SCIENCE NEWS®
A Science Service Publication
Vol. 109/January 17, 1976/No. 3
Incorporating Science News Letter

COVER: Jupiter and Saturn didn't quite make star billing. They have to be satisfied with best supporting roles in the solar system. Yet their odd composition and hypothesized evolution blur the once sharp distinction between stars and planets. See p. 42. (Photos: NASA)

Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., $10; 2 yrs., $18; 3 yrs., $25. (Add $2 a year for Canada and Mexico, $3 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255). Cable SCIENSERV. Telex 64227.

LETTERS

The shrinking tooth

Your reporter's account titled "The Shrinking Tooth" (SN: 12/13/75, p. 375) subtly implies that evolutionary changes are influenced by the environment. In the more commonly accepted view, an evolutionary change's applicability to its environment determines whether the change is a desirable one, and natural selection allows retention of a change only if it is "desirable" to its environment. In this light we must ask, "Why are persons with smaller teeth naturally selected over others?" Possibilities abound but it is doubtful that a person with large teeth is at a disadvantage eating prepared food. Therefore, we must look for a more plausible factor to explain his demise. Possibly, as a population becomes more technologically oriented, more emphasis is placed on esthetics. If smaller teeth are more esthetically pleasing to the opposite sex, as are smaller noses and better developed torsos, large-toothed individuals tend to remain single while small-toothed couples mate to produce a smaller-toothed population. Although I have no detailed study to prove my premise, it is at least as plausible as the one mentioned in the article. If we're not vigilant, anthropologists might fall into a train of thought that would have the woodpecker evolving from a sparrow that saw fit to go around banging his beak into trees. In studying the "shrinking tooth" perhaps we should also determine if "shrinking noses" and "developing torsos" are coincident.

M. P. Guillory
Senior Chemist
Shell Chemical Co.
Norco, La.

Wilson's sociobiology synthesis

According to your review (SN: 11/29/75, p. 347), the main argument in E. O. Wilson's textbook of sociobiology runs as follows: Insects and other nonhuman societies are founded on altruistic, self-destructive behavior of individuals. Such behavior is rather rigid and uniform, so that it may well be determined genetically and perpetuated by kin selection. This means that each component trait of such behavior might be controlled by a gene and thereby inherited, the same way as the size, structure and shape of the body are inherited. Then, why this view could not be extended to all sorts of behavioral characteristics, including specifically human traits? Apparently, a chorus of enthusiastic consensus has saluted this new synthesis, so that the reviewer apologizes "for focusing, however briefly, on critics and criticisms." While SCIENCE NEWS certainly deserves appreciation for picking up controversial issues, a little more courage in dealing with such issues would most certainly help.

There are in fact a few problems. First, "altruism," "kin selection" and "society" are notions that sociobiologists borrow from the common human culture to describe certain characteristics of insect behavior. To borrow them back from insects to humans (in order to describe human behavior) might be enlightening *to an insect,* but it does not add much to a human understanding of human affairs. Second, although physical traits are inherited, the mechanism for their development is essentially epigenetic: That is, it results from the interaction between genes and their cellular environment. As for behavior, it would seem reasonable to assume that the interaction between cells (including genes and their products) and the external social environment determines behavioral traits. (Of course, this does not sound like a new synthesis, but just like plain, old common sense.) Third, some claims for a new synthesis, rather than opening the road for more substantial and unconventional discoveries, may actually hamper and dwarf scientific inquiry. This happened before, with Spencer in the West at the turn of the century and with Lysenko more recently in the Soviet Union.

There is certainly something new to think of and to experiment with on the borderlines between biology, psychology and sociology. Unfortunately, what Wilson has apparently made has been only to dress up with new scientific terms the old Spencerian (social Darwinist) argument. Has Wilson actually retarded scientific progress in an old field? Or has he only produced an expensive Christmas gift for intellectuals in search of new sensations? Probably both.

Paolo Strigini
Biological Science Center
Boston University
Cambridge, Mass.

Conjecture on language

After enjoying the description of Julian Jaynes's highly speculative theory of language origin ("Language Evolving: Part Two" SN: 12/13/75 p. 378), I was amused to read in the final paragraph: "Jaynes's theory, like all others, contains a certain amount of conjecture." A beautiful and perhaps intended case of understatement!

James F. Coppedge
Northridge, Calif.