CHAPTER III

TECHNIQUE OF MANUFACTURE

The most obvious division in figurine chronology is between hand modelling and moulding. Within each group subdivisions have been identified, but based more on style than on changes in the technique of manufacture. Hand modelling and moulding are discussed in some detail here because there is variation in each of the processes of manufacture. It is not possible to make subtle refinements in the subdivisions of chronology using this information, but perhaps it will become relevant at some future time.

Hand Modelled Figurines

The earliest ceramic figurines made at Teotihuacan are solid and hand modelled. The prognathous faces are short and wide. The distinct prognathism is accentuated by the unrealistic proportions of the features. The nose is low on the face, and the mouth is usually placed at the tip of the chin. Two processes have been defined (Barbour 1975: 127), and a third observed from the heads of this collection, which were used to shape the face.

1) The core method. A piece of clay was used as the inner part or core of the head and another piece of clay was then wrapped about half way around it to form the face.

2) The fold-over technique. The clay which formed the stem or torso of the figurine was pulled up at the top, folded vertically, and then pinched out to form the prognathous face. Barbour discusses both these methods, and says the fold-over method probably postdates the core technique (1975: 78).

3) Other heads were formed by simply rolling a bit of clay into the desired shape, and then smoothing the surface. The heads in this collection which are made of a single lump of clay have no necks and seem to be independent units, that is, never attached to the clay torsos. Several heads were made by the core method, none clearly by the fold-over technique; in some cases it is impossible to know how they were made. The clay may have been smoothed while wet to eliminate seams, thereby also eliminating any clue that would identify which process of modelling was employed.

The torsos of Teotihuacan hand modelled figurines were made of one coil of clay that formed the body, or of two coils that were joined. Extensions of the coils were modelled into limbs, or the limbs were formed and then stuck onto the torso while the clay was still wet. Occasionally a tenon of clay was used to attach the head to the torso.

Figurines were then built up and decorated by attaching small bits of clay to the core, a technique known as appliqué or pastillaje. Noses were usually appliquéd, as was the coffee bean eye. Most attention

was given to the head; scant detail is found on the torsos and limbs. Heads were decorated with appliquéd headdresses, coiffures, earspools, and necklaces. Some torsos wear loincloths or capes, and limbs are sometimes decorated with appliquéd buttons on wrists or ankles.

Incision was another way of decorating hand modelled figurines. Mouths and eyes were incised with perhaps the fingernail or a sharp-edged tool. Hand modelled torsos and limbs may have been attached to either hand modelled or moulded heads. Torsos of figures on all fours, and those associated with portrait heads, are rather easily recognized.

Moulded Figurines

Use of the mould to make figurines began in Early Xolalpan (Noguera 1965: 135; Barbour 1975: 79). Wet clay was pressed into a terracotta mould, and details of the design were probably touched up before firing. When the procedure first began, only the head of the figurine was moulded (portrait heads). Articulated figurines were made at about the same time. Head, torso, and limbs were made separately. Later moulds were made to form either the entire figure or only the head (Linné 1934: Figs. 199-208). Two kinds of moulding are seen on some 9:N1E7 figurines, and are referred to here as "deep" and "shallow" moulding. These terms are used in the descriptions of the figurines (Appendix I).

In a deep mould, the proportion of face length to profile thickness

is closer than that of the shallow mould in which the heads are longer and the profiles flatter. The first layer of clay was pressed into the headdress, face, and chin area, presumably to better define the features. The third photograph of Fig. 84 is included specifically to show the deep mould technique. The second layer of clay was added to fill out the figure, and then flattened on the back. The result is a neck stem that attached to an unknown type of torso. The shallow mould, on the other hand, could accommodate one layer of clay to define the details of the face and decoration as well as to fill up the mould. That these two methods of moulding were contemporaneous is probable, but not certain. The importance of making the distinction between deep and shallow moulding would be to aid in identification of which style or type of heads were attached to which torsos.

Whether one kind of moulding was preferred over the other, or whether one or the other method proved more advantageous in obtaining desired artistic results, is unclear. A deep mould would provide space for more depth and, therefore, a more realistically proportioned profile. But the mould makers did not always take advantage of the spatial dimensions to add fineness of detail, or more elaborate ornamentation. For example, Figs. 74, 75, and 84 were made by the deep mould method, and while showing detail which made the head in some way definable, the design is stylized, simplified, and the mould itself apparently unevenly made. Fig. 96, on the other hand, made in a shallow mould, has several decorative elements clearly defined.

All the torsos in this collection were made by the shallow mould

method, although Figs. 117-119 are thick enough in profile to have accommodated the deep mould method. Other torsos are either concave or flat and slab-like.

One of the diagnostic traits of Coyotlatelco figurines is the thin, slab-like body (Rattray 1966: 136). All of the 9:N1E7 Coyotlatelco figurines were made in thin moulds which were filled with one layer of clay, that is, using the shallow moulding method. The one unbroken Coyotlatelco figurine (Fig. 136) was made in a single mould.

All the Coyotlatelco heads and torsos are broken horizontally across the neck, as if the head and torso had been moulded together. The only mould recovered at 9:N1E7 (Fig. 160) is a Coyotlatelco style head with the neck area intact. Apparently the head was made in one mould, the torso in another. Perhaps the two pieces were made separately and later joined before firing. Evidence for this method of manufacture is not seen on any of the Coyotlatelco pieces in this collection.

The Coyotlatelco figurines retain more traces of paint (or originally had more paint) than any others from 9:N1E7. The range of colors based on the Munsell Soil Chart is given for both paste and paint in Appendix VII.

The Moulding Process

One of the hallmarks of the Xolalpan phase is the technological shift from hand modelling to moulding figurines. The tradition of hand modelling did not die out completely, but rather continued together

with the moulding process, as seen in dancer figurines, during much of the Xolalpan phase. The method of moulding may have started earlier at Teotihuacan; the chronology is not yet perfectly understood. The use of the mould must have taken hold slowly, as ceramic and other art and craft traditions do.

What other technological, social, and economic innovations were taking place at Teotihuacan to influence the change from hand modelling to moulding has not yet been explained. Kubler suggests that moulding came in about the same time as the pillar-and-shaft architectural technique, and with the appearance of the talud-tablero profile for platforms (Kubler 1962: 35, Fig. 4).

Linné (1934: 193-197) traces the geographical distribution of mould use through Mexico to South America, and concludes that significant evidence is lacking for a history of its development. His map shows that the mould was used from Mesoamerica through parts of Central America, and along the west coast of South America to Tiahuanaco, but with only a single mould as evidence at the last (1934: 194). Certainly the mould was in use in large areas of Mesoamerica, and eventually became a pan-Mesoamerican tradition. Whether the moulding process was used in all areas of Mesoamerica during the Classic period is uncertain, but seems likely.

Some evidence suggests that the use of the mould began earlier than the Xolalpan phase at Teotihuacan. The presence of a perforated limb (Fig. 127o from stratigraphic pit 2) recovered in a layer associated

with ceramics dated to a phase no later than the Late Tlamimilolpa is only tenuous evidence that moulding puppet figurines began earlier than the Xolalpan. The puppet torso to which the limb was attached could have been hand modelled; however, no hand modelled puppet torsos were found in the 9:N1E7 excavation.

The earliest known evidence of mouldmade objects at Teotihuacan is an incense burner found in Burial 1 at Tlamimilolpa, and dated to the Tlamimilolpa phase (Linné 1942: Figs. 315-317; Rattray 1979: 241). However, Barbour's analysis showed no moulded pieces in layers earlier than Early Xolalpan (1975: 91).

A fragment of a mouldmade headdress was recovered from the Plataforma Adosada of the Pyramid of the Sun (Millon, Drewitt, and Bennyhoff 1965: 75, Fig. 105g), a structure usually associated with Miccaotli phase ceramics. These isolated examples are insufficient proof that moulding was a tradition, even of limited scope, before the Xolalpan phase.

In some areas outside Teotihuacan mouldmade figurines have been reported from the Gulf Coast in the Remojadas tradition, or the Protoclassic, that is, Teotihuacan IIA, Tajin I, Cerro de las Mesas II, and Tres Zapotes II (Culpepper Belt 1971: 39-41). According to McBride (1971: 25), mouldmade, triangular-faced figurines of Upper Remojadas I demonstrate the first use of the mould in Veracruz, and are probably coeval with Teotihuacan IIA-III phases. At Monte Alban, beginning at IIIb, urns were made with elements attached which were made in moulds (Paddock 1966: 128). Use of the mould is rare in Monte Alban IIIa,

but "overwhelmingly dominant" in IIIb; it was known as early as II (Paddock 1978: 59).

As the moulding process became known at Teotihuacan, the technique probably spread rapidly. For Pasztory (1978: 120) its use is an indication that "practical considerations were significant at Teotihuacan," and that "mass production of adornos was cheaper and faster than individual manufacture." Von Winning sees moulding as "less a time-saving device than a means of achieving uniformity on vessels and incense burners where the motif was used repeatedly" (1949: 127). Both these examples refer to incense burners and moulded impressions on vessels, but the same ideas might also apply to figurines. Once the moulding process had taken hold, it continued in use into Colonial and even present times.