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A pair of white over-ear headphones is positioned on the left side of the image. The headphones have a large, curved headband and two large, padded ear cups. The background is a solid light beige color.

WESTERN MUSIC ANALYSIS AND COMPOSITION

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Creative Techniques in Music Composition

Twentieth-century music introduced new compositional techniques that departed significantly from traditional Western tonal rules. Following the death of Gustav Mahler, the Romantic era declined, leading to the emergence of atonality and the breakdown of traditional tonality. Studying this period provides valuable insight for developing creative compositional approaches.



1. Scale-Based Compositional Techniques

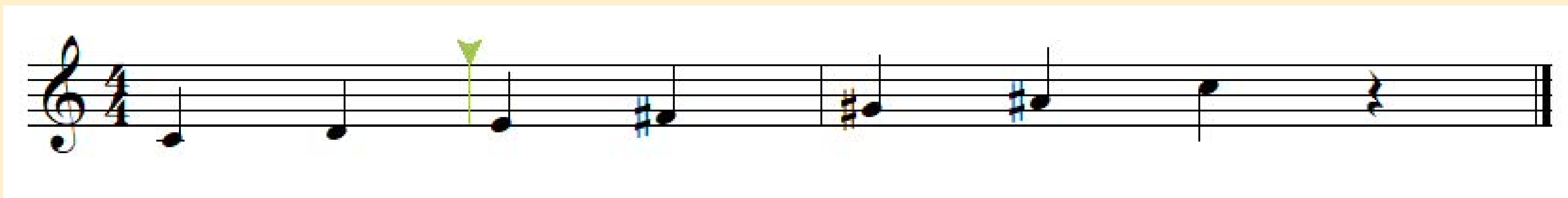
Whole Tone Scale

- Consists entirely of whole-step intervals.
- Contains only six notes and forms just two possible collections.
- Creates ambiguous, floating tonal effects.
 - Frequently used by Claude Debussy, especially in works such as *Voiles* (from *Préludes*) and *La Mer*.
- Often used to blend tonal centers and create impressionistic colors.



1. Scale-Based Compositional Techniques

Whole Tone Scale





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Whole Tone Scale





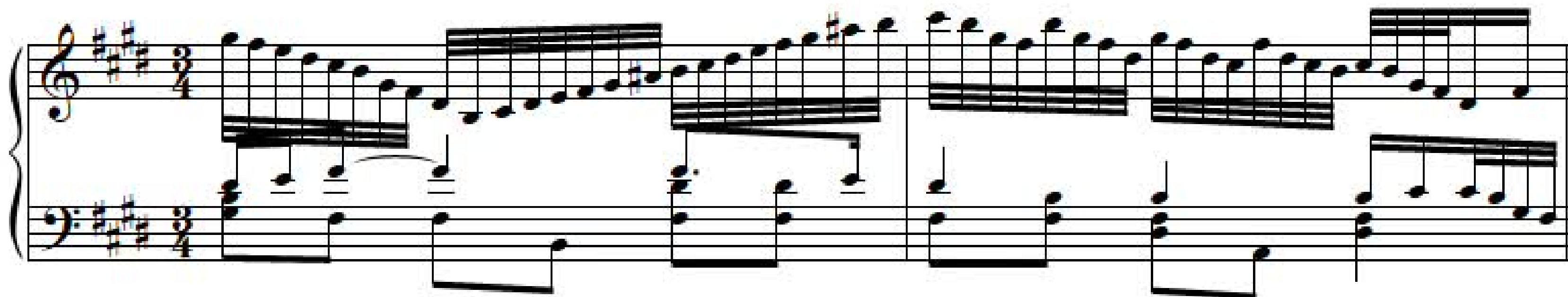
Pentatonic Scale

- A five-note scale derived from the diatonic scale by omitting certain degrees.
- Closely associated with Asian musical traditions and folk music.
- Divided into:
 - Major Pentatonic – Widely used in Impressionism, including works by Maurice Ravel (e.g., Piano Concerto in G major).
 - Minor Pentatonic – cutoff 4th and 7th from minor scal
- Flexible in tonal application because its notes often fit multiple key contexts.



Pentatonic Scale

B major pentatonic



B	C#	D#	F#	G#	B
1	2	3	5	6	1



Modal Scales (Modes)

- Ancient scale systems widely used before the 17th century, especially during the Middle Ages and Renaissance.
- Originally associated with monophonic chant and counterpoint rather than functional harmony.
- Revived in 20th-century jazz, leading to the development of Modal Jazz in the 1950s.
- Modal Jazz reduces harmonic movement to allow greater improvisational freedom.
- The seven modes derived from the major scale are:
 - Ionian
 - Dorian
 - Phrygian
 - Lydian
 - Mixolydian
 - Aeolian
 - Locrian

Modes are often applied over non-diatonic chords such as secondary dominants to expand melodic possibilities



Modal Scales (Modes)



Chord progression: Fmaj7 E7 Am Gm7 C7 Fmaj7

A Harmonic minor C Mixolydian

A musical staff in 4/4 time showing two scales. The first scale, A Harmonic minor, starts on A4 and includes a sharp on the F#5. The second scale, C Mixolydian, starts on C4 and includes a flat on the Bb5. Chord symbols are placed above the staff: Fmaj7, E7, Am, Gm7, C7, and Fmaj7.



Hirajoshi Scale

Hirajoshi scale is a Japanese five-note scale, or pentatonic scale, strongly associated with the koto, a traditional Japanese zither. Its name comes from hira-chōshi, meaning “standard” or “regular tuning.” It was developed in the 17th century by Yatsunashi Kengyō, who adapted ideas from shamisen music for koto tuning.

A common form is:

A B C E F

or in scale degrees: from minor scale 1 – 2 – 3 – 5 – 6

This scale creates a distinctly Japanese sound because it uses close half-step movement and wide gaps between notes.

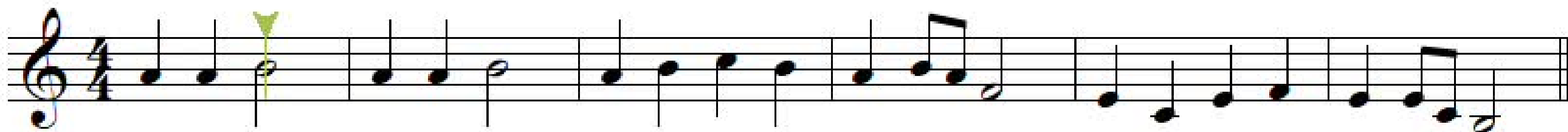
The famous Japanese folk song “Sakura Sakura” is often used as an example of this sound. Its melody uses a related Japanese pentatonic scale called the In scale or Miyako-bushi scale, closely connected to koto and shamisen music.

Example sentence:

“Sakura Sakura” demonstrates the Japanese pentatonic sound, using notes such as E–F–A–B–C, which gives the melody its calm, traditional, and slightly melancholic character.



Hirajoshi Scale



A	B	C	E	F	A
1	2	3	5	6	1

2. Composition Technique Using Parallel Fourths and Fifths

Quartal chords are harmonies constructed by stacking perfect fourths instead of thirds, creating a sound that differs from traditional tertian harmony. By counting a perfect fourth upward from a starting note (for example, C–F–B $\flat$), composers form a structure that produces an open, ambiguous, and often modern sonority. Because quartal harmony does not strongly reinforce major–minor tonal functions, it emphasizes color and atmosphere rather than functional harmonic progression. When used in composition, stacked fourths can gradually intensify texture, especially when arranged in parallel motion, while excessive layering may increase dissonance. As a result, quartal chords are effective for creating spacious, mysterious, or impressionistic musical effects.



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3. Innovative and Experimental Approaches in Music Composition

Concept of Out-of-the-Box Thinking

- Creative thinking in composition must be grounded in strong theoretical knowledge and professional principles.
- Understanding traditional frameworks allows composers to move beyond them effectively.
- Twentieth-century composers expanded musical language by challenging tonal conventions and structural norms.



Birdsong Imitation (Nature-Inspired Composition)

- Natural sound sources include geophony (non-living natural sounds), biophony (sounds of living organisms), and anthropophony (human-made noise).
- Olivier Messiaen systematically recorded and transcribed bird calls into musical notation.
- He analyzed pitch frequencies (e.g., A4 = 440 Hz) and translated them into melodic structures.
- His works feature modes of limited transposition, whole-tone scales, and non-retrogradable rhythms.
- His innovations influenced composers such as Pierre Boulez and Karlheinz Stockhausen.



Indeterminacy and Chance Music

- Indeterminacy (aleatory music) incorporates chance procedures into the compositional process.
- The approach became widely associated with John Cage.
- Cage was influenced by earlier composers such as Charles Ives and Henry Cowell.
- Techniques include prepared piano (placing objects inside the piano to alter timbre) and irregular rhythmic structures.
- Cage's work 4'33" redefined musical perception by framing environmental sound as music, inspired by the white paintings of Robert Rauschenberg.





4. CONCLUSION

Twentieth-century music represents one of the most innovative and boundary-breaking periods in Western music history, characterized by bold departures from traditional theoretical rules and tonal conventions. Studying this era enhances creative thinking and provides valuable compositional models. Three major approaches illustrate this development: first, the expanded use of scales beyond the diatonic system, including the whole-tone scale pioneered by Claude Debussy, the major and minor pentatonic scales frequently used by Maurice Ravel, and modal systems widely applied in jazz and non-functional harmony; second, the use of quartal and quintal harmony (stacked fourths and fifths), techniques that move beyond traditional tertian harmony and create distinctive modern sonorities; and third, experimental and out-of-the-box concepts such as birdsong transcription by Olivier Messiaen and indeterminacy in the works of John Cage, who employed chance operations in pieces like *Imaginary Landscape No. 4* and *4'33"*. Although these approaches may initially appear unconventional, they demonstrate how creative courage and theoretical understanding can generate new musical languages and inspire future generations of composers.



Bibliography



Ball, M. (n.d.). Prairie chicken. Retrieved November 5, 2022, from <https://www.oliviermessiaen.org/birdsong>

Narut Sutthachit. (2017). Thinking outside the box: Thinking and thinking outside the box from conceptual frameworks. *Journal of Education Studies, Chulalongkorn University*, 44(4), 402.

Natcha Phancharoen. (2013). *Music theory* (12th ed.). Keskharat.

NGThai. (2017). Bernie Krause and the sounds of nature that are becoming increasingly silent. Retrieved November 16, 2022, from <https://ngthai.com/environment/3631/nature-is-quieter-than-ever-before/>