

ing effect that prior restraints would have on research and is concerned that this sort of effect would do far more harm to the country than a lack of restraints would do to the NSA.

George Handelman of Rensselaer Polytechnic Institute, who represented the Society for Industrial and Applied Mathematics, questioned what sort of impact prior restraints would have on universities. He said he went to the dean of academic affairs at his university and asked him what he would do if faculty

members found their research was classified or, because of prior restraints, buried. Handelman said that the dean replied, "Don't let a graduate student near such research. The work is also a high risk for the untenured or for those who have promotions available."

The study group, of course, will not be the ultimate determinant of whether prior restraints are implemented. It may even prove impossible to formulate such restraints because it may be impossible to define what sorts of research are di-

rectly applicable to cryptography. And the question of whether such restraints are constitutional is still open. "I have no objection to the exercise [of considering restraints], although I find that the whole issue of prior restraint is greatly troubling," says Jonathan Knight, an authorized observer from the AAUP. But, says Knight, "I am not optimistic that we will be able to draw up anything that will satisfy these people [of the study group] with such very very diverse concerns."—GINA BARI KOLATA

## Forensic Use of Hypnosis on the Increase

*Researchers fear misuse by police, warn that hypnotic state is no guarantor of truth*

On 10 June newspapers reported that Martha Coleman, the woman who was with civil rights leader Vernon Jordan when he was shot in Fort Wayne, Indiana, had agreed to the FBI's request that she undergo hypnosis to enhance her memory of the event.

The use of hypnosis by law enforcement agencies has become increasingly common, just as hypnosis has come back into fashion in recent years as a therapeutic modality. But there is by no means universal agreement on the credibility that should be accorded hypnosis-evoked testimony in court.

The forensic use of hypnosis has occasionally produced striking breakthroughs: in 1973, after the bombing of an Israeli bus, the driver was able to recall details about a passenger that led to apprehension of the terrorists; some years later, in Chowchilla, California, another bus driver was able to recall most of the license plate number of a van in which children had been abducted from a school bus. This year brought a particularly unusual hypnosis-aided solution to an old crime: a 44-year-old North Carolina woman was able to dredge up a repressed memory of a gruesome event 35 years before when her mother had murdered her father, chopped him up, and hidden the remains in an outhouse.

The services of professionals trained in hypnosis are now frequently sought in criminal cases where it is thought that scavenging the memory of victims and witnesses may supply new leads. It can be particularly helpful in aiding recall of

emotion-laden crimes, such as rape and homicide, where psychological defenses can result in the repression of traumatic details. (Laws prohibit prosecutors from employing hypnosis with defendants.)

But although everyone agrees that the procedure can be very useful, there is considerable controversy over the extent of its usefulness and the degree to which hypnosis-evoked information can be relied on in court proceedings. Academic researchers in particular do not like the fact that law enforcement officials unschooled in psychology use hypnosis, and two professional organizations, the Society for Clinical and Experimental Hypnosis and the International Society of Hypnosis, have in the past 2 years passed resolutions avowing themselves to be "deeply troubled" by police use of hypnosis and stating that it is "unethical" to train laypersons in the procedure.

Hypnosis is difficult to define because no one really understands how it works. As Ernest Hilgard of Stanford University, one of America's foremost hypnosis researchers, says, "we don't know enough about the ordinary waking consciousness" to be able to speculate on just what sort of state of consciousness hypnosis represents. Stage hypnotists of yore imparted an unwarranted aura of glamour and mystery to the procedure, implying that the hypnotist casts some sort of spell over the subject, but in fact no one can be hypnotized against his will and indeed the state represents the ultimate in self-direction. A mild hypnotic state is scarcely dis-

cernible from a simple state of relaxed alertness; however, many people are capable of achieving a level of awareness distinctively different from ordinary waking consciousness. The physiological correlates of this state have not been ascertained, but it is characterized at the core by heightened suggestibility. It is a state of highly focused attention, where peripheral distractions are completely blocked out, and where inner events seem as real as only external reality ordinarily seems. In this state, people who are highly susceptible to hypnosis can do extraordinary things at will, such as block out pain or retrieve memories that have been otherwise inaccessible.

Because people are so suggestible under hypnosis, and because such powerful emotions can be released with the procedure, experts in hypnosis believe that it should only be conducted by persons with broad training in psychology. They also contend that, because memory is so malleable, no information elicited through hypnosis should be admitted in court unless it has been independently corroborated.

This puts academics at serious odds with many law enforcement officials, whose attitude is personified by Martin Reiser, a clinical psychologist who heads the Los Angeles Police Department's behavioral sciences services. Reiser, who may be the country's leading exponent of forensic use of hypnosis, thinks the LAPD is way ahead of most of the rest of the country because it has detectives specially trained in "investigative hypnosis." Reiser contends that this is a

field of expertise unto itself, and that anyone is qualified who passes the 4-day course in hypnosis conducted by the Law Enforcement Hypnosis Institute, which he founded in Los Angeles in 1976. Reiser believes the effectiveness of his approach has been validated by a 1-year "research and demonstration project" he ran in 1975, in which 11 detectives were trained in investigative hypnosis. Their skill at enhancing subjects' recall was tested on volunteers who were witnesses or victims in major crime cases. In three-quarters of the 70 cases, he reports, hypnosis produced additional "useful" information that had not come out in prior routine interviews.

So far, says Reiser, 850 people from around the country have been trained at his institute. He says that when people are properly trained in investigative hypnosis they know how to question a subject so as to avoid opening "emotional cans of worms and skeletons in the closet" and are able to focus specifically on the person's memories of the event in question. Reiser dismisses the notion that the suggestibility of the hypnotic state makes an individual especially prone to influence by leading questions. That problem, he said, "exists independent of hypnosis. . . . The form of the questions is what counts, not whether a person is under hypnosis." Psychiatrists and psychologists, he says, do not understand this, because even those

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schooled in therapeutic hypnosis usually do not know how to conduct investigative hypnosis.

Many reputable researchers believe Reiser is wrong in both his techniques and his scientific assumptions. To begin with, academic researchers regard Reiser's distinction between therapeutic and investigative hypnosis as nugatory, for it treats investigative hypnosis as a simple interrogative technique that can be mastered independent of any knowledge of psychology.

The technique taught by Reiser involves getting subjects to picture the event they want to recall as though it were on a television screen, where the

film can be run or stopped at will. Subjects are to be instructed that they do not have to experience any of the unpleasant feelings that accompanied the event.

"This is totally wrong," according to Martin Orne, psychiatrist and head of the hypnosis research laboratory at the University of Pennsylvania. He says that when people are reliving an experience their feelings are part of it. "When you are a victim and told to remember, you are trying to abreact—to get rid of bottled feelings." To be told to ignore them creates struggle and conflict.

The underlying objection of hypnosis experts to the Reiser approach is that it represents, in their view, a complete failure to understand the way memory works. Orne has written that "the idea that hypnosis can somehow reactivate original memory traces stems from a widely held view that memory involves a process analogous to a multichannel videotape recorder." In fact, memory is a shifty thing to begin with, and easily altered by suggestions—or leading questions as they are called in the law enforcement context. Under hypnosis, people are prone to accepting information that can then be incorporated into a fixed new version of the event.

Orne describes one experiment that illustrates this vividly. An investigator asks a subject about what he did on a certain night (went to bed at midnight, got up at 8). Then, with the subject under hypnosis, the investigator asks the same questions, only adding a few, such as "did something wake you at around 4 a.m.?" The good hypnotic subject will answer in the affirmative. Asked if he heard strange noises (such as gunshots), he will affirm that he did and go on to add details. Even though the subject has no motivation to "confabulate," as Orne calls it, this new memory of the night's events can be incorporated into the subject's waking memory. Orne says that although hypnosis can uncover valuable new information, "there is no way . . . by which anyone—even a psychologist or psychiatrist with extensive training in the field of hypnosis—can for any particular piece of information determine whether it is an actual memory versus a confabulation *unless* there is independent verification." Orne warns that the vividness of detail characteristic of descriptions of events given under hypnosis can convey the impression of authenticity—but the fact is that, given the slightest suggestion, the unfettered mind is off and running. Hence a person in a hypnotic trance can describe with great conviction what the world will be like in the year 2000, or what happened when

he was abducted by a flying saucer, or her former life as a domestic servant in 17th-century Ireland.

As the use of forensic hypnosis continues to spread, there have been a number of court cases pivoting on the issue. Orne cites the following case, which is now being appealed before the Indiana Supreme Court.

Three men held up a drugstore and killed the druggist. They briefly held a clerk hostage. The clerk saw two of them, who had stockings over their heads. He was later shown a series of photographs containing pictures of three suspects along with 12 other persons, added as controls, and was unable to identify anyone. He was later shown another set of pictures, with the suspects mingled with different controls. Finally, he submitted to hypnosis and was shown the photo lineup a third time, again with different controls. This time he identified two of the suspects as those who had held him hostage. Orne says the young man could scarcely have avoided making the identifications since there was no way to ascertain that he had not seen newspaper and television pictures of the suspects. In addition, all the photographs shown him during the hypnosis session still bore the dates of arrest of those depicted, and only two were arrested at a time near the murder. Orne said this was clearly a case where the clerk was given innumerable cues to which pictures to pick. Yet his testimony was admitted as "eyewitness" evidence, and the prosecution claimed it was corroborated by the fact that a sawed-off shotgun similar to that employed in the crime was found in the suspects' car—even though no proof was available that it was the same gun.

Orne and others want to prevent such apparent abuses of hypnosis by having all states adopt guidelines related to the procedures and the professional qualifications of the hypnotists. They specify that no one else should be in the room during hypnosis to inadvertently cue the subject and—most important—that none of the information obtained with hypnosis should be admitted as evidence unless it has been independently corroborated. There are signs that the judiciary is beginning to react to misuses of hypnosis—recently the Minnesota Supreme Court ruled that no information uncovered through hypnosis could under any circumstances be admitted as evidence.

Meanwhile, researchers are still trying to determine the proper role of hypnosis. "When is hypnosis really helpful, and how? We still don't know that," says Orne.—CONSTANCE HOLDEN