

of states of consciousness (SoC's), our rate of progress, or the hope of chemical and physical explanations of SoC's. Chemistry and physics provide some useful insights, and such conventional investigation should be continued. My proposal to develop state-specific sciences (SSS's) is not a call to abandon our useful hammer, but to develop additional tools for dealing with problems that don't act like nails.

Many of the comments of Cowan, Leake, Booth, and Sarles seem based on an implicit assumption which is very common in the scientific community. This is that our ordinary, normal, so-called rational SoC is the best one for surviving on this planet and understanding the universe, and that all altered SoC's are subnormal, irrational, or pathological to various degrees. This is a value judgment. One can find many examples of the products of a world supposedly run from a normal SoC that give reason to question this assumption, such as nuclear weapons or bacteriological warfare. It is also a common psychological ploy for each of us to support this assumption by defining our own ordinary SoC as normal and that of everyone whose behavior displeases us as abnormal or altered; this ploy, while ego-syntonic, is hardly scientific.

Cowan misrepresents me in saying a scientist "... could pass judgment on a theory developed in one state of consciousness (SoC 1) while he occupied another (SoC 2)," implying no need for SSS's. My original statement was that one could certainly comment on a theory developed in another SoC, but such comment said something about differences between SoC's, not about the validity of the SoC 1 theory from the point of view of SoC 1. If the proof of Fermat's last theorem (to use Cowan's example) is comprehensible to and agreed upon by all trained scientists who can enter SoC 1, even though they themselves cannot comprehend it while they are in SoC 2, that is not only a scientific advance, but an excellent illustration of the need for and potentialities of SSS's.

The hope expressed by Cowan and Sarles that there is some SoC in which all the observations and theorizing of other SoC's could be comprehended as special subsets is laudable: perhaps this is what the term enlightenment means. But this hope should not blind us to (i) the fact that we do not know of such a state now; (ii) the probability that our ordinary SoC is not such a

state; and (iii) the need to develop SSS's now as an approach to social problems such as drug use, as well as for inherent scientific interest, rather than avoiding this issue by assuming that some extension of ordinary SoC science will eliminate the need to deal directly with altered SoC's. The speculation that altered SoC's may be ultimately reducible to simply alterations in sensory processing does not fit current knowledge about them and can also function as a rationalization to avoid looking at the need to develop SSS's.

I share Booth's concern about goofy-berries. Many human beings act stupidly and suffer the consequences. Yet even a bird-brain like a pigeon can learn to discriminate seven different conditions and behave in an appropriate, rewarded fashion, so I have confidence that a large-brained creature like a scientist can learn to function in an SoC appropriate to the conditions he is in. Kekule used the altered SoC of dreaming to arrive at the inspiration for the structure of benzene (2), but he was intelligent enough not to go to sleep in a lion's den.

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Professional and Personal Equality

In her editorial "Misrepresented by 'Woman's Lib'" (10 Nov. 1972, p. 565), Susan Artandi attempts to speak for a large group of women who have hitherto been silent. Many of her points are true, but, as one of this large group, I wish that she had used the given forum to raise a point which is frequently ignored.

All women in the group of actively employed scientists do want equal pay and equal opportunity, as Artandi so clearly states. However, rather than understanding of their aspiration or sympathy to their cause, what these women would like is a just evaluation. This is particularly true for those who have spent a portion of their careers in part-time employment.

It seems self-evident that a woman who has been in academia for, as an example, 10 years on a half-time basis,

should be expected to have been no more productive than a full-time male counterpart has for 5 years. Furthermore, she should be expected to be 5 years older. Evaluating groups, be they study sections or committees, considering grants, travel allowances, society memberships, or even promotions should be aware that a considerably lower productivity (that is, number of publications) should be expected from 10 years of half-time than from 5 years of full-time research. This is due primarily to the regulations of most institutions and granting agencies, which forbid part-time professionals from being "principal investigators." While in many cases this need not mean a lack of independence in research for the part-time investigator, it effectively prevents her from supporting postdoctoral fellows or graduate students. Thus, her productivity is limited to her own efforts—perhaps with some technical assistance—while her full-time counterpart would be expected, after 5 years, to have benefited from the input of several graduate students or postdoctoral fellows.

Thus, what women who have combined "careers and private lives," as Artandi states it, seek is not the additional special considerations, understanding, and sympathy, as she concludes. Rather, they seek consideration and evaluation of their abilities, contributions, and potential, as well as an equitable opportunity for consideration of grants, support, and position, on which, after all, the utilization of their ability to do academic research depends.

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While I am in agreement with much of what Susan Artandi has to say about Women's Lib, "questions like who should wash the dishes" are not side issues. Such questions reflect directly on the attitudes of men. The general quiet assumption that, of course, women will continue to do all household tasks results in those women having less time and energy for either their work or their recreation. There is really no call for a woman to do two jobs when a better alternative exists: both the woman and her partner can do one and one-half jobs each.

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