

AN EGYPTO-ROMAN SCULPTURAL TYPE AND MASS PRODUCTION OF BRONZE STATUETTES

(PLATES 55–56)

IN these pages I am discussing two curious bronze statuettes in the collection of the Walters Art Gallery (Pls. 55, a, b, c) although I have previously published them more than once. Not of great beauty, they yet merit a fresh appraisal, for they are documents of a single sculptural type and, more important, of the means of its commercial mass production by a technique not too common in antiquity.

The more striking of these statuettes is a tense male figure which has been mounted as if seated on a modern base of stone fitted to its curves (Pl. 55, a, b).¹ The shoulders are hunched and the head shoved forward and to the left, while the enormous right hand is held meaninglessly before the waist with the fingers stiffly extended (the left hand is missing). The facial type, with its deep-set eyes glancing upward, its triangular forehead, tiny mouth, and hair that rises steeply above the center of the forehead, is derived from Alexander. I first published this statuette with five others that had been produced by the partial mould process of commercial duplication practiced in the province of Egypt.² The five listed were an Aphrodite of which exact duplicates exist elsewhere; a wrestler group of which there are innumerable near replicas; twin youths mounted side by side, having identical bodies and identical heads but differing in the turn of the neck; a pair of women on a common base, identical with each other except for this same difference at the neck; and a Jupiter of noticeable disproportion—his slim, youthful torso combined with a bearded

¹ Walters Art Gallery, no. 54.700. Ht. 0.17 m. In addition to the publications referred to here, it is also included in Exhibition Catalogue, *The Greek Tradition*, 1939, p. 74, no. 84; Hanfmann, *A.J.A.*, LVIII, 1954, p. 229; S. Reinach, *Répertoire de la statuaire*, V, p. 517, no. 10, with reference to sale in Paris, Feb. 12, 1923, no. 177.

² *Art in America*, October, 1943, pp. 182 ff.; the piece in question is fig. 6. On commercial reproduction see also my *Catalogue of Classical Bronze Sculpture in the Walters Art Gallery*, 1949, pp. xx-xxii and comment by Picard, *Revue historique*, LXXVI, 1952, p. 72. Since that time important new material has been discovered at Lixus in Spanish Morocco: two groups of wrestlers, exact opposites of each other, each composed of two figures very like one another. Further, one of the groups is very like the Theseus and Minotaur group in Berlin. See *Archivo Español de Arqueología*, XXIV, 1951, pp. 232 ff., figs. 22-24; *Zephyrus*, I, 1950, pp. 49-56, figs. 1-5; *Fasti Archaeologici*, V, 1950, pp. 390 f., figs. 112-113 and p. 389, no. 4529; *Arch. Anz.*, 1954, cols. 447-450, figs. 123-124. There exist three renditions of a single type of archaic woman's figure, two of bronze and one of silver. Albizzati rejects two as forgeries, *Historia*, IV, 1930, pp. 621 ff.; Richter accepts both bronzes, *Catalogue of the Greek and Roman Antiquities in the Dumbarton Oaks Collection*, 1956, pp. 29 ff., no. 16, pls. XII, XIII. For duplication of a bronze object in silver in another instance see Picard, above.

head of small size and huge hands that carry divine attributes. The grounds for including the statuette shown on Plate 55, a and b in this category were his large hand and the singularly inappropriate Alexander face, peculiarities which I considered evidence of combining parts copied from three unrelated prototypes.

All conclusions regarding such duplicating by combining the products of partial moulds depend upon the research of Edgar.³ First, in his catalogue of plaster moulds in the Cairo Museum (1903) he described this technique, and then he tested his results on the Cairo Museum's bronzes which he published in a second catalogue the following year. He explained the moulds as intended to produce wax models after which to cast bronze statuettes. As Edgar imagined the process, an original wax model was cut in parts and a back and a front piece-mould taken from each part; then, the piece-moulds were combined, and into the complete mould wax was poured, congealing as a new model precisely like the first; from this point on, the *cire perdue* process followed its usual course until a bronze statuette identical with the original emerged. My contribution was the suggestion that piece-moulds taken from several statuettes produced cast wax parts that could be joined at various angles, correct and otherwise, with hand carving and modelling individually executed, so as to construct each new wax model and its derivative bronze statuette slightly different from all others. Such a technique, in principle like that of the coroplasts, had results like those conspicuous in the terracotta industry; that is to say, quantity and variety were achieved at the expense of correct anatomy and artistic unity.

In a catalogue entry subsequent to my first article⁴ I mentioned a flattened area back of the left hip of this statuette (Pl. 55, b) and interpreted the subject as a wrestler group in which one member was lifted free of the ground by another so that he was forced to press his left hip against the other's erect body. I was able to offer only distant parallels to this group, being at that time unaware of a group in Cairo which had already been published by Kirwan⁵ and which is reproduced here from his article (Pl. 56, a, b). It is composed of two contestants, one swung clear of the ground by the other but with his body still tense and his head and limbs active, in fact, almost identical with the figure we have been discussing, and its subject must be the "drop" of modern wrestling, a hold by which a person is raised clear off his feet in

³ C. C. Edgar, *Greek Moulds* (*Catalogue général des antiquités égyptiennes du Musée du Caire* VIII, 1903) and *Greek Bronzes* (same series, XIX, 1904). Moulds found later at Memphis are taken to be for silverware: O. Rubensohn, *Hellenistisches Silbergerät in antiken Gipsabgüssen* (*Aus dem Pelizaeus-Museum zu Hildesheim. Festschrift zur Feier der Eröffnung des Museums, 29. Juli, 1911*). On plaster casts from metalware see Richter, *A.J.A.*, LXII, 1958, pp. 369-387.

⁴ *Catalogue*, p. 68, no. 143, pl. 31.

⁵ Kirwan, *Bulletin de l'institut français d'archéologie orientale du Caire*, XXXIV, 1934, pp. 55 f., no. 49542, pl. IV. Ht. 0.185 m. See his subsequent remarks on the commercial mould process in Emery, *Royal Tombs of Ballana and Qustul*, 1938, p. 171. The information that the wrestling term is "drop" was kindly supplied by Professor Joseph Brown.

order to be dropped to the ground. Unfortunately Kirwan did not give the measurements of the individual participants, but his overall measurement of 0.185 m. for the group proves that the scale is smaller than that of the Walters figure (0.17 m.) which, however, since it exhibits the same pose and the same extraordinary tension of muscles, can be definitely ascribed to a larger group of the same "drop" type, perhaps 0.25 m. tall.

There is one slight difference from the corresponding figure in the Cairo group. With his free right hand our wrestler seems about to seize his opponent's arm instead of having already grasped it. There is no positive evidence of belonging to a group—no trace of a second figure or sign of mortising. Contact with the other wrestler must have been made by the left hand, now lost; understandably, the break occurred at the wrist, a weak place between two heavy masses. We may discount the possibility that, though intended for a group, the statuette never was so combined.

The existence of these two lifted wrestlers, so similar yet so different in scale, may be taken as evidence that the type was popular, and popular enough to be mass produced by mechanical means. That such means were more complicated and diverse than had been supposed either by Edgar or by myself is indicated by the methods of construction. Kirwan states that the lifted figure in Cairo is a solid cast, and that its left hand with wrist, right forearm, and right and left upper arms were cast separately and attached each to its adjoining part by a lead joint.⁶ These joints and a lead repair on the left knee he attests are original and since the excavation record is complete there can be no doubt that he speaks correctly. The Walters bronze is a hollow cast without joints. Duplication with the help of moulds took place by two processes: by combining wax parts cast in partial moulds and finishing the wax model by hand, and, alternatively, by combining small bronze parts cast in partial moulds. In either case, variation was achieved by choosing moulds taken from various original types. The prospects for almost unlimited variation and cheap production based on a few good models must have been enticing to lazy manufacturers.

Failing to find Kirwan's publication, I also missed the interpretation of another statuette in our collection (Pl. 55, c),⁷ a hollow figure in a curious pose—bent knees spread wide apart and bearded head tipped sharply forward and a trifle to proper left. The explanation was elusive because of the loss of both feet, most of the right arm and the whole left arm together with the shoulder. I supposed it to be a drunken

⁶ Kirwan, *op. cit.*, p. 56. A cutting of the shoulder to receive a separately cast arm is very clear on one of the Dioskouroi published in my previous article, *Art in America*, 1943, pp. 182 ff., fig. 1; *Catalogue*, p. 27, no. 48, pl. 12. Mortised in place, the arm would have to be secured by a binder, such as lead.

⁷ Walters Art Gallery, 54.723. Ht. 0.185 m. Purchased 1924, and said to have come from Asia Minor. Hill, *Catalogue of Classical Bronze Sculpture in the Walters Art Gallery*, p. 48, no. 98, pl. 22; Bieber, *Sculpture of the Hellenistic Age*, fig. 579.

Herakles and, indeed, examples exist of an inebriated Herakles supported by an attendant or falling over for lack of such support, but the drunken Herakles is never identical with this statuette, always having extended his right leg and tipped his head forward and in the direction of this outstretched leg.⁸ So, while the drunken group bears only a vague similarity to our statuette, the Cairo "drop" group we have been discussing (Pl. 56, a, b) includes an almost exact duplicate as its erect member, the similarity extending beyond the pose to details of the face with huge, round eyes and corkscrew curls of the beard. Moreover, when we scrutinize the Walters figure we discover that just where the right arm breaks off near the shoulder, there are heavy accretions of bronze that must be the remains of the second figure held with left hip and left elbow close to the shoulder of his opponent (cf. Pl. 56, a).

So the same erect wrestler is represented by the Cairo group and the Walters detached statuette, and still a third example is to be found in one of the plaster moulds from the Memphis *cache* (Pl. 56, c),⁹ a three-part mould comprising a bearded head and a torso down to the middle of the thighs. It is not easy to compare the sizes; the footless Walters bronze is preserved to a height of 0.185 m., while the mould, with its top and bottom borders included in the measurement and most of the legs excluded from the impression, is 0.145; the scales are not very different and they may be identical. Though I dare not claim this mould produced the figure in Baltimore or was made from it, and though it certainly has no direct connection with the much smaller wrestler of the Cairo group, the existence of this mould is positive proof that wrestler groups of the type we have been discussing were produced by moulds.

Face moulds could be interchanged at will, and a single type could by the change be made to represent many subjects. It is not very profitable to try to decide the meaning of our wrestler type, since we have very few examples of its use. A certain other wrestler type is known to have been adapted, merely by change of the face moulds, to represent Herakles, Hermes, and several athletes of quite different expressions.¹⁰ The Cairo group could be interpreted as Herakles lifting Antaios, the antagonist who had to be separated from earth, his source of strength, but it might be merely a simple *genre* subject. The Walters statuette, though it has an Alexander face, was not intended to represent the conqueror for he is unthinkable in the role of defeated wrestler. Rather, in a shop stocked with many moulds and among them

⁸ See the entry in my *Catalogue*. The best example is a bronze statuette in the Metropolitan Museum of Art, Bieber, *op. cit.*, p. 140, figs. 577-578; Richter, *Handbook of the Greek Collection*, 1953, p. 125, pl. 104, d.

⁹ Edgar, *Greek Moulds*, pp. 13 f., no. 32045, pl. III. Ht. 0.145 m. The effect of the spreading legs is heightened by the pour channels that form angles with the legs and create the appearance of knees at the wrong height.

¹⁰ Walters Art Gallery, 54.1050; Hill, *Catalogue*, p. 66, no. 140, pl. 30; *Art in America*, 1943, pp. 182 ff., fig. 3; Bieber, *Sculpture of the Hellenistic Age*, p. 151, fig. 643; compare Sieveking, *Die Bronzen der Sammlung Loeb*, pl. 21; *Jahrb.*, XIII, 1898, p. 177, pl. 11.

many representations of Alexander, some worker chose a mould to represent an athlete or, conceivably, Antaios. Such misuse of the Alexander face is not without precedent.¹¹

More interesting than the problem of identification is the problem of dating, and equally difficult. Unfortunately there is no hope of establishing the positive or even the relative dates of these items. What evidence accrues from study of their details individually suggests that all were produced during a short period of the early days of the Roman Empire. Our Plate 55, a has, as we have repeatedly stated, an Alexander head, and with its bristling front locks and smooth crown surrounded by a band with hair rampant before and curled behind, it resembles the later Alexander portraits more than his contemporary ones.¹² Large hands, such as it sports, were classed by Neugebauer as a Roman characteristic¹³ and although I consider this large hand to be due to a mixing of moulds, I nevertheless recognize the similarity of the whole figure to the large-handed figures Neugebauer was discussing. The erect statuette in Baltimore (Pl. 55, c) is better modelled and there are grounds for assigning it to the Hellenistic age, but the curious treatment of the beard indicates something quite different. This beard is composed of long, tightly twisted locks, each ending in a wisp on the chest, its twists rendered by deep diagonal cuts. Such beards occur rarely except on a certain type of practical attachment: the busts of silenes that ornamented many couches and a few other objects. An example is illustrated in our Plate 56, d.¹⁴ The ornaments from couches were studied by Greifenhagen¹⁵ who found that though the silene type began in the second century B.C., the examples with beards of just this kind, notably one in the Terme and one attached to an incomplete couch formerly on

¹¹ For switching of heads of Alexander and others see J. H. Young and S. H. Young, *Terracotta Figurines from Kourion in Cyprus* (Museum Monographs), 1955, pp. 229 f., and J. H. Young, *Bulletin of the Walters Art Gallery*, VI, 2, November, 1953.

¹² On Alexander types, see Bieber, *Proceedings of the American Philosophical Society*, XCIII, 1949, pp. 373-427.

¹³ For example, the negroes and the Theseus group, both in Berlin; Neugebauer, *Die griechischen Bronzen der klassischen Zeit und des Hellenismus* (Katalog der statuarischen Bronze im Antiquarium, II), 1951, p. 89, and *Schumacher-Festschrift*, 1930, p. 235.

¹⁴ Walters Art Gallery, no. 54.878. Total height, 0.102 m. The head is complete at the back and free; the bust is open and circular. Both ivy crown and the leg of the nebris are strongly undercut; apparently they were modelled in wax and added to the model which was mouldmade. Similar ivy crowns appear on the bust in the Terme and on the horse head on the same couch; see *Röm. Mitt.*, XLV, 1930, pl. 45. The eyes have large, deep centers, pierced clear through the wall of bronze; for such eyes in silver on bed attachments see Fiegel in *Schumacher-Festschrift*, 1930, p. 281, pl. 27; for the same in bronze, the wagon attachments of note 15; for varied treatment of eyes, Neugebauer, *87 Berlin Winckelmannsprogramm*, 1927, pp. 13 f.

¹⁵ Greifenhagen, *Röm. Mitt.*, XLV, 1930, pp. 153-159, pls. 39 ff. For further comment on the wagon attachments see Von Mercklin, *Jahrb.*, XLVIII, 1933, pp. 94 ff. For the copying of Greek couches by Romans see Hoffman, *A.J.A.*, LXI, 1957, pp. 176 f. Two more silenes' busts have been found at Volubilis: Thouvenot, *Mélanges Charles Picard*, 1949, pt. II, pp. 1003-1007, figs. 3, 4; and Picard, *Rev. Arch.*, ser. 6, XXVII, 1947, pt. I, p. 201.

the Paris market, were made shortly before the destruction of Pompeii, while a pair of wagon fixtures from the Hadrianic period have even more tightly twisted, more stylistically treated beards. I therefore must date Plate 56, d and Plate 55, c within the first century after Christ and with them the Cairo group, Plate 56, a, b, on which the beard treatment is similar, though less carefully executed (the Cairo mould is so badly preserved that it is difficult to judge the beard; it seems rather dissheveled). Further evidence of the date of the Cairo group is provided by the curious linear treatment of the legs which recurs on a group dated by Neugebauer in the Roman period¹⁶ and by the face of the lifted figure which is not altogether unlike the "Alexander" face in Baltimore, though it has more of the satyric about it. In summary we may say that the various statuettes have many stylistic and technical traits in common with each other, and that every such trait of one or all that can be classified is characteristic of bronze sculpture of the early days of the Roman Empire. This conclusion reinforces that of Edgar, that the moulds from the Memphis *cache* are Roman, a conclusion which had the telling support of the fact that many of Memphis moulds were for Roman practical utensils.

I have compared the technique of constructing bronze groups to that of the coroplast, but whereas the latter was limited by the feebleness of clay, the metal-worker had tremendous scope for the employment of his moulds. The sculptor of terracotta contented himself with combining heads, torsos and limbs, chosen at random, to form bizarre figures, rarely groups, while the bronze sculptor composed wildly, building assymetric structures which almost defy the laws of gravity and suggest a mere moment in time, achieving extreme instability in the type under discussion. How much greater was his freedom than that of the sculptor in marble, one hardly needs to remark. Recognition of the vast difference in opportunity offered artists by the various *media* should deter us from drawing hasty comparisons between statues in different materials and deceiving ourselves about date and stylistic development. If my dating, based on evidence so far available, is correct, these daring groups were manufactured by the partial mould process after the peak of centrifugal sculpture in marble had been passed and during a period of flat marble groups, conceived for a single point of view.¹⁷ This apparent conflict offers a challenge for further study.¹⁸

¹⁶ Neugebauer, *Die griechischen Bronzen der klassischen Zeit und des Hellenismus* (Katalog der statuarischen Bronzen im Antiquarium, II), 1951, p. 86 and *Schumacher-Festschrift*, 1930, p. 235.

¹⁷ Krahmer, *Nachrichten Göttingen Gesellschaft* (Phil.-Hist. Kl.), 1927, pp. 53-91; Bieber, *Sculpture of the Hellenistic Age*, pp. 146 ff.

¹⁸ Since I wrote the above I have seen a similar bronze group, Fitzwilliam Museum, Cambridge, bequeathed in 1953 by Sir Robert Hyde Greg whose collection was formed in Egypt. It is small and gives the impression of hasty hand modelling. The juncture between figures is made at the raised person's right ankle, not his hip, and the figures, rather widely separated, are side by side so that the group is unifacial. This example proves that the type was perpetuated into the period of

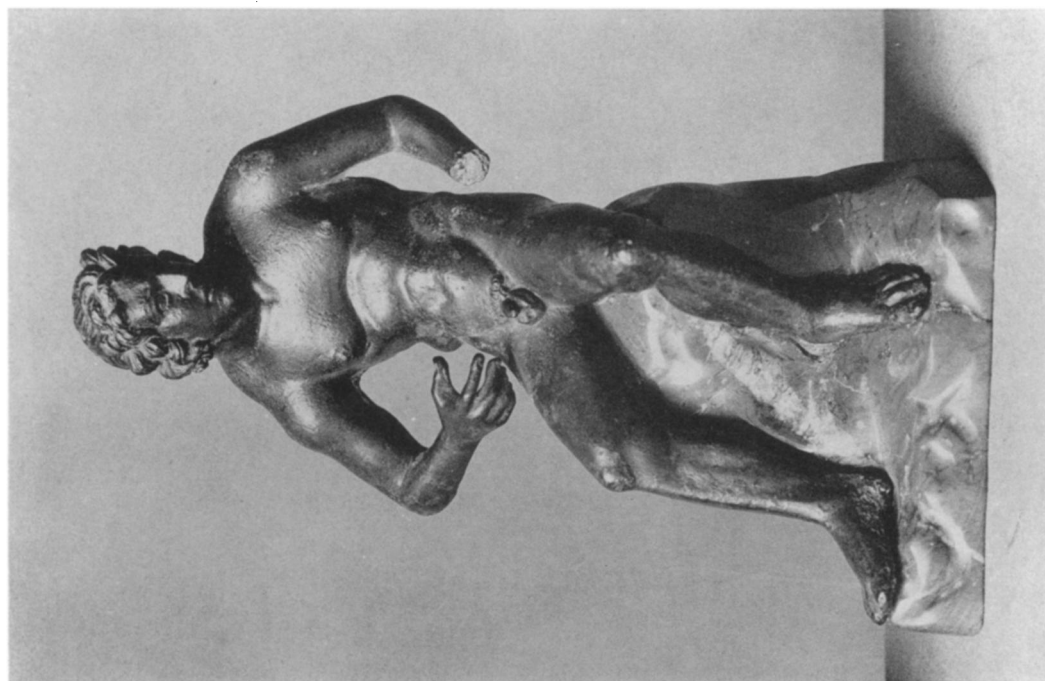
Finally, let me emphasize that there is no evidence that the pieces I have been discussing form a series, and there is even the positive evidence of scale that the group of Plate 56, a, b did not belong in a series with the others.¹⁹ Taken together, all these objects provide evidence that such a series did exist, and that it was produced by partial moulds taken from each group to form the next. The process of commercial duplication was somewhat more complicated than had been supposed, and its application to this particular sculptural type had not been recognized. The isolation of another commercially reproduced type is valuable for the light it throws on the personalities and methods of ancient sculptors.

DOROTHY KENT HILL

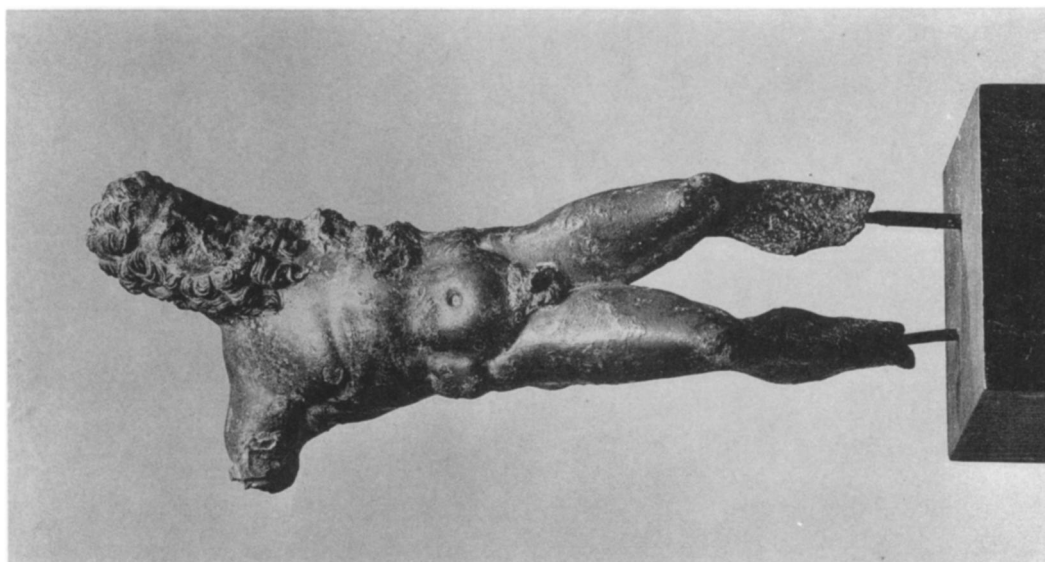
THE WALTERS ART GALLERY
BALTIMORE

the one-view groups, even though it may have been invented earlier, and it therefore corroborates in a general way the dating I have suggested.

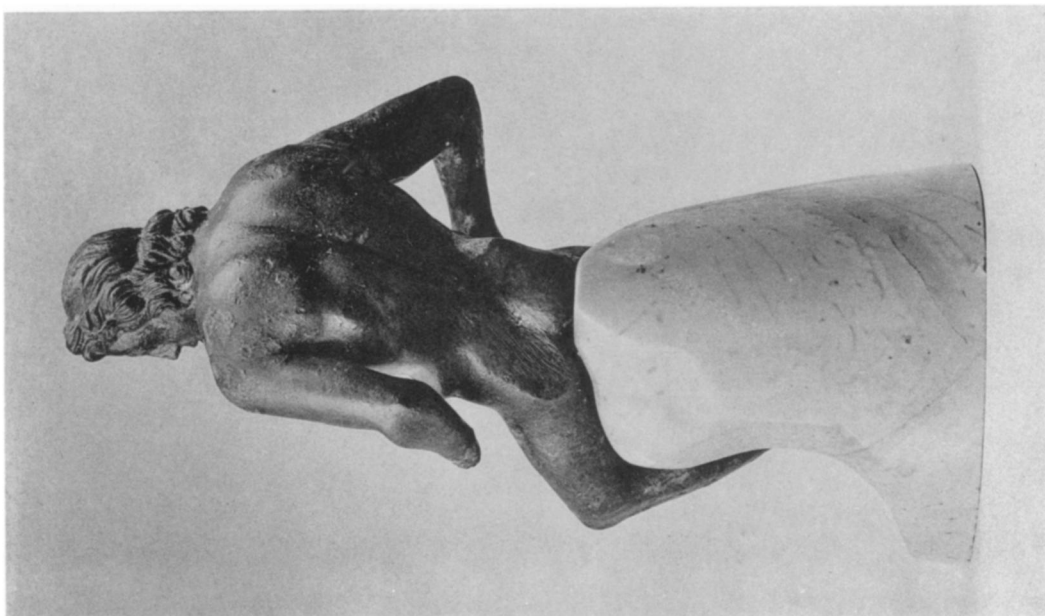
¹⁹ The best series of figures so far available is the Aphrodite type; there are five of almost the same size, but no mould; see my review, *A.J.A.*, L, 1946, p. 504.



a. Bronze Statuette, "Athlete"
Walters Art Gallery



c. Bronze Statuette, "Herakles"
Walters Art Gallery

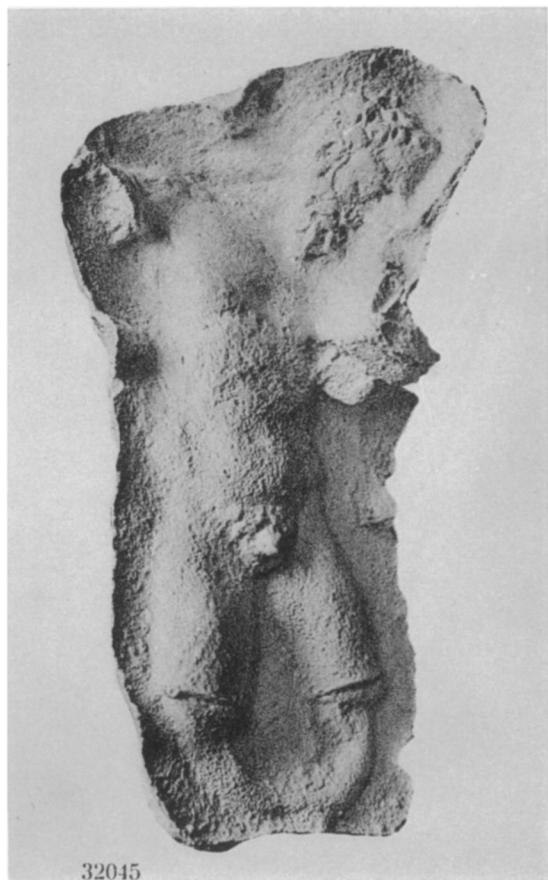


b. Bronze Statuette of a., from rear

DOROTHY KENT HILL, AN EGYPTO-ROMAN SCULPTURAL TYPE AND MASS PRODUCTION OF BRONZE STATUETTES



a. and b. Bronze Group, Wrestlers. Cairo Museum
After *Bulletin de l'institut français d'archéologie orientale du Caire*



c. Cast from Plaster Mould
After Edgar, *Greek Moulds*



d. Bronze Attachment, Silene
Walters Art Gallery