Egypt Exploration Society

DIODORUS' ACCOUNT OF THE EGYPTIAN CANON

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In the entire Egyptological and art-historical literature dealing with the relations between Egyptian and Greek art, few passages have given rise to more discussions and comments than Diodorus' short remark on the sculptural canon of the Egyptians.

A brief account of a statue of the Pythian Apollo commissioned by the people of Samos from two sculptors, Telecles and Theodorus, who decided to execute it in accordance with the method of working generally followed by Egyptian artists, provided Diodorus with the opportunity to include a small digression on the Egyptian system of proportions in terms which have generally been considered vague and obscure. In Oldfather's authoritative edition and translation the passage runs:[1]

παρ' ἐκείνοις γὰρ οὐκ ἀπὸ τῆς κατὰ τὴν ὅρασιν φαντασίας τὴν συμμετρίαν τῶν ἀγαλ-
μάτων κρίνεσθαι, καθάπερ παρὰ τοῖς Ἕλλησιν, ἀλλ' ἐπειδὰν τοὺς λίθους κατακλίνωσι καὶ
μερίσαντες κατεργάσωνται, τὸ τηνικαῦτα τὸ ἀνάλογον ἀπὸ τῶν ἐλαχίστων ἐπὶ τὰ μέγιστα
λαμβάνεσθαι· τοῦ γὰρ παντὸς σώματος τὴν κατασκευὴν εἰς ἓν καὶ εἴκοσι μέρη καὶ προσέτι
τέταρτον διαιρουμένους τὴν ὅλην ἀποδιδόναι συμμετρίαν τοῦ ζῴου. διόπερ ὅταν περὶ τοῦ
μεγέθους οἱ τεχνῖται πρὸς ἀλλήλους σύνθωνται, χωρισθέντες ἀπ' ἀλλήλων σύμφωνα
κατασκευάζουσι τὰ μεγέθη τῶν ἔργων οὕτως ἀκριβῶς ὥστε ἔκπληξιν παρέχειν τὴν
ἰδιότητα τῆς πραγματείας αὐτῶν.

For with them (i.e. the Egyptians) the symmetrical proportions of the statues are not fixed in accordance with the appearance they present to the artist's eye, as is done by the Greeks, but as soon as they lay out the stones and, after apportioning them, are ready to work on them, at that stage they take the proportions, from the smallest parts to the largest; for, dividing the structure of the entire body into twenty-one parts and one-fourth in addition, they separate and proceed to turn out the various sizes assigned to them, in such a way that they correspond, and they do it so accurately that the peculiarity of their system excites amazement.

It is typical of the general lack of attention paid by classical scholars to the results of Egyptological studies that Oldfather's sole comment on the passage is that no explanation of the twenty-one and one-fourth parts has been found in any modern author,[2] in spite of the fact that Lepsius in 1884 had already demonstrated the obvious connection between the twenty-one parts of Diodorus and the twenty-one squares into which the grids of the Late-Egyptian canon divide the human body from the sole of the feet to the canonical measuring-line passing through the root of the nose and the outer corner of the eye.[3]

[1] Diodorus Siculus, *Bibliotheca*, ed. Oldfather, (Loeb, 1933), I, 98, 5–10.
[2] Op. cit. 338, n. 1.
[3] R. Lepsius, *Die Längenmasse der Alten* (Berlin, 1884), 103.

The expression 'one-fourth in addition' he was unable to explain, but he pointed out that it certainly referred to the distance from the canonical measuring line to the crown of the head, which was separated from the canonical division of the rest of the body in order to avoid the difficulties which would otherwise arise from the varying dimensions of the different head-dresses, wigs, and crowns.

In the subsequent literature on the subject no author has been able to improve essentially upon Lepsius' interpretation; and since the unfortunate one-fourth has remained a stumbling block for the understanding of the text, it has by most scholars been dismissed as an error or a misunderstanding.[1] In the following we shall try to show not only that, properly understood and translated, Diodorus' statement is perfectly correct as it stands, but also that it contributes essentially to the understanding of the canonical problem.
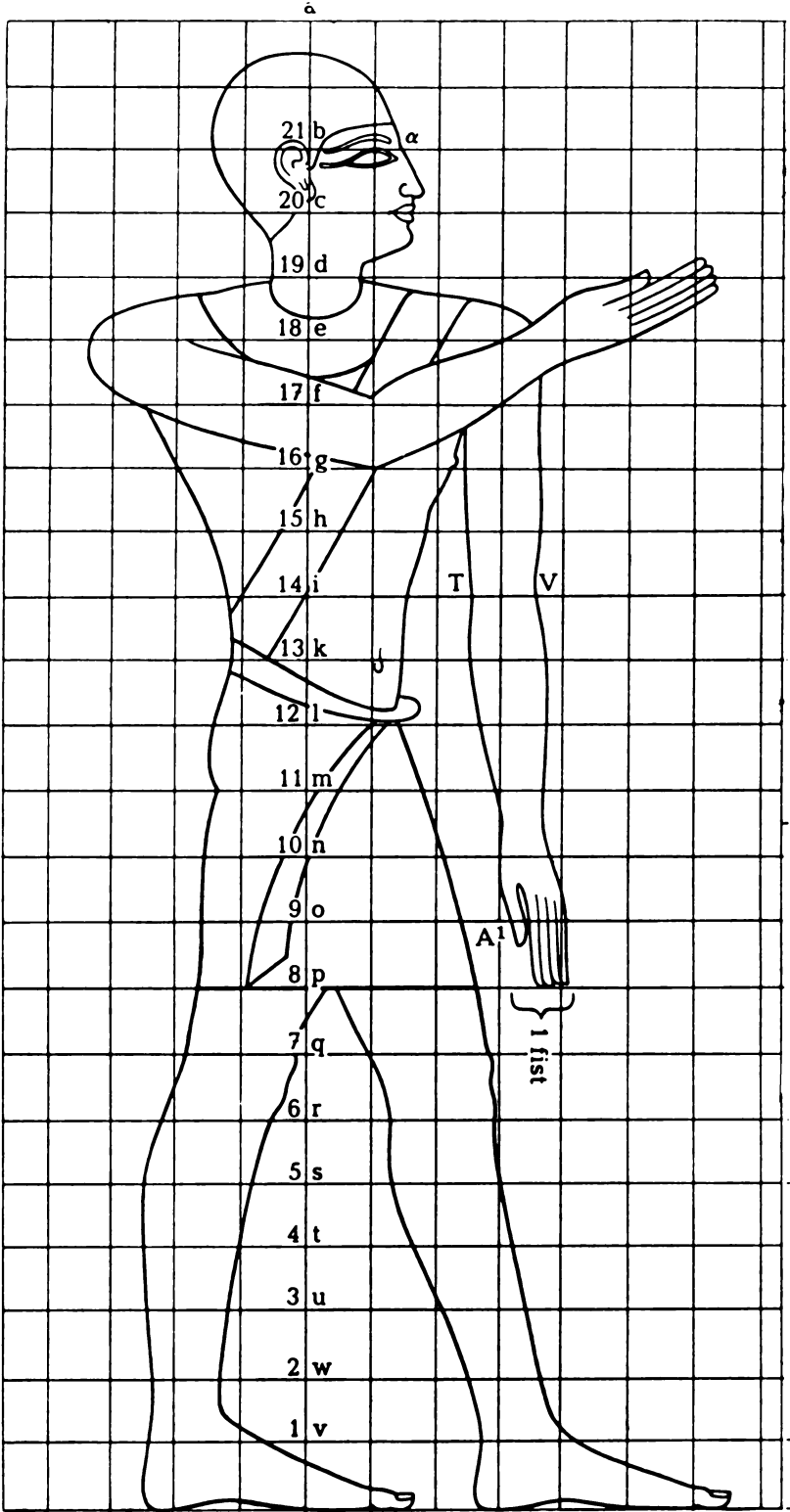
Before turning to the philological and canonical problems involved, attention must be drawn to one small point which is of basic importance for the understanding of Diodorus' account. We have already seen that the reason for the division of the body into two separate parts, the twenty-one squares dividing the body from feet to eye-line, and the supra-canonical distance from the eye to the crown of the head, was that the latter was a variable quantity changing with the various forms of head-dress. It is clear, therefore, that Diodorus' statement about the additional one-fourth cannot be taken as a general rule, but must necessarily refer to one particular type of representation, obviously that copied by the two artists; and having made this point clear we shall briefly consider some semasiological peculiarities of the word τέταρτος itself. That its basic meaning is one-fourth in the simple numerical sense of the word is beyond discussion, but a perusal of any major Greek dictionary will show that the word in special contexts had more closely defined and more specific meanings.[2]

In numismatic contexts it was used to signify the monetary unit of 'one quarter', that is one-fourth of one of the standard units of the monetary system. In metrological texts it was used as a measure of weight generally equivalent to one-quarter of the unit corresponding to the pound, and as a measure of capacity it was generally used as a quarter of the bushel or the gallon. As a measure of length we should therefore expect it to be used exactly as 'a quarter' in English with the meaning of one-fourth of the yard or the cubit; but owing to the ambiguity of the term, which frequently makes it difficult to decide when it should be translated numerically as 'one-fourth' or metrologically as 'a quarter', τέταρτος does not seem to be registered in the dictionaries as a specific measure of length. We shall see, however, that its very employment by Diodorus is a clear demonstration of the metrological significance of the word.
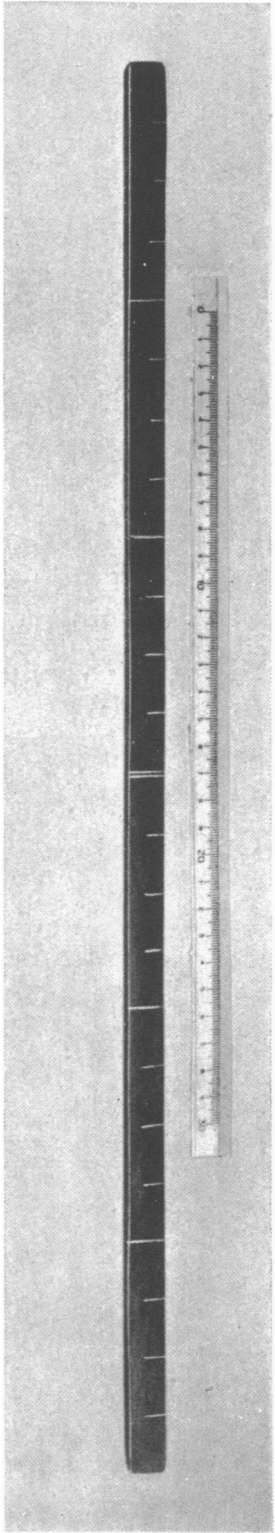
All commentators have agreed that when literally translated as 'one-fourth in addition' the phrase προσέτι τέταρτον is meaningless precisely because we are not told

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[1] From an art-historical and canonical view-point the most fruitful contributions are Anthes' important paper 'Werkverfahren aegyptischer Bildhauer' in *MDAIK* 10 (1941), part 2, and Panofsky's 'The History of the Theory of Human Proportions as a Reflection of the History of Styles', in *Meaning in the Visual Arts* (New York, 1955), p. 69 f.

[2] *Thesaurus Graecae Linguae* (Paris, 1831–65), VII, 2057; Liddell and Scott, *A Greek–English Lexicon* (Oxford, 1961), 1779, s.v.

Plate XXXIV

1. A canonical drawing (from Lepsius, *Denkmäler*, VIII, III, 282)

2. A cubit-rod (Turin no. 6349) (after *La Rivista R.I.V.* (Turin) of May 11, 1961, p. 28)

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from which unit this mysterious one-fourth is derived. If, however, we choose the second possibility, and in accordance with the metrological significance of the word translate it 'a quarter' the problem disappears completely and the passage becomes clear and unambiguous. We are quite simply told that in their canonical representations of the human body the Egyptians divided it into twenty-one parts, that is the twenty-one squares from the feet to the hairline, and then added on top of that (πρόσετι) the metrological unit of a quarter (τέταρτος) representing the supra-canonical distance from the eye to the crown of the head.

The entire statement is admirably illustrated by plate XXXIV, 1, a drawing preserved in its original grid, where the basic distance from the base to the eye (at 21b) is divided into 21 squares, and the supra-canonical distance from 21b to the crown of the head—representing the quarter of Diodorus—is $1\frac{1}{2}$ squares, but in order to make clear what induced Diodorus to identify this part with the quarter a few remarks on canon and metrology are indispensable. The constructional basis of the late canon was the so-called royal cubit which originally represented seven palms of the small cubit. As already pointed out by Lepsius this original division was at an uncertain date changed, and by analogy with the small cubit, the royal cubit was henceforward divided into six greater palms each representing $1\frac{1}{6}$ original handbreadths. That Lepsius's explanation of the metrological reform was correct is proved by the irrefutable evidence of actual cubit rods of which plate XXXIV, 2 shows a specimen from the museum at Turin.[1] It measures 520·936 mm in length, and must consequently represent a royal cubit; it will be seen to be divided into six parts, each representing one great handbreadth, which are in turn subdivided into four great fingers or digits.

In accordance with the general rules governing the relations between the canon and metrology, the anatomical identification of the great cubit should be the forearm from the elbow to the tip of the medius; this is confirmed by pl. XXXIV, 1 where this part (from TV to the line through 8p) is correctly divided into six parts by the grid. On the same figure the supra-canonical part of the head from the line at 21b to the crown of the head is divided into $1\frac{1}{2}$ squares. Since $1\frac{1}{2}$ is one-fourth of the six parts into which the forearm is divided, the supra-canonical part of the head is consequently one-fourth of the cubital arm-length, and represents therefore the metrological unit of one quarter, that is, one-fourth of the cubit.

Diodorus' statement is therefore absolutely correct, and should be interpreted in the following way: In their sculptural canon the Egyptians divided the structure of the entire body into twenty-one parts, adding on top of this division the metrological unit of one-quarter, that is one-fourth of the royal cubit, which was the basic constructional unit in the system of proportions of the Late Period.

This interpretation does not merely vindicate the reliability of Diodorus' account, but it also provides the important information that in the late canon the modulus of one square was certainly the great handbreadth of the royal cubit. It does not, however, solve the complicated problem of the nature of the late canon, many details of which

[1] No. 6349 in the *Catalogo del Museo di Torino.*

remain obscure, but it does show that my own very tentative proposal to correct the one-fourth of Diodorus into one-third was erroneous.[1] This proposal was based on an imperfect understanding of the nature of the royal cubit. On the other hand, it will be seen that the new interpretation strongly confirms the theory of the direct connection between canon and metrology, and it supports the basic definition of the canon as a system of proportions representing a standardization of the natural proportions of the human body, based on the anthropometric units of the established measure of length.

[1] *Canon and Proportions in Egyptian Art* (London, 1955), 50.