25 September 1968

MEMORANDUM FOR: 

SUBJECT : Meeting with Dr. 

1. As I mentioned to you earlier this week I had conversations at Mr. request with Dr. concerning animal training. In going over my notes from the trip, I found some things I didn't mention to you; therefore, I'll summarize my meeting with him in this memo.

2. As you will recall, has done guided animal work on donkeys and rats. He said that in doing his literature search on the project, he came across work done in Sweden in World War II in which seals were trained to attach explosives to submarines. He recalled that the harness for the seal had been one of the main problem areas. Further, he said dogs had been trained in World War I to go to tanks for a food reward.

3. In his own work with donkeys and rats, he found the following using electrical stimulation of the brain:

   a) negative reinforcement in all cases caused panic reaction and was not useful

   b) an intermediate level brain stimulation was the only useful one (you could overdo the pleasure reaction)

   c) with rats the attention span was so short (less than 1 sec.), that you needed to give immediate reinforcement (less than 1 sec.). By doing this you could train the rat in less than 10 minutes.
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d) for guidance he needed a "logical and" in the circuitry, i.e., the animal must have the right heading and have forward motion

e) a maximum response rate at 60-100 cps for the donkey

f) the animal gives the response you ask for and not necessarily what you want or expect, thus your questions to it must be framed very carefully.

4. While preparing to get into the animal work, Dr. spent 2 weeks with He realizes you must take but while he was at the was convinced of the following:

a) had found pleasure centers in the brain and could stimulate them by electrical shock

5. I'm sure you would find Dr. very stimulating. The next time he is in town, I hope that you can find time to have some discussions with him.