

# DRY-LACQUER OR CLAY? PRELIMINARY NOTES ON A NEGLECTED NEPALESE SCULPTURAL MEDIUM

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In the early 1960s the Cleveland Museum of Art acquired a Nepalese sculpture of an unusual type, composed neither of the familiar bronze, stone, or wood characterizing other sculptures in the collection. In 1964 when under the patronage of King Mahendra Bir Bikram Shah, Stella Kramrisch organized the first exhibition of Nepalese art in the United States, at Asia House, New York, this sculpture, Vajravārāhī, the Adamantine Sow, was included (Fig. 1). In the catalog accompanying the exhibition, Professor Kramrisch identified the sculptural medium as "dry-lacquer," an identification that clings to it yet.<sup>1</sup>

I first saw the Vajravārāhī in the early 1970s following several years' residence and study in the Kathmandu Valley. From what I could observe in the gallery setting I was convinced that the image did not belong to the dry-lacquer sculpture tradition of East Asia but rather to an altogether different tradition of modeled clay sculpture. This conviction was bolstered by recent encounters with several modeled clay images *in situ* in the Kathmandu Valley. None, to be sure, were esoteric images comparable to the Cleveland Vajravārāhī, which must have come from some *vihāra's* secret tantric shrine (*āga*)—where it "should not be seen except by two eyes, not even by three,"<sup>2</sup>—but were buddhas and bodhisattvas in visually accessible shrines such as Buddha-bari and Musun-bahal, Kathmandu (Fig. 2).<sup>3</sup>

Ostensibly as the sole example of this type of sculpture outside of Nepal, and employed for an aesthetically undistinguished image, the Cleveland Vajravārāhī elicited no particular scholarly interest over the years, either from a stylistic or technical viewpoint. My own interest in it was rekindled when during the 1980s and '90s other images of the same type began to appear in public and private art collections in the United States, at length numbering some half-dozen. With such a sizable body of material relatively close at hand it seemed time to initiate an in-depth study of these so-called "dry-lacquer" Nepalese sculptures. In 1992 the award of a fellowship by the

Smithsonian Institution, Washington, D.C., provided the means for conducting it in collaboration with the technological laboratory of the Arthur M. Sackler Gallery and Freer Gallery of Art, companion museums of Asian art under the Smithsonian aegis.<sup>4</sup> Although the study is far from finished it seems advisable to share some of the preliminary findings by means of this short paper I write in memory of one of Nepal's greatest scholars, the late and much-lamented Dhanavajra Vajracharya.

### **Dry-lacquer Sculpture Defined**

It will be useful to preface the description of the so-called "dry-lacquer" Nepalese sculptures with one of true dry-lacquer as practiced in East Asia. Although the term "lacquer," the fundamental ingredient of such sculptures, derives from *lac* (and ultimately Sanskrit *lākṣa*), the sticky exudate of an insect, the lacquer used in East Asia has nothing to do with *lac* but is the refined sap of a species of sumac tree (*Rhus verniciflua*), native to China and possibly Japan. In order to use it in the manufacture of lacquerware and sculpture, the liquid lacquer must be made to set, a demanding process requiring both warm temperature and high humidity. Therefore lacquer must be applied very sparingly not to deprive underlying parts from the action of these essentials to polymerization. Since thick coats will not set, thickness has to be achieved another way. In the manufacture of lacquerware it is done by applying layer upon layer of thin coats—even as many as a hundred—each thoroughly dried before the next is added. In the creation of sculptures, thickness is obtained by building up several layers of lacquer-saturated cloth. Once set, lacquer has a lustrous, glossy finish and is extremely durable, impervious to water and alcohol, almost all acids and alkalis, and to heat, insects, and decay. For example, lacquer objects recovered from Chinese tombs of the Warring States period (475—221 B.C.) are said to be "fresh enough to have been made yesterday."<sup>5</sup>

The term "dry-lacquer" is unrelated to the setting or drying process of liquid lacquer but is the ill-conceived Western term for a type of East Asian sculpture known in China as *tuodai* (removed core) or *jiaozhu* (wrapped hemp) and in Japan as *kanshitsu*. The definition of what constitutes dry-lacquer is inconsistent in the literature but is best used to mean the process of combining cloth with lacquer as a sculptural medium. The technique of dry-lacquer sculpture originated in China and has been practiced continuously from at least the fourth century A.D. to the present.<sup>6</sup> Later transmitted to Japan, lacquer sculptures have been made there since the early eighth century A.D.<sup>7</sup> Such sculptures are of two types: hollow dry-lacquer and wood-core dry-lacquer.

A finished hollow dry-lacquer sculpture may vary in appearance according to the time and place of its manufacture, its type and purpose, and the abilities and idiosyncracies of the sculptor. But by whom and whenever or wherever made, a hollow dry-lacquer sculpture is achieved through the same basic steps, complex, time-consuming, and evolved through centuries of transmitted skills. First a temporary support for the limp, lacquer-soaked cloth is made, either a wooden scaffold or a model of the intended figure in unbaked clay. The latter is strengthened with various fillers such as straw or rice chaff and sometimes with an internal wooden framework. Various fabrics are employed but coarsely woven hemp is favored for its ability to absorb the lacquer. As in the fabrication of lacquerware, each layer of lacquer-soaked cloth must dry thoroughly before the next is applied, although for sculptures there are rarely more than six or seven. Some features such as ears or hands may be carved from wood and later fastened to the image or they may be modeled in clay around wire armatures which are sometimes fiber wrapped for greater adhesion. Heads—and even arms—may also be fashioned separately and often the eyes (and in Buddha images, the *ūrṇa*) are inset with quartz or other hard materials. Thin sheets of native paper are sometimes used as the initial layer over a clay model but the purpose is unknown. Over the final layer of lacquer-impregnated cloth, details of clothing and ornament are modeled in a lacquer-based paste, a composition of pure lacquer and diverse additives such as ash of various substances, powdered brick, tile, calcined shell, and even pig's blood or gall. Finally, the clay support is dug or washed out (or if a scaffolding was used, removed) and the completed image may be gilded and painted. In some sculptures a layer of thin paper precedes the gilding and painting. Excepting the few solid parts and occasional wooden reinforcements (in the arms, for example), typically only a hollow, lightweight shell of lacquer and cloth remains. In Japan sculptors sometimes retained the wooden armature of the clay model or introduced one after the original had been removed (Fig. 3).

Wood-core dry-lacquer sculptures differ from hollow ones in that the model around which the lacquer-saturated cloth is shaped is permanent. The core may be a thin wooden shell with or without internal bracing, be formed from a number of joined wood blocks, or be a finished wood sculpture—sometimes partially hollowed to reduce weight and cracking. Like the temporary cores of hollow images, whichever type of permanent core is used it is covered with one or more layers of lacquer-impregnated cloth and finished with lacquer paste, gilding and polychrome paint.

There are many extant Chinese and Japanese examples of both hollow and wood-core dry-lacquer sculptures in the temples and museums of their country of origin and in foreign collections, private and public. The Freer

Gallery of Art, for example, possesses a number of them among which are an over life-size, hollow dry-lacquer representation of the Buddha fashioned in China during the Sui period (A.D. 581—618) and a wood-core dry-lacquer bodhisattva made about the twelfth century in Japan (Figs 4-5).

The art of dry-lacquer sculpture appears to be a monopoly of China and Japan where the sap of indigenous lacquer-producing trees has been exploited since the Neolithic period. Such sculptures were once familiar in parts of Central Asia, as is known from the memoirs of the seventh-century Chinese pilgrim, Xuanzang (Hsüan-tsang), who saw a monumental dry-lacquer Buddha in Khotan, reputed to have come from Kucha, another oasis on the Silk Road.<sup>8</sup> That it was of local manufacture, however, is manifestly impossible given both the absence of lacquer-producing trees that far west and the dry and dusty Silk Road. Such conditions are especially inimical to the lacquer process which requires humidity and a dust-free atmosphere. The Buddha can only have been imported from centers of dry-lacquer production farther east. Similarly, a few dry-lacquer sculptures of Chinese manufacture may have made their way to Tibet but none would have been made there (Fig. 6). India also lacks such a tradition, the closest approximation being the hollow clay- and paint-covered leather images said to have been made in antiquity and perhaps used in the theatre.<sup>9</sup> As in India, lacquer also is alien to Nepal. Indeed, a fifteenth- or early sixteenth-century Chinese lacquer box from Gujarat, now in the collection of the Boston Museum of Fine Arts, may represent the oldest example of East Asian lacquer to appear on the sub-continent.<sup>10</sup>

### **Technical Aspects of the Nepalese Sculptures**

If not dry-lacquer, what then is the nature of these heretofore enigmatic Nepalese sculptures? The answer to this question—unbaked clay modeled around an armature—was provided by examination and analysis of five sculptures in public and private collections in the United States.<sup>11</sup> Two are in museums, Cleveland and the Los Angeles County Museum of Art in California, and three in private collections. Two of the latter represent the historical Buddha, the remaining three, the Buddhist goddess, Vajravārahī (Figs 1, 7-12). In all instances, permission was granted to examine the images and to take various samples from them for technical study. (Such samples are minute, hardly the size of a pencil point, and are not injurious to the sculpture.)

The purpose of the technical study was to go beyond what the unaided eye could see, to determine how the images were constructed, of what materials, and, particularly, to ascertain the presence or absence of lacquer, the primary ingredient of dry-lacquer sculptures. Diverse methods were used including

X-ray diffraction analysis of samples of pigments and clay materials, microscopic examination of samples of fibers, clay, and binders and, for the analysis of organic materials, infrared spectrometry and gas chromatography in combination with mass spectrometry. Three of the sculptures, two public and one private, were examined in a controlled laboratory setting where as an additional investigative tool X-radiography could be used. The same three and one other sculpture were also radiocarbon dated. For comparison and control, a number of East Asian dry-lacquer sculptures and some Asian ones of unbaked clay were also examined.

The results of these tests demonstrate unequivocally that the so-called Nepalese "dry-lacquer" sculptures do not belong to that sculptural tradition but are modeled from unbaked clay. Individual differences aside, the five study sculptures are essentially uniform in the method of construction and the range of materials used. Construction begins with an armature of wood—identified as *Shorea robusta*, the familiar *sal* of the Nepalese Tarai—iron, or a combination of the two. Attached to the armature are heavy iron rods with loop ends which protrude from the back of the finished image and serve to secure and stabilize it against the shrine wall. In the body and limbs the armature can be quite substantial but is reduced to thin rods or wire for extended appendages—ears, fingers, and toes—and for semi-detached ornament such as the bone apron and fearful wreath Vajravārāhī wears (Figs 1, 9-10). Parts of the armature are frequently wrapped with cord or loosely twisted fibers to provide better adhesion for the material modeled around it (Figs 9-10). Comprising the essential mass of the sculpture, this is a thick layer composed of a matrix of unbaked clay mixed with sand particles (quartz, composite quartz, feldspar, hematite, and possibly other iron oxides), and various fibrous materials. Fibers consist of a wide array of substances including the woody parts of plants (straw, rice chaff, and similar materials), paper and cloth fibers, and whole fragments of cloth. Small lumps of resin observed in several samples indicate the presence of a binding material. Though yet to be positively identified, this binder is not lacquer since it dissolves in acetone. Ongoing tests suggest it may be *sal* resin, the well-known *sāldhūp* (Newari, *silāy*), in common use by Nepalese bronze casters as a wax binder. This mass—clay, sand, fibers, and binder—is not well consolidated but in some images is secured with a wrap of coarse cloth identified as hemp. With or without cloth, this thick layer is followed by a relatively thin one of similar fibrous material, of finer consistency and very hard and smooth (Fig. 10). It is the base for a thin layer of clay or gesso-like material which provides an undercoat for the final polychrome painting. Coarse cloth, plastered on both sides with a wash of fine clay, is used to fashion semi-detached parts of clothing such as the monastic robes

worn by the Buddha images (Fig. 12). The bone ornament apron worn by the Cleveland Vajravārahī is supported by a piece of woven matting (*sukul*). On some sculptures, irregular fragments of thin Nepalese paper (and in one instance, thin cotton fabric) were found on parts of the surface. They most likely represent restoration methods since some overlie previously painted surfaces. Although paint samples were analyzed and their properties identified the results are not judged especially useful to the study since all of the images have undergone frequent repainting, both within their shrines and afterward.

Samples of clay, cloth, and plant material were taken from four of the images for purposes of radiocarbon (C-14) dating. To judge by the results, the oldest of the tested images may be the Cleveland Vajravārahī whose calibrated age range was A.D. 1040 to 1310. If in fact this image was made sometime between these two dates, the sculpture predates the museum's sixteenth- or seventeenth-century estimated age by many years. The Los Angeles sculpture also appears to be earlier than the fifteenth-century date assigned to it by the museum. Radiocarbon testing provides a calibrated age range of A.D. 1250 to 1420 for it, dates which also roughly correspond to those obtained from the other tested images. These matters—dates of the images and the validity of radiocarbon dating—will be fully explored in a final report.<sup>12</sup>

There are certain similarities between the technique of dry-lacquer sculpture as practiced in East Asia and unbaked clay sculpture in Nepal. Among them is the use of cloth and paper as construction materials, and of fiber wraps for armatures. Unbaked clay is also used by both, but of occasional and temporary service in the one, fundamental and permanent in the other. Also shared is the practice of inseting eyes with hard substances. Favored by dry-lacquer sculptors, the custom seems less common in Nepal. Of the five study sculptures only one had such eyes (Fig. 11).

Despite these similarities, the two traditions, lacquer and unbaked clay sculpture, are fundamentally different. Lacquer images were created as free-standing, self-supporting images that could be made in one place and installed in another, were lightweight—even wood-core images are usually partially hollowed—and above all were durable. Except for some losses, such as the hands and surface finish, lacquer images like the Freer Gallery's sixth-seventh century Buddha have endured practically unscathed for well over a millenium (Fig. 4). By contrast, the Nepalese images are extremely heavy, very fragile, and designed as permanent installations. Although none of the five now displaced images used in this study is very large, ranging between 63.5 to 132 centimeters high (25-52 inches), they are remarkably heavy for their size. For reasons both practical and religious, all were

probably modeled *in situ* within the confines of the shrines in which they were meant to be worshiped — and in the case of esoteric images, secretly. Once constructed and secured to the wall by iron rods attached to the armature, the sculpture was meant to stay. The fact that none of these five were so destined is evident in the lamentable condition in which most of them are now, or were before restoration (Figs. 7-12). In the case of the three images of Vajravārāhī, thieves must have unceremoniously ripped them from their traditional support, a prostrate cadaver, which, freed of the dancing goddess, undoubtedly still lie crumbling in some Nepali shrine (Fig. 13). Even when still enshrined, these friable images were subject to the destructive attention of rats, attracted to the clay, and insects to the edible fibers mixed in it. It is the rats, so the temple guardians affirm, that necessitate the frequent refurbishing of Bagh Bhairava, the clay tiger image enshrined in Kirtipur. The fragility of images made of unbaked clay even when otherwise undisturbed is also apparent by the number of repairs and restorations effected on them over the years and long antedating their removal from Nepal.

### **The Cultural Significance of Unbaked Clay Sculptures**

The identification of these Nepalese sculptures as unbaked clay rather than dry-lacquer has far reaching implications for the history of Asian art in general and for Nepalese culture in particular. As for the former, it is clear that the antecedents of the Nepalese sculptures are not to be sought in the dry-lacquer tradition of China but in the unbaked clay tradition of the Himalayas and Central and East Asia, relationships it would be premature to discuss in these preliminary notes.

The cultural ramifications of these images with respect to the role clay plays in Nepalese culture is enormous. Clay, both baked (terra-cotta) and unbaked has served artistic and religious purposes in Nepal for millennia. Numerous clay seals and figurines from the Licchavi and Gupta period have come to light over the years<sup>13</sup> and there is the remarkable testimony of an inscribed image of Umā-Maheśvara at the Siku-bahi locale in Patan. Dated in accordance with A.D. 573, the inscription refers to a set of clay Mātkas that "in the course of time...had greatly deteriorated" necessitating their replacement in stone.<sup>14</sup> Whether they corresponded in any way to the technique described in this paper cannot be known but the inscription substantiates the presence of at least some kind of clay sculptural tradition in Nepal at least by the sixth century A. D.

In most cultures clay is clay or at best only a few varieties are denominated with any special modifiers. In Nepal, however, the types of clay, each with a different name, are legion. The illustrated dictionary of

architectural terms compiled by Gutschow and others lists no fewer than eighteen types of clay, each with a distinctive name according to its perceived use.<sup>15</sup> To the Nepalese these individual peculiarities of clay are not confined to their physical properties but to their religious—even magical—ones as well. For the annual rituals associated with the *abhiṣeka* and refurbishing of important deities clays of several different types have to be sought at prescribed places. In the case of Rato Macchendranath, whose image may itself be of clay,<sup>16</sup> eleven different varieties are said to be used, one of them from the environs of the prestigious goddess Mhaipi-ajimā. From here also, legend affirms, came the material for the construction of Svayambhu stupa.<sup>17</sup> In Licchavi and Gupta times, too, special clays had to be sought from special places for special occasions. In a royal edict of A.D. 598, for example, the hapless citizens of Kurppāsi village (now Khopasi) were instructed to furnish fifty varieties of white clay for festivals connected with a palace or temple in the distant Kathmandu Valley.<sup>18</sup>

A continuing aspect of research respecting Nepalese clay sculptures is to learn why, beyond its obvious economic value, clay should be imbued with such significance in Nepal and particularly why with all its inherent weaknesses as a sculptural medium, it is so employed? Traditionally, in Indian culture the use of clay for representing the gods was scorned. The *Agni-purāna* in listing the hierarchy of materials to be used in fashioning sacred images affirms that the one garnering the least merit for the donor is clay.<sup>19</sup> Even wood ranks higher. Yet in Nepal, according to Vajrayāna practice, at least, the hierarchy is reversed with clay outranking all other media as the preferred one for representing the gods. According to the oral testimony of priests and temple guardians, the most powerful images are made of it. Why this should be so is yet to be documented. Perhaps the value of clay is linked to the notion that from it come all basic human resources—food and the materials to build houses, temples, and even representations of the gods. The constant renewal necessitated by these physically fragile, if ritually powerful, images may relate in some broad way to regeneration as implied by annual *abhiṣeka* rituals. It also perhaps parallels the cycle of destruction and renewal of ritually powerful dance masks, a tradition that apparently shares in common with the clay sculptural tradition both certain techniques and the same ritually sanctioned practitioners.

Like other questions related to the cultural significance of the unbaked clay sculptural tradition, these speculations await further study. I will be searching for answers in future field work in Nepal. Meanwhile, I invite correspondence from readers who may already have these answers. In any event, it is to be hoped that Nepalese scholars whose interest may be



aroused by reading these preliminary notes will be conducting their own studies. These will surely plumb depths a foreign researcher is unlikely to reach alone.



Figure 1. This image of Vajravārāhī was the first Nepalese sculpture to be labeled “dry-lacquer” and according to recent radiocarbon dating may be much earlier than the 16th-17th century date now assigned to it. The Cleveland Museum of Art, Andrew R. and Martha Holden Jennings Fund (acc. no. 64.103). Photograph courtesy of the Cleveland Museum of Art.

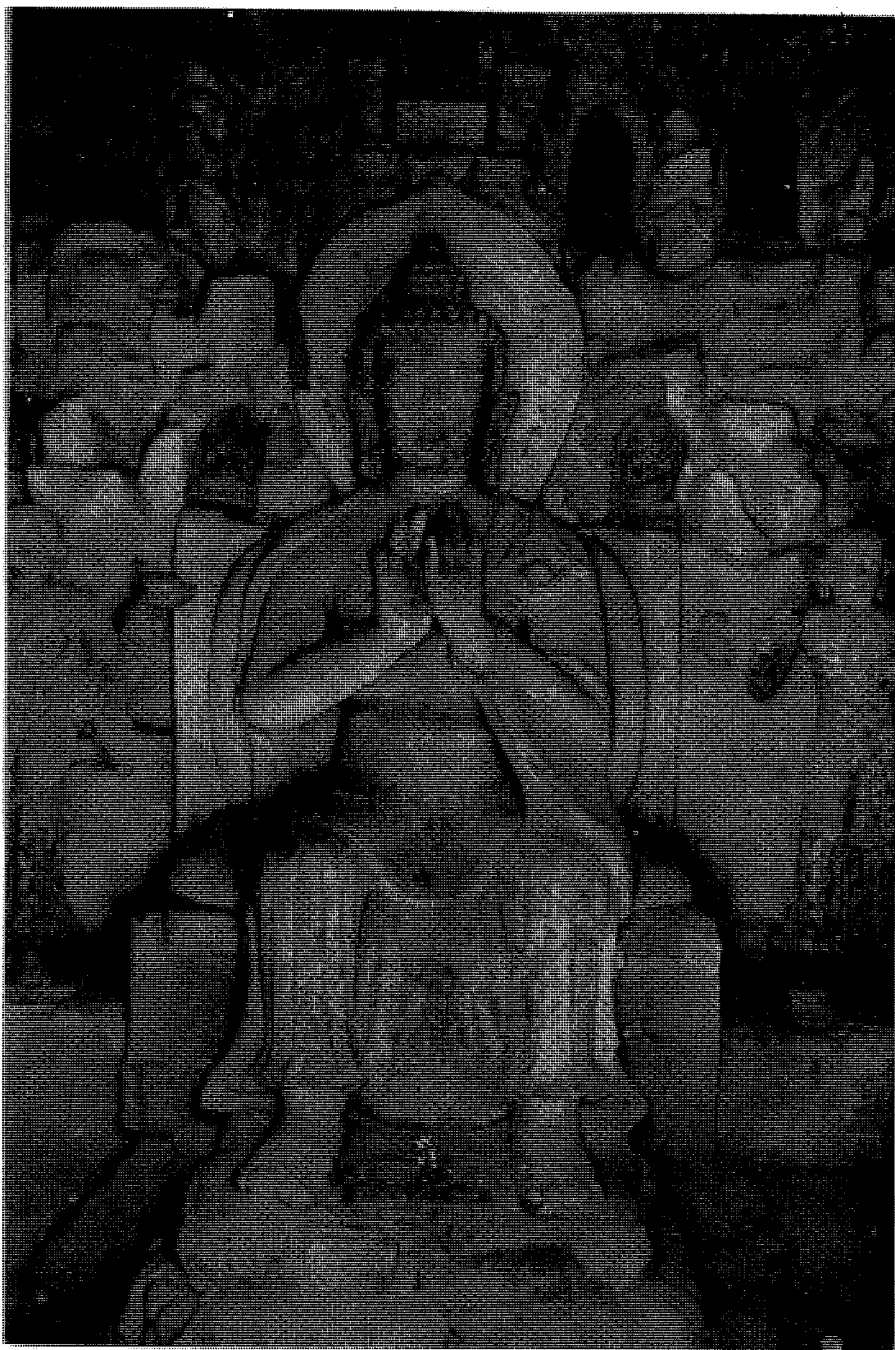


Figure 2. Maitreya, enthroned in the Tuṣita heaven, Musun-bahal, Kathmandu. Restored A.D. 1640. Unbaked clay modeled in situ, some polychromy. H: c. 183 cm. Photograph c. 1966.



Figure 3: A hollow dry-lacquer image of the disciple Sāriputra installed in 734 A.D. in the temple of Kōfuku, Nara, Japan, with diagram of the internal bracing system. H: 154.8 cm. After Samuel C. Morse, "Japanese sculpture in Transition: An Eighth-century Example from the Tōdai-ji Buddhist Sculpture Workshop," *The Art Institute of Chicago Museum Studies*, vol. 13, no. 1 (1987), Figs. 7-8.

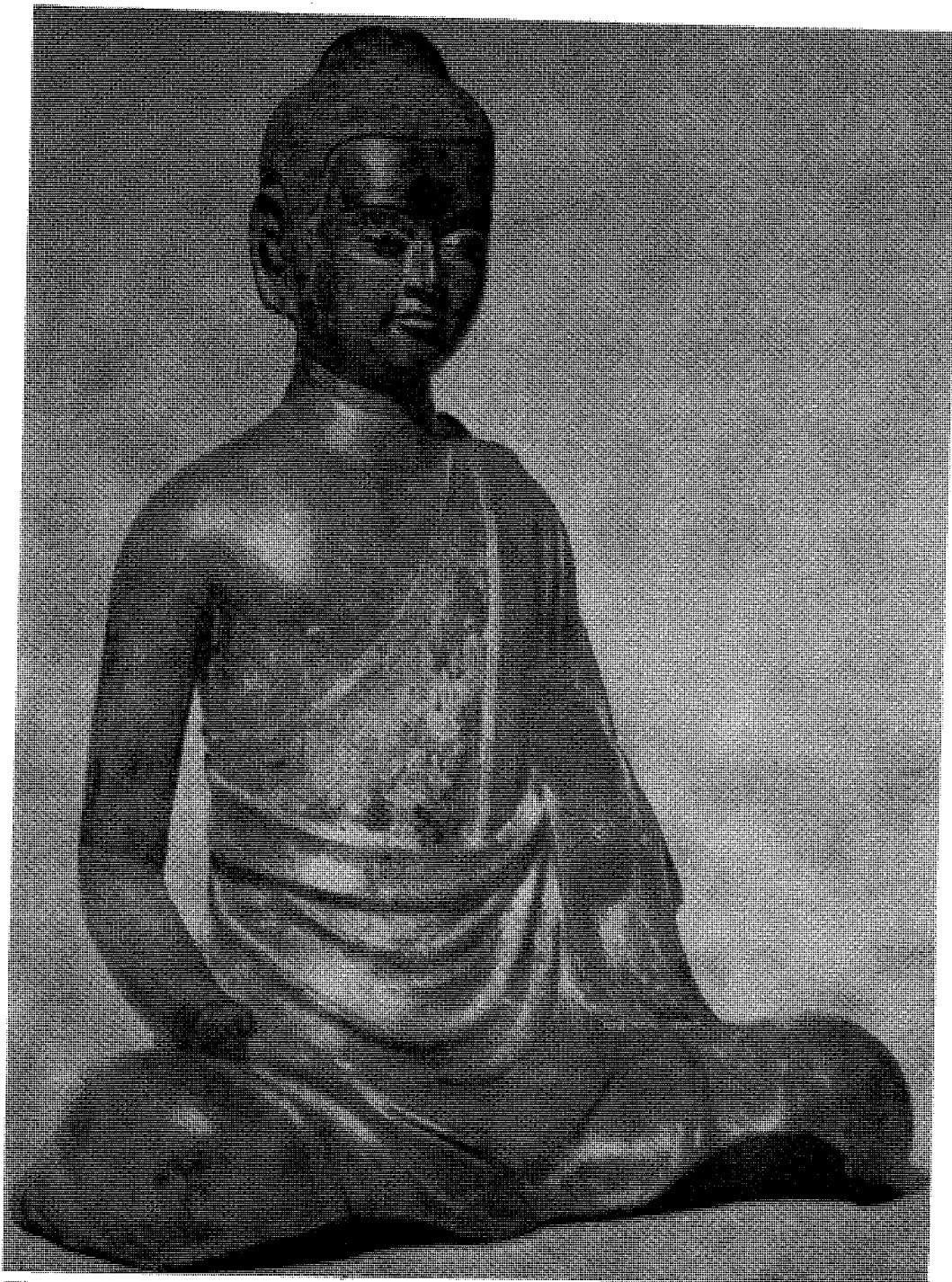


Figure 4. Historical Buddha, probably made about the end of the fifth or beginning of the sixth century A.D., China. Hollow dry-lacquer, traces of gilding and polychromy, some wire and wood armature, eyeballs inset glass. H: 99.5 cm. Freer Gallery of Art (acc. no. 44.46). Photograph courtesy of the Freer Gallery of Art.



Figure 5. Detail of an unidentified bodhisattva, Japan, c. 12th century A.D. Wood-core dry-lacquer, gildin and polychrome pint. Freer Gallery of Art (acc. no. 71.6). Photograph courtesy of the Freer Gallery of Art.



Figure 6. Portrait of an unidentified Gelugpa lama, China, Qing dynasty (1644-1911), seventeenth-eighteenth century. Hollow dry-lacquer with gold leaf and pigments. H: 54.5 cm. Collection of The Newark Museum (acc. no. 78124). Gift of Redfield Beckwith 1978. Photograph courtesy of The Newark Museum.



Figure 7. Extremely fragile, this image of the goddess Vajraārāhī has lost its cadaver support, part of one leg, and most of the sow-head projecting from her head. Unbaked clay, polychrome paint, iron armature, two copper bracelets. H: 76.2 cm. Los Angeles County Museum of Art (acc. no. M. 90.195). Photograph courtesy of the Los Angeles County Museum of Art.

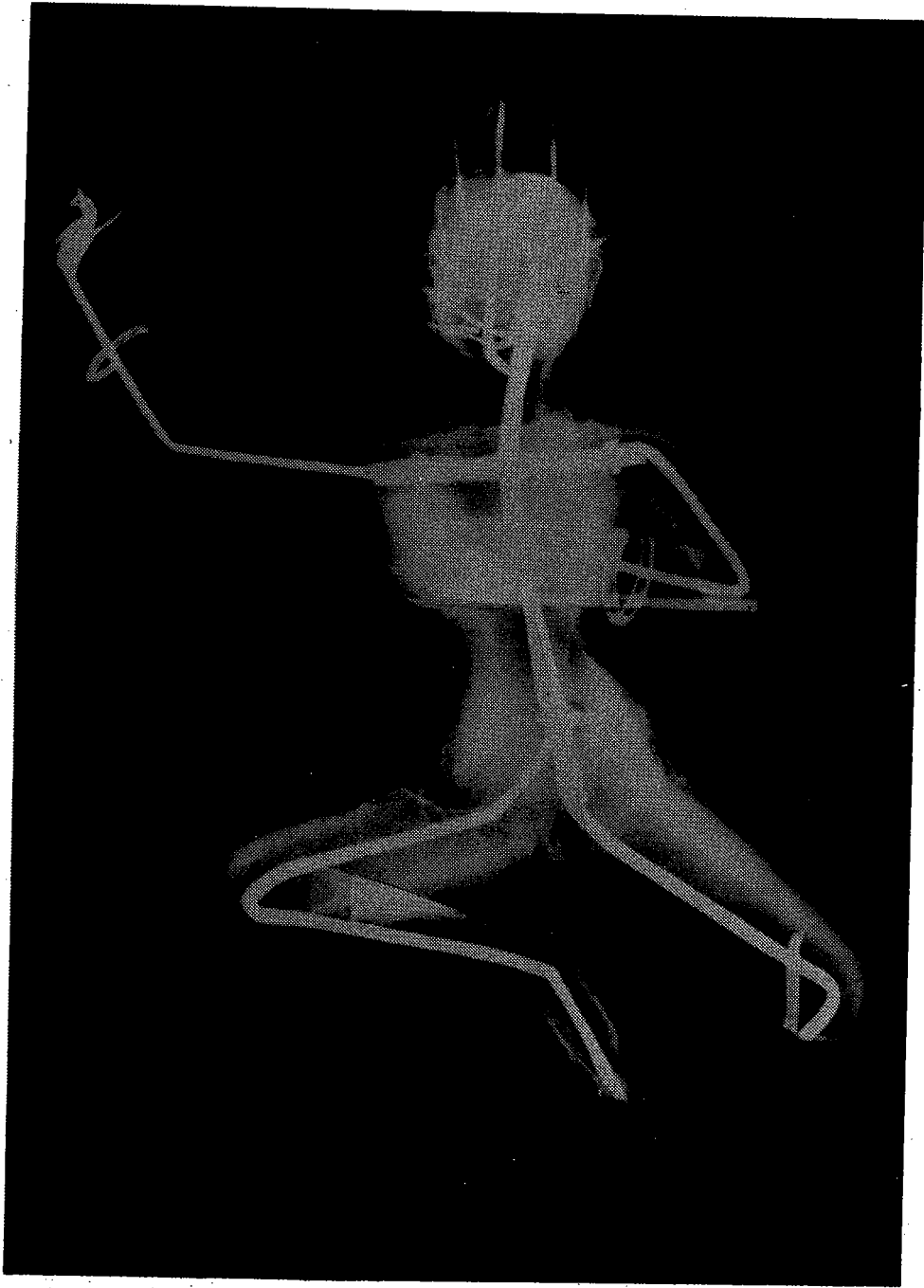


Figure 8. X-radiograph of the Los Angeles image (Figure 7) revealing the massive iron armature and thin wires around which the image was constructed and the vertical copper tubes used in the crown.





Figure 9. Another representation of Vajravārāhī showing damaged condition in which it appeared on the art market. Unbaked clay, polychrome paint, iron and wire armature. H: 101.5 cm. The John and Berthe Ford Collection, Baltimore, Maryland.



Figure 10. The semi-detached wire armature for the macabre ornaments of the goddess's wreath is tightly bound with cord to improve adhesion. The exposed armature above the knee retains only a little of the cord wrap and none of the modeled ornament. The thin, hard clay shell which forms the outer layer of unbaked clay images may be observed on the damaged elbow. Detail of Figure 9.



Figure 11. As an unusual feature among known Nepalese unbaked clay sculptures, the eyes of this image, composed of glass and an unidentified nacreous substance, are inset. Detail of Figure 9.



**Figure 12.** This once splendid image of the historical Buddha illustrates the ravages caused by removal of unbaked sculptures from the shrines in which they were modeled. Note both the torn, clay-stiffened cloth which provided the semi-detached parts of the garment, and the exposed armature in the fingers of the right hand. H: 81.5 cm. Private collection.



Figure 13. All of the unbaked clay images of Vajravārāhī probably were originally supported on a cadaver such as this Nepalese exemplar in carved wood, ca. 15th century. H: 109 cm. Collection of Constance B. and Carroll L. Cartwright, New York, New York. Photograph by O. E. Nelson, courtesy of Mr. and Mrs. Cartwright.

## Notes

- 1 Stella Kramrisch, *The Art of Nepal* (New York: Asia Society, 1964), p. 139, Pl. 53. While in recent years the gallery label has been modified, museum records accompanying photographs of the image still identify the medium as dry lacquer.
- 2 Bernhard Kölver and Hemraj-Sakya, *Documents from the Rudravarna-Mahāvihāra, Pāṭan. 1. Sales and Mortgages (Sankt Augustin: VGH Wissenschaftsverlag, 1985)*, p. 16.
- 3 The Budha-bari image is illustrated in Mary Shepherd Slusser, *Nepal Mandāla: A Cultural Study of the Kathmandu Valley* (Princeton: Princeton University Press, 1982), vol. 2, Pl. 481.
- 4 My principal collaborator has been Paul Jett, a conservator without whose assistance and patience, which I gratefully acknowledge, this study could not have been conducted.
- 5 F. Bailey Vanderhof, *Oriental Lacquer*. Exhibition catalog of the Santa Barbara Museum of Art (Santa Barbara, CA, 1976), p. 6.
- 6 Literary references confirm the existence of hollow dry-lacquer sculptures at least as early as the fourth century A.D. but no extant sculptures predate the sixth century (Alexander Soper, *Literary Evidence for Early Buddhist Art in China* (Ascona: *Artibus Asiae*, Supplement 19, 1959), pp. 19-20.
- 7 For the history of lacquer and lacquer sculptures in East Asia and a more detailed description of lacquer sculpture technique, see M. S. Slusser, "The Art of East Asian Lacquer Sculpture," *Orientalia*, in press.
- 8 Paul Pelliot, "Les Statues en Laque Séche dans l'ancien art chinois," *Journal Asiatique* (April-June 1923), pp. 184-86.
- 9 Stella Kramrisch, *The Viṣṇudharmottaram* (Calcutta: Calcutta University Press, 1924), p. 18, n. 2. It is unclear whether the reference is actually to sculptures or perhaps only refers to painted leather puppets such as are made today.
- 10 James C. Y. Watt and Barbara B. Ford, *East Asian Lacquer: The Florence and Herbert Irving Collection* (New York: The Metropolitan Museum of Art, 1991), p. 10, Fig. 2
- 11 Most likely there are others in Europe and Asia but if so they have not come to my attention.
- 12 Some of the problems respecting radiocarbon dating of lacquer images are discussed in Slusser, "The Art of East Asian Lacquer Sculpture" (in press).
- 13 Some of the figurines are illustrated in Pratapaditya Pal, *Art of Nepal* (Los Angeles: Los Angeles County Museum of Art, 1985), Figs S2-S4 and a seal in M. S. Slusser, "Bodhgaya and Nepal," in *Bodhgaya, Site of Enlightenment*, ed. J. Leoshko (Bombay: Marg Publications, 1988), Fig. 18. An inscribed Licchavi-period seal from Jumla, Western Nepal, is cataloged by Dhanavajra Vajracarya, *Licchavikālakā abhilekha* (Licchavi Period Inscriptions). Institute of Nepal and Asian Studies, Historical Collections Series, no. 6 (Kathmandu: Institute of Nepal and Asian Studies, 1973), inscr. 189.<sup>w</sup>

- 14 D. Vajracarya, *Licchavikālakā abhilekha*, inscr. 53, pp. 211-13. In a previous work (*Nepal Mandala*, vol. 1, p. 234) I erroneously referred to the dilapidated images as "terra-cotta" but I now observe that the Sanskrit word is *mṛmāya* (made of earth or clay, earthen), rendered the same way (*māto*) in the Nepali translation by Vajracharya.
- 15 Niels Gutschow, B. Kölver, and I. Shresthacarya, *Newar Towns and Buildings: An Illustrated Dictionary, Newari-English* (Sankt Augustin: VGH Wissenschaftsverlag, 1987), p. 185. On the following page, names are also provided for the various additives mixed with these clays, many of which are those used in the clays serving as a sculptural medium.
- 16 The composition of this famous image is discussed in Slusser, *Nepal Mandala*, vol. 1, pp. 377-378.
- 17 Daniel Wright, ed., *History of Nepal* 3rd ed. (Calcutta: Ranjan Gupta, 1966), pp. 99-100.
- 18 D. Vajracharya, *Licchavikālakā abhileka*, inscr. 68. Whether the clay was for Kailāsakūṭa, or as Vajracharya believes, Paśupatinātha, is discussed by Slusser, *Nepal Mandala*, vol. 1, p. 108, n. 134.
- 19 Ulrich von Schroeder, *Indo-Tibetan Bronzes* (Hong Kong: Visual Dharma, 1981), p. 54.