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The Phenomenon of the Indonesian Gamelan Orchestra in World Music Culture

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Abstract. In complex and multi-layered musical cultures from different regions of the world, it is not easy to identify phenomena that have represented the most complete repository of their characteristic features over a long period of time. The tradition of orchestral music-making, known as gamelan, can be attributed to such phenomena. It is one of the key, defining phenomena not only of Indonesia and the Southeast Asian region, but also of world musical culture as a whole. In this article, we sought to identify the main essence of Javanese music by analyzing the terminological array that has developed within the gamelan tradition, considered in a systematic-typological comparison both within Indonesian musical culture and in relation to other regions. Let us begin by considering the most important and general concept for any musical culture, “music” (at least in the sense in which it is used within Western civilization), which includes all phenomena related to the field of sound, tone, and sound creation in general. Neither Indonesian nor Javanese languages have developed such a general term. The term musik (from the Dutch musiek), which appeared at the turn of the 19th and 20th centuries, is used exclusively in relation to Western music, and only for academic music, while the term pop is used to refer to popular forms. This emphasized, on the one hand, the influence of contemporary Western pop culture on popular forms of music-making prevalent in Indonesian cities (particularly noticeable since the early 1960s) and, on the other hand, the features of their distinct identity, which make it easy to distinguish this music from Western music.

Keywords: orchestra, gamelan, gong, gendang, viruma, karawitan, slendro, pelog

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Introduction

Our many years of studying various musical cultures confirm the special significance of instrumental sound production in the musical practices of peoples around the world. Musical instruments firmly connect sound with the material world (since their design and sound are largely determined by the natural and ecological environment) and therefore, to a greater extent than the singing voice, carry all the symbolic burdens of civilization. Thus, the legends and myths of ancient India constantly show us cultural heroes or representatives of the divine pantheon playing various musical instruments, which testifies to the depth of the “instrumental code” in musical culture. Brahma’s wife, Saraswati, the goddess of knowledge and art, is traditionally depicted on many temple bas-reliefs with a stringed musical instrument called a vina. According to myth, Ganesha, the son of the god Shiva, was the first performer on a double-membrane cylindrical drum. In Indian iconography of the Middle Ages, the image of Krishna (one of the incarnations of the god Vishnu) playing the flute became widespread.

In the Far East region, the attitude towards musical instruments has been closely linked since ancient times to the belief in nature spirits and ancestors, who often chose them as their dwelling places. At an early stage of its development, the musical instrument was chosen in China as a special sacred object, even introduced into traditional cosmogonic myths, since its sound was regarded as a means of contact with other worlds. The sound and musical practices of China’s cultural heroes (the legendary rulers and first ancestors Shun, Yan Di, Fuxi, the goddess Nüwa, and others) is also associated with

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sound instruments (bells, gongs, drums, zithers, bamboo flutes), which were believed to have the ability to maintain harmony and order in the universe.

In Southeast Asia (SEA), the divine Batara Guru, hero of the Javanese myth about the origin of music, made three gongs — tetabuhans — which he used to send signals to all the gods and bring order to the universe [1]. The gong in Southeast Asia (SEA) is not only an important sound symbol, but also a special sacred object (pusaka). It is not surprising that the process of making gongs and kris (famous Javanese daggers) was associated with many taboos and accompanied by sacrifices to protect blacksmiths from the malice of evil spirits (*To this end, blacksmiths even temporarily changed their secular names, replacing them with names from stories about Panji*). A gong made for a ruler was the main sacred object in the state and was kept in a specially designated room, hidden from the eyes of outsiders [2].

Materials and Methods

In complex and multi-layered musical cultures of different regions of the world, it is not easy to identify phenomena that, over a long period of time, would represent the most complete repository of their characteristic features. The sound and musical sphere of regional civilizations around the world provides us with a few such examples: music played on the qin in China, pansori storytelling in Korea, the drawn-out singing of urtyn-duu in Mongolia, Buddhist shomyo chants in Japan, the North Indian vocal genres of dhrupad and khaial, the Arabic muwashshah, the traditions of African drum ensembles, etc. The tradition of orchestral music-making, known as gamelan, can be attributed to this type of phenomenon. This is one of the key, defining phenomena not only of Indonesia and the entire Southeast Asia, but also of world musical culture as a whole.

Gamelan, known to representatives of Western civilization as early as the 16th–18th centuries (judging by the notes of European travelers, such as the famous navigators Francis Drake, Fernão Mendes Pinto, and others), and possibly even earlier, impressed them with its vivid and original embodiment of the orchestral polyphonic idea, which, moreover, was realized “without notes and without a conductor.” English naturalist A. Wallace, who visited the Malay Archipelago in 1855–1862, does not hide his admiration for the gamelan, noting, “the pieces performed were very long and complex; many of the musicians were children and therefore played with great care... the overall impression was very pleasant...” [3]. In our opinion, a very accurate description of the sound of the gamelan was left by the Russian consul in Batavia (late 19th century) M.M. Bakunin: “A concert performed by a full gamelan ensemble, such as at the palace in Solo, makes a pleasant and sympathetic impression: there is nothing sharp, no tones that shock the ear, the sounds seem to steal from afar, muffled by a mute, but there is no melody in these motifs, all built on the same mode, and on only one mode at that. At least, that is how it seems. The ensemble is harmonious and gentle, like the character of this people, but nothing remains in the mind and memory after the performance of a Javanese musical piece” [4].

The degree of study of the problem. With the beginning of the study of foreign musical traditions by Western researchers, as well as Indonesian scholars, the phenomenon of gamelan came into focus. The complexity of understanding this issue lay primarily in the absence in Javanese culture of a tradition of scholarly treatises on music, which would explain the most important concepts, classifications of modal systems, principles of temperament, etc. in the process of historical evolution. The situation seemed quite paradoxical, especially considering the complexity and sophistication of gamelan musical texts, which contain perhaps

even more elements than is the case in the leading genres of Indian or Chinese musical cultures. The first attempts to describe the gamelan tradition by the Javanese themselves (such as *K.R.T. Wiraguka*, *K.R.T. Kertanegara* (19th century), and *R.T. Warsodiningrat* (20th century)) were made only in the late 18th and early 19th centuries. They were something between a court chronicle and a poetic legend, a practical guide to playing instruments, and memoirs of outstanding musicians who, in creating these texts, drew on their personal experience without claiming to generalize even at the level of gamelan playing within the area adjacent to the kraton.

Source base. Dutch ethnomusicologist J. Kunst was the author of the first major works [2] on Javanese music, which remain informative to this day and are striking in their scope of generalization. Drawing on the experience of the acoustic school and its achievements, he did a tremendous job of measuring the sound ranges of hundreds of gamelans, vainly trying to capture systemic patterns, a kind of “ideal” model. And despite the fact that practical fieldwork confronted him with the uniqueness of each specific gamelan’s tuning, he still could not resist the temptation to “adapt” the material at his disposal to a certain abstract theoretical idea of a paired pelog-slendro scale system.

The publications of the prominent American ethnomusicologist Mantle Hood, which appeared almost twenty years after the publication of Kunst’s seminal work and contained criticism of many of its propositions, did not significantly influence the established system of ideas about gamelan at that time. This is despite the fact that one of his works examines such an important issue as *patet*, which the scholar defined as “the idea of tonality applied to two unevenly tempered systems of scales – *slendro* and *pelog*” [5].

The subsequent stage of studying the gamelan tradition, relating to the 1970s and 1980s, can be characterized as one distinguished by considerable pluralism in approaches and research methods. Among the works that appeared during this period, those that use computer analysis methods to compare modal modulations within gamelan compositions (works by F. Lieberman, J. and A. Baker, and others) are particularly noteworthy.

Cultural contacts between civilizations always take place through many channels and, of course, are not limited to the realm of purely scientific interest. Parallel to this, we can trace the path of compositional interpretation of the gamelan tradition, begun in its time by Claude Debussy and continued by American composers, mainly those whose work took place on the west coast of the United States – K. McPhee, A. Hovhaness, X. Cowell, X. Parche, J. Cage, Lou Harrison, and others. The gamelan principle of thinking largely determined a new direction in music that began to develop in the United States in the late 1960s and early 1970s and was called minimalism. Composers L. Young, S. Reich, and J. Adam have repeatedly noted the influence that gamelan music has had on their work.

It is also worth noting another way of understanding the principle of gamelan playing – a purely empirical and practical one, when, from the late 1950s, representatives of Western civilization (not only the U.S., but also a number of European countries), both professional musicians and people without special musical education, began to organize gamelan ensembles, most often at universities, which allocated funds to purchase instruments and invite musicians from Indonesia to teach how to play them. By the end of the 1980s, it was already possible to speak of the establishment of a unique cultural “niche” for gamelan music in Western countries; this phenomenon thus went beyond its original “habitat”. What is the

magic of gamelan music? Can this phenomenon be understood scientifically? What approach should be taken when analyzing music related to gamelan music?

Purpose of the study. In this article, we sought to identify the main features of Javanese music by analyzing the terminology developed within the gamelan tradition, which was examined in a systematic and typological comparison both within Indonesian musical culture and in relation to other regions.

Basic Concepts of Gamelan Music. Characteristics of the Terminological Array

Let us begin by examining the most important and comprehensive concept for any musical culture, “music” (at least in the sense in which it is used within Western civilization), which includes all phenomena related to the field of sound, tone, and sound creation in general.

Neither Indonesian nor Javanese languages have developed such a general term. The term musik (from the Dutch musiek), which appeared at the turn of the 19th and 20th centuries, is used exclusively in relation to Western music, and only for academic music, while the term pop is used to refer to popular forms (The terms pop and pop music were introduced to distinguish them from the field of popular music, which refers to later styles associated with rock culture). This emphasized, on the one hand, the influence of contemporary Western pop culture on popular forms of music prevalent in Indonesian cities (particularly noticeable since the early 1960s) and, on the other hand, their distinct characteristics (especially kroncong, a popular style of urban song from the mid-20th century that emerged as a result of the mixing of elements of Portuguese, Chinese, Dutch, and Javanese music), which made it easy to distinguish this music from Western music.

As for musical phenomena related to traditional culture, there is no unifying concept for them in the terminological system, as a result of which they exist under separate independent headings denoting the sphere of sound creation: karawitan – the tradition of gamelan playing, tembang – singing, wayang – theatrical performance, etc.

Over the past fifty to sixty years, karawitan has become a fairly broad and general concept, associated, according to Javanese musicians, with “an area where sounds are organized according to certain temporal and spatial parameters” [6]. In other words, karawitan can be seen as the sphere of action of sounds organized in terms of pitch and meter, which generally brings this term closer to the concept of “music” that we are familiar with. The etymology of the term “karawitan” and its historical evolution testify to the existence of a whole range of meanings that can be arranged on three main levels:

- 1) something refined, perfect;
- 2) a method of organizing sounds in terms of pitch and meter;
- 3) the sound of the musical instruments that make up the gamelan.

The formation of the second level of meaning is connected in part with the deep mythological layers of Javanese musical culture and, in particular, with the attitude toward gamelan as a symbol of orderly sound, contributing to the unity of all three levels of the world – Heaven, Earth, and the Underworld. In this function as the most important sacred object, gamelan already played a role in the Mataram era (8th–20th centuries), being the magical property of the ruler – the god’s representative on earth.

The Javanese people's attitude toward gamelan as a sacred object is confirmed by its inclusion in traditional cosmogonic myths. For example, the mythological work *Serat Manik Maya* (The Book of Manik and Maya, written in Kartasura in 1725) states: "The original creator of the universe, Sang Hyang Wisesa, indulges in deep meditation, wishing to obtain from the supreme being, Sang Murben Pest, the ability to create the world. He hears a sound like the ringing of a bell, and at that moment an egg descends from above, from which he creates Heaven and Earth, the Sun and the Moon, as well as two anthropomorphic beings — Manik and Maya. Manik, also known as Batara Guru, is endowed with a beautiful, radiant appearance. Maya, also known as Semar, is dark-skinned and ugly. Manik remains in heaven, while Maya descends to Earth or into the bowels of the Earth [7].

The divine Batara Guru is the hero of the Javanese myth about the origin of music, the orderly sound that helps him rule the universe. The symbol of this orderly sound is a set of three gongs made by Manik, called *tetabuhan*, which was named *Lokananta*. This was the first "divine" gamelan, later known as the *Munggang gamelan* (the meaning and etymology of the term are unclear). Its appearance is attributed to 269 AD (317 AD). The term *tetabuhan* comes from *tabuh* — a stick, a beater, *tabuh-tabuhan* — to strike; but the point here is not only to reflect the technique of playing the gong in the term. Batara Guru, using the metrically and tonally organized sounds of the gong, thus sends signals to all the gods of the world (the gods also danced to the sounds of the gamelan, gathering in a special pavilion called "*lingotaa*"). In this sense, *tabuh-tabuhan* means "sound produced by a strike," i.e., the creation of the desired sound by a strike of a certain type, as opposed to the continuous ringing of a bell, symbolizing the original chaos, the disordered elements of the Universe. It is significant that this term, which goes back to the mythical "progenitor" of gamelan, is used today by *nyaga* musicians as a criterion of special aesthetic and professional intuition when they say about one of their colleagues: "He has *tabuh-tabuh*!" (In other words, "a special feeling for gending" — gamelan composition) — a moment that cannot be explained purely in scientific terms or performance technique, but rather belongs to the realm of sound "magic." In this respect, one aspect of *tabuh-tabuh* correlates with the concept of *chochog* (*so-cog*) — the feeling of a harmonious connection between human actions and the cosmic and social order. In traditional Javanese society, the symbol of this "unity of worlds" has long been the gamelan (the three gongs of the *Munggang gamelan* represent the three levels of the world: Heaven, Earth, and the Underworld). Subsequently, in a number of local gamelan traditions (this is especially characteristic of Bali), "*tabuh*" came to denote pre-composed *ostinato*-type melodic patterns (compare with section 'ghat' in the classical North Indian instrumental tradition), which are "linked" to specific compositions or, for example, to stage situations and the emotional state of the characters in a *wayang* theater performance. The above shows that this concept is one of the key elements in the structure of gamelan compositions. The reliance on *tabuh*, for example, makes Balinese gendings much more clearly modeled than Javanese ones [8]. In this regard, *tabuh* in Bali has recently acquired the stylistic features of virtuoso, dynamic playing, which most often refers to the *kebyar* genre (*kebyar* — literally, sudden flash) (a composition accompanying the dance of the same name, characterized by constant mood changes).

Being the foundation of any gamelan ensemble, the gong carries a complex sacred and mystical significance. On the one hand, this is linked to the magical properties of its sound — which is believed to help concentrate cosmic energy (*sekti*); on the other hand, to the material process of its creation. Since ancient times, the extraction of copper and tin ores necessary for smelting bronze has been preceded by

special meditations and prayers, intended to appease the subterranean spirits and disturb them as delicately as possible when “invading” the body of the Earth — the mountain.

The word gong (or gung) derives from the same root as mountain — gunung. As previously noted, the cult of stone and the sacred mountain is one of the most distinctive features of the Southeast Asian region [9]. In this context, “ore symbolizes the productive wealth of the Earth, and its molten state — the hot ‘blood’ of the volcano-mountain, gunung api.” Hence, in the Javanese language, the gong (in ngoko, the low register) is referred to in the krama (high register) as gangsa — meaning “the alloy used to make the gong”.

The transformation of raw material extracted from the Earth into a special alloy and ultimately into a gong is a mystical process that involves two other sacred creative forces — fire and water. According to belief, these elements reside in the depths of the world mountain, within the trunk and roots of the cosmic tree. Profound connections exist between gongs and water — water being one of the most enduring cosmological symbols among Southeast Asian cultures — though these links have yet to be fully explored.

Since ancient times, it has been widely believed that prolonged playing of gongs can summon rain. In actual practice, it is known that after many hours of continuous striking, moisture sometimes accumulates in the crevices of the gong’s body. Musicians interpret this as “Heaven’s dew” and reverently moisten their lips with it.

It is thus unsurprising that the process of forging gongs — like that of crafting krises (traditional Javanese daggers)—has long been surrounded by taboos and ritual offerings, intended to protect the blacksmiths from the malice of evil spirits. It even became customary for gong-makers to change their names during the forging process to avoid attracting misfortune; these temporary names were often borrowed from epic tales, such as the legends of the hero Panji.

A gong created for a ruler was regarded as the principal pusaka (sacred heirloom) of the realm and was kept in a designated chamber, hidden from the gaze of outsiders. Jaap Kunst recounts an incident in which a colonial official violated this prohibition by touching the sacred gong of Lodaya; not long after, the man reportedly died [2].

The making of a gong was traditionally regarded as the “birth” of an ensouled being. Its “parents” — the blacksmiths — were accorded a special courtly status due to the sacral nature of their craft, and their labor was highly compensated. Upon creation, the gong was given a personal name by its makers, a name that could continue to be used even after the gong became part of a gamelan ensemble.

To this day, blacksmiths often take part in naming not only individual gongs but entire gamelan sets, taking into account the character of the sound, the state of the cosmos at the time of the instrument’s “birth,” the intended function of the ensemble, and the wishes of its future owner. These names are rich in metaphor and layered meaning — for example: Sarya Swara (*Sounds of Prosperity*), Guntur Madhu (*Sweet Rushing Torrent*), Semar Ngigel (*Dancing Semar*), Ardjanagara (*Well-Being of the Nation*), Mendung (*Dark Cloud*), Udan Asih (*Kind Rain*), Kodok Ngorek (*Croaking Frog*), and others.

The latter, Kodok Ngorek, is one of the oldest known gamelans and is particularly remarkable for its imitation of frog croaks. This distinctive effect was achieved

through the simultaneous combination of two instrumental groups tuned to different modal systems: pelog and slendro.

Thus, the set of gongs within a gamelan ensemble is conceived as a kind of “family”, whose members are bound by “blood” ties — meaning they are crafted from the same alloy and by the same “parent”, the master artisan (empu gending). This principle is strictly observed. The “voice” of each such “family set” is unique, just as the voices of all living beings are unique. This is the fundamental reason behind the distinct tuning of every gamelan, which often confounds Western researchers.

Given the well-documented fact that casting technology in Indonesia had reached an advanced level by the turn of the Common Era, it is clear that artisans would have been fully capable of standardizing the tuning of all gamelans — had there been any intention to do so. However, when an exact replica of a particular gamelan was made, its set was designated as *mutrani*, which means “to produce a son”. (The same conceptual system applies to royal palaces — *kratons*: each new *kraton* was considered a “son” of the previous one and was constructed according to its layout.)

This terminology emphasizes, on the one hand, the deliberate act of reproducing an identical set, and on the other, the perception of the gamelan as a living entity capable of giving life to another. It is important to note that only the most venerable gamelans are ever reproduced — an act that represents a form of lineage preservation and an attempt to continue the legacy of an esteemed “family line”.

According to custom, the names of the most revered gamelans were traditionally preceded by the honorific *Kyai* (*Khjai*)—a respectful form of address used for elders [10]. These gamelans could also be granted titles typically reserved for people, such as *Kandjeng*, a rank second only to the ruler in the court hierarchy.

In this context, M. Hatch even suggests an additional meaning for the term gamelan, derived from *gamel* — meaning a personal [6], trusted servant or court attendant — thus emphasizing the obligatory presence of a gamelan at the royal court. For the ruler, the gamelan was a *pusaka*: a sacred heirloom once belonging to the ancestors and founders of the royal lineage and the state itself.

Gamelan and the Traditional Cosmology of Indonesian Culture

The older a gamelan was, the more cosmic energy — *sekti* (from Sanskrit *śakti*)—it was believed to possess. According to traditional beliefs, it is possible to “regulate” the concentration of *sekti* in different areas of space [11]. To achieve this, one must lead an ascetic life (*tapa*), visit sacred sites (such as sacralized mountains, tombs of saints, and the like), interact with individuals said to be “possessed by *sekti*”, among other practices.

Among these methods, the sound of the gamelan is considered one of the most effective. It is no coincidence that rulers, from ancient times, actively encouraged the creation of as many gamelans as possible — both within the *kraton* (royal palace) and beyond, including in rural areas. This was believed to attract the maximum amount of *sekti* to the territory of the state.

The mystical union of the two opposing principles — feminine and masculine — within the cosmic energy of *sekti* is reflected in the symbolic associations between the construction and sound of gamelan instruments. For instance, the largest gong, the gong *ageng* (from *ageng* in the high Javanese register *krama*, or *gede* in the

low register ngoko — meaning heavy, powerful (in voice), deep (in sound, wind, or wave), full of strength (in heart)), almost always exists in pairs: a “female” and a “male” gong, which alternate in marking the structural divisions of a composition known as gongan.

The “female” gong — larger in size and producing a deeper, more resonant tone — is considered the principal instrument in the ensemble. It is believed to house the spirit of the gamelan, and it is with its stroke that a composition — *gending* — both begins and ends.

The bonang metallophone consists of two parallel rows of horizontally placed kettle gongs on a wooden frame: the lower row, with larger gongs, is designated as “female”, while the upper row, with smaller gongs, is “male” [12].

In the act of performance, the Javanese musician does not perceive themselves as a creator, for they believe in the divine origin of music. The musician experiences their role as secondary to the instrument — as one who follows the “will” of the instrument, awakening its “voice”. This subordinate position of the musician in relation to the sound-producing apparatus is clearly reflected in the terminology used to denote performer ranks.

For example, a rebab player is referred to as *miji rebab*, where *miji* (or *pidji*) means “to be beneath someone or something”, or “to carry out another’s will”. A bonang player is called *sosoran*, derived from *sosor*, which also connotes “subordination” or “being under the authority of something or someone” [13].

A musician’s status was traditionally determined not by their technical skill, but by the degree of sacrality of the instrument they played. Thus, the rebabist, despite the complexity of their musical line and the soloistic nature of the instrument, is assigned a lower rank than the bonang player, since the rebab — being a foreign instrument from another cultural system — cannot compete with the gong, which is believed to possess magical power.

The performer on the gong *ageng* holds the highest status — *panevu* — a title derived from *sewu*, a term equated with a courtly title or high official rank. This is because the gong *ageng* is believed to be the dwelling place of the gamelan’s spirit. Although playing the gong does not require virtuosic technique, the musician assigned to it receives the highest material compensation within the ensemble.

At the core of any culture lies its worldview. The Javanese conception of the world resembled a “giant tree filling the space of the universe... The crown, roots, and the trunk that connected them into a single living organism corresponded to the binary or ternary vertical structure of the cosmos, expressing the idea of movement and struggle. The branches extending from the crown and the roots reflected the dual classification generated by this structure. The four main branches reaching outward, and a fifth one directed upward... corresponded to the five-part horizontal structure of the cosmos, expressing the idea of stasis and harmony. The roots (or the trunk) held the water of life — the bearer of cosmic energy, *sekti*...” [7].

At one time, Claire Holt compared *wayang kulit* — the Javanese shadow puppet theatre — to a “ghostly cultural double of Javanese reality... like the shimmering reflection of nature in a pond...” [7]. This observation could equally well be applied to the gamelan, a kind of Javanese microcosm in itself.

Dualistic oppositions are embedded in the very structure of the gamelan: in its two sound groupings — loud and soft ensembles — which are ultimately merged

into one as a symbol of the unity of opposites; in the distinction between court gamelans (*alus*, refined, upper) and rural gamelans (*kasar*, coarse, lower); in the tuning systems – *pelog* (symbolizing the Sky) and *slendro* (symbolizing the Earth); in the *gong*, which embodies the union of fire and water, mountain and sea; in the northern and southern pavilions of the *kraton* (representing auspicious/inauspicious, elder/younger dichotomies); and in the “male” and “female” variants of instruments, among others.

The overall tonal meeting point – *tumbuk* – between two gamelan ensembles tuned in *pelog* and *slendro* serves as a symbolic center, reconciling opposites, much like the figure of the ruler or the palace complex (*kraton*) itself. This tripartite classification also underpins the division of instrument families according to pitch registers, which are symbolically represented in the sound of the three types of gongs used in the *Gamelan Munggang*, each “regulating” one level of the cosmos:

- *Bonang panembung* (a set of large kettle gongs laid out in two horizontal rows, representing the upper and lower octaves);
- *Bonang barung* (its lower row mirrors the upper octave of the *panembung*, while its upper row sounds one octave higher);
- *Bonang panerus* (its lower row doubles the upper octave of the *barung*, and its upper row sounds yet another octave higher).

This principle extends to metallophones as well:

- *Gender panembung*, *gender barung*, *gender panerus*, and to the *saron* family of instruments;
- *Saron demung*, *saron barung*, and *saron peking*.

The term *saron* may share a linguistic root with Indian instruments such as the *sarangi* and *sarod*, possibly deriving from Sanskrit.

The fivefold system – like the binary and ternary systems – could encompass a wide range of phenomena in the surrounding world: five colors, metals, animals, birds, personality traits, and so forth. In the gamelan tradition, this structure is reflected, for example, in the five primary categories of instruments:

- Solo suspended gongs;
- Horizontal gongs (*kenong*, *ketuk*, *kempyang*);
- Gong sets on frames (*bonang*);
- Metallophones (*gender* and *saron*).

Other melodic and percussive instruments such as the xylophone (*gambang*), drums (*kendang* and *ketipung*), the human voice, and melodic instruments like the *rebab* (bowed lute) and *suling* (bamboo flute).

The fivefold structure is also evident in the preferred use of five-tone scales (even within the seven-tone *pelog* system), and in the concept of *keketeg* – a term associated with the felt balance and coordinated performance of at least five instruments during changes in tempo. This serves as a cue for the *kendang* (drum) to verify the correctness of the chosen *virama* (structural cadence or rhythmic resolution) [14].

Gamelan Performance Practice: Seni Karawitan

Returning to the etymology of the term *karawitan*, it is worth noting that the first of the semantic layers we identified – derived from *ngrawit*, meaning “refined, perfect, subtle” – indicates a much later development of this term in comparison to *tabuh-tabuhan* and *gamelan*. It is evident that during the period of the Central Javanese courts (17th–19th centuries), *karawitan* came to designate one of the key

aspects of the refined and increasingly codified priyayi subculture. The priyayi represented a sociocultural stratum situated just below the court aristocracy, composed primarily of the Javanese administrative elite.

The lifestyle of the priyayi was based on the ethical-aesthetic dichotomy of *alus* and *kasar*. *Alus* (often translated as “refined” in terms of manners, behavior, appearance, etc.) stood in opposition to *kasar* (“coarse, impulsive, unrefined”), which conveyed rawness of expression — compare, for instance, the Arabic *kasr*, meaning “to break” or “to cut off”.

The notion of *alus* is expansive: it refers to a person who speaks in high Javanese (*krama*), wears fabric with elegant patterns, makes clever jokes, employs refined poetic metaphors, or lives in divine presence and mystical awareness.

The Javanese language itself is structured across three primary speech levels — *ngoko*, *madya*, and *krama* — each suited to different social contexts. *Ngoko* is the everyday, informal register, used by children, close friends, or when addressing someone of lower social status. It is direct, often marked by humor or sarcasm, and is typically associated with the *kasar* mode.

Krama, on the other hand, belongs to the *alus* sphere. It signifies politeness, respect, and formality, and presupposes a social distance between interlocutors — such as when addressing someone of higher rank. It is ornate, emotionally restrained, and ceremonious in tone. Moreover, within *krama* itself, there are nine distinct vocabularies or speech registers, mastery of which is now rare even among native Javanese speakers [7].

The three principal domains of priyayi life — etiquette, the arts, and mystical practice — were vividly expressed in the sphere of gamelan performance. Alongside literature and dance, gamelan music formed part of the formal education and upbringing of young men from high-ranking families.

The fact that only men were permitted to play gamelan instruments was likely rooted in ideas developed during the era of Indo-Javanese cultural synthesis, particularly those concerning the cosmic energy *sekti*, which was conceived as a feminine force. This feminine *sekti* was believed to be “attracted” to its opposite — the masculine principle — embodied in the gamelan itself.

As previously noted, the internal hierarchy of instruments within a gamelan ensemble symbolizes the unity of these dual principles.

The art of *karawitan* — *seni karawitan* (from Indonesian *seni*, derived from Malay, meaning “graceful”, “refined”, “elegant”) — embodied a certain balance between the inner spiritual world of the individual (*batin*) and their outward behavior (*lair*). Over time, like the playing of the Chinese *Ch’in* (a long zither), *karawitan* evolved into a form of mystical practice. However, while playing the *Ch’in* in China was a solitary and silent form of regular self-cultivation, *karawitan* took the form of a collective spiritual action performed by a group of people within the framework of *saraseyan* — evening gatherings of friends, neighbors, and relatives from the priyayi circle.

Modeled after Chinese *Ch’in-tan* (“pure conversations”), these gatherings featured the recitation and singing of classical poetic works, discussions of emerging literary trends, or explorations of philosophical and mystical themes. Gamelan performance, typically held on the *pendapa* (a veranda used for receiving guests in large houses, or an open-pillared gallery in smaller homes), served as a medium for

grasping the deeper essence and meaning of the universe through the experience of *rasa* — an objectified complex of psycho-emotional states that gives inner unity to all forms of human expression.

A sense of deep fulfillment — *kepenak* — was experienced not by passive listening but directly through participation in the act of music-making. It was, in essence, a form of *cocog* — harmonizing one’s inner movements and emotional impulses with cosmic order.

The active, experiential nature of *karawitan* is further underscored by one of the meanings of the term *gamelan* itself: “to do something”, “to strike” — a sonorous human activity. The emphasis on human action is also reflected in the Balinese term for *gamelan*, *megambel*, which means “to strike”, referring more to the group of performers than to the set of instruments (compare this with another etymology of *gamelan*, from *gangsa* — “metal used for gongs”). Thus, *gamelan* becomes a form of sacred play between humans and the world of the gods — through organized, collective sound aimed at achieving universal harmony.

Contemporary *gamelan* performance practice is increasingly losing the unique sense of magic and sacral ritual that *karawitan* originally embodied. It is therefore not surprising that the recently emerged term *klenengan*, used to describe concert-style *gamelan* performance — as opposed to traditional *karawitan* — derives from the purely onomatopoeic and semantically meaningless root *klen-klan*, evoking the sound of jingling or clanging.

This term implicitly suggests that in this modern form of music-making, the inner essence is diminished, giving way instead to external sonic expression.

Research procedures in the field of *gamelan* terminology are complicated by a number of factors:

1. The highly developed nature of the musical text itself and the detailed body of technical and practical terminology that has formed around it, including even specific terms to denote the character of emphasized points within the metrical framework of a composition, and so forth.
2. The fundamental lack of standardization in *gamelan* traditions, both at the practical and theoretical levels. A multitude of local variants has always existed, each distinguished by its own unique features — even at the level of individual *kratons* (royal courts) and their surrounding regions. This diversity was believed by the Javanese to enhance the ruler’s magical power (*sekti*) [7]. Such a condition is likely rooted in the understanding that cosmic energy is unevenly distributed across time and space, with its concentrations in a state of continual flux.
3. The multilayered development of the *gamelan* tradition, which is due both to the diverse functions *gamelan* ensembles have served in Javanese culture, and to the successive influences exerted upon the tradition by ideas originating from other civilizations throughout its historical evolution. This sequence of influences may be schematically outlined as follows:
 - The indigenous sacred gong ensemble of ancient origin, which embodied local mythological ideas of “sonic localization” and the control of the three cosmic realms. The interweaving of three pitch levels in performance was interpreted as a conversation — a form of communication among the three worlds.
 - The influence of Indian musical traditions, particularly those associated with dance and theater, which led to a significant increase in the complexity of *gamelan* music. This complexity manifested primarily in the organization of metric and rhythmic structures (*gending*) — as a result of the need to coordinate

with choreographic movements — as well as in the development of modal-melodic models that accentuated the individual character of voices within wayang puppet theater.

- Some prominent Indian musicologists, such as Prem Lata Sharma and R. Satyanarayana, continue to uphold the established view in Indian music scholarship that gamelan is a borrowed phenomenon originating in Indian culture. This perspective refers to the very idea of an ensemble composed of homogeneous instruments — *tar ang* (lit. “set of instruments”)—and to the system of scale organization, which, according to this theory, also explains the etymology of the term gamelan: from the Sanskrit *mela* (scale) and *ga* (the third note of the scale). (This interpretation is based on the author’s personal conversation with the scholars mentioned, Delhi, April 1988.) Possible etymological links may also exist between the Javanese term *gangsa* (the alloy used for making gongs) and the Sanskrit *ganta*, denoting a flat gong used in Indian temple practice [15].
- With the spread of Arab-Islamic cultural elements, increasing importance was given to the human voice in gamelan performances — through the inclusion of the female soloist (*pesinden*) and male vocal ensemble (*gerong*). Alongside these, “singing” instruments were also introduced, such as the bowed *rebab* and the bamboo flute *suling*. This development marked a form of compromise, as gamelan had traditionally embodied an instrumental ideal, whereas Islamic musical aesthetics prioritized the human voice as the primary expressive medium. For this reason, it was once unthinkable for gamelan to be played during Ramadan or on Fridays. However, gamelan was so deeply embedded in Javanese social life that the new religion had to come to terms with its presence.

Special exemptions were granted to rulers (within the *dewa-raja* cult, which elevated the monarch to the status of divine representative on earth — an idea deeply rooted in the Indianized states of Southeast Asia), allowing them to suspend restrictions on gamelan performance during Ramadan when important *kraton* commemorative dates coincided with the fast. Over time, gamelan was eventually permitted during official Muslim festivals such as *Garebeg* and *Sekaten*. (*Garebeg* is celebrated three times a year: on the Prophet’s birthday, at the end of Ramadan, and on *Eid al-Adha*; *Sekaten* commemorates the Prophet Muhammad’s birth.) One example of this type of ensemble is *Gamelan Munggang* (first mentioned in 347 CE), which includes three *bonang*, one *kenong*, two *penontong* (small vertically suspended gongs), *kendang* and *ketipung* drums, and a large gong *ageng*. A key requirement for gamelan performance at these events was that it not accompany dance.

- With the advent of sustained Western musical influence in the 20th century, gamelan music found a permanent place in modern concert practice. Unfortunately, this shift introduced a number of negative developments: the artificial separation of participants into “performers” and “audience” — concept foreign to traditional practice; the modernization of instrument construction; and disruptions to the overall sonic balance due to the use of microphones in concert halls, recording studios, and other modern venues.

Results and Discussion

Thus, over time, gamelan music-making has come to be present in nearly all forms of sonic and musical expression and is utilized across all sociocultural strata — from refined bronze ensembles in royal *kratons* to simple iron or bamboo instruments in rural villages.

Accordingly, the term gamelan itself has undergone a semantic evolution: from originally referring to a basic set of three gongs (*genta keleng*) to designating a large, multi-component ensemble, such as the so-called “full” gamelan *seprengkat*.

Today, gamelan is a broad concept — comparable in scope of generalization to *karawitan* — which allows these two terms to be used almost interchangeably.

Classification of Gamelans: Traditions, Types, Forms, and Variants

Historically, several well-developed gamelan traditions have emerged in Indonesia, each distinguished by geographical origin: Sundanese gamelan (West Java), Central Javanese and East Javanese, Balinese, Sumatran, Madurese, as well as more localized traditions from North Kalimantan, Sulawesi, Eastern Irian (Papua), and other smaller islands. (Listing all would take considerable time, as Indonesia comprises over 10,000 islands.)

The typological classification of gamelan generally relies on a dichotomous principle: loud and soft ensembles (based on sound character), and *pelog* and *slendro* gamelans (based on the tuning system). The renowned Surakarta court musician Raden Tumenggung Warsodiningrat noted an early distinction — dating back to approximately the 2nd century BCE — between two major types of gamelan.

“Loud” gamelans, such as gamelan *bonangan*, are characterized by bright, impulsive sound qualities. This category includes ensembles like Gamelan Munggang (first mentioned in 347 CE), consisting of three *bonang*, a *kenong*, two *penontong* (small vertically suspended gongs), *kendang* and *ketipung* drums, and a large gong *agung*. These ensembles traditionally accompanied military campaigns, public festivities, and were used to mark time at royal courts.

“Soft” gamelans, which began to emerge around the 6th–7th centuries CE, were associated with vocal and dance performance. They incorporated more delicate-sounding instruments such as the *gambang* and *gender* metallophones, the *suling* flute, and the bowed *rebab*.

Eventually, during the 15th–16th centuries, both types were combined within a single ensemble, structured as two distinct, non-integrated sections that performed alternately — symbolizing a synthesis of sonic oppositions.

From our perspective, the classification of gamelan ensembles by type appears more logical when based on their sociocultural functions. On the one hand, this includes the distinction between elite and grassroots traditions — for example, gamelan *alus* (refined gamelan) and gamelan *kasar* (coarse gamelan) in East Java. (It is worth noting that the term *kasar* in this context may also derive from the name of a type of ritual gong used in Indian temple traditions.) Similarly, gamelan *Jogja* and gamelan *Solo*, named after the two Central Javanese court centers of Jogjakarta and Surakarta (since the 18th century), represent the high royal tradition. This is contrasted with *lagu-lagu daerah* (lit. “regional melodies”) — a term used for local musical forms in Central Java.

In West Java, the gamelan *degung* reflects the courtly style, while gamelan *renteng* represents a communal or village-based tradition.

On the other hand, classification can also be made based on the specific function of the ensemble, the size of its instrumentation, the choice of dominant instrument, and so forth. This has led to a number of functionally specific terms:

Gamelan *carabalen* — an ensemble used to accompany the return of soldiers,

Gamelan bonang and gamelan angklung — named after their leading instruments: the bonang (a set of kettle gongs) and the angklung (a bamboo “harp”),
 Gamelan lengkap — a full gamelan ensemble,
 Gamelan gadhon — a “partial” or chamber gamelan.

Another distinct type is gamelan gandrung, literally meaning “love-struck” or “enchanted.” This term refers to a specific performance tradition, as well as to the female singer-dancer (gandrung), the vocal style, the dance itself, the structure of the performance as a whole, and the gamelan ensemble that accompanies it.

The typical gandrung performance involves a young woman dressed in ornate batik who sings love-themed songs, followed by a solo dance that transitions into an improvised duet dance called ngibing (lit. “to accompany”), in which a man chosen from the audience humorously mimics the dancer’s refined movements. In the 20th century, gandrung melodies were adapted into patriotic songs with anti-colonial messages.

Gamelan gandrung, which traces its roots to the 15th—16th centuries, has become a hallmark of contemporary urban culture in East Java. It blends musical traditions associated with wedding rituals with the aesthetics of colorful popular stage performances. In modern practice, the traditional rebab is often replaced by two Western violins.

The introduction of the term gamelan as a kind of generalizing component in ensemble classification is a relatively recent development. Earlier practice typically involved using only the second, defining part of the ensemble’s name. The specific type of gamelan was further “specified” by means of personal names, as previously noted. These names were given to every ensemble without exception and were chosen based on a variety of considerations.

Various cultural contexts underlie the origins of the names of most gamelan compositions — gending, especially those associated with theatrical performance. For example, a poetic metaphor spoken by the dalang (puppeteer), such as “like a flower”, is immediately followed by the performance of the gending “Puspawarna” (puspa — flower, warna — color), reinforcing the imagery.

Particular attention should be paid to the realm of metaphor and imagery found in gending titles. Like the names of gamelan ensembles, they reflect the mythological and religious beliefs of the peoples of Indonesia. A recurring symbolic motif is the dichotomy between mountains and the sea or water, which is understood as a connecting substance between heaven and earth — clouds, rain, and so forth. Examples include:

“Ricik-Ricik” — the delicate sound of flowing water;
 “Redi Guntur” (redi — mountain, guntur — thunder);
 “Hudan Sore” (hudan — rain, sore — evening), and others.

Some gending titles, such as “Kalunta” (lunta — one who suffers or experiences great pain), are associated with entire legends. According to oral tradition, this particular composition inspired Prince Pakubuwono II during his resistance against the conquest of the Kartasura Kingdom in the 18th century [16]. As a result, “Kalunta” is considered a pusaka (sacred heirloom), believed to possess supernatural power, and is rarely performed out of fear that its magical force might be misdirected.

The term gending entered gamelan practice quite some time ago, and there is little doubt that it originated in the realm of literature. One of its earliest meanings was

“song” or “melody.” Its connection to vocal performance is further supported by another early usage of the term — as an old name for the rebab, the bowed string instrument that traditionally accompanies the voice.

Once absorbed into the sphere of karawitan, the term *gending* came to refer primarily to instrumental compositions. (It is also occasionally used to refer to a gamelan maker.) In contrast, for vocal music accompanied by gamelan, a separate term — *tetembangan* (from *tembang*, “song”) — was introduced. This distinction indicates that gamelan compositions may originate either from purely instrumental ideas or from adaptations of vocal repertoire.

Gending can also be interpreted as “art” (*seni*), though with a stronger emphasis on the aspect of process or intentional action — it connotes “the art of achieving something”, or “a method for attaining a goal through deliberate practice”. This nuance is evident in the title of the second volume of the 19th-century Javanese divinatory manual *Primbon: Adhamakna Sastra Gending* (*sastra* from Sanskrit, meaning “learning”, “science”, or “treatise”). In this context, *gending* refers to “the art of finding the correct numerical correspondence”.

The term also carries a faint echo of one of the meanings of karawitan — “refinement” or “skillful technique” — thus affirming its association with the *alus* (refined) aesthetic. This is underscored by the fact that the word *gending* is not used to refer to compositions of a more casual or overtly expressive nature; such pieces are called *gecul* (playful, humorous).

The phrase “the art of performing a *gending*” is formalized as *gegendingan*, which denotes a codified practice of ensemble performance built around nine progressive stages of instruction in group coordination and technique. Mastery of these stages allows performers to attain the maximum expressive potential embedded in a given *gending*. This learning path begins with short compositions featuring simple metric structures — such as *gending ladrang* (a common introductory form, also used for dance training) — and continues through stages of performing with “loud” ensembles, then “soft” ensembles, ultimately culminating in the execution of complex *gending* compositions that accompany dance and *wayang* performances. These are considered the most technically and expressively demanding pieces in the repertoire.

The Concept of Musical Tone: Sound/Sonority and the Structure of Gending Composition

Turning to an analysis of the terminology related to the sonic and musical texture of gamelan, as well as the general mode of musical development, we must once again emphasize the striking absence of adequate theoretical foundations within such a highly developed musical tradition — foundations that would reflect its centuries-long evolution.

Attempts to fill this gap at all costs, undertaken primarily by Western scholars over the past fifty years, have unfortunately often resulted in the construction of conceptual frameworks that are, in many cases, speculative in nature. Without questioning the scholarly competence of many outstanding researchers, we must point out that most of their conclusions are based on the observation of contemporary gamelan performance practices.

The diversity of their proposed models becomes particularly evident in the area of pitch-acoustic justification for tuning systems and scalar structures. The traditional

tuning of gamelans — especially older ensembles — has always extended beyond the familiar frameworks of Western music theory. In our view, this reflects not a deficiency in the tuning system, but rather a fundamentally different principle of relating to sound and musical expressivity, one that is deeply rooted in the cultural matrix of the Southeast Asian region.

To begin with, the concept of “musical tone” has not developed in either Indonesian music theory or in the realm of practical performance. In the Javanese language, there is the term *suara* or *swara* (in *ngoko*), and its synonym *swanten* (in *krama*), both referring to an abstract notion of “sound” in general. For instance, *suara ombak* means “the sound of waves”, and *suara orang* refers to “the sound of a human voice”.

As previously mentioned, the term *suara* derives from the Sanskrit *swara*, which, although conceptually closer to the notion of “musical tone” in Indian music theory, still maintains a rather abstract meaning — even in that context. Etymologically, *swara* originates from *swa* (self) and *raj* (shining), and can be interpreted as “self-luminous” or “self-radiating”, much like a gem or precious stone.

In modern Indonesian, the expression *seni suara* is typically translated as “the art of singing,” whereas instrumental performance is designated as *seni gamelan*. Thus, as a musical term, *suara* remains more closely associated with the human voice, while the sound produced by musical instruments is not terminologically distinguished in common usage. A possible approximation might be found in the onomatopoeic and semantically neutral syllable *kleng* — as in *genta keleng* (the mythical “primordial gong”) or *klenengan* (a term used today for concert-style gamelan performance).

It is worth noting that the tradition of vocal imitation of gamelan sounds — originally used as an educational exercise — occasionally gave rise to original forms of polyphonic singing, a practice that is generally uncharacteristic of Indonesian music (and indeed, of most Southeast Asian musical cultures). A striking example is the *kecak* performance still practiced in Bali today, where a large group of men (sometimes numbering up to two hundred) collectively imitate gamelan sounds, including gongs, using a vocalized interlocking pattern based on rhythmic syllables such as *cak*.

The phenomenon of a musical tone can arise only within a scale system (pitch set) that has been formed through the application of some principle of temperament. Only under such conditions does a tone acquire a fixed pitch position and enter into a structured system of relationships with other tones in the scale. This is what occurred, for example, in the high tradition of Chinese music, where the doctrine of temperament constitutes a coherent system — acoustically, mathematically, and ethically grounded.

In contrast, the tunings of gamelan ensembles, which are based on non-standardized temperaments, present us each time with a unique set of pitches — or more precisely, pitch zones — which manifest differently with each performance, especially at the level of overtones and resonant partials.

Similarly, in Indian classical music we also encounter, first, the absence of fixed pitch in the Western sense, and second, the fluidity of pitch values — regulated through the system of *śruti* (microtonal intervals). Yet every concrete sonic realization of a composition based on a specific *rāga* is always grounded in a clearly defined tonal center, the *sa* (tonic). This sense of tonic grounding — both physical

and psychological — is supported by the continuous drone of the *tampura*, which serves as a sonic foundation.

In gamelan music, however, the sound of the *gong ageng*, which marks the boundaries of the largest formal sections of a *gending* (*gongan*), is far more ambiguous in terms of pitch and cannot serve as a tonal anchor in the same way. Its “tone” is better understood as a resonance containing the richest possible spectrum of partials and overtones, generated by the totality of the other instruments in the ensemble.

The two pitch–scale systems historically established in gamelan music — *slendro* and *pelog* — also exhibit a certain instability, both grammatically and conceptually. The term *slendro*, according to a number of Western scholars (such as Jaap Kunst and M. Hood), may derive from *Sailendro*, the name of the *Sailendra* dynasty — a Buddhist ruling house of an early medieval Indonesian kingdom — whose name literally means “Lord of the Mountains”.

The Javanese themselves, however, attribute the origin of *slendro* to a poetic legend: this tuning system was given to humanity by the mythical *Batara Indra* at the command of the god *Shiva*. From this, the etymology *Sura* (“god”) + *Endra* = *Surendra* = *slendro* is proposed. According to *Rangga Warsita* (1802–1873), the official court chronicler and custodian of *adat* (customary law) at the *Surakarta kraton*, this occurred in the year 404.

The formalization of *pelog* — a different method of dividing the octave (compare this to the Javanese calendrical system, which is organized into both seven-day and five-day weeks within a 35-day cycle)—is thought to have taken place somewhat later, around the 11th–12th centuries. Its creation is traditionally ascribed to the legendary Prince *Panji Hino Kerpati*. However, this does not necessarily imply that *pelog* represents a later evolutionary stage than *slendro*.

The tuning of archaic gamelans suggests that both systems emerged and were used in parallel, functioning as distinct modes of “sonic-spatial optics”. At times, it is difficult to draw a clear line between them, due to the wide circulation of non-standardized tuning variants — such as three-, five-, or six-tone versions of *pelog*, and two-, three-, or four-tone versions of *slendro*.

As a result, it is possible to translate a particular *gending* (composition) from *slendro* to *pelog* and vice versa. This transposition imparts a different “coloration” to the piece, often altering it so significantly that an uninitiated listener may perceive it as an entirely different work.

This is because the principles of octave division differ substantially between the two systems: unlike the Western 12-tone equal temperament, *slendro* divides the octave into five roughly equal intervals, whereas *pelog* divides it into seven unequal ones. A schematic comparison of *slendro*, *pelog*, and Western diatonic scales can be represented as follows:

The *pelog* scale can be schematically represented as follows:

ji-150-ro-150-lu-225-pat-150-ma-150-nem-150-pi-225-ji;

The *slendro* scale:

ji-240-ro-240-lu-240-ma-240-nem-240-ji;

Western diatonic scale:

do-200-re-200-mi-100-fa-200-sol-200-la-200-si-100-do.

(The octave comprises 1200 cents, with 100 cents equaling a semitone in the Western chromatic system.)

Despite the roughly equal status of *slendro* and *pelog* in performance practice, their use is functionally differentiated. *Pelog* often symbolizes the sound of an “otherworldly” realm, associated more with divine than human spheres. This is why *gending* compositions in *pelog* are traditionally performed at night. It is also possible that the term *pelog* resonates with *pelo*, meaning “strange,” “mysterious,” or “difficult to comprehend” — an appropriate connotation, considering that the most sacralized, mystically potent ancient gamelans are frequently tuned in *pelog* (including the legendary *Gamelan Munggang*).

What, then, is the mechanism by which the universe is regulated through sound — understood here as a kind of tuning fork that determines the saturation of cosmic energy in the ether, its influx and outflow?

As noted earlier, in ancient Chinese tradition, cosmic harmony was believed to be maintained through precise correspondences of pitch and timbre to the fundamental elements of the cosmos [17]. For instance, the tone *gong* symbolically corresponded to Saturn, the Earth, the color yellow, wind, midsummer, the human heart, sincerity, rulership, and the cardinal direction of the center.

In contrast, pitch in Indonesian musical tradition is far more fluid and unfixed, while the distinctive timbres of the instruments often struggle to emerge clearly from the resonant “sonic haze” produced by the gongs. Thus, the “state” of the cosmos is realized through a specific organization of the sonic process, structured around the key concepts of *patet* and *virama*.

Patet means “to tune a musical instrument”, but also “to restrain”, “to tame”, or “to control”. It is the central mechanism by which the flexible, non-standardized pitch structures of *pelog* and *slendro* are systematized — through the use of three modal categories: *lima*, *nem*, and *barang* in *pelog*; and *nem*, *sanga*, and *manyura* in *slendro*. Each *patet* defines a specific tonal hierarchy, a kind of micro-chromatic aura (comparable to the *alankar* system in Indian classical music), as well as a particular pitch range and characteristic modal-melodic formulas.

As in *raga*-based musical systems, *patet* imbues a *gending* with a certain psycho-emotional coloring (*rasa*). It represents a way to “domesticate”, to regulate a kind of sonic force, bringing it into a state in which it can enter into communication with other realms.

Whereas in ancient and medieval Chinese ceremonial orchestras a “message” to Heaven was conveyed through successions of single tones — each considered self-sufficient and a microcosm in itself — in Javanese belief, the gamelan functions as a vessel that concentrates cosmic energy by merging multiple layers of sound into a unified whole, regulating and playing with it to establish harmonic order.

Conclusions

We compare the Chinese ceremonial orchestra and the gamelan because they represent fundamentally different approaches to the regulation of the universe. The Chinese ceremonial orchestra was tuned to reflect the specific cosmological condition of the universe at a given moment — through the establishment of a principal pitch known as *Huang zhong*, which corresponded to the time of day, season of the year, planetary alignments, and so forth.

In gamelan, however, what matters far more is the energetic release of sound and the subsequent unfolding of its life in space — a kind of probing of cosmic energy clusters, their accumulation and regulation through sound.

It would be particularly interesting to compare various civilizations' views on the degree of sound's influence — its sonic and musical impact — on the cosmos. In Chinese musical-theoretical systems, the precisely calculated pitch and timbral correspondences between Heaven and Earth are likened to “communicating vessels,” whose interaction ensures the universe's harmonious state. The result of a sonic process is not necessarily anticipated — indeed, a direct and immediate cosmic reaction to a musical message is often interpreted as a sign of misalignment, which might manifest as a natural disaster, illness, or other disruptions. From this stems the traditional Chinese indifference to temporal progression in musical development, and the deliberate pursuit of spatiality and endlessness in sound — unbound by fixed metric constraints.

By contrast, gamelan's sonic energy is oriented toward result — a transformation that begins already during the performance of a *gending*. The *balungan* (the “skeleton” or core melodic framework) travels along a tiered spiral path, symbolizing the breathing of the universe — a process of continual destruction and rebirth through cyclical motion.

The unfolding of musical material in time is of paramount importance in gamelan and is reflected in the elaborately developed colotomic structure of *gending* compositions, which is regulated by the concept of *wirama*. *Wirama* (meaning tempo, rhythm, or motion) ensures the temporal organization of a composition and defines its type — regular (with an even number of *gongan* cycles) or irregular (with an odd number).

The rich terminology used to designate temporal divisions within a *gending*, types of metric structures, technical playing methods for gongs and drums, and so forth, in some respects even surpasses that of the Indian classical tradition, with its intricate system of metric-rhythmic cycles known as *tāla*. In Indian music, the *tāla* functions as an underlying metric grid superimposed on the sonic flow — it governs pulse rather than formally segmenting the music (at least, not in a terminologically explicit way).

In contrast, *gending* compositions treat metric segmentation as a primary formal and structural feature, which is explicitly encoded in a range of specialized terms, such as:

- *Gongan* (from *gong*) — the longest structural unit of a composition, marked by strokes of the *gong ageng*;
- *Kenongan* (from *kenong*) — a subdivision of the *gongan* into two or four sections (occasionally three or five), marked by the *kenong gong*;
- *Balungan* (“skeleton” or “framework”) — typically, one-quarter of a *kenongan*, serving as the melodic core;

Ten types of so-called regular forms are designated by specific terms, such as:

- *Ladrang* — 16 *balungan* in one *gongan*; a full composition may consist of one or several *gongan*;
- *Ketawang* — 8 *balungan* per *gongan*;
- *Ageng* — an extended form that includes an introductory section (*buka*), 8 or 4 strokes of the *ketuk gong* within one *kenongan*, or 128–64 *keteg* (the smallest metric unit of subdivision), and so on.

In irregular compositions, the length of each gongan can vary, regulated by the drummer's cues. In such cases, wirama becomes unstable — reflecting another of its meanings: “unpredictable” or “capricious”.

Overall, the development of a gending unfolds through permutations of tone combinations and the continuous expansion and compression of the balungan structure — achieved via successive rhythmic subdivisions. Each metric cycle is marked by a unique timbral profile produced by specific types of drums and gongs, as well as by distinctive pitch placement.

Two additional meanings of wirama — “a place to take a breath in a song” and “levels of language” — highlight its close connection, and possibly origin, in vocal prosody. The “high” and “low” levels of the Javanese language reflect different tempo-rhythmic speech patterns, while in krama, intonation plays a vital communicative role.

In general, the human voice (which, in traditional Javanese belief, reveals a person's spiritual and physical vitality, particularly their ability to attract sekti) and long-sustaining, melodic instruments like the rebab and suling hold a special function in the tuning organization of gamelan. These are tuned to fall “between” the tones of pelog and slendro, adding two microtonal degrees to the former and five to the latter.

While this may seem to introduce even greater temperamental vagueness, in fact, the more pitch-stable and consciously controlled voice, rebab, and suling acoustically serve to “focus” the shimmering sounds of gongs and metallophones — gathering them into coherent bundles. This mechanism is reflected in the concepts of blero and embat: blero (or balero) refers to looser alignment of voice or instrument with the ensemble's tuning, while embat refers to a higher degree of alignment and concordance.

Thus, the process of tuning convergence in karawitan reveals a unique kind of intonational integration between voice and instrument. In this respect, seni suara (vocal art) proves temperamentally more stable than seni gamelan (instrumental music). The principle of discursivity in musical unfolding — introduced into karawitan under the influence of Near Eastern linear, extended melodic traditions — has led to a “loosening” of the eternally cycling gongan structure, drawing it out along a temporal line shaped by the voice, rebab, and suling.

As a result, the texture of the main instrumental ensemble has evolved toward linearity — an evolution facilitated by cultural borrowings, especially from non-kraton gamelan traditions, in which gongs and metallophones are more commonly combined with wind instruments.

All of the above inevitably prompts reflection on the fundamentally fluid and unstable nature of the musical and cultural tradition we are examining. It resists unification and is difficult to describe or analyze using fixed definitions and absolute values. The ghostly, shimmering sounds of the gamelan at night, the wavering shadows of wayang puppets on the screen — these phenomena, which form the emblematic image of Javanese culture, are aptly compared to “moonlight reflected in a pond...”

As Jaap Kunst poetically writes, “The Javanese gamelan can be compared only with two things in the world — moonlight and flowing water... It is a unique reflection of being — just as moonlight embraces the entire earth: it is as eternal as water, and as changeable as water”.

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Феномен индонезийского оркестра гамелан в мировой музыкальной культуре

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Аннотация. В сложных и многоуровневых музыкальных культурах различных регионов мира не так просто выделить явления, которые на протяжении длительного периода представляли бы собой наиболее полный депозитарий их характерных черт. Традицию оркестрового музицирования, получившего название «гамелан», можно отнести к подобного рода феноменам. Это одно из ключевых, кодовых явлений не только Индонезии, региона Юго-Восточной Азии, но и мировой музыкальной культуры в целом. В данной статье предпринята попытка выявить существенные основы яванской музыки посредством анализа терминологии, сложившейся в рамках традиции гамелана, который рассматривается в системно-типологическом сопоставлении как внутри индонезийской музыкальной культуры, так и в сравнительной перспективе с другими регионами. Анализ начинается с наиболее важного и обобщающего для любой музыкальной культуры понятия «музыка» (по крайней мере в том значении, в котором оно применяется в пределах западной цивилизации), включающего все явления, касающиеся области звука, звучания, звукотворчества в целом. Ни в индонезийском, ни в яванском языках такой обобщающий термин не сложился. Появившийся на рубеже XIX–XX вв. термин *musik* (от голландского *musiek*) используется исключительно по отношению к западной музыке, причем только для музыки академической, в то время как для обозначения популярных форм употребляется термин *pop*. Подобное терминологическое разграничение, с одной стороны, отражает момент влияния современной западной поп-культуры на популярные формы музицирования, распространенные в городах Индонезии (особо оцутимого с начала 1960-х), а с другой – подчеркивает черты их явной самобытности, позволяющие без труда отделить эту музыку от западной.

Ключевые слова: оркестр, гамелан, гонг, гэндинг, вирама, каравитан, слендро, пелог

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