The Enjoyment of MUSIC

SHORTER VERSION

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Chapter 62

New Sound Palettes: Mid-Twentieth-Century American Experimentalists

"I thought I could never compose socially important music. Only if I could invent something new, then would I be useful to society."

—John Cage

KEY POINTS

- Contemporary music often calls for innovative and highly virtuosic instrumental or vocal effects that challenge performers to new technical levels.
- Composer John Cage used a specially modified "**prepared**" **piano** to simulate the sound of the **Javanese gamelan**, an ensemble of metallic percussion instruments played in Indonesia (on the islands of Java and Bali, in particular).
- In his four books of madrigals, which treat the voice as a virtuosic instrument, composer George Crumb set texts by the Spanish poet Federico García Lorca.

Since the beginning of recorded history, musicians have been expanding their sound-production resources—by inventing new scales and harmonies, developing increasingly complex and versatile instruments, and training their bodies to sing and play in experimental ways. In order to do so, they have reached out to other cultures for inspiration, but also taken advantage of the inventiveness of their fellow musicians. The mid-twentieth century was an especially fertile time for musical expansion in North America, and we will consider examples by two composers who shaped such expansion: John Cage and George Crumb.

Early Experiments

Henry Cowell

Two earlier composers in particular helped shape the pioneering genius of John Cage. One, Henry Cowell (1897–1965), was drawn toward a variety of non-Western musics. His studies of the musics of Japan, India, and Iran led him to combine Asian instruments with traditional Western ensembles. Cowell also experimented with foreign scales, which he harmonized with Western chords. Several of his innovations involved the piano; these include **tone clusters** (groups of adjacent notes played with the fist, palm, or forearm) and the plucking of the piano strings directly with the fingers. This novel approach to the piano helped to inspire Cage's idea of the "prepared piano," which we will encounter below.

Tone clusters

Microtones

The most serious proponent of microtonal technique was Harry Partch (1901–1974), who developed a scale of forty-three **microtones** to the octave in the 1920s and adapted Indian and African instruments to fit this tuning. Among his original instruments are cloud-chamber bowls (made of glass), cone gongs (made of metal), and gourd trees. Such instruments make melody and timbre, rather than harmony, the focus of his music.

The Music of John Cage

Cage represents the type of eternally questing artist who no sooner solves one problem than presses forward to another. His works explored new sounds and concepts that challenged the very notion of what makes up music. Probably his most important contribution, and one that shaped many strands of music in the second half of the twentieth century, was the idea of **chance**, or **aleatoric**, music. His experimental compositions and writings defined him as a leader in the postwar avant-garde scene.

In His Own Words

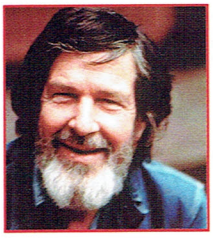
"Once in Amsterdam, a Dutch musician said to me, "It must be very difficult for you in America to write music, for you are so far away from the centers of tradition." I had to say, "It must be very difficult for you in Europe to write music, for you are so close to the centers of tradition."

—*John Cage*

Sonatas and Interludes

Sonatas and Interludes represents Cage's crowning achievement for the prepared piano, approximating the subtle sounds of the Javanese gamelan and preserving the effect of music floating above time. There are sixteen sonatas in this set, ordered in four groups of four, and separated by interludes (LG 55). Cage provides detailed

John Cage (1912–1992)



Born in Los Angeles, Cage exhibited an early interest in non-Western scales, which he learned from his mentor, Henry Cowell. He soon realized that the traditional division between consonance and dissonance had given way to a new opposition between music and noise, as a result of which the boundaries of the one were extended to include more of the other.

In 1938, Cage invented what he called the "prepared piano," in which various foreign substances were inserted at crucial points in the strings of a grand piano. From this instrument came a myriad of sounds whose overall effect resembled that of a Javanese gamelan. Cage wrote a number of works for the prepared piano, notably the set of *Sonatas and Interludes*. His interest in indeterminacy, or chance, led him to compose works in which performers make choices by throwing dice.

Cage maintained an intense interest in exploring the role of silence, which led to a composition entitled *4′33″*, without any musical content at all, consisting of four minutes and thirty-three seconds of "silence." The piece was first "performed" by the pianist David Tudor in 1952. He came onstage, placed a score on the piano rack, sat quietly for the duration of the piece, then closed the piano lid and walked off the stage. Cage viewed *4′33″* as one of the most radical statements he had made against the traditions of Western music, one that raised profound questions. What is music, and what is noise? And what does silence contribute to music? In any case, *4′33″*, which can be performed by anyone on any instrument, always makes us more aware of our surroundings.

MAJOR WORKS: Orchestral music • Piano music, including *Music of Changes* (1951) • Prepared piano works, including *Bacchanale* (1940) and *Sonatas and Interludes* (1946–48) • Percussion works, including *First, Second, Third Construction* (1938, 1940, 1941) • Vocal works, including *Aria* (1958) • Electronic music, including *Fontana Mix* (1958), *Cartridge Music* (1960), and *HPSCHD* (for harpsichord and tapes, 1969) • Indeterminate works, including *4′33″* (for any instrument, 1952) • Writings, including *Silence* (1961), *Notations* (1969), *Themes and Variations* (1982), and *I–VI* (1990).

LISTENING GUIDE 55

1:23

Cage: Sonata V, from *Sonatas and Interludes*

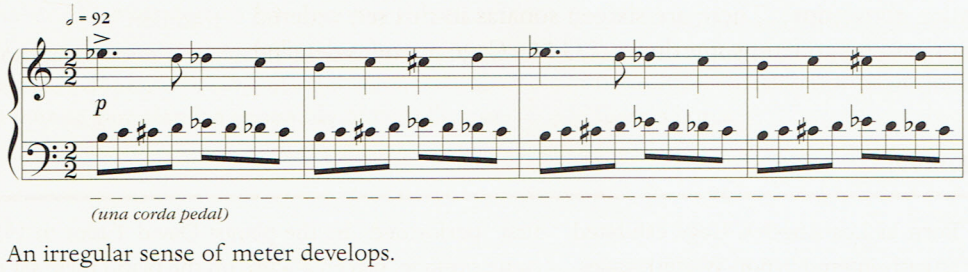
DATE: 1946–48 (first performed 1949)

OVERALL STRUCTURE: 16 sonatas, in four groups of 4, each group separated by an interlude

What to Listen For

Melody	Irregular phrases, small-range, undulating chromatic line; second section is more disjunct.
Rhythm/meter	Opening with regular movement, then changing rhythmic flow, seemingly without a clear meter.
Harmony	Minimal sense of harmony; dissonant ending.
Texture	The focus is on linear movement.
Form	Binary structure (**A-A-B-B**).
Expression	Evokes ethereal, otherworldly sounds.
Timbre	Piano produces percussive effects, both pitched and nonpitched; varied tone quality and pitches.

0:00 **A section**—18 measures, grouped in irregular phrases (4 + 5 + 4 + 5 = 18).
Opening of sonata, with regular rhythmic movement and two-voice texture:



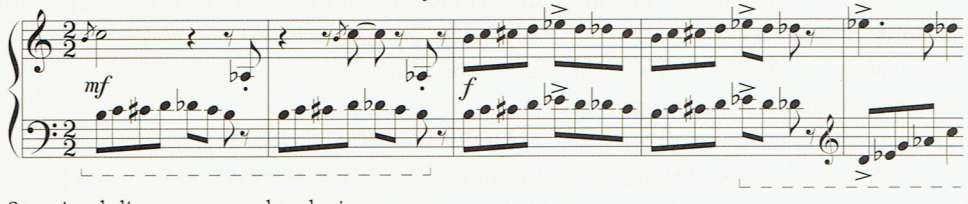
An irregular sense of meter develops.

0:12 Upper line is sustained over a moving lower line (in last 9 measures).

0:20 **A section** repeated.

0:38 **B section**—22½ measures, in irregular phrases (4 + 5 + 4 + 5 + 4½ = 22½).
Rests break the music into sections.

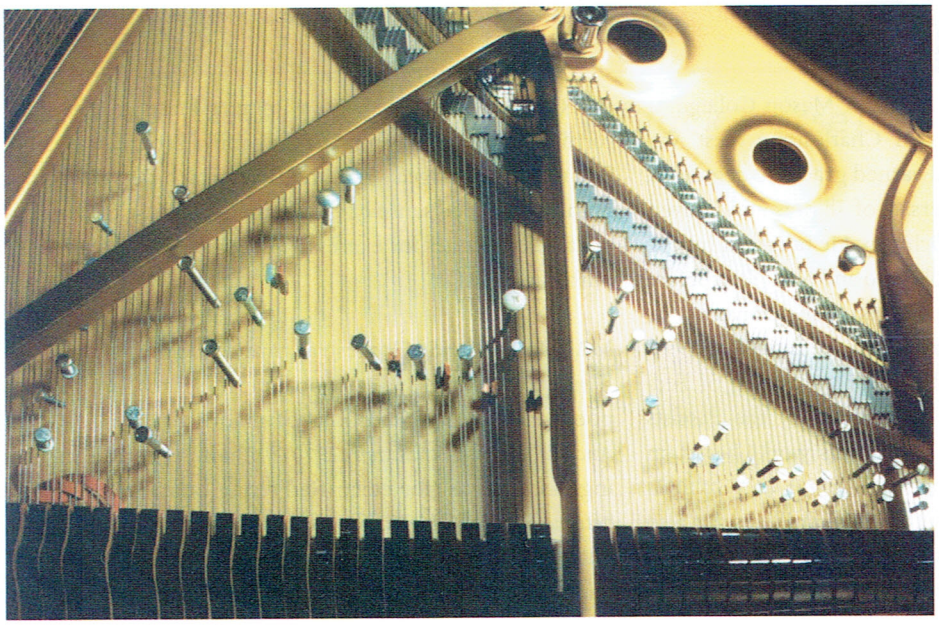
0:46 Quicker tempo, lines are more disjunct and accented.
Second half of **B section**, with more disjunct lines and accents:



0:55 Sustained dissonance at the closing.

1:00 **B section** repeated.

instructions at the beginning of the score, indicating that forty-five of the piano's eighty-eight keys should be prepared by inserting nails, bolts, nuts, screws, and bits of rubber, wood, or leather at carefully specified distances. The effect is var-



John Cage's prepared piano works call for screws, nails, and other materials to be inserted between the strings.

ied, depending on the material inserted, its position, and whether the soft pedal is depressed. Some strings produce a nonpitched, percussive thump, while others produce tones whose pitch and timbre are altered. This music is not concerned with the simultaneous sounding of pitches (harmony) but rather with timbral effects and the rhythmic grouping of sounds.

Sonata V is short but highly structured; its overall shape is binary (a prevalent form in the Baroque and Classical eras), with each section repeated (**A-A-B-B**). The sonority of the prepared piano is almost ethereal. Here and elsewhere, Cage's music for prepared piano is made of wholly original sounds that delight the ears and, as intended by the composer, "set the soul in operation."

George Crumb and Avant-Garde Virtuosity

Avant-garde musical styles call for a new breed of instrumentalists and vocalists, and a new arsenal of unusual techniques, to cope with the music's performance demands. The music of George Crumb, for example, draws from art music traditions, folk themes, and non-Western sounds. Crumb displays a real talent for turning ordinary instruments, including the voice, into the extraordinary. His imaginative music resounds with extramusical and symbolic content that infuses it with a deep meaning waiting to be unlocked.

In His Own Words

"I think composers are everything they've ever experienced, everything they've ever read, all the music they've heard. . . . I think there's a lot of music that has a darker side and maybe some of this music influenced me."

—*George Crumb*

Caballito negro (*Little Black Horse*)

Caballito negro (LG 56) is the last of three songs in Crumb's second book of madrigals. All three are set to poetry by Federico García Lorca, and are scored for soprano with metallic percussion instruments and a flute or piccolo. The piccolo player uses a technique called **flutter-tonguing**: quickly moving the tongue as though "rolling an R" while blowing into the instrument. In *Caballito negro*, a hair-raising image of death, Crumb extracts only the two refrains from the poem, alternating between them: "Little black horse, where are you taking your dead rider? Little

ENCOUNTER

Javanese Gamelan

Listeners at the 1889 Paris World Exhibition were captivated with the spectacle of Javanese dance and the accompanying orchestra called gamelan. French composer Camille Saint-Saëns observed that it was "a dream music which had truly hypnotized some people." From that time on, many composers have looked to the music of Southeast Asia and Oceania for inspiration in their own works. American West Coast musicians in particular had the opportunity to experience the gamelan on their own turf: in California, Santa Barbara–based composer/ethnomusicologist Henry Eichheim (1870–1942) brought Indonesian instruments back from his travels in the 1920s and also adopted elements of Balinese music in his work. Beginning in 1940, touring Javanese ensembles traveled up the coast from Los Angeles. These events caught the attention of experimental composers Henry Cowell, who taught a class on "Music of the World's Peoples" at the New School for Social Research in New York, and Lou Harrison (1917–2003), who wrote a number of works for Javanese-style instruments. John Cage, a devotee of Cowell and Harrison, was certainly not blind to these influences, and he too undertook a study of Asian cultures. The prepared piano technique Cage devised owes a significant debt to gamelan music, in both texture and timbre, although the sounds are achieved in quite a different way.

The gamelan, an orchestra of metallic percussion found on the Indonesian islands of Java, Bali, and Sunda, is comprised of melodic-percussive instruments, each with its own function. The music is generally performed from memory, passed on through oral tradition from master musician to apprentice. It is only in recent years that a notational method has been devised. Gamelan music is often heard in ritual ceremonies, including court performances (there are four princely courts in central Java alone), and in *wayang*, or shadow-puppet theater.

The performance of a shadow-puppet play would normally begin in the early evening with an overture and continue until dawn. A master puppeteer operates the puppets from behind a screen, narrates and sings the songs, and signals the gamelan—here, soft and loud metallophones (tuned metal bars struck with a mallet), gongs of various sizes, wooden xylophones, and drums—when to play. Our selection is an overture (called *Patalon*) to a

A gamelan, with metallophones, playing for a meeting of OPEC (Organization of Petroleum Exporting Countries) in Jakarta.

shadow-puppet play. Like many Javanese dramas, the story comes from the great Hindu epic *Ramayana*, the story of King Rama, whose wife Sinta is kidnapped by an evil king named Rahwana. (Java today is predominately Islamic, although Hindu and Buddhist beliefs are also important to the culture.) In this play, the evil king's brother is cast out of the kingdom for suggesting that Rahwana return Sinta to her husband.

In Javanese music, the interaction of the melodic movement with a cyclical rhythmic structure determines the form of the work. Here, the melody is based on the pentatonic scale (notes 1, 2, 3, 5, 6, or C, D, E, G, A). The work unfolds in sections, with the drum marking the transition between sections. The first, including an introduction, is slow and stately—the melody can be heard in the highest-pitched metallophone, which sounds each note of the pentatonic pattern twice. When the singer enters, he elaborates on the melody in quite a different way from the instruments, but both singer and instruments converge on accented notes. At dramatic moments in the text, the accents can jolt the listener. A fast-paced and excited closing section signals the entrance of the dancers and puppet characters.

Javanese shadow-drama puppets of King Rama, hero of the Hindu epic *Ramayana*, and his wife Sinta (left), who is kidnapped and later recovered.

Wayang

What to listen for:

- Pentatonic (five-note) melodic patterns.
- Rhythmic cycles that develop in complex polyrhythms.
- Sectional alternations between loud and soft instruments.

A slow introduction features the high-sounding metallophone outlining the melodic pattern; the voice soon enters, elaborating on the main melody, which is punctuated by gongs.
A drum cues the transition to the next (faster) section; a loud-style section follows, featuring the first four notes of the melody and the gong playing on most main notes.
A transition leads to a soft-style section, featuring quieter instruments and the voice (with dramatic accents and leaps; the dynamic level grows, with loud instruments; recording fades out.