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SACRED TEXTS AS A SOURCE OF THE BUDDHIST VISUAL TRADITION: THE KOREAN ICONOMETRIC CORPUS

This comprehensive research advances a fundamental reconceptualization of the Korean Buddhist iconometric tradition, systematically transitioning the academic discourse away from purely art-historical or aesthetic interpretations. Rather than interpreting this rich textual and material corpus as a mere compilation of artisanal heuristics or stylistic guidelines, this study posits it as an advanced, highly codified mechanism of soteriological engineering and ontological stabilization applied to sacred materiality. By tracing the historical arc from the heterogeneous proto-Tantric practices of the Unified Silla era (676–935 CE) to the highly systematized ritual orthopraxy of the late Joseon period (1392–1910 CE), the analysis investigates the dialectical relationship between the textual codification of the divine form and its physical instantiation in resistant media. Through a rigorous synthesis of philological analysis and material culture methodologies – focusing specifically on the codicology of the Josang gyeong (造像經, Sutras on the Production of Images) and the consecratory bokjang (腹藏) rituals – this paper argues that Korean sacred statuary operates as meticulously organized matter. The numinous efficacy of these objects is entirely contingent upon their mathematical subjugation to canonical dictates. Ultimately, this work decodes the generative matrix of the Korean sacred image, illustrating how iconometry functions as the critical juncture where theological imperatives, metallurgical technologies, and actualized divine presence intersect.

Keywords: Korean iconometry, Seokguram Grotto, Tuoluoni ji jing (陀羅尼集經), Josang gyeong (造像經), consecration rituals (Bokjang), Huryeongtong (喉鈴筒), material religion, Ontological instantiation, Fenben (粉本).

Introduction: Historiographical Context and the Material Turn. The academic investigation of Korean Buddhist sculpture has historically been dominated by formalist and stylistic methodologies. Foundational scholars in the early to mid-twentieth century primarily occupied themselves with taxonomic classifications, the establishment of dating chronologies, and the tracing of morphological lineages back to Tang and Song dynasty China, or further west to Gupta-era India. However, this aesthetic-centric approach routinely neglected the most fundamental ontological question regarding these artifacts: their *agency*. How did these statues function not as static artworks, but as active participants within their specific liturgical, spatial, and soteriological contexts?

Recently, a crucial “material turn” in Korean Buddhist studies, pioneered by native scholars such as Kang Woobang (강우방) and Moon Myung-dae (문명대), has prompted a radical re-evaluation of the sacred image. Kang’s theoretical framework of “spiritual vitalization” emphasizes that without the correct internal

architecture and proportional geometry, a statue remains secular, inert matter [Kang 1990]. Building upon this domestic historiography and integrating broader theories of material religion, this paper argues that the iconometric manuals of Korea were never intended as simple artistic sketchbooks. They were the operative algorithms of a religious technology designed to bind the absolute to the empirical.

The Epistemological Paradox of Iconometry: Quantifying the Boundless. The foundational paradox animating Buddhist visual theology across East Asia is the ambitious endeavor to confine the infinite within tangible limits – to enforce absolute geometric metrics (*māna* / *liang*, 量) upon an entity that is inherently immeasurable and conceptually void (*ananta* / *wuliang*, 無量). According to Mahayana ontology, specifically within the complex Hwaeom (Huayan, 華嚴) traditions that were heavily favored by the Silla and Goryeo aristocracy, the *Dharmakāya* (the ultimate truth body of the Buddha) is formless, all-pervading, and entirely beyond the grasp of sensory perception.

How, then, does a civilization construct a vessel capable of housing this formless absolute? Within the intellectual landscape of medieval Korea, the fabrication of sacred imagery transcended any localized aesthetic pursuit or mimetic representation; it constituted a critical soteriological procedure with vast karmic implications. A properly measured and consecutively consecrated sculpture did not merely symbolize a deity in a semiotic sense but served as the actualized locus of divine agency – a matrix of artificially structured matter possessing immense metaphysical potency.

Consequently, the iconometric directives governing its assembly functioned as algorithmic prerequisites for manifesting the transcendent within three-dimensional space. Translating abstract textual dictates into concrete volumetric reality presents significant ontological friction. Texts are inherently conceptual and linear; a sculpture commands physical space, displaces mass, and is constantly subjected to the entropic forces of the material world. This study employs a *longue durée* perspective to scrutinize the Korean iconometric corpus, tracking the evolution of the “quantified divine body” and investigating how Korean artisans negotiated the material resistance of granite, wood, and bronze to achieve canonical geometry.

The Proto-Tantric Paradigm: Semiotic Collapse in the Tuoluoni ji jing. The systematization of Korean iconometry did not emerge in a vacuum but was catalyzed during the mid-seventh century amid the dynamic cultural syncretism of the Silla unification (668 CE). During this era, Silla monks frequently traveled to Tang China and India, bringing back a plethora of esoteric texts. The foundational text for this early tradition is the *Tuoluoni ji jing* (K. *Daraniḥip gyeong*, 陀羅尼集經, *Dhāraṇī-saṃgraha*, T. 901), translated by the Indian monk Atikūṭa in Chang’an around 654 CE.



Fig. 1. Illustrations and texts from the Buddhist Great Dharani Sutra of Immaculate and Pure Light (*Mugujeonggwang daedarani*)

Predating the highly structured, mathematically rigorous Yoga Tantras that would characterize later esoteric Buddhism, this compendium functions as a vast, somewhat heterogeneous repository of esoteric technologies, including complex mudras, incantations, and ritual procedures. Crucially, the text contains the *Huaxiang fa* (画像法, Method of Image Production). This specific section initiates a profound semiotic convergence within Korean religious practice: the absolute ontological equation of the visual icon (*xiang*) with the phonetic incantation (*dhāraṇī*).

The manual explicitly details the fabrication of “spell-seals” (*zhouyin*, 呪印), establishing those sonic vibrations and physical forms are interchangeable conduits of spiritual authority. In the Korean paradigm, this dictated that sculptures were not merely superficially adorned with text or symbols, but rather ontologically animated by them. The image was a frozen mantra; the mantra was a vocalized image.



Fig. 2. The image of Gwanseum-bosal in 1915 during repairs on the Seokguram Grotto. (Picture courtesy of the National Museum of Korea)

Material Evidence in Early Silla: The eighth-century monumental granite reliefs at the Seokguram Grotto in Gyeongju – specifically the depictions of the guardian deities Brahmā (Beomcheon) and Indra (Jeseokcheon) – exemplify strict adherence to these esoteric textual blueprints. Deviating from standard secular

Chinese iconographic norms of the period, the Seokguram Brahmā bears a double-spouted *kuṇḍīkā* (water vessel) and wears highly specific monastic robes. These physical attributes are directly lifted from the *Bore huaxiang fa* subsection of the *Tuoluoni ji jing*. As Korean art historian Choe Seongeun (최성은) has astutely noted, this confirms the manual’s function not as a loose artistic suggestion, but as a rigid, legally binding control mechanism for state-sponsored sculptors [Choe 2012].

Spatial Rationalism and Hwaeom Cosmology: The Seokguram Matrix.

While imported esoteric texts like the *Tuoluoni ji jing* supplied the iconographic “software”, the physical environment of monumental sites like Seokguram provided the mathematical “hardware”. For decades, early twentieth-century historiography imposed a mystical “geometric paradigm” upon Seokguram, with scholars searching for complex irrational numbers within its architecture to prove its transcendent nature.

However, contemporary revisionist analyses, particularly those combining 3D architectural modeling with historical Silla metrology, reveal that the grotto actually adheres to a highly rational, terrestrial proportional logic. This spatial logic is strictly grounded in integer modules and the traditional East Asian Gougu rule [Park 2022].



Fig. 3. View the Seokguram Main Buddha

The spatial configuration of the Seokguram main rotunda was dictated by a foundational module measuring 12 cheok (approximately 3.5 meters). Rather than relying on spontaneous aesthetic intuition or purely emotional expression, the

architecture was systematically derived from the physical dimensions of the primary Buddha statue. The physical arm span of the Buddha dictated both the dome's precise curvature and the circular hall's diameter.

This precise granite execution – where, for instance, the deity's shoulder width perfectly mirrors the exact distance between the antechamber's octagonal columns – guarantees flawless gaze alignment for the practitioner entering the sacred space. By mathematically locking the viewer, the architecture, and the statue into a single, unified proportional grid, the Silla architects effectively preserved the purity of the theological signal. This structural harmony creates a physical manifestation of Indra's Net, a core conceptual pillar in Hwaeom Buddhism where every element of the cosmos reflects and depends upon every other element.

Internalizing the Canon: The Somatic Animation of Bokjang. Following the external, architectural codifications of the Unified Silla, the subsequent Goryeo (918–1392) and Joseon (1392–1910) dynasties redirected their soteriological focus toward the interior, hidden architecture of the sacred image through the bokjang (腹藏) consecration ritual. Translating roughly to “abdominal cache” or “womb hoard”, this procedural mechanism entailed depositing highly specific assemblages of sacred artifacts into the hollow core of a newly cast or carved statue. Without this ritual, the object was considered merely a beautifully crafted piece of wood or bronze; with it, it became a vitalized locus of worship, a living entity.



Fig.4. Bokjang artifacts (Dedication materials found inside the head and body of the sculpture)

The textual and procedural authority for this animation was the Josangyeong (造像經, Sutras on the Production of Images), a distinctly Korean manual finalized and widely printed during the Joseon era, but heavily rooted in Goryeo esoteric practices and Liao/Yuan dynasty esoteric influences. The text strictly mandates the material installation of the “Three Mysteries” (Body, Speech, and Mind) through physical proxies.

At the very center of this complex internal cosmos is the Huryeongtong (喉鈴筒), a specialized, often silver or bronze throat-bell container acting as the

cardiovascular and respiratory center of the deity. Surrounding this central axis are the Obobyeong (五寶瓶): five treasure vessels corresponding to the five cosmic elements, the five cardinal directions (including the center), and the esoteric Dhyani Buddhas. Inside these vessels, monks meticulously placed five types of grains, five types of medicinal herbs, and five distinct colors of silk.

As Korean scholar Moon Myung-dae (문명대) has extensively researched, this interior architecture was not merely a symbolic offering to a distant god; it represented a sophisticated technological adaptation of the abhiṣeka (consecration/coronation) rite – traditionally reserved for human initiates or royalty – now projected directly onto the plasticity of the divine form [Moon 1984]. The bokjang transformed the statue from a representation of the cosmos into a functioning, vibrating microcosm itself.

Haptic Epistemology: The Workshop Matrix, Fenben, and Mechanical Reproduction. To fully grasp how these high-level theological and iconometric prescriptions were instantiated on the dusty floors of the artisanal workshop, it is absolutely necessary to examine the operational mechanics of the sculptors' guilds. The successful translation of sacred proportions relied heavily on the fenben (K. bunbon, 粉本) – the preparatory stencil, pouncing pattern, or schematic grid.

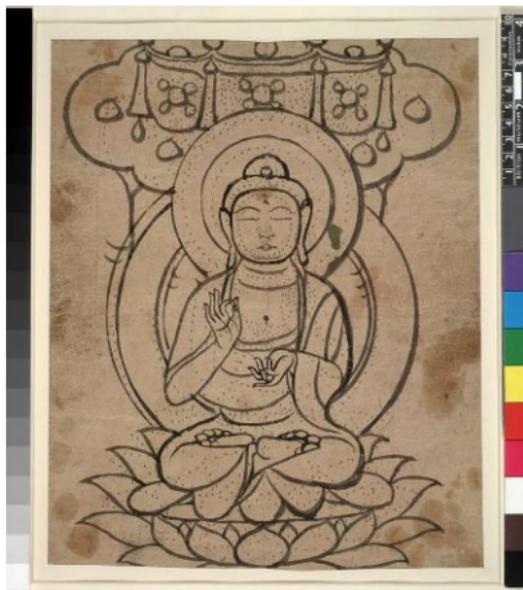


Fig.5. Fenben

These perforated diagrams facilitated the haptic (touch-based) transmission of sacred proportions. By placing a finely pricked paper stencil over a wooden

block or a clay core and dusting it with colored powder or charcoal, artisans could mechanically reproduce the exact dimensions dictated by the canon. This ensured the successful transfer of karmic merit without relying on the subjective, and therefore fallible, “artistic eye” of the individual craftsman.

As meticulously detailed in the extensive research of Sarah E. Fraser regarding the Dunhuang workshops, the use of fenben was an indispensable, highly standardized technology across the Buddhist Silk Road, providing a reliable mechanism for strictly “performing the visual” [Fraser 2004: 89]. This exact methodology was seamlessly adopted, refined, and heavily utilized in the Korean peninsula. The fenben allowed wood, stone, and clay sculptors to consistently verify precise somatic ratios – such as the exact mathematical distance from the hairline to the chin, or the width of the *ūrṇā* (the tuft of hair between the eyebrows) – ensuring that the visual syntax of the deity remained uncorrupted across generations, political upheavals, and vast geographical distances.

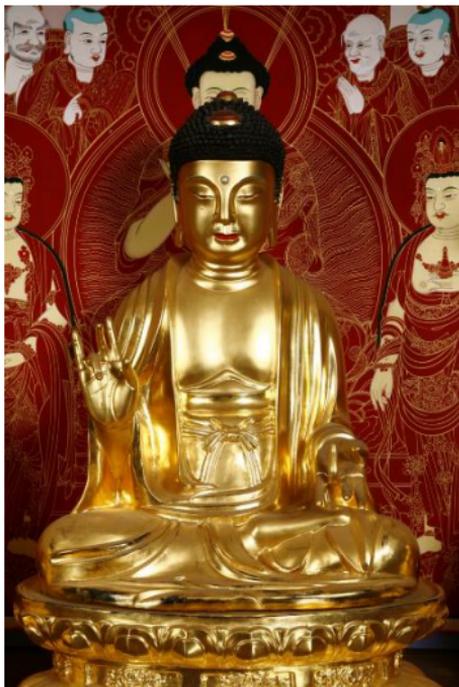


Fig.6. Gilt-bronze Seated Amitayus Buddha and Excavated Relics of Daeseungsa Temple, Mungyeong

By the mid-fourteenth century, as evidenced by heavily endowed gilt-bronze artifacts like the Amitayus Buddha of Munsusa Temple (dated 1346 CE), this

generative matrix was entirely standardized. The mathematical ratio had evolved into the ultimate, undeniable metric of doctrinal fidelity. The transition from the fluid ink of the sketch to the rigid permanence of the final material represented the literal calcification of Buddhist theology into a stable, physical interface for the worshipper.

Metallurgical Orthopraxy: Iconometry as Structural Imperative. The most rigorous, unforgiving validation of iconometric theory occurred not in the quiet halls of textual exegesis, but within the fiery, unpredictable confines of the foundry. Transmuting a textual decree into a monumental cast bronze statue was an extraordinary exercise in high-risk structural engineering. During the critical wax-model phase of the *cire perdue* (lost-wax) casting process, iconometric guidelines dictated much more than mere visual harmony; they governed precise limb thicknesses, the exact curvature of the structural arches forming the shoulders, and the mathematical depth of the drapery folds.



Fig.7. A late Goryeo-era Buddhist bronze bell housed in Naeso Temple in Buan, North Jeolla Province

These highly specific measurements were fundamentally structural imperatives camouflaged as religious law. If a wax matrix was excessively thin, or

if the proportional weight distribution was flawed, the molten bronze alloy would fail to circulate properly through the sprues and vents. This would result in catastrophic casting flaws, blowholes, or structural collapse – yielding a flawed, ritually impotent, and economically devastating icon. Consequently, the iconometric canon essentially codified metallurgical best practices under a strict theological veneer.

In this rigorous tradition, orthopraxy (correct ritual application) and orthotechnics (correct mechanical engineering) were fundamentally indivisible. A statue could only be spiritually perfect and capable of housing the Dharmakāya if it was, first and foremost, metallurgically viable. The Josang gyeong and its predecessor texts, therefore, functioned as an interdisciplinary nexus where soteriology directly informed metallurgy, ensuring that the physical tensile strength of the artifact matched its promised metaphysical durability.

The Imperial Panopticon: Bureaucratization of the Sacred in Late Joseon. The historical trajectory of Korean iconometry reaches its zenith – and its most rigid codification – during the late Joseon era (17th–19th centuries) with the mass proliferation of woodblock-printed Josang gyeong manuals. Following the devastating Imjin War (Japanese invasions of 1592–1598) and the subsequent Manchu invasions, the Korean peninsula required massive socio-cultural and architectural reconstruction. Hundreds of major temples had been burned to the ground, and thousands of sacred statues destroyed.

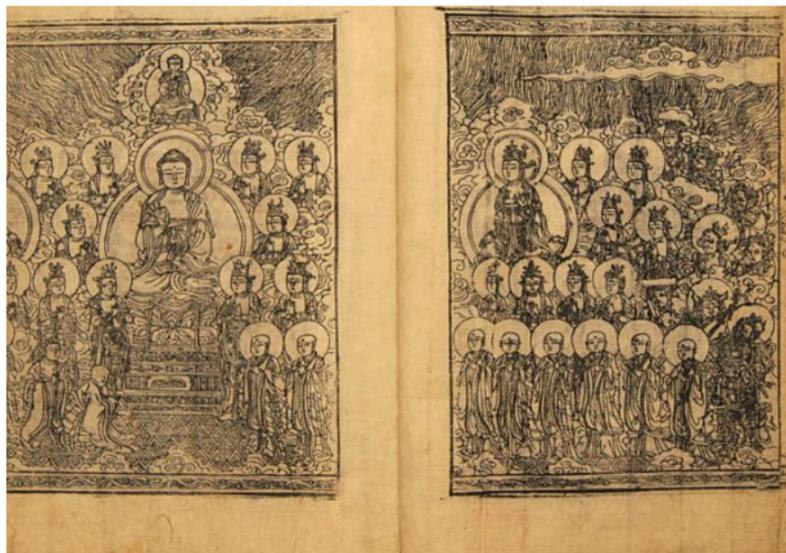


Fig.8. Illustration from the Shurangama Sutra, printed in 1547

This era of frantic post-war recovery marked a profound bureaucratization of sacred production to meet the immense, state-tolerated demand for new merit-making objects. The printed diagrams in the late Joseon manuals imposed an uncompromising, explicit grid upon the divine anatomy. This grid established the *talamana* (the specific ratio of the face relative to the total body length) as the immutable, legally binding metric of correctness. For the late Joseon sculptor, this manual was absolute law; deviating from its proportions was not viewed as artistic innovation, but as a severe karmic transgression and a failure of ritual duty.

The use of these standardized grids ensured that in a workshop tasked with producing hundreds of images simultaneously, the “theological signal” remained absolutely pure. Production was entirely monopolized by highly organized, specialized monk-sculptor guilds (*yupa*, 流派), such as the historically dominant Eungyeon or Saeknan lineages [Song 2023]. Operating under a strict, proto-industrial division of labor led by a master monk-sculptor (*sujogakseung*), individual artistic expression was systematically suppressed.

Assistant monks were assigned highly specific, modular tasks – one carving the lotus pedestal, another shaping the *mudras* (hand gestures), and another finishing the facial features. By subordinating the individual artistic hand to the textual “operating system”, the Joseon monastic institutions guaranteed absolute uniformity in the divine countenance. This mechanical reproduction of the sacred validated the socio-religious economy of the state, ensuring that even hastily produced statues retained their full soteriological efficacy.

The Political Economy of Divine Proportions. To fully understand the weight of the Korean iconometric corpus, one must also address the massive economic mechanisms driving its application. The creation of a canonically perfect image was an extraordinarily expensive endeavor, requiring the mobilization of vast resources: rare metals, imported pigments (such as lapis lazuli and cinnabar), exotic woods, and the labor of dozens of highly specialized monks over several months or years.



Fig.9. Seated Wooden Sakyamuni Buddha Triad at Jeondeungsa temple in Ganghwa

The iconometric text served as a contractual guarantee between the patron (often royal family members, aristocrats, or wealthy merchants) and the monastic workshop. By rigidly adhering to the *Josang gyeong*, the master sculptor provided verifiable proof that the vast sums of capital invested by the patron were successfully converted into uncorrupted, geometrically perfect karmic merit. The text mathematically insured the investment. Therefore, the measurements of the Buddha were not just theological coordinates; they were the currency of a complex religious economy where exact proportions dictated the scale of salvation.

Conclusion: Mediating the Absolute. The diachronic analysis of the Korean iconometric corpus uncovers a profound ontological shift in how the sacred image was conceptualized and manufactured over a millennium. The tradition progressed from the magical frequency-tuning of Unified Silla “spell-seals”, where image and sound were conflated; through the mathematically precise spatial and architectural environments of the Seokguram Grotto; and ultimately arrived at the hyper-standardized, grid-based, and bureaucratized protocols of the late Joseon ritual manuals.

This study conclusively demonstrates that these texts and matrices were never merely art manuals or stylistic suggestions. They were the foundational source code for a civilization’s attempt to negotiate the terrifying boundary between the visible empirical world and the invisible absolute. To measure the Buddha was, essentially, to measure the cosmos.

In the transition from the fluid, haptic transmission of the fenben stencil to the rigid, imposing granite of Seokguram, and down to the vibrating, vitalized cache of the bokjang consecration rituals, we witness the literal solidification of

Buddhist theology into matter. The iconometric text serves as the ultimate bridge – a meticulously engineered interface – between the silent, formless void of the Dharmakāya and the tangible, heavy, and strictly measured reality of Korean material religion.

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Крістіна Золотарьова

САКРАЛЬНІ ТЕКСТИ

ЯК ДЖЕРЕЛО БУДДИСТСЬКОЇ ЗОБРАЖАЛЬНОЇ ТРАДИЦІЇ: КОРЕЙСЬКИЙ ІКОНОМЕТРИЧНИЙ КОРПУС

Це комплексне дослідження пропонує фундаментальне переосмислення корейської буддистської іконометричної традиції, системно зміщуючи академічний дискурс від суто мистецтвознавчих або естетичних інтерпретацій. Замість того, щоб трактувати цей багатий текстовий та матеріальний корпус як просту компіляцію ремісничих евристик чи стилістичних настанов, у цьому дослідженні він розглядається як складний,

висококодифікований механізм сотеріологічної інженерії та онтологічної стабілізації, застосований до сакральної матеріальності.

Простежуючи історичну траєкторію від гетерогенних прототантричних практик епохи Об'єднаної Сілли (676–935 рр. н. е.) до жорстко систематизованої ритуальної ортопраксії пізнього періоду Чосон (1392–1910 рр. н. е.), аналіз розкриває діалектичний зв'язок між текстовою кодифікацією божественної форми та її фізичним втіленням у резистентних матеріалах (камені, металі, дереві). Завдяки ретельному синтезу філологічного аналізу та методологій вивчення матеріальної релігії — із особливим фокусом на кодикології «Чосан кьон» (造像經, Сутри про створення зображень) та ритуалах внутрішнього освячення покчан (腹藏) — у статті доводиться, що корейська сакральна скульптура функціонує як ретельно організована матерія.

Нуміозна ефективність та дієвість цих об'єктів повністю залежить від їхнього беззаперечного математичного підпорядкування канонічним приписам. Зрештою, ця робота деконструює генеративну матрицю корейського сакрального зображення, ілюструючи, як іконометрія слугує критичною точкою перетину теологічних імперативів, інженерно-металургійних технологій та актуалізованої божественної присутності.

Ключові слова: корейська іконометрія, грот Соккурам, Толоні чіп кьон (陀羅尼集經), Чосан кьон (造像經), ритуали освячення (Покчан, 腹藏), Хурйонтон (喉鈴筒), матеріальна релігія, онтологічне втілення, матриця феньбенъ (粉本).

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