LETTERS

Drug Shortages

The article "Penicillin G: Suddenly a shortage" by Barbara J. Culliton (News and Comment, 19 Mar., p.1157) accurately describes the shortage of intravenous penicillin G which has existed during the past few months. Shortages of other drugs (injectable local anesthetics, vasopressor agents, electrolyte additives, and so forth) have been occurring with increasing frequency during the past year, posing numerous problems, particularly in hospitals.

The American Society of Hospital Pharmacists and the Food and Drug Administration have jointly developed a nationwide Drug Shortage Monitoring Program which will be operational within the next few weeks. This program will enable us to anticipate drug supply problems and will provide information about their extent and expected duration. An important goal of the program is to help eliminate artificial shortages caused by rumor, such as the toilet tissue panic a year or so ago.

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Big University

The editorial "Big University—Humane or bureaucratic?" by Susan Artandi (19 Mar., p. 1129) is well stated and expresses what many of us have been thinking for some time. At the University of Florida, the change from an academic institution to a huge bureaucracy has occurred slowly, and only over the last several years has the faculty realized with horror what has occurred.

There are seven levels of administration over the professor in our state university system. The upper six levels are occupied by what I would term "professional administrators." That is, they are not associated to any extent with an academic discipline. This has led to cleavage of the academic community into administrators and faculty. The "Big University" should utilize the organization practiced by some of the better private universities: administration positions from department head to president should be filled by election or appointment from the senior faculty on a rotating basis. The highest academic rank in the university should be that of professor.

As for the myriad of lower echelon administrative personnel, their cost should be reduced to no more than 10 percent of the operating budget. This could be done by the university's negotiating with the state and federal governments for some less demanding accounting system. Then we could do away with personnel departments, publicity bureaus, personnel evaluation forms, time cards—in fact most forms and more than three copies of anything.

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Aleut Life Expectancy

W. S. Laughlin's very interesting work with Soviet scientists on the ecology and archeology of the Aleutian peoples (15 Aug. 1975, p. 507) cites the population structure and processes of Aleut and Eskimo peoples as an expression of the ecological adaptation of the Aleuts. A closer look at the demographic data presented, however, raises some doubts about whether he has really established the theoretical points he makes.

Questions immediately arise when one notes that in Laughlin's figure 3, presenting life expectancy of males at age 15, 3 of the 12 columns of data are based on skeletons. Skeletons have an estimated age at death but obviously have no life expectancy, not simply because they are already dead but because life expectancy is a property of populations, not individuals. Three more columns are based on a census, a form of data from which one can derive life expectancy estimates only by making stringent and rather unlikely assumptions about the growth rate of the population and the constancy of past mortality (*1*). One column in figure 3, that labeled "Unalaska 1822," is noted in the text as being based on a population of 411 deaths from which a life table can readily be constructed. However, Laughlin gives no information about the size of the population from which these deaths were drawn and what proportion of all deaths during that period were recorded, no assurance that the extremely likely underrepresentation of infant deaths has been assessed or corrected, and no information on the crucial question of how the age of these people was estimated.

If the data in figure 3 represent the true expectation of life at age 15 for males, I wouldn't necessarily describe this as an "Aleut achievement of longevity." The model life table for all human populations which gives an expectation of life at age 15 for males of 35 years (comparable to the Unalaska 1822 data) gives an expectation of life at birth of 30 years for women and 27.7 years for men, and nearly 45 percent of the babies born die before reaching the age of 15 (*2*). This is comparable to the results I have found for the hunting and gathering !Kung (*3*) people of the Kalahari desert and represents "a better management policy for natural resources" only in comparison to the Eskimos, who seem to have an expectation of life at birth well under 20 years—below the level of the "worst" model life table presented in the Coale-Demeny series (*2*).

When we go back to look at the three very different age distributions of Aleut and Eskimo populations shown in Laughlin's figure 2, more questions arise about whether the conclusions can be accepted. Cross-sectional age distributions, which provide valuable information for ecological studies about the "dependency" burden of youth and old age on adults, tell us much more about the growth rate of the population than about the longevity (*4*). Figure 2 cannot be an age distribution in percentages, as it is labeled, or it would be impossible to have 100 percent at age 0, 80 percent at age 10, and so forth; apparently it represents the percentage at each age and older. I suspect, although I can't be sure, that the data in segment A represent the survivorship curve (the l_x column) of the life table based on those 411 deaths discussed above. If the data in segments B and C are cumulative age distributions of living populations, they are not comparable to those in segment A. If, on the other hand, they too are survivorship curves, I would be surprised and impressed at the low level of survivorship. In the absence of clear labeling and a basis for age estimation, I am not inclined to believe it.

The demography of small populations of primitive people is a sufficiently new and difficult field that it will be necessary to spell out the basis for conclusions, including such items as the procedure of age estimation, the data base, and the exact analysis performed, for some time, until a standard methodology is established.

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