

Last week was a bad week for the narcs

Scientific reports, political switches and public opinion all seem to point to an eventual decriminalization of marijuana

Imagine the United States as a large Monopoly board. The name of the game, stamped across the middle of the country, has been changed to read, "Marijuana, a Game for Narcs and Freaks." And the rules have been changed. For instance, Park Place is now Acapulco Gold and Go to Jail means for 30 years—especially if you are busted in Texas.

The game has been going on since the Pure Food and Drug Act of 1906 required that the amount of cannabis in any drug or food sold to the public be clearly marked on the label. Then in the early 1930's the law-and-order narcs created a marijuana scare and pot became known as "Killer Drug Marijuana." Public opinion forced the enactment of a Federal anti-marijuana law, making the drug illegal.

Just when the game seemed to be won by the narcs, the youth revolution of the 1960's caught a whiff of the weed and made it a symbol of anti-establishment protest. The game was in full swing again. The youth culture enlisted the aid of a new breed of social-minded scientist and strange things began to happen. Research indicated that perhaps marijuana was not the mind-rotting, youth-destroying villain of the 1930's. Freaks of all ages began to clamor for legalization of their pet drug, backed up by evidence that it was no worse than alcohol or tobacco. The narcs answered with stricter law enforcement and research showing that marijuana leads to the hard stuff. The researchers canceled each other out and the game came to a standstill.

But the stalemate was broken last week. The freaks got a few good rolls of the dice. The unofficial scorekeeper, the Gallup Poll, reported that the use of marijuana was again on the rise. In 1967 only 5 percent of all college students said they had tried marijuana. In 1969 the figure went up to 22 percent, and in 1971 it went up to 51 percent.

The survey results are based on personal interviews conducted in November and December with 1,063 college students on 57 campuses.

Then the narcs lost one of their best players. John H. Finlator, considered to be a strict law-enforcement man, retired as deputy director of the Justice Department's Bureau of Narcotics and Dangerous Drugs. He announced last week that he had joined the board of the National Organization for the Reform of Marijuana Laws. Doing a complete about-face, Finlator called for an immediate end to the jailing of persons who smoke marijuana. "I have reached this decision after much thought and considerable study," he said. It is "just wrong as hell" to jail young people for smoking pot. He said drug-abuse control should concentrate on hard drugs. "We have ruined the careers and lives of hundreds of thousands of otherwise law-abiding citizens by needlessly subjecting them to the ramifications of being defined criminal. Both liquor and tobacco have far more harmful effects," he said.

To make matters worse for the narcs, one of their most skillful and scientific players, the Department of Health, Education and Welfare, announced that it would no longer play on the team of the strict law enforcers. HEW's second annual Report on Marijuana and Health was sent to Congress last week. Prepared by the National Institute of Mental Health and based on more than 100 scientific studies, the report concludes that there are probably no unhealthy effects from moderate use of the drug by normal adults.

The report finds that marijuana use is as high as 90 percent among some young-adult groups. This high use is clearly associated with the use of other drugs but, "there is no evidence that the drug itself causes such use," and the report goes on, "marijuana does not appear to have a causal role

in the commission of crimes."

Animal research, conducted for the report, has clearly established that the margin of safety with cannabis and with a synthetic version of its psychoactive ingredient, THC (delta-9-tetrahydrocannabinol), is high. In animals, and in humans, tolerance to certain effects of the drug develops. But there is also a reverse-tolerance developed by frequent users. With practice, smaller amounts of the drug are needed to get high—unlike heroin.

The report does confirm earlier observations that acute marijuana intoxication causes deterioration in intellectual and psychomotor performance that is heavily related to dosage as well as dependent on the complexity of the test. Automobile driving is an important example. The report finds "increased reason for believing a motorist's performance is significantly impaired by marijuana intoxication."

The report does not find sufficient evidence to support theories of genetic damage or birth defects. Death from an overdose of cannabis is extremely rare, the report says, and difficult to confirm. Preliminary findings from studies of chronic hashish users in Greece and Jamaica show a relative absence of pathology. Psychiatric illness from marijuana is not confirmed. The report adds, "almost certainly many of those attracted to drug use are individuals who have personality problems. In some cases the drug is sought with a conscious hope that it will be psychotherapeutic."

The final chapters of the report focus on the possible therapeutic uses of the drug and indicate that research along these lines is called for. Results of limited studies of the treatment of depression, alcoholism and epilepsy are reported to be generally favorable. Other research has demonstrated that cannabis preparations have an antibacterial action in the treatment of certain skin diseases, otitis (inflamma-

tion of the ear) and sinusitis. There is a possibility of development of an antihypertension agent, and the effect of marijuana in reducing intraocular pressure may have significance in the treatment of glaucoma. Releasing the report in Washington, NIMH director Bertram S. Brown said that "the current state of scientific and medical evidence" does not justify making the use of marijuana legal. "But," he added, "I have personally felt for a long time that the penalties for the use and possession of marijuana are much too severe and much out of keeping with knowledge about its harmfulness. I have been strongly in favor of decriminalization, but not for the total removal of penalties." Penalties similar to parking tickets might be used.

With the Government's top psychiatrist now calling for an easing of the marijuana laws, the narcs really seemed to be losing the game. But the game is not over. In fact, the end is not in sight. At least two more heavy rollers have a chance to take their best shot.

The first is the President's Commission on Marijuana and Drug Abuse. This commission was expected by many freaks to be a rubber stamp for its initiator, but it has already proved itself to be something more (SN: 1/29/72, p. 72). The commission's recommendations to Congress and the President are due on March 22, but the New York Times reported this week that the recommendation will be for the legal private use of marijuana.

The next move now belongs to President Nixon. But he may be shooting with loaded dice. He has already publicly stated that he will not listen to any recommendation of decriminalization (SN: 5/22/71, p. 349). So, when he takes his turn, the dice will probably still say, "Go to Jail." □

Pesticide committees

Part of the problem with scientific advisory groups to Federal agencies is the lack of public participation in their deliberations (SN: 7/31/71, p. 82). Whether or not the exclusion of the public results in biased decisions, a certain degree of suspicion and distrust are inevitable. New rules proposed by the Environmental Protection Agency would require pesticide advisory committees to solicit data from public interest groups. They would also allow any member of the public to submit comments on advisory committee reports before EPA makes final rulings on the recommendations of the reports. Other features of the proposed rules include allowing the public interest groups to use Federal administrative machinery to challenge EPA decisions, and the televising of pesticide hearings. □

Perspectives on cancer: Viral link elusive

If anything came out of the Gustav Stern Symposium on Perspectives in Virology, held in New York City last week, it is that scientists are far from understanding what causes human cancer. Linking a possible viral cause with a possible chemical cause seems to become more difficult instead of less so, as investigators delve deeper into the depths of cellular and molecular action. The symposium also brought home the fact that a vaccine for human cancer is not imminent—not because it is not technically feasible, but rather because Federal regulations prohibit the culturing of some "Andromeda Strain." On the whole, it was easy to come away with the gnawing feeling that cancer virus research may have been overpublicized in the past year.

To start with, cancer virologists are far from agreeing on when they might be able to say for sure that a virus is involved in human cancer, as they can now say for sure about some animal cancers. George Todaro of the National Cancer Institute says proof could be obtained within six months, but Maurice R. Hilleman of the Merck Institute for Therapeutic Research, West Point, Pa., believes it might take several years. True, as Elizabeth Priori of the M.D. Anderson Hospital in Houston points out, four of the five RNA viruses that are candidates for human tumor induction have been found within the past year. She says that evidence proving her candidate virus is definitely not an animal virus (that is, a contaminant) is shaping up nicely (SN: 9/18/71, p. 185). F. Kingsley Sanders of the Sloan-Kettering Institute in New York City cautions, though, that there are some four DNA virus candidates for causing human cancer as well. Some of these candidates have been around longer than a year. Although one of the DNA virus candidates was tracked down by Sanders, he admits that none of the current candidate viruses, RNA or DNA, may turn out to be implicated in human cancer. Todaro seconds the possibility.

And even if a virus, or viruses, were proved to be involved in human cancer, the question remains of how they might fit in with carcinogens. Carcinogens are those chemicals used to induce tumors in laboratory animals and believed, at least by carcinogen researchers, to induce tumors in humans as well. Several scientists report some interesting laboratory interaction among viruses, chemicals and cancer cells. Sarah E. Stewart of Georgetown University was the first to use a chemical to coax a virus out of a line of cancer cells, after two years work. Wallace P. Rowe of the National Institute of Allergy and Infectious Di-

seases treated mice cells with chemicals until the cells began to produce a cancer virus. Yet, as even the most enthusiastic cancer virologist will admit, chemical tricks performed on cells in the laboratory do not necessarily correspond to chemical-virus action in humans.

Fortunately some cancer virologists and carcinogen researchers are putting their heads together to find a real-life link between cancer viruses and carcinogens. Todaro thinks that carcinogens might transform a latent cancer virus into an active one. Thus carcinogens mesh nicely with his increasingly accepted "oncogene theory," which suggests all of us have latent virus material that could, under the right conditions, turn normal cells into cancer cells. Not all carcinogen researchers are as enthusiastic about Todaro's explanation as he is, though. When asked how cancer viruses and carcinogens might interact to cause cancer in humans, none of the other symposium scientists ventured an explanation.

As might be expected, cancer virologists are not happy about regulations that stand in the way of making a human cancer virus. Yet more than a few of them are not sure they would change the regulations. Apparently the threat Michael Crichton writes about in his novel, *The Andromeda Strain*—the chance of a virus leaking out of the laboratory and infecting the population—is always a possibility. Some safety mistakes were made in the creation of a polio virus vaccine, Todaro recalls. One possible way to circumvent cancer virus culturing dangers, of course, would be to find a nonvirulent human virus that would counter a human cancer virus. The only effective cancer vaccine to date keeps chickens from getting Marek's disease. It is made of a nonvirulent turkey virus. But even with this possible alternate approach to a cancer vaccine, Hilleman cautions: "The role of viruses in cancer and the prevention of cancer by viral vaccines is clearly an immensely complex situation which is only in its earliest stages of exploration."

Even among cancer virologists, it seems, there are now quiet rumblings that the cancer conquest is not quite falling into place as the President, Congress, the public and even scientists themselves had hoped it might. In a private conversation, one cancer virologist told SCIENCE NEWS he believes cancer virus research deserves the money, but not the publicity it now enjoys. Another young cancer virologist says he thinks cancer virus research is both overpublicized and overfunded—and this even though his income is partially derived from such funds. As might be expected, he wishes to remain anonymous. □