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Recent research has now indicated that the left hemisphere is also involved in the immune response. Dr. Kathleen Biziere and her co-workers in France have found that the left hemisphere is involved in the proper functioning of the T-cell lineage of lymphocytes in the immune system. Admittedly, Biziere and colleagues have so far used only laboratory animals, but in human beings, Dr. Peter Behan of Glasgow and the late Dr. Norman Geschwind of Harvard found left-handed individuals to have a high incidence of immune disorders, presumably related to their abnormal hemispheric lateralization.

Another part of the story comes from Dr. Candace Pert of the NIMH, codiscoverer of opiate receptors in nerve cells, who argues that positive emotions may be encoded in opioids, consistent with the findings of Goldstein and of Spintge. Several labs have reported that beta-endorphin and other opioids modulate the responsiveness of lymphocytes.

Putting all this together in the spirit of the Institute workshop on how positive emotions might affect physical health (May 1984), I speculate that the positive emotions aroused in the left hemisphere by appropriate music may increase the activity of opioids that help to ensure the optimum level of immune responsiveness in lymphocytes. This optimal level, neither so weak as to permit tumors and infections nor so strong as to permit allergies and

auto-immune disorders, helps to keep us in good health.

In the new field of psychoneural modulation of immunity, negative emotions caused by social losses have been shown to be accompanied by a depression of immune responsiveness that can be ameliorated by social support. It does not seem too farfetched to suppose that immune responsiveness can be modulated toward optimal levels by the positive emotions aroused by the music we enjoy. Turning this speculation into precise, testable hypotheses remains to be done, presumably while whistling in the dark.

### An Orphic Rhapsody

Dr. Orpheus — like his namesake, a great believer in the vital power of music — was inspired by my speculation to finger his modern equivalent of a lyre and sing:

Music is an art of gently touch —  
Not on the sturdy instruments we strum,  
Which sometimes we must pummel  
overmuch,  
But on the ear's minute and tender drum,  
Which puffs of air (called sound waves) pat;  
Since acupressure for a painful wound  
May drum up opioids, I'll venture that  
Immunity is literally . . . *tuned*.

*Theodore Melnechuk is a member of the Institute staff*

## Using MDMA in Psychotherapy

**Esalen Institute  
Big Sur, California  
March 10-15, 1985**

*George Greer*

The chemical substance MDMA (3,4-methylene-dioxy-methamphetamine) is a psychotropic agent now used as an adjunct to psychotherapy by a growing number of psychiatrists around the country. Since the U.S. Drug Enforcement Administration has begun hearings on the possible classification of the drug and the World

Health Organization is considering international regulation, this 5-day meeting, jointly sponsored by Esalen Institute and Earth Metabolic Design Foundation (an organization originally founded by Buckminster Fuller), was convened to bring together clinicians and researchers experienced in the use of MDMA to discuss and evaluate its uses and effectiveness and to explore ways to promote more extensive research on its effects. Because MDMA is not patentable (the original 1914 patent held by Merck & Company has lapsed and the compound is now in the public domain), the pharmaceutical companies are not inclined to support the expensive research required to demonstrate a drug's efficacy and safety.

Among the 35 participants at the meeting were 5 veteran researchers on psychoactive drugs (Francesco DiLeo, M.D., Stanislav Grof, M.D., Robert Lynch, M.D., Claudio Naranjo, M.D. and Richard Yensen, Ph.D.) and 4 psychiatrists who use MDMA in their clinical practice. On the fourth day of the meeting, George Greer, one of the psychiatrists, directed a session in which 13 of the participants took MDMA; each person was monitored separately by a physician or psychotherapist. Among the professionals present, the combined clinical experience in using MDMA during the past several years totaled over a thousand sessions.

A continuing topic of the meeting was the difference between MDMA and LSD. The structure of MDMA is related to that of dopamine and norepinephrine, whereas LSD is more closely related to serotonin. Unlike LSD, MDMA does not essentially cause perceptual or cognitive distortions or loss of ego control. MDMA consistently promotes a positive mood state, while LSD promotes mood swings that can be extreme and unpredictable. MDMA's principal effects last 3 to 5 hours, those of LSD last 6 to 14. The clinicians agreed that MDMA was much easier to use than LSD, and because MDMA did not threaten ego control, involved little psychological risk to a naive subject. While LSD subjects sometimes experience transient delusional states, the only complications of using MDMA, according to the clinicians and researchers, are occasional anxiety and various physical symptoms due to the drug's sympathomimetic effects.

Psychiatrists Joseph Downing, M.D. and Philip Wolfson, M.D. presented results of an unpublished, recently completed toxicity study of 21 human subjects, all of whom had taken MDMA in the past. Other than a brief and moderate rise in pulse and blood pressure, the researchers found no significant abnormalities before ingestion or up to 24 hours afterward. The study included blood chemistry profiles and neurobehavioral examinations.

The reports on the benefits of MDMA, although anecdotal, were uniformly positive. In the discussion of MDMA's effects, the clinicians using it felt it possessed a unique action that enhanced communication, especially in couples in therapy. The drug reduced defensiveness and fear of emotional injury, thereby

facilitating more direct expression of feelings and opinions, and enabling people to receive both praise and criticism with more acceptance than usual.

Reports on MDMA's facilitation of individual psychotherapy were also favorable. Many subjects experienced the classic retrieval of lost traumatic memories, followed by the relief of emotional symptoms. Victims of child abuse and sexual attack experienced the most dramatic benefits. Wolfson also reported having multiple MDMA sessions with psychotic individuals and their natal families, leading to improvements in the patients' functioning and ego integration. In two of the cases, year-long trials with antipsychotics and lithium had proved unsuccessful in significantly ameliorating the patients' symptoms.

Rich Ingrassi, M.D., reported using MDMA with patients suffering from terminal cancer, to help them deal with feelings of hopelessness and helplessness. He noted that many of them were outliving their prognosis. George Greer presented the case history of a patient who had multiple myeloma and had been in constant pain from crushed vertebrae for several months. During part of the first session with MDMA, the patient was totally pain free, and after two more MDMA sessions, the patient, using self-hypnosis techniques taught by Greer, has been able to keep the pain at a low level for the past 6 months to the present.

Integrating MDMA sessions within a format of psychotherapy, family support, or conjoint therapy were deemed essential components of the healing process. Though explanations for the drug's effects were highly speculative, it was agreed that in the experience of the therapists, its capacity to reduce or temporarily eliminate fear and anxiety from a subject's consciousness, allowing an acceleration and deepening of the therapeutic process, was unique.

The midweek experiential session with MDMA was organized so that each subject was accompanied by a psychiatrist or psychotherapist, who remained in attendance until no effects were present. None of those who took MDMA had any complications, some found the session emotionally intense. The two days

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remaining in the conference allowed for follow-  
 up discussion and analysis. The people who  
 took MDMA regarded the experience positively  
 and felt the drug encouraged self-insight.

Toward the end of the meeting the partici-  
 pants discussed research ideas for studying the  
 use of MDMA to treat drug abuse and psycho-  
 somatic disease and as a motivational tool in  
 vocational rehabilitation. However, the out-  
 come of the Drug Enforcement Administra-  
 tion's hearing on making MDMA a controlled  
 substance will have a major influence on the  
 future use of the drug. The conference partici-  
 pants felt that the potential therapeutic appli-  
 cations of MDMA were unknown to both the  
 Drug Enforcement Administration and the  
 Drug Abuse section of the Federal Drug  
 Administration, both of whom had recom-  
 mended that MDMA be classified as a drug  
 with the highest abuse potential and no medi-  
 cal use — in the terminology of the DEA and  
 the FDA, a Schedule I drug. Due to the complex  
 FDA approval process required for studies  
 using any Schedule I substance, this move  
 would create a major administrative barrier to  
 further research. LSD is in Schedule I, and the  
 FDA has currently approved only one LSD  
 study — Francesco DiLeo and Richard Yens-

en's research at the University of Maryland,  
 using LSD with terminal cancer patients.

It was also noted that the FDA is not set up  
 to approve techniques of psychotherapy. It has  
 no established procedure for approving com-  
 pounds that are viewed as psychotherapeutic  
 adjuncts, as opposed to chemotherapeutic  
 agents.

The group favored assigning MDMA to a  
 lower schedule, reserved for drugs with moder-  
 ate- to low-abuse potential, thus allowing both  
 prosecution for illicit trafficking and the con-  
 tinuation of ongoing studies of MDMA's thera-  
 peutic potential. In support of this position, it  
 was pointed out that the Drug Abuse Warning  
 Network — a federally funded national clear-  
 inghouse of information — had listed only 8  
 emergency-room visits as a result of MDMA,  
 and that since the drug's appearance in the  
 1970's, no deaths in conjunction with MDMA  
 use have been established. The participants  
 agreed that although MDMA was not a proven  
 therapeutic agent, its supervised experimental  
 use with fully informed consent was medically  
 acceptable and safe.

*George Greer, M.D., is a psychiatrist in private  
 practice in Santa Fe, New Mexico.*