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ABSTRACT
                This final report indicates the general areas of
investigation in a program of research in the prediction of personal
adjustment, conducted over a seventeen-year period. The crucial
problems in the prediction of personal adjustment are fundamentally
concerned with the data matrix which reflects the experimental
designs and displays the essential information from the experimental
observations. The research program has been primarily concerned with
methodological aspects of these problems, but the techniques have
also been applied to substantive data. A comprehensive bibliography
records 3 theses, 47 technical reports, 26 journal articles, 8
monographs, 4 book chapters, and 4 books which have resulted from
this research. (Author/CK)

FINAL REPORT

MULTIPLE PREDICTION STUDIES

Paul Horst

This research was sponsored by the

Personnel and Training Research Programs,

Psychological Sciences Division, Office

of Naval Research, under Contracts 477

(08 and 33), Project NR 151-143.

Principal Investigator: Paul Horst

University of Washington

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13. ABSTRACT

This Final Report indicates the general areas of investigation in a program of research in the prediction of person adjustment, conducted over a period of seventeen years. The research, under the title of "Multiple Prediction Studies," was supported by Project NR 151-143, Contracts Nonr-477 (08 and 33), Office of Naval Research. The publications resulting from the research and listed in the bibliography include thirty-six (36) theses, forty-seven (47) technical reports, twenty-six (26) journal articles, eight (8) monographs, four (4) chapters in books, and four (4) books.

14. KEY WORDS	LINK A		LINK B		LINK C	
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Predictor Selection						
Multiple Prediction						
Optimal Classification						
Matrix Algebra						
Factor Analysis						
Multiple Set Analysis						
Incomplete Data Matrix						
Reduced Rank Prediction						
Configural Analysis						
Psychological Measurement						
Non-cognitive Measurement						
Binary Data						
Metric in Multivariate Analysis						

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MULTIPLE PREDICTION STUDIES

This document constitutes the final report on a program of research in the prediction of personal adjustment supported by the Office of Naval Research under Contract Nonr-477 (33), Project NR 151-143, from April, 1962 through February, 1970. This research followed, without a break, a program in the same general area, also supported by the Office of Naval Research under Contract Nonr-477 (08), Project NR 151-143, from May, 1953 through March, 1962.

The crucial problems in the prediction of personal adjustment are, for the most part, fundamentally concerned with the data matrix which reflects the experimental designs and displays the essential information from the experimental observations. The research program has been primarily concerned with methodological aspects of these problems but the techniques have also been applied to substantive data. The research program under the earlier contract was concerned largely with the following major problems:

    Predictor selection techniques for multiple criteria
    Optimal test length for multiple prediction
    Optimal classification
    Simplified matrix algebra
    Factor analytic technology
    Multiple set analysis

The numerous technical reports, M.A. and Ph.D. theses,
and published articles and monographs listed in the
Final Report for the original contract, and reprinted
in this report for convenient reference, provide detail-
ed accounts of the specific research projects in the
general areas.

During the current contract period, major effort
was continued in the general areas of

> Optimal classification
> Factor analytic technology
> Multiple set analysis
> Simplified matrix algebra

In addition to these, research in the following areas
was also conducted:

> The incomplete data matrix
> Rank reduction models for multiple prediction
> Configural analysis techniques
> Psychological measurement .
> Non-cognitive measurement
> Binary data matrices
> Prediction from nonrandom subgroups
> Metric in multivariate analysis

Much effort has gone into the completion of the four
books, listed in the bibliography, covering and integrat-
ing many of the results of the research under this and
the previous contract. However, much of the work could
not be included in these books and most of it is included
in the numerous technical reports, Ph.D. theses, chapters
in books, monographs, and published articles listed in

the bibliography.

The vast and·highly technical field of prediction of personal adjustment would require a set of many additional volumes to cover adequately the current state of the art. At least one or more additional volumes would be required to set forth in detail the many urgent unsolved problems and to suggest well-indicated directions and areas for further research. This says nothing of the actual prosecution of the needed research.

It is hoped that the principal investigator may continue, even if at a more leisurely pace, to contribute to one or more of these three areas: (1) the orderly presentation of the current state of the art, (2) the outlining of further needed research, and (3) actual participation in this research. He rests assured, however, that many others with a longer productive life expectancy will continue to contribute in these three areas.

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