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Dear Jan,

It is good to have the opportunity to review an ECT project again, and one that seems well founded and well designed.

Some months ago, I received the engineers report for review-- the report by Weaver, Rvaris, Rush and Paananen which described the parameters of the seizure stimulus in exquisite detail. At that time I found the report fascinating reading-- a bit too long for the journal, and recommended approval with a suggestion that the number of tables be reduced.

Apparently, these authors have interested a young psychiatrist in the problem, and the design of the experiment, the selection of cases, the intent, and the methods are all good. The project needs doing, for as the recent report and editorial in the Archives indicated, the machines we now use are faulty, and the parameters of the stimulus are poorly defined. Indeed, in the engineers report, they refer to the best papers in the field, including that done by my associate (Green, 1960) and Maxwell (1968).

If there are flaws in the application, they are trifling. One, for example, is the emphasis on producing a stimulus which is minimal in intensity (see page 17, last paragraph, "*It would seem almost a prima facie case that the use of the least effective energy dose would result in less short-range and long-range morbidity.*"), when what they really wish to define are the relation between the parameters of the current and the therapeutic effect (measured as changes in behavioral scores) and the morbidity (measured as changes in the Reitan battery). The latter emphasis is more mature and more in keeping with an academic need and tradition, but the other view is not one that is easily criticized.

I would also question the sequence of problems they wish to attack-- but that too is a matter of style and not a criticism.

They are well equipped, and the application asks for little extra. The principal question of cost is the item of administration of the Halstead tasks. This is a complex test, and if done by rote, by a psychologist paid by the session, the results may very well be of

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limited value. Taking measurements in depressed patients before treatment is difficult; and taking them after treatment may be confusing. I would hazard a guess that this expenditure will be wasted. The solution is to recommend the appointment of a psychologist (even at an increased cost) who could attend to the measurement of memory test changes. From our work, the memory tests (only some of which are in the Reitan battery) are the best indices of the differences between unilateral and bilateral seizures, and between single and multiple seizures. If they follow the usual 'consultation' method, these data will probably be useless.

If one wanted to save money, you could ask why Rush is being paid-- his advice should have already been given (and Paanenen is not, yet he will build the instruments).

But these are matters of detail and tactics. I like the proposal; it is needed in the field; there is little similar work going on that I know of; and these men do have a prior experience in animals upon which they are building. In the site visit, I would be most interested in whether the P.I., Dr. Nies, seems capable of bringing the talents of a psychiatric nature that are sorely needed in the evaluation to the setting; and also would ask about the test battery.

My thanks for letting me read this proposal. It is an interesting follow-up to the report I read earlier by the engineers in this team !

My best regards.

Sincerely yours,

Max Fink, M.D.
Professor of Psychiatry