October 9, 1988

Dr. Reese T. Jones
Department of Mental Hygiene
The Langley Porter Neuropsychiatric Institute
401 Parnassus Avenue
San Francisco, California 94122

Dear Reese,

Please excuse the delay in answering your letter, but I had to be sure that I could handle additional tapes. I believe that I can.

I have read the draft of your medical student's report and examined the EEG records carefully. The record of S. Miller showed very little change except in the samples which follow flashes. But these samples are too short to be sure.

The record of Shiel shows a decrease in alpha abundance and in amplitude and an increase in beta and theta activities. I read these records before seeing your letter and wonder if your statement that Shiel's record showed little change may not have been in error.

As I showed you at the meeting, we are prepared to provide print-outs of the EEG samples, statistical changes if the samples are sequential, and figures of the EEG changes for each of the variables analyzed. The analyses can be either of period or power spectrum.

The quality of your paper record is excellent and we will "artefact" the samples during playback. Assuming that you will provide multiple drug administrations in the same subject and that you will randomly assign the sequence to take care of the sequence effect; and, ideally that you will throw away the first records in each subject, I would ask that there be a 2 minute sine wave followed by a minimum 15 minute resting record. To maintain a constant state of alertness during this part of the study, we introduce eye opening every 5 minutes.

Following drug administration, at whatever times you feel the effects are to be measured, we would need a 15 minute sample done in the same fashion as the pre sample. You may, of course, record additional 15 minute samples in an experiment at, say, 1 and 2 hours after administration. It may be worthwhile to take an EEG sample before your interviews, and again, either after the interview or the flicker experiment.

I do not know if we can read your tape and would suggest that you manufacture a 10 minute sample with a different frequency on each channel. We will read each one and if the frequencies come out as you put them on, then you can proceed. We are equipped to play back at 1 7/8, 3 3/4, 7 1/2 and 15 ips. Most of our work is at 1 7/8. I would suggest you record your sample either at this or 3 3/4 ips.

Because the amplitude measure that we provide is a "relative" amplitude, it is important that the calibration signal from an oscillator go through the EEG and that the settings of the EEG not be changed thereafter. If you will "lock" your calibration amplitude to some standard, and although it will very, it will do so within a narrow range, and thus give you a good amplitude measure.

To make it easy for us to identify samples, we generally place a signal of the same frequency at the end of the experiment for 1 minute, then leave a gap of approximately 2 minutes on the tape and begin our next sample with a calibration frequency not easily related by a factor of 2 to the one before (e.g., 10, 17, 25, 8, 20, etc.).

Incidentally, in reading the medical student's report, it seems that subject A had no EEG change, D had an intermediate change and B and C had the greatest EEG change. What were the behavioral effects just before and just after the EEG samples?

We will begin our THC studies within the next two weeks. I have not yet received a legal supply of marijuana but plan to carry out the study anyway. The protocol is being retyped and I will send you a copy as soon as I have it.

Please send us a sample tape and we will proceed from there.

Sincerely yours,

Max Fink, M.D.
Professor of Psychiatry

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