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

*This study proffers a radical re-evaluation of the Chinese Buddhist iconometric tradition, positing it not merely as a repository of artistic technicalities but as a sophisticated technology of ontological control and soteriological engineering specifically applied to sacred sculpture. Spanning a millennium – from the proto-Tantric heterogeneity of the early Tang dynasty (*Tuoluoni ji jing*) to the rigid imperial orthopraxy of the Qing (*Zaoxiang liangdu jing*) – the research interrogates the dialectical tension between the textual "legislating" of the sacred body and the sculptural "instantiating" of the divine presence. By deploying a methodology that synthesizes philological rigor with material culture studies (specifically the codicology of Dunhuang manuscripts P.4514, P.2002, and S.2498), the article argues that the trajectory of Chinese religious statuary demonstrates a fundamental epistemic shift: from the haptic transmission of charisma via the *fenben* (powder pounce) in medieval workshops to the optic discipline of the grid via the woodblock print in imperial ateliers. Furthermore, the study incorporates a historiographical critique of Western reception and a technical analysis of bronze casting, demonstrating how "lost-wax" metallurgy functioned as the material proving ground for iconometric theory. The investigation exposes how the Qing court utilized the *Zaoxiang liangdu jing* (1742) to bureaucratize the volumetric body of the Buddha, turning sculpture into a site of political governance. Ultimately, this work reconstructs the "operating system" of the Chinese sacred image, demonstrating that iconometry serves as the nexus where theology, technology, and the material plasticity of the divine converge.*

Keywords: Chinese Iconometry, Buddhist Sculpture, *Tuoluoni ji jing* (陀羅尼集經), *Tanfa yize* (壇法儀則), *Zaoxiang liangdu jing* (造像量度經), *fenben* (粉本), Esoteric Buddhism (*Mijiao*, 密教), Material Culture, Bronze Casting, Historiography, Dunhuang Studies (敦煌學), *Amoghadvaja* (不空), *Rolpai Dorje* (若必多吉).

The central paradox of Buddhist iconology lies in the audacious attempt to circumscribe the infinite within the finite, to impose measurement (*māna* / *liang*, 量) upon that which is ontologically boundless (*ananta* / *wuliang*, 無量). In the context of medieval and late imperial China, the creation of a sacred sculpture was never an exercise in mere mimetic representation or aesthetic indulgence; rather, it was a high-stakes soteriological operation. The statue was not a symbol of the deity; under the correct ritual conditions, it became the *locus* of the deity's presence, a "body of artificially arranged matter" capable of agency. Consequently, the rules governing its construction – the iconometric corpus – must be understood not as artistic guidelines but as algorithmic codes for the manifestation of the numinous in three-dimensional space.

The transition from text to volume is fraught with peril. A textual description is abstract; a sculpture is undeniably concrete, occupying space, displacing air, and commanding gravity. This research undertakes a *longue durée* analysis of this corpus, examining the transformation of the “measured body” from the Tang dynasty (618–907 CE) to the Qing dynasty (1644–1911 CE). We explicitly interrogate how two-dimensional diagrams and linear texts were translated into the volumetric reality of bronze, stone, clay, and wood. Our inquiry integrates high theological texts with the material residues of artistic production, visualizing this trajectory through *ten key artifacts* that mark paradigm shifts in the conception of the sacred image. We posit that the history of Chinese Buddhist sculpture is the history of the struggle to align the material resistance of the medium with the perfect geometry of the canon.

The Proto-Tantric Matrix: The Agency of the Sculpted Body in the Tuoluoni ji jing

The genesis of a systematized Chinese iconometry can be traced to the mid-7th century, a period of fertile chaos in Chinese Buddhism. The *Tuoluoni ji jing* (陀羅尼集經, *Dhāraṇī-samgraha*, T. 901) (fig. 1), compiled by the Indian master Atikūta (阿地瞿多) in the imperial capital of Chang'an circa 654 CE, serves as our *ur-text*. Unlike the systematic Yoga Tantras that would arrive a century later, this text is a compendium – a vast, heterogeneous library of spells, mudras, and ritual protocols.

Within this compendium lies the *Huaxiang fa* (画像法, “Method of Painting/Image Making”). While the term often implies painting, the prescriptions are equally applicable to relief and sculpture in the round. The *Tuoluoni ji jing* introduces a radical semiotic collapse: the conflation of the Image (xiang) and the Spell (dhāraṇī). The text elucidates methods for creating “spell-seals” (zhouyin, 呪印), where the visual form and the sonic syllable are interchangeable technologies of power. This artifact demonstrates the integration of text and image. The central deity is literally composed of and surrounded by the “dharma-body” of the text, serving as a conceptual prototype for the sculpture which must also be “filled” with texts.

The text’s influence extends profoundly to the volumetric depictions of Hindu deities incorporated into the Buddhist pantheon. The images of Brahmā and Indra found at Seokguram (Korea) (fig. 2) correspond precisely to the descriptions in the *Bore huaxiang fa* (般若画像法), a subsection of the *Tuoluoni ji jing*. Here, Brahmā is described in a form that deviates from earlier generic Chinese representations of celestial officials and aligns more closely with specific ritual requirements, holding a *kundikā* (water vessel) and wearing monastic robes [Leidy 2007]. This proves that the text functioned as a transnational “control mechanism”. The sculptor at Seokguram was not carving from imagination; he was carving from a manual derived from Chang'an. The shift from a generic noble figure to a specific ritual agent in stone marks the triumph of the iconometric text over local vernacular styles.



Fig. 1. Woodblock Printed Dhāraṇī Sheet with Central Deity. Tang Dynasty (9th-10th c.). From Mogao Cave 17, Dunhuang. The British Museum (1919,0101,0.249).

A masterclass in translating textual prescription into granite. The specific attributes (water bottle, robes) are direct quotes from the *Tuoluoni ji jing*, proving the text's role as a sculptor's blueprint.



Fig. 2. Interior view of the Seokguram Grotto (Korea). 8th c. Granite.

The Geometry of the Void: Amoghavajra and the Cosmological Diagram

As the Tang dynasty reached its zenith, the “Three Great Masters” of the Kaiyuan era introduced a systematized Esoteric Buddhism (*Mijiao*, 密教). The *Tanfa yize* (壇法儀則, *Ritual Instructions for Altar Methods*), attributed to Amoghavajra (705–774), represents a quantum leap in iconometric sophistication.

In the *Tanfa yize*, the focus shifts from the isolated talismanic figure to the *Maṇḍala* – a totalizing cosmological architecture. For the sculptor, this meant that the single statue was no longer sufficient; the statue had to exist in a rigorous spatial relationship with other statues. The altar (*tan*) became a multi-figure installation art piece (fig. 3).

The text specifies the placement of the “Eight Great Bodhisattvas” and the “Four Guardian Kings” (fig. 4). If a sculptor made the central Vairocana too large or the peripheral figures too small, the gravitational pull of the mandala would be disrupted. The *Tanfa yize* acts as the architectural plan for this sculptural ensemble.

This ensemble visualizes the prescriptions of texts like *Tanfa yize*. The hierarchy of scale between the Buddha, the monks, and the guardians is not artistic license but iconometric law.

Crucially, the text elucidates the “double construction” of the image. The physical altar is merely the external support (*adhisthana*) for the internal, visualized altar constructed within the adept’s consciousness. This “Mental Iconometry” demands that the practitioner internalize the grid of the mandala. The physical

sculpture must be perfect so that the mental image can be stable. The bronze or wood is an anchor for the mind.

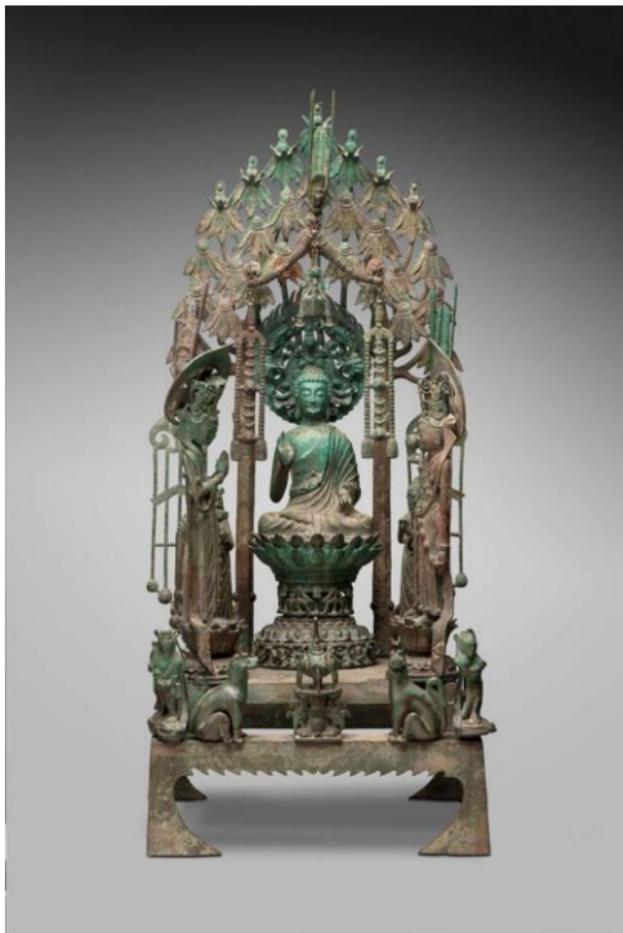


Fig. 3. Altarpiece with Amitabha and Attendants. Chinese, Sui dynasty, dated A.D. 593.

Based on Tang Esoteric principles. The geometric arrangement of the figures creates a “field of power” that the sculptor must facilitate through precise placement.



Fig. 4. Womb Realm (*Garbhadhātu*) Mandala featuring *Mahāvairocana*

The Archive of the Hand: Haptic Transmission in the Dunhuang Workshops

To understand how these high-level prescriptions were instantiated in the provinces, we must turn to the “Black Box” of the medieval workshop: the *fenben* (粉本). The discovery of Cave 17 at Mogao transformed our understanding of Chinese art history, revealing the intermediate stages of production usually lost to time [Fraser 2004].

Manuscript P.4514 serves as a primary artifact for analyzing mechanical reproduction (fig. 5). This scroll is a collection of pounces – drawings with pinpricked outlines. While often associated with wall painting, recent scholarship suggests these 2D templates were also used to map out the proportions for clay armature sculptures. The clay sculptor would place the pounce against the prepared wooden core or a flat surface to check the proportions of the limb or head. The

physical evidence – traces of red mineral powder forced through the holes – demonstrates the method of “pouncing”. I argue that the fenben represents a haptic lineage of transmission. The “sacred” was transmitted through the physical touch of the master’s stencil.



Source gallica.bnf.fr / Bibliothèque nationale de France. Département des Manuscrits. Pelliot chinois 4514 (2) 26

Fig. 5. P.4514 (2) 26: Pounce (fenben) for a Bodhisattva (Mañjuśrī?). Ink and pricked outlines on paper. Bibliothèque nationale de France, Paris.

The holes in the paper allow for the transfer of the “sacred trace” (vestigium) to the wall or the sculpture’s surface, ensuring canonical fidelity.

The application of these texts and templates resulted in the magnificent clay sculptures of the Mogao Grottoes (fig. 6). Unlike stone carvers who subtract material, the Dunhuang sculptors added material (clay over wood and reed). This additive process required rigorous monitoring of proportions at every layer. The iconometric manuals provided the “check-points” for the sculptor: the distance from chin to hairline, the span of the shoulders.

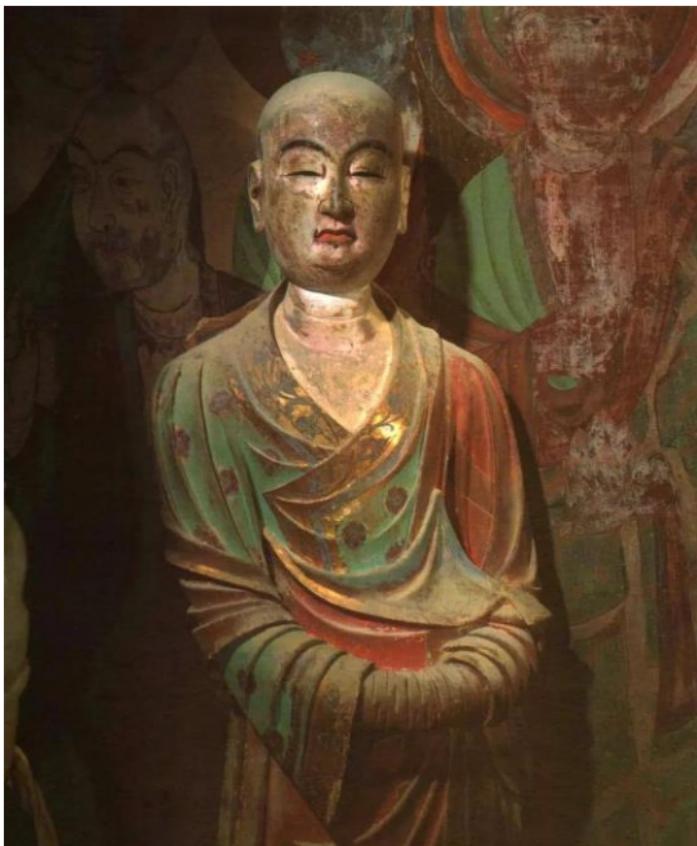


Fig. 6. The Disciple Ananda. Painted clay sculpture with wooden armature. South side of the west niche, Mogao Cave 328. High Tang period (8th century).

The volumetric realization of the 2D pounce. The fluidity of the clay allows for a direct translation of the “white drawing” sketches into three dimensions.

Dunhuang also preserves diagrams intended solely for the ritual specialist. S.2498 (Stein manuscript 2498) depicts a “Superlative Mantra Altar” (Zunsheng zhoutan, 尊勝呪壇) (fig. 7). Unlike pictorial art, this diagram abstracts deities into text labels positioned in cardinal directions. It functions as a circuit board for the ritualist’s visualization.

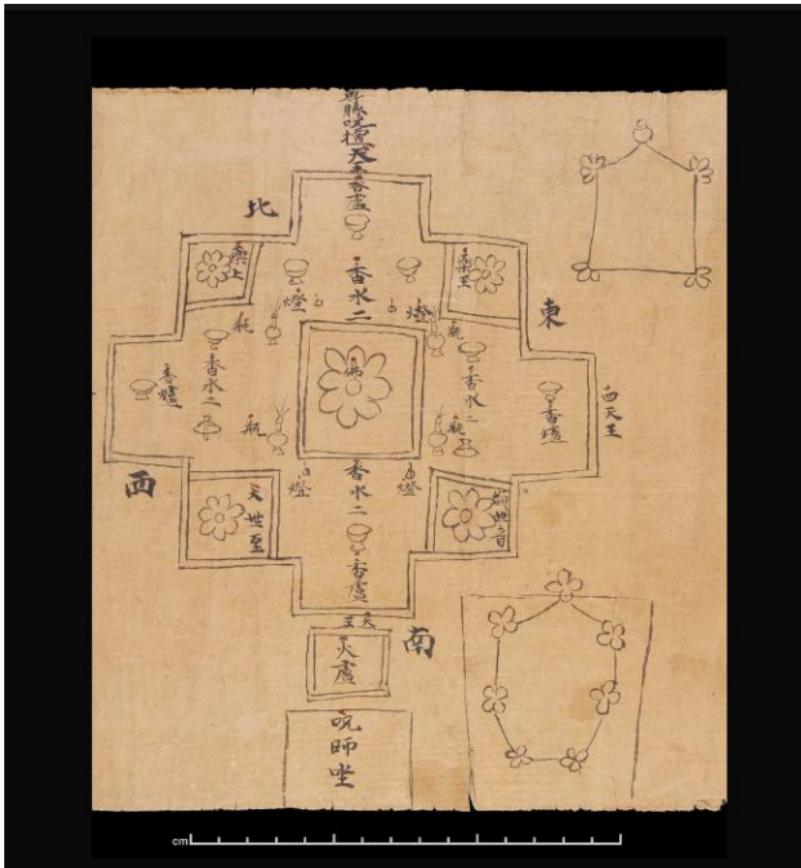


Fig. 7. S.2498: Altar Diagram for the Superlative Mantra (Mahāpratisarā). Ink on paper. British Library, London.

A schematic guide that abstracts the sculptural bodies into text labels, emphasizing their ritual position over their visual form.

Conversely, manuscripts like P.2002 show the fluid, heuristic side of the workshop. These “white drawings” (*baihua*, 白畫) are sketches where the artist

works out dynamic poses (fig. 8). They represent the space of controlled variation permitted outside the rigid iconometric constraints of the central deities.

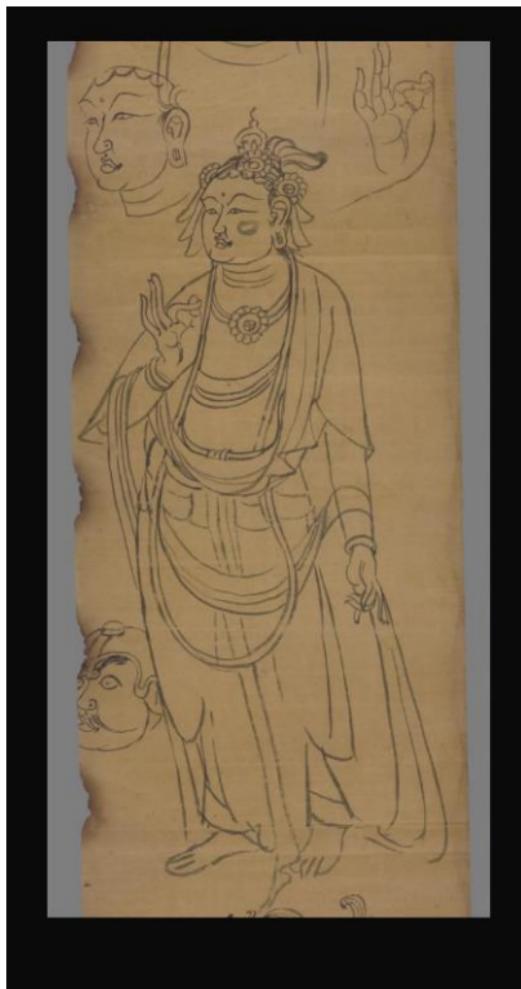


Fig. 8. P.2002 (verso): Sketches (*fenben/baihua*) of characters for statues and murals. Ink on paper. Bibliothèque nationale de France, Paris.

These sketches show the “hand” of the sculptor/painter working out problems of anatomy and drapery before committing to the final material.

The Hermeneutics of Measurement: From Aesthetic Form to Ritual Function

To fully grasp the significance of the iconometric corpus, we must briefly interrogate the historiography of its reception. The scholarly understanding of Chinese Buddhist sculpture has undergone a Copernican revolution over the last century, shifting from an “Aesthetic” paradigm to a “Technological” one. Early 20th-century pioneers like Osvald Sirén and Alexander Soper approached Chinese sculpture through the lens of European art history. They sought “style”, “genius”, and “evolution of form”, treating Buddhist statues as they would Greek kouroi or Renaissance marbles. For these scholars, the iconometric texts (if they were acknowledged at all) were viewed as stifling constraints – bureaucratic shackles that hindered the “free expression” of the artist. The rigid grids of the Zaoxiang liangdu jing were dismissed as evidence of the “ossification” or “decline” of Chinese art in the late imperial period.

However, the discovery of the Dunhuang manuscripts and the structuralist analysis of scholars like Lothar Ledderose [Ten Thousand Things, 2000] and Sarah Fraser [Performing the Visual, 2004] inverted this hierarchy. Ledderose argued that the “modular system” – the use of standardized parts and measurements – was not a limitation but the very genius of Chinese art. It allowed for the mass production of merit.

In this new light, the Tuoluoni ji jing and Tanfa yize are not seen as “anti-artistic” regulations, but as sophisticated Quality Control (QC) manuals. They ensured that in a workshop producing thousands of images, the theological “signal” remained pure. The text was the software; the workshop was the hardware; the sculpture was the output. This study aligns with this revisionist school, arguing that the aesthetic power of these sculptures derives precisely from their rigorous mathematical subordination to the canon.

The Metallurgy of the Canon: Iconometry and the Lost-Wax Process

The most critical test of the iconometric text occurred in the foundry. The translation of a textual prescription into a cast bronze statue represents a feat of high engineering, where the “lost-wax” (*cire perdue*) process serves as the mediator between the ideal and the real. Before a single drop of molten bronze could be poured, the sculptor had to create a full-scale model in wax. It was at this stage – the wax stage – that the iconometric rules were applied. The wax is pliable and forgiving; bronze is permanent.

The Zaoxiang liangdu jing prescribes specific measurements for the thickness of the limbs and the depth of the drapery folds. These were not merely visual choices but structural necessities. If the wax model for the arm of a generic Bodhisattva was too thin (deviating from the canon), the molten metal might not flow to the fingertips during casting, resulting in a “maimed” and thus ritually useless statue. Thus, the iconometric canon codified best practices in metallurgy under the guise of theology.

For the colossal statues of the Qing court, the “Piece-Mold” technique was often employed alongside lost-wax. The body of the Buddha would be cast in separate modules: the lotus throne, the crossed legs, the torso, and the head.

This required an absolute adherence to the standard grid. If the neck of the torso module was cast according to one measurement system and the head according to another, the assembly would fail. The *Zaoxiang liangdu jing* functioned as the industrial standard (an 18th-century ISO) that allowed different teams of artisans to work on different body parts simultaneously. The “sacredness” of the final object depended on the seamless mechanical integration of these parts, proving that in the Chinese tradition, orthopraxy (correct practice) was inseparable from orthotechnics (correct engineering).

The Imperial Panopticon: The Bureaucratization of the Sculptural Body in the Qing Dynasty

The narrative arc culminates in the 18th century with the *Foshuo Zaoxiang Liangdu Jing* (佛說造像量度經, *The Buddhist Canon of Iconometry*), published in 1742 under the Qianlong Emperor. This text, produced by Gömpojab and Rolpai Dorje, represents the bureaucratization of the sacred [Berger 2003]. The Qing court viewed vernacular Chinese Buddhist art as “degenerate”. The *Zaoxiang liangdu jing* was a corrective tool, imposing a rigorous, mathematically verifiable Indo-Tibetan standard. The illustrations in this woodblock-printed manual impose a relentless grid upon the divine body.

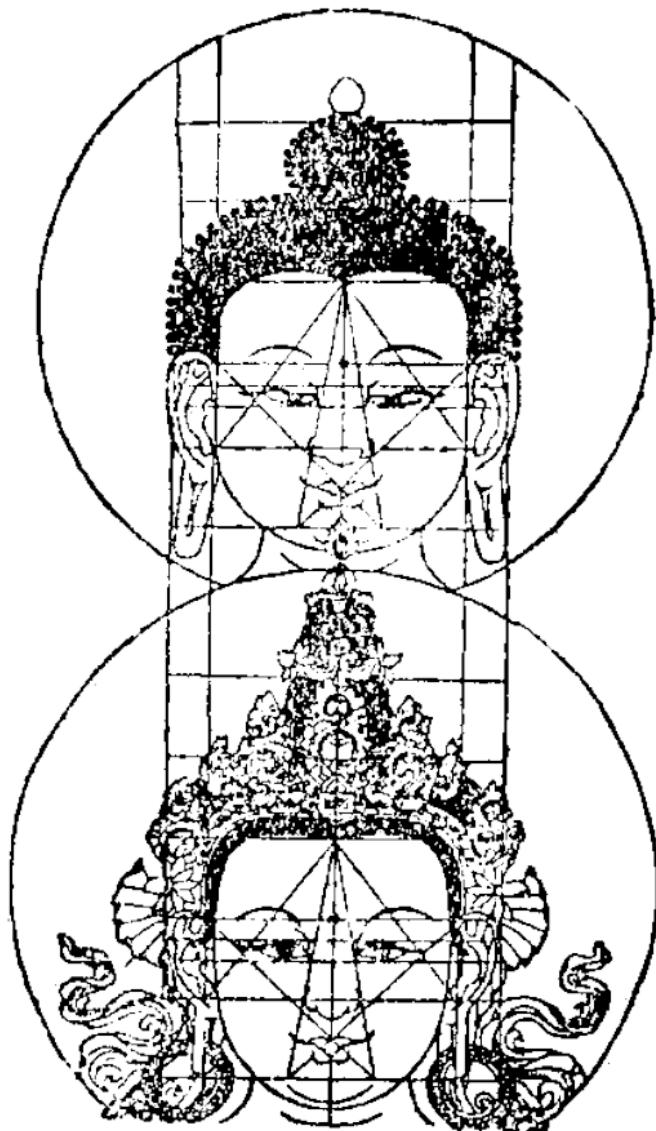
For the sculptor, this manual was law. The famous grid of the Buddha’s head divides the countenance into minute angula (sor) units. A bronze caster could not simply model a “pleasing” face; they had to model a face where the nose was exactly 4 angula long and the forehead 4 angula high. The ratio “fang wu xie qi” (方五斜七, “square five, oblique seven”) became the metric of loyalty (fig. 9).

The rationalization of the divine countenance. This 2D grid was the mandatory template for all 3D imperial production.

This optical discipline extended to the entire body. The full standing figure of the Buddha was subjected to the same proportional “cage” (fig. 10). This was crucial for large-scale metal casting. The modular casting method required precise standardization so that parts cast separately (head, torso, lotus base) would fit together perfectly. The *Zaoxiang liangdu jing* provided the “industrial standard” (ISO) for this assembly.

Totalizing control over the sacred body. This diagram ensured that no matter the size of the statue, the proportions remained constant.

The practical application of this rigid iconometry is visible in the immense production of Sino-Tibetan art by the Qing imperial workshops (Zaobanchu). Statues produced under this regime possess a characteristic precision, a mechanical perfection that reflects the successful imposition of the textual grid onto three-dimensional matter. They are manifestations of “Imperial Universalism”, where the Buddha’s body becomes a site of state governance.



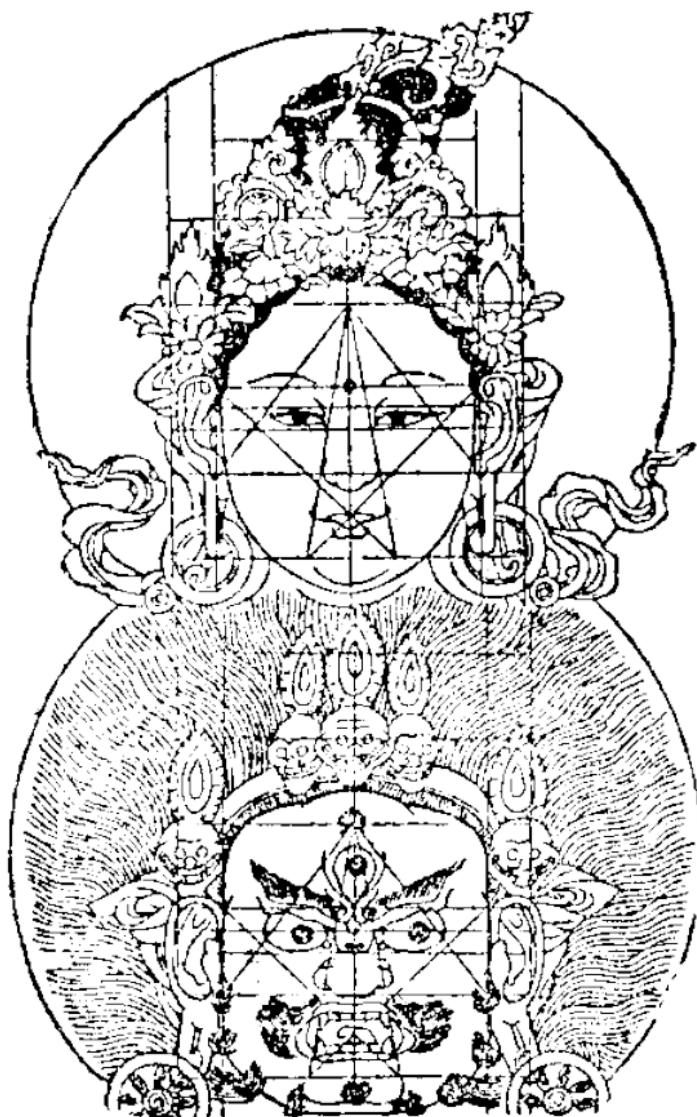


Fig. 9. Canonical facial forms: the "Full Moon" (Buddha), "Egg" (Bodhisattva), "Sesame" (Female Deities), and "Square" (Wrathful Deities).
From the 1742 edition of *Foshuo zaoxiang liangdu jing*.



Fig. 10. Woodblock print illustrating the iconometric grid for the standing Buddha. From *Foshuo zaoxiang liangdu jing* (The Buddhist Canon of Iconometry), compiled by Gömpojab, 1742.

Conclusion: The Measured and the Immeasurable

The trajectory of the Chinese iconometric corpus – visualized here through ten artifacts spanning a millennium – reveals a profound evolution in the ontology of the sculptural image. We move from the proto-Tantric **Talisman** (fig. 1), whose measurements tune it to magical frequencies; to the High Tang **Hologram** (fig. 3), requiring mental construction; through the medieval **Trace** of the workshop pounce (fig. 5); and finally, to the Qing **Datum**, locked within the imperial grid (figs. 9–10).

This study demonstrates that these texts were never merely art manuals. They were the source code for a civilization's attempt to negotiate the boundary between the visible and the invisible. To measure the Buddha was to measure the world. In the transition from the fluid ink of the *fenben* to the rigid bronze of the Imperial workshop, we witness the solidification of theology into matter. The iconometric text serves as the bridge between the silent void of the Absolute and the tangible, heavy, and measured reality of the sacred sculpture.

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**САКРАЛЬНІ ТЕКСТИ
ЯК ДЖЕРЕЛО БУДДИСТСЬКОЇ ЗОБРАЖАЛЬНОЇ ТРАДИЦІЇ:
КИТАЙСЬКИЙ ІКОНОМЕТРИЧНИЙ КОРПУС**

Це дослідження пропонує радикальну переоцінку китайської буддійської іконометричної традиції, розглядаючи її не просто як збірку технічних художніх настанов, а як складну технологію онтологічного контролю та сотеріологічної інженерії, що безпосередньо формувала сакральну скульптуру. Охоплюючи тисячоліття – від прото-тантричної гетерогенності ранньої династії Тан (*Tuoluoni ji jing*) до жорсткої імперської ортопраксії династії Цін (*Zaoxiang liangdu jing*), – робота досліджує діалектичну напругу між текстовим «законодавством» сакрального тіла та скульптурною «інстанціацією» божественної присутності. Застосовуючи методологію, що синтезує філологічну точність із дослідженнями матеріальної культури (зокрема кодикологією манускриптів Дуньхуана P.4514, P.2002 та S.2498), стаття стверджує, що траєкторія китайської релігійної пластики демонструє фундаментальний епістемічний зсув: від гаптичної передачі харизми через фенбень (трафарет з порошком) у середньовічних майстернях до оптичної дисципліни сітки через ксилографію в імперських ательє. Додатково у дослідженні наведено історіографічну критику західної рецепції та технічний аналіз ліття бронзи, що демонструє, як металургія «втраченого воску» слугувала матеріальним полігоном для перевірки іконометричної теорії. Дослідження розкриває, як цінський двір використовував трактат «Цзаосян лянду цзін» (1742) для бюрократизації об'ємного тіла Будди, перетворюючи скульптуру на об'єкт політичного управління. Зрештою, ця робота реконструює «операційну систему» китайського сакрального образу, демонструючи, що іконометрія слугує вузлом, де сходяться теологія, технологія та матеріальна пластичність божественного.

Ключові слова: китайська іконометрія, буддійська скульптура, *Tuoluoni ji jing* (陀羅尼集經), *Tanfa yize* (壇法儀則), *Zaoxiang liangdu jing* (造像量度經), *fenben* (粉本), езотеричний буддизм (*Mijiao*, 密教), матеріальна культура, ліття бронзи, історіографія, дуньхуанознавство (敦煌學), Амогхаваджра (不空), Ролтай Дордже (若必多吉).

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