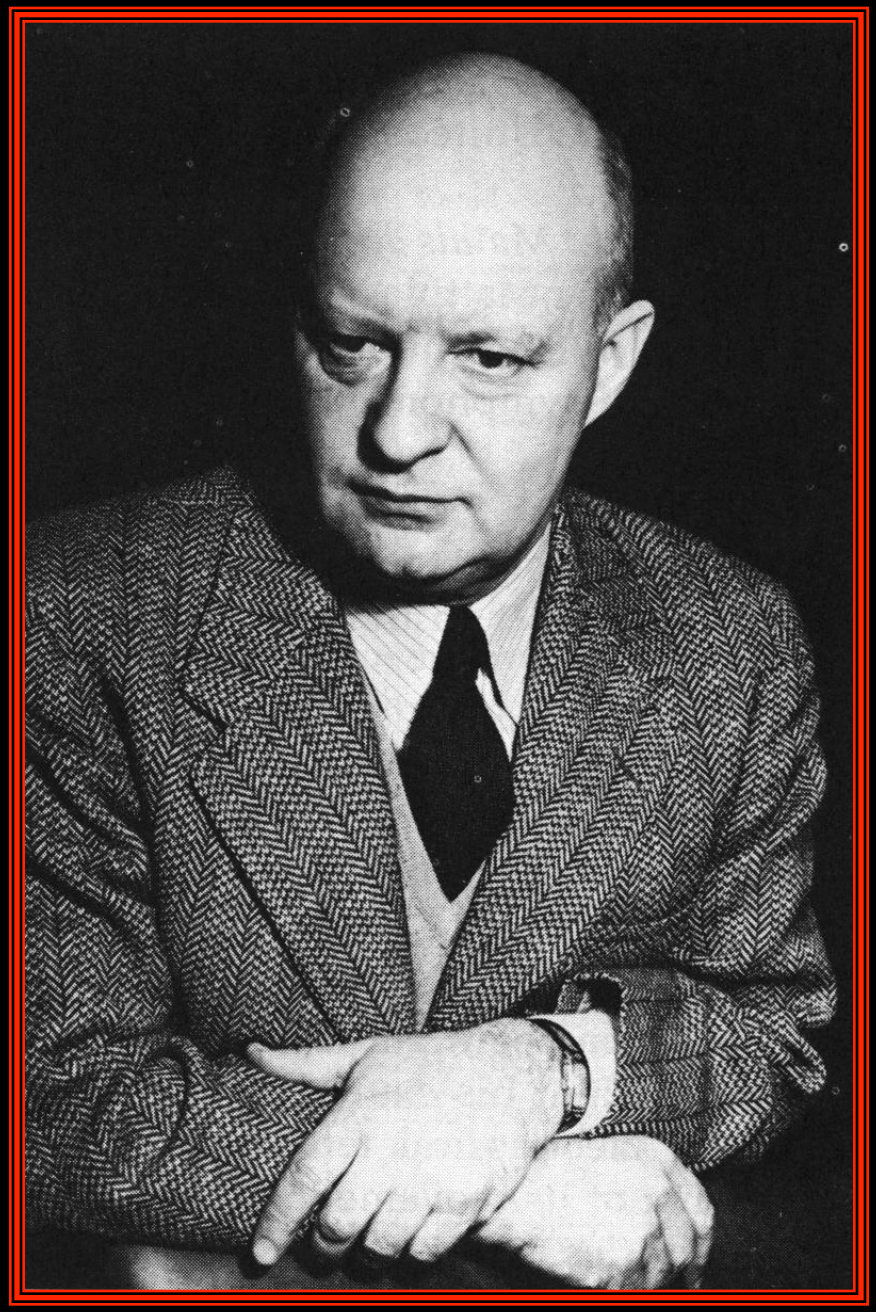
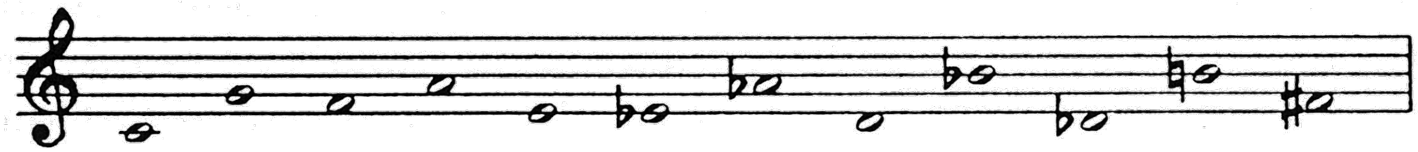
New Harmonic Resources



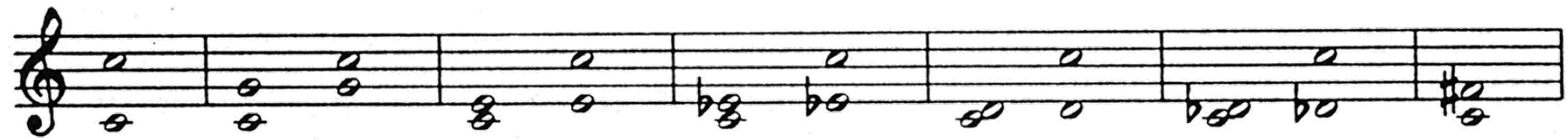
Paul Hindemith (1895-1962)

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

Series I—Hierarchical relationship of scale degrees:



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

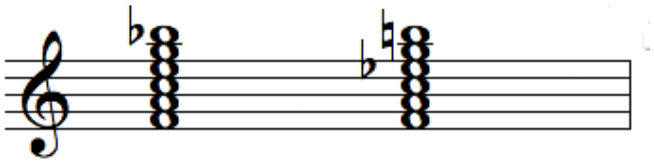


- Tonal principle considered to be a "natural force, like gravity."
- All pitch and intervallic relationships are graded according to their "absolute" degree of consonance and dissonance.
- The system was intended to accommodate principles of not only traditional tonal music, but any type of "meaningful" 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):

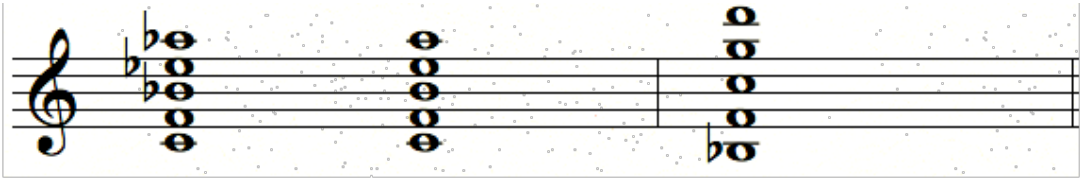
3rds (tertian)



diatonic | with chromatic alterations

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

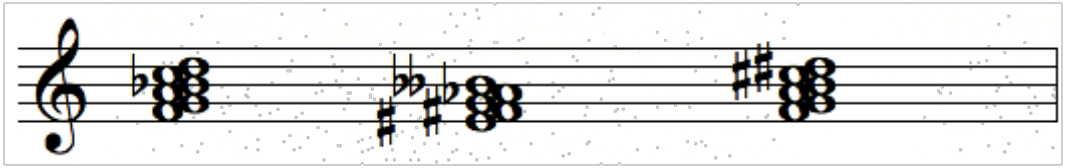
4ths (quartal) **5ths** (quintal)



with perfect intervals | diatonic | with perfect intervals

Most distinctive as perfect interval stacks.

2nds (secondal)

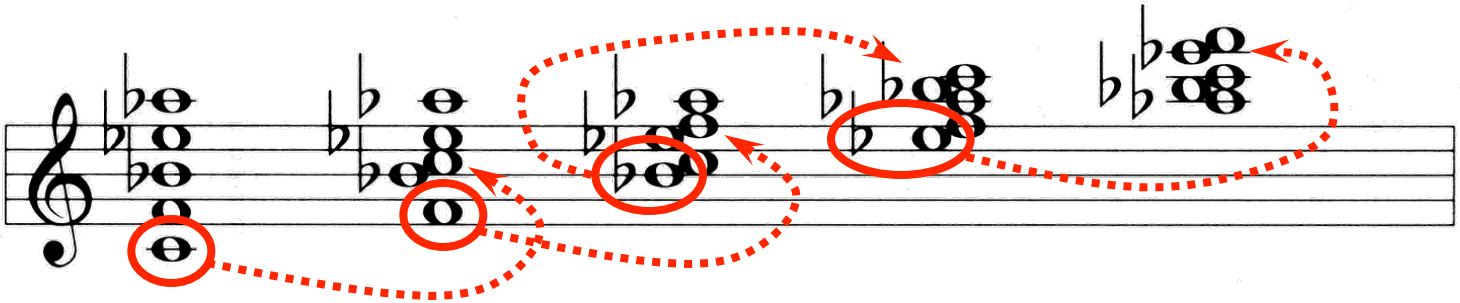


diatonic | chromatic | whole-tone

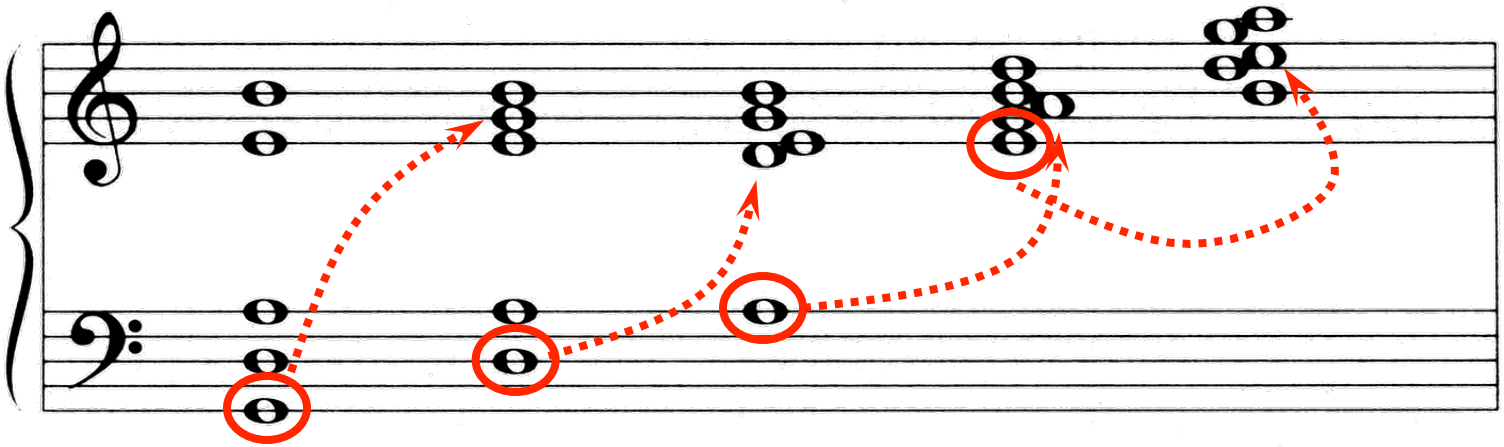
Also referred to as "tone clusters."

Successive inversions of Quartal (a) and Quintal (b) Chords

a.



b.



Planing

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

- Emphasis on **color** over harmonic **functionality**.

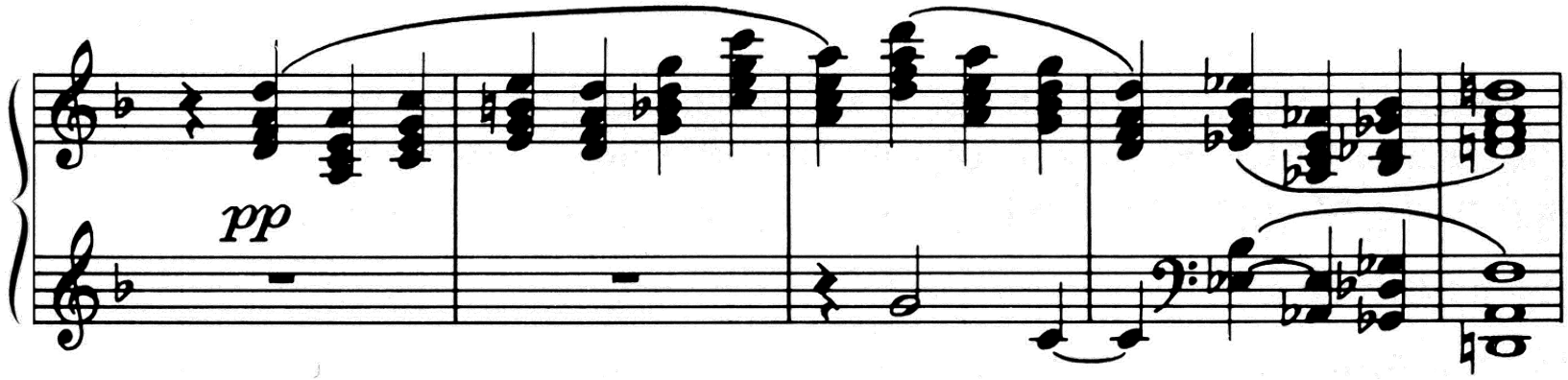
- Commonly used by **Impressionist** composers (e.g., Debussy, Ravel), but may also be found in works by Stravinsky, Hindemith, Bartók, et al.

- 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."

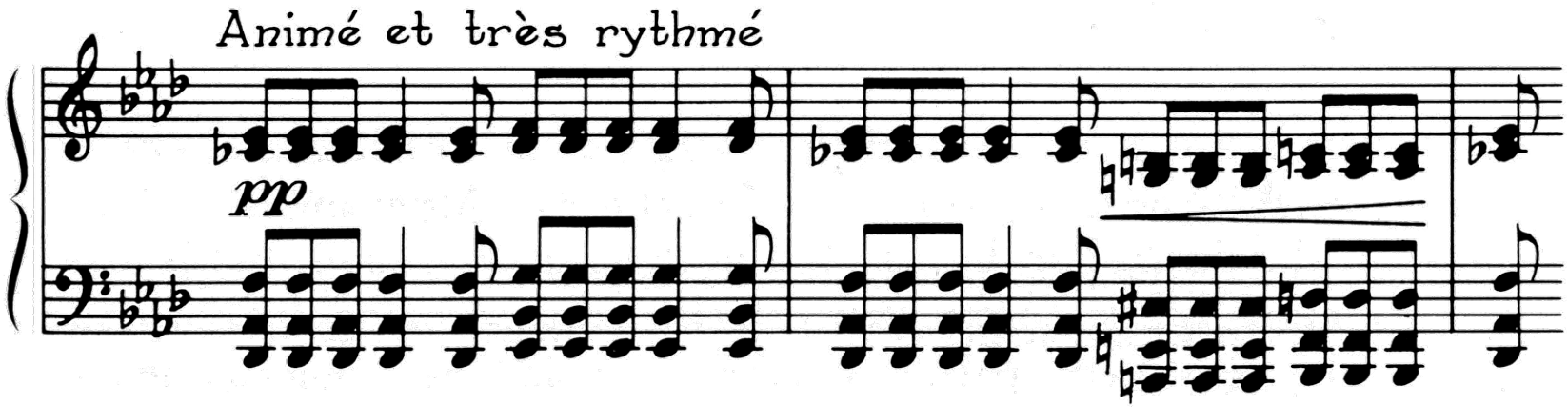
Planing

Planing with extended tertian chords:

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



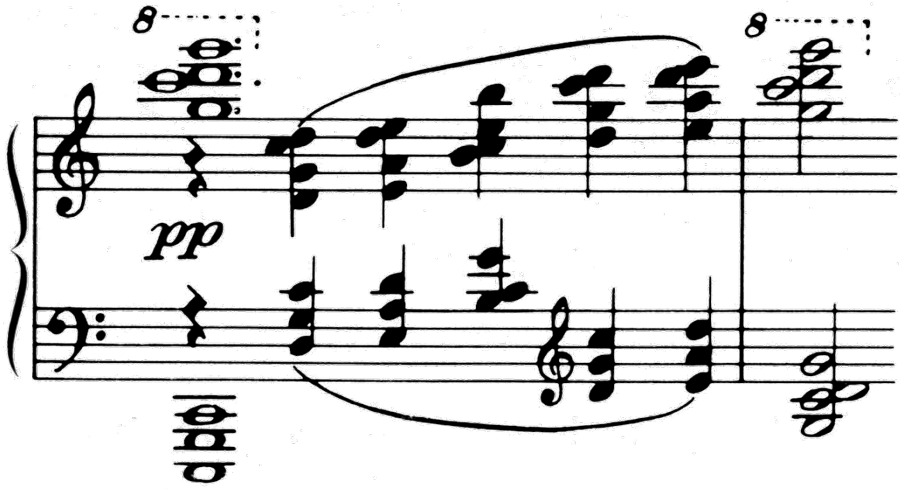
Claude Debussy: “Fêtes” from *Nocturnes* (1899)



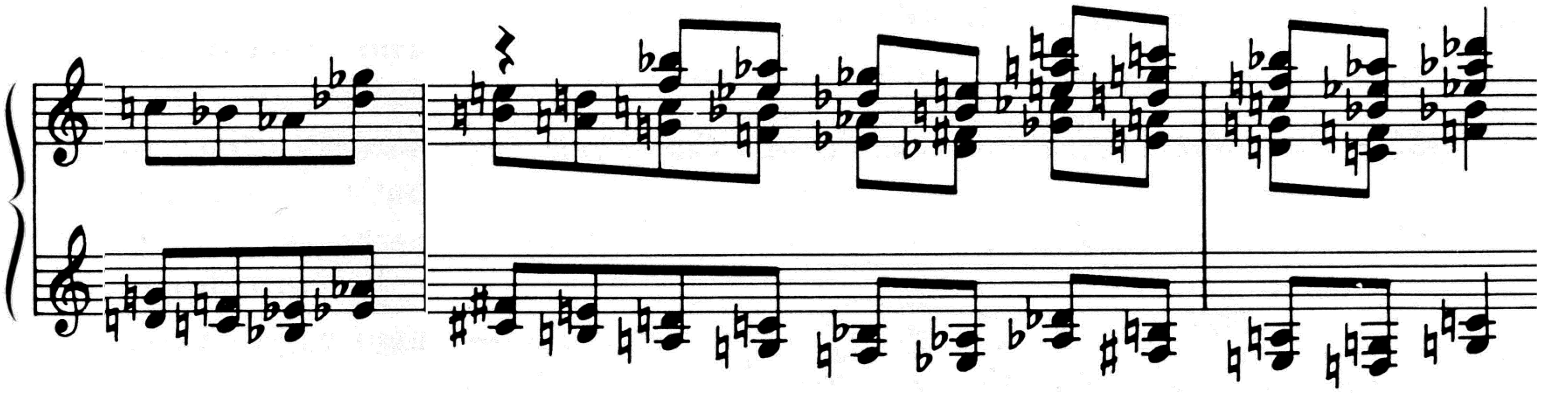
Planing

Planing with parallel fourth chords:

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



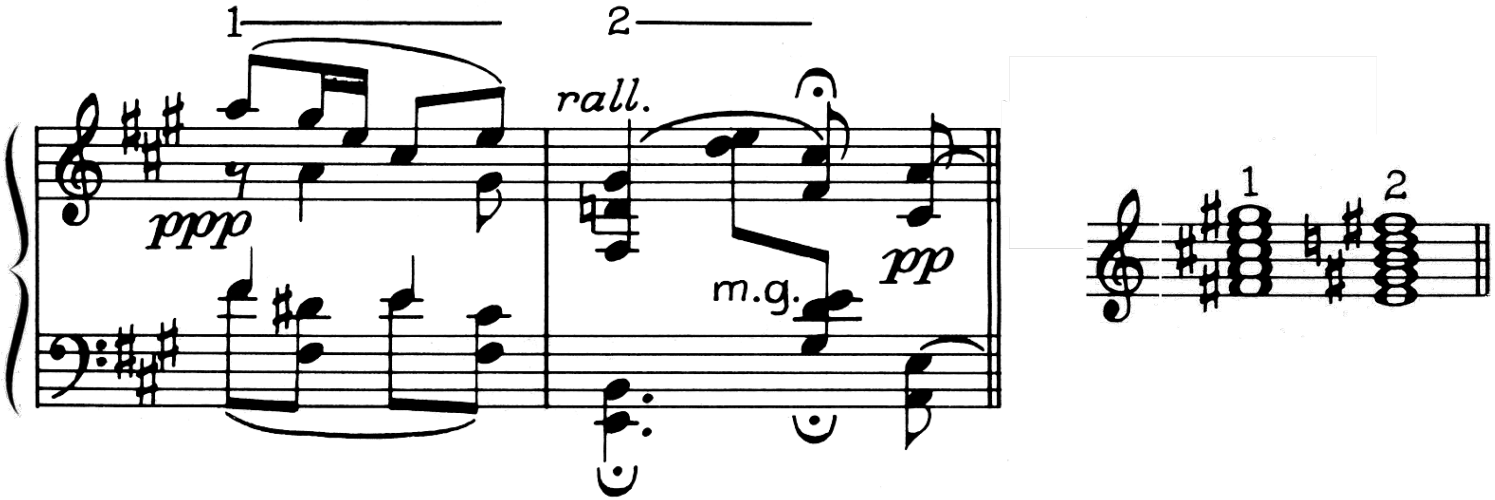
Alban Berg: *Wozzeck*—Act I, Scene 4 (1917-21)



Extended Tertian Sonorities

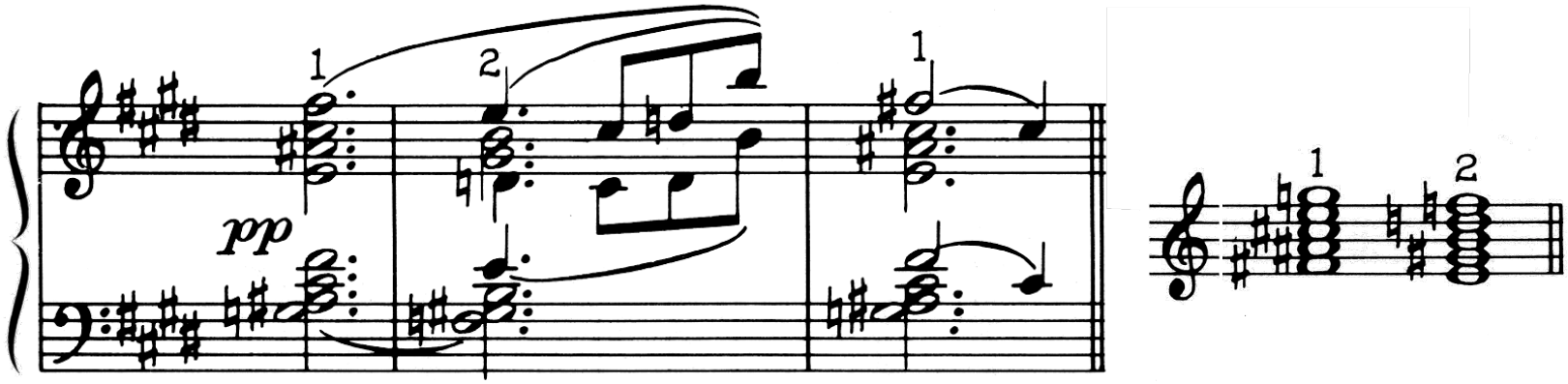
Parallel diatonic ninth chords:

Maurice Ravel: *Sonatine* (1903)



Parallel chromatic ninth chords:

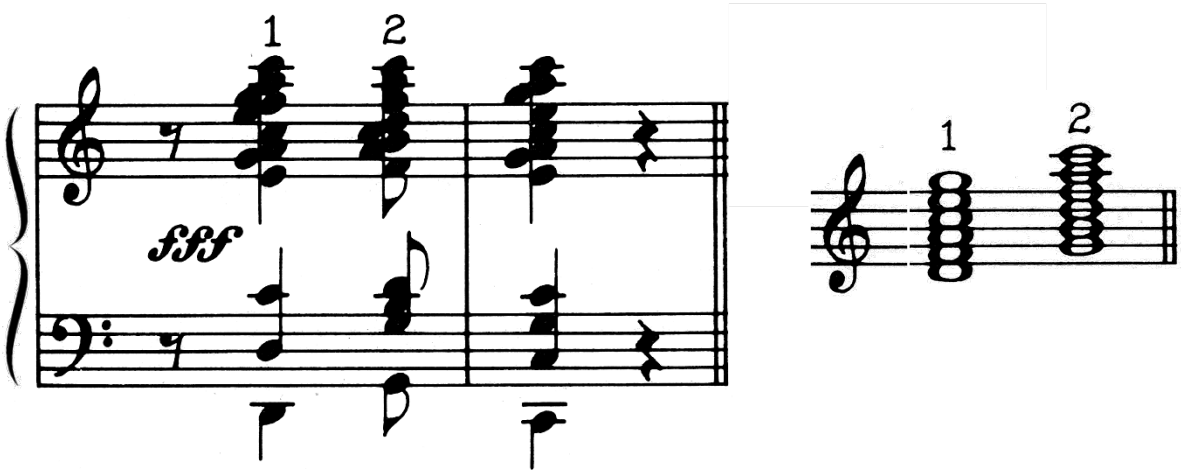
Claude Debussy: “Feuilles Mortes” from *Preludes*, Book II (1913)



Extended Tertian Sonorities

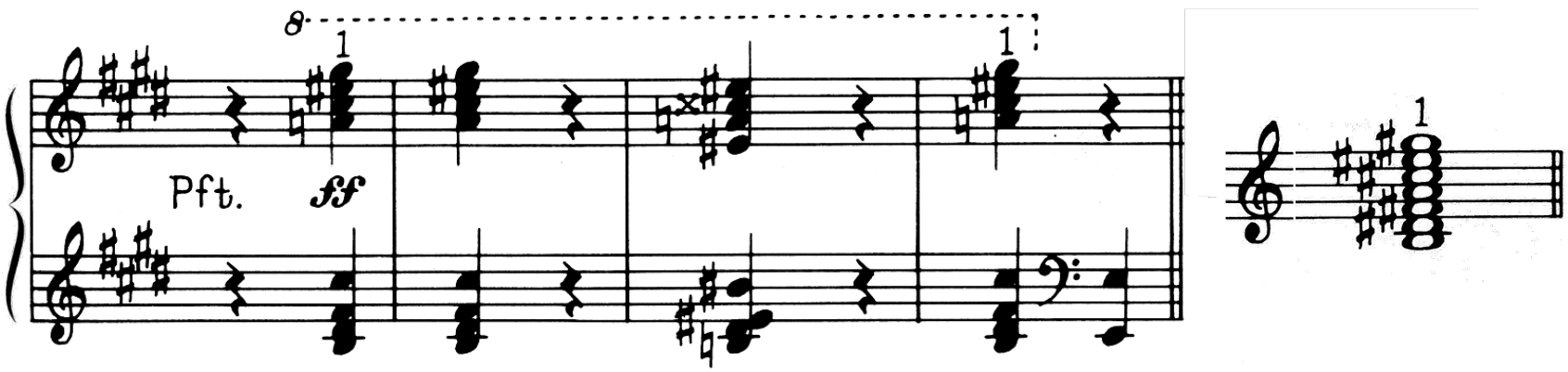
Eleventh chords:

Igor Stravinsky: *Petrouchka* (1911)

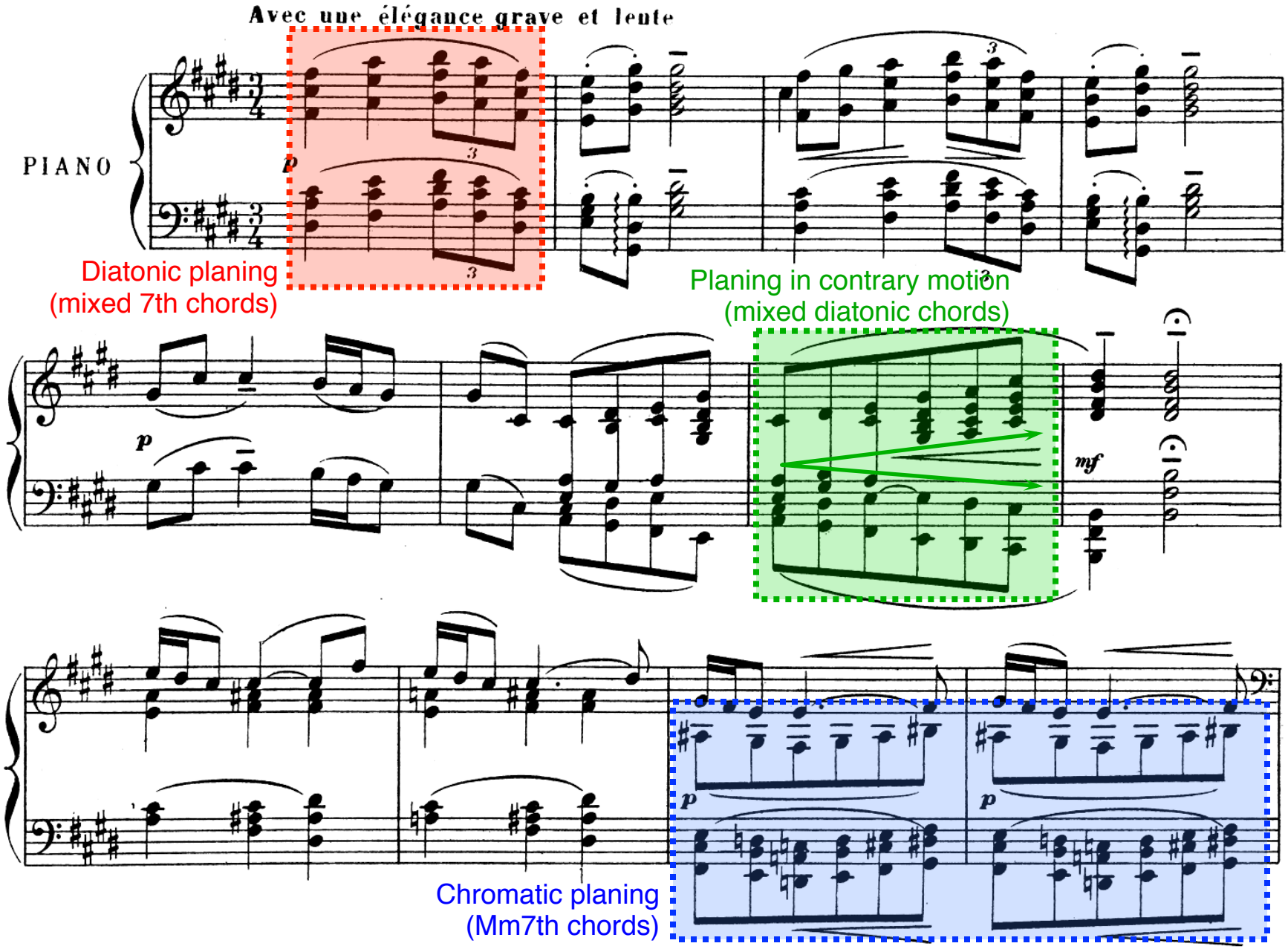


Thirteenth chords:

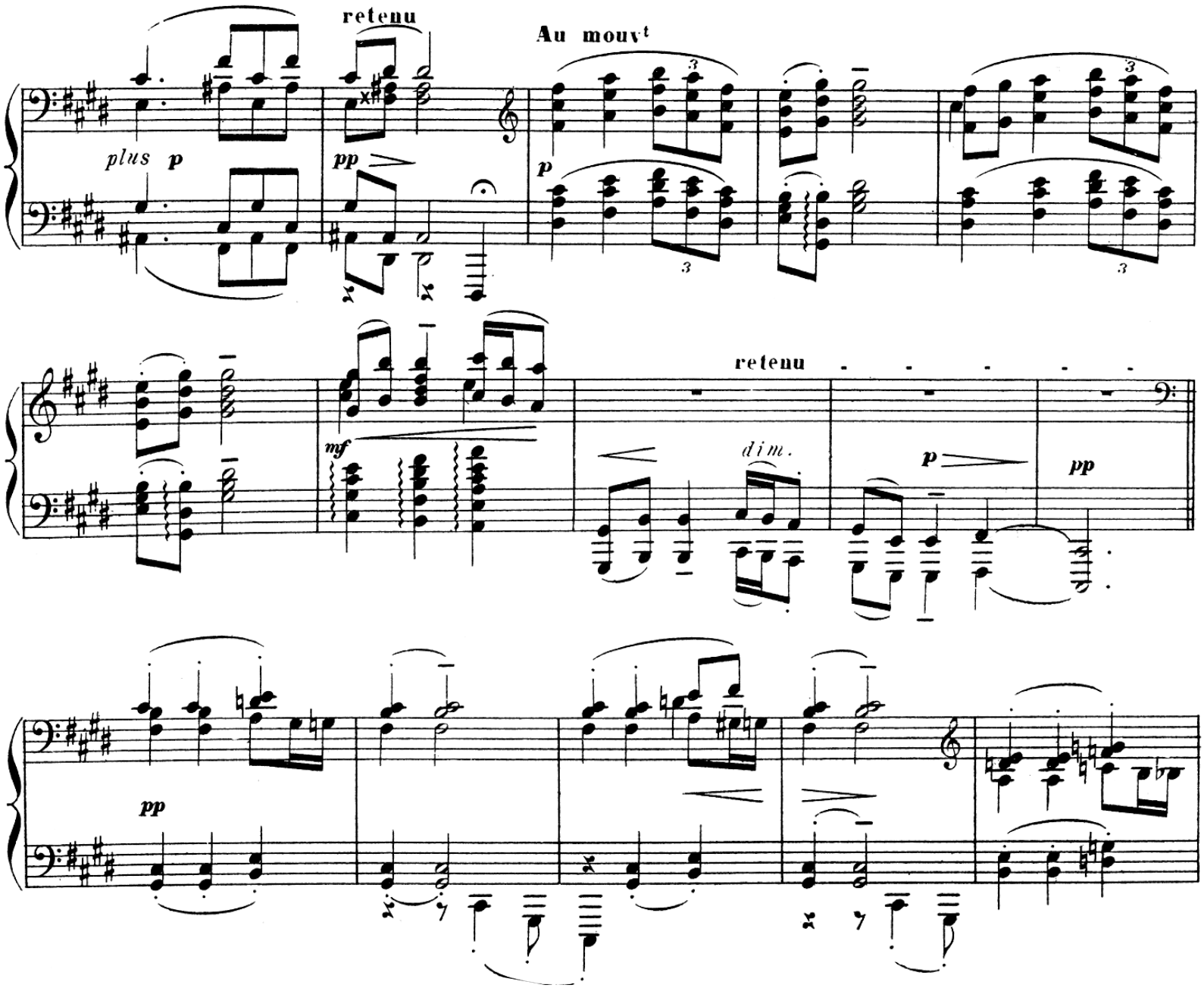
Maurice Ravel: Piano Concerto in G (1931)



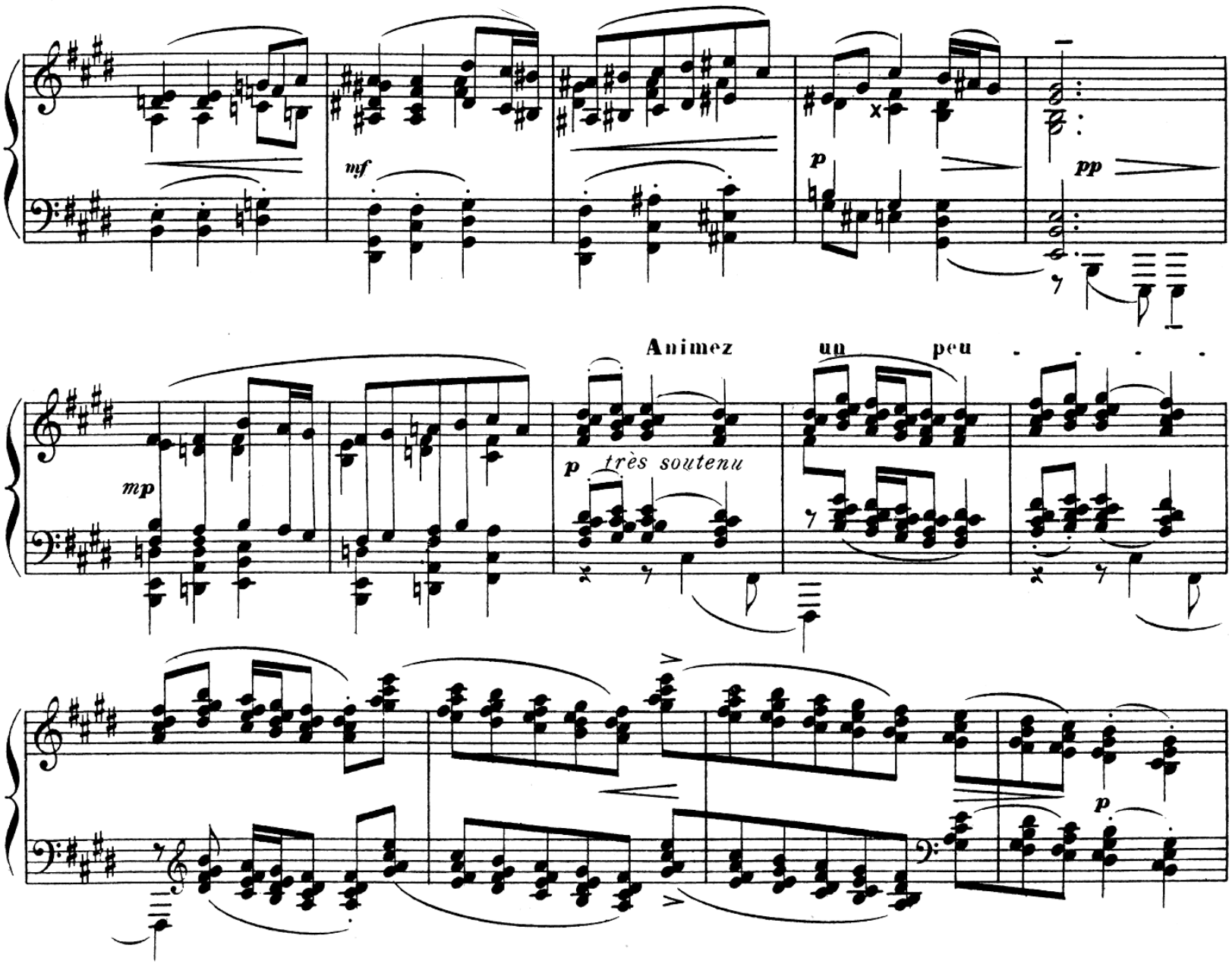
Claude Debussy: “Sarabande” from *Pour le Piano* (1901)



Claude Debussy: “Sarabande” from *Pour le Piano* (1901)



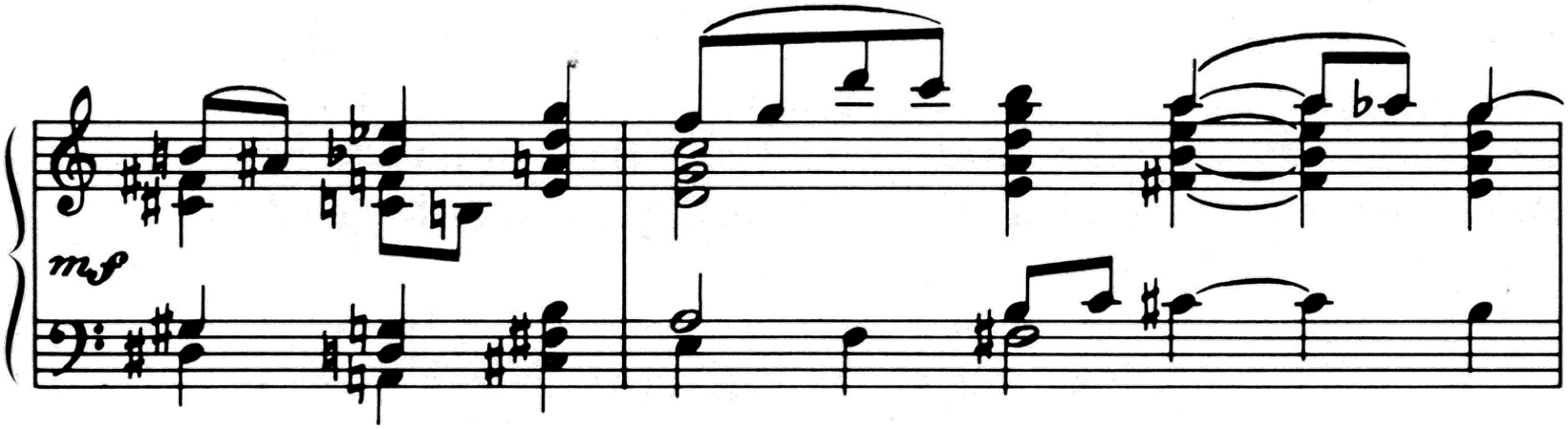
Claude Debussy: “Sarabande” from *Pour le Piano* (1901)



Quartal and Quintal Sonorities

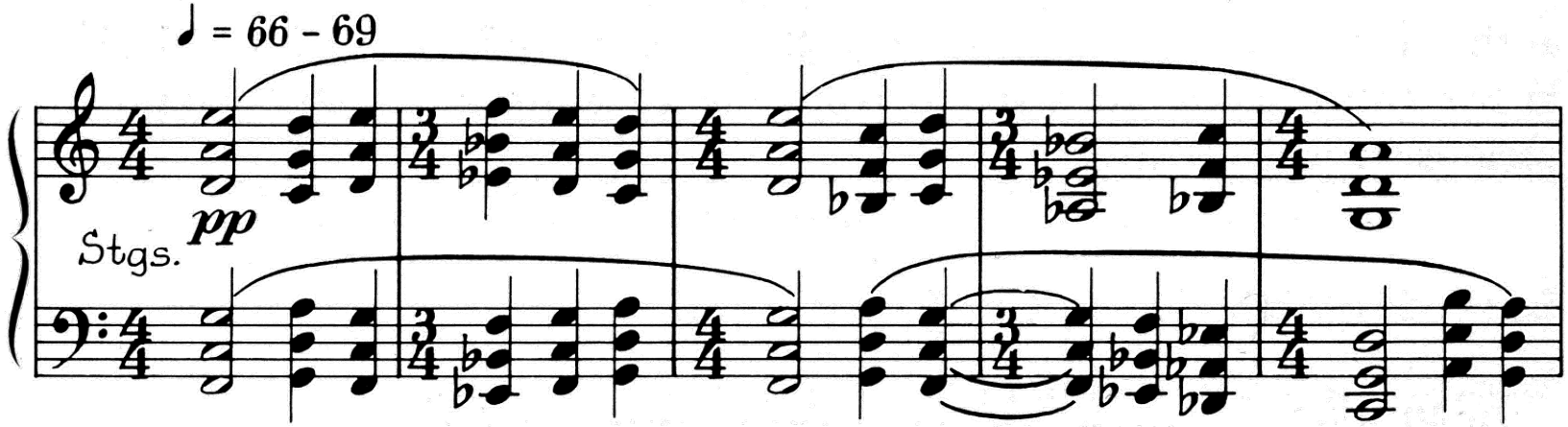
Free application of fourth chords:

Charles Ives: “Majority” from *114 Songs* (1922)



Two streams of parallel fifth chords in contrary motion:

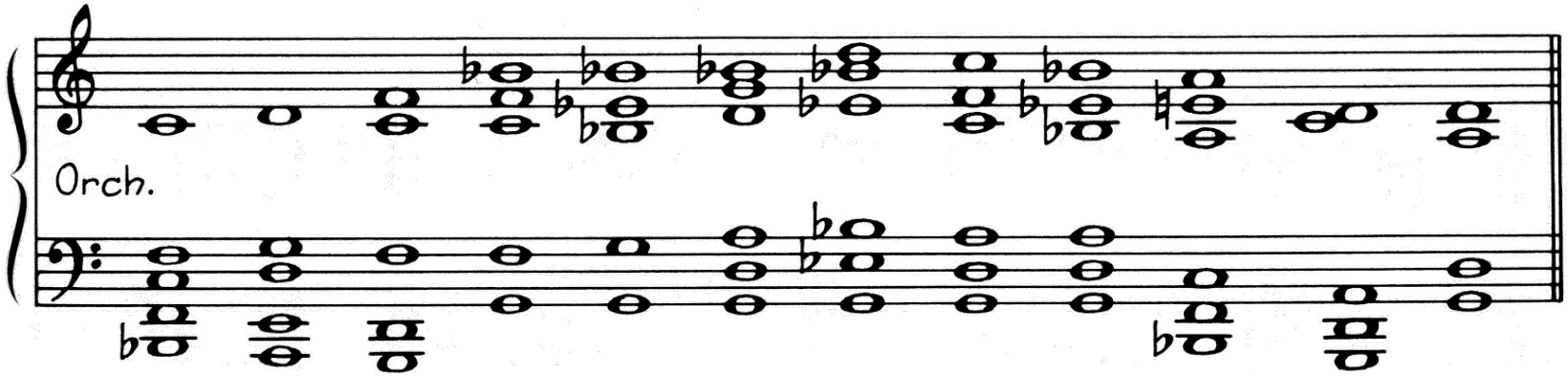
Béla Bartók: Piano Concerto No. 2 (1931)



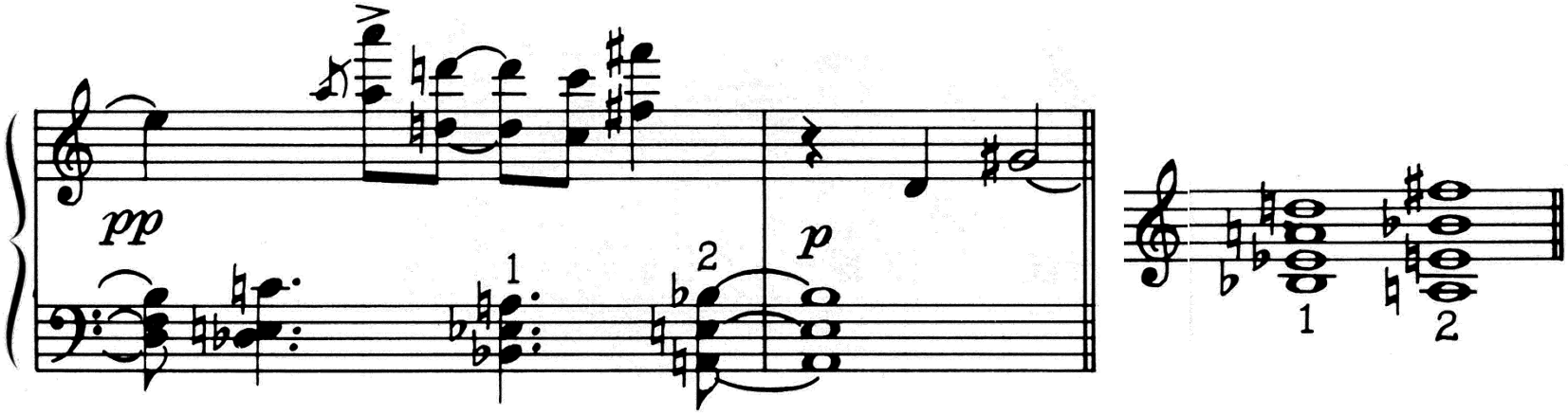
Quartal and Quintal Sonorities

Chord mixtures utilizing fourths and fifths:

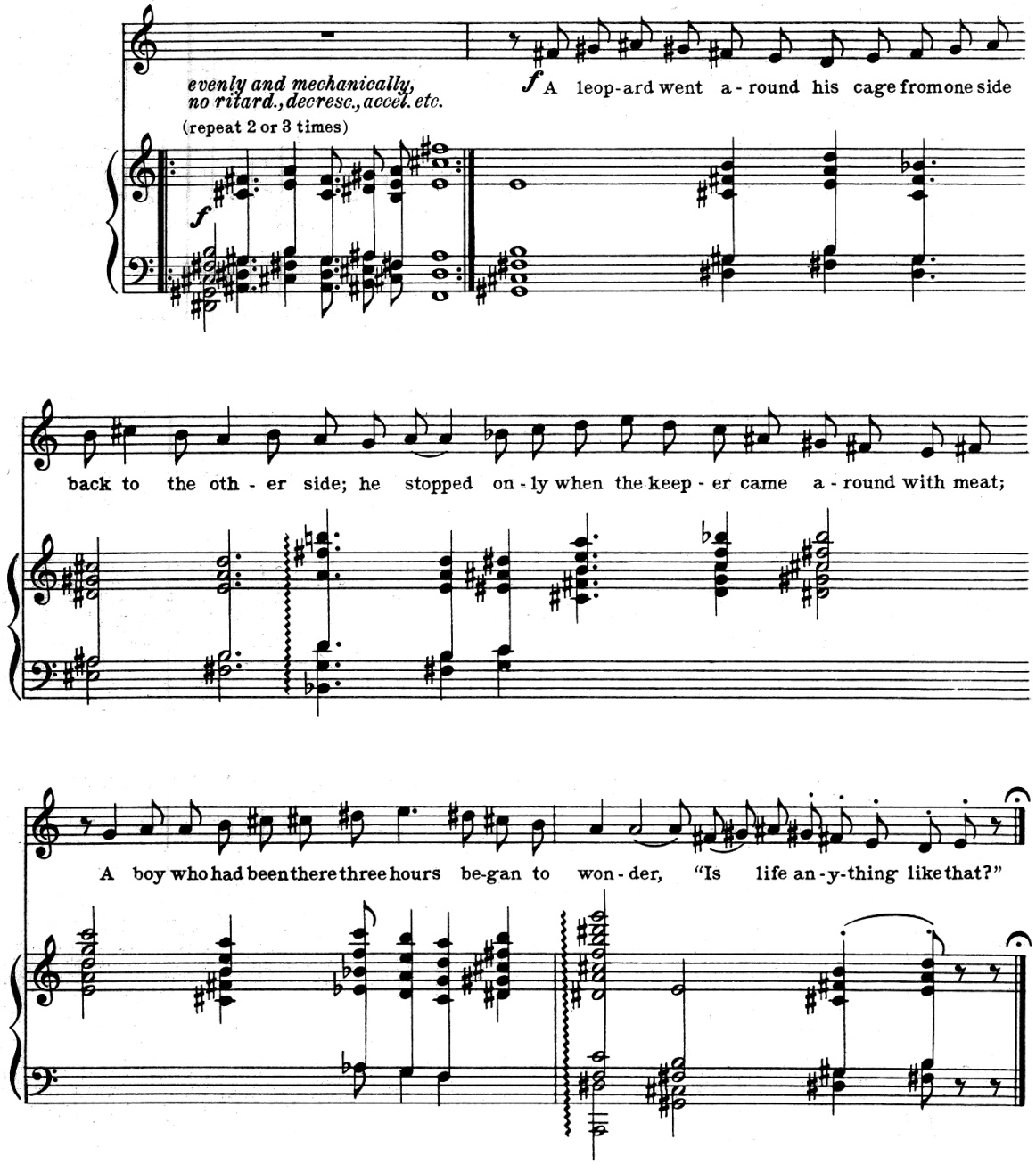
Howard Hanson: *Lament for Beowulf* (1925)



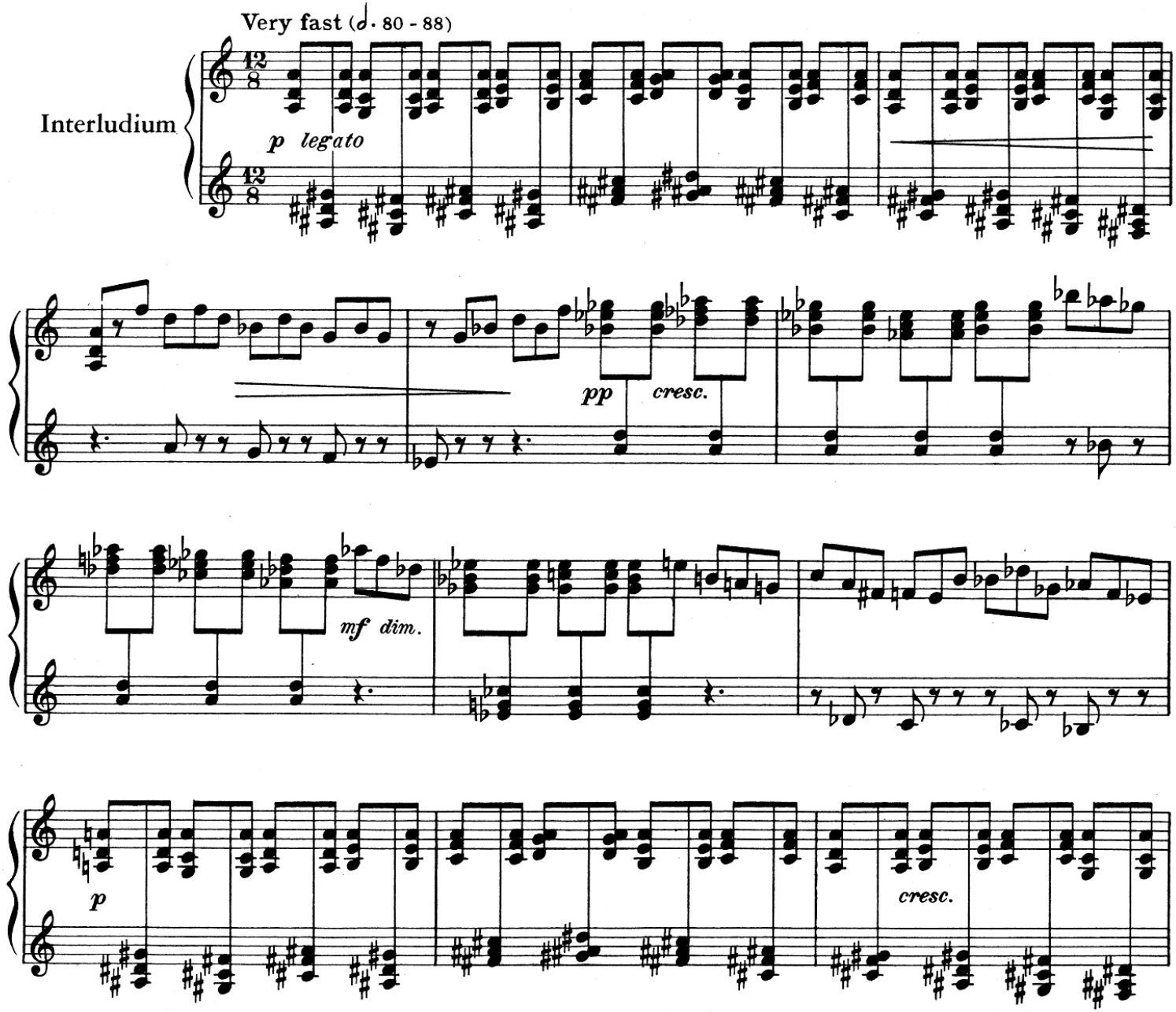
Arnold Schönberg: *Klavierstücke*, Op. 11 No. 2 (1910)



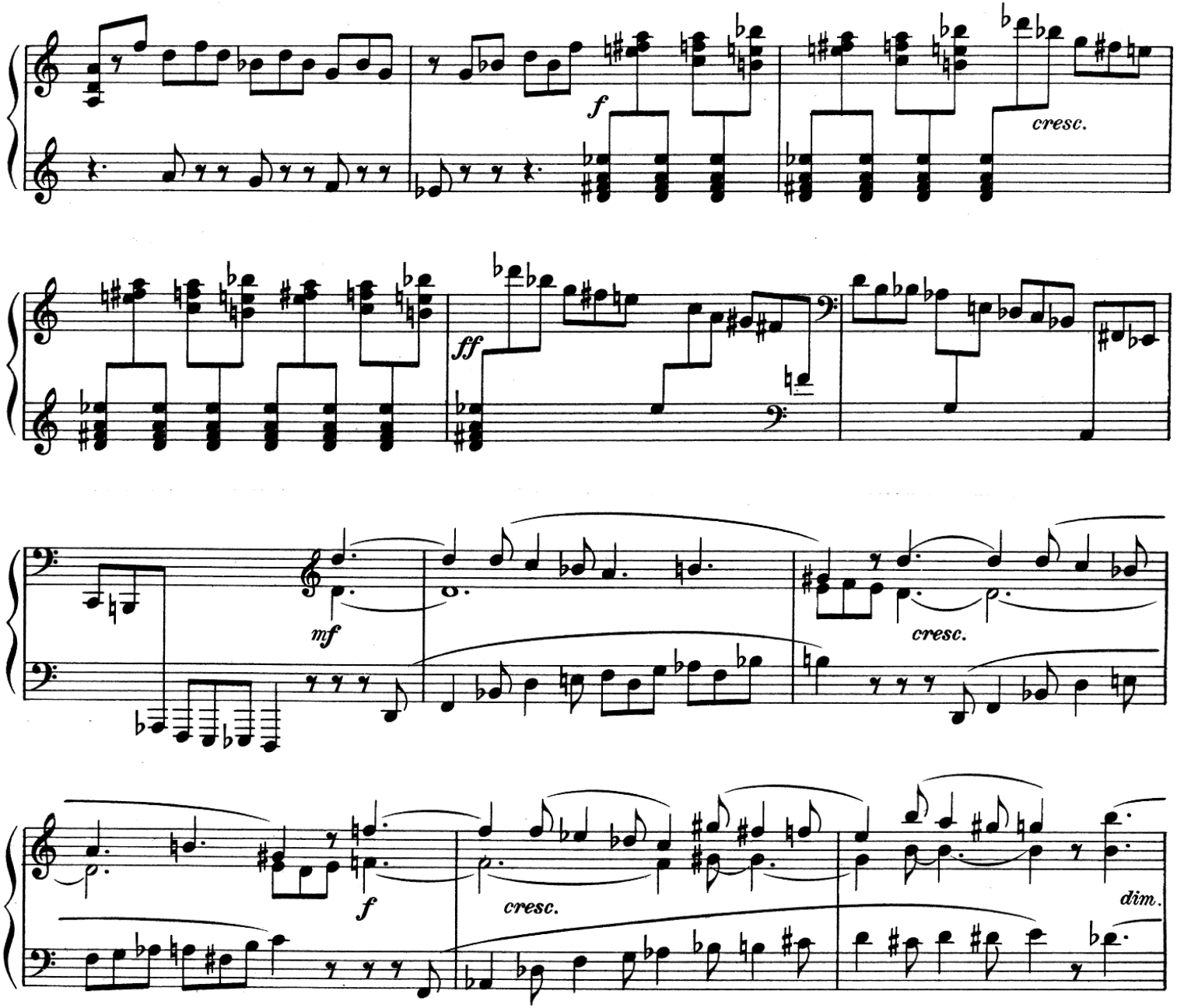
Charles Ives: *The Cage* (1906)



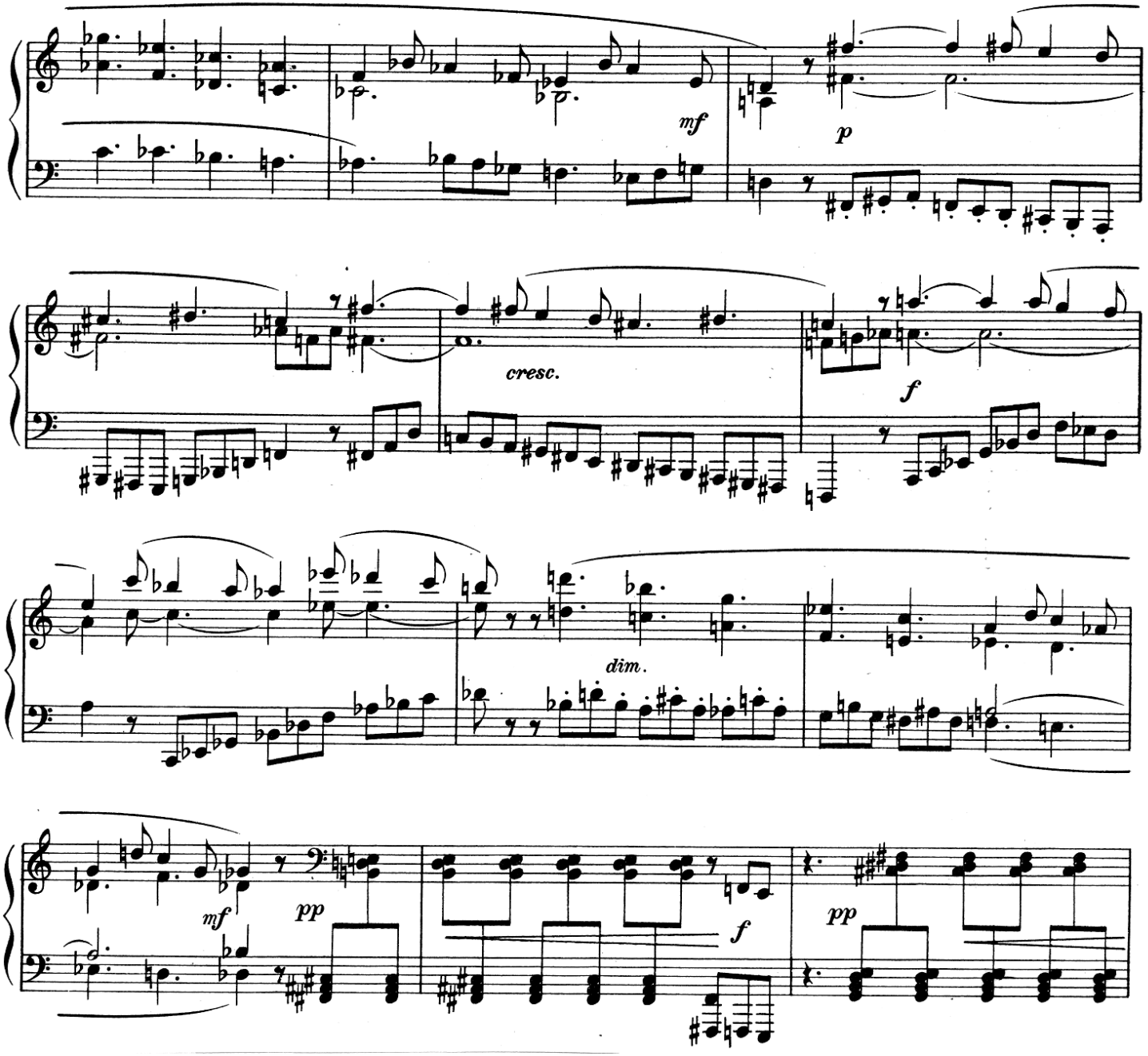
Paul Hindemith: *Ludus Tonalis* (1942)—Interludium



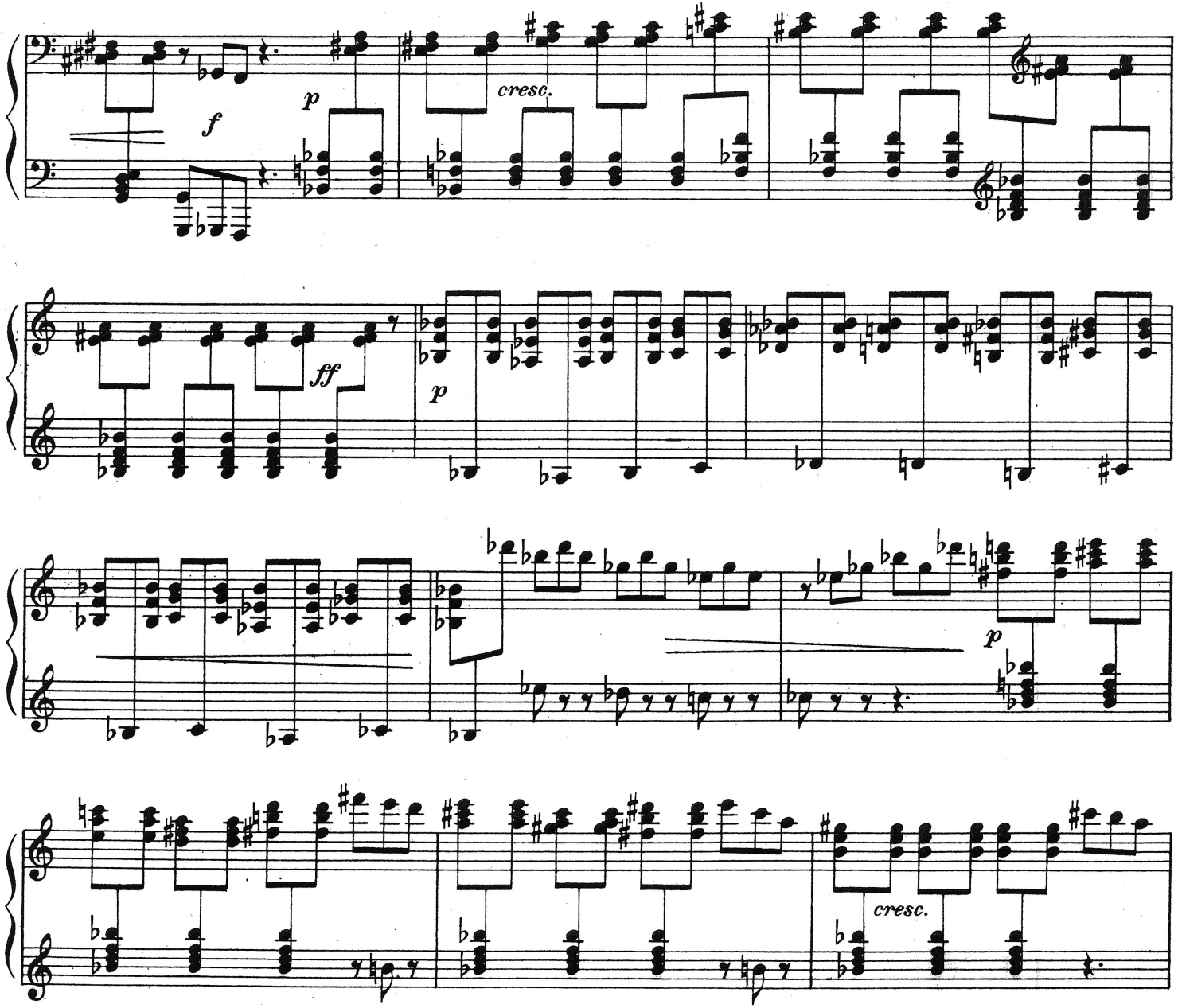
Paul Hindemith: *Ludus Tonalis* (1942)—Interludium



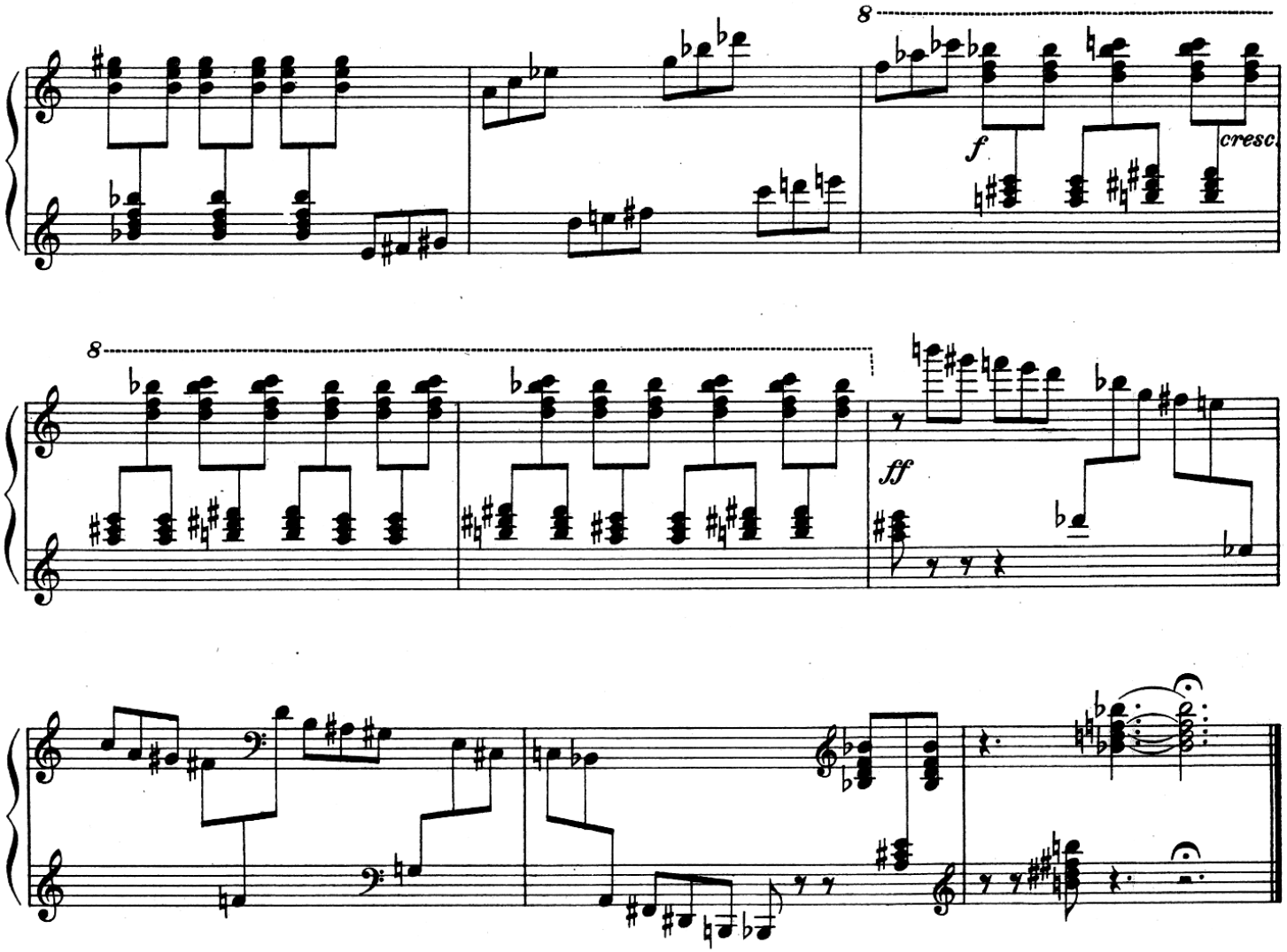
Paul Hindemith: *Ludus Tonalis* (1942)—Interludium



Paul Hindemith: *Ludus Tonalis* (1942)—Interludium



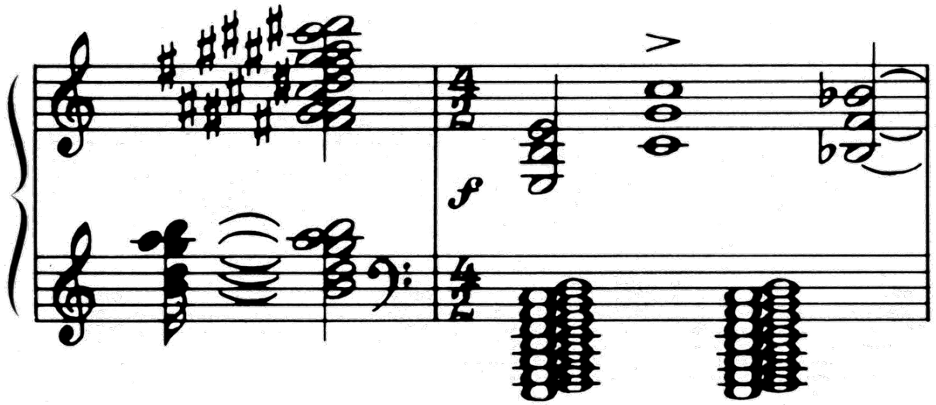
Paul Hindemith: *Ludus Tonalis* (1942)—Interludium



Secondal Sonorities (“Tone Clusters”)

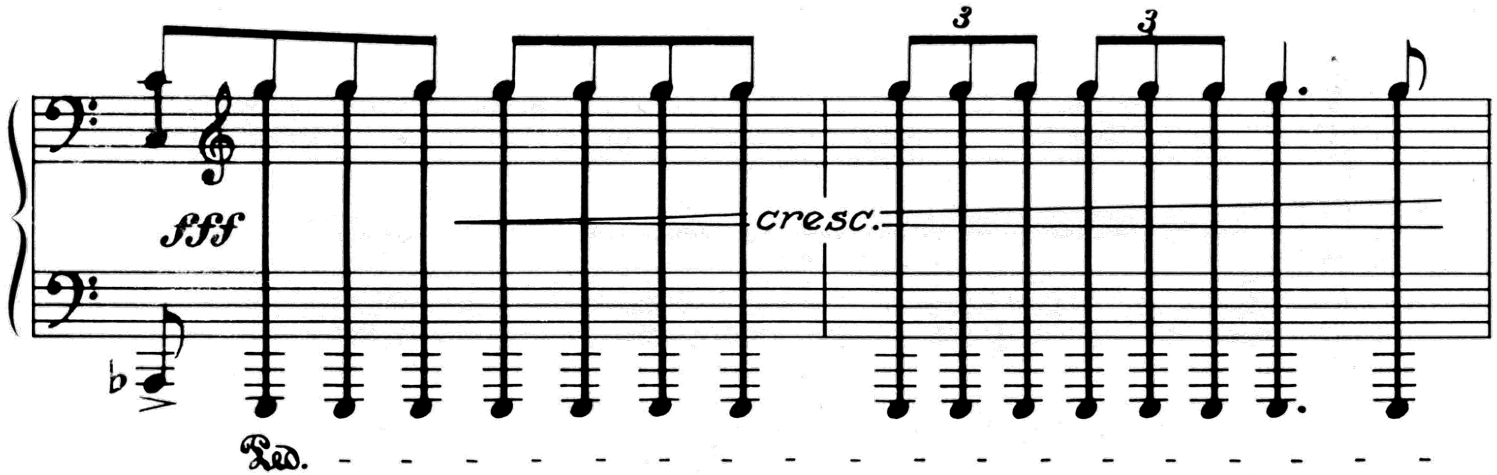
Diatonic clusters:

Charles Ives: “Majority” from *114 Songs* (1922)



Chromatic clusters:

Henry Cowell: *Tiger* (1910)



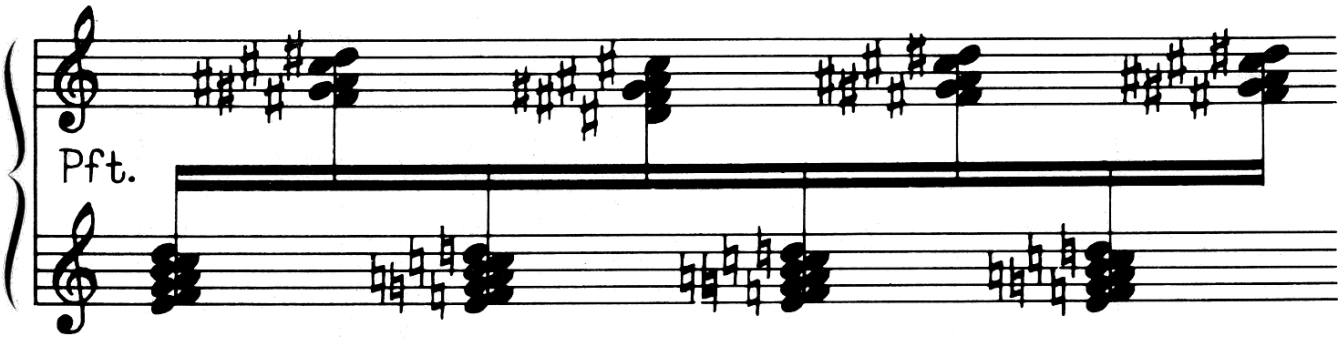
Secondal Sonorities (“Tone Clusters”)

Chords in parallel major seconds:

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

Alternating “black key” and “white key” clusters:

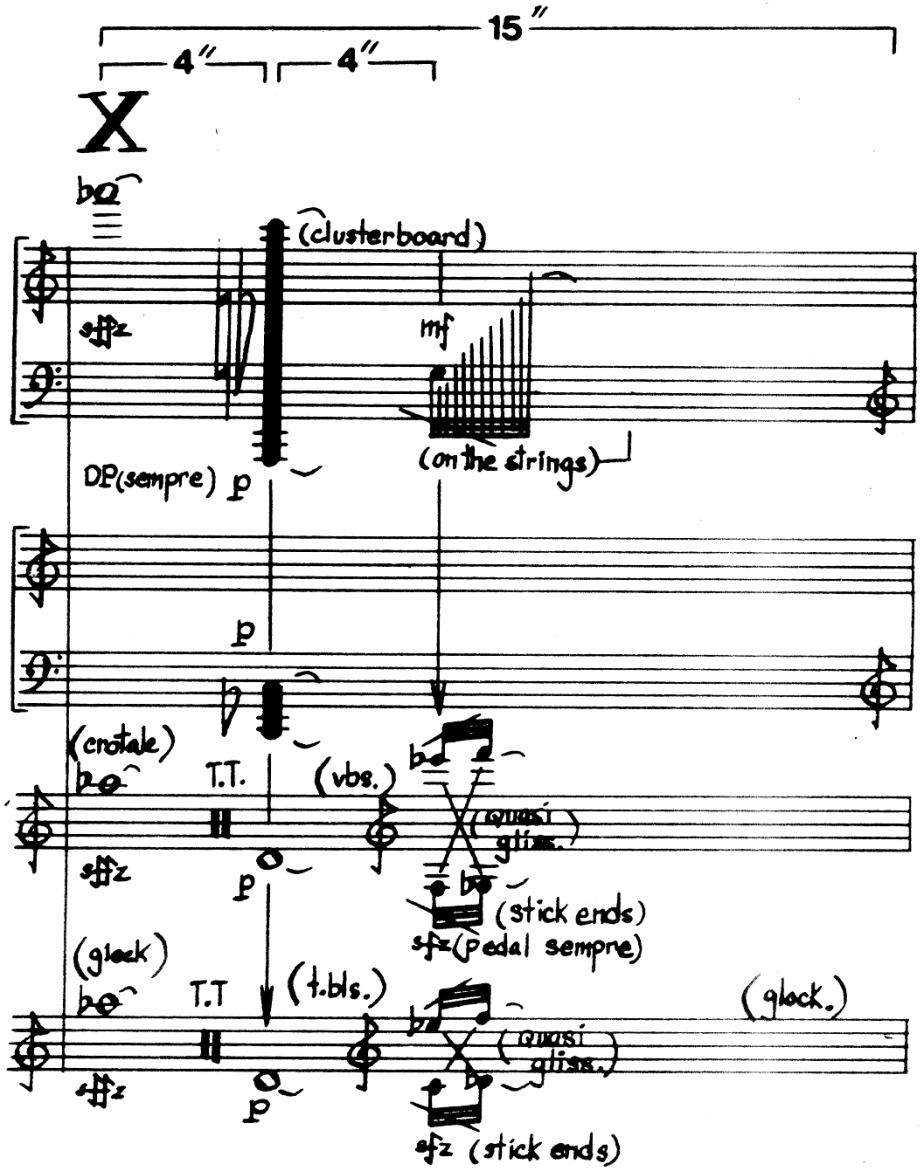
Béla Bartók: Piano Concerto No. 2 (1931)

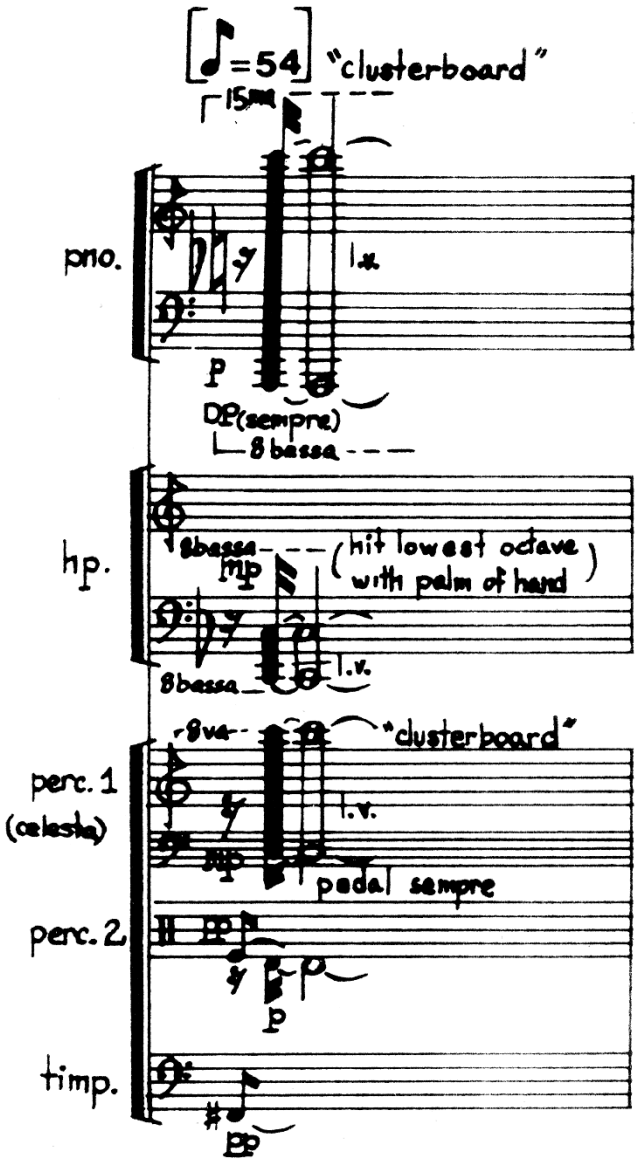


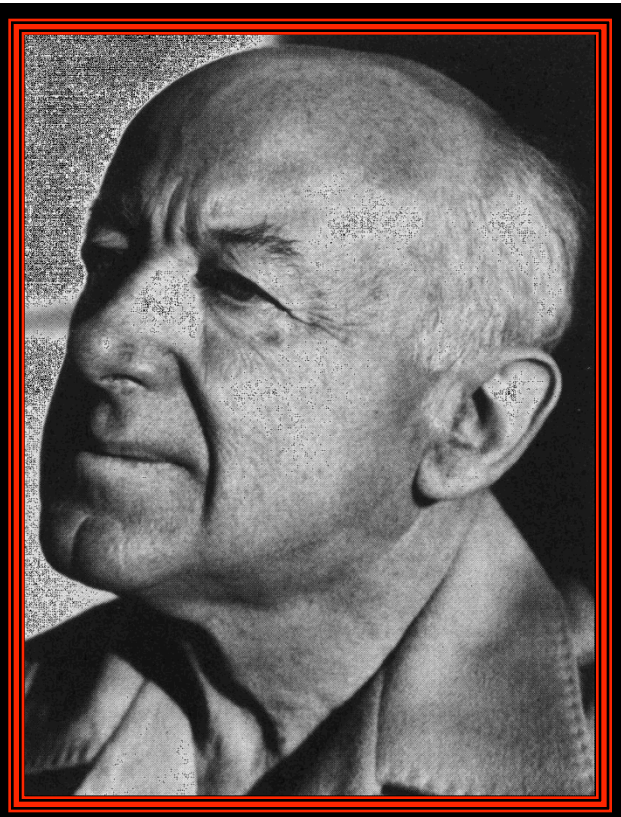
Secondal Sonorities (“Tone Clusters”)

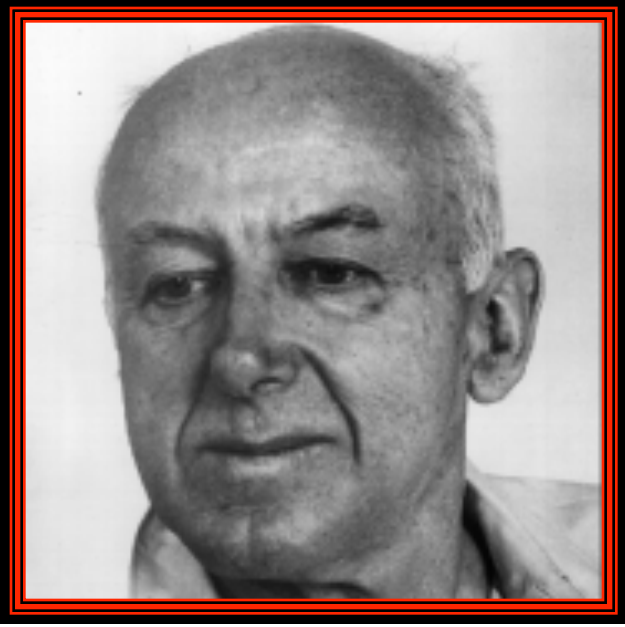
Use of “clusterboard”:

Joseph Schwantner: *Aftertones of Infinity* (1977)



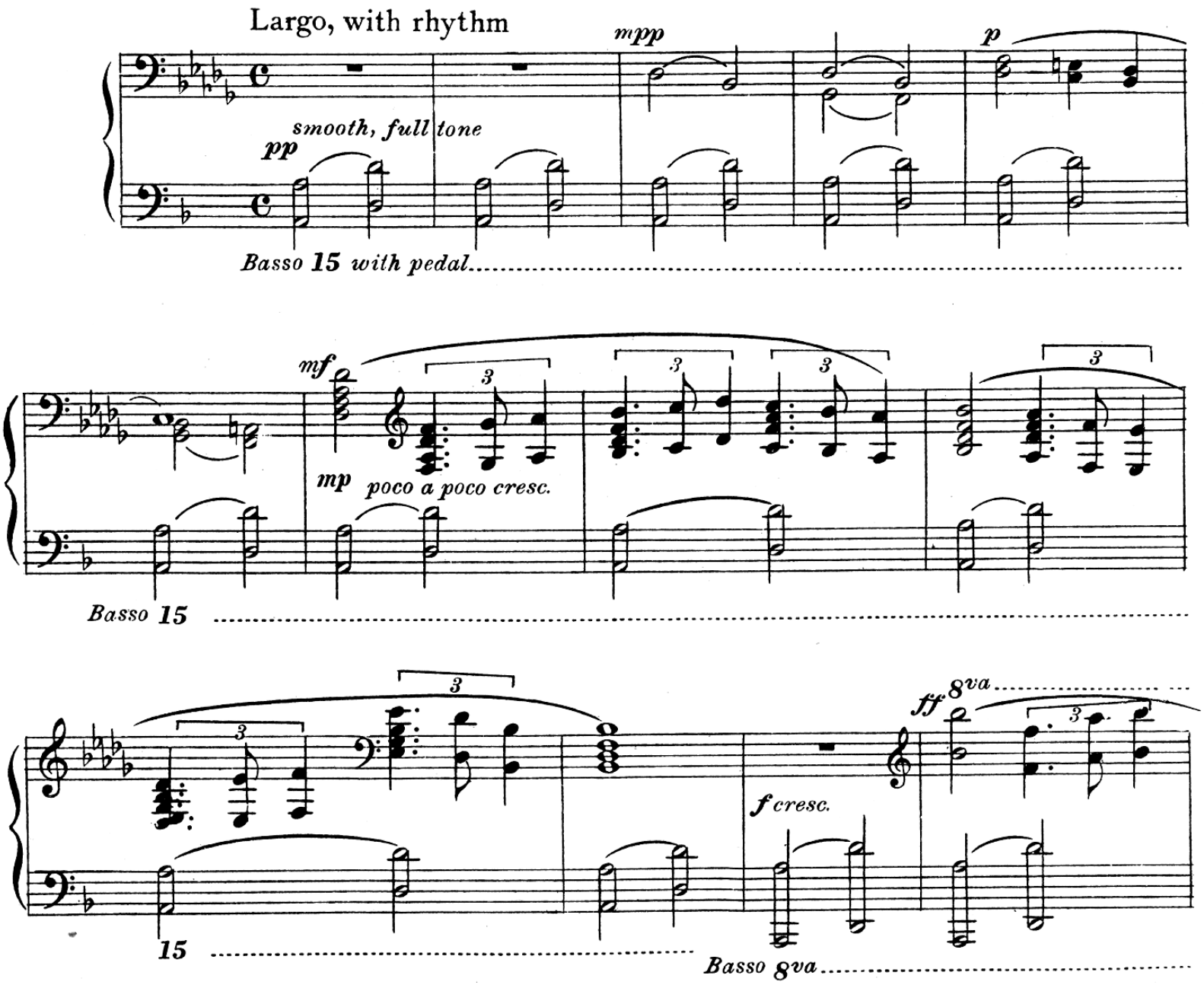




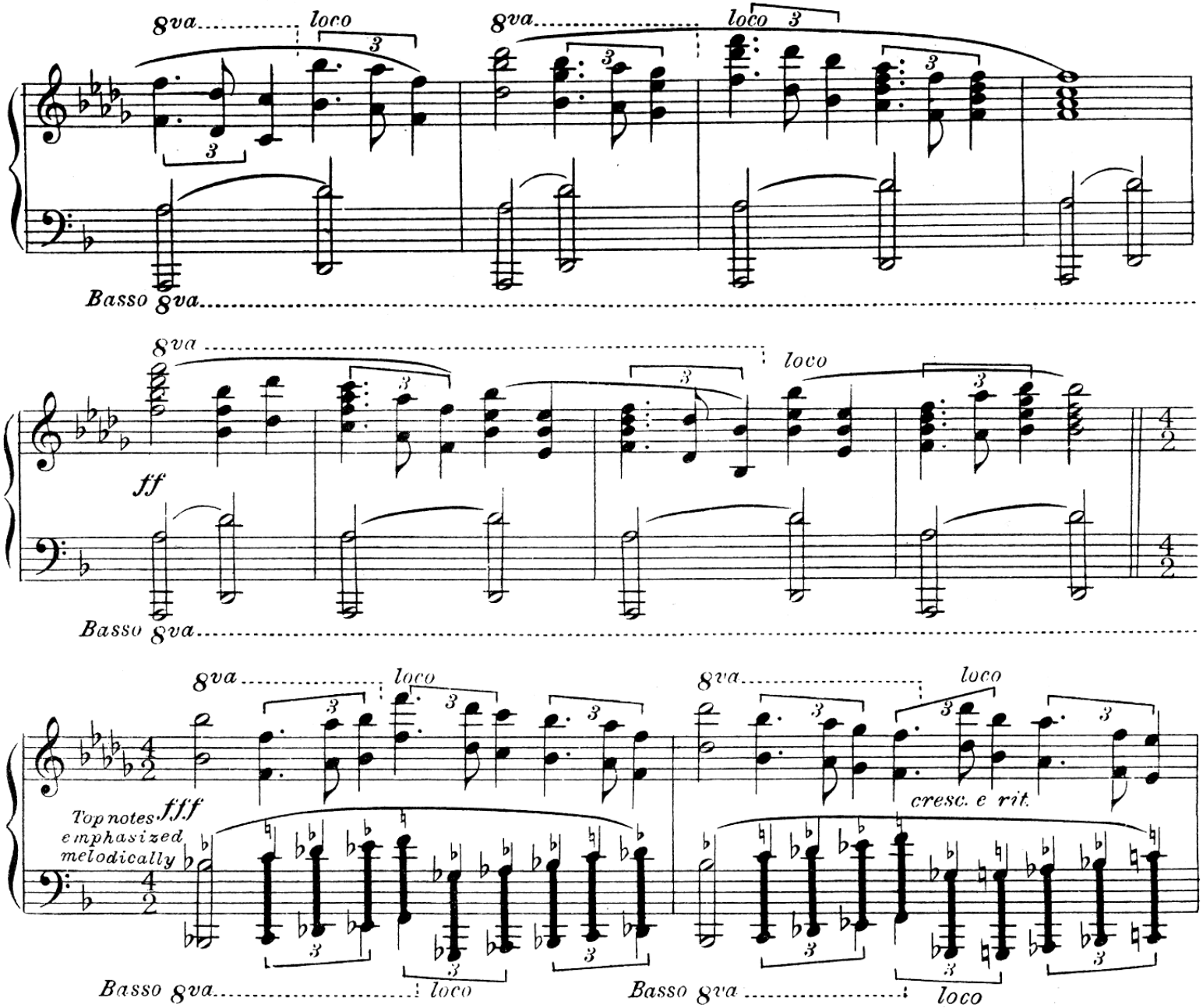


Henry Cowell
(1897-1965)

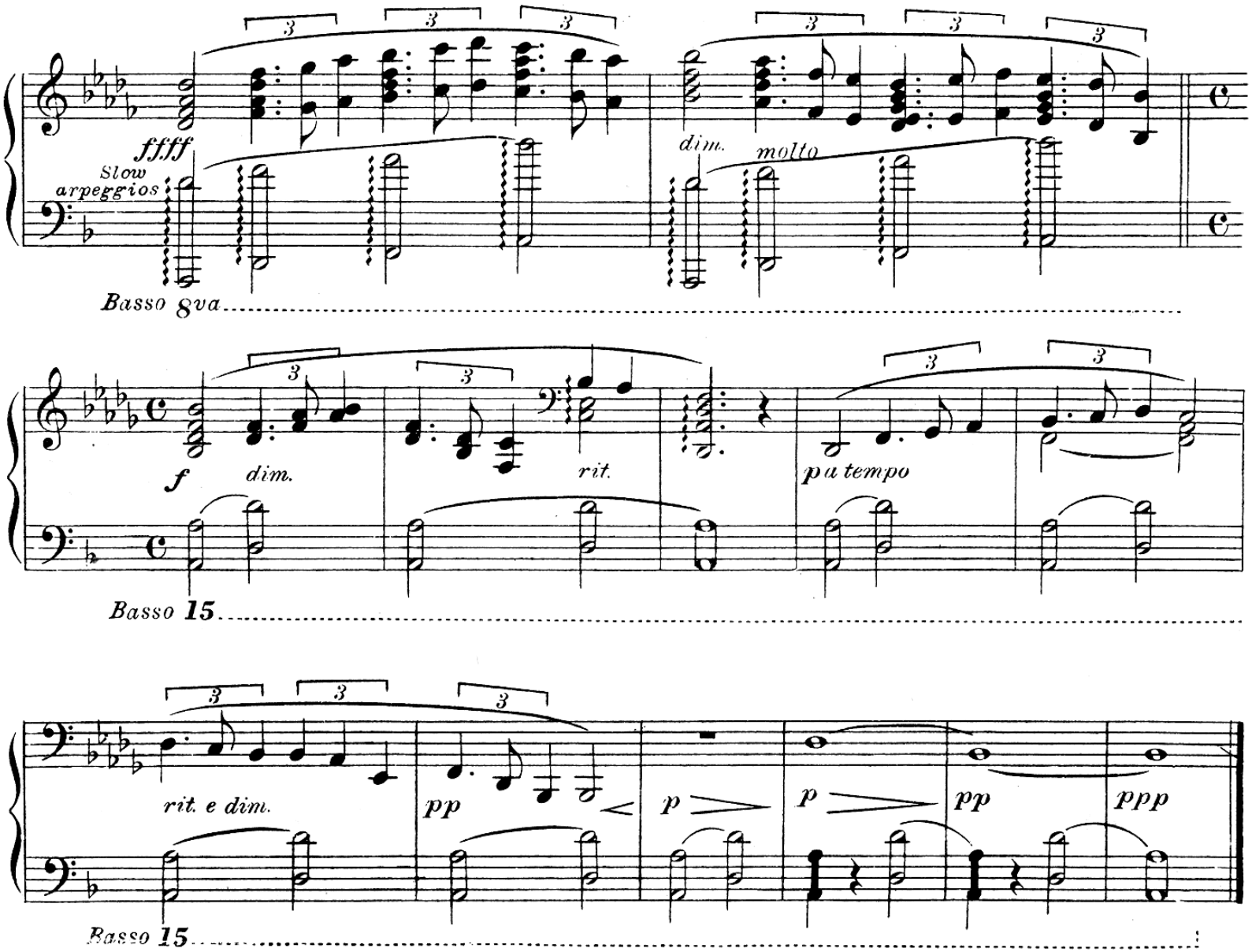
Henry Cowell: *Tides of Manaunaun* (1912)



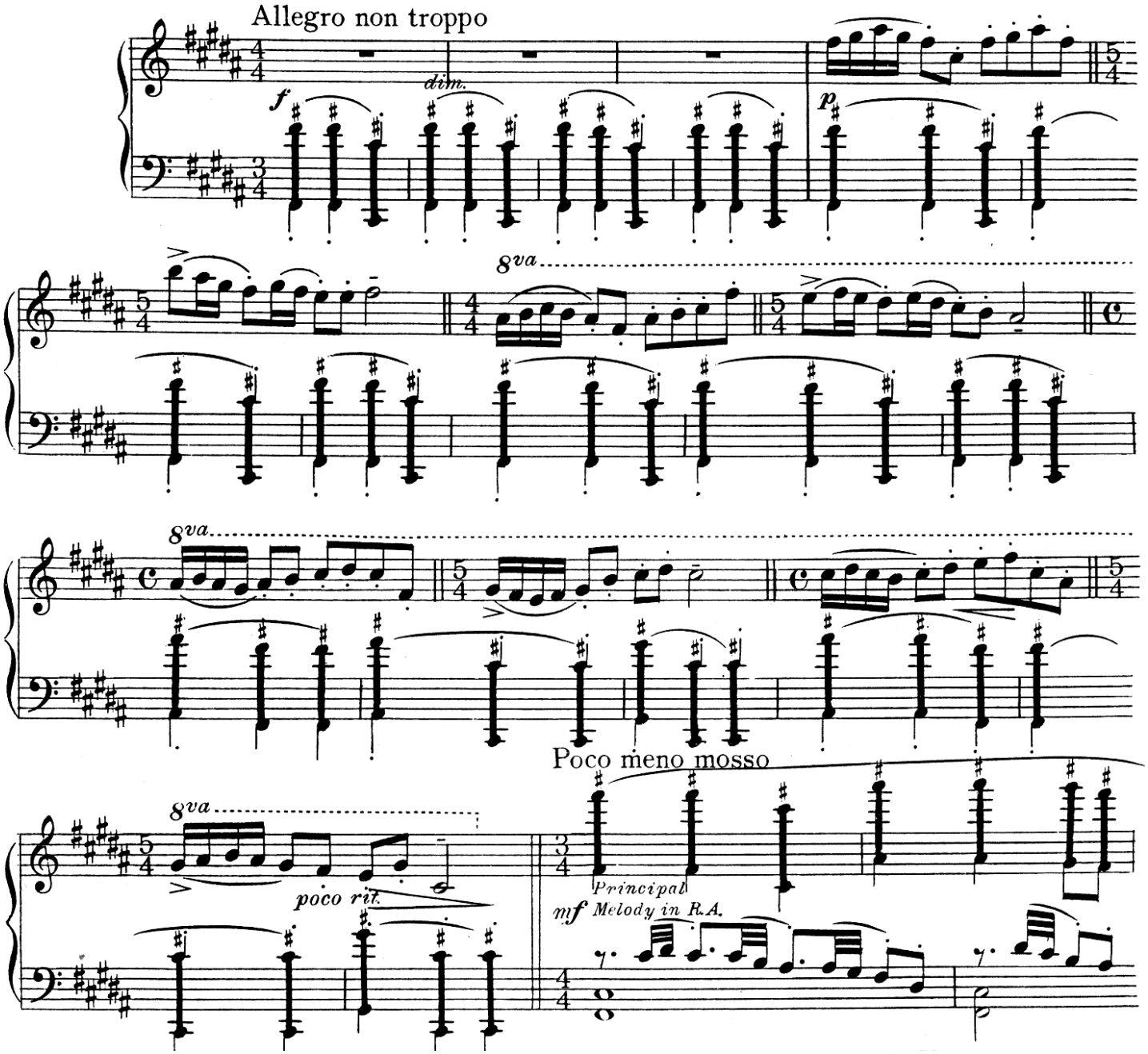
Henry Cowell: *Tides of Manaunaun* (1912)



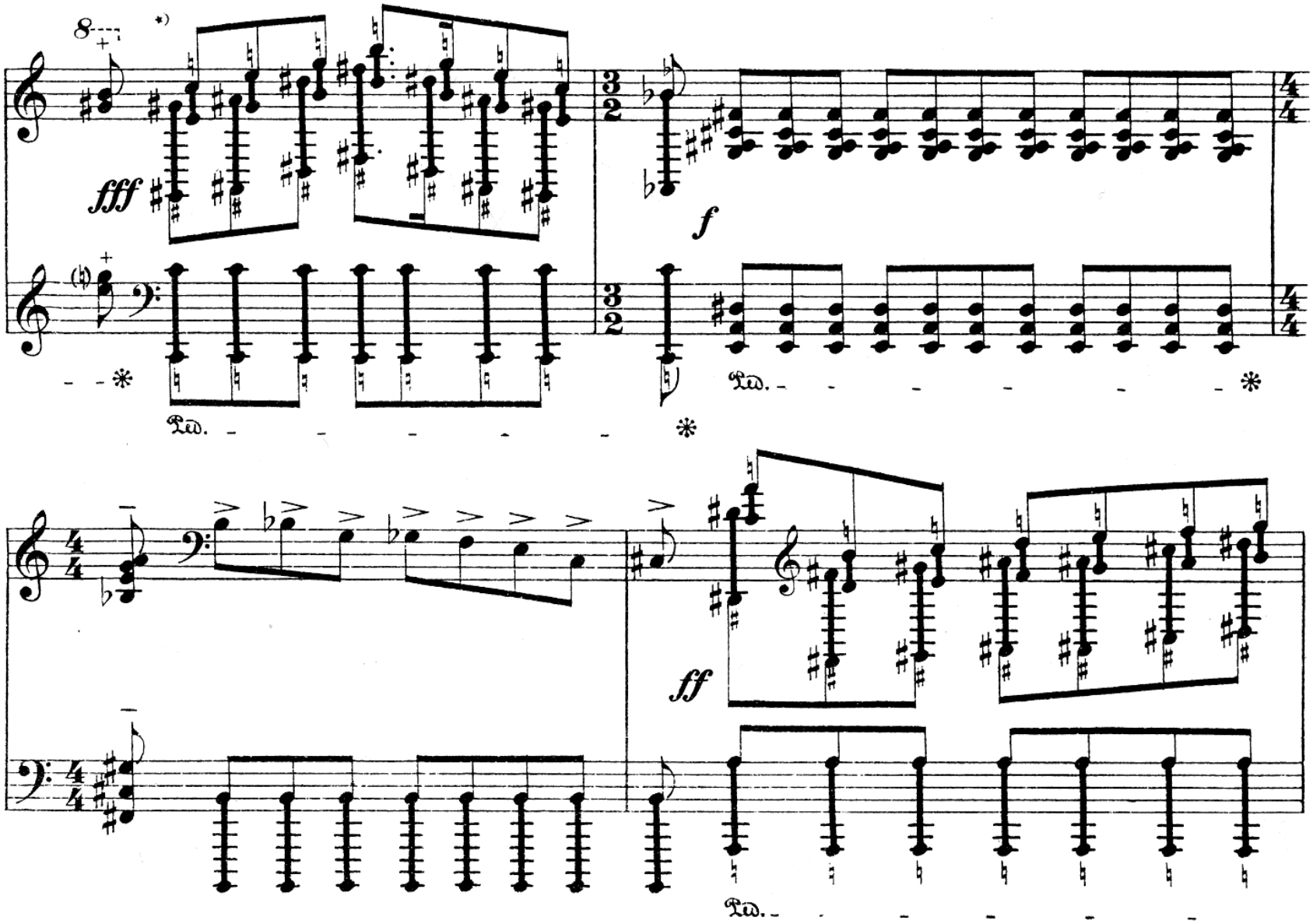
Henry Cowell: *Tides of Manaunaun* (1912)



Henry Cowell: *Exultation* (1919)

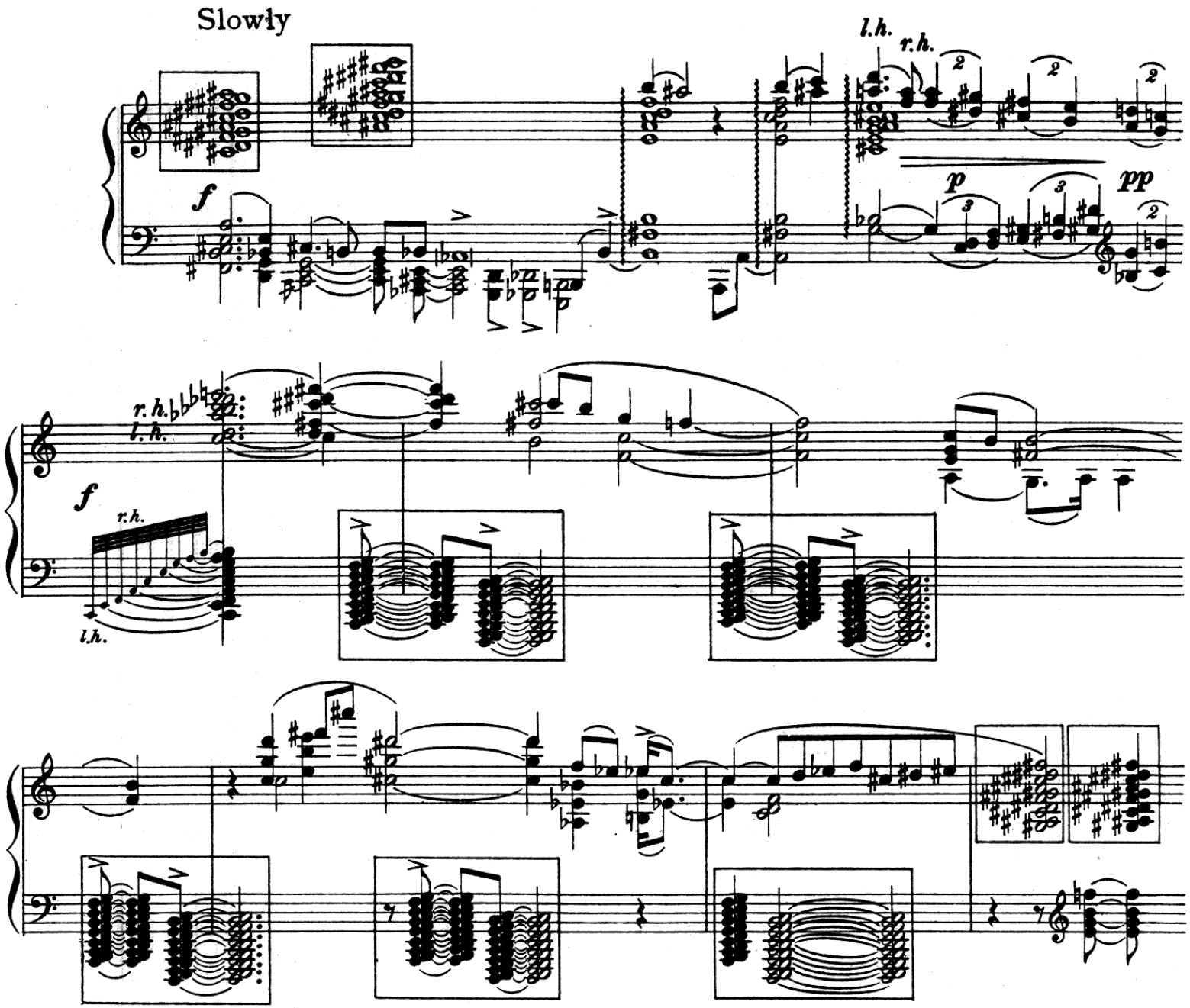


Henry Cowell: *Tiger* (1928)



*) The two Clusters, one on white the other on black keys, are both played together with the right forearm.

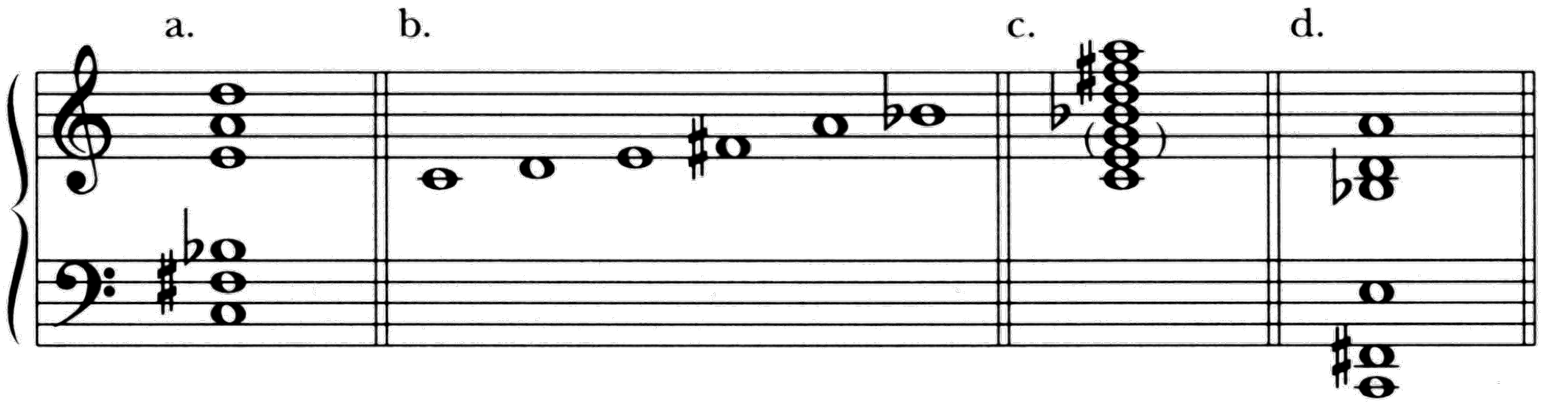
Charles Ives: *Majority* (1921)



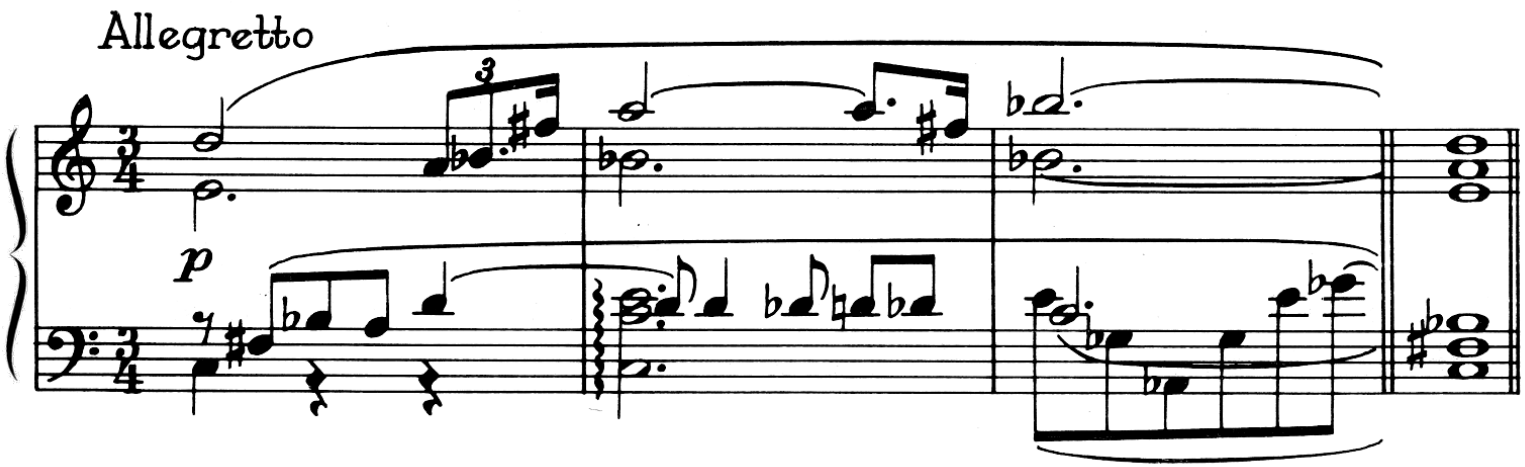
Additional Slides

Alexander Scriabin
(1872-1915)

Alexander Scriabin's "Mystic"



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):