

THE RESEARCH SUBJECT PANEL AT THE UNIVERSITY OF OTAGO

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The purpose and formation of the Research Subject Panel at the University of Otago is described. The main reason for its development has been the need to provide a representative cross section of the population for applied research problems in the University of Otago. Details of the administration and necessary safeguards are discussed and a brief description of a simple method of storage and retrieval of data is given.

Over the past year, the University of Otago's Department of Psychology has been in the process of building up a panel of volunteer human subjects to assist staff and postgraduate students in their research programmes. It is hoped that over the course of the next few years, we can build up a list of 200-300 volunteers who are drawn from all sections of the community, and represent all age, educational and income groups.

The administration and purpose of the panel follows in the tradition of two subject panels sponsored by the British Medical Research Council in Liverpool and Cambridge, both of which enjoyed considerable success and provided invaluable research facilities (Heron, 1962).

The provision of suitable subjects is a continual problem in research, and it is hoped that the formation of the subject panel will improve both the quantity and quality of research work carried out. To date, the 80 active members of the panel have each participated in an average of 1.34 substantial experimental research projects.

The projects have involved experimental studies of performance at different times of day, following sleep loss, under alcohol and cannabis, coffee and cigarettes, and studies of the control of E.E.G. alpha rhythm and of reaction time in tasks involving multiple-choice. In addition, the vast majority of the panel have contributed written and spoken information on their reactions to the Dunedin earthquake, the significance and disruption caused by past crises in their lives, and their understanding of the civil Defence instructions for emergencies. Standardized tests have also been administered to the panel from time to time to collect normative data.

The current practice in most experimental research projects, of relying upon a very narrow stratum of subjects, imposes severe limitations on the research design employed and on the implications of the data

collected. Clearly, when investigating any applied problem it is necessary to take into account variables such as age, intellectual ability, educational experience, socio-economic status, etc. Of course, it is often the case that these variables are themselves of interest. In the case of more purely theoretical research, it has been argued (Broadbent, 1971) that the development of theory benefits from being tested in as practical and as wide a context as possible, where differing samples of subjects may show up the limits of generalizations that had been widely thought to hold under all circumstances.

Furthermore, the introduction of statistical decision theories to psychology have implied that factors such as education and occupation may dramatically change performance even in the relatively "pure" tests of psychophysical abilities. Of course, the utility of a broadly representative panel of volunteers is even greater for the collection of normative and comparative data in social and clinical research. In these latter cases, a good deal of research within the University may be impossible without the development of a subject panel.

There is therefore a considerable need to establish a pool of subjects which more closely represent the general population in terms of age, abilities and socio-economic variables, than does the student body.

Composition of the Panel

The panel has been assembled from as wide a cross-section of the community as possible. To this end, members of the public were invited to join the panel by advertisements placed in the two local Dunedin newspapers. Following the initial contact and description of the scheme, willing volunteers were invited to attend an introductory testing session in the Department. At this meeting, subjects were told more about the aims of the panel, their probable commitments, and the kinds of project they would be invited to take part in. During the meeting, subjects completed:

- (1) A comprehensive personal questionnaire concerning their physical characteristics, employment, educational level and family background;
- (2) Raven's Progressive Matrices;
- (3) The Mill Hill Vocabulary Scale;
- (4) The Eysenck Personality Inventory.

All these data were collected anonymously. The volunteers have all been assigned a subject code number which is used to identify all data that the subject produces. However, to further safeguard anonymity, a second encoding stage is employed in the filing of subjects' names and addresses. This second stage involves the random assignment of a second set of numbers to the subjects file cards. A list of the equivalent first and second code numbers is stored in a disguised fashion.

Apart from the responses to the newspaper advertisements, further subjects have joined the panel by two, arguably less statistically satisfactory, routes. First, existing subjects have introduced their friends to the panel. Second, extramural lectures by the Department's staff have attracted a number of volunteers.

It is likely that some further work with the panel will attempt to "validate" the data obtained from the panel. Some workers have noted that systematic biases may be present in volunteer samples, and that these biases may influence the outcome of experiments and surveys. At this time we do not have sufficient data to test this possibility against a non-volunteer population. However, future studies may involve reliability and validity checks on the panel data obtained.

Administration of the Panel

The panel is at present administered by a single research assistant. This procedure is aimed at safeguarding the coding links between names and personal data by restricting this knowledge to a single person. Personal data about: (1) physical characteristics, education, employment and family background, and (2) the results of standardized tests of aptitudes and personality characteristics, are stored on computer file. Initially, these data are punched onto two sets of 80-column computer cards and then loaded on to a card image file which can be stored on magnetic tape in the University Computing Centre's Burroughs 6700 machine. Each subject's data is identified only by a three-digit number from the primary encoding stage. This simple data-storage system readily allows two types of data retrieval by researchers:

- (1) if subjects who possess a certain property or set of properties are required (e.g., males over 65 who smoke) then the computer can select and return the numbers of those subjects in that category, so that they may be contacted;
- (2) the file can be scanned as a whole and frequency counts made in order to construct tables of how many people there are in any general category chosen by the researcher. In this case, there is no identification of the subjects returned. Other analyses of the correlation or interdependence of variables can easily be performed.

Within the administrative framework of the panel, subjects are entitled to payment of their return fare by public transport for each invited visit to the Department. Although there is no financial incentive involved in volunteering for most experiments, subjects have readily volunteered. Further financial commitments have been incurred in providing the administrative assistant for the panel, and the postage of questionnaires and other items of information. In addition, a five-page newsletter has been published and circulated to existing panel members, primarily as a vehicle for informing them of the results of their endeavours. However, the total financial outlay has been small compared to the benefits reaped.

Users of the panel are made familiar with some general ground rules, stressing the need to ensure confidentiality of results and the familiarization of the subject with as much experimental procedure and background as possible. In addition, users are requested to furnish brief outlines of experiments and surveys for inclusion on the panel files, and in the yearly newsletter. These details also save duplication of existing information and the possibility of deleterious transfer from one project to another.

Clearly the success of any project such as this ultimately depends upon the goodwill of the volunteers involved, and naturally it requires some effort on the part of users to main this spirit. It is to be hoped, however, that part of the satisfaction the panel provides is by involving the public in studies that are relevant to everyday social and occupational problems, and where the utility is self-evident.

REFERENCES

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