5. W. Bevan, *ibid.* **171**, 710 (1971).
6. P. M. Boffey, *ibid.* p. 43; T. Aaronson, *Environment* **13** (No. 2), 34 (1971).
7. M. S. Meselson, A. H. Westing, J. D. Constable, R. E. Cook, *Congr. Rec.* **118**, S3226 (3 March 1972).
8. J. Constable and M. Meselson, *Sierra Club Bull.* **56** (No. 4), 4 (1971); R. E. Cook, *Yale Alumni Mag.* **34** (No. 8), 26 (1970–71); A. H. Westing, *BioScience* **21**, 893 (1971); *J. Forest.* **69**, 777 (1971).
9. A. H. Westing, *Biol. Conserv.* **4**, 322 (1972).
10. D. S. Greenberg, *Sci. Gov. Rep.* **2** (No. 11), 1 (1972).
11. *Congr. Rec.* **117**, S15995 (6 October 1971); *ibid.* **118**, S3246 (3 March 1972).

Language and Prehistory

Reiner Protsch and Rainer Berger (19 Jan., p. 235) summarize radiocarbon dates for domesticated animals showing that southeastern Europe was no less an early center of domestication than the Near East was. Even though the early dates in question reach back considerably before the time of our earliest linguistic reconstructions of the Indo-European language (perhaps 3500 B.C.), the authors' results are striking to a student of comparative Indo-European linguistics.

It has been well known for a century or more that reliable reconstructions can be arrived at for the nouns naming most of the animals discussed by the authors. Recent scholarship on the structure and formation rules of reconstructed Indo-European, however, enables us to be more precise today regarding the chronology of certain aspects of the lexicon of that language. The authors find particularly early domestication dates for four animals; we reconstruct their Indo-European names as follows: **g*$^{\text{w}}$*eH*$_{\text{u}}$- (Greek *boûs*, English *cow*), **suH*- (Latin *sūs*, English *sow*), **H*$_{\text{u}}$*eu̯i*- (Latin *ovis*, English *ewe*), **ḱuon*- (Greek *kýōn*, English *hound*). Each of these nouns has a shape and declensional class that place them among the earlier morphological layers of the reconstructed language; in other words, these nouns should already have been in the Indo-European language for a considerable time.

No direct dates yet exist for goats in Europe; goat bones are found in the lowest levels of one Greek site, but does this mean they do not occur thereafter? It may be of interest that we can recover no single Indo-European word for the goat. This does not mean that the speakers did not know goats, but that at an early date their term for the goat diverged dialectally, which conceivably reflects some important cultural change (*1*).

The authors find horses represented rather late. The Indo-European reconstruction **ek'wo-* (Latin *equus*) is clear and certain, but morphologically the word seems to be not a simplex, but a derivative of something else. Moreover, the noun is a so-called thematic stem (Latin second declension); this is recognized as representing a rather recent layer of noun formation in the prehistory of the Indo-European language.

The structural linguistic chronology strikingly parallels that indicated by the radiocarbon measurements.

ERIC P. HAMP

Department of Linguistics, University of Chicago, Chicago, Illinois 60637

References

1. The taboo on eating goat observed by the Roman priest of Jupiter [see R. E. A. Palmer, *Homenaje a Antonio Tovar* (Editorial Gredos, Madrid, 1972), pp. 341–347] may reflect an older, more general abstinence.

Remedial College Courses

In his editorial of 28 July 1972 (p. 297), Arnold B. Grobman contends that disadvantaged students will be educationally short-changed if they are given college credit for "remedial courses." Yet he nowhere defines such courses other than by allowing the reader to infer that they are courses which, if credited, lead to graduation "on a basis different from that used for other college students."

Two points need to be made. First, nearly every college student already is graduated on a basis different from that of every other student. Students enter with a wide range of skills and interests. That range increases as a result of the variety of individual abilities and the thousands of individual choices made every year by every student. Grobman posits a homogeneous student body and set of academic standards suddenly fragmented by the introduction of disadvantaged students. A more accurate model is one of a heterogeneous student body where disadvantaged students slightly increase the variety.

The second and more important point concerns the nature of courses which are frequently considered remedial. Almost every student, regardless of ability or background, takes at least one such course.

Most colleges require freshmen to take a basic course in expository writing. Yet many faculty who teach freshman English courses believe that students should have mastered writing skills in high school, and that such skills are requisite to success in most other college courses. The typical freshman English course is remedial in the common use of the term. Should students therefore be denied credit?

The curricula in sciences and mathematics in most colleges is tightly articulated. Yet students typically enter those curricula at different points and for different reasons. For example, a student might enter a sequence of calculus courses at the intermediate level because of prior background, luck on an advanced placement test, poor advice, or sheer nerve. Does that make introductory calculus remedial?

Most colleges require students to develop some skill in a foreign language. Yet many freshmen have already studied or learned a language. Students enrolled in a typical introductory college language course may be taking their first language instruction, want to learn a second or third language, have some previous background but are unable to handle more advanced work, need the skill for further study, or are simply trying to meet a requirement. Is introductory foreign language study remedial? If so, for what category of student?

The concept of remediation is so complex there seems only one way to apply it in a nondiscriminatory way to all students—define a remedial course as one which prepares a student to pass an examination required of all applicants prior to their admission as regular students. Only a definition such as this allows college officials to grant or deny credit without capriciously categorizing either certain students or certain courses as disadvantaged. In the absence of such a procedure, every high school graduate should receive full college credit for every course taught at the college.

MARK BEACH

University of Rochester, Rochester, New York 14627

In an earlier editorial (29 Oct. 1971, p. 457), I suggested that on several campuses the result of the enrollment of a significant number of disadvantaged students could be described as a tendency toward a bipolarity of the student body. I think this a more useful portrayal than that of a slight increase in the variety of a heterogeneous student body. Remedial courses, therefore, may play a somewhat different role on such campuses than they did in the past.

My editorial of 28 July was not ad-