

# Martyrs May Not Feel Pain

A mechanism somewhere in the brain blocks pain as well as other stimulation and men can learn to use it—By Patricia McBroom

► **BURNING ALIVE** must be one of the greatest physical tortures known to man. Yet the Buddhist monks and nuns who have sacrificed themselves in Viet Nam have shown nothing but serenity in the face of it. How is this possible? Do they not feel the pain, or is their control so extraordinary that they can freeze their facial muscles into a mask of nonexpression?

To find an answer, **SCIENCE SERVICE** interviewed three research psychologists well known for their work on the reduction of pain sensation. All agreed that there is indeed a biological mechanism somewhere in the brain for blocking pain as well as other stimulation. And people can learn to use it.

But scientific approaches to the phenomenon have as many angles as a problem in geometry. Some psychologists view it as auto-hypnosis, others as a "focus of attention," and still others as a nervous system defense mechanism. Quite probably, future understanding of the higher brain centers will reveal links between all these explanations.

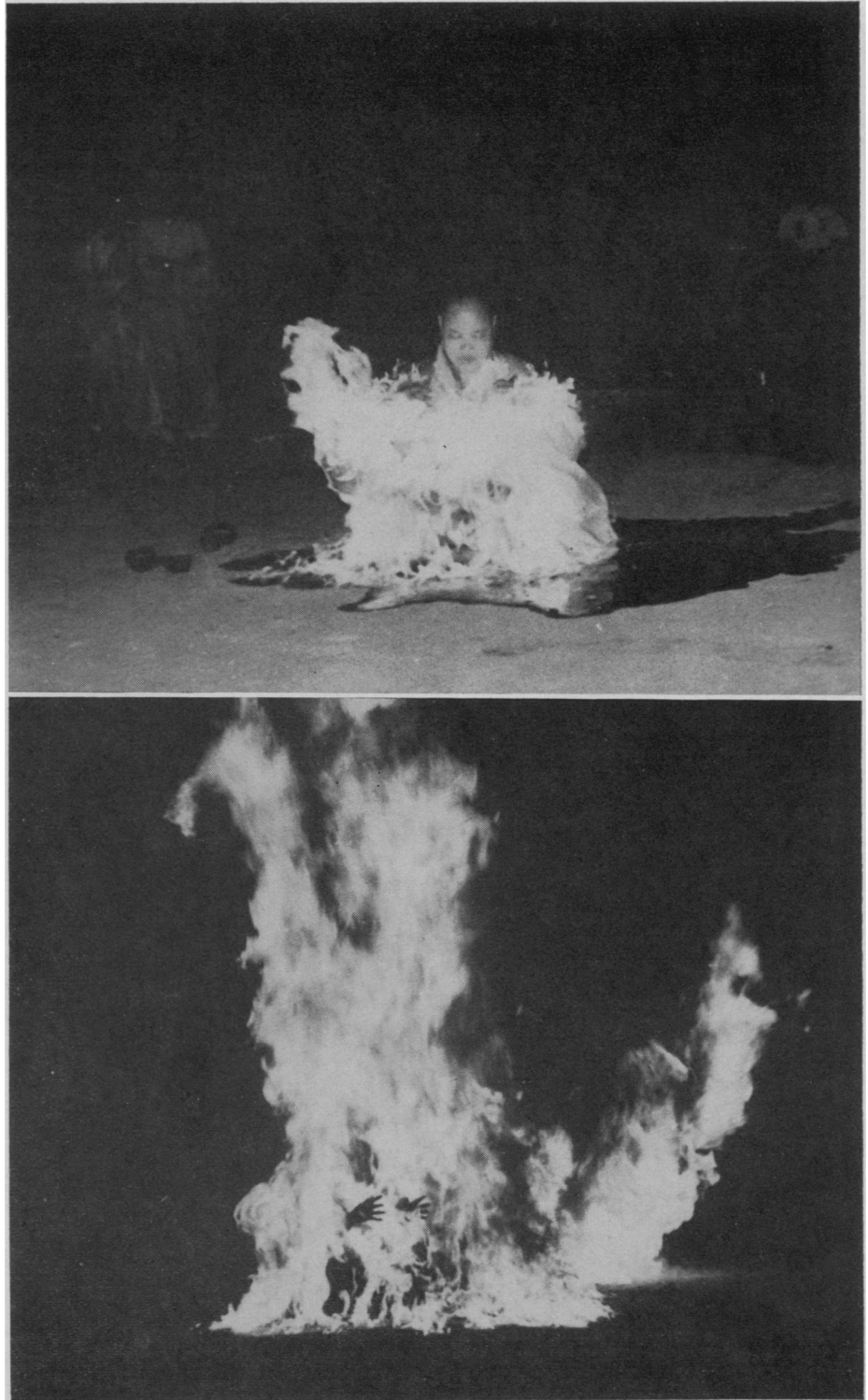
For now, "we know that the integration of pain is a high level matter" in the brain, said Dr. Ernest Hilgard of Stanford University, Palo Alto, Calif. "It is not just the cry of an injured nerve." He said the body may show it is reacting to pain even when a person reports he is not feeling it. In other words, there is no direct relationship between the physiological and the psychological experience of pain.

A good hypnotic subject can put himself in a state where he is not susceptible to pain, said Dr. Hilgard, who has been experimenting with hypnotic insensitivity to electric shock and ice water.

Dr. Harold B. Crasilneck of the University of Texas' Southwestern Medical School has been using hypnosis for years as an anesthetic for severely burned patients. He said the technique is successful in allaying pain both during skin graft operations and afterward, in the form of post-hypnotic suggestion.

Dr. Crasilneck believes the deep contemplation practiced by people in Eastern religions is very much akin to auto-hypnosis. But who can say that the Buddhist martyrs hypnotized themselves, in any simple sense, into feeling no pain?

Viewing the problem from another angle, Dr. Asenath Petrie of Harvard University Medical School, Boston, proposed a focus of attention theory.



UPI

**SERENITY**—As flames engulf her, Buddhist nun Thanh Quang does not seem to feel pain. She immolated herself at the Dieu de Pagoda in Hue, Viet Nam, on May 29. The 55-year-old nun left several letters, including one to President Lyndon B. Johnson.

She said sensory experience is reduced when there are "a great many other things impinging on a man's attention;" that is, "when the nervous system is bombarded with other input." Other input could be intense emotional involvement in a cause, as in the case of the Viet Nam Buddhists.

It does not much matter, said Dr. Petrie, whether stimulation comes from "inside" (a cause) or "outside" (physical pain). To the brain it is all input and must be handled as such.

In addition, people subjected to intense, unpleasant stimulation apparently can switch on a defensive mechanism. In normal populations there are pain-sensitive people who naturally amplify sensations. But if stimulation is too great, they will switch and become less sensitive.

The change from augmentation to reduction has been reliably measured in tests conducted at Harvard and at the Boston Department of Health. Dr. Petrie will publish details in a book, "Individuality in Suffering" (University of Chicago Press).

It is possible, noted the psychologist, for a person not understanding the mechanism to use it. Probably the Christian and Jewish martyrs did so. This does not detract from the Buddhists' heroism, she said, but it does explain, in part, why the martyr's face may not show the full impact of the torture.

In addition to Dr. Petrie's work, other biological evidence has recently emerged to indicate that "involuntary" body processes can come under voluntary control. Dr. Neal Miller of Yale University, New Haven, Conn., has shown that animals can be taught to increase, decrease, or modify in some other way their heart rates, vascular constriction and even their brain waves (flow of electrical current between various parts of the brain), just as they are taught any number of tricks.

If such fundamental body activity can be trained this way, it is feasible that the nervous system can also be trained, so that the pain signals surely sent by burning, cut or punctured skin are not fully recognized and experienced.

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## SOCIOLOGY

## No Effective Treatment For Chronic Drinkers

➤ THERE APPEARS to be no effective treatment for chronic alcoholic offenders, according to a four and one-half year study at the University of California at Los Angeles' alcoholism research clinic in cooperation with the San Diego Municipal Court.

As a matter of fact, when referred by the court for treatment the alcoholics fare no better, and perhaps do worse, than those receiving no treatment.

The study was carried out by Drs. Keith S. Ditman, Edward W. Forgy, Herbert Moskowitz, and Craig McAndrew of the UCLA neuropsychiatric institute and Judge George G. Crawford of San Diego.

A total of 301 chronic drunk offenders participated in the study. Each had been fined \$25, given a 30-day suspended sentence and a year's probation by the court.

Additionally they were assigned randomly either to an alcoholism clinic, Alcoholics Anonymous or to a no-treatment group.

The number of subsequent arrests for drunkenness was used to judge effectiveness of treatment or lack of treatment. No rearrests occurred in 44% of the no-treatment group, 32% of the clinic group, and 31% of the AA group. Two or more rearrests occurred in 37% of the no-treatment group, 40% in the clinic and 47% of the AA.

"Courts are increasingly viewing chronic drunk offenders as sick persons who deserve treatment instead of punishment, and yet we appear to have no effective therapy for them," Dr. Ditman said.

It is possible the two forms of treatment in the study may not have had time to take effect, he noted. The imposed court referral may have caused the offender more anxiety, which increased the likelihood that he would resume his drinking pattern, or the number of treatment sessions offered may not have been enough.

He added that there was some suggestion in the study that certain types of offenders might benefit more than others from treatment and thus a policy of selective referral by the court might prove to be feasible. Data with which to construct such a referral strategy are still being collected.

Support for the study was furnished by the division of alcoholic rehabilitation of the California State Department of Public Health and the Vista Hill Psychiatric Foundation.

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