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Letters

Drug defended, study panned

Karl Rickels' overgeneralization regarding progesterone and premenstrual syndrome ("PMS study pans popular prescription," SN: 7/21/90, p.37) is typical of psychiatrically managed studies. The population selection is not identified in his paper and is almost certainly biased to a university and psychiatric patient base. The form of progesterone is not identified and is almost certainly medroxyprogesterone rather than the actual hormone. The dose is almost certainly too low, and its timing is not empirically based on clinical lore but instead reflects the purely textbook assumption that every woman follows a clock set in the university. The composition of the delivery system—a suppository—is not described and is almost certainly not adjusted for progesterone's notorious inability to remain in solution. There is no report of any cofactor given with the suppositories, and most clinical reports indicate that treatment will not be

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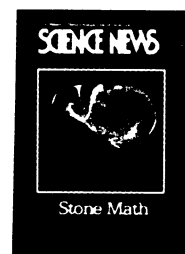
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Cover: Mathematician Helaman Ferguson creates mathematically inspired sculptures as a way of conveying the beauty of theorems. Carved out of onyx, the sculpture shown here represents an intriguing geometric shape known as a Klein bottle, accompanied by a topological feature called a cross-cap. (Photo © Helaman Ferguson)



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efficacious without multivitamins, magnesium and relatively large doses of pyridoxine.

Moreover, there is no indication of the kind of PMS studied. There are at least five varieties, each with its own biochemistry: PMS characterized by agitation, anger and anxiety; PMS with headache and food cravings; PMS with bloating and water retention; PMS with severe depression; and PMS with mixed symptoms.

The antiscience bias of psychiatry cannot be exaggerated. Note that Rickels concludes, on the basis of one misconceived and narrow study, that "emotional" factors are more important than physical ones.

For at least 10 years we have treated PMS using high doses of natural progesterone and cofactors appropriate to the type of PMS each woman suffers. These women do not need appetite suppressors and will be made worse by such a chemical assault. Some do need antidepressants.

In our practice, women keep returning for the so-called progesterone "placebos." If only

other disorders responded to placebos in such a dramatic manner as does PMS. . . .

George von Hilsheimer
Neuropsychologist
Associated Health Professionals
Maitland, Fla.

Keeping documents alive

Ivars Peterson notes in passing the difficulty of deciphering information stored by extinct computer systems ("Electronic Grapevine," SN: 8/11/90, p.90), but he perhaps is not aware that in the future we can expect this problem to be alleviated to a very considerable degree. What is needed is a standard, system-independent way to represent the structure of the information contained in documents that are stored electronically.

The International Standardization Organization adopted in 1986 a method for storing

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Scientific Reasoning: The Bayesian Approach

By Colin Howson and Peter Urbach

Open Court, 1989, 312 pages, 9" x 6",
paperback, \$16.95 ISBN 0-8126-9085-0

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This book is designed to explain to the uninitiated the controversial theories it discusses; it can serve as an introduction to the role of statistics and probability in science. Confronting the problems of induction and the confirmation of scientific theories, Howson and Urbach reject the "objectivist ideal" and the fashionable non-probabilistic standard of scientific worth, associated with such writers as Neyman and Pearson, Fisher, Popper, and Lakatos. Howson and Urbach contend that "scientific reasoning is reasoning in accordance with the calculus of probabilities," and (using nothing more advanced than elementary algebra) they give a concise introduction to this calculus. Howson and Urbach examine the way in which scientists actually appeal to probability arguments, and explain the "classical" approach to statistical inference, which they demonstrate to be full of flaws. They then present the Bayesian method, showing that it avoids the difficulties of the classical system. Finally, they reply to all the major criticisms leveled against the Bayesian method, especially the charge that it is "too subjective."
— from the publisher

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documents of all kinds in a fashion that will ensure its long-term usefulness: Standard Generalized Markup Language (SGML). (The word "document" is used here in the broadest possible sense. Any digitally represented information of any kind, including graphics, audio, video, still pictures, studio lighting instructions, computer programs, databases, MIDI data, etc., can form part or all of an SGML document.) SGML allows the presentation of any document, containing any kind of information, in a manner reflecting the document's logical structure (but not necessarily any particular style, means or medium of presentation). In SGML, every document has a "document-type definition" (DTD), which declares the grammatical structure (so to speak) of any document conforming to that DTD. The syntax of an SGML DTD bears some resemblance to BNF productions. The DTD (or the reference to some external standard DTD) is followed by the document itself, which is normally hierarchical and tree-like. Each component or "element" of the document is "marked up," i.e., surrounded by specially punctuated information that includes a "generic identifier" — the corresponding element name as given in the DTD.

Steven R. Newcomb
Vice Chairman, Center for Music Research
Florida State University
Tallahassee, Fla.

"Some tapes are so old that today's computer experts do not understand how they were programmed," Ivars Peterson writes.

Speaking as one of yesterday's computer

experts — one who was involved with NASA's data processing efforts — I must point out that there are many people still around who could salvage these data if someone would hire us to do it.

But it won't happen. In spite of being conversant with current as well as past technology, I have accumulated a whole file of application letters that never elicited an acknowledgment, much less an interview request. NASA (and others) would rather pay the youngsters dearly to learn about seven-track tapes and punched cards than hire one of us "old folks" who already know.

Emily Johnson
Westminster, Md.

Ivars Peterson mentions John McCarthy's advocacy of simplified electronic mail with "no complicated network addresses and no politics." I strongly agree with that.

The national effort to install a broad-bandwidth network for computer users in research and education should be widened beyond those groups to include the country's manufacturing, business and financial sectors. In fact, the national network should be as easy to use and no more exclusive than the telephone system. Fax is just a very expensive way of doing what might be done better by electronic mail, particularly electronic mail that can incorporate pictures and graphics; but fax survives because it is attached to a telephone network that is a 20th-century marvel. The next century, however, should see every sector of the economy possessing ready access to electronic mail and computational power. That will be the 21st-century marvel, and it will contribute mightily to American competitive-

ness in the world.

At the San Diego Supercomputer Center, we are working on the CASA testbed for the gigabit (billion bits per second) network mentioned by Peterson. We hope that local and national legislators and decision makers in government agencies will do their part to speed the day, by untangling the mass of regulations and knocking over the political barriers. The electronic network can be much more than a grapevine; it can be the country's informational circulatory system.

Sidney Karin
Director, San Diego Supercomputer Center
San Diego, Calif.

Multipurpose mounds

Archaeologist Robert S. Carr's hypothesis may partly explain the function of southern Florida's circular canals and earthen mounds ("Florida 'circles' may be ancient fisheries," SN: 7/7/90, p.6). In Bangladesh, canals adjacent to rural villages are used as fishing grounds. However, the canals (and/or ponds) are also the source of the fill material used to elevate village "mounds" above typical flood levels. In addition, the excavations are used for dry-season water supplies and transportation.

Christopher Shuman
State College, Pa.

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