

Dr. Leary's Concord Prison Experiment: A 34-Year Follow-Up Study[†]

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Abstract—This study is a long-term follow-up to the Concord Prison Experiment, one of the best-known studies in the psychedelic psychotherapy literature. The Concord Prison Experiment was conducted from 1961 to 1963 by a team of researchers at Harvard University under the direction of Timothy Leary. The original study involved the administration of psilocybin-assisted group psychotherapy to 32 prisoners in an effort to reduce recidivism rates. This follow-up study involved a search through the state and federal criminal justice system records of 21 of the original 32 subjects, as well as personal interviews with two of the subjects and three of the researchers: Timothy Leary, Ralph Metzner and Gunther Weil. The results of the follow-up study indicate that published claims of a treatment effect were erroneous. This follow-up study supports the emphasis in the original reports on the necessity of embedding psilocybin-assisted psychotherapy with inmates within a comprehensive treatment plan that includes post-release, nondrug group support programs. Despite substantial efforts by the experimental team to provide post-release support, these services were not made sufficiently available to the subjects in this study. Whether a new program of psilocybin-assisted group psychotherapy and post-release programs would significantly reduce recidivism rates is an empirical question that deserves to be addressed within the context of a new experiment.

Keywords—Concord Prison Experiment, Leary, psilocybin, psychedelic, psychotherapy, recidivism

This article reports on the results of a long-term (34 year) follow-up study to the Concord Prison Experiment, one of the best known studies in the psychedelic psychotherapy research literature.¹ The Concord Prison Experiment was originally conducted during the years 1961 to 1963 by a team of Harvard researchers under the direction of Timothy Leary (Riedlinger & Leary 1994; Leary 1969; Leary & Metzner 1968; Leary et al. 1965; Leary 1963).

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The Concord Prison Experiment arose out of preliminary research into the subjective effects of psilocybin (Leary, Litwin & Metzner 1963). Leary and associates found that 88% of their subjects in the preliminary study reported that they learned something of value about themselves and the world, while 62% claimed that the experience of psilocybin changed their lives for the better. In some subjects, the administration of psilocybin produced a "mystical" or "transcendent" experience similar to experiences of religious conversion. Based upon the preliminary evidence, Leary speculated that psilocybin experiences might be powerful catalysts of behavior change in subjects with criminal records.

Research evaluating the use of psychedelic psychotherapy in subjects with criminal records was also being conducted around the same time by Tenenbaum, who

administered LSD to criminal sex offenders while they were incarcerated in Atascadero State Hospital in California (Tenenbaum 1961), and by Arendsen Hein in the Netherlands, who administered a series of doses of LSD to twenty-one chronic criminal offenders (Arendsen Hein 1963). These studies generated promising results but focused on measuring symptom, behavior and personality changes rather than recidivism (the return to prison post-release for parole violations or new crimes).

DESIGN OF THE ORIGINAL EXPERIMENT

The Concord Prison Experiment was designed to evaluate the use of a form of psilocybin-assisted group psychotherapy in the reduction of rates of recidivism. As described by the researchers, the form of treatment was "a collaborative group program; we avoid . . . the traditional doctor-patient, researcher-subject, professional-client roles" (Leary et al. 1965).

The subjects in the study, all volunteers, were incarcerated in Massachusetts Correctional Institute-Concord, located outside of Boston not far from Cambridge, where Harvard University is located. Subjects were limited almost entirely to prisoners nearing their possible parole dates, with just a few subjects released more than a year after the experiment concluded. Leary thought that recidivism would be an objective measure of behavior change that would more persuasively demonstrate the effects of psychedelic-assisted psychotherapy than subjective self-report questionnaires and tests. Differences between pre- and post-values of standardized tests of psychological functioning were also evaluated. Among the tests administered were the Minnesota Multiphasic Personality Inventory (MMPI), the Thematic Apperception Test (TAT), and the California Personality Inventory (CPI).

The experimental treatment was administered in the context of group therapy, with each group composed of about four subjects and two members of the experimental team. The treatment generally took place over six weeks of biweekly meetings which included two administrations of psilocybin. The treatment involved an initial battery of tests; twice-a-week nondrug preparation sessions over the course of two weeks (at which the test results were discussed and preparations were made for the first psilocybin experience); a day-long group experience of psilocybin, with doses ranging from 20 to 70 mg.; several post-psilocybin sessions devoted to discussion and integration of the initial psilocybin experience and preparation for the second and usually final administration of psilocybin; followed by several more nondrug sessions. After the final session, the identical battery of personality tests was readministered, with the results again fed back to the subjects. Over the course of two years, 32 subjects participated in the experiment.

In most treatment groups, one subject who had completed the cycle of treatment was included so as to give the

new subjects exposure to a peer who had already been through the psilocybin experience. As a further method of providing emotional support to the subjects for their frequently challenging psilocybin experiences, one of the group leaders usually self-administered psilocybin as a demonstration of solidarity and trust in the healing potential of psilocybin.²

Once subjects who had completed the treatment process had been approved for parole, additional group meetings were held to address the details of trying to create a new life outside of prison. Though no post-release group meetings were originally planned, they were soon considered necessary to support the efforts of the subjects to live within the law and remain out of prison. Substantial effort was expended by the experimental team to remain in contact with subjects post-parole so as to provide continuing emotional support and leads on jobs and housing. A nonprofit organization, Freedom Inc., was created to coordinate post-release efforts. However, Leary noted, "This phase (post-parole) of our program was never fully developed. We now realize that it is necessary to set up a halfway house where members can meet regularly and discuss mutual problems along Alcoholics Anonymous lines. For practical and material reasons, we were limited to irregular individual contacts with group members" (Leary et al. 1965).

REPORTED OUTCOME OF THE ORIGINAL EXPERIMENT

The Concord Prison Experiment is generally accepted to have had somewhat beneficial results (Grinspoon & Bakalar 1979) or to have been an astonishing success (Stevens 1987; Lee & Shlain 1985; Stafford 1979) in reducing recidivism rate. In addition, some of the psychological measures showed changes that would be expected to support the development of more positive behaviors.³

Recidivism rates of the experimental group were initially measured on January 15, 1963, when 28 of the 32 subjects had already been released from one to eighteen months (an average of ten months post-release). At this first follow-up, Leary reported in two papers that the recidivism rate was 32%, slightly more than half of what Leary claimed was the expected 56% recidivism base rate for inmates at Concord Prison (Leary & Metzner 1968, Riedlinger & Leary 1994). In a slight discrepancy, Leary reported in another paper that the recidivism rate as of January 15, 1963 was just 27% (Leary 1969). In his autobiography, Leary reported that, "We had kept twice as many convicts out on the street as the expected number" (Leary 1968). The recidivism base rates were generated through a review of the records of all 311 prisoners who had been discharged or paroled from Concord in 1959. This recidivism base rate study was conducted by Metzner and Weil (1963), both of whom were graduate students

affiliated with the Harvard Social Relations Department and co-investigators with Leary on the prison project.

The longest period of follow-up reported was from data gathered as of July, 1964, when 27 subjects were reported to have been evaluated at a time from 18 to 26 months post-release (Leary et al. 1965). As of July, 1964, the total recidivism rate of the experimental group was reported by Leary to be no different than the expected base rates, with 41% of the experimental group who had been released reportedly still out of prison and 59% having been reincarcerated.⁴

Despite the lack of a reduction in overall recidivism rates, Leary still claimed that the experimental treatment had a significantly positive influence. Leary reported that in the control data gathered in the base rate study, the recidivism rate was due equally to new crimes and parole violations. However, in the experimental group, 52% were reported to have been returned on parole violations while only 7% were incarcerated for new crimes. With a total recidivism rate of 59%, Leary stated that the expected percentage of subjects reincarcerated for new crimes would have been 29.5%, and the expected percentage of subjects reincarcerated for parole violations would also have been 29.5%. The discrepancy between the expected and actual numbers of subjects reincarcerated for parole violations compared to new crimes was reported to be significant at the .01 level.

The difference between recidivism for ostensibly less serious parole violations as compared to new crimes was considered a sign of the continued, though limited, success of the experimental treatment. Leary hypothesized that the higher rate of recidivism in the experimental group attributable to parole violations rather than new crimes might have been the result of the experimental group being more closely supervised than other parolees, resulting in an increased number of technical parole violations of a minor nature. As Leary wrote, "The main conclusion can be stated as follows: one and one half years after termination of the program, the rate of new crimes has been reduced. . . ." (Leary et al. 1965).

GENESIS OF THE FOLLOW-UP STUDY

Recognizing the historical importance of the Concord Prison Experiment, the Massachusetts Department of Corrections had preserved many of the original records of the experiment. Michael Forcier, a researcher with extensive experience conducting research for the Department of Corrections, was aware of the continued existence of a collection of papers from the Concord Prison experiment. These papers included an uncoded list of the names of the subjects in the experiment, a series of progress reports by Leary, correspondence between Leary and the Department, and some personal accounts written by the subjects about their subjective experiences under the influence

of psilocybin.

In 1991, Forcier read an op-ed article about the present author's previously published twenty-five year follow-up study to the Good Friday Experiment, the other major psilocybin experiment that Leary sponsored during his time at Harvard (Doblin 1991). Conducted in 1962 by Walter Pahnke, M.D., then a Ph.D. student working under the direction of Leary, the Good Friday Experiment was designed to evaluate the potential of psilocybin to catalyze religious experiences when taken by religiously-inclined people in a religious setting. After reading about the follow-up to the Good Friday experiment, Forcier contacted this author and offered to assist with a long-term follow-up study to the Concord Prison Experiment. After a quite lengthy process, approval was obtained for the Concord follow-up study from the office of then-Governor William Weld.

RESEARCH OBJECTIVES

This follow-up study was conducted in order to measure the impact of the experimental treatment on recidivism rates from both parole violations and new crimes at 2.5 years post-release, the longest point in time for which base rate statistics for a control group had been gathered, and also to review the records of the criminal behavior patterns of the subjects over a 34-year period. A secondary aim was to seek to interview some of the original subjects in order to determine what they felt were the long-term consequences of their participation in the experiment, and to gather information on any reported linkages between the subjects' experiences under the influence of psilocybin and the nature of subsequent behavior change.

Due to the importance of the Concord Prison Experiment in the psychedelic literature, the long-term follow-up also offered the opportunity to raise awareness in a new generation of students and researchers about what this author then believed was a successfully proven approach to behavior change. It was also hoped that this follow-up might help to catalyze additional research extending and expanding on Leary's pioneering study and its reportedly promising results.

METHODOLOGY

The follow-up experiment was designed primarily as a search of the criminal histories of the subjects, using both Massachusetts and Federal data bases. A supplemental part of the experiment was planned to include interviews with any subjects who were located and willing to be interviewed. The readministration of the same set of psychological measures used by Leary was considered but rejected since there was no way to link any newly obtained results to the initial scores, which were reported only as group averages.

LIMITATIONS OF THE DATA SET

The criminal histories of the subjects in the Concord Prison Experiment for the time period of the experiment and several years thereafter are contained only in file folders in storage at the Department of Corrections. The Concord Prison Experiment took place well before the records of the Department were computerized, necessitating that the follow-up study be conducted primarily through physical examination of the records on site at the downtown Boston offices of the Department of Corrections. Federal records were accessed via computer.

Although a list of the names of the 32 subjects who participated in the experiment was among the papers retained by the Department of Corrections, file folders could be located for only 21 of the original subjects. As a result, there is no way to determine the exact recidivism rate of the entire experimental group for periods of time longer than those previously reported by Leary. Nevertheless, the total recidivism rate as of July, 1964 for the sample of 21 subjects whose files were located is quite similar to the rates reported by Leary for the entire experimental group, demonstrating that the lost folders are likely to form a random subset of the entire cohort. As a result, the recidivism rate for the subsample of 21 subjects at 2.5 years post-release is likely to be similar to that of the entire sample. Furthermore, by comparing the cumulative records from the smaller sample of 21 subjects as of July, 1964 to that of the larger sample as reported by Leary (also as of July, 1964), it is possible to calculate both lower and upper bounds for the recidivism rate of the entire group of 32 subjects at the timepoint of 2.5 years post-release.

REANALYSIS OF THE REPORTED SHORT-TERM RECIDIVISM SUCCESS

In the first follow-up, Leary claimed a remarkable reduction of recidivism rates in the short term as of January, 1963. A careful review of all the source documents, including the base rate study, prove that claims of an initial treatment effect were false. Leary's report of a dramatic treatment effect was the result of a misleading use of the base rate data.

To show an initial treatment effect as of January, 1963, Leary compared the recidivism rates of his experimental group after they had been out of jail an average of ten months (32%) with the recidivism rates of a base-rate group (56%) who had been out of Concord Prison an average of 30 months, a fact that he did not specify. The difference between the two rates was called the treatment effect. However, the appropriate comparison should have been between recidivism rates of the experimental and control groups at similar periods of time post-release. Recidivism is, among other factors, a function of how long someone has been out of prison, with rates rising over time: more time out of prison

presents more opportunities for criminal behavior and police apprehension. Leary's flawed comparison has not been criticized to date, in part because in all the papers in which Leary reported data from the January, 1963 follow-up, he failed to mention that the base rate study figure used for comparison was for recidivism rates at 30 months. Perhaps another factor obscuring this fact is that the base rate study was published in a journal that is not widely available.

Also unreported by Leary, the base rate study contained a graph indicating the recidivism rate as a function of time. It was thus easily possible for Leary to have compared recidivism rates at identical periods of time post-release. When the appropriate comparison between the experimental and control group is made for the identical period of 10 months post-release, the recidivism rate for the control group turns out to be 34.3%, compared to 32% for the experimental group. This results in a 2.3% reduction over the base rates, not the 23% reduction reported by Leary. The 2.3% reduction is not significant and is the same as a finding of no treatment effect.

PAROLE VIOLATIONS OR NEW CRIMES?

As of the July, 1964 follow-up, Leary reported that only two subjects were returned to jail for new crimes, while 14 were returned as parole violators.⁵ The disproportionate rate of recidivism due to supposedly technical parole violations instead of new crimes is the basis of Leary's claim that the Concord Prison experiment was still a success as of July, 1964 despite there being no reductions in overall recidivism rates as compared to the base rate control group. Leary claimed that many of his subjects were returned to prison for minor technical parole violations. He hypothesized that these technical parole violations were due to the extra supervision the subjects received as a result of having been in the psilocybin experiment. Unfortunately, the results of this follow-up do not confirm Leary's claim that virtually all of the subjects in his study who were returned to prison were returned merely for technical parole violations.

Through comparison of the findings of the follow-up with Leary's reported results, it was possible, with some difficulty, to discern how Leary's method of categorization distinguished between new crimes and parole violations. Leary's method counted only the reason for the first reincarceration post-release, ignoring everything occurring after that first reincarceration. As of July, 1964, 12 out of the 18 subjects in the subsample of 21 subjects who had been released prior to this date had been returned to prison. By Leary's counting method, only one of these 12 had been returned for a new crime, while 11 had been returned for parole violations. Of the 15 out of 21 subjects who were returned to prison within 2.5 years post-release, only one was returned for a new crime while 14 were returned for parole violations.

Leary's method, using only the reason for the first reincarceration to determine whether a subject was returned to prison for a new crime or a parole violation, isn't as straightforward as it initially appears. For example, many of the experimental subjects were arrested for a new crime while on parole, immediately or shortly thereafter returned to prison as a parole violator because of the new arrest, then were subsequently convicted and sentenced for the new crime, all within the follow-up period. By Leary's counting rules, these subjects were considered parole violators because they were first returned to prison for a parole violation. They were not counted as having committed a new crime despite the fact that they had, in fact, committed a new crime that directly resulted in a rapid return to prison (initially for violation of parole), followed by a subsequent conviction for the new crime. As another example, several subjects were first returned to prison for a parole violation that was not linked to an arrest (with subsequent conviction) for a new crime, and were subsequently released within the follow-up period. They were then later arrested for a new crime, convicted and returned to prison again for that new crime, all within the follow-up period. These subjects were also counted as having been reincarcerated for parole violations and not new crimes, since their first reincarceration was for a parole violation.

It may be true that Leary's subjects were more closely monitored than other parolees. If that were the case, this intensive monitoring would have resulted in a rapid return to prison for violation of parole for new crimes that had been committed but for which the criminal justice system needed more time to arrive at a conviction. Parolees who were less intensively monitored may not have been returned to prison until they were actually convicted for new crimes. The rapid link between arrests for new crimes and parole violations prior to new convictions, combined with Leary's counting rules, resulted in the illusion that fewer new crimes and more technical parole violations had been committed by the subjects in this experiment. The results look quite different when recidivism due to a new crime is defined as a return to jail during the period of the follow-up for any incident that later resulted in a conviction for a new crime (regardless if the subject was first returned to prison for a parole violation), and a parole violation is defined as a return to prison for anything short of an incident that led to a new conviction (such as not reporting in to the parole officer, not keeping a job, associating with known criminals, or suspicion of or arrest for a new crime but no new conviction). These definitions represent a reasonable criteria; the present author is not certain that these are the exact definitions used in the base-rate study.

Using the above definitions, it turns out that of the 18 subjects who had been released prior to July, 1964, seven (39%) had been returned to prison for a new crime, five (28%) had been returned for parole violations, and six (33%) had not returned to prison. Of the seven returned to

prison due to new crimes, one subject was first returned to prison for a new crime while six had been returned to prison as a result of parole violations linked to incidents that subsequently resulted in convictions for new crimes. Of the five subjects who had been returned for parole violations, two were returned for parole violations linked to a suspicion of a new crime but without conviction. Only three were returned for technical parole violations, in each case due primarily to problems related to the use of alcohol.⁶

Of all 21 subjects evaluated at 2.5 years post-release, eight (38%) had been returned to prison for a new crime, seven (33%) had been returned to prison for parole violations, and six (29%) had not returned to prison. Of the eight returned for new crimes, one was returned first for new crimes and seven were returned for parole violations that were associated with incidents that later resulted in convictions for new crimes. Of the seven returned for parole violations, four were returned for parole violations linked to a suspicion without conviction of a new crime and only three were returned for a technical parole violation, in each case due primarily to problems related to the use of alcohol.⁷

Neither as of the July, 1964 follow-up nor at 2.5 years post-release were a disproportionate percentage of the subjects returned to prison for parole violations as compared to new crimes, when parole violations are defined as returns to prison not linked to convictions for new crimes and recidivism due to a new crime is defined as a return to prison only for incidents linked to new convictions. Only a small minority of subjects who were sent back to prison were returned for technical parole violations, just three of 12 (25%) as of July, 1964 and only three of 15 (20%) as of 2.5 years post-release. Regardless of whether the results of the Concord Prison experiment were somehow an improvement on the ratio of new crimes to parole violations in the base rate study, the distinction between parole violations and new crimes is largely meaningless since the majority of what Leary considered "parole violations" were caused by incidents that later led to convictions for new crimes.

LONGER-TERM RECIDIVISM RATES

Of the 21 psilocybin subjects for whom records could be searched, the actual recidivism rate at 2.5 years (30 months) post-release was 71%, with 15 out of 21 of the subsample having been returned to prison. The bounded range of possible recidivism rates for 2.5 years post-release for the entire experimental group of 32 subjects is 56% to 88%.⁸

The 71% recidivism rate of the sample of 21 is just one percentage point below the mid-point of the range of possible values (72%), again suggesting that the subsample is likely to be a random sample of the entire group. The range of possible recidivism rates is similar to the expected recidivism base rate of 56% at 2.5 years post-release, and

to the previously reported recidivism rate as of July, 1964 of 59%. There is thus no treatment effect, in terms of reduced recidivism rates, at the longest point in time for which base rate statistics for a control group are available. The finding of no treatment effect at 2.5 years post-release is not surprising, given the lack of such an effect as of July, 1964 with subjects from 18 to 26 months post-release.

From 30 months post-release to the time when the present long-term follow-up was conducted (an additional 31.5 years), the total recidivism rate was 76%. One of the six subjects who stayed out of jail for the first 2.5 years post-release was returned to jail after that period of time for the commission of a new crime, while the remaining five subjects were not reincarcerated.

FOLLOW-UP INTERVIEWS

Only three subjects could be located and contacted by phone. Two agreed to be interviewed and one declined. Of the two subjects who agreed to be interviewed, one had returned to prison after participating in the experiment while the other had not. A special meeting was arranged at which the author brought the two subjects willing to be interviewed to the home of Leary for an emotional reunion and tape-recorded interview. The meeting took place on January 20, 1996, several months before Leary died. Gunther Weil, one of Leary's co-investigators on the experiment, also participated in the meeting.

Both experimental subjects expressed their gratitude at being able to participate in the experiment. Both felt that they had benefited personally from their psilocybin experiences and did not suffer any long-term negative problems linked to their psilocybin experience. Both had vivid memories of their psilocybin experiences. Neither had taken a psychedelic drug on his own after the experiment.

The subject who returned to prison spoke about a remarkable experience he had while under the influence of psilocybin. He described it as, "being back in the womb . . . I'm seeing a movie, it's my two older brothers and they're saying, 'Mom, can we go out and play?' 'Sure, Bob, sure, Al, you can go out.' I'm saying, 'Wait for me, I want to go out, too.' She says, 'You can't go out.' And I said, 'Why?' And she says, 'Because you're not even born yet.' It was a funny sensation."

He reflected on the experience and commented, "I firmly believe that I would never have gone back to prison if I had had help [post-release], if someone would have guided me, taken an interest. Who the hell wants to do time?" After his final release from jail, he said he became more responsible, got married and became a father. He reported that his son also had served time in jail, and commented that he wished his son could have a psilocybin experience because it might have helped him see his life options in a new, more responsible light.

The subject who did not return to jail speculated that he was able to stay out of jail primarily because he had a family to return to post-release. The crime for which he went to jail had been committed six years prior to his arrest, which he said came about because he told someone about his earlier crime who then told the police. This subject credited the psilocybin experiences with helping him to stay out of jail, saying, "I know this thing [the psilocybin experience] was great for me in my life for about two years after I had taken it. You know, my wife and I would discuss it every once and a while, and she'd ask me, 'How do you feel?' And I'd say, 'I feel great . . . you and I are together, so I got something out of it.'" He reflected on the content of his psilocybin experience by saying, "You tear your life down and you put it back together."

LEARY'S REFLECTIONS

Leary, though weakened by terminal illness, thoroughly enjoyed the meeting with the ex-prisoners. He reminisced about the elation he frequently felt leaving the prison after a successful experimental session, realizing that he had brought a degree of mental freedom to people behind bars.

Leary also mentioned several elements of the experimental design other than the use of psilocybin that he thought were important but might easily be overlooked. The main point he wanted to make was that "There were no secrets. We gave you guys all the power. . . ." The prisoners were given the results of all the psychological tests that were administered, they could decide on the dose they wanted to take, and they even played a role in deciding which other prisoners could participate in the experiment. At that time, this degree of openness was rare, but Leary chose to be democratic about information and procedures in order to empower the subjects to take greater control over their lives.

Leary elaborated on the theme of relinquishing control. "Giving full disclosure, no secrets, but one of us [the experimental team] would always be in control, we would trade off. Once I really lost it. At one point, I was sitting there talking to the group and it was like a hypnotic thing. Everybody was like really into it, I was really into it, and suddenly I had this flash like you were all in my web, like a spider. I got into a whole control thing, and I felt really shameful about that. The next minute I collapsed. I kind of woke up and I was on a cot and you guys were all looking at me like Mom. I was completely vulnerable, but everybody was so kind and sensitive. It was tremendous."

When asked what changes in the experimental design he would implement if he were to try to replicate the experiment, the first and only change he noted was, "One thing would be to set up the halfway house system. A support system is really needed." The lack of post-release support was the most important weak link in the therapeutic

intervention. This fact was recognized early on, and the experimental team devoted a substantial amount of time to keeping in touch with the subjects post-release, trying to find them living arrangements and jobs, and offering emotional support. The establishment of a half-way house was, however, beyond the means of the experimental team.

A HIGHER STANDARD

When Leary left Harvard, he left science behind and focused on becoming a cultural change agent of the most controversial type. Until now, it has been generally assumed that all his scientific contributions were reliable. Indeed, this author's Good Friday Experiment follow-up study confirmed the basic findings of that Leary-sponsored experiment, although the author did uncover the unreported fact that one of the subjects in the Good Friday experiment had experienced a difficult reaction and was administered a major tranquilizer during the course of the experiment (Doblin 1991; Roberts & Jesse 1998). Whatever his motivations, Leary's misleading reports about the success of the Concord Prison experiment serve as an object lesson in what not to repeat. With the current renewal of research into the therapeutic use of psychedelic drugs after three decades of almost total prohibition, psychedelic researchers must hold themselves to the highest ethical standards in order to retain a measure of trust from regulators and the general public.

CONCLUSION

The failure of the Concord Prison Experiment to generate a reduction in recidivism rates should not be interpreted as proof of the lack of value of psychedelics as adjuncts to psychotherapy in criminals. Rather, the failure of the Concord Prison Experiment should finally put to rest the myth of psychedelic drugs as magic bullets, the ingestion of which will automatically confer wisdom and create lasting change after just one or even a few experiences. Personality change may be made more likely after a cathartic and insightful psychedelic experience, but only sustained hard work after the drug has worn off will serve to anchor and solidify any movement toward healing and behavior change. Psychedelic drug experiences are not sufficient in and of themselves to produce lasting change. Leary, who wrote about the importance of set and setting, knew this as well as anyone, and wrote, "The main conclusion of our two year pilot study is that institutional programs, however effective, count for little after the ex-convict reaches the street. The social pressures faced are so overwhelming as to make change very difficult." (Leary 1969).

Leary took the time during the follow-up interview, conducted shortly before his death, to reiterate what he had previously claimed was the major lesson of the Concord

Prison experiment: the key to a long-term reduction in overall recidivism rates might be the combination of the pre-release administration of psilocybin-assisted group psychotherapy with a comprehensive post-release follow-up program modeled on Alcoholics Anonymous groups to offer support to the released prisoners.

Of course, it is likely that post-release programs would be of some benefit to all people released from prison, regardless of whether they had received psilocybin-assisted group psychotherapy, drug abuse counseling, vocational training, non-drug psychological treatment, any other program intended to reduce recidivism, or even no treatment at all. As a result of the profound psychological effects of psilocybin, a post-release program for subjects who had received psilocybin might differ in both content and importance from programs for subjects who had received other interventions. Whether a new program of psilocybin-assisted group psychotherapy and post-release programs would significantly reduce recidivism rates is an empirical question that deserves to be addressed within the context of a new experiment.

NOTES

1. This article has benefited from extensive critique by Ralph Metzner as well as thoughtful review by Rick Strassman, Tom Riedlinger, Gunther Weil, Charles Grob, and Bob Forte.

2. Experiential accounts by project leaders can be found in *High Priest* (Leary 1968), and in the forthcoming account by Metzner, "From Harvard to Zihuatanejo," in the Leary *Festschrift Timothy Leary—Outside Looking In*, edited by Robert Forte, to be published by Inner Traditions, New York.

3. These personality changes are discussed in detail in Leary et al. 1965, and Leary & Metzner 1968. In the California Personality Inventory, significant changes were noted in 12 of 18 scales (including sociability, sense of well-being, socialization, tolerance and intellectual efficiency.) There were generally no significant changes in the MMPI with the exception of the D-scale going down from test one to test three.

4. Some confusion may result from the fact that the first journal article that Leary published about the Concord Prison experiment (Leary et al. 1965) contains information about recidivism rates as of July, 1964, which showed no overall reduction. Leary's subsequent books and journal articles (Leary 1969; Leary 1968; Leary & Metzner 1968) and historical reviews written by authors to whom Leary spoke (Stevens 1987; Lee & Shlain 1985; Stafford 1979), report recidivism rates only as of January, 1963, which Leary claimed did show a dramatic reduction, and do not even mention that there had been a later follow-up as of July, 1964 which showed no overall reduction. The normal expectation is that later papers and reports contain

the most up-to-date information. As a result of being first exposed to the later papers and reports, this author, as well as many other people, initially obtained the mistaken impressions that there had been no follow-up to the Concord Prison Experiment after January, 1963, and that the experiment had succeeded in reducing recidivism rates. Only in one post-1965 paper did Leary ever mention again that there had been a follow-up after January, 1963 in which the recidivism rates were not lower than expected. Leary was not the lead author in that paper, which was written after almost three decades had passed since the 1965 paper (Riedlinger & Leary 1994).

5. Leary's report of two people returned to prison for new crimes as of July, 1964 conflicts with his report as of January 15, 1963, 18 months earlier, when he claimed that three people had already been returned to prison for new crimes. Subject #9 was returned to prison for parole violations linked to a new crime for which he was not convicted, was released after serving additional time, and then returned for parole violations linked to subsequent convictions for new crimes.

6. Subjects #2, #9, #13, #17, #19, and #21 were returned to prison for parole violations for incidents that subsequently resulted in new criminal convictions. Subject #4 was returned to prison for a new crime. Subjects #5 and #10 were suspected of committing new crimes but were not convicted, while Subjects #12, #15, and #20 were returned for problems related to their use of alcohol.

7. Between the July, 1964 follow-up and 2.5 years post release, three additional subjects were released from Concord. Subject #3 was returned to prison for skipping parole but was not suspected of committing any new crimes. Subject #6 was returned for a parole violation related to

suspicion of involvement in an armed robbery for which he was not convicted. Subject #7 was returned to prison for a parole violation linked to suspicion of involvement in theft, was released after serving additional time, and then returned for a conviction of armed robbery.

8. As of July, 1964, Leary reported that 27 out of the 32 subjects had been released from prison. Of the 27 who had been released, 16 had returned to prison and 11 had not, for a recidivism rate of 59%. In the subsample of 21 subjects, 18 had been released from prison prior to July, 1964. Of those 18 who had been released, 12 had returned to prison and six had not, for a recidivism rate of 67%. Thus, out of the nine subjects who had been released as of July, 1964 and whose file folders were not located, simple subtraction indicates that four must have been returned to prison (16 minus 12) and five were not (11 minus 6). There were also five subjects who had not been released from prison as of July, 1964. In the subsample of 21 subjects, three were released only after July, 1964. Of that three, two were returned to prison for parole violations within 2.5 years post-release while the third was returned to prison for a new crime, but not until after 2.5 years post-release. Therefore, the best possible outcome at 2.5 years post-release would be 56% (18/32; 12 subjects from the subsample of 21 who went back to prison before July, 1964, four subjects from the missing files who Leary reported went back to prison by July, 1964, and two subjects from the subsample of 21 who were released from prison after July, 1964 and who returned to prison within 2.5 years post-release). This lower bound of 56% is exactly what the base rate statistics were for 2.5 years post-release. The worst possible outcome at 2.5 years post-release would be 88% (28/32).

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