



CONTINUUM

CHEMICAL ECSTASIES

In Homer's *Odyssey*, Helen of Troy filled wine cups with nepenthe, a potion that banished pain and sorrow. Similar to hashish and opium, the mythical nepenthe represented an ideal drug, perfectly safe and enjoyable. Seeking to remedy their ills and misfortunes, the ancient Greeks replaced human sacrifice, in which the victims were called *pharmakoi*, with better living through pharmacology. Many of their herbs and drugs are found in today's medicines, but the ideal nepenthe for both therapeutic and social use has remained an elusive yet fetching possibility.

From Homer to Aldous Huxley, dreams of a brave new world of chemical ecstasies have haunted our literature and inspired our research. Huxley's fictional mind-lulling "soma" is now the trade name of a modern muscle relaxant; a few puffs of cocaine smoke can magically transform Dr. Jekyll into Mr. Hyde; and California's Moksha Laboratories, named after the psychedelic in Huxley's utopian *Island*, is searching worldwide for botanical nepenthes.

The quest has been guided by the dreams and nightmares of science-fiction elixirs. Author Robert Silverberg reviewed these substances for the National Institute on Drug Abuse and noted that future drugs, like his own fictional potions—"tingle" and "mindblot"—will be used as euphorics, panaceas, mind expanders, and controllers. The stories in the science-fiction anthology *Strange Ecstasies* suggest that the drugs will work in both medical and nonmedical settings. Researchers from academia, the Rand Corporation, and the Hudson Institute have endorsed this vision, predicting the arrival of an ideal potion by the year 2000.

This utopian substance would balance optimal positive effects, such as therapeutic efficacy or pleasure, with minimal or non-existent toxic consequences. But the quest for such a substance is difficult. The pharmaceutical industry spends more than \$3 billion a year to find therapeutic "magic bullets" with acceptable combinations of advantages and risks. Research with recreational drugs may encounter bullets of a different kind.

Los Angeles biochemist Ronald Burkholder, for instance, was trying to synthesize a "peace pill" by twisting a ring of cyclohexane molecules, when he discovered PHP, an analog of the devilish PCP. After swallowing the pill, he stripped, climbed a pole, and was shot six times, fatally, by a policeman. Biochemist Alexander Shulgin has fashioned drugs for enhancing sensations, reliving childhood fantasies, unblocking creativity, or taking a weekend

trip. The trips, however, are not always pleasant or controllable.

Nepenthe is still not here. Or is it?

Nepenthe is now the name of a restaurant nestled between the redwoods and the Pacific coast of northern California. Just down the road, at the Esalen Institute, investigators recently spent a week toasting and tasting the newest chemical contender for Homer's cup: MDMA. Synthesized from nutmeg in 1914, the year opium and cocaine were banned in the United States, MDMA was ignored until Shulgin discovered its psychedelic effects in 1978 and users dubbed it Ecstasy (XTC). Since then 30,000 doses have been distributed each month.

One dealer gives written "flight instructions" promising that while XTC is "kissing in your veins" during the hour-long voyage, you'll experience happiness, security, peace, and freedom. That should end all wars, but secret U.S. Army tests in the Fifties found that it also ended the lives of experimental animals. Low doses reduce toxicity but leave subjects with clenched jaws, wiggly eyes, and high blood pressure. Users are told this is a "de-stressing" process and that the nausea and vomiting are all in their minds.

XTC can call up hidden emotions and thoughts. Shulgin describes this as disinhibition, whereby empathy and mutual trust are enhanced. Psychiatrists report XTC improves communication with patients, but these claims remain unproved. Despite users' occasional anxiety, depression, and hallucinatory confusion, therapists insist there is benefit without abuse. Commuters in Chicago may also have benefited when a psychiatrist who had taken XTC was found directing rush-hour traffic.

The Drug Enforcement Administration recently banned XTC with an emergency one-year controlled substance classification. Even so, evangelical pushers still talk of turning on the Pentagon, while enchanted psychiatrists lobby against bans, proof that the dream of nepenthe is still alive. The dream has been disturbed by the night terror of MDMA's toxicity, reminding us that we are like children charmed by Circe, the magical pharmacologist who lulled travelers with promises of ecstasy. To find our dream, we must first outwit Circe and her sorcery that changed men into beasts and imprisoned them forever.—RONALD K. SIEGEL

Ronald K. Siegel is a psychopharmacologist at UCLA's Neuropsychiatric Institute and past president of Moksha Laboratories.

Dear Omni Forum,

August 1, 1985

I particularly enjoyed the mythology and science-fiction stories in Ron Seigel's Chemical Ecstasy article, August 1985. If only the attempt at science hadn't yielded simply more science fiction, the piece would have been much more interesting and useful. As it reads, it is a biased, misleading collection of innuendos that does both the magazine and the readers a disservice.

For instance, we hear that "secret U.S. Army tests in the Fifties found that it (MDMA) also ended the lives of experimental animals". We are supposed to draw the conclusion that the simple fact of the deaths of the animals was unexpected, and is particularly significant. We are not told that the explicit purpose of the 1953 study was to see how much of MDMA and seven other compounds that it took to kill 50% of the test animals in five separate species. The experimental procedure was to daily inject increasing amounts of the compounds, until 50% of each group of animals died.

Most importantly, we are not told at all of the directly relevant May, 1985 study by Intox Labs of Redfield Arkansas that showed the Lethal Dose in 50% of the rats orally administered MDMA to be over 300mg./kg. If you could reliably draw exact extrapolation estimates across species (which you can't), the LD50 would equal over thirteen and a half grams per 100 pounds of human body weight. Given orally, the therapeutic dose usually ranges between 60-200 mg. per session, well under 1/65 of the LD50.

We are told the use of low doses reduces toxicity "but leave subjects with clenched jaw, wiggly eyes, and high blood pressure...nausea and vomiting..." implying permanent damage. We are not told about the October 1984 human toxicity study sponsored by Earth Metabolic Foundation which found that in those people that experience jaw tension, nystagmus, nausea or vomiting, these not necessarily discomforting physical effects almost always fade away after a few hours. Remarkably, after 24 hours, most people in the study had slightly lower blood pressure than before they experienced MDMA. Absolutely no abnormalities showed up in the blood chemistry or urine analysis or in the neurological study.

We are told that "Despite users occasional anxiety, depression and hallucinatory confusion, therapists insist there is benefit without abuse." We are not told that when taken in a therapeutic setting, there has not been one single case of a therapeutically damaging MDMA experience, and there have been many thousands of significantly healing sessions. Nor are we told that the therapists have taken the official public position in the DEA hearings that MDMA does have an abuse potential, which is low in comparison to other drugs. Finally, MDMA is not a hallucinogen.

We read misinformation to the effect that "Shulgin discovered its effects in 1978...since then 30,000 doses have been distributed each month." Actually, Dr. Shulgin was told about MDMA by another chemist, the DEA first knew about MDMA in 1970 when it got its first sample, and therapists began using MDMA before 1975. Up until 1983, only about 60,000 doses were distributed each year. Consumption steadily increased to hundreds of thousands of doses per month by Spring of 1985. Estimates of about 1.5 million total administrations of MDMA seem reasonable. The National Institute of Drug Abuse sponsored "Drug Abuse Warning Network" first detected MDMA in 1977, and there have been a miniscule total of only 8 mentions of MDMA since then, all of them before 1982, making MDMA seem safer than aspirin or penicillin.

Finally, we are told that "the dream has been disturbed by the night terror of MDMA's toxicity." Presumably, this refers to the DEA claims that MDMA causes severe brain damage. There have been only two completed studies directly investigating the brain neurotoxicity of MDMA, both conducted by Intox Labs with the first study completed in June and the second study in July. The first study showed that one time doses of up to 400mg/kg of MDMA given orally to 7 different rats caused no permanent observable functional damage, and upon dissection no observable brain damage whatsoever. The second study showed that a daily oral administration of MDMA in 40 rats, beginning with 25mg/kg per day and ending 13 days later with 300 mg/kg per day, produced no observable functional or brain damage, even after the brain tissue was examined using four separate techniques.

The rat study that was the sole piece of evidence used by the DEA to infer severe brain damage in humans with therapeutic doses of oral MDMA was not even with MDMA, but with injected MDA, at about ten times the therapeutic MDMA dose. Dr. Seiden, one of the authors of that study, appeared to testify in Kansas City on July 10 during the official DEA hearings. Even he stated that at this time there was sufficient scientific justification to proceed slowly into initial human studies with MDMA.

As far as your apocryphal "evangelical pushers of turning on the Pentagon", the Pentagon is already turned on, and addicted to that most dangerous substance, nuclear weapons. And those "enchanted psychiatrists (who) lobby against bans" are simply asking for permission to continue treating the health of their patients to the best of their medical judgements, and are asking for permission to conduct research to replace fear with facts.

Dr. Siegel's track record for evaluating drugs is not very reassuring, he was seriously fooled by cocaine. It is a sad commentary that in his zeal to not be fooled again, he has become the dreamweaver, conjuring up dangers that fade in the daylight of genuine scientific inquiry and leaving those that do exist undiscussed.

There are the only two MDMA-linked deaths in the literature. There is one case of a 60 year old man with a very weak heart who died of heart failure shortly after taking 200mg. of MDMA. MDMA temporarily increases blood pressure and should not be used by people with a compromised heart, although several people with pacemakers have experienced MDMA with no complications. MDMA can also trigger epilepsy in people predisposed to epileptic fits, and there is one death related to MDMA in this way.

Also, by virtue of MDMA's ability to allow emotions to become more felt and present, when taken in a non-supportive setting it can be disruptive to those with preexisting psychological disturbances, and could precipitate a psychological disintegration. This same capacity of MDMA to open a window into the emotions, when used therapeutically, can facilitate much needed healing. The context, set and setting are much more determinative variables than the MDMA itself. As the son of a physician who administers an inpatient drug abuse treatment facility, I deeply know the tragedy of drug abuse and have initiated discussions with Straight, the national drug abuse treatment program, in order to investigate and if possible limit cases of MDMA abuse.

As the grandson of an 81 year old woman who is suffering from a clinical depression that electroconvulsive therapy and various drug treatments have not cured, I am struggling to legally treat her with MDMA under medical supervision. As the coordinator of the Esalen scientific conference on MDMA that was referred to in the article, I am seeking scientific truth.

The way is clear to break free from Dr. Siegel's nightmares, from the mythological Circe's imprisonment, as well as from the sorcery of the magical pharmacologists. As is written over a main door, at CIA Headquarters, "Know the truth and the truth shall make you free."

Psychedelically Yours, *Rick Doblin*

Rick Doblin

2105 Robinson Ave
Sarasota, Florida 33582