in devising algorithms for the solution of problems of game theory, also of potential importance in these areas.

2. General studies of the use of machines in the storage and translation of information have already been started at M.I.T. A project in machine translation has already been set up, under the direction of Professor Locke of the Language Department. As it develops, it will need the help of machine programming specialists and will need the use of a machine to test its ideas. The translation project is already supported by the Rockefeller Foundation, but parallel work by the Computation Center on techniques for rapid access to large-quantity data would help this work as well as others. For example, a study of the use and operation of the M.I.T. libraries was begun last year. At present, the study is concerned with the ways the library is being used at present, but it is expected to move on to the consideration of possible improvement of library operation and extension of its use as a research tool in science and engineering. One promising direction of investigation is in the application of machine techniques to library inventorying, cataloguing, and record-keeping. Although special-purpose machines will probably be required in the end, many ideas and procedures can be developed and checked out on the general-purpose machine at the Center with the addition, perhaps, of some specially built input and output equipment. The staff of the M.I.T. Library is interested in this work, and will contribute its knowledge to its progress.

3. A digital computer can be used as an integral part of many experiments in the social sciences. It can be used to simulate certain operational situations and thus to provide data rapidly and under controlled conditions. For example, automobile traffic distributes itself through the streets of a town according to some minimization principle, on the average. It should be possible to simulate this flow on the computer, trying different assumptions as to the effective "street resistances" and measuring the resulting flow under various traffic stresses to see how closely the results check with measurements made in the Boston streets by the Traffic Study Group already in operation in the Civil Engineering Department at M.I.T. Tactical situations in warfare are already being studied by "gaming techniques" at Rand and in other military operations research groups. Similar tactical problems in various fields of the social sciences can also be studied by simplifying the situation down to some sort of "game," with more or less complicated rules, which can be played by groups of investigators, to see what are the consequences of various strategies. If the "games" are to correspond, even distantly, to some actual social situation, the rules must be quite complicated and the scoring will require a great deal of statistical computation. It has been found that only by the use of computing machines can the scoring be speeded up sufficiently so that enough games can be run through to provide