NATIONAL SCIENCE FOUNDATION ADVISORY COMMITTEE
BIOLOGICAL AND MEDICAL SCIENCES

PROPOSAL RATING SHEET

No.	Title	Investigator	Institution
B-3048	Mathematical analysis of tetrad data from yeast genetics	Carl C. Lindegren	Southern Ill U

The mathematical formalisation of crossing-over is an important research area that has occupied the attention of a variety of workers (e.g., the very elaborate proposals of Owen and Sir Ronald Fisher). A hasty reading of Schult's analysis (to which I had access independently of the NSF, and which was not furnished with the application) leads me to think that he has made an interesting advance in the application of a group——theoretical approach (a notion on which I unsuccessfully sought to elicit some mathematical interest in 1947) and he appears to have been able to simplify and generalise some derivations in tetrad theory. This work should definitely be encouraged, and Schult seems rather abright lad, but I doubt that this is the right track. No theoretical development that is going to require expensive machine——programming is going to be particularly useful, and I suspect the theory itself has not yet been sufficiently perfected. The data that the Lindegrens hace accumulated ought to be processed, but this should be entirely feasible on a more modest basis: after they have had a preliminary survey we could meaningfully enquire whether they warrant the type of analysis indicated here.

Lindegren's reputation and standing have been reviewed in previous evaluations, and I need not repeat my previous remarks. It is characteristic that he should ask for $800 travel for a stationary project.

I think enough of Schult to want to keep him in business. It is a question I cannot answer whether he would not be far better off in more rigorous surroundings; one recommendation I would be prepared to consider would be a grant sufficient to subsidize his own salary, i.e., about 4500 altogether.

Score _____ 2 _____   Signature _____
From 5 (low) to 1 (high)