which is the sense used in the revised diagnosis of *Homo*[3], dishing applies only to the robust australopithecines (members of the superspecies *A. robustus*/*A. boisei*[11]), but not to *A. africanus*. If the commentator's interpretation were correct, then clearly the face of *A. africanus* would be much more dished, and that of the robust australopithecines hardly dished at all! The face of the robust australopithecines is in fact flat to hollowed from side to side, and is very slightly hollowed from above downwards; that of other early hominids is flattish to slightly convex from side to side, but is appreciably hollowed from above downwards.

The commentator's use of "dishing" is perhaps based on the usage of dog breeders and stock breeders for whom "dishing" applies to a hollowing from forehead to teeth (*teste* Dr M. D. Leakey and Mrs R. Walker).

In view of the confusion which has arisen, it would perhaps be better if the term "dishing" were not used in palaeoanthropology in the sense in which Robinson first used it and as has been followed by others, or in the sense followed by the commentator! Instead, it would be less confusing to adhere to the wording proposed in the diagnosis of *A. robustus* and *A. boisei*, namely that "the nasal region is set in a central facial hollow"[11,12]. Meantime, on the usage of Leakey *et al.*[3] in their revised diagnosis of *Homo*, it would be correct to say that OH 24 does not show a "dished" face, and that it is not thereby disqualified from membership of the genus *Homo*.

One last point; the commentator implied that because the cranial capacity of OH 24 cannot be determined with accuracy, the validity of many of the cranial measurements might be undermined, and therefore that of the conclusions drawn, at least in part, from those measurements. A close study of the cranium and its distortion reveals that relatively few of the uncorrected measurements are so affected, and further, that the diagnosis of the taxonomic affinities does not depend on any of those measurements, save for cranial capacity which has been dealt with before.

I conclude that if the criteria proposed for *Homo* by Leakey *et al.*[3] are valid—and they differ from those of Le Gros Clark[14] principally in respect of cranial capacity—then it is reasonable to assign OH 24 to *Homo*. This inference is supported by such additional features as the wide spacing of the anterior parts of the temporal crests, the very small absolute size and the shape of the palate and the extreme forward position of the foramen magnum on the base of the cranium, as compared with its position in such australopithecine crania as Sterkfontein 5, Makapansgat 37/38, OH 5 (the former "*Zinjanthropus*") and KNM-ER-406 of Ileret, East Rudolf.

It is not unreasonable to conclude that OH 24 adds powerfully to the growing body of evidence from Olduvai, East Rudolf and elsewhere that an early member of the genus *Homo* existed alongside australopithecines in the Lower Pleistocene.

I thank Dr M. D. Leakey, Mr R. E. F. Leakey, Mrs Margaret Leakey, Dr A. Walker, Mrs Pat Barrett, the Kenya National Museum, Centre for Prehistory and Palaeontology, and the Research Committee of the University of the Witwatersrand, Johannesburg.

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Reply to Professor Tobias

THROUGH the kindness of the Kenya National Museum I have had the opportunity of examining the original material of OH 24 in Nairobi on several occasions. I am therefore in a position to reply to Professor Tobias's letter concerning this important specimen.

It is vital not to underestimate the amount of post-mortem crushing and distortion still present in OH 24. Although a skilful job of reconstruction has been done, at least two areas of gross distortion remain (perhaps unavoidably), and it is imperative that these areas of distortion are not misinterpreted when making taxonomic considerations. In this regard, the most crucial source of distortion occurs in the occipital bone. There are multiple fractures in the occipital and a major fracture runs laterally through the internal occipital protuberance, 15.5 mm posterior to opisthion, causing inferior and distal displacement of the posterior fossae above the line of breakage. This has had the effect of making the skull appear longer than it should be and a correction of this distortion will decrease the cranial capacity as published.

Further distortion occurs in the frontal region where severe downward crushing after burial displaced the frontal bone both anteriorly and inferiorly. After reconstruction, the supra-orbital portion of the frontal is "floating" freely on the left and the join with the orbital portion of the zygomatic, on the right, is uncertain. In my opinion, therefore, the supra-orbital area of the frontal could be moved in a slightly superior and posterior direction. This would also have the effect of shortening the cranium and thereby diminish the cranial capacity still further.

Professor Tobias's discussion of what constitutes facial "dishing" in *Australopithecus* seems irrelevant; surely it is the occurrence of this feature in a purported member of the genus *Homo* which is under consideration and not its admitted presence in *Australopithecus*. The original definition[1] referred to a "concave" or "dished" face, although Professor Tobias may prefer the term "central facial hollow". A concavity is defined as "having the outline or surface curved like the interior of a circle or sphere"[2]. Since circles or spheres have, by definition, no up or down or side to side, Professor Tobias's qualification regarding a side to side concavity is meaningless. Either a structure is concave (or "hollow") in all directions or it is not concave. May we now conclude that either the specimen does not fit the definition or that the definition does not fit the specimen?

Semantic disputes aside, one of the most interesting aspects of the morphology of OH 24 is the remarkably close similarity this specimen shows with MLD 6, an australopithecine from Makapansgat, South Africa. Although MLD 6 is a fragmentary specimen, the preserved portion of its central facial area shows a near identity with the comparable portions on OH 24, not only in size and shape but in detailed morphology. Moreover, the teeth which can be compared, PM^4 and M^1, although showing different degrees of wear, are extremely similar in their measurements, relative sizes and general conformation.

Finally, I must entirely agree with Professor Tobias that there is growing, and perhaps incontrovertible, evidence of the existence of a more advanced hominid in the early Pleistocene parts of Africa. I must, however, emphatically deny that "Twiggy" is part of this evidence.

Received September 11, 1972.

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