

therapy, patients did better with therapy alone than with drugs alone. The last finding, she says, needs confirmation. In general, the most effective approaches were those in which both drugs and therapy were used. Like Parloff, Weissman thinks it would be a boon to have more standardized manuals of practice. Few schools of therapy do.

The most ambitious attempt to conduct a clinical trial of psychotherapy is just getting under way now at NIMH. It exists at present only as a proposal which must clear two peer review panels before it wins funding. Designed by the NIMH staff, it would cost about \$1 million and provide for research, at half a

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dozen centers, on two types of psychotherapy in treating depression on an outpatient basis. One type, interpersonal therapy, is the creation of Weissman and Gerald Klerman, head of the Alcohol, Drug Abuse, and Mental Health Administration. The other, cognitive therapy, was created by Aaron Beck at the University of Pennsylvania.

Although the designer of the test at NIMH was reluctant to discuss details, the project is clearly intended to be the largest and most carefully controlled trial of psychotherapy ever undertaken. The pilot phase alone will take 3 years. Its chief purpose will be to discover whether it is possible to conduct a standardized test of human behavior on such a scale.

Many psychologists are uneasy about the NIMH project, partly because they fear it will siphon off research money from other worthy experiments, and partly because the results of the test will have rather narrow use. It remains to be seen whether the peer groups will go along with the plan.

The record suggests that some forms of therapy can lay an undisputed claim to efficacy in treating mental illness. The evidence is strong, for example, that people suffering from nonpsychotic depression or moderate anxieties may be helped. But beyond generalizations of that kind, little has been demonstrated in a way that satisfies the demand for hard scientific proof of effectiveness.

—ELIOT MARSHALL

China Gets a Satellite Station

During Defense Secretary Harold Brown's recent visit to China, the Chinese Army Deputy Chief of Staff and the American entourage are reported to have joined at a banquet in some hearty toasts of "Down to earth, bottoms up." The reference was to a statement made earlier by the Chinese Vice-Premier that "China and the United States should do something in a down-to-earth way so as to defend world peace against Soviet hegemonism," such as its recent invasion of Afghanistan.

During the visit, the Defense Department announced that one of the first down-to-earth activities will be the sale to the Chinese of an American resources satellite receiving station, a facility that probably would not be sold to the Russians. Though it is being sold with safeguards against the diversion to military use of its computer and tape recording equipment, the station—as a piece of advanced technology with military potential—still represents a risk of sorts for the Americans. As such, the Defense Department's approval of the sale marks a significant liberalization of its policies toward technology trade with China (in direct contrast to the Administration's recent embargo on such trade with the Soviets).

Christopher Phillips, president of the National Council for U.S.-China trade, has indicated that although similar sales will not receive blanket approval in the future, "there will be increasing approvals on a selective basis of dual-purpose [military and civilian] technology." Already, he told *Science*, the Administration has supported sales to the Chinese of several items of potential military use, including seismic equipment for petroleum exploration that might be diverted to antisubmarine warfare; navigational equipment for a Boeing 707 that is superior to anything the Chinese had previously; and an infrared scanning system for land survey aircraft that could also prove valuable in military planes. Phillips is not a critic of these decisions (indeed, his job is to promote trade with the Chinese), and simply offers them as examples of a more liberal Administration attitude to-

ward the Soviet's southern neighbor.

The satellite receiving station, which will cost the Chinese about \$10 million, is equipped to receive direct transmissions from the LANDSAT 3 survey satellite now circling the globe, and from the LANDSAT D satellite to be launched within 2 years. Although the images taken by these satellites have a potential reconnaissance value (the LANDSAT D photographs objects as small as 75 feet in diameter), the program is run strictly for civilian use by the National Aeronautics and Space Administration. NASA will permit the station to receive transmission only when the satellite is directly over Chinese territory. And photographs from the satellites, whether of Chinese or other lands, must be made available to any country that requests them.

At present, the Chinese can purchase these photos from a data center in South Dakota, but the turnaround time is occasionally as long as 6 months; the chief advantage of owning a station is to get instant analysis. The photos are useful for estimating crop production and exploring for oil, gas, and minerals.

A Defense official notes that even though the station's computer might be useful in high-speed defense calculations, some safeguards—such as visitation rights—will be extracted in a detailed agreement to be negotiated by NASA later this month. The Chinese are said to be tough negotiators on such assurances, which is one reason the Defense Department has been less generous with approval in the past.

Nader Assails ETS

The Educational Testing Service (ETS) of Princeton, New Jersey, has come under renewed fire from consumer advocate Ralph Nader for making unsubstantiated claims that its standardized college-level exams measure aptitude and predict success. On 14 January, Nader released a 550-page report on ETS, which contains some of the same accusations made before by his group and others (*Science*, 14 September 1979). Flanking him at a press conference were representatives of the Parent-Teachers Association, the National

Association for the Advancement of Colored People, the Association of Black Psychologists, a Hispanic group, and several academics.

Each criticized ETS, but for mostly the same faults. Its major tests, such as the Scholastic Aptitude Test, the Law School and Graduate Management Admission tests, and the Graduate Record Examination, were said to be flawed by cultural bias, inadequate test construction and validity, and scoring errors; ETS itself was said to be flawed by its size, or rather its dominance of the testing industry, and also by its unresponsiveness to criticism and student complaints. The ETS tests, said Nader with typical flourish, "continue to unfairly shape the plans of millions of people, regulate their hopes, and shatter their self-confidence."

ETS President William Turnbull, who flew to Washington to rebut the report on the same day, termed it "an anti-climax after a five-year build-up. It seems mainly a collection of well-published material about testing, much of it published by ETS. Much of the material is dated . . . and some of it is just wrong."

ETS takes particular issue with the contention in the report that the major ETS tests are barely predictive of first-year academic performance, the major criterion by which such tests are measured. The author of the report, 24-year-old Columbia undergraduate Allen Nairn, concluded from published studies on the tests' validity that random predictions are just as reliable 90 percent of the time. Winton Manning, a vice president at ETS, says the validity is slightly higher, and that, in any event, it must be placed in the context of overall predictive difficulty and of practical use.

This rebuttal was challenged, however, by two Harvard Medical School faculty members who appeared on the podium with Nader. Douglas Porter and Warner Slack said their own research, soon to be published in the *Harvard Educational Review*, revealed similarly low correlations between test scores and college grades. They, and Nader, also said the tests do not predict grades in later years, the likelihood of eventual graduation, or eventual success in one's chosen profession. ETS admits as much, pointing out that such claims were never made.

The study, with attendant charges and countercharges, perhaps serves best to highlight the difficulty of predicting eventual performance at all. ETS and its supporters in the testing community believe the standardized tests offer enough improvement over older, less objective methods in order to justify their continued use. Nader, along with such academics as Leon J. Kamin, former chairman of the Princeton psychology department, and Banesh Hoffman, a mathematician from Queens College, believes the tests to be frauds perpetrated on a largely captive public.

But his sympathizers' real grievances are revealed several times in transparent remarks. For example, the report notes that "the ETS legal selection [LSAT] system does little to encourage the admission of potential advocates for working class and minority people. It is, however, congenial to the philosophy and priorities of the corporate bar." Nader also acknowledged he thought that better measures of potential success might replace traditional testing, measures such as a look at "extracurricular activities and community organizing."

The Nader-backed bill on standardized testing, which recently took effect in New York State, is due to be considered soon in at least 9 other states. ETS, in an effort to eclipse these moves, recently announced its willingness to distribute more sample tests and more information about its tests, to both students and statisticians. It also proposes to get independent analysis of potential cultural bias. Whether these measures go far enough will become evident soon in the legislatures.

Women Gain Parity in Smoking-Related Ailments

"Cigarette smoking, an early sign of woman's social emancipation, is now a major threat to her personal health and her ability to bear healthy children." So states Surgeon General Julius Richmond, in releasing a study this month that says lung cancer due to smoking will soon be the leading cause of disease-related death among women.

The study, latest in a series of an-

nual reports to Congress on the health effects of smoking, notes for the first time that the death rate from lung cancer among women has tripled since the 1960's, and will surpass the rate of death from breast cancer by 1983. "An epidemic of lung cancer among women has now begun," Richmond said.

The cancer rate is rising now because women who entered the work force during World War II began smoking in greater numbers, and the latency period for cancers induced then has now ended. The report notes that, even today, there is a high incidence of smoking among women in professional occupations (the reverse is true for men), and that women are "more likely than men to smoke in order to reduce stress" such as that induced on the job.

The result is an unpleasant twist in the battle for equality. Women who smoke are now vulnerable to coronary heart disease and peptic ulcers, two smoking-related ailments more common among men. They also have special risks, because pregnant women who smoke experience more spontaneous abortions, bleeding, and ruptures of the amniotic membrane. Smoking during pregnancy has been firmly linked to lower birth weights, and tentatively linked with sudden infant death syndrome. Children of parents who smoke have more respiratory infections and more hospitalizations during the first year of life. As a result, Richmond said, the Health and Welfare Department is considering recommendation of a specific package warning label against smoking during pregnancy.

The report acknowledges that the incidence of smoking among both men and women is declining, but says the decline is slower among women. It also calls into question the predominant means of reducing one's risk, short of quitting: a switch to lower tar and nicotine cigarettes. "The evidence is mounting that individuals who switch to cigarettes with lowered 'tar' and nicotine inhale more deeply, smoke a greater proportion of their cigarettes, and in some cases smoke more cigarettes," possibly to maintain blood nicotine levels, the report says. Though the number of smokers is down, business is still brisk, because the average number of cigarettes that each smoker purchases is going up.

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