

for disagreement with them is that everybody in the study was defined as an alcoholic." The authorities—such as the NIAAA, the National Council on Alcoholism, and the American Psychiatric Association—all concur that alcoholism, as opposed to alcohol abuse, is a physical addiction marked by chronicity, increased tolerance, and withdrawal symptoms. The Rand report does not define what an alcoholic is, and, says Archer, some of the subjects could have been young men who modified their alcohol consumption as they outgrew the heaviest drinking age group, which is said to be between 18 and 25.

To those who subscribe to the conventional notion of alcoholism—which is that the only cure is abstinence—a hundred Rand studies wouldn't change their minds. Any "alcoholic" who returns to controlled drinking is, by definition, not an alcoholic. Archer says the Rand study can be compared with a study of diabetics which included people with pre-diabetic or borderline conditions. "If you said they were all the same you might well come up with the conclusion that some diabetics don't need insulin."

The principal Rand author, sociologist J. Michael Polich, says the difference with the NIAAA is a quibble over terminology which doesn't detract from the report's findings. He says all but 8 percent of the original subject population exhibited dependency symptoms, and their elimination would not have changed the outcome. He says "we are not at odds over what the data show," which is that "there is a subgroup of people admitted for treatment of alcoholism for whom the prognosis is better with controlled drinking than with abstinence."

Polich says "the existence of this group calls into question the whole theoretical basis of alcoholism treatment as currently conducted." Since some people are less likely to relapse into alcoholic drinking if they do not have to abstain altogether, there are some instances in which "insistence on a goal of abstinence can be harmful."

Despite the differences in interpretation, Archer says the NIAAA likes the study. In his view, its main contribution is an affirmation that alcoholics are better able to stay on the wagon if they have some kind of community support system. (The researchers found the treatment histories of alcoholics too erratic and varied to evaluate but they concluded that treatment is better than no treatment.) Archer says the report also helps "substantiate the value of AA [Al-

coholics Anonymous]" and could bolster efforts to establish closer ties between treatment centers and AA. This, he acknowledged, may sound like an obvious thing to do, but not everybody thinks AA is great. Behavioral psychologists, for example, who contend that all behavior, including alcoholic behavior, is learned, have an aversion to the AA philosophy which implicitly relieves an alcoholic of some responsibility for his condition by flatly insisting that alcoholism is a "disease" and accepting anyone's self-definition as an "alcoholic."

The Rand study is probably the most complete picture yet produced of the "natural history" of problem drinkers who have contacted treatment facilities. As such, it provides impressive confirmation of the chronicity and relative intractability of alcoholism. Over the entire 4-year period, 84 percent of the subjects experienced significant alcohol-related problems. So the likelihood is that many of the 46 percent judged problem-free at the time of the study could relapse into alcoholic behavior. So difficult is it to alter the alcoholic condition that the authors conclude "it is the subject's initial characteristics rather than the treatment he receives that exercise the greatest influence on the course of alcoholism."

One noteworthy finding by the Rand group was that even among the subjects who managed long-term abstinence or control of their drinking, other indicators of well-being did not significantly improve. That is, there was still a high rate of unemployment, failure to establish enduring marriage or love relationships, anxiety, and depression. Says the report, "alcohol consumption is only one factor in a large number of behavioral problems that typically manifest themselves in alcoholism," which may mean that for most alcoholics, kicking the bottle is only the beginning.

Although the controversy over controlled drinking versus abstinence is still very much alive, Polich believes more people are beginning to question the conventional belief that "alcoholism is a monolith and there is only one right treatment." After the 1976 report "some people said we should not even discuss the idea because it will encourage people to go back to drinking." Now the reaction to the idea of controlled drinking is more muted. Besides, relates Polich, some Boston University researchers did a survey of local alcoholics after the 1976 report, and not one of them blamed the Rand report for his return to the bottle.—CONSTANCE HOLDEN

Citizens Update

The new political party for which ecologist Barry Commoner is the most visible spokesman, and presumptive front-running presidential candidate, is alive and kicking. The Citizens Party was launched last August as a rallying point for those who feel the Republicans and Democrats have conspicuously failed to address issues related to corporate power, inflation, and energy (that is, conservation and development of renewable sources). Among prominent figures in the movement are Georgia politician Julian Bond, renegade Steelworkers Union leader Ed Sadlowski, and writer Studs Terkel.

Party machinery is now grinding into gear. Headquarters have been established in downtown Washington, run by Bert DeLeeuw, who is a former field coordinator for Fred Harris's 1976 presidential campaign and founder of something called the Movement for Economic Justice. DeLeeuw says the party now has several thousand members, who have contributed \$18 apiece, and it is hoped they will number 10,000 by the time the party holds its convention in Cleveland next April. The party has branches in 32 states and is now working on the petitions that are necessary to get it listed on the presidential ballot in all 50 states. The entrance of Senator Edward Kennedy (D-Mass.) into the race has probably damped recruitment efforts to some extent, but after the Democratic nominating convention, says DeLeeuw optimistically, "we'll be there."

Decision on Aspartame Due This Year

Next summer may see government approval of a new artificial sweetener, Aspartame, which has been patiently waiting in the wings for 6 years to take up the banner from the fallen cyclamate and disgraced saccharin.

Aspartame's manufacturer, G. D. Searle & Co., has been trying to get the product on the market since 1974, when it was briefly approved by the

Food and Drug Administration. The approval was withdrawn the following year in the face of challenges by John W. Olney, professor of psychiatry and neuropathology at the Washington University Medical School in St. Louis, and attorney James Turner. Since then, Searle has gone through a lengthy process of getting its Aspartame studies validated by independent pathologists. The FDA finally convened a Public Board of Inquiry, a new review procedure involving a panel of three scientists, who spent 3 days listening to Olney, Turner, and Searle representatives in late January.

Olney, who may be remembered for his discovery that massive doses of monosodium glutamate (MSG) cause brain lesions in young animals, believes that Aspartame, a combination of two naturally occurring amino acids, has the potential for causing damage to the nervous systems of children. Olney's objections to Aspartame are threefold. First, because Aspartame contains the amino acid phenylalanine, he claims it will add to the hazards faced by children born with phenylketonuria, an inherited metabolic disorder. Because phenylalanine contributes to mental retardation in PKU children, doctors put them on a phenylalanine-free diet, at least for the first several years of life. Second, Olney says that even modest amounts of aspartate, the other amino acid in Aspartame, in combination with MSG can cause damage to the hypothalamus. Finally, he cites a rat-feeding study Searle conducted in which 4 percent of the experimental animals and none of the controls got brain tumors.

Searle has countered that since phenylalanine is in so many foods, its presence in Aspartame is hardly cause for concern; that a damaging synergistic action with MSG is only "hypothetical" and has not been produced in tests with primates; and that the hypothalamic lesions observed by Olney are a "pharmacopathologic curiosity" with no relation to Aspartame. Searle officials discount the rat study cited by Olney and emphasizes the results of two other rat-feeding studies, in which tumor rates in the experimental animals and the controls were identical. Olney is inclined to discount the two other studies, particularly one

in which an FDA inspection team found numerous irregularities, including lack of homogeneity in the feeding mixture.

Although the Bureau of Foods has already indicated that it favors approval of Aspartame, Olney says he is not the only scientist who has misgivings. Floyd Bloom of the Salk Institute, for one, says he believes the evidence produced by Olney demonstrates that even moderate amounts of aspartate can be neurotoxic.

Members of the scientific panel, whose names were submitted, respectively, by FDA, Olney, and Searle, are Walle Nauta, neuroanatomist from the Massachusetts Institute of Technology; Peter Lampert, neuropathologist from the University of California at La Jolla; and Vernon Young, MIT nutritional biochemist. But for all the scientific talent lined up to look at Aspartame, the final verdict in view of the equivocal evidence is likely to be a result of subjective judgments.

Searle has a lot of money riding on the panel's decision, particularly if approval of the product persuades Congress that it will no longer be necessary to keep imposing moratoriums on the FDA's ban of saccharin. The market could reach several hundred million dollars a year, according to one outside analyst, if Aspartame becomes available as a dry sweetener, breakfast cereal coating, and sweetener for chewing gum, desserts, and toppings. If it is cleared for use in soft drinks as well, the market could top \$1 billion in a few years.

Deutch to Leave DOE

John Deutch, who early in the Carter Administration was brought in to head the Department of Energy's new Office of Energy Research and who now serves as under secretary of energy, plans to leave his post and return to Massachusetts Institute of Technology within the next month or so.

In his letter of resignation, he cited the need to return to his family, which has remained in Lexington, Massachusetts. However, his departure is earlier than originally intended. At his confirmation hearings in mid-1977 he

assured senators that he would stay as long as the President wished him to; but the method of operation instituted by energy secretary Charles Duncan, who succeeded James Schlesinger in the job last August, has reportedly made it difficult for him to exercise his authority. Duncan has surrounded himself with 14 special assistants—most of them imported from the Department of Defense, where he worked previously—who, according to one source, keep making



Photo by E. Poggenpohl

John Deutch

"end runs" around the line of command. Deutch is said to have obtained repeated promises from Duncan that the situation would be straightened out, but it was not. So, he felt he had no choice but to leave, even though Duncan urged him not to. Deutch himself refuses to make any criticisms publicly and insists that he and Duncan are good friends.

Asked about DOE's accomplishments during his stint there, Deutch told *Science* he is "proud" of the "sound policy" on nuclear power the DOE has adopted and very happy with the government's move toward synthetic fuels. He is disappointed that more has not been accomplished in the areas of coal utilization, conservation technologies, and radioactive waste management. Deutch believes it is time to move ahead with establishment of a nuclear waste facility in New Mexico (the Waste Isolation Pilot Plant), but the Administration has decided, for all intents and purposes, to cancel it.

Deutch's reception on Capitol Hill has been very favorable, according to an aide to Senator Pete V. Domenici (R-N.M.). The aide says they appreciated his technical expertise and willingness to explain technical things to them.

Constance Holden