THE HYPNODELIC STATE

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Ullman: I'm not at all discouraged by what we've accomplished thus far. We've been attempting to establish a meaningful level of discourse for all concerned, and this includes people from many different disciplines and interests. We have clinicians, and researchers in psychology, psychiatry, chemistry, pharmacology, biology and biochemistry and even in parapsychology. We have writers and a philosopher.

We are trying to establish this mutual understanding around the most elusive of all scientific concerns, namely psi events. Not only are we engaged in an effort at a meaningful scientific exchange, but we are doing this as a group in the process of becoming a group. Yesterday we had a polite testing experience; I think today we can feel free in our comments and criticisms.

Our first essayist is Dr. Ludwig on "The Hypnodelic State."

Ludwig: Thank you, Dr. Ullman. I wish you had waited another day before you gave the group the freedom to criticize more freely.

I plan to present some recent work; I'm not certain what relevance it may have to psi phenomena, and I will leave it to the experts to see its implications.

The hypnodelic technique has several roots, and I would like to speak about these roots before I describe this particular state and the treatment technique.

The work started at the Federal Narcotics Hospital in Lexington, Kentucky. My interest in this area stemmed from a desire both to understand narcotic drug effects and to evaluate their psychological components in drug addicts.

For purposes of definition, we ought to talk about two conditions in the narcotic drug addict. One is the drug state, in which the addict takes the drug and has several different types of experiences–emotional, subjective, as well as physiological. The other aspect has to do with the withdrawal state. When the drug is abruptly withdrawn from an addict, you tend to get a whole variety of physiological, emotional, and psychological changes. Dr. Lyle and I decided to study what contribution the psyche made to both these conditions. We took a group of 11 postnarcotic drug addicts and trained them in hypnosis. Then we gave them the suggestion that they were back on the street in their home town, New York, in most cases, and that they had secured some heroin. While they were in the trance state, we encouraged them to give themselves a "fix" intravenously.

We used certain physiological measures (blood pressure, pulse rate, pupillary size, respiration) as well as behavioral measures and subjective accounts. The results were quite interesting. Our better subjects took their belts off immediately, wrapped them around their arms, pulled them tight, and with an imaginary needle gave themselves a shot. Then they began going through the typical picture of what you would expect with the administration of heroin. Pretty soon they drifted off into a narcotic drug "high." Their lower lip drooped and they began drooling. We were quite impressed with how real this looked, and we had certain observers come in to make critical observations of their behavior. I won't go into this in detail, since reprints of our study are available.[1]

The results were even more dramatic when we told these hypnotized subjects that they had been picked up by the cops, that they had been placed in jail, that their supply of heroin had been cut off, and that 24 hours had elapsed. Soon the subjects began showing full-blown withdrawal effects.

ULLMAN: Had these subjects experienced withdrawal effects before?

LUDWIG: Yes.

MUNDLE: How did you get them to imagine so vividly? Just by suggestion?

LUDWIG: Yes. These well-trained hypnotic subjects were not only able

to imagine these suggestions very vividly, but to show the appropriate physiological effects.

We also administered morphine to subjects under hypnosis and gave them the posthypnotic suggestion that they had only received saline, no drug. Then we awakened them from the hypnotic state and observed them through a one-way mirror. We also interviewed them at half-hour intervals throughout a four-hour period. More than half of them denied having any narcotic effects.

TART: Were these your better hypnotic subjects?

LUDWIG: Yes. It's interesting to note that even though they denied having any drug effects, it was quite apparent from the physiological measures that they were having these effects.

FINER: We carried out a number of experiments under hypnosis, in which we tried to block the circulatory changes that were causing pain in the arm by a beta sympathetic blocking agent. It is interesting that when we gave saline and the subject assumed that we had given him a blocking agent, we obtained the desired physiological effects, but that when we administered the blocking agent but told the patient it was saline, the blocking effect did not occur.[2]

LUDWIG: To continue, it was about this time that Dr. Levine and I started working together. Dr. Levine was impressed with the accounts that narcotic drug addicts were giving after having received LSD, such as wanting nothing more to do with all drugs. This was especially impressive since they "didn't know," theoretically, that they were getting LSD, and also because the drug was given in an experimental setting rather than a treatment setting.

Both of us were very skeptical about the claims for LSD. Yet we were feeling rather frustrated in our efforts to treat the narcotic drug addict. The treatments available at the time were very unsatisfactory, so we decided to try LSD.

Of the several hundred addicts who were treated at the Addiction Research Center with LSD, only a few reported this therapeutic experience. We tried to conceptualize a means to optimize the therapeutic potential of LSD. In other words, how could we take advantage of the LSD effects and insure that a higher percentage of patients would be responsive to the treatment technique? Since I had been doing some work with hypnosis and narcotic drug effects, it followed naturally in our discussion that we might

combine hypnosis and LSD as a treatment procedure. Through the use of hypnosis we might be better able to structure, direct, and control the LSD reaction in order to maximize its therapeutic potential.

We chose 12 addicts for a pilot project, and we were impressed with these patients' reports following our "hypnodelic therapy," as we named it. They began to make dramatic claims that they saw "the light," that they felt better, that they wouldn't take drugs again, that they understood themselves. From a technical point of view we were impressed by how well we were able to structure, to modify and direct the LSD experience through the use of hypnosis. Our initial bias was that we could not really envision that a free-floating LSD effect could by itself be therapeutic. We believed that if a patient was to receive optimal benefit, it would be important for him to understand the nature of his problems and to see their implications in terms of his relationships with others. While under this experience, we wanted the patient to learn new ways of coping with his difficulties rather than just have a mystical experience. We wanted to treat patients within a more traditional insight-oriented therapy model, and we were quite successful in having patients focus on their problems during LSD.

After this pilot work, because of the intriguing claims made by the patients, we decided to set up a controlled experiment with 70 patients. We compared five different treatment conditions, assigning patients to these conditions on a random basis.

The conditions were as follows:

Hypnodelic therapy: a combination of hypnosis plus LSD plus psychotherapy;
Psychedelic therapy (which is different from what others call psychedelic therapy): this is LSD plus therapy;
Delic therapy: which is LSD alone;
Hypnosis plus therapy; and
Psychotherapy: alone.

There were certain other combinations we could have investigated, but these five variables were the ones we wanted to evaluate.

Before the treatments, all the patients were tested with certain psychological measures, which were repeated two weeks and two months after therapy. At this time we were able to differentiate among the treatments. The hypnodelic therapy did produce a greater constructive attitude change and greater symptom relief as recorded by our measures, compared to the other treatments. There were certain differences between the other treatments, but I will not go into details.

TART: Was there a long-term follow-up on the results?

LUDWIG: No. This was an in-patient study in Lexington, and most of the addicts came from New York.

WEBSTER: How much LSD did you use per dose?

LUDWIG: We used 2 micrograms per kilogram body weight.

WEBSTER: Did you use any massive dose of LSD?

LUDWIG: No. This would be considered a moderate dose. The delic treatment also was with a moderate dose. We wanted to compare the same dosage for all the different approaches.

FINER: Had you taken LSD yourself previously?

LUDWIG: Yes. I had taken it once before starting the project. We had tossed a coin between us, since we felt that at least one of us should take the drug so we would know something about it.

AARONSON: Did the loser or the winner take the drug?

LEVINE: May I comment about the dosage. In psychedelic therapy at Spring Grove State Hospital, Drs. Kurland, Savage, and Unger use larger doses of LSD. Their feeling is that by so doing, a greater percentage of the patients will experience the transcendental state. However, let me point out that it is quite possible to get these experiences in a certain percentage of people with much lower doses, even with 50 micrograms. The amount of drug used at Spring Grove was determined by the fact that they wanted to be sure of getting this transcendental experience in as many patients as possible. But I have observed some sessions at Spring Grove, and talked extensively with Drs. Savage and Unger, and I would say that most of the experiences their patients had, we also saw in our patients at the lower dosage.

OSMOND: Your patients were not alcoholics, anyway. We have reason to suppose that they have some sort of resistance.

LUDWIG: This is a good point. There are differences between narcotic drug addicts and alcoholics. The addict is a very experienced person in terms of savoring altered states of consciousness; perhaps he feels freer to give himself to the experience than the alcoholic.

Another observation we made in our initial studies pertained to the al-

tered states of consciousness involved with these various techniques. We were interested in determining whether these particular states that were produced were different from one another. To assess this we used a modified Linton-Lang questionnaire,[3] specifically designed to evaluate alterations in consciousness. This questionnaire, as modified by us, had the following scales: alteration of thinking, disturbed time sense, loss of control, meaning change, affect change, body-image change, and somatic change. We also used a total score.

AARONSON: Why didn't you use the Addiction Research Center Inventory?

LUDWIG: We felt it was not as appropriate as this scale. The Addiction Research Center Inventory was set up to differentiate among different drug effects, and did not seem sensitive to changes that might be produced by hypnosis, at least as we conceptualized it. The Linton-Lang scale seemed to be a very sensitive instrument for picking up some of these changes, so we decided to work with that.

TART: Isn't the Addiction Research Center Inventory awfully long, as I recall it?

LUDWIG: Yes, it is very long, but you can administer parts of it.

TART: If you administer these tests in a psychedelic state, the state is liable to change radically by the time you arrive at the end of the test.

LEVINE: Dr. Haertzen, who has developed the ARC Inventory, noticed that if he administered it to people before and after they received LSD, they finished the Inventory much more quickly after they had taken the drug. They said they wanted to rush to finish so they could get back into the "state." In order to do the task, they had to stop the experience they were in a hurry to get back to. So they did it as fast as possible.

TART: I recall from my own experience on card-sorting tests that I would read the questions and that, if it were a desirable sort of change, I would take a couple of seconds to produce it and then throw the card in the "True" pile, and if it were an undesirable sort of change, throw it in the "False" pile immediately. I think that the subjects can manipulate the symptoms considerably and give you a very strange picture of what is going on.

AARONSON: Subjects like you we don't need.

LUDWIG: Dr. Levine and I had to deal with some methodological problems, some of which you mentioned. One of the most difficult conceptual problems was that of validity. How do you evaluate the truth of a response, such as: "I'm feeling as though I am part of the universe." What objective yardstick can you use? We decided it is obvious that there is no objective yardstick.

AARONSON: In objective tests you do not need to worry whether the answer is true or not, because it does not really matter.

LUDWIG: For research purposes, we were not going to make any assumptions regarding the truth or falsity of the answer. All we were interested in was whether patients under different conditions answered particular items more frequently than other items. On an operational basis, we were only assessing the frequency of endorsement of items. We found that the hypnodelic state produced a significantly greater alteration of consciousness than the other conditions on almost all of the scales, and definitely in terms of the total score. The hierarchy of alterations in consciousness was as follows: hypnodelic therapy > psychedelic = LSD alone = hypnotherapy > psychotherapy.

OWEN: Did you look for interactions?

LEVINE: No, we didn't.

OWEN: If you had three or more treatments and hypnosis alone, you would have been in a position to examine all the interactions.

LEVINE: Yes, that's correct. But we would have had to treat a greater number of subjects, and there wasn't the time for that.

OWEN: You wouldn't have needed more subjects.

LEVINE: We felt that we did, in order to have sufficient cases in each of the cells.

AARONSON: If you used the analysis of variance design, you could have achieved your interactions.

LEVINE: We didn't use a two-way analysis of variance; it was a one-way analysis of variance.

LUDWIG: Since the hypnodelic treatment produced, at least by our measures, the greatest constructive attitude change, and also the greatest

alteration in consciousness, we decided to study the correlation between depth of alteration in consciousness and therapeutic change. We found a very intriguing relationship: the correlation (.35) was high enough to be significant, but not to give any definite answer.

TART: Is depth of alteration of consciousness here operationally defined as total number of items endorsed?

LUDWIG: Yes. That is correct.

FINER: How did you measure the therapeutic change?

LUDWIG: Through the Psychiatric Evaluation Profile.

MUNDLE: If I understand correctly, you found a positive correlation between therapeutic change and change in consciousness which was almost, but not quite, statistically significant?

LUDWIG: It was statistically significant, but the order of magnitude of the correlation was not high. It was a .35 correlation, which means that there was approximately a 10 percent common variance.

In these initial studies there was a number of loopholes. Perhaps the most important was that we couldn't do follow-up studies on these drug addicts and get actual behavioral measures of their adjustment in the community.

I have recently been involved in a study on a much larger scale, this time involving alcoholics. In this study we evaluated four different basic treatment techniques: hypnodelic therapy, psychedelic therapy, drug alone, and no therapy.

TART: I'm not sure that I understand your definition of psychedelic therapy. You gave the subjects LSD, and then what?

LUDWIG: Then we began talking about their problems.

TART: So it's LSD plus psychotherapy?

LUDWIG: Yes. Also, these subjects had standard psychiatric information-gathering interviews with the therapists during which an effort was made to outline what their major problems were. At the time of psychedelic therapy, these problems would be brought up with some attempt at resolving them while the patients were under the influence of the drug.

In this study, which involves alcoholics, we have treated 176 patients, and have involved 13 psychiatrists in the treatments. Both patients and

therapists have been assigned to all the categories on a random basis. We use a number of measures before and after treatment while in the hospital, and we are also getting detailed follow-up data outside of the hospital (3-, 6-, 9-, 12-, and 18-month periods). Within the next months we shall have some more definitive answers about the usefulness of these techniques and shall be able to draw some conclusions.

OSMOND: How do you rate therapists' efficiency? This seems to me a very crucial variable, exceptionally difficult to rate. Suppose you had the best treatment, but unluckily you got the worst therapist among the 13; and on the other hand, you had the worst treatment and the best therapist. In both cases, you would end up with a kind of medium condition. How do you guard against that?

LUDWIG: Right. We do have a way of guarding against that. Each therapist is responsible for treating at least one group of patients which includes each one of the different treatment categories. Actually we had 8 treatment categories, 4 x 2 design, in which some of the patients were assigned Antabuse upon discharge, and others were not; but each of the therapists would be responsible for treating at least one patient in each of these different conditions in order to minimize bias. Our feeling was that if there were anything inherently beneficial to these techniques, it should override the therapist variable. If there is any real potency in these techniques, it should be objectively demonstrable. I'm more interested in the science of therapy than in the art. These treatment techniques should be effective across therapists.

OSMOND: I don't think they are. There is the famous case of a therapist who managed to produce a paranoid state in 23 of 24 LSD patients. The person who originated the treatment got satisfactory results in the same setting.

LUDWIG: We have been fortunate in this respect. We have had only two somewhat adverse effects in 176 patients.

OSMOND: I think it is an important variable. You obviously have not been quite as unlucky.

AARONSON: I feel that selecting the therapist is not a matter of art versus science. It is part of your science to select which person you are going to let interact with another person.

LEVINE: We have some preliminary data; we looked at the 13 therapists versus the four treatment groups in a two-way parametric analysis of variance design. First, there were no differences among the therapists; and second, there were no interaction effects. The amount of variance accounted for by the therapist variable compared to the total variance was very small. I hope this answers the question.

AARONSON: I don't think the problem here is to assess how "good" or how "bad" a therapist is. There are studies[4] that show that particular kinds of therapists work better with particular kinds of people.

LUDWIG: This is all unexplored in the area of psychedelic therapy, and I think it's an appropriate point. There are certain disadvantages in using many therapists, but one main advantage is that we are on a safer ground for generalizing if the results hold up with all therapists.

TART: Another big problem in psychotherapy research, which I'm sure you're aware of, is the implicit assumption that "a therapist is a therapist, is a therapist," and that they are interchangeable units, which they are obviously not. By using a large number of therapists you are partially getting around this problem, but you introduce a source of variability which could tend to obscure the real effects of different treatment modalities.

GILBERT: Would it be possible during the stages of the treatment, and afterwards in the follow-up, to detect if your patients exhibited any kind of psi phenomena? It would seem to me a marvelous opportunity.

LUDWIG: I agree with you. It would be a marvelous opportunity. Unfortunately, however, our follow-up forms are not geared toward picking up these phenomena. On the other hand, I'm certain that if statements of this kind were made, our co-workers would probably not record them.

MUNDLE: May I congratulate Dr. Ludwig? Rarely have I learned so much new information in 40 minutes. Obviously the experiments he has been doing were extremely well designed. Could I ask him one question concerning his questionnaire, which is used to test changes in states of mind? Several questions concern the sense of time: "Has time been passing slower or faster than usual?" This seems to me a perfectly clear question, and I think you would get clear answers. Then there's a question, "Has time ever come to a standstill or stopped now and again?" I would be

terribly interested to know whether any of the subjects did answer this in the affirmative while under the influence of LSD. Then there is question No. 7 in the Inventory: "Have you ever lost your sense of time?" I don't know what that question means. What answers did you get? As a philosopher who has spent a lot of time thinking about problems concerning time, I would be most interested to hear your comments.

LUDWIG: I can give you exact information in terms of frequency of endorsement for each of the items, as well as scale analyses for the 70 subjects. On question No. 7 the frequency of a positive answer was 13 out of 14 patients in the hypnodelic treatment, 9 out of 14 in the psychedelic, 10 out of 14 in drug alone, 11 out of 14 in hypnotherapy, and 6 out of 14 in psychotherapy alone. In other words, almost everybody answered "Yes."

MUNDLE: Do you think they understood what the question meant? Did they interpret it as meaning what you meant by it?

LUDWIG: I think they did know, but from a philosophical point of view this gets difficult, as I'm sure you are well aware. We decided to play it safe, I mean in terms of interpreting whether time *really* came to a standstill for them. We simply decided to record frequency of endorsement as an operational measure to differentiate among the particular states. All the items you mentioned are endorsed very frequently under LSD and hypnosis, since the subjects do experience (or say they experience) a disturbed time sense.

TART: Essentially the only interpretation you are making is that your subjects are saying, "My time sense is disturbed."

LUDWIG: Yes.

AARONSON: It would be difficult for the subjects to talk about the world outside of themselves. Professor Mundle seems to be insisting that they would.

MUNDLE: I'm concerned with their perception, their experience, and their introspective reports. But I would like to pursue the discussion later, privately.

LEVINE: I would like to reinforce what Dr. Ludwig said earlier regarding our experimental design. We are comparing independent groups of people who have been subjected to different procedures. What we ask is, "Does one group differ from the other group?" In this way, we circum-

vent the truth-or-falsity issue. I agree that it doesn't answer the basic issue of whether time sense really is changed, or not.

AARONSON: I object to this *really* changed, or not, because how would you know?

LEVINE: I don't really know, and that's why we use a comparison design.

TART: I would like to make a comment on test construction for the nonpsychologists in the group; it might help to clear up some of these problems. Most of us think of a test as a situation in which you ask questions that are supposed to be meaningful, and the subject answers "yes" or "no," and you interpret the meaning. This is not the way most psychological tests are constructed. You can construct a test using nonsense words, using figures with extremely ambiguous sense, and simply administer these to groups of people under different experimental treatments and see if particular items are endorsed with different frequencies. You need have no idea at all of the meaning of your items in the test. Of course, some day when you get around to interpreting what the different scales mean, then you start getting back into what the meaning of the individual items are.

AARONSON: You need never know what the individual items mean. We only need to know what the scales mean.

TART: Yes, but at the end we are all tempted to try and figure out what our tests mean, rather than simply saying they discriminate in such and such a way.

AARONSON: As long as you know what your test is discriminating, you can get performance on the test.

LUDWIG: I think we can say, on the basis of our results, that our subjects reported a greater sense of disturbance of time. Now whether our subjects *really* experienced a greater disturbance of time is impossible to determine; there is no objective yardstick for measuring this. We can, though, objectively measure whether they say they're experiencing it.

FINER: Did any of the therapists actually mention time when talking to the subjects? Could it have come in as a suggestive element?

LUDWIG: We were well aware of this problem, and took special pre-

cautions to avoid any comments relating to any of the items on the scale.

OWEN: It seems to me that there is no meaningful difference between saying that the patient *thinks* he experiences something or that he *really does* experience it.

BELOFF: He still answers what he thinks he experiences.

LEVINE: There may be a difference in what he says he experiences and what he does experience. There could be a response bias: some people tend to endorse certain items in a positive way and others tend to endorse the same items in a negative way, the so-called "yea sayers" and "nay sayers."

LUDWIG: In some of our other studies we found that subjects have a tendency to endorse certain items highly correlated with social desirability. In other words, to appear socially desirable they will tend to endorse certain items which make them look better. In a previous study[5] on the relationship of attitudes to behavior, there was a strong indication that what somebody said had no relationship at all to what he did. We don't have to go too far to corroborate this finding. We may think certain things and not say them. We may say certain things and not do them. If you're interested in assessing therapeutic change, you have to ask yourself whether you are interested in what patients think, what they say, or what they do, or all of these things. It is very possible that there may not be much relationship among these variables.

OWEN: All I have heard makes me feel that parapsychology is probably an easier subject than psychology.

MUNDLE: I'm very sorry that my question has led the conference into discussing the very fundamentals of methodology in psychology. I think it would be more profitable if we returned to the important and interesting results of the experiments by Drs. Ludwig and Levine, rather than try to solve virtually unsolvable differences of opinion among psychologists about their methodology.

PAHNKE: I wonder if you could comment about the actual control that you have over the drug experience with hypnosis. Are you able to control the experience very well? Much better than when you don't use hypnosis? You didn't train your subjects too much, did you?

LUDWIG: Well, we trained the addicts in hypnosis prior to the study, as I mentioned earlier. With these subjects we were able to exert exquisite control in the sense that the suggestions of the therapist provoked immediate responses in the subject. The subject is able to make instantaneous transformations of his affect.

PAHNKE: Did you ever try thinking of things and not saying anything?

LUDWIG: No, we didn't investigate this. But in terms of verbal commands, we were able to control the session structure very well. Some of the subjects, when they came out of the hypnodelic state, felt as if they had been just under hypnosis, even though it was quite apparent that they had a very profound drug reaction. What had taken place was more a result of their interaction with the therapist.

LEVINE: You must realize that these are experienced narcotic drug users. They are now given a pretty good dose of LSD and are hypnotized. After their experience they are asked, "How do you account for the things you experienced?" They answer, "Well, the hypnosis." This is surprising, because these people are able to differentiate, for example, an injection of morphine from an injection of heroin.

LUDWIG: Answering Dr. Pahnke's questions, I might make several observations. First, we found that it was essential to hypnotize the subject prior to the onset of the drug effects. Second, some subjects did resist hypnotic induction. And third, depending on the degree of trance achieved, we obtained greater or lesser degrees of control.

AARONSON: In the therapeutic literature it is reported that subjects will go as deep as they need to.[6] Did you find the same thing? And if that is so, why talk about the degree of trance?

LUDWIG: I think you are correct: subjects will go as deep as they need to. We were quite surprised with some subjects, who did not show much suggestibility at the initial evaluation. At the time of the treatment, these subjects would give themselves completely to the experience, relinquish control, and would go into what we would describe as a deep trance.

AARONSON: Do you know my views on suggestibility?

LUDWIG: Yes, I do, but I'm not sure that I agree. We noticed that during the session the trance lightened periodically. If we came across

traumatic material, the subjects often handled it by lightening the trance or by concentrating on the drug symptoms.

PAHNKE: Could you deepen the trance to get them back?

LUDWIG: We developed techniques to do this, yes.

TART: How did you tell it was lightened? What were your criteria?

LUDWIG: They might open their eyes and look around and begin paying attention to the colors.

TART: I have done extensive work with self-report scales of hypnotic depth.[7-13] You ask the subject to rate how deep his trance is on a 10-point scale. It is very easily taught and can provide an almost minute-by-minute measure of how deeply entranced the subject is at any moment, at least experientially.

MUNDLE: In comparing the results of what you call psychedelic treatment (LSD plus therapy) and delic treatment (LSD alone, without therapy), you said that there was no significant difference in the efficacy of these two methods for therapeutic purposes. This implies that the therapy makes no difference, which should be a bit shattering to those who believe in therapy, and if it is so, obviously it needs confirmation. I've no doubt you will be hotly challenged by therapists, but have I got the facts right? As far as you are concerned, there was no evidence of any significant difference in the therapeutic effect of giving LSD alone without therapy, and giving LSD with therapy.

LUDWIG: That is correct. I think it would be unwarranted to draw any conclusion at this time, though. First we would have to establish a baseline, by comparing a therapy and a no-therapy condition. But I certainly think this would warrant further investigation.

LESHAN: Speaking as a therapist, I would say that there was only a very indirect measure of a therapeutic effect. The only valid measure would be how long they remained free from drugs. Since there was no follow-up, we cannot really tell what the therapeutic effects were. It is an incomplete experiment.

May I ask a question, addressed to the group at large. I wonder if any of you could suggest ways in which this extremely stimulating study could be of value in parapsychological research?

TART: Using a combination of hypnosis and psychedelics might help

to produce a state favorable to psi. This kind of work indicates that you can get control over the psychedelic state, which makes it look much more favorable to psi.

OSMOND: I agree. I think it is interesting that you could achieve control over the patient's affect. It is most encouraging. Did you try, however, to evoke the experience without LSD?

LUDWIG: No, the closest we came to that was in hypnotherapy, in which we attempted to use the same procedures except for the absence of the drug.

OSMOND: Dr. Fogel[14] was able, by hypnotic suggestion, to evoke the LSD state without LSD in a person who had taken LSD on other occasions. He was also able to remove the effects of LSD.

LUDWIG: Oh, I see what you are asking. I'm sorry. I misinterpreted this. One of the conclusions that we drew from our work with narcotic drugs after evoking both withdrawal effects as well as drug effects was that, even though we were able to produce very realistic states, significantly different from control conditions (we also had faking subjects and acting subjects as a comparison), we definitely felt that these were "as if" states. They approached the real states, but were not quite the real states. The subject themselves, questioned afterward, said they almost felt as though they had the experience, but it wasn't quite the real experience. Dr. Levine and I also tried to hypnotically evoke the LSD experience in a former LSD subject. It was a very unsatisfactory attempt. He really worked at trying to re-experience the drug state, but he couldn't quite make it.

OSMOND: Actually with Fogel's cases it was a clear-cut carrying on. I imagine it is a matter of luck as to how good your subject is. Looking at the general picture of narcotics addiction, if you could teach people to develop a self-hypnotic shot, this would be a great advantage over methadone. It seems to me you have gone a long way toward doing this.

LUDWIG: I think it is a brilliant idea.

OSMOND: It seems to me this would be the only thoroughly unobjectionable substitute treatment.

LUDWIG: Dr. Leary has stated that after you have taken LSD a number of times, you get "reverse tolerance." Dr. Levine and I did talk with a number of patients who claimed that after taking LSD several times,

instead of needing more and more drug to achieve the same effects (which is the usual way tolerance works), they were able to get the same effects on lower dosages. Some even claimed that they were able to "turn on" without any drugs.[15]

TART: May I add a little sociological perspective from exotic California? It is quite common among the Hippy set there for people who have had LSD before to claim that when they are with someone who is high on LSD they can get a mild drug effect themselves. The "technical" term is *contact high.* Another observation in the sociological perspective, now that we are talking about getting control over drug states by hypnotic techniques or other sorts of intense guidance, is that this drug-using subculture values very much what they call "coping." This means to be able to walk around in the real world while at the peak of an LSD reaction, although appearing totally undrugged to an outside observer. They seem to be able to turn off all of the drug reactions, deal with reality in an adaptive way, and then go back to enjoying the drug state. Apparently with practice, one could acquire quite a bit of control over the drug reaction.

ULLMAN: It occurs to me that it would be interesting to take a group of subjects, establish the hypnodelic situation, and try with a posthypnotic suggestion to explore some of the effects that might come into the natural sleep-dream cycle, and see whether any paranormal effects are facilitated through an experience of this kind.

TART: Several times during ordinary dreams I have dreamed of taking a psychedelic and experienced a change of consciousness within the dream to something much like the psychedelic state. I am sure this could be induced in quite a few subjects by posthypnotic suggestion. Whether this would be a favorable state for parapsychological phenomena is an empirical question, of course, but it looks like it combines the potentialities of both the psychedelic state and the Stage I sleep state.

RAO: Dr. Ludwig, from your experience of this hypnodelic treatment, would you say that it might be applied to produce that kind of a state Dr. Rýzl believes to facilitate ESP?

LUDWIG: That is an interesting question. I think that you would have a much better opportunity of producing this type of state with the control of hypnosis than you would through just verbal control. But I think there are many aspects of the LSD experience which work against this state, such as the rapid flow of thoughts. To get better control you would need

a very powerful influence such as the interpersonal relationship in hypnosis. We were able to produce very focused concentration in this state. We didn't specifically try to slow thought, but we were able to produce blankness. For example, if we were concerned that patients were undergoing excessive stress we would say, "Make your mind completely blank, relax," and they would immediately relax. However, I don't know if their minds were really blank. Dr. Levine might have some ideas on this.

LEVINE: Yes. In all the work described, the primary focus was on treatment. We have never tried to see what the state itself looks like without superimposing treatment upon it. We have never mapped out in what direction you could take the person. It seems to me that if the hypnotist had good rapport with the subject, they could work together toward producing other phenomena—for example, psychic phenomena. The therapist might be able to help the individual under the combined effects of hypnosis and LSD to control the "undesirable parts of the LSD experience," and to stress those parts which might be favorable to psi phenomena. We have never done anything like this. It is an unexplored area. The technique is valid to help the experience go in whatever particular direction you select. We had selected treatment, because that was our primary aim.

BELOFF: Did any addicts ever report any spontaneous psi experiences? After all, a great many people in the last years have been taking these kinds of drugs. If they were in any way conducive to paranormal experiences, one would expect quite a few interesting spontaneous reports that could be followed up. Is there any indication anywhere that these drugs have this kind of effect?

LUDWIG: This is a very difficult question. We had not focused on this problem. In many experimental procedures you sacrifice an awful lot of potential information by systematizing observations and focusing on some. I am afraid these types of observations got lost, if they were there, and I am not sure that we would have been receptive to them at that time. I have treated a couple of students taking these drugs; they both felt that they had these abilities while under the influence of the drug. Somehow they felt that taking LSD helped them see or realize these abilities.

BELOFF: We need something a bit more concrete.

OSMOND: I think you are talking about two different things. The

narcotic addicts' main interests lie in an entirely different direction from the ones of the people who take LSD. In fact, there is considerable conflict between the two, since the narcotic addicts are actually frightened of these enlarged experiences and speak very lowly of them. On the other hand, the LSD takers speak very poorly of the narcotic addicts. However, in our sociological studies there is evidence of groups who seem to be specifically interested in exploring what they hold are paranormal phenomena. It is quite a difficult task to hunt them down. Some of them are alleged to be competent witches, and our investigators have to go rather slowly. Others claim that these phenomena occur regularly. Whether they do or not, it is perfectly clear that some people are extremely interested in them. Whether in fact they simply have a shared hallucinatory experience, we still do not know; but it is clear that there are going to be extremely difficult situations. If we get an observer, as we hope, into a situation where there is a group misperception of some kind, will our observer be resistant to it? There are very few accounts on this problem in anthropological work. The evidence is that when the anthropologist gets into a culture in which he is a member of a minority of one, he might go through experiences he does not wish to report in his scientific writings. I think we are going to be in one of these indeterminate situations. If we do not get our observer in and get him accepted, we will not get any information. If we do get him accepted, then we have got another set of problems.

ULLMAN: I do not think that Professor Mundle's provocative statement should go completely unchallenged by those of us who are interested in psychotherapy. It is important to realize that we are dealing with the treatment of drug addiction, for which there has been no treatment in the past. This is very important, for otherwise people will go away thinking that the results of psychotherapy are even worse than they really are.

LUDWIG: In a comparative research design, no statement is implied about whether or not you get improvement. For example, what we did find with the narcotic study was that all five groups showed significant improvement, no matter what you did. Then you have to compare among them to find out if one group did better than the others.

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