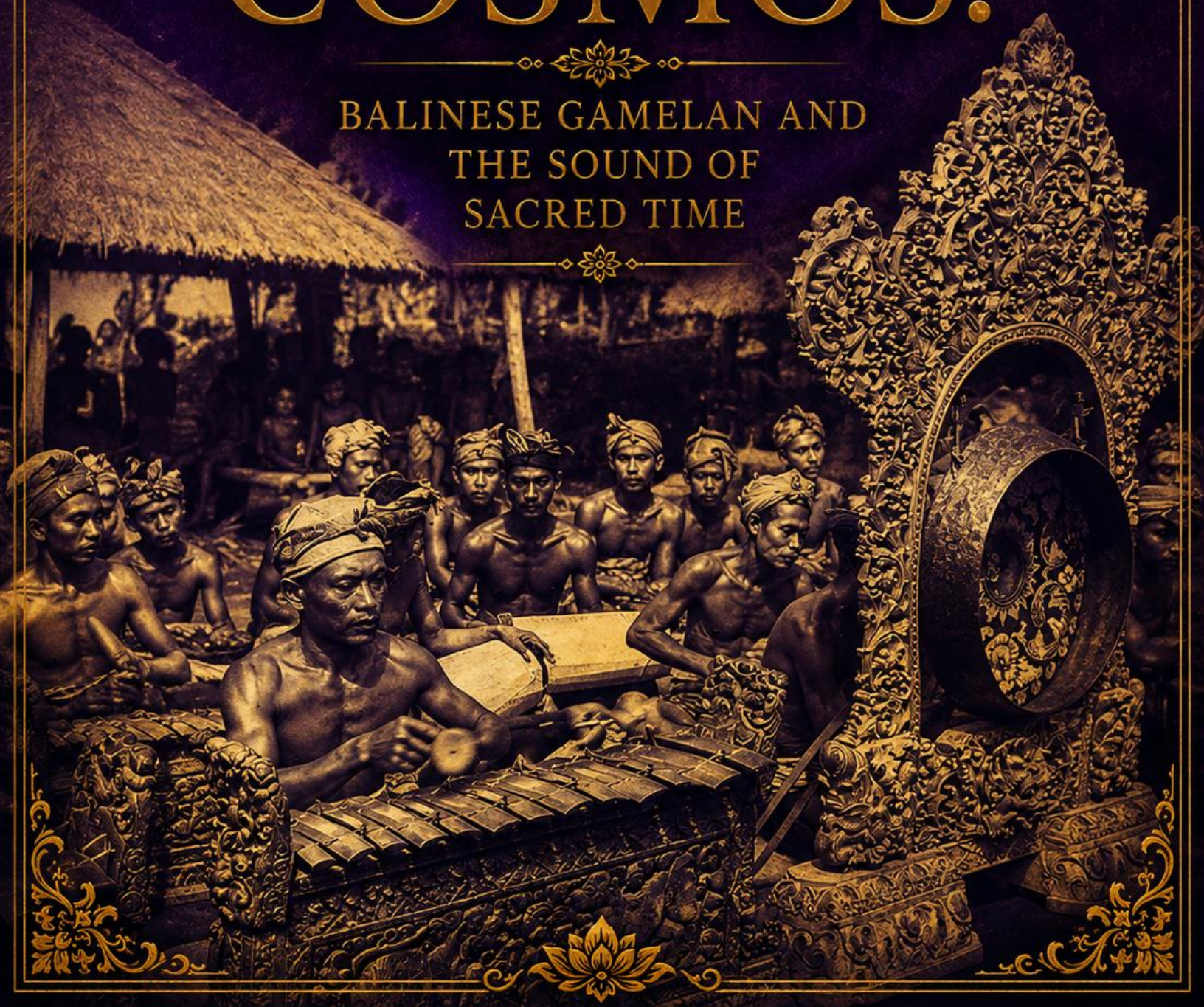




BRONZE AND COSMOS:

BALINESE GAMELAN AND
THE SOUND OF
SACRED TIME



Bronze and Cosmos: *Balinese Gamelan and the Sound of Sacred Time*

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First Edition

Opening the Gate

Few musical traditions have inspired as much fascination among outsiders while remaining so thoroughly embedded within local religious life as the gamelan of Bali. Early European travelers heard metallic sonorities that seemed to dissolve ordinary notions of melody and pulse. Anthropologists described temple festivals in which music appeared to continue without obvious beginning or conclusion, moving through cycles whose internal logic resisted transcription onto Western staff notation. By the middle decades of the twentieth century, composers and ethnomusicologists had begun carrying recordings of Balinese ensembles back to Europe and North America, where listeners often responded with equal measures of bewilderment and admiration. The sounds themselves seemed familiar and foreign at once: brilliant bronze timbres, sudden bursts of rhythmic activity, enormous gongs that punctuated the musical surface with an almost geological sense of time.¹

Many of those early descriptions now feel incomplete. They frequently isolated the music from the society that produced it, treating Bali as an artistic curiosity preserved beyond history. Colonial photography contributed to this impression. So did travel literature. Images of temple dancers and elaborately carved instruments circulated widely, while the political and economic realities of the island remained largely absent from public imagination. Music occupied a central place within this exotic vision, yet it often appeared detached from the ceremonies, villages, and families that sustained it.²

Published temple inventories, colonial administrative records, and Balinese chronicles present a more complicated picture. They list bronze instruments alongside agricultural resources, ritual obligations, and communal property, suggesting that gamelan occupied a central place within village life rather than existing as an independent artistic institution. Lansing and Vickers both note that donations of instruments frequently accompanied temple construction or renovation, linking musical patronage to broader patterns of religious and civic life.³

Photographs published during the 1920s and 1930s by figures such as Miguel Covarrubias and later reproduced in ethnographic studies show ensembles assembled beneath temporary ceremonial pavilions, musicians seated cross-legged while children gather nearby. These images document performance settings that differed markedly from the concert stages through which many international audiences first encountered Balinese gamelan.⁴

Listening carefully to Balinese gamelan requires a similar adjustment of expectation. The ear initially searches for harmonic progression or thematic development before slowly discovering that musical continuity is being organized elsewhere. Repeating gong cycles establish orientation. Layers of metallophones divide and recombine melodic fragments at astonishing speed. Resonance lingers long after individual attacks have disappeared. The sensation is less one of movement toward a destination than of inhabiting an acoustic landscape whose boundaries continually reveal themselves through recurrence. The experience can be strangely physical. Listeners often describe feeling the larger gongs before consciously hearing them.

The longer one remains with this repertory, the more difficult it becomes to separate musical practice from ritual practice. Temple anniversaries, cremation ceremonies, processions, shadow theater, masked drama, and village festivals all possess distinctive musical traditions whose histories intersect with broader transformations in Balinese religious life. The same instruments may accompany sacred offerings one week and public celebration the next, yet their ceremonial associations remain audible even outside explicitly religious contexts. Sound carries memory. Villagers who have participated in annual temple festivals since childhood frequently identify particular compositions not by formal titles but by the ceremonies with which they have long been associated.⁵

This study grew gradually from those observations. It began with questions about musical structure and eventually wandered into local histories, colonial archives, instrument workshops, photographs, ethnographies, and recordings separated by decades but connected through remarkably persistent ideas about sound and community. The argument that follows emerged slowly from those materials. Balinese gamelan appears not simply as a repertory or ensemble tradition but as a way of organizing collective experience through sound, one in which cyclical temporality, ritual obligation, craftsmanship, and musical performance remain deeply intertwined. The bronze instruments themselves endure across generations, but so do habits of listening that have shaped Balinese cultural life for centuries.⁶

Historical Development: Bronze, Courts, and Village Temples

Archaeological evidence for the earliest musical life of Bali remains fragmentary. Bronze drums associated with the Dong Son cultural sphere have been discovered across parts of Indonesia, suggesting that metallurgical knowledge circulated through maritime networks long before the rise of the Hindu-Buddhist kingdoms that later transformed the region.⁷ These great ceremonial drums were probably not ancestors of the modern gamelan in any direct sense, yet their presence indicates that bronze sound possessed ritual significance centuries before the first documented Balinese courts. Their surfaces, decorated with concentric circles and geometric designs, seem almost to anticipate the cyclical imagination that would characterize later musical traditions.

Chinese sources from the Tang and Song dynasties occasionally mention embassies and commercial exchange with islands in the Indonesian archipelago, although they reveal frustratingly little about music itself. Court chronicles prove equally elusive. References to musicians appear beside inventories of textiles, livestock, and ceremonial objects, suggesting that music belonged to the ordinary machinery of political life rather than existing as an independent art.⁸ The surviving evidence is often incidental. A bronze gong donated to a temple. A royal procession accompanied by percussion. Payments recorded for dancers whose names have long disappeared from memory.

The inscriptions found at Bebetin and other Balinese sites provide brief glimpses into this earlier world. Several refer to ritual specialists, festivals, and temple obligations whose performance almost certainly involved music, though the instruments themselves remain unidentified.⁹ Historians have occasionally attempted to reconstruct these ceremonies through

later ethnographic evidence, but such efforts require caution. Religious practice changed repeatedly across the centuries, absorbing influences from Java while preserving local customs that were themselves evolving.

The expansion of Hindu-Buddhist kingdoms across Java altered the cultural landscape of Bali in ways that remain visible today. Sanskrit texts circulated alongside local languages, temple architecture grew increasingly elaborate, and court patronage encouraged the cultivation of dance, literature, sculpture, and music. None of these developments unfolded evenly across the island. Coastal regions participated more directly in maritime trade, while upland communities often retained distinctive ceremonial traditions that survived alongside imported religious forms.¹⁰ The resulting cultural mosaic complicates any simple narrative of diffusion from Java to Bali.

Perhaps the most frequently cited episode in Balinese cultural history concerns the decline of the Majapahit Empire during the fifteenth century. Political instability in eastern Java encouraged the migration of priests, nobles, craftsmen, dancers, and musicians across the Bali Strait. Later Balinese chronicles remembered this movement almost as an act of cultural preservation, imagining the island as a refuge for classical Hindu civilization after the spread of Islam through much of Java.¹¹ The historical details remain debated, yet archaeological evidence and literary sources alike indicate that artistic exchange intensified considerably during this period.

Music accompanied that migration. Court repertoires appear to have traveled with aristocratic households, although they did not remain unchanged after arriving in Bali. Local ceremonial traditions absorbed new instruments, repertoires, and performance practices while retaining older ritual functions rooted in village life. The process seems to have unfolded gradually. One encounters few moments of abrupt replacement in the historical record. Instead there are layers of continuity interrupted by episodes of innovation whose precise chronology often remains uncertain.

Village temples became particularly important custodians of musical life. Inventories from later centuries list bronze ensembles among the possessions of religious communities alongside ritual textiles, carved images, and ceremonial umbrellas.¹² These instruments were expensive objects requiring specialized craftsmanship and substantial communal investment. Their acquisition often depended upon collective fundraising or royal patronage, circumstances that reinforced the connection between musical performance and civic identity.

Travel accounts from Dutch administrators during the nineteenth century occasionally pause to describe village festivals encountered during administrative tours. The descriptions are uneven. Some writers seem genuinely captivated by the sound of interlocking metallophones echoing through temple courtyards after sunset. Others complained that ceremonies disrupted taxation schedules or agricultural labor.¹³ Their observations nevertheless preserve details absent from official archives: children falling asleep beside instruments after midnight performances, women weaving offerings while musicians rehearsed nearby, processions moving slowly through villages illuminated only by oil lamps and the glow of ceremonial fires.

The colonial period also produced the first sustained efforts to document Balinese music through photography and sound recording. These technologies arrived at a moment of considerable political change, preserving fragments of repertoires that have since disappeared while inevitably filtering them through European expectations about authenticity and preservation. Early gramophone recordings capture remarkable performances, yet they cannot reproduce the physical environment of temple festivals where insects, conversation, distant chanting, and the resonance of stone courtyards mingle inseparably with the instruments themselves.¹⁴

By the opening decades of the twentieth century, Balinese musical life stood at a complicated historical crossroads. Court traditions remained influential, village ensembles flourished, colonial administrators promoted tourism, and foreign scholars began arriving with notebooks and recording equipment in search of unfamiliar sounds. Much of what later generations would identify as "traditional" Balinese music emerged from this period of remarkable historical movement, when inherited repertoires continued to evolve within ceremonies that had themselves never been entirely fixed.¹⁵

Sound, Ritual, and the Everyday Life of the Ensemble

The first sustained descriptions of Balinese gamelan written by foreign observers often begin with astonishment at the instruments themselves. Bronze keys seem to float above elaborately carved wooden frames painted in gold and vermillion, while suspended gongs hang beneath carved dragons whose bodies twist around the supporting beams. Even photographs struggle to convey their physical scale. The larger ensembles occupy entire pavilions, their instruments arranged with an architectural logic that reflects both acoustical necessity and ceremonial order.¹⁶

Many instruments bear visible evidence of long use. Bronze surfaces darken where generations of musicians have struck the keys thousands of times during rehearsals and temple festivals. The painted wood beneath them chips and fades before being restored by local craftsmen. Small repairs accumulate quietly over decades. Replacement keys are occasionally cast when cracks appear, but entire ensembles often remain together for centuries, acquiring a collective history remembered by the communities that maintain them. In several villages the instruments themselves possess names and ceremonial identities independent of the musicians who perform upon them.¹⁷

The process of constructing a gamelan remains highly specialized. Bronze is melted and poured into molds before repeated cycles of hammering and filing gradually shape each key to its desired resonance. Instrument makers speak less about numerical frequencies than about relationships between sounds. One key cannot be tuned until another has already been completed, and an adjustment made to a single metallophone may require corresponding changes elsewhere in the ensemble. The work proceeds by ear as much as by measurement. Apprentices often describe spending years listening before being entrusted with final tuning.¹⁸

Visitors sometimes assume that all gamelan ensembles sound alike. Recordings quickly dispel that impression. Ensembles from neighboring villages may differ noticeably in pitch level,

resonance, ornamentation, and performance style despite sharing much of the same repertory. There has never been a universal standard comparable to concert pitch in European orchestras. Each ensemble possesses its own acoustical character, preserved through local craftsmanship and transmitted across generations of musicians who learn its particular sound from childhood.¹⁹

The paired tuning of many metallophones contributes to this individuality. Two instruments assigned the same musical function are intentionally tuned slightly apart, producing audible pulsations when struck together. Balinese musicians refer to this phenomenon as *ombak*, literally "wave." The effect is difficult to capture through notation. One hears not a single stable pitch but a shimmering field of vibration that seems constantly alive, expanding and contracting within the surrounding resonance. Standing only a few feet from the ensemble, the sensation is almost tactile.²⁰

Temple festivals reveal these sonorities under conditions rarely encountered in concert halls. Music begins before dawn as offerings are arranged throughout the temple complex. Priests move between shrines carrying holy water and incense while villagers prepare food, weave palm-leaf decorations, and organize processions that will continue late into the evening. Children wander among the instruments before performances begin, occasionally sitting beside the great hanging gongs whose bronze surfaces reflect flickering candlelight. The boundaries separating performers from listeners remain remarkably fluid. Musicians leave the ensemble to assist with ceremonial preparations before quietly returning to their places.²¹

There is surprisingly little visible conducting. The drummer signals transitions through gestures and rhythmic cues that experienced musicians anticipate almost instinctively, while the larger gong cycles continue to orient the ensemble beneath increasingly dense layers of ornamentation. Foreign listeners often describe hearing apparent chaos during these passages until repeated listening reveals extraordinary precision concealed within the surface brilliance. The music seems to accelerate and suspend time simultaneously.

Commercial and ethnographic recordings produced during the middle decades of the twentieth century—including those documented by Colin McPhee and later collections discussed by Michael Tenzer—preserve something of this atmosphere despite the technological limitations of the period. Microphones captured not only metallophones and gongs but also environmental sounds that reveal the open acoustical character of Balinese performance spaces.²²

The ethnographic notebooks of the Canadian composer and scholar Colin McPhee contain repeated observations about rehearsals interrupted by ordinary village life. A child wanders into the middle of the ensemble. Someone pauses to repair an instrument stand. Tea is served before musicians return to difficult passages that require extraordinary concentration. The informality of these moments contrasts strikingly with the discipline required for performance itself. Technical mastery emerges gradually from social familiarity, repetition, and communal obligation more than isolated individual practice.²³

One leaves many temple festivals with the memory of resonance lingering longer than melody. The great gong sounds, its vibration fading slowly into the evening air while

conversations resume around the courtyard. Another cycle begins almost before the previous one has disappeared. For listeners accustomed to music organized through harmonic destination, the experience may feel strangely suspended. Time seems to gather around recurring sounds whose significance lies partly in their return.²⁴

Listening to Interlocking Time

Early phonograph recordings made in Bali often leave modern listeners with a curious impression. The performances seem impossibly fast. Metallophones flash across the sonic field with such density that individual attacks disappear into continuous metallic shimmer, interrupted only by the slow punctuation of larger gongs that seem to arrive from another temporal dimension altogether. Recording technology of the period exaggerated this sensation. Limited frequency response compressed the resonance of the lower instruments while emphasizing the brilliance of the upper registers, producing a sound that many European listeners initially described as nervous or frantic.²⁵

Those judgments perhaps reveal more about Western listening habits than about the music itself. A listener expecting melodic continuity naturally follows the upper instruments, where activity is most conspicuous. Balinese musicians often attend instead to the slower-moving structural layers that anchor the ensemble beneath the surface activity. The experience changes once the ear begins to follow the larger cycles. What first sounded chaotic gradually assumes an unexpected stability.

The core melody, known as the *pokok*, is frequently understated. Lower metallophones articulate it with remarkable restraint while surrounding instruments elaborate the same material through increasingly intricate patterns of ornamentation.²⁶ There are moments during performance when the structural melody almost disappears beneath the brilliance of the higher instruments, surviving only as an implied framework carried collectively by the ensemble. The listener senses its presence without always hearing it directly.

Ethnomusicologists have often described this texture as stratified polyphony, although the term captures only part of the experience. Sitting beside a gamelan during rehearsal, one becomes aware that different musicians inhabit different layers of musical time simultaneously. The largest gongs may sound only a handful of times during an extended cycle, while neighboring metallophones articulate dozens of notes within the same span. Nearby drummers anticipate transitions before they occur, shaping tempo through subtle gestures that pass almost unnoticed by unfamiliar audiences.²⁷

The celebrated technique known as *kotekan* occupies a central place within this texture. Two performers divide a rapid melodic pattern between them, alternating notes so quickly that the resulting line exceeds the physical capacity of a single musician. Observed visually, the technique resembles weaving. One player's hands rise as the other's descend, each filling spaces left intentionally vacant by the other. The completed pattern exists nowhere except between them.²⁸

Several Balinese musicians interviewed during the twentieth century described learning these passages without formal notation, memorizing complementary patterns through repetition until bodily movement became almost automatic. Younger performers frequently rehearsed alongside older relatives for years before assuming public roles during temple festivals. The process depended less upon explicit explanation than prolonged immersion. One learns by sitting nearby, listening, imitating, and waiting.²⁹

There is a temptation to compare *kotekan* with Western counterpoint, although the analogy only goes so far. Renaissance polyphony privileges independent melodic lines whose interaction produces harmonic consequence. Balinese interlocking patterns seem animated by different priorities. Individual parts often sound fragmentary when isolated, acquiring coherence only through collective execution. The pleasure lies partly in this dissolution of individual agency into larger rhythmic process.

Michael Tenzer has remarked that analytical reduction can obscure as much as it reveals when approaching Balinese repertory. Transcription preserves pitch and rhythm with admirable precision, yet the shimmering acoustical life of the ensemble remains difficult to represent on paper.³⁰ Notation records events. Resonance exists between them. The slight pulsations created by paired tuning, the overlapping decay of bronze keys, and the acoustics of open temple pavilions contribute as much to musical experience as the notes themselves.

One notices this especially at the close of extended performances. The ensemble reaches a cadence marked by the great gong, yet silence never arrives immediately. Resonance lingers across the courtyard while musicians remain motionless for several seconds before conversation resumes. The performance appears finished, though the sound continues quietly through stone floors, wooden beams, and evening air. The distinction between music and its afterlife becomes unexpectedly difficult to locate.

Accounts written by foreign composers during the first half of the twentieth century often dwell upon these lingering vibrations. Colin McPhee repeatedly described hearing the resonance of temple ensembles long after returning to his residence at night, the distant bronze sonorities carried across rice fields by humid air.³¹ Whether memory intensified those impressions is impossible to determine. Yet similar observations recur across diaries, field recordings, and oral histories collected decades apart, suggesting that the acoustical environment surrounding gamelan performance has shaped listening as profoundly as the repertory itself. The music unfolds through recurrence. A gong returns. An interlocking figure reappears with subtle variation. The ear begins to anticipate events not because they progress toward a conclusion but because they inhabit cycles whose familiarity deepens through repetition. After sufficient listening, what initially seemed dense and bewildering begins to feel almost inevitable.³²

Village Life, Ceremony, and Musical Memory

The annual temple festival, or *odalan*, remains one of the principal settings in which Balinese gamelan acquires its fullest meaning. Every temple follows its own ceremonial calendar, determined according to the Balinese Pawukon cycle, and preparations often begin several days

before the first musicians assemble. Women carry towering arrangements of fruit and flowers balanced effortlessly upon their heads while families decorate shrines with woven palm ornaments that will last only a few days before drying beneath the tropical sun. Chickens wander through temple courtyards as priests arrange offerings before dawn. Somewhere nearby, instruments are already being uncovered from protective cloths that have concealed them since the previous ceremony.³³

The opening sounds seldom announce themselves dramatically. A single metallophone begins to test its tuning. Another musician quietly dampens a key after striking it, listening for the familiar shimmer produced by its paired instrument. Drums answer with brief rhythmic fragments before falling silent again. The ensemble appears to awaken gradually, almost conversationally, long before formal performance begins. Village children drift toward the pavilion and imitate the motions of older musicians on imaginary instruments carved from memory and observation.

Accounts recorded during the Dutch colonial period repeatedly remark upon the sheer duration of these ceremonies. Performances could continue for hours, interrupted by processions, prayers, meals, and theatrical episodes that blurred distinctions between ritual and entertainment.³⁴ Foreign observers often searched for a beginning or conclusion that participants themselves may not have recognized with the same urgency. Musical activity rose and subsided with the movement of the ceremony, accompanying processions one moment and lingering quietly in the background the next while offerings were presented inside the temple walls.

The social composition of the ensemble has always reflected local circumstances. Some villages maintained prestigious orchestras through royal patronage, while others depended upon cooperative labor and communal fundraising to acquire new instruments. Temple records occasionally preserve lists of donors whose contributions financed the casting of bronze keys or the repair of damaged gongs after decades of ceremonial use.³⁵ The names themselves rarely appear elsewhere in historical documents. Their gifts survive acoustically long after their biographies have disappeared.

Published oral histories collected during the late twentieth century include musicians who described recognizing neighboring ensembles by their distinctive resonance long before the instruments themselves came into view. Similar recollections appear in ethnographic interviews reproduced by Tenzer and other scholars, where performers frequently associated the sound of particular ensembles with specific villages, ceremonies, and family histories.³⁶

The close association between instruments and community extends even to questions of ownership. A gamelan rarely belongs to an individual musician. It belongs to a temple, a village association, or a ceremonial organization whose members collectively maintain it across generations.³⁶ Instruments damaged by age are repaired with considerable care, and when replacement becomes necessary the process itself may involve ritual observances acknowledging the transition. Bronze is never entirely ordinary material. It accumulates memory through repeated ceremonial use.

Musical education unfolds quietly within these communal settings. Children first absorb repertory through proximity, sitting beside rehearsals or watching older siblings during temple festivals before receiving formal instruction. Errors are corrected through demonstration more often than verbal explanation. Hands are guided physically across bronze keys. Rhythms are repeated until they become bodily habits difficult to separate from ordinary movement. The distinction between rehearsal and social gathering often remains ambiguous, particularly in village settings where conversation, laughter, and instruction proceed simultaneously.³⁷

Visitors occasionally mistake this informality for lack of discipline. The opposite appears closer to the truth. Extraordinary precision emerges from years of collective familiarity during which musicians learn to anticipate one another through peripheral vision, shared breathing, and accumulated experience. During particularly demanding passages of *kotekan*, performers often glance toward neighboring players only briefly before returning their attention to the instruments. Coordination has already migrated into muscle memory.

Ethnographic film from the 1930s captures one such rehearsal in remarkable detail. A drummer suddenly interrupts the ensemble, smiles, and repeats a difficult transition. The musicians laugh before beginning again from several measures earlier. No frustration appears visible. The passage is attempted repeatedly until the ensemble arrives together at the following gong stroke, where the entire group pauses almost imperceptibly before continuing forward.³⁸ The moment lasts only seconds, yet it reveals something difficult to express analytically: technical mastery grows from communal patience as much as individual ability.

Perhaps this helps explain why Balinese musicians so often speak of gamelan through the language of obligation instead of performance. Temple anniversaries return. Instruments are uncovered once again. Younger musicians take the places formerly occupied by parents and grandparents. Bronze keys continue to resonate beneath familiar hands while children wait nearby for their own turn to join the ensemble. The continuity is historical, but it is also audible.³⁹

Gong Kebyar and the Sound of a Changing Island

Many Balinese musicians speak of older repertories with a certain reserve. The music associated with court traditions and temple ritual is often described as refined, measured, and patient, its movements unfolding through carefully sustained cycles whose proportions reveal themselves only over extended listening. Yet visitors arriving in Bali during the early decades of the twentieth century increasingly encountered something different. Ensembles performed with startling dynamic contrasts, sudden accelerations, explosive rhythmic figures, and abrupt silences that seemed almost theatrical. Contemporary observers frequently remarked that the music appeared new, although few agreed precisely how new it actually was.⁴⁰

The style came to be known as *gong kebyar*. The Balinese word *kebyar* carries associations of bursting into flame or flashing suddenly into brilliance, an image that musicians themselves often invoke when describing the repertory. The metaphor is unusually apt. Performances begin with moments of near stillness before erupting into rapid interlocking passages whose energy can seem almost uncontrollable, only to collapse once more into suspended resonance marked by the

deep voice of the great gong. Early recordings preserve this volatility imperfectly, but enough remains to suggest why audiences found the music so compelling.⁴¹

The historical circumstances surrounding its emergence remain somewhat elusive. Some scholars locate its origins in northern Bali during the first decades of the twentieth century, linking its development to changing patterns of patronage after the decline of royal courts. Others emphasize broader social transformations associated with colonial administration, expanding tourism, and increasing interaction between villages whose musical traditions had previously remained more localized. The evidence points in several directions at once. Innovation appears to have emerged collectively through many ensembles rather than through a single identifiable composer or court.⁴²

One repeatedly encounters stories of village competitions in which ensembles attempted to astonish neighboring audiences through unprecedented speed and precision. Oral histories recorded late in the twentieth century preserve memories of musicians rehearsing difficult passages late into the night before public festivals, determined to outperform rival villages whose reputations rested upon the brilliance of their gamelan. The competitive element may account for some of the technical escalation visible in surviving repertoires. Complexity became a source of communal prestige.

Listening to *gong kebyar* after older ceremonial music can feel almost disorienting. The metallophones seem sharper, the drumming more aggressive, the tempo unexpectedly fluid. Rapid interlocking passages dissolve into unison strikes before fragmenting again into shimmering rhythmic layers. Yet beneath these dramatic surfaces the familiar gong cycles continue quietly organizing musical time. The underlying architecture remains recognizably Balinese even as the musical language expands toward new expressive possibilities.⁴³

Dance changed alongside the music. Choreographers developed movements of remarkable angularity and speed, punctuated by sudden changes of direction synchronized with rhythmic accents from the ensemble. The famous widening of the eyes associated with Balinese dance appears almost inseparable from these musical gestures when observed in performance. One senses musicians and dancers responding to one another continuously, each shaping the timing of the other through minute adjustments impossible to anticipate from notation alone.

Film footage from the 1930s preserves several performances that continue to circulate among scholars today. Grainy black-and-white images show dancers moving with astonishing precision while musicians seated behind them strike bronze keys with movements that appear almost economical by comparison. The contrast is striking. Extraordinary sonic complexity emerges from gestures that rarely seem exaggerated or theatrical. Hands rise only slightly above the instruments before returning with quiet accuracy to the bronze surface.⁴⁴

Foreign composers who encountered *gong kebyar* frequently struggled to describe what they had heard. Colin McPhee's notebooks reveal repeated attempts to reconcile the music's explosive rhythmic energy with analytical categories inherited from European composition. He transcribed tirelessly, yet occasionally admitted that notation seemed inadequate for representing

the living movement of performance itself. Similar frustrations appear in later ethnographic accounts, where writers describe the difficulty of separating rhythm, gesture, resonance, and bodily movement into discrete analytical categories.⁴⁵

The spread of *gong kebyar* across Bali during the twentieth century did not erase older repertoires. Temple ensembles continued performing ceremonial music whose histories extended back generations, while villages adopted newer styles for festivals, competitions, and theatrical productions. The coexistence of these traditions complicates narratives of musical progress or replacement. Older and newer repertoires frequently inhabit the same ceremonial calendar, performed by the same musicians using instruments that themselves may be considerably older than the compositions they now articulate.

Visitors often remember *gong kebyar* because of its virtuosity. Local musicians frequently remember something else: the rehearsals, the collective labor of preparation, the excitement surrounding village festivals, and the quiet satisfaction of arriving together at the final gong stroke after months of communal practice. The brilliance of performance occupies only a small portion of the music's social life. The longer history unfolds in workshops, temple courtyards, and evening rehearsals where the next generation gradually learns to hear time through bronze.⁴⁶

Across the Ocean: Recordings, Archives, and the Global Circulation of Gamelan

The first commercial recordings of Balinese music traveled much farther than the musicians who performed upon them. Shellac discs produced during the colonial period circulated through European collections, museums, universities, and private homes where listeners encountered sounds detached from the ceremonies that had originally given them purpose.⁴⁷ Labels supplied only brief descriptions—"native orchestra," "temple music," "dance accompaniment"—reducing highly localized traditions to generalized categories intended for foreign markets. Yet these recordings became the first sustained encounters many Western musicians had with Balinese gamelan.

The surviving discs possess an unmistakable acoustic character. Surface noise obscures the quieter instruments, while the limited frequency range of early recording equipment compresses the lower registers into a narrow band of resonance. High metallophones dominate the texture. The great gongs seem distant, arriving through static that occasionally swallows entire attacks before allowing their lingering vibration to emerge. Listening to these recordings today requires a certain patience. Their imperfections have become part of the historical document itself.⁴⁸

Archives preserve other traces of those encounters. Correspondence between museum curators and colonial officials records requests for instruments to be shipped to Europe for exhibition. Packing inventories list bronze keys individually alongside shipping crates, weights, and customs declarations. One document notes concern that tropical humidity had altered the tuning of an instrument during transport, although no explanation follows regarding how such a change might actually have been measured.⁴⁹ The observation remains almost incidental, yet it hints at the difficulty of separating gamelan from the environment in which it had long existed.

Photography played an equally significant role in shaping foreign perceptions of Balinese music. Images published during the 1920s and 1930s frequently emphasized visual symmetry: rows of metallophones, dancers frozen in elaborate poses, temple courtyards framed by carved gateways and flowering trees. Sound itself disappeared from these photographs, replaced by carefully composed representations of cultural permanence. The performances had ended by the time the shutter closed, but the photographs encouraged viewers to imagine timeless traditions existing beyond historical change.

The notebooks of foreign scholars tell a different story. Margins are filled with corrections, uncertain transcriptions, alternative spellings of village names, and occasional admissions that the music had moved too quickly to record accurately. One page preserved among Colin McPhee's papers consists almost entirely of crossed-out rhythmic figures followed by the simple observation: "too fast to hear separately."⁵⁰ Such moments of hesitation are revealing. They remind the reader that ethnographic knowledge often begins with failure before gradually approaching understanding.

American and European composers who encountered gamelan through recordings frequently responded to rhythm before melody. The repetition of large gong cycles, the density of interlocking metallophones, and the absence of conventional harmonic progression suggested organizational principles unfamiliar within much twentieth-century concert music. The influence has sometimes been overstated, but traces of Balinese listening can be heard across a surprising range of experimental composition after the Second World War. Repetition acquired new significance. Duration itself became compositional material.

Universities in North America and Europe began acquiring complete gamelan ensembles during the second half of the twentieth century. Many arrived through cultural exchange programs or direct collaboration with Balinese instrument makers, who supervised construction and installation abroad. Students encountering these instruments often describe an initial sense of uncertainty. The keys cannot simply be struck and allowed to ring. Every note must also be dampened by the opposite hand, requiring movements that feel unfamiliar even to experienced percussionists.⁵¹ The body learns a different choreography.

Rehearsals outside Bali inevitably unfold under different conditions. Temple calendars no longer determine performance schedules, and village obligations give way to academic semesters or community concerts. Yet many ensembles preserve traditions of collective responsibility inherited from Balinese practice. Instruments are uncovered together, moved together, and carefully covered again after rehearsal. New members often learn by sitting beside more experienced players rather than beginning with written notation. The pedagogy itself travels alongside the repertory.

Questions of cultural ownership occasionally surface within these international contexts. Can ritual music be separated from ritual space? Does performance in a university recital hall alter the meaning of compositions originally associated with temple festivals? Musicians and scholars have offered differing answers over the past several decades. Some emphasize preservation through

performance, while others caution against reducing ceremonial traditions to concert repertory. The debate remains unresolved, perhaps because no single answer can encompass the diversity of Balinese musical life itself.⁵²

One notices, however, that the physical sound of bronze continues to affect listeners regardless of context. The paired tuning of metallophones still produces its characteristic shimmer. Large gongs continue to suspend ordinary perceptions of pulse. Students unfamiliar with Balinese music frequently describe losing track of measure numbers while becoming increasingly aware of recurring cycles whose proportions are sensed more than counted. The experience appears remarkably consistent across cultures.

The archive continues to expand. Digital recordings now preserve performances once documented only through memory, while village musicians upload rehearsals and ceremonies to online platforms viewed by audiences thousands of miles away. The circulation of Balinese gamelan has accelerated beyond anything imagined by the collectors of colonial shellac discs. Yet recordings remain partial witnesses. They preserve sound while leaving behind incense smoke, evening humidity, temple architecture, shared meals, and the quiet conversations that unfold between rehearsals. Those absences may be impossible to archive.⁵³

Listening Again: Time, Resonance, and the Persistence of Bronze

After spending months with archival recordings and contemporary performances, one begins to notice that many written descriptions of Balinese gamelan devote surprisingly little attention to decay. Musicological analysis often privileges attack—the instant a bronze key is struck or a gong enters the cycle—but the sound's gradual disappearance may be equally important. Resonance lingers beneath subsequent events, creating layers of acoustic memory that remain present even after the ear has shifted elsewhere.⁵⁴ A transcription records onset and duration with admirable precision, yet the living experience of the sound continues well beyond the notation.

Recordings made in village temples occasionally preserve this effect by accident. Microphones placed too close to the ensemble capture overlapping vibrations that accumulate into dense clouds of metallic resonance, obscuring individual pitches while revealing the extraordinary acoustical life of the instruments themselves. Engineers sometimes regarded these artifacts as flaws requiring correction. For listeners accustomed to temple performance, they may document something essential about the music's natural environment. Open pavilions, stone courtyards, tiled roofs, and humid evening air all participate quietly in the production of sound.

The acoustics of Balinese temples deserve more attention than they have generally received. Many performance spaces are only partially enclosed, allowing resonance to escape into surrounding gardens while insects, birds, and distant conversations enter almost imperceptibly into the musical texture.⁵⁵ There is rarely complete separation between performance and environment. Wind passing through palm leaves contributes its own rhythm. Dogs bark beyond the temple walls. Children whisper behind the musicians until a large gong momentarily silences everything else.

Several ethnographers noted that village audiences rarely remained motionless throughout extended ceremonies. People arrived and departed freely according to ritual obligations, family responsibilities, or simple curiosity. Meals were prepared nearby. Offerings continued to be arranged while music unfolded. Foreign visitors occasionally interpreted this movement as distraction, yet local participants appear to have understood musical attention differently. Listening coexisted comfortably with conversation, labor, prayer, and social interaction. Sound circulated through communal life without demanding exclusive concentration.⁵⁶

The metallophones themselves encourage this distributed attention. Their bright attacks emerge clearly from surrounding activity before dissolving into resonance that mingles with voices and environmental sound. The great gongs perform a different function altogether. Their low frequencies seem to gather the surrounding acoustical space into a single moment before releasing it once more into ordinary village life. Musicians often pause almost imperceptibly after these strokes, allowing the bronze to speak without interruption.

One repeatedly encounters references to memory in interviews with Balinese performers. They remember the sound of a particular gong that cracked decades earlier. They recall rehearsals before cremation ceremonies for respected elders whose names younger musicians no longer recognize. Some speak of instruments as though describing elderly relatives whose personalities have remained remarkably consistent across time.⁵⁷ Such recollections blur distinctions between musical history and local history. Instruments become repositories of communal experience.

The remarkable longevity of bronze contributes to this phenomenon. Wooden frames decay and require restoration, decorative paint fades beneath tropical weather, and leather bindings occasionally need replacement, yet the sounding metal often survives across centuries with surprisingly little alteration. The same instrument may accompany generations of ceremonies while villages themselves undergo political, economic, and demographic transformation. Its resonance links moments separated by lifetimes.

Perhaps for this reason Balinese musicians so frequently describe tuning in relational rather than numerical terms. An instrument sounds correct because it belongs with its companions, because its shimmer matches familiar expectation, because the ensemble breathes as remembered. Frequency measurements can document these relationships, but they cannot entirely explain them. The ear recognizes a social history embedded within acoustical experience.⁵⁸

The historian eventually reaches the limits of documentation. Archives preserve recordings, inventories, correspondence, photographs, and transcriptions with admirable care, yet the lived experience of village ceremony remains only partially recoverable. One can identify repertoires, trace instrument construction, reconstruct patronage networks, and compare field recordings separated by decades. The sensation of evening humidity settling over a temple courtyard while bronze resonance fades into darkness belongs to another category of evidence altogether.

Those absences should not necessarily be regarded as failures of scholarship. They remind us that musical history survives through practices as much as documents. Every rehearsal renews knowledge that has never existed entirely on paper. Every temple festival carries forward habits of listening acquired through participation rather than explanation. The archive expands each year, but the most durable repository of Balinese gamelan continues to reside in collective memory, where cycles of sound return with remarkable persistence long after individual performances have disappeared.⁵⁹

Returning to the Gate

The last sound to disappear at a Balinese temple festival is often the great gong. Its vibration remains suspended in the air for several seconds after the musicians have already lowered their mallets, lingering across stone courtyards and open pavilions before gradually dissolving into insects, conversation, and the ordinary sounds of evening. Observers have remarked upon this moment for more than a century. Some heard resolution. Others heard silence. The musicians simply waited until the resonance had completed its course before moving again.⁶⁰

Looking back through colonial archives, ethnographic notebooks, temple inventories, and commercial recordings, one is struck less by continuity than by adaptation. Ensembles changed. Repertoires expanded. Court patronage declined while village associations assumed greater responsibility for preserving ceremonial traditions. Tourism introduced unfamiliar audiences, conservatories formalized instruction, and digital technology carried performances across the world within moments of their completion. Yet bronze instruments cast generations ago continue to sound beneath temple roofs where offerings are still prepared according to calendars older than the modern Indonesian state itself. Historical change has never required historical rupture.

Many Western writers first encountered gamelan through questions of rhythm or tuning, fascinated by interlocking patterns and unfamiliar scales. Those subjects remain worthy of attention, but prolonged listening gradually shifts emphasis elsewhere. Memory becomes audible. The sound of a particular ensemble belongs to a village in much the same way that a dialect belongs to its speakers or a temple belongs to its congregation. Instruments accumulate biographies through repeated ceremonial use, and musicians inherit those histories every time they sit before the bronze keys.⁶¹

The historical record preserves countless small moments that resist broad interpretation: repairs noted in temple inventories, damaged gongs recast after earthquakes, colonial officials delayed by religious festivals, scholars crossing out failed transcriptions in notebooks because the music moved too quickly to capture. Such details rarely appear in general histories of Southeast Asian music, yet together they suggest that gamelan has survived not through isolation from history but through constant negotiation with it. Ceremonies continue because communities continue to rebuild them.

One also notices how frequently conversations about Balinese music return to listening itself. Not analysis. Not notation. Listening. Instrument makers speak of hearing balance emerge gradually during tuning. Elder musicians recognize neighboring ensembles before they come into

view. Children memorize repertory long before learning the names of individual compositions. Foreign researchers describe reaching understanding only after abandoning the expectation that every musical event must lead toward climactic resolution. The archive repeatedly returns to the ear.

There may be a lesson in that persistence. Musicological language often seeks precision through classification, reducing sound to intervals, meters, forms, and repertoires that can be compared across cultures. Balinese gamelan certainly rewards such analysis, yet its most enduring qualities seem to reside elsewhere—in resonance that exceeds notation, in communal performance that exceeds individual virtuosity, and in cycles whose significance emerges only through repetition across years rather than minutes.⁶²

The bronze continues to ring after the mallet has left the key. That simple acoustical fact has shaped generations of musicians who learned to hear time through sustained vibration instead of abrupt conclusion. Perhaps this explains why so many first-time listeners leave Balinese performances unable to remember exact melodies while recalling with extraordinary clarity the sensation of sound itself lingering in space. The music remains present because its disappearance is gradual.

The argument of this study arrived slowly, and perhaps it could have arrived differently. Months spent with archival recordings, photographs, field notes, and ethnographies produced fewer certainties than expected. What emerged instead was an appreciation for the remarkable durability of practices transmitted through participation rather than texts, through shared ceremonies rather than individual authorship, through bronze instruments whose voices outlive the generations that cast and played them. Their resonance carries history in a form that no document can entirely preserve.

Long after the festival has ended, the pavilion stands empty again. The instruments are covered with cloth, offerings removed, lamps extinguished, and the village returns to ordinary routines until the next ceremonial cycle arrives. The bronze waits in silence that is only temporary. Somewhere beyond the archive, another rehearsal has already begun.⁶³

Notes

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4. Miguel Covarrubias, *Island of Bali* (Singapore: Periplus Editions, 2006), 165–172.
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6. Michael Tenzer, *Balinese Music*, 9–15.
7. Margaret J. Kartomi, *On Concepts and Classifications of Musical Instruments* (Chicago: University of Chicago Press, 1990), 144–150.
8. Adrian Vickers, *Bali: A Paradise Created* (Singapore: Tuttle Publishing, 2012), 21–33.
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19. Michael Tenzer, *Balinese Music*, 60–68.
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22. Colin McPhee, *Music in Bali*, xxiii–xxix.
23. Colin McPhee, *A House in Bali* (Singapore: Periplus Editions, 2000), 187–196.
24. Michael Tenzer, *Balinese Music*, 71–78.
25. Colin McPhee, *Music in Bali*, 188–202.
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27. Michael Tenzer, *Balinese Music*, 80–93.
28. Colin McPhee, *Music in Bali*, 210–222.
29. Benjamin Brinner, *Knowing Music, Making Music: Javanese Gamelan and the Theory of Musical Competence and Interaction* (Chicago: University of Chicago Press, 1995), 41–52.
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31. Colin McPhee, *A House in Bali*, 242–251.

32. Michael Tenzer, *Balinese Music*, 121–130.
33. J. Stephen Lansing, *The Balinese*, 88–97.
34. Miguel Covarrubias, *Island of Bali*, 280–292.
35. Adrian Vickers, *Bali: A Paradise Created*, 115–126.
36. J. Stephen Lansing, *Perfect Order*, 92–100.
37. Benjamin Brinner, *Knowing Music, Making Music*, 76–88.
38. Michael Tenzer, ed., *Gamelan Gong Kebyar*, 95–108.
39. J. Stephen Lansing, *The Balinese*, 104–112.
40. Michael Tenzer, ed., *Gamelan Gong Kebyar*, 13–26.
41. Michael Tenzer, *Balinese Music*, 136–149.
42. Adrian Vickers, *Bali: A Paradise Created*, 157–169.
43. Colin McPhee, *Music in Bali*, 246–260.
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60. Colin McPhee, *Music in Bali*, 270–277.
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63. Colin McPhee, *A House in Bali*, 329–334.

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