is commonplace in our culture to snipe at the assumed mindlessness and frivolity of women. Quite frankly, when I read *Science* I expect the analysis and humor to be more sophisticated and trenchant than the usual bland, stereotyped fare offered the mass audience.

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R. H. Shannon's letter castigating the housewife and adolescent female for their "unanalyzable, unscientific, uncontrolled" consumption of power is a frivolous attempt to escape acceptance of an equal share of the blame for the westernized world's current energy crisis. At the research laboratory where I work there is an equally appalling waste of power. This includes everything from burning 200-watt light bulbs and running radios throughout the night when there is no one in the building to neglecting to completely shut off faucets after presurgical scrubbing or washing of glassware. After speaking with some of our maintenance personnel, I find that this is a universitywide situation that exists not because of housewives or nubile daughters, but rather because professors, technicians, and graduate students —all supposedly rational women and men—fail to conserve the energy that appears so unlimited to them. Shannon's indictment of only one segment of the population is therefore unfair and unscientific.

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Last night my husband handed me the 6 April issue of *Science* and called my attention to a letter by R. H. Shannon concerning the energy crisis, which he (Shannon) fears has been precipitated primarily by the practices of his wife and teen-aged daughters.

My husband has always been aware of the careless use of our precious natural resources and routinely snaps off the porch lights which I have left on for dinner guests or a late-returning child. (Fortunately, all injuries so far have been minor.) After reading Shannon's letter I realized that I too must face the reality of our dwindling energy supply and do what I can to conserve it. Surely I can do without a washer or dryer when a scrubboard and a clothesline will suffice. The refrigerator will cause something of a problem because I am having difficulty locating a man to deliver ice. The electric stove must also remain because I have not been able to convince my husband to chop wood for a woodburning stove. We will fill the bathtub on Saturday and draw lots for the order of bathing. Think what fun that will be for the family. Of course, the second car must go. I plan a monthly trip to the market to replenish the larder (sugar, flour, and so forth). The rest of our food will come from a home garden—perhaps I can keep a few chickens and a cow.

When I consider how my husband (already a careful consumer) can stave off the energy flow, I meet with greater difficulties. He, of course, must continue to drive himself to work (the bus for the laboratory leaves at an unconscionably early hour, and car pools are so inconvenient). It would be difficult for him to perform his experiments without the use of the cyclotron (that's only a few million watts), vacuum pumps, drying lamps, electronic counters and calculators (whatever happened to the slide rule and a bit of paper?). He could not be expected to work without air conditioning in his office. I know how uncomfortable he is when he leaves the office to come home in the summer.

Since we cannot cut down (energy-wise) in the laboratory, we must concentrate on the home, therefore today I am placing an advertisement in the paper offering for sale his power saw, drill press, lathe, shop vacuum, several power sanders, and paint compressors. Think how much fun he will have now that he is back to basics with just a hand saw and a plane. I know that both he, and Shannon, will be proud of me.

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Analysis of Anthropological Data

For the last several years anthropology has been undergoing evolutionary change. One used to be able to analyze data in any way he saw fit, but now it is considered useless to perform an analysis simply because one has available computer time. Because of the debatable value of anthropological data, it is also desirable that any problem-oriented analysis be conducted within as rigorous a scientific, methodological framework as possible. Unfortunately, the article by Alan Lomax with Norman Berkowitz

(21 July 1972, p. 228) fulfills neither requirement and is, therefore, less acceptable as anthropology. The following points should be considered.

Lomax and Berkowitz add factors to their analysis until the results conform to their model. One cannot help but wonder what the results would have been if one more factor had been added, or if human communication had been the first factor to be analyzed.

An alternate hypothesis for the similarities found between cultures is that they represent ecological adaptations to roughly similar environments. This hypothesis was not suggested, and certainly not tested. The climatic similarities which exist between Patagonia and the North American Plains would certainly suggest to ecologists that they look for similar adaptations. No contact would be necessary.

An association of human subspecies with culture types is unacceptable, not simply because of sociological pressures present today, but because there is no support for the statement.

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Wolfe seems vaguely to resent the use of computers in our work, although comparison and clustering of such multiparameter profiles (for example, the sets of norms that structure culture) is otherwise impractical. He doubts the validity of anthropological data in general, and our methodological rigor in particular, without specifying his standards of validity or rigor, or saying where we failed. This seems an unfair tactic.

He confounds our specialized use of the term "factor" with *vector* (or index) when he charges us with adding "factors . . . until the results conform to their model." Actually, we *discovered* the cultural "factors" (sets of similarly acting vectors are indices of social and communication structure), by means of cluster analysis of the reliable scalar indices available to us for a large sample of world cultures. The results of many other trial runs with somewhat different groups of indices were strikingly similar—about 14 main factors of social and communication structure involving the indices always showed up.

Our finding is that these 14-plus factors are sufficient to describe the main variations in human culture patterns. Operations with measures of other kinds of human performance (such as dance, speech, and breathing rate) reveal similar geographic distributions. It seems likely that (i) every cultural tradition consists of a stylistic core that is reinforced in every aspect of cultural activity; and (ii) these dynamic culture styles have continuous distributions. Ultimately these regional styles are hooked into environment, but it is eminently clear that environment biases rather than forms culture style. The successful interzone migration of cultures is proof of that.

The environment, Earth, has not changed drastically in the last 20,000 years, whereas in that time the human race has developed many cultural styles that differ from each other as profoundly as do the subspecific habits of other kinds of animals. Our finding that these cultural styles have clear-cut geographical distributions, which account for the fact of human history, reinforces the main thesis of anthropology. In man, culture (inherited, learned norms and skills) replaces genetic inheritance and enables human societies to adapt more flexibly than animal groups. In this (metaphorical) sense, human subspeciation *is* cultural. In fact the key element seems to be man's keen esthetic sense of the culturally appropriate, which provides the baseline for cooperative endeavor in all human societies.

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Doctorate Output

I wish to note for the record a regrettable error in my article "Shifts in doctorate output: History and outlook" (9 Feb., p. 538). In table 2 of the article, the University of Pittsburgh should have been listed as a public university, and among the 60 universities ranked highest for the article.

The University of Rochester should be counted as granting about 2.6 doctorate degrees in 1969 for every 1 in 1960, rather than the 3.6 multiple shown in the article. The 3.6 figure resulted from an unusually low number of degrees granted in 1960 and an unusually high number in 1969.

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