PAIN, DEATH AND LSD:
A Retrospective of the Work of Dr. Eric Kast

By Francis Gerard

The following bibliographic profile focuses on Dr. Eric Kast and his research involving LSD and pain thresholds. The clinical use of LSD as an analgesic is detailed from sixteen of Kast's papers published between 1959 and 1973. These pioneering papers formed the basis for later studies, carried on by other researchers. Such involved the treatment of cancer and other highly painful illnesses with LSD as an adjunct to pain control. Dr. Kast's relationships with medical contemporaries, The Black Panthers, the ideas of Che Guevera and Marxism are outlined.

LSD is perhaps best known for its role in the psychedelic subcultures of the 1960's. There exists, however, a lesser known but extensive literature reporting investigations of the drug's medical therapeutic potentials. This, the first in a series of articles retrospectively examining the work of some all-but-forgotten researchers, will focus on the work of Eric C. Kast.

Born in Vienna, Austria, in 1916, he and his family converted to Catholicism in 1935. They fled to the United States after the Nazi invasion of Austria in 1938. He completed his M.D. at Loyola University Medical School in Chicago in 1944 having interned at Michael Reese Hospital and completed residencies in both medicine and psychiatry at the University of Chicago Clinics, Permanente Foundation Hospital in Oakland, California, and Manteno Hospital in Illinois. Dr. Kast was a teaching fellow at Tufts Medical College and is a member of Sigma Xi.

With staff appointments at Cook County Hospital, Mt. Sinai Hospital Department of Medicine, Michael Reese Hospital, Hektoen Institute for Medical Research as well as Clinical Assistant Professorships in both medicine and psychiatry at Chicago Medical School, Dr. Kast also maintained an outpatient practice at his downtown Chicago office.

The earliest publication I was able to find (Kast, 1962) is an ıttempt to define a method for measuring the elusive concept ɔf pain and responses to analgesics. He differentiates between 'pathologic pain" related to a disease process, and "experimen-ıl pain" induced by a mechanical apparatus. The patients in he study controlled the pain inducing apparatus and were ınstructed to increase the experimental pain to a level that they :elt equalled their pathologic pain. The level of pneumatic ɔressure required of the device to induce experimental pain ɛqual to the subjects' experience of pathological pain was used ıs an objective indicator of pain.

Various analgesic drugs and a placebo were assessed for the legree to which they produced pain relief. Objective data are ɔresented on the efficacy of the drugs versus placebo.

In this study, which precedes his experiments with LSD, Dr. Kast advances an interesting theoretical idea about pain. He ıotes that the subjects' experience of experimental pain was ıot affected by analgesics while pathologic pain was relieved. The explanation he offers is that pathologic pain has both a ensory (physical) aspect and an affective (emotional) aspect /hile experimental pain (controlled by the subject) has only ıe sensory aspect.

To explain the action of the analgesic drugs he suggests that ıey induce a "feeling of removal of the self from emotional :oblems," allowing the subject to distance himself from the ıinful part of his body while maintaining a sense of bodily ıtegrity. citing a psychoanalytic article (Ramzy and /allerstein, 1958) that states narcotics produce "a feeling of :andeur and spiritual expansion at the expense of bodily feel-ıgs and concerns," Dr. Kast suggests that this may also apply ı other intoxicating agents and non-narcotic analgesics.

The medical model approach to research is evident in Kast's rst report on the use of LSD (Kast and Collins, 1964a). Iaintaining the same theoretical concept of pathological pain, rs. Kast and Collins compared the duration of analgesia pro-ıced by meperidine (Demerol), dihydromorphinone Dilaudid), and LSD-25 in gravely ill and terminal patients. heir striking conclusion was that

SD-25, while slower in onset, produced greater and longer ısting pain relief than either of the narcotics. Also noted was

the fact that 8 of the 50 patients refused further administration of LSD, 30 patients were indifferent, and only 12 patients wished to experience the drug again even though all experienced significant pain relief.

Two mechanisms are proposed to explain LSD's analgesic effect: "... certain obliterations of the ego boundaries (permitting) sequestration of the diseased part ... alleviating pain affect," and "...LSD-25 produces an inability to maintain selective attention on a sensation of importance (which) should alleviate both components of the pain experience."

In an article which first appeared in David Solomon's *LSD: The Consciousness Expanding Drug* (Kast, 1964b) and subsequently revised (Kast, 1967a), a study of single dose administrations of LSD 100 mcg. to 128 "preterminal" cancer patients at Chicago's Cook County Hospital is described.

Four factors are proposed as mechanisms to explain the analgesic potential of LSD:

1. "(LSD) seems to deprive the patient of his ability to concentrate on one specific sensory input, even if the input is of urgent survivalvalue.";

2. "... 'minor' sensations, namely those of less importance for survival, make a claim on the patient's attention sometimes in preference to those of major survival significance.";

3. "(LSD) diminishes cortical control of thoughts, concepts, or ideas and reduces their significance in control of vegetative function and behavior in general. The meaning of pain ... and its frightful resonance ... is greatly
alleviated."; and

4. "... LSD obliterates the individual's ego boundaries (and) a geographic separation can more easily be made between the self and the ailing part."

These same factors are used to support a further elaboration, the theory of "attenuation of anticipation" in which the author suggests that LSD allows the patient to escape the anticipation of pain by making immediate sensory input relatively more

important.

The results of the study showed a precipitous drop in pain about two to three hours after administration of 100 mcg. of LSD. Pain relief lasted an average of 12 hours despite the fact that no other analgesics were given during this period. And total pain intensity was reported to be less for up to three weeks
thereafter.

Patient's general mood was elevated, "almost euphoric", for 11 to 12 hours after which their moods returned to baseline. Curiously, some patients seemed unconcerned about their impending death and they experienced more restful sleep for up to ten days. But the concerns about their condition and inability to sleep did return after this.

Only 10% of the patients reported hallucinations but 50% reported visual distortions. Panic reactions were seen in 7 patients and 42 suffered mild anxiety reactions. All reactions responded to follow up psychotherapy and, most notably, no medical complications occurred.

Another paper which was published in the *Chicago Medical School Quarterly* (Kast, 1966a) is apparently a discussion of the same clinical trial. It does not specifically refer to the location of the trial and the fact that the chapter in Solomon's 1964 book is not cited in the bibliography suggests that this paper is offered specifically to the academic community.

In view of Dr. Kast's principal role as a clinician and the impending constraints resulting in the termination of most LSD research in humans, it is not surprising that he conducted no further work with LSD. Two papers which appeared in 1966 (Kast and Collins, 1966b; Kast, 1966c) are only slightly different versions of the authors' research on a new analgesica-gent, methotrimeprazine (Levoprome), a non-narcotic analgesic which is still in use. The basic theoretical framework for pain assessment remains intact but there is clearly a shift to more concrete clinical research will substances who pharmacology is better understood and whose actions are thought to be desirable in these terms.[1]

Interest in social and political issues is the dominant theme in the remainder of Dr. Kast's published output, (Kast, 1966d,

1967b, 1972, 1973, 1974, 1976). He published on the subject of LSD only once again (Kast, 1970) integrating social/ political concerns in describing the impact of LSD on the concept of death. While he cites more radical, non-academicians such as Che Guevera and Aldous Huxley, the article remains a sound discussion of the possible benefits of LSD in terminal patients.

Dr. Kast's obituary (Heise, 1988) describes him as "... deeply Catholic, proudly Jewish and militantly Marxist." Until his death from cancer on November 26, 1988, he was active in establishing three free health clinics in Chicago's poverty stricken neighborhoods. At one point in 1969 he worked with the radical Black Panthers to establish one of these clinics.

A more recent article (Kurland, 1985) prominently cites Kast's research and proceeds to describe four case histories not unlike those described by Kast in which 100 mcg. of LSD administered to cancer patients with variable but, at times, positive results.

Dr. Kurland, a psychiatrist with the National Institute of Mental Health, is, at this writing, the only person licensed to administer LSD to human subjects. In concluding his paper he suggests that good reasons remain to pursue research with LSD in the terminally ill.

Notes

[1] The pharmacology of LSD and the mechanism(s) of its action currently remain poorly understood. This elusive aspect which promotes only vague speculation may account for the drug's lack of popularity as a subject for research in academic circles.

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Summary of a Pilot Study of LSD as premedication for General Anesthesia

Anesthetic used	Pre-Anesthetic anxiety	Ease of Induction	Operative Blood Loss	Emergence from Anesthesia	Analgesic Requirements
1. cyclo.	2	0	normal	easy	36 hours
2. cyclo.	1	0	normal	very easy	none
3. cyclo.	2	0	——	easy	Patient was asthmatic and developed bronchospasms, was not operated on.
4. cyclo.	0	0	normal	very easy	42 hours
5. flurothane	1	0	normal	very easy	None
6. flurothane	2	1	normal	easy	None
7. flurothane	0	0	normal	very easy	48 hours
8. cyclo.	2	1	normal	easy	12 hours
9. cyclo.	0	0	normal	very easy	None
10. cyclo.	0	0	normal	very easy	None

Resumption of bodily functions and ambulation; all were normal or early, except number 3; for explanation see above.

Legend: 0-4 indicates a graduation from "no difficulty" to "very difficult" or "severe".
Normal refers to customary accepted amounts.
"Analgesic requirements" refers to the time elapsed from emergence from anesthesia to the first administration of an analgesic.

LSD

Dr. Eric Kast pioneered the use of LSD as analgesic and studied its' effects on body image and pain perception. Above is a blow-up from one of Kast's book chapters charting LSD's use as a pre-anesthetic agent (from LSD: The Consciousness Expanding Drug by D. Soloman; Putnam, 1964)