matters arising

Scrotal asymmetry: an appendix

TESTICULAR asymmetry, as McManus has shown[1], was a not uncommon feature of Greek and Roman sculpture; the ancient artist, always attentive to nature, seems to have noticed that the right-hand testis is usually the higher, and inferred (apparently incorrectly) that the other ought therefore to be the larger.

For the historian, however, two questions still remain to be answered: when did the Greeks first discover this peculiarity, and how consistently did they observe it in the early stages of their art? McManus's data, coming as it does from museums in Italy, must of necessity be confined almost entirely to sculpture of the classical period onward (that is, from the fifth century BC to Roman times). Since the preceding century, from the birth of monumental sculpture in Greece around 600 BC, was an era of rapid development in both style and understanding of the the anatomy of the human body, it may be worthwhile to supplement his survey with a look at the 80 kouroi, or standing archaic youths, where this feature is preserved intact. I use Richter's typology[2], based on minute anatomical analyses and generally accepted today, and Harrison's revised chronology[3], which puts the beginning of the series at around 600 BC and its end just before 480 BC, the data of the Persian invasion and sack of Athens. The results (Tables 1–3) can be summarised as follows.

As might be expected, the early groups (Sounion and Orchomenos–Thera: Table 1) show a propensity to equalise the testes in both height and size (or, occasionally, to model them as one; this is particularly the case with statuettes, and continues, though to a diminishing extent, down to the end of the Archaic period: see ref. 2, nos. 13, 22, 26, and so on: in such cases I record the two as "equal") though even at this early date the right is already higher than the left in about two-fifths of the statues sampled. In these and the six statues in which the opposite case obtains, the distribution of size seems to be more-or-less random.

By the middle of the century (Tenea–Volomandra and Melos groups: Table 2), the right testis is the higher in a majority of cases, though in only half of these is the other the larger: the tendency to equalise the testes in size is still dominant.

In the final period (Anavyssos–Ptoon 12 and Ptoon 20 groups: Table 3) the classical scheme is already established. Again, the right testis is usually the higher (though about a quarter of all sculptors, intent on symmetry, still persist in making the two equal in height and size—a practice that is, apparently, to continue), (see ref. 1, Table 1), and the left is now regularly the larger. Significantly, in no case now is the higher testis the larger: Greek sculptors seem to have bowed to the dictates of common sense, as opposed to science, even in the adolescence of their art.

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Table 1 Analysis of the scrotal asymmetry of 26 statues from Richter's Sounion and Orchomenos–Thera groups (*c*.600–*c*.570 BC)

		Side of higher testicle			
		Left	Equal	Right	Total
Side of larger testicle	Left	3		6	9
	Equal		10	1	11
	Right	2		4	6
	Total	5	10	11	26

Table 2 Analysis of the scrotal asymmetry of 29 statues from Richter's Tenea–Volomandra and Melos groups (*c*.570–*c*.540 BC)

		Side of higher testicle			
		Left	Equal	Right	Total
Side of larger testicle	Left			9	9
	Equal	1	8	7	16
	Right	2		2	4
	Total	3	8	18	29

Table 3 Analysis of the scrotala symmetry of 25 statues from Richter's Anavyssos–Ptoon 12 and Ptoon 20 groups (*c*.540–*c*.480 BC)

		Side of higher testicle			
		Left	Equal	Right	Total
Side of larger testicle	Left			13	13
	Equal	1	6		7
	Right	5			5
	Total	6	6	13	25

Received April 20; accepted April 26, 1976.

1 McManus, I. C., *Nature*, 259, 426 (1976).
2 Richter, G. M. A., *Kouroi: Archaic Greek Youths. A study of the development of the kouros type in Greek sculpture*, 3rd ed. (Phaidon, London, 1970).
3 Harrison, E., *The Athenian Agora* 11, *Archaic and Archaistic Sculpture*, 3–13. (American School of Classical Studies, Princeton, New Jersey, 1965).

Specificity of transfer factor

THE letter by Salaman and Valdimarsson[1] is an important step forward in the understanding of the problem of whether the activities of dialysable transfer factor (TFd) are specific or not. They admit that two substances may be involved in the effects of dialysable leukocyte extracts (DLE)—one adjuvant-like material and another specific substance (that is, TFd). In fact, until recently, reports on the effects of TFd dealt with the effects of crude preparations of DLE or roughly purified fractions thereof.

There remains, however, one important point which, although sug-