

## The diagnostic deluge

Mental health professionals directing efforts to produce a new guide to mental disorders, set for release next year, find themselves trying to stem a tide of suggested diagnoses that threaten to add substantially to the 292 disorders already included in the current manual. In the last two years, 94 proposed new diagnostic categories have surfaced, report Harold A. Pincus, deputy director of the American Psychiatric Association in Washington, D.C., and his colleagues.

New categories should enter the guide, known as the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), only if existing research convincingly documents their usefulness in identifying and treating patients, Pincus and his coauthors contend in the January *AMERICAN JOURNAL OF PSYCHIATRY*. Some clinicians and researchers think that too many new and revamped diagnoses cluttered the last two editions of DSM, published in 1980 and 1987 (SN: 2/25/89, p.120). It usually proves more difficult to evict old diagnoses than to welcome new ones into the DSM fold, Pincus' group says.

Some diagnoses now applied to children — including identity disorder, overanxious disorder and avoidant disorder — probably will not make DSM's final cut, the authors say. In addition, scant evidence supports the inclusion of "sadistic personality disorder," they assert. Critics charge that this diagnosis, proposed several years ago, would offer a psychiatric excuse for rapists and spouse abusers.

In contrast, recent research makes likely the acceptance of "acute stress disorder," according to Pincus' group. Acute stress disorder — less severe than post-traumatic stress disorder — refers to temporary psychological symptoms following extreme distress or physical risk (SN: 5/25/91, p.333). Ongoing studies indicate that this new diagnosis aids in the treatment of disaster survivors, the authors contend.

## Practice what you preach

Preliminary data suggest that an enlightened focus on hypocrisy fosters condom use and AIDS awareness among sexually active young adults. AIDS education campaigns in schools might profit by holding discussions in which each student first tries to persuade others of the need for sexual safety precautions and then acknowledges his or her own past failures in that regard, asserts a team led by psychologist Elliot Aronson of the University of California, Santa Cruz.

Well-intended information about AIDS typically elicits fear from young adults, who then deny the threat rather than change their sexual behavior, Aronson's group argues in the December *AMERICAN JOURNAL OF PUBLIC HEALTH*. This denial also stems from the widespread belief that condoms wreck the romance and spontaneity of sex, they say.

The scientists recruited 40 female and 40 male sexually active college students. Half composed speeches advocating condom use, based on a fact sheet about AIDS, and delivered their talks in front of a television camera. An experimenter told them an AIDS-prevention program would use the tape. Researchers began the exercise by asking half of these 40 volunteers to describe recent situations in which they failed to use condoms, thereby creating a sense of hypocrisy.

The remaining students composed pro-condom speeches from the fact sheet but only rehearsed them silently. Again, half of this group first told of their recent failures to use condoms.

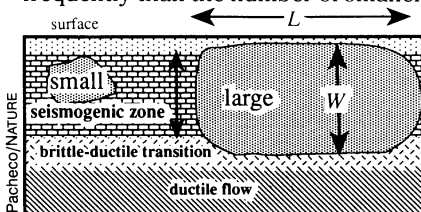
After the exercise, the 40 students who had revealed their hypocrisy — particularly those who gave a taped speech — reported more past failures to use condoms than the other 40 and a greater willingness to use them in the future. Among 39 participants contacted three months later, the 12 who taped a speech in the hypocrisy condition reported significantly more condom use since the experiment.

## Earthquakes: How big will they get?

When seismologists want to assess the threat of large earthquakes, they often use the number of small tremors as a guide. But a new analysis of past jolts suggests this practice overestimates the risk of big shocks.

Scientists have long thought that the size and frequency of earthquakes are linked together by a rule, which holds that magnitude 4 quakes occur in a given region roughly 10 times as often as magnitude 5 quakes and 1,000 times as often as magnitude 7 quakes. Using this relationship, seismologists assumed they could estimate the hazard of major earthquakes from the number of smaller quakes in a region.

Researchers at Columbia University's Lamont-Doherty Geological Observatory in Palisades, N.Y., decided to test this rule by analyzing a revised catalog of the earthquakes that have occurred around the world this century. In the Jan. 2 *NATURE*, Javier F. Pacheco, Christopher H. Scholz and Lynn R. Sykes report that larger quakes do not follow the patterns set by smaller ones. Shocks above magnitude 6 or so occur less frequently than the number of smaller tremors would suggest.



*The ductile zone restricts large quakes but not small ones.*

The researchers propose that this discrepancy stems from a difference in the way large and small tremors grow. Earthquakes occur only in the upper portion of the crust, where rock is brittle enough to fracture. Rock lying below that level is too hot and ductile. When a large earthquake starts, the fracture may spread horizontally for hundreds of kilometers, but the same crack can move only a few tens of kilometers downward before it hits the ductile zone. In weak earthquakes, however, the fault fracture remains small, so it can spread equally in the vertical and horizontal directions.

## Quake shakes nuclear-waste space

A moderate earthquake struck southeastern New Mexico on Jan. 2, centered about 60 kilometers from the Waste Isolation Pilot Plant (WIPP), the nation's first underground repository for storing nuclear waste. After examining the still-unopened site, investigators from the Department of Energy (DOE) concluded the quake did not damage the storage facility, which is carved out of a salt deposit 650 meters below ground. The quake measured 4.8 on the Richter scale and was centered near the town of Jal on the New Mexico-Texas border, according to the U.S. Geological Survey in Golden, Colo. Randy Keller, a seismologist at the University of Texas at El Paso, suggests that oil drilling in the region may have triggered the quake.

Quakes of this size and distance from WIPP pose no danger to the facility, according to Keller. The repository is built to withstand a magnitude 5.5 shock directly under the site, says Pat Sallani of the DOE in Carlsbad.

Engineers designed WIPP to hold radioactive waste generated during the production of nuclear weapons. Last October, after years of delays, DOE declared itself ready to send the first bins of trash to WIPP as part of a testing phase (SN: 10/19/91, p.245), but the state of New Mexico filed a suit in federal court and, in late November, received a temporary injunction blocking any shipment. New Mexico officials argue that existing federal laws and administrative orders do not permit DOE to bring any radioactive waste to WIPP. Congress is considering legislation that would impose safeguards and restrictions on waste emplacement during the testing phase.