Desistance From Crime Through Psilocybin as an Adjunct to Psychotherapy: Updating the Concord Prison Experiment

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Abstract

The Concord Prison Experiment was one of the more famous experiments undertaken with psychedelics. Harvard researchers attempted to reduce the recidivism rate of a group of prisoners in Concord, Massachusetts through the adminstration of psilocybin and group therapy. The methods and results of the experiment are reviewed and suggestions are made for an improved follow-up.

Keywords: psilocybin, desistance

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Prologue

For several decades there was no research openly conducted about the effects of psychedelics[1] on humans. This slowly began to change with the work of Rick Strassman, a psychiatrist at the University of New Mexico who went through the long and difficult approval process to be able to do research on N,N-dimethyltryptamine (DMT) (Johnson, Richards, & Griffiths, 2008; Strassman, 1991).

Among the psychedelic research that occurred prior to this time period, there were two particularly famous experiments conducted by Harvard psychologists including Dr. Timothy Leary. These were the Marsh Chapel Experiment (also known as "the Good Friday Experiment") and the Concord Prison Experiment.

For the Good Friday experiment, twenty Christian divinity students were administered either psilocybin or an active placebo of nicotinic acid before attending a Good Friday service at Marsh Chapel in Boston. The experiment confirmed that psilocybin could facilitate a mystical experience when given to religiously inclined volunteers in a religious setting (Doblin, 1991; Pahnke, 1963).

In 2006 researchers at Johns Hopkins University published the results of a carefully controlled study that confirmed and extended the results of the Good Friday experiment. They have since extended those results, finding that their subjects still attributed personal significance and meaning to the event months later and showed positive personality changes (Griffiths, Richards, McCann, & Jesse, 2006, 2008; MacLean, Johnson, & Griffiths, 2011).

The Concord Prison Experiment has not yet been reproduced.

[1]The term 'psychedelic' is used throughout. The prior terms, 'psychotomimetic' and 'hallucinogenic' both reflect a misunderstanding of the effects of these drugs.

The Concord Prison Experiment

Subjects and dosage. From 1961 through 1963, Harvard psychologists under the leadership of Dr. Timothy Leary conducted an experiment at a maximum security prison in Concord, Massachusetts. The subjects were 32 prisoners who would be eligible for parole within three to five months and who had no more than one previous parole violation. The subjects attended 12 group therapy sessions over six weeks. For two of these sessions they were administered psilocybin. Dosage was individually selected and was typically 20-30mg for the initial round and higher doses of up to 70mg were employed for the second round (Leary et al., 1965).

Rationale of the experiment. Leary provides a brief account of how the therapy should be conducted based on his preferred models. The program was designed around empowering the subjects, avoiding normal roles, and eliminating feelings of helplessness. The subjects were heavily involved in the process and were given access to all their test results. However, Wampold has found that neither the type of therapy nor its theoretical basis are significant factors in the success of psychotherapy (Wampold, 2001). Therefore Leary's discussion of these matters can be disregarded as irrelevant.[2] This leaves only considerations of the use and role of psilocybin.

Psilocybin was selected over other available psychedelics for its short duration and "minimal somatic side-effects" (Leary et al., 1965). Leary's group had previously found that "in a benign, supportive setting and with a favorable set, psilocybin can produce a state of dissociation or detachment from the roles and games of everyday interaction" (Leary, Litwin, & Metzner, 1963). This detachment is thought to lead to insight about behavior patterns and the possibility for exploring alternative behaviors. In addition, the experience can lead to an elevated level of trust for the group. (Leary et al., 1965) Wampold validates

[2] Although it might be possible that this does not hold with psychedelics and in such cases some forms of therapy may work better than others but there is no reason to think that Leary's form in particular is special in this way.

the significance of this latter effect, finding that the alliance between patient and therapist, including trusting feelings, is a key factor in the success of psychotherapy (Wampold, 2001).

Measured results. The effects of the treatment were measured in the form of personality test results, a sentence completion test, behavior ratings made by prison guards, and a comparison of recidivism versus the base rate for the prison. No differences were found on the MMPI. The sentence completion test showed "a decrease in cynical and hostile attitudes towards a variety of social institutions" (Leary et al., 1965). The results of the California Personality Inventory were the most encouraging. There were significant increases on twelve of the eighteen CPI scales, including "marked" changes in Sociability, Sense of Well-Being, Socialization, Tolerance and Intellectual Efficiency (Leary et al., 1965). The recidivism rate as measured eighteen months after the end of the program was not significantly different from the base rate, with 59% returning to prison within that time period versus the base rate of 56% (Leary et al., 1965).

Problems and Improvements

Counting problems

In 1998, Rick Doblin of the Multidisciplinary Association for Psychedelic Studies published the results of a follow-up to the Concord Prison Experiment. For the follow-up he examined the methods and results of the original Concord experiment and attempted to track the progress of the subjects since the experiment through criminal records and personal interviews. Doblin noted some serious problems with the study. In particular, Leary had published an initial positive report using data from January 1963 suggesting that the recidivism rate had been reduced. However, this report was based on a comparison of subjects at average 10 months from release out with controls at average 30 months out (Doblin, 1998). This comparison is simply invalid.

In his later paper using the final July 1964 data, Leary says that although the overall recidivism rate had not gone down, a great proportion of the parolees had returned on

minor parole violations and so the rate of new crimes had been reduced. However, there was a problem with the definition and counting method he used. Leary counted only the reason for the first incarceration. However, many of his subjects returned to prison on parole violations for incidents that later resulted in convictions. When this is taken into account, the results for the experimental group are similar to the base rate measured for the prison (Doblin, 1998; Leary et al., 1965).

Post-release support program needed

Desistance from crime is a difficult proposition. Though definitions and measurements vary, one figure is that 47% of all released prisoners are convicted of a new crime within 3 years (Langan & Levin, 2002). The desistance literature has identified a handful of effective routes to desistance, including attachment to a spouse, stable employment, aging out, and transformation of personal identity (Laub & Sampson, 2001). It is this last route which is the proper target of a psilocybin behavior change program. Although psychedelic experiences can be very compelling, it is still unreasonable to expect major transformations without continued effort at integrating the wisdom gained.

The Concord experiment was originally intended to include a post-parole phase. However, this did not actually occur and there was only disorganized and limited contact with the subjects following release (Leary et al., 1965). Any new experiment would ideally include a follow-up therapy program lasting one year post-release since the probability of reconviction remains high through this period (Langan & Levin, 2002).

It would likely be worthwhile to move the bulk of the program to post-parole. Leary found that "it is highly undesirable to have an inmate return to the same frustrating environment after experiencing an internal liberation" and suggests that the program should begin immediately upon parole rather than before (Leary et al., 1965).

A controlled experiment

The comparison data for the Concord Prison Experiment came from data assembled by Harvard graduate students Ralph Metzner and Gunther Weil who published a separate paper in 1963 describing the base recidivism rate for Concord prison for those released in 1959. Although that paper does provide return rates for various groups based on a number of criteria, there is no exact match for the criteria used in the psilocybin experiment — parolees with no more than one previous parole violation (Metzner & Weil, 1963). Instead the overall rate for parolees was used as the basis for comparison.

Although a better comparison could have been made by measuring the return rate for parolees with no more than one previous parole violation, the results of the experiment would have been more interesting and worthwhile still if a placebo control group had been used. This is particularly important for an experiment in which the subjects are given ongoing feedback. Since the subjects were given the results of their personality tests as well as the performance review and behavioral rating surveys completed by the guards, we can expect some change on that basis alone. A control group taken through the same process but without being administered psilocybin would provide a suitable basis for comparison.

Further, it is not clear how much of the change seen on the California Personality Inventory and the sentence completion test could be due simply to the elevated emotions associated with approaching an upcoming parole date. We also do not know how much of this change comes from expectancy effects, which could have been countered if there was a control group which had been briefed the same way about the treatment.

Subject selection. We know that not only were the subjects hand-picked for the study, the already-selected subjects were involved in aiding the selection process. This was part of the overall plan of empowering them (Doblin, 1998; Leary et al., 1965). However, this causes some issues for the validity of the experiment. Under such a system, if the experimenters were able to identify subjects with the most hope of not returning to prison, then they might be able to show a treatment effect without doing anything at all beyond

carefully picking the subjects. This would not be as much of a problem if some portion of the subjects were randomly set aside as a control group rather than comparing against the base rate for the prison.

Blind where possible

It has been noted that it is not possible to maintain a fully blind experiment with psychedelics because the subjects are able to easily identify the effects (Gouzoulis-Mayfrank et al., 1998; Grieco & Bloom, 1981). In the case of the Good Friday Experiment, all subjects were able to determine whether they had received psilocybin or the active placebo (Doblin, 1991).

There are some measures that can be taken to somewhat counteract this difficulty. In some cases, a sub-psychedelic dose of the same drug may be used as was the case with Pahnke's later experiment using LSD-assisted psychotherapy with cancer patients, as well as a more recent experiment using ketamine-assisted psychotherapy with former heroin addicts (Krupitsky et al., 2002; Pahnke et al., 1970).

The 2006 Johns Hopkins psilocybin experiment used the stimulant methylphenidate ("Ritalin") for an active placebo. The patients and monitors were informed that a list of various drugs may be administered in place of psilocybin. The monitors were asked after each session what they thought the patient had received and they were wrong in 23% of the cases (Griffiths et al., 2006). This number is fairly high and was likely possible only because the procedure for the experiment called for the subjects to remain still and introspect for most of the session.

Another option is to use an enactogen such as MDMA. Besides producing pleasant emotional effects, the enactogens have some stimulant and pseudo-psychedelic effects which may make them suitable as an in-between case between stimulants and psychedelics (Gouzoulis-Mayfrank et al., 1998). However, enactogens are unlikely to be a viable option for blinding when the experiment is testing any form of psychedelic therapy as enactogens

are likely to be beneficial for the same use.

Non-participants. Leary notes that the subjects of the Concord Experiment were placed under closer scrutiny and this could have led to an increased likelihood of returning to prison due to minor parole violations (Doblin, 1998; Leary et al., 1965). This really should never have been an issue because the subjects' participation in the experiment should have been held confidential. In any such experiment, confidentiality should be upheld to the extent possible. Where it is not possible to obscure the subject's participation, it should at least be possible to keep secret whether a given subject received the placebo, and the subjects should be discouraged from discussing this information with government personnel including their parole officers.

Screening Participants

Johnson et al. (2008) provides some recommendations for selecting volunteers for any psychedelic study. Most importantly, anyone who meets the DSM-IV criteria for schizophrenia, other psychotic disorders, or bipolar disorder should be excluded, along with those who previously met such criteria and those with first or second-degree relatives with any of these disorders.

A prison population provides an additional significant concern for volunteer screening. Perhaps 46% of the prison population meet the criteria for Anti-Social Personality Disorder (Fazel, Danesh, et al., 2002). These individuals' behavior likely stems from differences in the function of certain limbic and paralimbic structures (Kiehl, 2006). ASPD is a negative indicator of the likely success of psychotherapy generally (Bateman & Fonagy, 2000; Woody, McLellan, Luborsky, & O'Brien, 1985) and it is unlikely that this would be any different in the case of psychedelic assisted therapy. For any new study, the Hare Psychopathy Checklist-Revised should be included in the screening process and anyone scoring high on the test should be excluded from participation.

Additional Recommendations

The setting where psilocybin or another psychedelic is administered is a significant concern. It was previously understood that setting is a significant factor in the experiences produced during psychedelic sessions. This knowledge has not been universally respected and Strassman notes that the clinical environment where he conducted his work seems to have led to an increased incidence of difficult experiences[3] such as being examined by extraterrestrials (Johnson et al., 2008; Strassman, 2001). Johnson et al. (2008) notes that the facility used at Johns-Hopkins is a "living room-like" environment with a couch, pillows, rugs, and so forth.

Johnson et al. (2008) also emphasize the importance of the interactions of the study staff with the volunteers in any psychedelic study, noting that although "treating volunteers respectfully is an ethical imperative for all human research... with hallucinogen administration research, the importance of this mandate is even more compelling given the powerful influence of set and setting on hallucinogen effects." For this reason, everyone who will be interacting with the subjects should themselves be carefully selected and informed concerning the importance of their demeanor prior to the session.

One final guideline for conducting any psychedelic study is curiously missing from the literature. Perhaps the most important factor in the qualifications of a session monitor or therapist is that they have themselves had previous experience with psychedelics such as those being used. This is critical for their ability to empathize with the subject. Also, a monitor or therapist with the benefit of past experience with psychedelics will be able to identify with confidence the somatic effects that may occur early on in a session and assure the subject that everything is normal.

[3]The term 'bad trip' is to be avoided — difficult experiences can be as valuable or more as compared to the much more common pleasant experiences people have with psychedelics, and with the caring assistance of an experienced sitter, the one can be turned into the other.

Final Remarks

Dr. Leary originally targeted criminal recidivism for study because it is an unforgiving measure of psychological change. The failure of the original Concord experiment to produce a reduction in the recidivism rate only serves to reinforce its value as a measure. The changes measured on the California Personality Inventory are encouraging, and perhaps a new experiment with carefully screened participants and coupled with a post-release program would see an actual reduction in the recidivism rate.

Any attempt to perform a new experiment like the Concord Prison Experiment carries with it some risks. The program would likely be under close public scrutiny and there is a chance that any crimes committed by those who had been participants would receive media attention. Also, a negative result could lead to public criticism of the research. With renewed psychedelic research in its infancy, it may be best to wait some time before revisiting the Concord Prison Experiment.

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