BLOUGH, John Andrew, 1929-
KNOWLEDGE FOR ACTION: AN ANALYSIS OF THE
RELEVANCE OF SELECTED SOCIAL SCIENCE CONCEPTS
TO THE PREPARATION OF EDUCATIONAL LEADERS.

The Ohio State University, Ph.D., 1971
Education, administration

University Microfilms, A XEROX Company, Ann Arbor, Michigan

©Copyright
John Andrew Blough
1971

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED
KNOWLEDGE FOR ACTION: AN ANALYSIS OF THE RELEVANCE
OF SELECTED SOCIAL SCIENCE CONCEPTS TO THE PREPARATION
OF EDUCATIONAL LEADERS

DISSERTATION

Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

John Andrew Blough, B.A.

* * * * *

The Ohio State University
1971

Approved by

Advisor
Department of
Educational Administration
PLEASE NOTE:

Some Pages have indistinct print. Filmed as received.

UNIVERSITY MICROFILMS
ACKNOWLEDGEMENTS

The writer wishes to express his deep appreciation to Dr. Raphael O. Nystrand, chairman of his doctoral committee; to Dr. Roald Campbell and to Dr. Robert Bargar, members of the reading committee; and to Dr. Jack Culbertson, who served on the examination committee. Each of these men made unique and highly valued contributions to this work.

Special thanks are extended to the forty-eight professors of educational administration and the forty-four public school superintendents in the United States and Canada who participated in the study as respondents, and to Dr. Robin Farquhar, Dr. Alan Gaynor, and Dr. Roy Larmee, who generously provided critical insight and encouragement.

The research reported herein was supported in part by matching grants of fortitude and caritas from the writer’s wife, Susan.
VITA

August 31, 1929

Born - Ashland, Ohio

1951

B.A., The College of Wooster, Wooster, Ohio

1951-2

Yale University, New Haven, Connecticut

1951-55

United States Air Force

1956-60

The Standard Oil Company, Cleveland, Ohio

1961-68

Teacher and Administrator, Orange Public Schools, Cleveland, Ohio

1968-70

Research Associate, Faculty of Educational Administration, The Ohio State University, Columbus, Ohio

1971

Associate Director, The University Council for Educational Administration, Columbus, Ohio

PUBLICATIONS


FIELDS OF STUDY

Major Field: Education

Studies in Educational Administration. Professor Raphael O. Nystrand

Studies in Educational Research and Research Management. Professors Robert Bargar and Desmond Cook
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
</tr>
<tr>
<td>VITA</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
</tr>
<tr>
<td>Background of the Problem</td>
</tr>
<tr>
<td>Statement of the Problem</td>
</tr>
<tr>
<td>Objectives of the Study</td>
</tr>
<tr>
<td>Design of the Study</td>
</tr>
<tr>
<td>Selection of social science content</td>
</tr>
<tr>
<td>Operationalization and application of the criteria</td>
</tr>
<tr>
<td>Survey of professors and administrators</td>
</tr>
<tr>
<td>Limitations of the Study</td>
</tr>
<tr>
<td>Assumptions of the Study</td>
</tr>
<tr>
<td>Significance of the Study</td>
</tr>
<tr>
<td>Summary and Organization of the Study</td>
</tr>
<tr>
<td>II. CONCEPTUAL FRAMEWORK OF THE STUDY AND RELATED LITERATURE</td>
</tr>
<tr>
<td>The National Science Board Special Commission on the Social Sciences</td>
</tr>
<tr>
<td>Conceptual Framework of the Study</td>
</tr>
<tr>
<td>The spectrum from truth to power</td>
</tr>
<tr>
<td>The school administrator and the spectrum from truth to power</td>
</tr>
<tr>
<td>Preparation programs for educational administrators</td>
</tr>
<tr>
<td>A differentiated preparation program design</td>
</tr>
<tr>
<td>Chapter</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Implications and propositions</td>
</tr>
<tr>
<td>Preparation Programs: Problems and Current Practice</td>
</tr>
<tr>
<td>Problems in Relating Social Science</td>
</tr>
<tr>
<td>Knowledge to Educational Administration</td>
</tr>
<tr>
<td>The nature of social science knowledge</td>
</tr>
<tr>
<td>The problem of superficiality</td>
</tr>
<tr>
<td>The problem of articulation</td>
</tr>
<tr>
<td>The problem of selection</td>
</tr>
<tr>
<td>The Relevance of the Social Sciences</td>
</tr>
<tr>
<td>A Systematic Approach to Determining Relevance</td>
</tr>
<tr>
<td>Summary</td>
</tr>
<tr>
<td>III. SIX CRITERIA OF RELEVANCE: OPERATIONALIZATION AND APPLICATION</td>
</tr>
<tr>
<td>Criteria of Relevance</td>
</tr>
<tr>
<td>The Charters Criteria</td>
</tr>
<tr>
<td>The criteria as a unitary set</td>
</tr>
<tr>
<td>The Selection of Social Science Content</td>
</tr>
<tr>
<td>The Nine Concept Sets</td>
</tr>
<tr>
<td>Operationalization and Application of the Criteria to the Content</td>
</tr>
<tr>
<td>Articulation</td>
</tr>
<tr>
<td>Dynamic referents</td>
</tr>
<tr>
<td>Person-environment interaction</td>
</tr>
<tr>
<td>Operationality</td>
</tr>
<tr>
<td>Relevance of scope</td>
</tr>
<tr>
<td>Intervention capacity</td>
</tr>
<tr>
<td>Ranking the Concept Sets</td>
</tr>
<tr>
<td>IV. SURVEY OF PROFESSORS AND SUPERINTENDENTS</td>
</tr>
<tr>
<td>Rationale</td>
</tr>
<tr>
<td>Chapter</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The Questionnaire</td>
</tr>
<tr>
<td>Questionnaire development</td>
</tr>
<tr>
<td>Identification of populations and sample selection</td>
</tr>
<tr>
<td>Questionnaire return</td>
</tr>
<tr>
<td>Concept Set Relevance Ratings from the Survey</td>
</tr>
<tr>
<td>Concept Set Relevance Rankings from the Survey</td>
</tr>
<tr>
<td>Interpretation</td>
</tr>
<tr>
<td>Comparison of Survey and Criteria-Based Relevance Rankings</td>
</tr>
<tr>
<td>Summary</td>
</tr>
<tr>
<td>V. SUMMARY, CONCLUSIONS, AND IMPLICATIONS</td>
</tr>
<tr>
<td>Summary</td>
</tr>
<tr>
<td>Conclusions</td>
</tr>
<tr>
<td>Implications</td>
</tr>
<tr>
<td>Recommendations for Further Study</td>
</tr>
<tr>
<td>APPENDIX</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Membership in Five Professional Social Science Associations, 1947-67</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Selected Specialized Career Patterns in Educational Administration: Some Significant Differences</td>
<td>43</td>
</tr>
<tr>
<td>3.</td>
<td>Goals of Researchers, Developers, Synthesizers, and Administrators</td>
<td>45</td>
</tr>
<tr>
<td>4.</td>
<td>Selected Characteristics of Administration: A Comparison of Price and Culbertson-Farquhar</td>
<td>46</td>
</tr>
<tr>
<td>5.</td>
<td>Utilization of Content External to Education as Reported by School Superintendents</td>
<td>61</td>
</tr>
<tr>
<td>6.</td>
<td>Utilization of Content External to Education as Reported by University Personnel</td>
<td>61</td>
</tr>
<tr>
<td>7.</td>
<td>Values Assigned Nine Social Science Concept Sets on Six Criteria</td>
<td>140</td>
</tr>
<tr>
<td>8.</td>
<td>Rate of Return for Mail Questionnaire Survey</td>
<td>150</td>
</tr>
<tr>
<td>9.</td>
<td>Relevance Ratings of Nine Social Science Concept Sets Made by Professors and Superintendents</td>
<td>152</td>
</tr>
<tr>
<td>10.</td>
<td>Relevance Rankings of Nine Social Science Concept Sets Made by Professors and Superintendents</td>
<td>155</td>
</tr>
<tr>
<td>11.</td>
<td>Within-Group Values for W and Levels of Significance of Relevance Rankings Made by Professors and Superintendents</td>
<td>156</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>12. Relevance Rankings for Nine Social Science Concept Sets Made by Professors, Superintendents, and Application of the Charters Criteria</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>13. Across-Groups Value for $\hat{W}$ and Level of Significance of Relevance Rankings Produced by Professors, Superintendents, and Application of the Charters Criteria</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1.</td>
<td>The Spectrum from Truth to Power</td>
<td>28</td>
</tr>
<tr>
<td>2.</td>
<td>The School Administrator and the Spectrum from Truth to Power</td>
<td>37</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Duty arises from our potential control over the course of events. Where attainable knowledge could have changed the issue, ignorance has the guilt of vice. 1

---Alfred North Whitehead

In recent years, two factors -- the rapid growth of social science knowledge and the increasing complexity and severity of the issues facing public school administrators -- have combined to pose a challenging problem to those responsible for the preparation of educational leaders. In contemporary terms, the problem is one of relevance: given the limitations of the preparation process, the limitations of the social sciences, and the limitations of the human mind, how can the most appropriate content from the social sciences be incorporated into preparation programs in educational administration -- and, thus, by extension,

incorporated into the performance of the practicing school administrator? This research is intended to treat one aspect of this problem. It is an investigation of a method of identifying social science content that is potentially relevant to the practice of educational administration.

Background of the problem

The relationship of knowledge to action is of ancient interest. Confucius speaks of the knowledge appropriate for "one called to the government of nations." ² Plato's philosopher-king embodies an ideal fusion of certain realms of knowledge with the capacity for action in the person of the leader of the state. ³ Down to the present day, the qualities, knowledge and competencies which leaders possess or ought to possess have been matters of perennial concern. The issue is revived in the popular mind with particular vigor at every major election.

The question of the relevance of social science knowledge to the preparation of practicing educational


³ Plato, The Republic, V.
administrators may be seen as a subset of this time-honored problem. What should the school administrator know? Can the social sciences contribute to his useful stock of knowledge? If so, what social science knowledge is most relevant? How can it be identified? And how can it be incorporated into administrator preparation programs? These questions suggest the focus of this study.

Shortly after the end of World War II, in the search for a broader knowledge base to support the study and growth of educational administration, a number of professors of educational administration turned to the social sciences. Culbertson and Shibles, in tracing the history of the relationship between educational administration and the social sciences, note that the first formal educational administration course offerings emphasizing social science disciplines appeared about 1950. The University of Oregon and Harvard offered work in this area in 1951. These two programs, like some others that developed in the early nineteen fifties, were in part outgrowths of

---

4 Jack Culbertson and Mark Shibles, "The Social Sciences and the Issue of Relevance," (University Council for Educational Administration, Columbus, Ohio, July, 1969), pp. 2-3. (Mimeoographed.)
the Cooperative Program in Educational Administration funded by the W. K. Kellogg Foundation. During the fifties, social scientists were attached to faculties of educational administration and materials began to appear under the joint authorship of professors of educational administration and social scientists.

By the nineteen sixties, as might be expected, professional literature in educational administration exhibited a heavy reliance on the social sciences. Haller's analysis of citations in all articles of the first ten issues of Educational Administration Quarterly, for example, showed that over half (56%) of all the 657 citations made in these articles were to research done in various social science disciplines. By the nineteen sixties, too, many preparation programs for school administrators had become increasingly oriented toward the social sciences.

During the same period -- roughly, that is, since the end of World War II -- the social sciences

5 Ibid., p. 1.

have exhibited rapid growth. A measure of this growth can be found in comparative statistics on membership in the major social science professional associations. As Table 1 indicates, the total membership in five selected major social science associations has nearly quadrupled during the twenty year span from 1947 to 1967.

**TABLE 1**

MEMBERSHIP IN FIVE PROFESSIONAL SOCIAL SCIENCE ASSOCIATIONS, 1947-1967

<table>
<thead>
<tr>
<th>Association</th>
<th>1947</th>
<th>1957</th>
<th>1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Economic Association</td>
<td>7,529</td>
<td>12,092</td>
<td>23,305</td>
</tr>
<tr>
<td>American Historical Assn.</td>
<td>4,207</td>
<td>6,300</td>
<td>17,839</td>
</tr>
<tr>
<td>American Political Science Association</td>
<td>4,598</td>
<td>6,650</td>
<td>14,685</td>
</tr>
<tr>
<td>American Sociological Association</td>
<td>2,218</td>
<td>5,482</td>
<td>11,000</td>
</tr>
<tr>
<td>American Anthropological Association</td>
<td>1,692</td>
<td>3,656</td>
<td>6,634</td>
</tr>
<tr>
<td>Total</td>
<td>20,244</td>
<td>34,180</td>
<td>73,463</td>
</tr>
</tbody>
</table>

It may be reasonably assumed that an increase in the number of scholars engaged in teaching and research in the social sciences will be accompanied by an increase in the production of social science knowledge. The implication of this growth for those allied fields, like educational administration, which wish to make selective use of social science knowledge is clear: the task of identifying and selecting social science knowledge of potential relevance to the allied field is compounded in difficulty.

Re-orientation and expansion in any area of endeavor are frequently beset with difficulties. The developing relationship between the training of educational administrators and the incorporation of social science knowledge into that training has not been excepted from this experience. The proliferation of social science specialists, specializations, and knowledge has complicated the task of selecting, evaluating, and introducing appropriate content from the social sciences into preparation programs for school administrators. It is not likely that time will abate the problem. The social sciences will continue to grow. 8 Scholars in educational administra-

8 Ibid., Chapter 17, passim.
tion will, in all likelihood, continue to view social science outputs as relevant to the preparation of school administrators.  

Still, it is not altogether clear whether future interplay between educational administration and the social sciences will follow the general pattern of the past twenty-five years. Skeptics have criticized the failure of social scientists to develop Newtonian laws of human social behavior. Sir Karl Popper, for example, argues that every social situation is unique, hence impossible to investigate experimentally, and Barrington Moore asserts that "social science, after some two hundred years, has not yet discovered any universal propositions comparable in scope or intellectual significance to those in the natural sciences." Is natural science to be the

---


11 Ibid.
test of social science? And, if so, how does this affect the educational administrator's use of the social sciences? Will social scientists turn, like Maurice Stein, increasingly away from scientism and toward dramatic and poetic metaphors to describe and analyze man and society? Or, finally, will the problem of effectively linking social science knowledge to administrative action ultimately appear insurmountable, with a consequent "loss of faith" in the relevance of the social sciences to educational administration? 12

It is important to recognize these questions, even though this research did not attempt to investigate them. The study assumes that for the foreseeable future the social sciences will be perceived as an important component of the knowledge base in educational administration. It is further assumed that, as long as this is so, it will be necessary to make judgments and discriminations about the potential relevance of segments

of social science knowledge to the performance, hence to the preparation, of school administrators. The purpose of the study was to investigate one method for making such discriminations.

Statement of the problem

Theories, concepts, and findings from the social sciences presently constitute a significant portion -- albeit only a portion -- of the knowledge base in educational administration. This is reflected in the interdisciplinary and multidisciplinary nature of many current graduate preparation programs in educational administration. At the same time, personal limitations and preparation program constraints make it impossible for professors, practitioners, and students to individually know and utilize the broad and varied outputs of the social sciences. For the aims of educational administration, selectivity and discrimination must be exercised in the use of social science knowledge. Judgments must be made as to the actual or potential relevance of various social science theories, concepts, and findings to the specific interests and goals of those engaged in the preparation of educational leaders. These judgments must ultimately be based on perceptions regarding what knowledge is most appropriate, pertinent,
and effective in the practice of educational administra-

This study was addressed to one aspect of this problem. It aimed to investigate the rationale for making judgments as to the potential relevance of specific social science content to the practice of educational administration. The study thus undertook to explore the development of an operational definition of relevance within the broad context of the social sciences and their potential contribution to more effective and efficient preparation of leaders for American education.

Objectives of the study

The purpose of the study was to investigate the development of a set of criterion measures which can be applied to existing and emergent social science content to produce an evaluation of the potential relevance of the content to the practice of educational administration. These provisional and untested criteria were proposed by W. W. Charters, Jr. Among the major questions the study attempted to answer were these:

1. Can the proposed criteria be defined operationally?

2. Do the criteria denote characteristics which
can be identified in social science theories, orientational views, and concept sets?

3. Does the operational definition of the criteria produce a set of measures which in fact discriminates among social science content as to potential relevance to educational administration?

4. What is the concurrent validity of the criteria set?
   a. What is the correlation between concept rankings generated by application of the criteria and concept rankings made by UCEA professors of educational administration?
   b. What is the correlation between concept rankings generated by application of the criteria and concept rankings made by superintendents, a subset of the group of educational administrators, who hold advanced degrees from UCEA institutions?

5. How can the criteria be refined?

**Design of the study**

The study was an investigation of the applicability and validity of a set of criteria designed to test the potential relevance of social science content
to the preparation of practicing educational administrators. The criteria which were tested are those proposed by Charters. They denote characteristics presumed to be identifiable in social science theories, orientational views, and concept sets. These criteria were proposed in order to encourage the development of a more systematic basis for evaluating the potential relevance of social science content to educational administration than is presently available. The criteria, previously untested, appear to constitute the most systematic and comprehensive set of notions which has yet been proposed for this purpose.

Five basic steps comprised the method of the study:

1. The selection of nine social science concept sets.

2. The operationalization and application of the criteria to these concept sets.

3. The collection of the judgments of a systematic random sample of a selected population of professors of educational administration as to the relevance to administration of the nine concept sets.

4. The collection of the judgments of a systematic random sample of a selected population of practicing administrators as to the relevance to administration of
The nine concept sets.

5. The statistical and logical analysis of the data so produced.

The study may be conceived of as an attempt to develop an instrument to "measure" concept sets. The purpose of the "measurement" is to predict the potential relevance of specific social science concept sets to the practice of educational administration. The design of the study thus reflects the generalized process of instrument development.

Selection of social science content.--The Charters criteria are designed to be applied to social science "theories, orientational views, and concept sets." Although these terms are not precisely defined by Charters, it seems clear that they are intended to include a broad range of social science knowledge, that is, to be inclusive rather than exclusive. The analytic unit common to the three referents -- orientational views, theories, and concept sets -- is the concept. The terminology in which theories and "orientational views" are couched certainly includes

concepts, and concept sets are, obviously, related collections of concepts. To insure, however, that the segments of social science knowledge include only those to which the author of the criteria intended that they be applied, the term "concept" must be defined.

Griffiths, in examining the role of concept development in theory-building, suggests two useful notions regarding the nature of concepts. First, he notes facts are instances of concepts. 14 Second, Griffiths offers his own definition of concept: "A concept is simply a term to which a particular meaning has been attached." 15 If these notions are combined, we may define a concept as an abstraction (term) to which a specific meaning is attached; this meaning consists of the facts (events) denoted by the concept.

This definition would appear to be consistent with Charters' use of the term "concept" in his discussion of the four fundamental concepts of formal organization: task, position, authority relations, and department.


15 Ibid., p. 105.
Each of these is a concept, and each of the four is built upon the preceding or "lower level" concept or concepts. 

16 

Taken together, the four constitute a "concept set."

The foregoing discussion indicates that any segment of social science knowledge which requires two or more concepts for its exposition is an appropriate object for the application of the criteria of relevance. This would include all social science knowledge other than simple listings of similar facts or events. If such listings or inventories are organized into taxonomies of more than one category, even when no relationships between the categories or concepts are asserted, the criteria may be applied. 

17 

Nine social science concept sets were selected for analysis and evaluation. These were drawn from the disciplines of anthropology, social psychology, sociology, economics, and political science. (Although it was recognized that the boundaries between the disciplines have always been somewhat unclear and are


becoming increasingly so, the traditional disciplinary descriptors were used for the sake of convenience and clarity of exposition in this study. Many of the concept sets employed in the study could be more accurately described by the use of compound multidisciplinary terms.) There was, of course, no intention that the selected concept sets be representative of the entire range of any of the disciplines or of the social sciences. Three criteria were used in content selection: (1) the concept set was found or referred to in current literature; (2) the concept set or a cohesive segment of it could be summarized with reasonable brevity and accuracy; and (3) the precision with which the behavioral referents of the concept set were defined could be classified as relatively general or relatively specific. For purposes of this study, an attempt was made to identify concept sets whose behavioral referents were relatively general, and concept sets whose behavioral referents were relatively specific.

**Operationalization and application of the criteria.**—Each of the nine concept sets were evaluated by the investigator in terms of the six criteria: articulation of the concept set, dynamic referents, person-environment interaction referents, operationality,
relevance of scope, and intervention capacity. First, operational definitions for each criterion were to be developed. Each concept set was then to be evaluated criterion by criterion. These evaluations were to be expressed where possible at the level of high-low-no ratings of the adequacy of the concept set to fulfill the criterion measures. For each concept set, ratings were accumulated to provide a numerical basis for ranking the concept sets in order of relevance to the practice of administration.

Survey of professors and administrators.--In addition to the application of the criteria of relevance to the nine concept sets by the investigator, relevance judgments were solicited from two independent samples of judges. The first population which was sampled on a systematic random basis consisted of the professors of educational administration who, at the time of the survey, held appointments in the 59 University Council of Educational Administration member universities. The second population sampled consisted of currently practicing public school superintendents who received doctorates in Educational Administration from UCEA member universities during the period 1963-1968.

Both groups of subjects were asked to complete an instrument which required judging the relevance of
each of the nine concept sets to the practice of educational administration and the ranking of the nine concept sets in order of relevance. The results of the survey were analyzed by the use of appropriate statistical techniques. Relationships arising from the content rankings produced by the survey and the rankings produced by the application of the criteria of relevance were compared and analyzed, and conclusions were to be reported.

Limitations of the study

The limitations of this study were:

1. The study was limited to the determination of the relevance of social science content to the preparation of practitioners, and was not intended to apply to the preparation of other specialists in educational administration.

2. The study was not designed to test the reliability of the criteria.

3. The study did not deal with disciplinary modes of inquiry. It was designed to apply only to the substantive content of social science knowledge.

4. The study was limited to knowledge in the cognitive domain; it did not deal with the affective domain.

5. The study was limited to the testing of one
specific set of criteria.

Assumptions of the study

This study assumed that:

1. Cognitive knowledge contributes to the basis for rationality in administrative behavior.

2. Although much of administrative behavior is not clearly rational, it is desirable to maximize rationality in administration.

3. Administration is improved when available knowledge is brought to bear in problem-solving and decision-making situations.

4. Cognitive knowledge can be acquired in one setting (the preparation program) and transferred and utilized in another setting (the concrete world of the practicing administrator).

5. There is a measure of autonomy which inheres in the social and organizational role of the educational administrator. This measure of autonomy is such that the administrator is able to significantly influence events, processes, and outcomes in the real world.

The study assumed then, that the quality of administration in education can and does make a difference in the nature of the educational enterprise; that it is desirable to maximize rationality in administrative
behavior; and that cognitive knowledge can contribute to this objective. The study was intended to explore one approach to insuring that significant cognitive knowledge in one broad area -- the social sciences -- is identified so that it can be evaluated for inclusion in preparatory programs.

Significance of the study

The past twenty-five years have been witness to substantial and far-reaching change in American life. The effects and implications of this period of rapid social change have inevitably re-shaped the obligations and responsibilities of those who would lead and administer American public education. Those concerned with the preparation of educational leaders and administrators have sought to meet their responsibility by turning to a broad range of resources throughout society in the search for experience, knowledge, and insight which might contribute to the development of improved preparation programs. The knowledge produced by the rapidly expanding social sciences was identified as a resource of great potential significance for the improvement of administrator preparation. A number of issues and problems have appeared as the effort to incorporate social science knowledge into administrator preparation
programs has progressed. A major issue has been the question of relevance: what social science knowledge is relevant to the preparation of educational administrators and how can it be identified and incorporated into training programs?

Relatively few efforts have been made to formulate and test the systematic operational definitions of relevance which would appear to be essential if the promising potential of social science knowledge in educational administration is to be fulfilled. This study was an effort to investigate in an exploratory manner a set of criteria which, taken together, appear to constitute one such operational definition of relevance. The significance of the study rests in part on the testing of the operationality and validity of the criterion set. If the proposed criteria do indeed identify qualities exhibited to varying degree in social science orientational views, theories, and concept sets, they may be used by other investigators, designers of preparation programs, and students and professors of educational administration in efforts to select potentially relevant social science knowledge. This is seen as an essential step in the total process of effectively incorporating social science knowledge into educational administration preparation programs.
Significance was also attached to the survey of practitioners and professors of educational administration. Preparation program design often appears to be founded on the notion that there is a consensual basis for content selection. Survey results were expected to provide quantitative data which would be useful in the evaluation of this assumption. In addition, information which would be gained on the comparative judgments of professors and practitioners as to the relevance of selected social science concepts was expected to be of interest to those responsible for the design of preparation programs in educational administration.

Summary and Organization of the Study

Chapter I establishes the setting and outlines the general intent of the research. The importance of the investigation, in view of present developments both in the social sciences and in the practice of educational administration, has been emphasized. The purpose of the study was to explore the development of a rational basis for determining the potential relevance of social science knowledge to educational administration. This problem was placed in the context of the general nature of the relationship of knowledge to action.
in human affairs. The problem was stated, a design for investigating it was suggested, and the limitations and significance of the study were outlined.

Chapter II will focus on the development of a conceptual framework for the study. The investigation will be placed in the perspective of a larger set of relationships anchored in notions of knowledge, power, and social role. The activity of the educational administrator will be related to this framework, and relevant literature will be critically analyzed. Concepts developed in Chapter II will serve to support the analysis and application of the criteria of relevance which will be undertaken in Chapter III.

In Chapter III the criteria set will be operationally defined, the selection of specific social science concept sets will be detailed, and the criteria will be applied to the selected concept sets. The aim of this chapter is to develop a method and to illustrate its application to specific social science content so that relevance rankings of the content can be obtained.

Chapter IV will be devoted to the survey of professors and practitioners. This survey is conceived of as a study of the concurrent validity of the logical analysis performed in Chapter III. Methods and procedures of the survey will be detailed, statistical treat-
ments will be outlined, and results will be reported. Chapter V will consist of a summary of the investigation, conclusions, and implications. On the basis of reported findings, suggestions for future research will be made.
CHAPTER II
CONCEPTUAL FRAMEWORK OF THE
STUDY AND RELATED LITERATURE

The National Science Board Special
Commission on the Social Sciences

In May, 1969, the Special Commission on the
Social Sciences, charged by the National Science Board
with making recommendations for advancing the applica­
tion of social science knowledge to the solution of
contemporary social problems, completed its work and
published its final report. ¹ The report of the
Special Commission emphasized the past contributions
of the social sciences to professional practice in
education, medicine, public health, social work, and
law. In addition, it examined the relationship of the
social sciences to professional practice in the fields
of engineering and journalism. In general, the Commiss­
ion recommended substantially accelerated joint efforts
involving the professions, the social science disciplines,

¹ National Science Foundation, Knowledge into
Action: Improving the Nation's Use of the Social Sci­
and the federal government to maximize the utilization of social science knowledge in the practicing professions. One specific recommendation for action proposed that professional schools include more relevant social science knowledge in their preparatory curricula. A second specific recommendation urged the establishment of social problem research institutes to provide for increased collaboration between social scientists and researchers in the professions. 2

Despite the Commission's strong endorsement of the actual and potential contributions of the social sciences to professional practice, some major obstacles to the utilization of social science knowledge are recognized in its report. Among these obstacles are the failure of the social sciences to provide problem solutions, the threatening aspect of new knowledge to personal and organizational security, and the fact that social science data often imply remediating policy approaches that are too demanding, too expensive, or simply not feasible.

A fourth obstacle to the utilization of social science knowledge, and one that is more pertinent to

2 Ibid., p. xiii.
our purpose here, has to do with the identification of knowledge that is relevant to a given practicing profession. Even when relevant knowledge exists, the Commission notes, "there is frequently no institution or agency to note such knowledge and act upon it."

The purpose of this chapter is to establish a conceptual framework for the investigation, to examine the current procedures in the field of educational administration for "noting" or identifying relevant social science knowledge, and to outline a systematic approach for determining the relevance of such knowledge to professional practice in educational administration.

Conceptual framework of the study

The problem of the selection of social science content that is potentially relevant to the training of educational administrators may be seen as a subset of the general and historical problem of the relationship of knowledge to action. To establish the nature of this study with some precision in the universe of relationships between knowledge and action, itself a subset of the universe of human activity, a series of conceptual distinctions will be made. The leading

---

3 Ibid., p. xii.
notions that will be used in this process of delimitation are drawn from the work and writings of Price, Culbertson, Farquhar, Cunningham, Downey, Goldhammer, and Charters.

The *spectrum from truth to power*.—Price's concept of "the spectrum from truth to power" provides a useful basis for the first stage of problem delimitation. In this formulation, Price suggests a spectrum or continuum which deals with the relationships among three variables: the demonstrable truth of presently available knowledge, power, and social role. Four generic social roles are placed on the continuum. These are the roles of the scientist, the professional, the administrator, and the politician. The scientist and the politician constitute polar role categories, thus:

<table>
<thead>
<tr>
<th>Scientist</th>
<th>Professional</th>
<th>Administrator</th>
<th>Politician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truth</td>
<td></td>
<td></td>
<td>Power</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td>Action</td>
</tr>
<tr>
<td>Inhuman</td>
<td></td>
<td></td>
<td>Moral</td>
</tr>
<tr>
<td>Abstraction</td>
<td></td>
<td></td>
<td>Responsibility</td>
</tr>
</tbody>
</table>

Fig. 1.--The spectrum from truth to power
The spectrum from truth to power is pertinent to the conceptual framework of the study on three counts. First, it is founded on a concern for the relationship between knowledge and action, the substance of the investigation. Second, it defines a subset of relationships within the universe of knowledge-action relationships which appears to include the functions of the school administrator. Third, it provides a systematic set of definitions and propositions about relationships among the elements included in the spectrum. These definitions and propositions will be useful in further reducing the scope of the problem. Each of the last two counts of relevance will be expanded briefly.

It is apparent that the scientist, the professional, the administrator, and the politician are not discrete roles, categories of roles, or as Price calls them, "estates."

The four broad functions ... are by no means sharply distinguished from one another even in theory, but fall along a gradation or spectrum within our political system. At one end of the spectrum, pure science is concerned with knowledge and truth; at the other end, pure politics is concerned with power and action. But neither ever exists in its pure form.
Every person, in his actual work, is concerned to some extent with all four functions...

The differences in function among the several estates are not merely based on tradition; they correspond in a measure to the nature of knowledge, and are found in every modern country. If a government is to act as an organized whole, it must make decisions on problems for which neither the sciences, nor the professions that are based on them, are prepared to give the complete answers...

The operative notion in this quotation is that the functions attributable to the four generic roles "correspond in a measure to the nature of knowledge." As we move from left to right on the continuum from truth to power, the base of presently available demonstrably "true" knowledge diminishes in relation to the range of problems which must be faced by the role incumbent. In part, this is a function of the role incumbent's freedom to choose the problems with which he will be concerned. The scientist, for example, may limit his scientific activity not only to a particular class of carefully delimited phenomena; he may also limit his investigations of this class of phenomena to those which may be examined by only one of several avail-

5 Ibid., pp. 135-6.
able techniques -- this technique being the one in which
he is most interested. The administrator, on the other
hand, is not so free to select what problems he will
expend his energies on. Concrete circumstances present
themselves. They must be dealt with regardless of the
administrator's interest in them -- regardless, too, of
the availability of appropriate knowledge or techniques
to utilize in their solution.

To locate the educational administrator on the
spectrum from truth to power, then, it is necessary to
suggest in general terms the relationships between
knowledge and action which characterize each of the four
estates. The purpose of this analysis is to further
delimit the conceptual basis of the study as well as to
develop some propositions about the relationship of
knowledge to action in the functional role of the educa­
tional administrator.

Science, in Price's view, has advanced by
ignoring the idea of purpose, if one excepts the highly
abstract purpose of furthering truth and knowledge. 6
Science cannot develop decision objectives in political
and social life: these are matters of judgment and

6 Ibid., pp. 133.
value, of compromise and hunch. "Science can contribute to the making of a decision only if someone has first specified a consistent set of objectives or values which he seeks to reach with maximum efficiency." 7 Corollary to this is the notion that the more precise and limited the problem, the greater the likelihood that science will be able to contribute to its solution. This is partly explained by the fact that the "mature" physical sciences have purchased greater precision at the cost of greater abstraction and increasing disregard for value and social purpose.

Price suggests that as the social sciences mature, they too will ultimately follow this pattern. The data and knowledge produced by the social sciences in the future will be increasingly precise and correspondingly more valuable to decision-makers. At the same time, the limitations of this knowledge -- its abstraction and its basic unconcern with values and judgment and purpose -- will make it even more clear that scientific knowledge itself cannot substitute for the essentially political process of goal selection and purpose identification. The scientist, then, is concerned with truth and

knowledge at the expense of purpose and particularity.

The professions, such as medicine and engineering, make extensive use of the findings of the sciences. In addition to their dependence on what science has learned, they are intensively concerned with what science has ignored: purpose. "Basic science could not cure a patient or build a bridge or an airplane, but the medical and engineering professions are organized to do so. Each is organized around a combination of a social purpose and a body of knowledge, much of it drawn from science." 8 The professions exhibit some control over standards of admissions, serve individual and corporate employers within carefully defined and limited fields, and are obligated to standards of ethics and competence dictated by the profession itself, not by the employer.

In the spectrum from truth to power, the administrator stands a step beyond the professional, even further from the precision and abstraction of the scientist. The administrator may be distinguished from the professional in that general administrative responsibility is not limited to a special aspect of organizational affairs which is related to a particular body of knowledge.

8 Ibid., p. 133.
The administrator must deal with all aspects of the concrete problems that he or his organization faces. Hence the administrator's education cannot be encompassed within a specific discipline or a limited field. "On the contrary, he must be prepared to understand and to use a wide variety of professional expertise and scholarly disciplines as he helps his political superiors (or the directors of a business corporation) attain their general purposes."  

Administrators are dedicated to standards of objectivity and competence, but they cannot fully control admission into their ranks since this is closely related to the political purposes of the institutional entities to which they are responsible. In Price's view, administrators may organize themselves into associations that are quasi-professional at best. The limitations resulting from the absence of a discipline-related knowledge base and the subordination of their actions, at least in some respects, to the purposes of their political superiors prevent the administrators from joining the ranks of the "true professionals."

---

9 Ibid., p. 134.
The politicians are located at the opposite end of the truth-power spectrum from the scientists and scholars.

The men who exercise legislative or executive power may make use of the skills of administrators and engineers and scientists, but in the end they make their most important decisions on the basis of value judgments or hunch or compromise or power interests. There can be no common discipline or body of established principles to guide them, for their business is to deal with problems in which either the inadequacy of scientific and professional data, or the conflict of expert opinion, makes it necessary or possible to come to decisions that are based on judgment and must be sustained by persuasion or authority. In government, the politician is apt to make every decision both to accomplish its ostensible purpose and to maintain or increase his power -- just as in private business, the principal executive or owner is apt to make every decision both to produce some product or service and to make a profit. 10

The spectrum from truth to power is thus useful in putting into perspective the relationship of knowledge to action in public affairs. It posits an inverse relationship between the exactitude and maturity of the various sciences and their "suitability for solving problems that seem important to the average citizen or

10 Ibid.
Before moving to an analysis of the relationship of the school administrator to the continuum from truth to power, it should be emphasized that Price's formulation is based on the device of defining ideal types for the purpose of clarity in exposition and analysis. In actuality, a given individual may at various times perform in any of the four generic roles -- as scientist, professional, administrator, or politician. It is also clear that scientists as human beings may be motivated by many forces, not the least of which is the profound desire to fulfill a useful social purpose. The history of medicine, for example, is in part the history of men and women fully dedicated to just such a goal. Other examples in this field may be found among scientists working on environmental problems today. But despite these qualifications, the use of ideal types serves well as an analytic device.

The school administrator and the spectrum from truth to power.--In locating the school administrator on the spectrum, it is possible to identify action-

11 Ibid., p. 129.
knowledge relationships which are similar to those in three of the four estates described by Price. This may be represented graphically as follows:

Scientist  Professional  Administrator  Politician

Truth                                Power

Educational Administrator

Fig. 2.--The educational administrator and the spectrum from truth to power.

Since educational administration does not rest on a single discipline, it is not fully professional by Price's definition. Yet the school administrator does engage in "professional" behavior when he applies knowledge from a given discipline in a given action, as for example, in interpreting psychological tests in the light of knowledge of psychometrics, or in making curriculum decisions on the basis of accepted research findings about child development. (This is not intended to suggest that all educational administrators do or can do this, but simply that it is conceivable that some can or do.)

Clearly, too, the knowledge-action relationship in much of the activity of educational administrators
falls within the purview of Price's concept of administrative behavior. The school administrator must often deal with all aspects of a concrete problem not encompassed by the knowledge resources of a single discipline, including, it must be noted, the "science of administration." His actions are often subordinate to the purposes of his political superiors -- other administrators, boards of education, citizen-taxpayers, courts of law, and legislatures.

It also seems likely that some of the activities of educational administrators may be characterized as political within the limits of Price's definition. School administrators do have executive power, as in the employment and termination of teachers or in the appointment of committees. They do make decisions when there is no body of established principle to guide them or when the judgments of professionals conflict, as in the decision as to the most favorable time to submit a fiscal issue to the voters or to suspend or expel a student from school. And educational administrators do make decisions both to accomplish their ostensible purposes and to maintain or increase their power, as the existence of powerful big-city
school bureaucracies attests. 12

It is not the purpose here to enter into the controversy about the professionalism of educators or to attempt to affirm or negate assertions about educators and politicians. It is the purpose to consider the knowledge-action relationship in educational administration within the larger context of the "four estates" as a basis for incorporating the insights of Price into the conceptual framework of this investigation. To achieve this end, it will be useful to turn now to a consideration of graduate preparation programs in educational administration, giving particular attention to the preparation of practitioners.

Preparation programs for educational administrators.--Typically, graduate programs in educational administration are relatively undifferentiated. Prospective researchers, professors of educational administration, and practitioners all undergo relatively similar graduate training experience in a given univer-

12 A more specific example is that of the big-city superintendent whom a board member claimed deluged the board with so much information that board members still had to rely on him for nearly as much guidance as they would have with no information. See Joseph Pols, The School Board Crisis (Chicago: Educational Methods, Inc., 1964).
sity, however much programs may differ among universities. In spite of this, it seems clear that future educational researchers and future practitioners will have differing knowledge needs. Researchers, for example, will need a strong knowledge base in inquiry methods. The practitioner, on the other hand, will be more interested in research outcomes and usable findings. Consistent with this, the researcher and the practitioner may well be at variance in assessing the relevance of specific social science knowledge to their training. At minimum, they are likely to view a given segment of social science content from different perspectives and they are likely to put it to different uses. This may be summarized by saying that, in terms of the spectrum from truth to power, knowledge-action relationships for the researcher are like those of the scientist, whereas knowledge-action relationships for the practitioner are like those of the administrator. For these reasons, the conceptual framework of the study will be clarified if the study can be placed in the framework of a career-differentiated program.

13 An exception is the University of Oregon, where a program to prepare research professors of educational administration was developed.
structure which distinguishes the preparation of practitioners from the preparation of other specialists in educational administration. The design of such a program would clearly require that consideration be given to the functional goals and knowledge needs of each specialization. A suggestive program design with these characteristics has been described by Culbertson and Farquhar. 14

A differentiated preparation program design. --The projected basis for preparation program design outlined by Culbertson and Farquhar provides differentiated program paths for four types of educational administration specialists: researchers, developers, synthesizers, and administrators. Differentia among the four program sub-structures are indicated in Table 2. 15 A preliminary analysis of the goals associated with each of the four career specializations is shown in Table 3. 16 This conceptualization is

---

14 Jack Culbertson and Robin H. Farquhar, "Structure of Administrative Preparation Programs," (University Council for Educational Administration, Columbus, Ohio, December, 1970). (Mimeographed.)

15 Ibid., p. 7.

16 Ibid., p. 8.
especially useful because it includes explicit and implicit notions regarding the knowledge requirements of the practicing administrator. It also serves to elaborate the definition of the specific role of the educational administrator beyond Price's generic concept. In addition, it serves to distinguish the role of the administrator from the roles of other educational administration specialists, thus clarifying the focus of the investigation. This last point is important: it suggests that the relevance of social science knowledge to educational administration preparation programs is a function of career specialization, and that differing sets of criteria of relevance should be developed for each specialization.

To determine if the propositions advanced by Price can be related to the phenomena classed by Culbertson and Farquhar as administrative, it is necessary to compare the characteristics of administration as set forth by each. This comparison is displayed in Table 4.

Although the language varies, inspection of Table 4 indicates that both sources define administration in reasonably equivalent fashion. The Culbertson-Farquhar formulation is more specific, but does not appear to contravene that of Price. Price's propositions about the relationship of scientific knowledge to
### TABLE 2
SELECTED SPECIALIZED CAREER PATTERNS IN EDUCATIONAL ADMINISTRATION: SOME SIGNIFICANT DIFFERENCES

<table>
<thead>
<tr>
<th>Descriptive Categories</th>
<th>Researchers</th>
<th>Synthesizers</th>
<th>Developers</th>
<th>Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Aspirations</strong></td>
<td>Scientific understandings</td>
<td>Larger and more comprehensive meanings of educational administration</td>
<td>Useful products</td>
<td>Improvements in educational policies, programs, and organizational effectiveness</td>
</tr>
<tr>
<td><strong>Desired Outcomes</strong></td>
<td>Valid findings and generalizations</td>
<td>Organized bodies of knowledge</td>
<td>New materials, programs, organizations, processes, technologies</td>
<td>Effective decisions and actions</td>
</tr>
<tr>
<td><strong>Knowledge-Related Resources Typically Used</strong></td>
<td>Selected theories and modes of inquiry</td>
<td>Modes of inquiry required for mastering and organizing a wide range of concepts and research findings</td>
<td>Analytic studies of “field” problems and knowledge relevant to them</td>
<td>School system data and externally developed research findings and concepts</td>
</tr>
<tr>
<td><strong>Essential Processes</strong></td>
<td>Basic inquiry</td>
<td>Synthesis</td>
<td>Product invention</td>
<td>Organizational decision-making</td>
</tr>
<tr>
<td><strong>Some Characteristics of Work Setting and Processes</strong></td>
<td>1. Not so constrained by time</td>
<td>1. Substantially constrained by time</td>
<td>1. Highly constrained by time</td>
<td>1. Highly constrained by time</td>
</tr>
<tr>
<td></td>
<td>2. High degree of autonomy</td>
<td>2. Considerable degree of autonomy</td>
<td>2. Limited degree of autonomy</td>
<td>2. Limited degree of autonomy</td>
</tr>
<tr>
<td>Descriptive Categories</td>
<td>Researchers</td>
<td>Synthesizers</td>
<td>Developers</td>
<td>Administrators</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>------------</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td>6. Relatively small number of carefully defined variables involved</td>
<td>6. Large number of variables usually involved</td>
<td>6. Substantial number of variables involved</td>
<td>6. Countless variables involved</td>
</tr>
<tr>
<td><strong>Illustrative Work Places</strong></td>
<td>Universities</td>
<td>Universities</td>
<td>Regional Laboratories</td>
<td>School districts</td>
</tr>
<tr>
<td><strong>Illustrative Artifacts of Practice</strong></td>
<td>Research monographs</td>
<td>Textbooks</td>
<td>Design specifications</td>
<td>Officially recorded decisions in minutes of meetings</td>
</tr>
<tr>
<td><strong>Significant Quality Control Agents</strong></td>
<td>Fellow research specialists</td>
<td>Reviewers of textbook manuscripts</td>
<td>Product users</td>
<td>Boards and designated professional personnel</td>
</tr>
</tbody>
</table>
TABLE 3
GOALS OF RESEARCHERS, DEVELOPERS, SYNTHESIZERS, AND ADMINISTRATORS

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Synthesizers</th>
<th>Developers</th>
<th>Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and describe research problems</td>
<td>Identify and master a range of concepts and research findings</td>
<td>Analyze and define significant dimensions of development problems</td>
<td>Help schools, communities formulate desired policies</td>
</tr>
<tr>
<td>Conceptualize pertinent research strategies and designs</td>
<td>Classify and order the knowledge mastered</td>
<td>Identify pertinent concepts and research findings</td>
<td>Help generate programs to achieve defined policies</td>
</tr>
<tr>
<td>Operationalize needed methods, instruments for data gathering</td>
<td>Discover relationships and organizing principles</td>
<td>Relate concepts and findings to development problems</td>
<td>Manage resources to implement programs</td>
</tr>
<tr>
<td>Gather and analyze data and project their larger meanings</td>
<td>Synthesize concepts, findings into larger bodies of knowledge</td>
<td>Invent and develop products to help resolve problems of practice</td>
<td>Help ensure continuous program improvement and effectiveness</td>
</tr>
</tbody>
</table>
TABLE 4
SELECTED CHARACTERISTICS OF ADMINISTRATION:
A COMPARISON OF PRICE AND CULBERTSON-FARQUHAR

<table>
<thead>
<tr>
<th>Descriptive Category</th>
<th>Price</th>
<th>Culbertson-Farquhar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Base</td>
<td>Many Disciplines</td>
<td>School system data and externally developed research findings, concepts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>Subordination of actions to purposes of political superiors</td>
<td>Limited autonomy; Public legitimation frequently essential</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature of Problems to be Dealt With</td>
<td>All aspects of concrete problems faced by organization</td>
<td>Continually involved with a wide range of problems of practice; Countless variables involved</td>
</tr>
</tbody>
</table>

administrative action may, therefore, be applied to the role of the educational administrator as outlined by Culbertson and Farquhar.

Implications and propositions.---The significance of this analysis turns on its implications for the relevance of social science knowledge to educational administration. Price's conclusion that there is an inverse relationship between the exactitude and maturity
of the various sciences and their suitability for solving problems that seem important to the administrator 17 may be inferred to apply to conditions in educational administration. The second conclusion of Price -- that the more specific and limited the problem the more likely scientific knowledge will be useful in its solution -- may also be inferred to apply to educational administration.

The foregoing analysis has been performed in order to relate the work of authorities working in different fields at different levels on certain aspects of a similar problem. The purpose of the analysis has been to synthesize the work of both into a conceptual framework for the study. This conceptual framework may now be summarized in the following statements:

1. There is no congruence between the formal goals of the social sciences in their "pure," ideal, or mature forms and the goals of the educational administrator. The goal of the sciences is to produce knowledge; the goals of the administrator are to formulate purposes and policies, generate programs to realize these purposes and policies, manage resources

17 Ibid., p. 9.
to implement the programs, and create organizational arrangements to insure continued effectiveness and improvement in programs.

2. There is, however, a relationship between social science knowledge and the actions of educational administrators. This relationship arises from the intersection or overlapping of their respective domains. Because the social scientist can (and must) carefully select and limit the problems with which he will concern himself, while the educational administrator must be concerned with all aspects of the concrete problems which confront him, this relationship may be characterized as unsystematic. The unsystematic nature of the relationship between social science knowledge and administrative activity may be attributed to the condition that their domains intersect, at least partially, while their purposes do not.

3. This relationship appears to be such that (a) the more specific and limited the problem faced by the educational administrator, the more likely that social science knowledge can contribute to its solution, and (b) there is an inverse relationship between the exactitude and maturity of the various sciences and their suitability for solving complex problems of administration.
4. The social sciences are of limited value in the making of policy decisions. They can contribute to the making of such decisions by contributing to the understanding of what is and, given specific conditions, what is likely to be. In their present form, however, the social sciences contribute in only a very limited way, if at all, to decisions regarding what should be.

These statements suggest a number of implications bearing on the proposed study. They suggest, first, that it is unlikely that all social science knowledge is relevant to the training of educational administrators. At the same time, it is likely that some social science knowledge is relevant to such training. Those who would plan preparation programs for administrators are thus faced with the problem of making, or attempting to make, discriminations among segments of social science knowledge which reflect their relevance to administrator preparation. The statements further suggest that the social sciences can contribute most to the understanding of precisely defined and limited problems, and least to the understanding and solution of complex policy issues.

Preparation programs: problems and current practice

The preceding discussion has drawn some conceptual
parameters for analyzing the potential relevance of social science knowledge to preparation programs for educational administrators. It is apparent from the discussion that various difficulties will be involved in the process of incorporating social science knowledge into such programs. It is the purpose in this section to identify some of these difficulties and to see how they are dealt with in existing graduate preparation programs for school administrators.

Problems in relating social science knowledge to educational administration

Downey and Enns, writing of the interdisciplinary movement in administrator training, state:

The use of the terms 'multidisciplinary' and 'interdisciplinary' to describe training programs for administrators has become common in recent years. The inference is clear that somehow the social sciences, particularly sociology, should be incorporated into programs for preparing educational administrators. The assumption that the social sciences can contribute significantly to the study of administration seems reasonable; yet there is considerable confusion as to the way in which the two fields might be integrated and the kinds of studies to be included.

A naive or superficial approach holds obvious dangers. The real world of social action and interaction is not so simple that a few specific concepts chosen more or less at random can explain observed phenomena.
Nor is the science of sociology sufficiently unified, mature, or exact to explain the complexities or administrative relations or to predict the precise consequences of administrative action. 18

Four difficulties encountered in relating one kind of social science knowledge to the field of educational administration are identified here. These include (a) confusion as to the means of integrating the two fields -- the problem of articulation; (b) confusion as to the kinds of social science studies which should be included in preparation programs in educational administration -- the problem of selection; (c) the problem of "naivete" or superficiality -- of assuming that a few randomly selected social science concepts can explain the complexities of observed phenomena in the real world; and (d) the immature and fragmented nature of the social sciences at the present time -- the problem of the nature of social science knowledge.

Each of these problems will be reviewed briefly, beginning with the last, the problem of the nature of social science knowledge.

social science knowledge.

The nature of social science knowledge.--Like the natural sciences, the social sciences are concerned with patterns of order and change among the phenomena which fall within their respective domains. In the natural sciences, these phenomena are related to the structure and properties of physical matter. In the social sciences, the phenomena under study are related to the structure and properties of human groups, that is, to the interaction of individuals with each other and with their environment. In the context of the structure of knowledge, then, the social sciences may be seen as those academic disciplines which deal systematically with men in their social context. MacKenzie has described the relationships of the natural sciences, the social sciences, and the arts as follows:

The social sciences overlap each other; they also overlap other fields of knowledge -- the natural and human sciences, on the one hand, and the arts on the other. Once again it is convenient to make a working distinction. The natural sciences deal with the material world, with the structure and properties of matter. The human sciences, such as biology, physiology, anatomy, neurology and psychology, are concerned with the individual as a living organism, with the structure and properties of human groups, the way in which
individuals interact with one another and with their environment. The arts, finally, focus their attention on man's knowledge and culture, on his creative reaction to his fellows and the world in which they live. 19

The different classes of phenomena dealt with by the natural and social sciences have led historically to what may be called different orders of knowledge: knowledge generated by the natural sciences was often based on replicable experimentation and was often reliably predictive; this was rarely the case with knowledge produced by the social sciences. Although this distinction appears to be fading as the natural and social sciences continue to evolve in methodology and focus and come to resemble each other more and more, 20 the social sciences are still lacking in confirmed theories. As Robert Merton puts it, in the case of sociology, much of what is now called theory "... consists of general orientations toward data, suggesting types of variables which somehow need to be taken in account, rather than clear, verifiable

20 Ibid., pp. 28 ff.
statements of relationships between specified variables." 21 A further difficulty in using the social sciences is introduced when one attempts to base predictions of actual events on social science concepts and generalizations: the mutual interdependence of the social sciences requires that their various points of view must be combined if a comprehensive basis for the anticipation of future events is to be achieved. 22

The identification and selection of social science content for use in educational administration would, then, appear to be influenced and complicated by these attributes of social science knowledge as knowledge.

The problem of superficiality.—Given the relatively inchoate state of the social sciences, some obvious difficulties face those outside these disciplines who would attempt to apply social science knowledge to the solution of problems in the complex


environment of the real world. It is apparent that the educational administrator, for example, cannot achieve the knowledge and insight of all the specialists in all of the social science disciplines and subdisciplines, even though the specialized knowledge of each of them might be fruitfully brought to bear on a single concrete problem for which he seeks a solution. Compared to the understanding of any of these specialists, the administrator's knowledge will be partial and, in a sense, superficial. This kind of "superficiality," if that is the appropriate term, would appear to be unavoidable -- it is a function of the limits of the capacity of the individual human mind. Strenuous efforts to overcome it might, indeed, lead to what Cunningham, Downey, and Goldhammer have called "trained incapacitation":

There is some evidence to suggest that the administrator schooled solely in the social scientific approach to administration is in danger of becoming incapacitated. He may tend increasingly to satisfy himself merely with an understanding of situations. And he may become overly inclined to accept things as they are -- when appropriate administrative action could or should make things otherwise. 23

A second variety of superficiality which may occur in the conversion and use of social science knowledge in educational administration results from the practitioner's failure to appreciate the limitations which applied to the production of the given knowledge. This kind of superficiality seems more amenable to control. Gross has approached this problem by suggesting, in the case of sociological findings, some pitfalls to be avoided by administrators who would use such knowledge for decision-making. 24

In general, these pitfalls may occur as a result of the administrator's failure to understand the objectives of sociology as a discipline and the methods of sociological inquiry. Specifically, they may involve (1) failing to realize that the social scientist works with a deliberately restricted number of variables; (2) failing to appreciate the limited nature of the population to which the findings apply; (3) interpreting associational relationships among variables as causal relationships; (4) failure to be aware of the assumption of multiple causality as the appropriate explanatory model for social phenomena; (5) failing to

distinguish between necessary and sufficient influence of independent variables; (6) applying findings that describe classes of events -- "on the average" findings -- to individual cases; and (7) failing to perceive that statistical tests of significance may be much too stringent for indicating the practical significance of research findings.

The problem of superficiality in the utilization of social science knowledge in educational administration preparation programs may thus be seen from two perspectives. The first has to do with the quantity and quality of social science knowledge that reposes in the various social science disciplines and specializations; the second has to do with the objectives of the disciplines qua disciplines and with the methods of inquiry appropriate to each.

The problem of articulation.--The problem of the articulation of social science knowledge with the study of educational administration encompasses the ways and means of linking these two broad fields together effectively and efficiently. Some substantive considerations which influence this problem have been suggested above. Although the relationship of the two fields cannot be properly considered in the absence
of its substantive background, it will be useful to focus on the alternative procedural -- even mechanical -- ways of joining them together. Since this problem is being viewed in the present study from the standpoint of educational administration, it may be seen as a matter of access: How can and do students of educational administration gain access to social science knowledge? Inasmuch as this study is limited to the context of graduate preparation programs in educational administration, it is within this framework that the problem of articulation will be briefly reviewed.

The staff of the University Council for Educational Administration recently completed a study in which the procedures for the articulation of content from allied disciplines were analyzed as part of the broader area of administrator preparation. Four basic patterns for the articulation of content external to education were identified and investigated. Data were gathered regarding these four approaches to incorporation of "outside" content in terms of four general content areas and a miscellaneous category. The four general content areas were defined as the

social and behavioral sciences, the management sciences, the humanities, and a combination of the physical sciences, mathematics, and research.

The four approaches to the incorporation of outside content into graduate preparation programs, as identified in the UCEA study, were:

1. external content presented by professors of educational administration;
2. external content presented by interdisciplinary teams of professors;
3. external content presented by professors from other areas offering courses specifically for students in educational administration; and
4. educational administration students exposed to external content by going "across campus" to take courses in other areas. 26

The numbers assigned to the respective approaches above are used as code-symbols for the "Approaches to Incorporation" in Tables 5 and 6. 27 Multiple codes indicate that more than one approach was used for the

---

26 Ibid., p. 429.
27 Ibid., p. 430.
indicated content area. For example, the column headed "24" shows the number of respondents who said that both the interdisciplinary team and "across campus" approaches were utilized in incorporating the indicated content into their preparation programs.

The data in Tables 5 and 6 suggest three major generalizations pertinent to this investigation: (1) the social and behavioral sciences are identified as external content utilized in educational administration preparation programs more often than all others combined; (2) the perceptions of practitioners and professors are proportionately similar in regard to approaches used for the incorporation of external content in preparation programs; and (3) the "across-campus" approach is used about five times as often as the next most frequently used approach to incorporating outside content in preparatory programs.

Although each of these four articulation procedures has positive and negative features which can be related to the efficiency and functionality of the procedures themselves -- they may be evaluated in terms of cost, organizational feasibility, availability of needed specialists, participant satisfaction, requirements placed on general university resources, and other
### TABLE 5

**UTILIZATION OF CONTENT EXTERNAL TO EDUCATION AS REPORTED BY SCHOOL SUPERINTENDENTS (N=180)**

| General Content Areas | Approaches to Incorporation | 1 | 2 | 3 | 4 | 12 | 13 | 14 | 23 | 24 | 34 | 123 | 124 | 134 | 234 | 1234 TOTAL |
|-----------------------|----------------------------|---|---|---|---|----|----|----|----|----|----|-----|-----|-----|-----|------|----------|
| Soc. & Behav. Sciences|                           | 24| 22| 11| 03| 0  | 1  | 22 | 5  | 20 | 14 | 1   | 6   | 9   | 8   | 7    | 253      |
| Management Sciences  |                           | 4 | 7 | 3 | 44| 0  | 0  | 7  | 1  | 4  | 1  | 0   | 4   | 2   | 1   | 4    | 82       |
| Humanities           |                           | 2 | 2 | 0 | 18| 0  | 0  | 5  | 3  | 1  | 3  | 0   | 1   | 0   | 0   | 2    | 37       |
| Phys.Sci.-Math.-Resch.|                          | 6 | 3 | 5 | 6 | 0  | 0  | 1  | 0  | 1  | 5  | 1   | 0   | 3   | 2   | 3    | 38       |
| Miscellaneous        |                           | 1 | 2 | 0 | 7 | 0  | 0  | 2  | 1  | 1  | 3  | 1   | 1   | 1   | 1   | 1     | 22       |
| TOTAL                |                           | 37| 36| 19| 178|0 | 1 | 37 | 10 | 27 | 26 | 3   | 12  | 15  | 12  | 17    | 430      |

### TABLE 6

**UTILIZATION OF CONTENT EXTERNAL TO EDUCATION AS REPORTED BY UNIVERSITY PERSONNEL (N=46)**

| General Content Areas | Approaches to Incorporation | 1 | 2 | 3 | 4 | 12 | 13 | 14 | 23 | 24 | 34 | 123 | 124 | 134 | 234 | 1234 TOTAL |
|-----------------------|----------------------------|---|---|---|---|----|----|----|----|----|----|-----|-----|-----|-----|------|----------|
| Soc. & Behav. Sciences|                           | 9 | 6 | 2 | 65 |0  | 0 | 37 | 0  | 9  | 17 | 1   | 11  | 18  | 6   | 0   | 181      |
| Management Sciences  |                           | 2 | 1 | 2 | 21 |0  | 0 | 14 | 0  | 3  | 11 | 0   | 0   | 6   | 0   | 0    | 60       |
| Humanities           |                           | 1 | 0 | 0 | 6  |0  | 0 | 6  | 0  | 2  | 6  | 0   | 1   | 2   | 0   | 0    | 28       |
| Phys.Sci.-Math.-Resch.|                          | 0 | 0 | 0 | 4  |0  | 0 | 4  | 0  | 2  | 4  | 0   | 0   | 1   | 0   | 0    | 19       |
| Miscellaneous        |                           | 1 | 0 | 0 | 2  |0  | 0 | 3  | 0  | 0  | 2  | 0   | 2   | 1   | 0   | 0    | 10       |
| TOTAL                |                           | 13| 7 | 4 | 103|0 | 0 | 64 | 0  | 18 | 38 | 1   | 14  | 28  | 6   | 0    | 298      |

*The number of responses reported in this cell exceeds the number of respondents because of the fact that participants frequently identified more than one content area within a general category.*
factors -- the major interest in them from the standpoint of this study is in how they operate as mechanisms of content selection. This question will be reviewed in the following section, which examines the problem of selection.

The problem of selection.--In part, the problem of the selection of social science content for inclusion in the study of educational administration and in graduate preparation programs for educational administrators is related to the problem of articulation. The four existing approaches to the incorporation of outside content into graduate preparation programs identified in the UCEA study represent mechanisms of content articulation based on assumptions regarding content selection. Each of them will be examined in turn. The purpose of this examination will not be to evaluate them, but will be limited to an attempt to describe the assumptions regarding content selection which they embody and to comment briefly on them. Comments will be organized around the two leading ideas of the content selectors -- the person or persons who make the selection decision -- and the setting in which content presentation takes place.

The first approach to the incorporation of
external content in educational administration programs is that in which external content is presented to students of administration by professors of administration. In this case, the selector is the professor of educational administration and the setting is one where the major focus of the participants is the field of educational administration. The professor of educational administration is here performing in the capacity of "developer," as suggested by Guetzkow and elaborated by Campbell.²⁸ The professor of educational administration has determined the relevance of whatever social science content is being presented in a given situation, and is applying or relating it to educational administration.

In the second approach to the incorporation of external content, material is presented by interdisciplinary teams of professors. Although the process is not spelled out in detail in the report -- it may,

obviously, take many different forms -- it may be assumed that there is interaction among the members of the instructional team as to content selection. Selection is a product of multiple judgments, including that of the professor of educational administration who is a team member. The setting of the presentation is focussed either entirely or in part on the field of educational administration, and student participants may come only from educational administration or may be joined by students from the outside disciplines.

The third approach involves the presentation of courses designed specifically for students of educational administration by professors in other disciplines. This approach, the least common of the four, was reported by only two of forty-six professors in the UCEA study. Here, the outside professor is the content selector, but the setting of the presentation is the field of educational administration, not the allied discipline.

The most common approach to the incorporation of outside content into preparation programs in educational administration is the fourth, or "across-campus," approach. In this case, the process of content selection and the identification of the selector(s) is somewhat more complex. In the typical situation, it
seems likely that the following steps occur. First, courses are chosen from among university offerings in the social sciences by the student, with the approval and counsel of the professor of educational administration who is his advisor. As course descriptions are ordinarily terse and general in university catalogs, and the individual professor's knowledge of outside courses is likely to be idiosyncratic in some respect, the knowledge brought to bear at this stage of selection is frequently informal and partial. The course is taught by an outside professor who selectively presents material from his discipline or specialty. The relevance of this material to educational administration is not among selection criteria at this point. The student then selects from the course material that content which he determines is relevant to his program in educational administration. The setting of the presentation is the outside discipline, not the field of educational administration.

In this approach to the incorporation of social science content into educational administration preparation programs, the professor of educational administration performs as an arbiter or coordinator of the individual student's program. The professor of educational administration, the professor of the external
discipline, and the student all serve as content selectors at various points in the process of incorporation of knowledge from the outside discipline. (It may be noted that the extension of this approach to all areas of the preparation program could logically lead to the replacement of existing faculties of Educational Administration by a small number of eclectic program coordinators. 29 This would imply the creation of another kind of solution to the problem of selection of social science content for use in educational administration preparation programs.)

The foregoing review of current formal practice in the articulation of social science and educational administration content has suggested the nature of the content selection process implicit in each approach. The existence of a number of approaches indicates that the related problems of preparatory program design and outside content selection are at present being resolved by the judgments of a variety of professors and students as to content relevance and the appropriate setting for learning. The rationale for these judgments may be

sometimes unclear. Although it may very well be that the most effective, if not the only, basis for making such judgments is the informed intelligence of professors of educational administration, professors in the social sciences, and students -- individually or in groups -- it may still be argued that it would be useful to develop a more systematic basis for these judgments.

Three generalizations derived from the UCEA preparation program study are pertinent to and supportive of the significance of developing such a systematic approach:

1. There is an established trend in program content toward the incorporation of theoretical, conceptual, and research-related material drawn largely from the social and behavioral sciences (predominantly sociology, political science, psychology, economics, anthropology, and social-psychology) and, to a lesser extent, from business and public administration.

2. There is a need to achieve greater relevance in the application of "external" content to the skills required and the problems confronted by practicing educational administrators.

3. There is an emergent trend in program content toward according increased attention to topics which deal with contemporary problems of, and new skills needed in, school administration. 30

30 Ibid., p. 492.
These generalizations suggest that the social sciences are seen today as a source of valuable material for expanding the knowledge base of the practicing administrator, but that the effective integration of relevant material in preparation programs has not yet been achieved. In the generalizations, two kinds of relevance are touched upon — first, relevance to the knowledge required of practicing administrators, and, secondly, relevance to the contemporary problems of school administration. These notions lead to a consideration of the problem of relevance within the context of this study.

The relevance of the social sciences

The "hoary question of relevance," as it has been appropriately called, has been intertwined with the history of the movement to incorporate the social sciences into administrator preparation programs. Although the general tendency in the literature and in practice has been to endorse and encourage the inclusion of the social sciences in administrator training, there have been periodic queries as to the

---

specific nature of the relationship of social science knowledge to administration and of the influence of such content on the activity of practitioners.

In the concluding chapter of the 1964 Yearbook of the National Society for the Study of Education devoted to the behavioral sciences and educational administration, for example, Haskew noted, inter alia, "alleged 'great bodies of new knowledge produced by modern behavioral sciences pertinent to school administration' are not represented in the pages of this volume, except by scattered illustrations and claims that they do exist." 32 Goldhammer reported in 1967 that there were few preparation programs which exhibited carefully developed rationales for employing the social and behavioral sciences in the achievement of specified program goals, 33 and Cunningham and Nystrand noted more recently the apparent emergence of "a cult of social science for its own sake" in some administra-


33 Keith Goldhammer, et al, Issues and Problems in Contemporary Educational Administration (Eugene: Center for the Advanced Study of Educational Administra-
tor preparation programs. Schmuck has noted that even when presumably useful behavioral science content exists, there are formidable socio-psychological barriers to its utilization, and that "it still appears to be easier to capture the interest of a businessman or government leader in the use of behavioral science than it is a public educator." In recognition of an even wider range of problems, Havelock has developed a rather elaborate typology of "linking roles" to deal with what has been called the "knowledge gap." 

Taken together, these cautions and concerns as to the relevance of social science knowledge and the difficulties of insuring that such content, even when it appears to be clearly useful in administration, actually finds its way into practice, may constitute


the seeds of future disaffection with the social sciences. It may be fair to suggest that something of the trajectory of such disaffection may be seen in two very useful statements made by Goldhammer. The first, generally supportive of the social sciences emphasis, was written in 1963; the second, reflecting a measure of disenchantment with this approach and advocating a "clinical" role for the school administrator, was written five years later, in 1968. 37, 38

In the latter piece, Goldhammer is particularly critical of the notion that "taking a few courses" in the social sciences is an adequate means of relating the social sciences to educational administration. 39

Reflected here is the failure of the profession to develop an effective and systematic approach to relating the social sciences to educational administration.

A systematic approach to determining relevance


38 Keith Goldhammer, "Implications for Change in Training Programs," in Eidell and Kitchel (eds.), Knowledge Production and Utilization in Educational Administration, op. cit.

39 Ibid., pp. 175-6.
In each of the four direct approaches to the incorporation of social science content into graduate preparation programs in educational administration that have been considered, the process of content selection is subjective and relatively unsystematic. This would appear to be the case regardless of whether the actual determination of the appropriateness of content is made by a professor of educational administration, a professor in an allied discipline, a student, or a combination of these. In an effort to move the process of content selection toward a less subjective basis, Cunningham, Downey, and Goldhammer have proposed a systematic process for identifying social science content relevant to educational administration.

Such a process might include the following steps: observing administrative action; arriving at consensus of what the requirements of administering are; finding relevant concepts wherever they may be; feeding these into the cognitive structures of trainees; testing the trainee to determine whether the concepts have been assimilated; testing further to discover whether the concepts do, in fact, improve his capacity to administer; and finally, refining the process on the basis of our appraisal and feedback from trainees. What we are suggesting is a multistage process of concept selection, teaching, and testing based initially on intensive observation and
agreement on the requirements of administering. 40

In outline form, this process would include the following steps:

(1) The formulation of a large number -- the authors suggest hundreds or even thousands -- of "if-what" questions relative to the knowledge skills needed by the educational administrator. These questions would take the general form: If an administrator must do X, what social science concepts will improve his capacity to do X?

(2) The search through the disciplines for promising concept sources which might bring social science knowledge to bear on the "if" terms of the "if-what" questions developed in the first step. Again, hundreds or even thousands of possibly relevant concepts might be identified in the search phase.

(3) The selection of the most promising concepts -- those with the greatest potential relevance -- by means of the application of criteria of relevance. (It is this process which is the focus of this study.)

(4) The teaching of some of the selected concepts

through a variety of creative and experimental teaching methods.

(5) The testing of the relevance and utility of the concepts taught in step four by evaluating their impact on those engaged in administrative action in field positions. Such an appraisal would constitute an empirical test of relevance.

This process would appear to be systematic, i.e., composed of elements clearly related both to each other and to a specific purpose. It would also appear to involve a task that is, in the language of its authors, "staggering." 41 (Although not, perhaps, more staggering than other tasks confronting educational administration, such as the resolution of the race, equality, finance, and goals of education questions.) Implicitly, it is consistent, in its emphasis on the need for specific referents in administrative behavior -- the development of "if-what" questions in step one -- with a proposition in the conceptual framework of this study: the more precise and limited the problem, the more likely that social science knowledge will be able to contribute to its solution. Cunningham,

---

41 Ibid., p. 104.
Goldhammer, and Downey also recognize a limitation on the usefulness of social science knowledge suggested by another of the propositions in the conceptual framework of this study:

It should be clearly understood that the social sciences may help the administrator to know what is, and even what will be -- but seldom, if ever, what ought to be. That is to say, through the social science disciplines, the administrator may learn to assess situations accurately and to predict what action may or may not "work" in dealing with the forces in various situations. But he still may not know what action he should take. Detailed knowledge of the social sciences may tend to make the administrator simply a manipulator of social forces; and it may lead him to believe that the best way to behave is "to lean in the direction of the prevailing wind."

Clearly, the educational administrator must, himself, "stand for something." In addition to the analytical tools provided by the social sciences, he needs a sense of direction, a value orientation that is his own. 42

The social sciences can help to clarify alternatives, and they can, to a greater or lesser degree, help in the anticipation of consequences, but they cannot ordinarily make decisions of policy. These are matters of value and judgment. The social sciences may still, however, be seen as a source of analytical tools and

42 Ibid., p. 105.
Summary

A conceptual framework for the study has been developed in this chapter. This framework incorporates propositions and notions regarding the general relationship of knowledge to action, generic social roles in which the knowledge-action relationship takes varying and differential forms, the relationship of the school administrator to these roles, and the implications of these ideas for preparation programs in educational administration. In addition, current practice in preparation programs was reviewed. Obstacles and problems in integrating social science knowledge with leadership preparation were examined, some cautions regarding the relevance of the social sciences were noted, and a systematic approach to meliorating the problem was outlined. The relationship of this investigation to one stage in such a systematic approach was indicated.

43 These relationships are discussed insightfully in Michael Lipton, "Concepts, Methods, and Values," Chapter II in MacKenzie, op. cit., and in National Science Foundation, Knowledge into Action: Improving the Nation's Use of the Social Sciences, op. cit.
CHAPTER III

SIX CRITERIA OF RELEVANCE:
OPERATIONALIZATION AND APPLICATION

The concept of "relevance" is now much in vogue. Whether the familiar pattern of overuse, abuse, and subsequent disembowelment of meaning will prevail in the case of this term, too, is as yet undetermined; it may well be that the literature in which the word appears will one day soon appear curiously dated, and that notions of relevance will thus become "irrelevant." Still, the word may serve. The purpose here is to attempt to operationalize a specific meaning of it -- to develop a set of criteria, hence a definition, which imputes meaning to the term in a technical sense.

---

that is, to operationally specify a definition. Further, it is desirable and necessary to devise a means of distinguishing degrees of relevance -- notions of relative relevance, if you will -- which are susceptible of general application.

The objective of this effort is to make possible the evaluation of the potential relevance of given social science concept sets to the preparation of educational administrators. This is the third stage in the systematic approach to the utilization of social science knowledge in training programs for educational leaders proposed by Cunningham, Downey, and Goldhammer. Whether their general approach or some other approach to this problem is undertaken, it seems clear that this stage of classification of concepts as to potential relevance will be an essential component of the process of incorporating social science knowledge into administrator preparation.

The notion of classification is introduced here intentionally, to underscore the exploratory nature of the study. Classification is an early stage in the development of science, and its major purpose is to

---

2 Supra, pp. 73-5.
develop or derive classes about which generalizations can be made. As Cullinan has noted, the construction of classes is dependent upon the kinds of generalizations which are sought and the specific purposes which are being pursued. The parallel with formal scientific classification is only approximate in this investigation, however. Strictly speaking, classification deals with natural phenomena. Our intent here is to treat concept sets produced by social scientists as phenomena, although it is clear that such symbolic abstractions are not "natural" in either the philosophical or the scientific sense. Cullinan has pointed out that the following considerations, among others, should guide the derivation of characteristics in classification efforts of this kind:

1. The characteristics which are to be used in classification should be related to a theoretical or conceptual framework.

2. They will be defined in exaggerated, perhaps polar terms due to their conceptual nature and to the

---


4 Ibid., pp. 91-2.
lack of more adequate tools at this point of theoretical derivation.

3. The characteristics should be assigned in comparable, preferably uniform ways to the components.

4. The characteristics are theoretically derived as conceptual tools; empirical cases will show many variations and approximations of them. However, the deviations that occur in testing correspondence between the hypothesized characteristics and empirical data will assist the process of making the characteristics more precise.

Criteria of relevance

Although the problem of evaluating social science content for relevance to educational administration has been recognized explicitly or implicitly for at least a decade, very few systematic attacks on the problem have been mounted. Culbertson and Shibles note, in a recent monograph focused directly on this issue, that "few attempts have been made to explicate in rigorous fashion criteria for selecting concepts and/or theories which are both relevant and cogent." 5

Evidence of attempts to operationalize and

test such criteria is virtually non-existent. A series of questions which can be used to evaluate theories has been developed by Sweitzer, ⁶ and Charters has proposed the criteria on which this study is based. Culbertson and Shibles have proposed an interesting set of four perspectives for establishing "logical connections" between the social sciences and the preparation of educational administrators. They characterize these perspectives as discipline-based relevance, theory-based relevance, problems-based relevance, and career-based relevance. ⁷ These perspectives are not mutually exclusive, as their authors indicate, but they do appear to offer promising points of departure for a comprehensive inquiry into the issue of relevance and the social sciences. The Charters criteria, which will be discussed below, may be related to at least two of the four relevance perspectives: discipline-based and problems-based relevance.

**The Charters Criteria**

Charters has proposed a rationale and a set of

---


criteria for determining the potential relevance to educational administration of social science "theories, orientational views, or concept sets." This rationale is based on the proposition that graduate preparation programs in educational administration posit as their objective the inducement of cognitive reorganization in students. This formulation of the objective of administrator preparation provides a basis for viewing the potential contributions of the social sciences in the framework of their potential effects on cognitive structure. Charters, a social psychologist, notes that some of the dimensions of cognitive structure have been empirically investigated and described. He suggests that this knowledge of cognitive structure can be applied to the development of criteria for the selection of content which will have the potential for inducing cognitive reorganization in persons engaged in administrator preparation programs.

In addition to taking into account dimensions of cognitive structure, Charters has employed concepts from two other areas in the construction of the criteria. The first of these areas includes the criteria generally

---

used in the technical evaluation of scientific theories. Recognizing, however, that "the worth of a theory to a scientist ... is not necessarily the same as its worth to a practitioner," the second set of additional considerations embodied in the criteria have to do with the incorporation of practice-related concerns.

On these three bases -- cognitive structure, the technical requirements of theory, and the utility of knowledge in practice -- the following provisional criteria for the identification of potentially relevant social science content have been suggested by Charters:

1. Articulation of the concept set.
2. Dynamic referents in the concept set.
3. Person-environment interaction referents in the concept set.
4. Operationality of the concepts in the concept set.
5. Relevance of scope of the concept set.
6. Intervention capacity of the concept set.
7. Gain in power from the concept set.
8. Orthogonality of the concept set.

These criteria will be presented and discussed individually.

---

9 Ibid., p. 91.
They will then be analyzed collectively, that is, as a unified set.

1. Articulation of the theory or concept set. The greater the number and range of definitive relationships incorporated in the theory, the higher its priority for inclusion in the training program. At the one extreme are highly abstract theories in which explicitly stated relationships among concepts have a substantial degree of empirical support. It goes without saying that this is a null class in the social sciences. At the other extreme, and at a low level or priority are simple taxonomies or classification schemes which suggest no relationships among the categories. It should be noted, however, that most taxonomies, unless they are entirely concretistic, do carry implicit suggestions of relationship with other conditions and concepts and may prove to be exceedingly fruitful for the practitioner. 10

This criterion is essentially quantitative: it should be possible to count and to identify the number of definitive relationships incorporated in a concept set. Similarly, the notion of "range" is essentially quantitative: it should be possible to count and to identify the elements which the specified relationships connect. These elements may be expressed as phenomena, conditions, states, behaviors, and so forth. Implicit in the criterion of articulation is the notion of parsimony, economy, or simpli-
city in theory construction. Economy is used in two senses here: it applies to both the number of propositions required to completely state the theory and to the number of exceptions to it that must be recognized. In the case of two competing concept sets which are based on identical empirical referents, all else being equal, the simplest is to be preferred. Aside from the place of the principle of economy in theory construction, it has an important and apparent advantage to those who, like educational administrators, are more likely to be consumers than developers of theory. It is clearly more convenient to work with economically stated notions.

Application of the criterion of articulation to social science concepts, then, should yield an enumeration of the relationships which are incorporated in the concept set as well as an enumeration of the elements which the relationships connect. This information can then be translated into levels of knowledge suitable for ranking on the articulation criterion.

2. Dynamic referents in the theory or concept set. Candidates for inclusion in the training program should incorporate conceptions of process and change among its elemental concepts. Concept sets which imply immutable circumstances or which propose movement toward an equilibrium without specifying the conditions creating
disequilibrium should have a low priority. 11

This criterion asserts, in simplest terms, that the educational administrator should be more interested in how and why things change than in how and why they stay the same. It suggests a processual view of administration in which development and growth is to be preferred to the maintenance of existing conditions. This criterion would give higher priority to an analysis of interpersonal value perceptions and their consequences for organizational role behavior, for example, than it would to an inventory of value perceptions alone.

Following Charters, the dynamic referent criterion would imply that concept sets incorporating a longitudinal dimension would be preferred to "one-shot" studies; it would further imply that, of the former, concept sets emphasizing change would be preferred to concept sets emphasizing equilibrium.

The presence or absence of dynamic referents in the concept set can be determined by an analysis of the elements of the concept set and their enumerated relationships, after these qualities have been isolated by the application of the articulation criterion.

11 Ibid., p. 92.
3. Person-environment interaction referents. The concept set should include both situational and personal concepts and suggest the interactive conditions of the two. That is, the orientation must not be exclusively environmental, accounting for no inter-individual variations, nor exclusively individual, accounting for no intra-individual variations from situation to situation. Perhaps this is another way of saying that the approach should be social psychological in character. 12

This criterion requires that the concept set be directed to the explanation of variation in either inter-individual behavior or intra-individual behavior in relationship to environmental characteristics. Higher priority would thus be given to studies which deal with the differences in an individual's behavior over a period of time or in a variety of environments, or to studies which deal with variations in the behavior of a number of individual persons in one or several environments. As with the dynamic referent criterion, this criterion could be applied to a given segment of social science knowledge by means of an analysis of the relationships and their elements as isolated by application of the articulation criterion.

4. Operationality of the concepts. In keeping with criteria for good social science theories, the concepts presented

12 Ibid.
to trainees should be those whose denominations are reasonably unambiguous and precise. But beyond this, the operations for the denotation of concepts must not demand information which is inaccessible to the practitioner. This has been one of the troubles with the opinion leader concept. As fruitful as it is, it is difficult to identify opinion leaders in the various primary groups of the community short of an extensive and expensive population survey. The information required for denoting the instances of interaction and the order in which it occurs should be accessible to any administrator who keeps his eyes open. 13

Two aspects of operationality are designated in this criterion. First is the general requirement that denotations of concepts in the concept set be precise, unambiguous and formulated operationally. The second and more specific aspect is rather closely related to the relevance question: the information required for operational concept definition should be such that it is reasonably accessible to the administrator. This would mean, for example, that a concept set whose terms could be operationalized by means of information only available in psychoanalytic histories would be ranked below a concept set whose terms could be operationalized in standardized test scores, or, to exaggerate further, in measures of height, weight, age, or sex.

Two steps would thus be necessary to apply the criterion of concept operationality. The first step

13 Ibid., pp. 92-3.
would involve an analysis of the denotations of concepts as presented in the study; the second step would involve an analysis of the administrator's capacity to operationalize these in his own organizational setting. It is recognized that information-gathering capabilities of educational organizations vary considerably and that these variations should be taken into account in applying this criterion.

5. Relevance of scope. Social science theories and concept sets are designed to account for delimited classes of phenomena. Preference should be given to those which account for reasonably substantial amounts of variance in phenomena with which the practitioner must deal. Thus, a theory accounting for 1 per cent of the variance in intelligence test performance, no matter how elaborate and firmly established, would have little relevance to school officers. 14

As in the case of the criterion of operationality, two aspects are involved in the application of this criterion, the criterion of relevance of scope. The first has to do with the scope of variance in the phenomena accounted for by the concept set. As Charters states above, preference should be given to concept sets which account for "reasonably substantial" quantities of variance in the phenomena which the concept set

14 Ibid., p. 93.
encompasses. The second aspect of the relevance of scope criterion applies to the phenomena themselves -- they should be phenomena "with which the practitioner must deal." This is a rather imprecise statement -- understandably so, as the criteria are offered as tentative and provisional -- as to the congruence of the phenomena denoted by the concept set with phenomena which concern the practitioner. The imprecision arises from the words "must deal." Firstly, the administrator has a certain amount of discretion as to phenomena with which he will "deal." Secondly, there is the normative issue: the administrator may not deal with all the phenomena which various others might feel he "ought to" deal with. He may not, in fact, agree that he ought to deal with them at all. This is an issue in administrative ideology, and it should be recognized when the criterion of relevance of scope is applied to a given segment of social science knowledge.

6. Intervention capacity in the theory or concept set. Preference should be given to orientations and concept sets which propose causal conditions within the capacity of human agents to manipulate. The theory should be optimistic. This criterion should not

preclude, however, acquaintance with theories failing to meet this criterion. A Spenglerian theory of cyclical change may be important to understand, particularly so if any sizable number of persons with whom the practitioner deals accepts the theory and behaves in accordance with it. In any event, it is often as important to know what cannot be done as it is to know what can be done. 16

The intervention criterion is composed of three elements. Preference should be given to concept sets which propose (1) causal conditions which are (2) manipulable by human agents, i.e., educational administrators, and which are (3) optimistic. Application of the criterion of intervention capacity would require analysis of the concept set or orientation for the presence or absence of each of these three qualities.

7. Gain in power from the theory or concept set. This refers to the extent to which the social science contribution constitutes an improvement upon the schema available to the practitioner in any one of the above respects. This criterion cannot be applied, however, without some knowledge of the schema of the particular individuals -- practitioners or trainees -- in question. It says, in effect, that the simple substitution of one set of concepts for another set already incorporated in the practitioner's cognitive structure is a fruitless venture. 17


17 Ibid.
It is not contemplated that this criterion be employed in the study for the reason suggested above: it is not intended that knowledge of the cognitive structure of individuals be sought and incorporated into the study. The criterion of orthogonality, which is a corollary to the "gain in power" criterion, is to be excluded from the proposed study for the same reason.

The criteria as a unitary set.--These criteria for the identification of potentially relevant social science knowledge reflect the social psychological orientation of their author. They are consistent with the view that administration is a social process in which persons and environment interact, and they express the conviction that intervention in this process is possible and can be fruitful. They further reflect the notion that social science knowledge can contribute to the cognitive re-structuring of trainees in educational administration, and the criteria implicitly suggest that such re-structuring can or will eventuate in improved administrative performance in concrete institutional situations.

The criteria also express a concern for the theoretical adequacy of social science knowledge. Charters recognizes the fact that highly abstract theories
containing explicit relationships based on substantial empirical support are a "null class" in the social sciences, 18 but accords preference to concept sets which most nearly satisfy this condition, provided, of course, that they meet other criterion measures. It may be argued that the practitioner has limited interest in the theoretical adequacy of social science knowledge; that, rather, his interest is in knowledge which can be operationalized in the solution of problems which he faces. It should be noted, in this connection, that the criteria provide for independent analysis of the qualities of theoretical adequacy and of operationality. They are thus set apart in the analysis and may be weighted variously for differing purposes in subsequent use.

With this introduction to the nature of the criteria which are to be operationally specified and applied, we may now turn to a consideration of the specific social science content which provides the basis for the investigation.

**The selection of social science content**

The nature of the content to which the Charters

18 *Supra*, p. 84.
criteria are intended to be applied has been discussed in Chapter 1. 19 The types of content specified by Charters include "theories, orientational views, and concept sets." 20 This specification is intended to be inclusive rather than exclusive, and its reach encompasses a broad range of social science content. The analytic unit common to theories, orientational views, and concept sets is the concept. "Concept" was defined as "an abstraction (term) to which a specific meaning is attached; this meaning consists of the facts (events) denoted by the concept." 21

The "simplest" kind of content to which the criteria may be appropriately applied was determined to be a two-category taxonomic classification; simple listings of facts or events are to be excluded when they do not exhibit the quality of being organized on more than one controlling concept -- hence do not meet the minimum criterion of the concept set. At the same time, as the author of the criteria has pointed out,

19 Supra, pp. 13-5.


relatively simple taxonomies or classification schemes may be quite useful for the practitioner. 22

Nine social science concept sets were selected for analysis and evaluation in the study. Because the study was exploratory and the capacity of the Charters criteria to differentiate the relevance to administration of various examples of social science content was unknown, it was necessary to make a series of judgments to provide a basis for the task of content selection. These judgments took into account the following considerations:

(1) The number of concepts chosen for analysis should be sufficient to provide a basis for discrimination, but not so large as to imperil the execution of the survey of professors of educational administration and superintendents in the empirical phase of the study.

(2) The selected concepts should be found or cited in current literature or current university courses.

(3) Each selected concept set or a cohesive

segment of it should be such that it could
be summarized with reasonable brevity and
accuracy.

(4) There should be included in the total
selection concept sets whose referents
appeared to be both relatively specific
and relatively general. This would be a
matter of judgment at the stage of concept
selection; more precise analysis would be
attempted in the operationalization process.

(5) There should be an effort to include concepts
from more than one discipline, although
there would clearly be no intention to
suggest that the selected content was
systematically representative in any way of
a larger body of material, of a specific
discipline, or of the social sciences.
Selected concepts would merely constitute
examples of social science knowledge.

(6) There should be no attempt to evaluate the
objective validity or methodological
adequacy of the selected content; content
would be accepted as given.

(7) The selected concept sets should not include
any content which has been traditionally
incorporated into administrator preparation or whose implications for practitioners have been previously spelled out and explicated.

With these considerations in mind, a number of social science concept sets were identified. Nine of these were selected for inclusion in the study. The choice of the number nine was made in view of consideration (1) above. In addition, because of the exploratory nature of the work, provision was thus made for the possibility that the criteria might only produce very gross discriminations, and it might be necessary to group the concepts, perhaps in threes, in order to carry out the analysis.

The nine concept sets

The concept sets which were ultimately selected came from the disciplines of sociology, anthropology, and political science. Some of them, as may be noted, are essentially social-psychological in character. They are presented below in the forms in which they were presented to respondents in the survey phase of the investigation. In the future, the concept sets will be referred to by the short titles which identify them as follows:
A. Urban-Rural Differences. 23

The rural domination of state legislatures has long been a target of the critics of state and local government. To investigate this, a political scientist analyzed the roll-call votes in five biennial sessions of the Illinois and Missouri state legislatures -- two states where big-city and rural interests can be clearly contrasted. The study concluded that the traditional belief in bitter conflict between metropolitan and non-metropolitan interests in the state legislatures does not hold, at least in these states on roll-call votes.

More specifically, the investigator concluded that (1) urban legislators usually do not vote together with high cohesion; (2) when they do, they usually win; and (3) rural legislators seldom vote against urban legislators with high cohesion.

B. Cultural Influences on Motivation. 24

By analyzing a number of personal accounts of life in two different cultures, an anthropologist has examined the relationship between community values and the motivation of learning in young children. The two contrasting cultures which were studied were the "primitive" society of the Dakota Plains Indians and the highly literate communities of Eastern European Jews in the years before World War II. In both cultures,


the education of the young child typically involved extreme physical hardship and demands that we might well consider to be beyond the biological capacity of children 3 to 8 years of age.

In both cultures, however, the children developed what could be termed a lifelong dedication to learning. The anthropologist concluded that education does not need to be externally motivated if it is seen as necessary to the deep and pervasive values of the community and to the carrying out of the significant role of the individual. In these circumstances, education is in general undertaken readily, through an inner urge, by the individual.

C. Articulation of Ghetto Issues. 25

Using data from 15 large American cities, two social scientists investigated the conditions under which the issues of retail merchant exploitation and police brutality in ghetto areas become major public issues in those areas. Among other findings, the investigators concluded that (1) grassroots ghetto grievances against ghetto merchants and police usually are founded on fact; (2) ghetto consumers did not realize they were being exploited by ghetto retailers until this was pointed out to them by city and community leaders; and (3) the reputation of the local police chief has an independent effect on whether police brutality becomes a major issue -- where the police chief is sympathetic and responsive to black leaders, the rank and file of policemen are less likely to be abusive and police brutality is less likely to be a major issue in the ghetto.

D. Adoption of Innovations. 26

Several hundred studies of the rate at which individuals and organizations adopt or accept new ideas and practices have been made since the end of World War II. The innovations studied in this research include new practices in health, agriculture, and education, as well as new products placed on the market by business and industrial corporations. After reviewing a large number of these studies, a sociologist concluded that:

(1) in both urban and rural areas, personal influence seems to be more effective in gaining acceptance of change than do impersonal sources of influence, such as the mass media;
(2) when the acceptance process is broken down into stages, mass media are more influential in the early stage of getting information, while personal influences are more of a factor in the later stages of deliberation and decision-making about acceptance of the innovation; and
(3) "early adopters" seem to be more influenced by agencies, mass media, or other formal and impersonal sources, while "late adopters" seem to be more influenced by personal, informal sources.

E. Egalitarianism and Elitism. 27

In a classic study of a small American community, a sociologist found that the American social system is permeated with two conflicting social principles. The first, most often expressed in words, says that all men are created equal. The second, most often expressed in action, declares that men are of unequal worth -- that a few are superior to the many. Does this mean that honest men should abandon the rhetoric of equality because of the reality of American social class structure? No, concluded the investigator: the apparently conflicting belief in equality is absolutely essential to preserve such social class mobility as exists in the United States. Without the belief in equality, American social class structure would become rigid and inflexible.

F. Role Conflict. 28

No individual is ever able to respond with complete satisfaction to himself and to others in every social situation. This felt difficulty in fulfilling role obligations has been described by one researcher as "role strain." Role strain arises because, in general, every individual's total role obligations are overdemanding -- they are numerous, distracting, inconsistent, and sometimes directly conflicting. Some socially acceptable ways of reducing role strain


Include (1) delegation of role obligations within the limits of societal values -- a wife may delegate housekeeping but a student may not delegate examinations; (2) curtailment or elimination of some role relationships, although role obligations related to status positions are not easily eliminated; (3) extension, or the taking on of so many role obligations that some may be used as excuses for not performing others; and (4) erecting barriers against intrusion: the executive may make himself approachable only through his secretary, or the professor may go on sabbatical leave.

G. Urban Stress and Personal Security. 29

In a recent analysis of the relationship between violent crime and the shaping of the American big city environment, an urban sociologist concluded that our cities are becoming "fortified" at the present time, and that "defensive cities" will soon become a reality. Historically, when political institutions have failed to protect the public, individuals have taken steps on their own to safeguard the physical safety of themselves, their families, and their property. The steps being taken today by individuals include, among others, expanded illumination of streets, stairways, and hallways; trimming of trees and shrubbery; the increased use of locks, safety chains, and alarm systems; electrified fences; closed circuit television surveillance; guns, dogs, and chemicals used for self-protection; the employment of private guards, doormen, and vigilante security forces; and the closing of businesses after daylight hours.

The development of fortified and defensive urban areas is seen as dysfunctional in that (1) the social and economic consequences are costly and destructive, and (2) although defensive development of the cities can control the types and locations of crime, it will not attack the causes of crime, and may add to them. At the same time, it is acknowledged that we simply do not know whether improving the urban environment can influence positive behavior and reduce the overall volume of crime.

H. Alternative Ascendance of Republicans and Democrats. 30

For a century neither the Republican nor the Democratic party has been able to control the government of the United States for more than twenty years at a time, and sometimes for only four. In analyzing the Eisenhower, Kennedy, and Johnson years, a political scientist concluded that the major cleavage between the two parties is not what a given policy should be, but is instead the tempo or speed with which a given policy should be pursued. This cleavage as to tempo is between activists and conservatives — between those who would move more rapidly and those who would move more slowly in the pursuit of relatively similar policy goals. On this basis, the Democratic and Republican parties and their leadership may be depicted graphically as follows:

Party leadership must stand near the midpoint of its party. Hence, the Democratic party leadership will always be to "left of center," and the Republican party leadership will always be to "right of center." Two conclusions follow: (1) either party, when in control, finds itself to the left or right of center, hence in a state of disequilibrium with the electorate; and (2) government "by consensus," no matter how often it is proposed by Presidents, is in reality unlikely. Moving too fast and doing too much is the recurrent pitfall of the Democrats; moving too slowly and doing too little is the bane of the Republicans. The researcher concludes that once a party establishes its power, it is already on the way to losing its power -- hence government control alternates between the parties.

I. Community Conflict.

After an analysis of data on conflict and controversy in local communities, a researcher concluded that the following stages are typical of the sequence of events when community conflict arises over issues such as water fluoridation, what books should be on school library shelves, local "witch-hunts," and others:

(1) A single issue is raised;
(2) The issue disrupts community equilibrium;
(3) Previously suppressed issues against the opponent begin to surface;
(4) The opponent's beliefs increasingly become an issue in the disagreement;
(5) The opponent appears totally "bad";
(6) Charges are made against the person of the opponent;
(7) Finally, the dispute becomes independent of the issue on which initial disagreement was raised.

Operationalization and application of the criteria to the content

To operationalize the criteria, it was necessary to develop a series of statements which specified "what must be done in order to make certain observations. For instance, in order to determine a child's IQ, we must first administer a test of a specified kind, then observe his performance on the test, and finally make certain calculations. All of these conditions define the meaning of IQ as it appears in the sentence, 'John has an IQ of 115.'" Generally, operational definitions take the form of conditional or "if-then" sentences: the "if" clause states the

---

test, and the "then" clause states what must be observed when the test conditions are imposed. Terms requiring "if-then" definitions may be called, according to Brodbeck, dispositional concepts. 33

In this study, an effort was made to develop a three-point ordinal scale for each criterion. Although the limitations of ordinal or ranked data were recognized, such data do admit of the operations which are necessary to carry out this investigation. Siegel states:

Since any order-preserving transformation does not change the information contained in an ordinal scale, the scale is said to be "unique up to a monotonic transformation." That is, it does not matter what numbers we give to a pair of classes or to members of those classes, just as long as we give a higher number to the members of the class which is "greater" or "more preferred." 34

Articulation.—The criterion of articulation is intended to account for the number and range of

33 Ibid.
definitive relationships incorporated in the concept set. Polar concepts bounding the range of possibilities available under this criterion are simple classifications or taxonomies at one extreme and highly abstract theories supported by substantial empirical evidence (a null class in the social sciences) at the other. To establish a three-point scale for the criterion of articulation, three levels of descriptive category are required. These three levels should be ordered so that the highest level most nearly approaches empirically validated highly abstract theory, while the lowest level least nearly approaches this standard. The three levels which will be specified in this study are, in order of increasing preference, taxonomic classifications, correlational studies, and studies asserting antecedent-consequent relationships of at least temporal priority.

Taxonomic classification systems are specified as of least priority by Charters. Correlational studies, even those yielding positive coefficients of 1.0, do not support the inference of causation, although they do express a higher degree of association than do

35 Supra, p. 84.
simple classifications. 36 Studies asserting at least sequential temporal relationships are at a higher level than correlational studies, although, as Campbell and Stanley point out, selective retention and cultural stereotypes can lead to misguided conclusions about temporal priority and implied causation. 37 These authors also note that to establish temporal antecedence-consequence, observations either must be made over time or experimental design must be employed. 38

Each of these three bases for assessing the concept sets on this criterion specifies a degree of conceptual articulation; these may be ranked in ascending order. If a concept set exhibits the characteristics of a taxonomic classification, then it is at the lowest level and may be assigned a value of 1. If a concept set exhibits the characteristics of a correlational relationship, it is at the middle level and may be


38 Ibid.
assigned a value of 2. If a concept set exhibits the characteristics of antecedent-consequent temporal priority, it is at the highest level (for purposes of this study) and may be assigned a value of 3. If and when a concept set shows characteristics of more than one level, it will be assigned a value commensurate with the highest level. As noted previously, these values are ordinal and indicate rank order only. A value of 2 merely indicates preference to an unspecified degree over a value of 1; it does not indicate "twice the preference."

Turning now to the evaluation of the nine concept sets used in the study, values for the articulation criterion may be assigned as follows:

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural</td>
<td>Analyzes the relationship of the cohesive voting patterns of urban and rural legislators with roll-call outcomes: essentially a correlation analysis. Value=2.</td>
</tr>
<tr>
<td>Differences</td>
<td></td>
</tr>
<tr>
<td>B. Cultural Influences on Motivation</td>
<td>Proposes antecedent-consequent relationships based on autobiographical observations over time. Value=3.</td>
</tr>
<tr>
<td>C. Articulation of Ghetto Issues</td>
<td>A Correlation analysis in the main, but includes a &quot;proposed causal model&quot; for emergence of police abuse as a public issue. Value=3.</td>
</tr>
<tr>
<td>D. Adoption of Innovations</td>
<td>Relates influencing medium and rates of acceptance in correlational analysis, but also asserts patterns related to temporal sequence. Value=3.</td>
</tr>
<tr>
<td>E. Egalitarianism and Elitism</td>
<td>Generalization arises from a descriptive taxonomic study of social stratification. Value=1.</td>
</tr>
<tr>
<td>F. Role Conflict</td>
<td>Presented as a &quot;theory&quot;; suggests number of consequents (ways of reducing role strain) which follow antecedent notion that total role obligations are overdemanding. Value=3.</td>
</tr>
<tr>
<td>G. Urban Stress and Personal Security</td>
<td>Correlates crime rates with urban form, but also asserts that if political institutions fail to protect citizenry, then they will protect themselves, an antecedent-</td>
</tr>
</tbody>
</table>
consequent relationship developed on a historical basis. Value=3.

II. Alternative Asserts cyclical form of antecedent-consequent temporal relationships. Value=3.

Ascendance of Republicans and Democrats

I. Community Based on collected observations of examples of community conflict reported over time. Value=3.

Dynamic referents.—This criterion imputes high priority to concept sets which subsume fundamental notions of process and change, low priority to concept sets which propose states of static equilibrium. Consistent with this formulation of the criterion, three categories of dynamic reference may be specified. At the lowest level (Value=1) may be placed concept sets which propose or assert conditions of static equilibrium. At the middle level (Value=2) may be placed concept sets which propose conditions of dynamic equilibrium, such as cyclical alternation, or successive conditions of synthesis in the dialectical sense. At the most preferred level (Value=3) may be classified concept sets which posit dynamic change without implying movement towards
equilibrium, synthesis, or stasis.

On the basis of these specifications, the nine concept sets may be evaluated on the dynamic referent criterion as follows:

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural Differences</td>
<td>Observations over eight-year period showed no change in relationships central to the study, hence conditions of static equilibrium. Value=1.</td>
</tr>
<tr>
<td>B. Cultural Influences on Motivation</td>
<td>Evidence consisting of self-observations over time indicates that apparently severe obstacles to motivation for learning in selected cultures do not prevent individuals from developing lifelong motivation for learning, a stable personal characteristic in these subjects. Asserts dynamic conditions for reaching equilibrium on this variable. Value=2.</td>
</tr>
<tr>
<td>C. Articulation of Ghetto Issues</td>
<td>Analyzes the conditions under which objective ghetto situations are translated into levels of grievance</td>
</tr>
</tbody>
</table>
and the process of the emergence of these concerns as public issues. Value=3.

D. Adoption of Innovations

Presents findings on the process of adoption and diffusion of ideas and practices by stages over time; describes some dynamics of change. Value=3.

E. Egalitarianism and Elitism

Proposes two permanently conflicting notions deeply embedded in American life; a static condition. Value=1.

F. Role Conflict

Suggests alternative strategies for dealing with overdemanding nature of role obligations; these strategies may lead to personal equilibrium. Value=2.

G. Urban Stress and Personal Security

Proposes that citizens will act when political institutions fail to protect them, but implies equilibrium when political protection is adequate. Value=2.
H. Alternative Ascendace of Republicans and Democrats

Suggests that voting a party into power reflects the wish of the electorate to redress the disequilibrium between the inevitable "left" or "right" position of party leadership and the "center" position of electorate. Value=2.

I. Community Conflict

Charts the dynamics of community controversy which leads to changed community structure; a dynamic change. Value=3.

**Person-environment interaction referents.**--The third criterion, person-environment interaction referents, requires that preferred concept sets include both situational and personal concepts and propose interactive conditions between the two. This criterion is essentially social psychological in character, and requires that the concept set not be exclusively environmental, accounting for no variations between individuals, nor exclusively individual, accounting for no variations internal to a given individual from situation to situation. From this perspective, three levels of adequacy to satisfy the criterion may be
proposed. At the highest level (Value=3) may be classified concept sets which include both situational and personal concepts and indicate interaction between the two. At the middle level (Value=2) may be placed concept sets which account exclusively for either inter-individual variations or exclusively for intra-individual variations from situation to situation. At the least preferred level (Value=1) may be placed concept sets which merely describe environmental or situational conditions at a single point in time.

Accordingly, the nine concept sets may be evaluated as follows:

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural Differences</td>
<td>Accounts for inter-individual variations over time; also accounts for intra-individual variations in analysis of more than 500,000 individual legislator votes cast. Value=3.</td>
</tr>
<tr>
<td>B. Cultural Influences on Motivation</td>
<td>Deals directly with both situational (cultural) and personal concepts. Value=3.</td>
</tr>
<tr>
<td>C. Articulation of Ghetto Issues</td>
<td>Evidence and conclusions are derived primarily from an analysis of situa-</td>
</tr>
</tbody>
</table>
D. Adoption of Innovations

Deals with both situational and personal factors. Definition of adopting units includes individual persons. Value=3.

E. Egalitarianism and Elitism

Proposes personal concepts (matters of belief) and person-environment concepts (matters of action), but does not account for intra-individual variations over time. Value=2.

F. Role Conflict

Concepts are clearly social psychological and refer to both environmental and personal conditions. Also can account for selected intra-individual variations over time. Value=3.

G. Urban Stress and Personal Security

Study highlights situational factors but does suggest individual motivation for altered behavior because of...
environmental stimuli. Value=3.

H. Alternative Ascendancy of Republicans and Democrats Includes both situational and personal concepts and describes interactive relationships in the aggregate but not intra-individual changes. Value=2.

I. Community Conflict Study deals directly with person-environment interaction referents. Accounts for both inter-individual and intra-individual variations over time. Value=3.

Operationality.--The criterion of operationality requires that "in keeping with criteria for good social science theories, the concepts presented to trainees should be ... reasonably unambiguous and precise. But beyond this, the operations for the denotation of concepts must not demand information which is inaccessible to the practitioner." 39 In this evaluation, particular attention will be paid to the accessibility to the practitioner of essential information related

to the concept sets. On this basis, three levels of characteristics may be specified. At the most preferred level (Value=3) are concept sets whose denotations are clearly accessible to the individual practitioner without supporting research or information gathering capability. At the middle level (Value=2) may be placed concept sets whose denotations in specific circumstances appear to require information-gathering activity beyond the capacity of the individual practitioner, but may be considered to be reasonably expected of the research arm of school systems which have such a supporting function. At the lowest level (Value=1) are those concept sets which require denotative information which would appear to be available only through a concerted effort well beyond the customary scope of school district research units, or not available at all without replication of the study from which such concepts and relationships were developed.

With this notion of operationality in mind and in the light of foregoing definitional specifications for its evaluation, we may now turn to an analysis of the nine concept sets.
<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural Differences</td>
<td>The development of an information base to establish the relationship of the conclusions of the study to a given local situation would require an exceptional effort. Value=1.</td>
</tr>
<tr>
<td>B. Cultural Influences on Motivation</td>
<td>Access to information base requires skills and methods of the anthropologist: this expertise unlikely to be found in public school research unit. Value=1.</td>
</tr>
<tr>
<td>C. Articulation of Ghetto Issues</td>
<td>Some information required here is accessible to the individual practitioner through media and informal reports (expression of public grievances, surveys of comparative ghetto retail prices, etc.) while other information (quantified perceptions of police abuse and retail exploitation) would require systematic staff investigative efforts. Value=2.</td>
</tr>
</tbody>
</table>
D. Adoption of Innovations

Although the individual practitioner can probably make reasonably accurate judgments about who is an adopter or accepter and who is not, systematic studies would very likely be needed to establish relative effects of personal and impersonal influences on adopters. Given a salient innovative practice, such an analysis might be reasonably expected of a staff research group. Value=2.

E. Egalitarianism and Elitism

Although the individual practitioner might easily observe the conflicting notions described in this research in isolated cases, it seems unlikely that denotative information sufficient for use in concrete local situations could be generated without an extraordinary effort. Value=1.

F. Role Conflict

Denotative information would appear to be available to the alert practitioner. Value=3.
| **G. Urban Stress** and Personal Security | Evidence of "fortification" accessible to the individual practitioner or other perceptive citizen (through newspaper ads for protective devices, etc.), but relationship of this phenomenon to failure of political institutions and to crime rates would require considerable analysis. Value=2. |
| **H. Alternative Ascendance of Republicans and Democrats** | Denotative information required would seem to clearly be beyond the reach of school district research staff concerns and customary activities. Value=1. |
| **I. Community Conflict** | Behavioral referents at all stages suggested in concept set can reasonably be expected to be available to perceptive and alert individual practitioner. Value=3. |

**Relevance of scope.--**This criterion is set forth in the following language: "Social science theories and concept sets are designed to account for delimited classes of phenomena. Preference should be given to
those which account for reasonably substantial amounts of variance in phenomena with which the practitioner must deal." 40 Two notions are stated here, the first having to do with variance, the second restricting the scope of relevance to phenomena with which the administrator must deal.

Corollary to the latter is the manner of definition of "must" -- there is clearly room for distinction between matters that "must" be dealt with, matters that "should" be dealt with, and matters that "could" be dealt with. The decisions of individual administrators in regard to the placement of specific issues, events, and problems into these categories will be influenced in part, as has been indicated above, by personal philosophical and ideological convictions and positions. 41 In the case of a given question, two administrators might make considerably different judgments, one seeing the issue as presenting unavoidable demands for administrative intervention, the other seeing intervention as a matter of discretion and as of no compelling urgency. It must, of course, be remembered that the administrator is not free to make such decisions unilaterally in every

40 Ibid., p. 93.
41 Supra, p. 90.
case — perhaps not in most cases. When the educational leader is acting in the role of administrator, as distinguished from the roles of professional and politician in Price’s conceptualization, he is by definition acting in accord with the interests of a higher authority, usually the board of education.

A three-point scale for evaluating the nine concept sets that takes account of these notions may be specified as follows. At the highest level (Value=3) may be placed concept sets which pertain to phenomena which the administrator would appear to have little discretion to avoid taking action on. These would include events or situations in which the administrator has a clear legal responsibility and those for which he is generally required to act as the agent of the board. At the second level (Value=2) may be placed concept sets which pertain to phenomena on which there appears to be room for reasonable difference of opinion as to whether the administrator must or should take action. At the lowest level (Value=1) may be placed concepts which pertain to phenomena which appear to present no clear requirement for action and which have not normally been intervened in by administrators. Also placed at the lowest level would be concept sets
which account for insubstantial amounts of variance, regardless of the nature of the phenomena with which they deal.

From these specifications, an evaluation of the nine concept sets on the criterion of relevance of scope may be essayed.

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural Differences</td>
<td>As education is a state function, controlled by state statutory and administrative law, there is a clear connection between the administrator, whose authority derives from these sources, and the actions of state legislative bodies. He must deal with or take account of their regulating output, but it seems reasonable to suggest that he is not required to attempt to influence their deliberations -- though many would argue that he should. Value=2.</td>
</tr>
<tr>
<td>B. Cultural Influences on</td>
<td>It seems clear that the educational administrator must deal with</td>
</tr>
</tbody>
</table>
Motivation problems and issues surrounding motivation for learning on the part of students. At the same time, the cultural phenomena associated with this issue are those of the area in which the local school is located, partaking as it does to varying degrees of particular or universal regional and national cultural characteristics. Analyses of cultural factors influencing motivation to learn in other cultures may be of intellectual interest to administrators, but since the cultural phenomena which are dealt with in such studies are well beyond the control or potential control of any given individual, it seems open to reasonable question whether their scope includes phenomena with which the administrator must deal in any very concrete sense. Value=2.
C. Articulation of Ghetto Issues

This concept set deals with phenomena almost exclusively to be found in major urban areas which have ghettos. This limitation of scope restricts their use as information on which action may be based to public school systems which encompass such areas. In addition, even in such areas, it seems likely that problems of retail merchant exploitation and police brutality are, in the main, not issues with which the administrator must deal. Value=2.

D. Adoption of Innovations

Only in a school situation where the status quo was rigidly maintained in every respect would the administrator be able to avoid developing strategies for installing innovations of some kind. This is seen to be so unlikely a situation that it seems reasonable to suggest that all administrators must deal with the notions contained in this
E. Egalitarianism and Elitism

The broad range of events and behaviors which flow from the two propositions in this concept set include many which are public school-related. All schemes for classifying students, for example, may be seen as manifestations of the referents of this concept set. In another vein, the notion that one of the public school's major institutional functions is status conferral is also an example. On this rationale, the concept set does appear to encompass phenomena with which the administrator must deal. Value=3.

F. Role Conflict

The administrator, in dealing with himself and his staff, would very likely find that he was unable to avoid taking into account the adaptive behavior occasioned by the fact that role obligations are over-demanding. Value=3.
G. Urban Stress and Personal Security

As in the case of Articulation of Ghetto Issues, the scope of this concept set would appear to be limited to urban areas. In such areas, the need to provide for the security of students would suggest that urban fortification, where it existed, would be of critical concern to school leaders. At the same time, since such concern would be limited to urban areas, it seems reasonable to question whether it is applicable to phenomena addressed by school administrators in general. Value=2.

H. Alternative Ascendance of Republicans and Democrats

Although changes in control of the federal government can have extremely significant consequences for public school administrators, the explanation for such changes proposed by this concept set does not appear to be composed of phenomena with which the administrator must deal in any very direct sense. Value=1.
I. Community
Conflict

It is difficult to conceive of a community in which there is neither actual conflict about schools nor the potential for conflict involving schools. Hence, this set of concepts may be classified as describing phenomena with which the administrator must deal, either now or in the future. Value=3.

Intervention capacity.--As set forth by Charters, the intervention criterion is composed of three elements: (1) causal conditions which are (2) manipulable by human agents and which are (3) optimistic. Each of these may be treated individually. The first of them, the notion of causal conditions, specifies a relatively ideal state of social science knowledge, although it may be presumed that "causal conditions" indicates a slightly lower order of concept development that does strict causation. A judgment on this characteristic is implicit in the articulation criterion application and was exemplified in the notion of antecedent-consequent relationships of at least temporal priority as the most preferred level. Hence, the rankings on the articulation criteria should serve to meet this element as specified for the intervention criterion.
The administrator's capacity to manipulate causal conditions is, of course, a matter of judgment -- this capacity would appear to vary according to the differing characteristics of individual administrators. Nevertheless, a three point scale reflecting one way of conceptualizing differentiable levels on this criterion may be specified as follows: at the lowest level (Value=1) may be placed concept sets which propose causal conditions clearly beyond the capacity of the administrator to manipulate or concept sets which do not propose causal conditions; at the middle level (Value=2) may be placed concept sets which do specify conditions which are "causal" in nature, but which appear to be susceptible of doubtful or unlikely influence by the practitioner; and at the highest level (Value=3) may be placed concept sets which rather clearly can be applied by the practitioner to influence the outcomes of events or situations in which he is likely to be involved. The nine concept sets may thus be evaluated on the second element of the intervention criterion as follows:

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural Differences</td>
<td>This concept set does not specify causal conditions. It might be of</td>
</tr>
</tbody>
</table>
interest, however, to urban school administrators who had concluded that rural domination of the state legislature rendered efforts to achieve desired urban legislation futile. Indirectly, then, this research could lead urban practitioners to intensify efforts to influence urban legislators. Value=2.

B. Cultural Influences on Motivation

Although some practitioners might find themselves dealing with American subcultures whose values appeared similar to those in the cultures which were studied, it clearly seems unlikely that the practitioner could influence the development of those particular community values in their absence. Value=1.

C. Articulation of Ghetto Issues

Since charges of police brutality may accompany racial school disturbances in which police are used, it is possible that the administrator
could use this concept set as a rationale for attempting to influence, formally or informally, the image-creating behavior of senior police officials. It is also conceivable that some superintendents could, for ideological reasons having to do with civic responsibility, point out to ghetto residents the conditions of retail merchant exploitation. Although both of these are conceivable, they are judged to be relatively remote possibilities. Value=2.

D. Adoption of Innovations

This concept set implies a strategy for using media and personal influence for the acceptance of innovations which would appear to be clearly employable by the educational administrator. Value=3.

E. Egalitarianism and Elitism

This concept set suggests immutable or at least reasonably permanent characteristics of American life. It would appear to provide no base.
F. Role Conflict

In analyzing the behavior of himself and of his staff, the practitioner might very well find these concepts valuable for analyzing and influencing behavior. Value=3.

G. Urban Stress and Personal Security

These notions would appear to have clear implications for school plant location and design for practitioners in urban areas. They would, of course, be included among a number of other considerations which influence decisions about plant, but it seems reasonable to suggest that they could be used to influence planning decisions. Value=3.

H. Alternative Ascendence of Republicans and Democrats

This concept set specifies relationships which, although causal in nature, seem clearly to be beyond the capacity of the practitioner to manipulate. Value=1.
I. Community Conflict

This concept set suggests a pattern of events which, when understood by the administrator, would appear to enable him to take positive action in an effort to influence the course of controversy. Value=3.

The third element in the intervention criterion is the notion of optimism. As Charters notes, "The theory should be optimistic. This criterion should not preclude, however, acquaintance with theories failing to meet this criterion." 42 Three levels may be specified for evaluating social science concept sets on this measure. Underlying these three specifications relative to optimism is the interpretation that "optimistic" implies the possibility of improvement, "change for the better," amelioration of unsatisfactory conditions, and the like. Thus, we may specify that at the lowest level (Value=1) are those concept sets which imply or state an inevitable negative social result or posit continued deterioration of human and social conditions. (It is recognized that what is

deterioration to one may be appreciation to another: to clarify, these three specifications are derived from the standpoint of the Western liberal humanist tradition.) At the middle level (Value=2) may be placed those concept sets which do not appear to necessarily indicate either an optimistic or pessimistic state of affairs. At the highest level (Value=3) may be placed those concept sets which indicate conditions which would permit, encourage, or entail the possibility or inevitability of "improved" human and social conditions.

Thus:

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Urban-Rural Differences</td>
<td>Implies that alleged fixed conditions of imbalance in legislative bodies may not be actual conditions. Hence, the concept set may be classified as optimistic if balanced representation is accepted as desirable. Value=3.</td>
</tr>
<tr>
<td>B. Cultural Influences on Motivation</td>
<td>Suggests that a culturally valued outcome, love for learning, can survive apparently severe obstacles to its growth in certain cultural contexts. Value=3.</td>
</tr>
</tbody>
</table>
C. Articulation of Ghetto Issues

Describes the process by which issues emerge and implies conditions which encourage such emergence. In a democratic society it is essential to have basic issues become public issues. In this sense, the concept set may be classed as optimistic. Value=3.

D. Adoption of Innovations

Although the process of innovation adoption is optimistic in that it documents that change is possible, the writer would hold that the nature of the innovation itself must be evaluated as to its "optimistic" or "pessimistic" qualities. Value=2.

E. Egalitarianism and Elitism

Asserts unchanging conditions which imply a stressful disequilibrium between words and deeds. Value=1.

F. Role Conflict

Presents alternative responses to a given stimulus. Neither optimistic nor pessimistic. Value=2.
G. Urban Stress and Personal Security

Concept set describes deteriorating social conditions. Value=1.

II. Alternative Ascendance of Republicans and Democrats

Evaluation as to optimism or pessimism is difficult to disentangle from individual party politics. It may be argued that the concept set is optimistic in that it provides room for change, but pessimistic in that it only offers one changeful alternative at a time. Value=2.

I. Community Conflict

As with Adoption of Innovations, the concept set focusses on process. Evaluation as to optimism or pessimism would appear to rest more with the substantive than processual characteristics of the controversy. Value=2.

**Ranking the concept sets**

The concept sets may now be ranked in order of potential relevance to the practice of educational administration by summing the ranks assigned to each
concept set on each criterion. It should be emphasized that the information represented by the assigned values is ordinal in nature. Ordinal information is "not isomorphic to the numerical system known as arithmetic," as Siegel notes. 43 Hence, the operations admissible with ordinal data are restricted to those which preserve rank-order information. Any operation is permissible which is an order-preserving transformation. 44

The numerals 1, 2, and 3 which were used to symbolize rank order, that is, an unquantified notion of "greater than," do not symbolize any arithmetic relationships. They merely indicate order or rank in a convenient way. A series of letter symbols would have served equally well. Had letters been used, for example, with A representing the highest level of operationally specified criterion satisfaction, B the next level, and C the lowest level, the sum of ranks for Concept I in Table 7 below could be symbolized by 6 "A-values" and 1 "B-value." Concept I would thereby be ranked above Concepts D and F, whose sums of ranks would be

44 Ibid., p. 24.
tied with 5 "A-values" and 2 "B-values" each. Thus, either the numeric or the alphabetic notations would preserve the rank order resulting from evaluation of the concept sets on the several criteria. With ordinal data, it is inadmissible to compute, for example, means and standard deviations, and such operations were not performed here.

The values assigned the nine concept sets by criterion are shown in Table 7. Sums of ranks are also indicated in this Table.

From the accumulated values for sums of ranks in Table 7, the following rank order listing can be made:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Concept Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Community Conflict (I)</td>
</tr>
<tr>
<td>2.5</td>
<td>Adoption of Innovations (D)</td>
</tr>
<tr>
<td>2.5</td>
<td>Role Conflict (F)</td>
</tr>
</tbody>
</table>

45 Siegel indicates that the appearance of tied scores as the result of ordinal-scale ranking is "almost invariably a reflection of the lack of sensitivity of our measuring instruments, which fail to distinguish the small differences which really exist between the tied observations." *Ibid.*, p. 26. It seems likely that this statement is applicable to this study which, because of its exploratory nature, deals in rather gross discriminations, and seeks to determine whether such discriminations can be operationalized.
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Rank Value Assigned by Concept Set</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A  B  C  D  E  F  G  H  I</td>
</tr>
<tr>
<td>Articulation</td>
<td>2 3 3 3 1 3 3 3 3 3 3</td>
</tr>
<tr>
<td>Dynamic Referents</td>
<td>1 2 3 3 1 2 2 2 3</td>
</tr>
<tr>
<td>Person Environment Interaction</td>
<td>3 3 3 3 2 3 3 2 3</td>
</tr>
<tr>
<td>Operationality</td>
<td>1 1 2 2 1 3 2 1 3</td>
</tr>
<tr>
<td>Scope of Relevance</td>
<td>2 2 2 3 3 2 1 3</td>
</tr>
<tr>
<td>Intervention Capacity</td>
<td>2 1 2 3 1 3 3 1 3 3</td>
</tr>
<tr>
<td>Optimism-Pessimism</td>
<td>3 3 3 2 1 2 1 2 2</td>
</tr>
<tr>
<td>Sum of Ranks</td>
<td>14 15 18 19 10 19 16 12 20</td>
</tr>
</tbody>
</table>
Having completed this stage of the investigation, we may now turn to a description and analysis of the survey of professors of educational administration and superintendents.
Rationale

The ultimate purpose of the investigation was to explore the value of a set of criteria as predictive indicators of the potential relevance of social science concept sets to the practice of educational administration. This objective was conceived of as susceptible to an approach similar to that used in the development of psychometric instruments, although it was not intended that a formal instrument would be devised, and it was clear that the investigation did not address psychological variables.

To determine predictive validity, the normal procedure is to compute a correlation between the predictor scores and scores obtained on some criterion at a later time. 1 When measuring psychological

phenomena, an important variable to be considered is the amount of time that elapses between the administration of the predictor tests and the criterion measures. In this investigation, where psychological phenomena were not at issue, the test of predictive validity was expressed in terms of a concurrent validity correlation. Three factors suggested the use of the concurrent validity approach: (1) concurrent validity coefficients establish the upper limits for predictive validity coefficients and thus are especially useful in exploratory studies; (2) the criteria under investigation here include concepts which themselves take account of changes over time as, for example, in the criterion of relevance of scope; (3) concurrent validity analysis can be carried out without elapsed time specification; and (4) the ratings or evaluations of specialists are frequently used as concurrent criteria.

It should be noted that the time factor was viewed as important in one respect in this study. In order to avoid contamination of the operationalization

---

2 Ibid., p. 169.

3 Ibid.
and application of the criteria as set forth in Chapter III, it was deemed essential that data from the concurrent validity study not be examined prior to the completion of Chapter III. This requirement was duly observed in this work.

The questionnaire

Concurrent validity can be appropriately investigated by obtaining information from qualified respondents, as has been indicated above. Alternative means of obtaining such information for this study would include the use of the personal interview, the administered questionnaire, and the mailed questionnaire. Advantages and disadvantages for each of these approaches exist and are recognized. 4 The mailed questionnaire was selected for use in this particular study, on the basis of the following rationale.

The advantages of the mailed questionnaire for the study derived from a number of considerations. First, the primary information sought was very limited and easily structured -- the ranking of nine concepts on one criterion. Second, the mailed questionnaire

4 Ibid., pp. 201-40.
made possible an economical survey of two widely dispersed populations -- in this particular case, international populations. Third, it ensured that, in contrast to the interview, each respondent received the same set of questions phrased in exactly the same way.

The disadvantages of using the mailed questionnaire were also recognized. Among these were the inability to standardize the conditions under which respondents answered questions, the inability to check on the respondent's motivation, and the possibility that bias would be introduced by an incomplete return related to a systematically operating variable inaccessible or unknown to the researcher. The first two of these disadvantages were based on conditions beyond control of the investigator, but were judged to be of limited severity due to the professional characteristics of the population to be surveyed. The third disadvantage was judged to be the most serious, and required that careful attention be paid to all details of survey design and execution to maximize the rate of return.

Questionnaire development.--The purpose of the questionnaire was to solicit relevance ratings from
sample populations on nine social science concept sets. The rationale for selection of the concept sets has been detailed above. \(^5\) To present these concept sets in the questionnaire, it was necessary to write summary descriptions of them on which respondents could base their judgments. These were written on a trial basis for testing in the questionnaire pretest. As clarity and ease of response were considered to be characteristics which would affect the rate of return, it was determined that a desirable format would be to provide for response on a large specially printed pre-stamped and addressed postcard separate from the summary statements. The pages containing the summary statements could thus be discarded by the respondent after the response card had been completed.

Preliminary forms of the cover letter, questionnaire, and response card were tried out with a small group of respondents in an interview-administration context. Respondents were asked to maintain a dialogue with the investigator as they read and completed the questionnaire. \(^6\) On the basis of information thus

\(^5\) Supra, pp. 95-7.

\(^6\) This is a technique described by Sax, Empirical Foundations of Educational Research, op. cit., p. 228.
obtained, items were re-written and the format was re-worked to achieve greater clarity and convenience of response. Final forms of the cover letter, questionnaire, and response card are included in the Appendix. As may be noted, these materials observe the requirements that the purpose of the study be stated, that the sponsoring agency be identified, that directions for responding to the instrument be clearly stated, and that the opportunity for respondents to remain anonymous be offered and assured.

Identification of populations and sample selection.--Two major collectivities consist of members whose judgments were seen to be particularly germane to the nature and intent of the study. One of these groups includes university professors of educational administration in the United States and Canada; the second includes public school superintendents in the same geographic area. Sub-populations of each of these groups were designated as targets of the survey. One such group included all professors of educational administration in the 59 member universities of the University Council for Educational Administration as of September 1, 1970. This group (hereafter referred to as the population of professors) was seen
as an appropriate target population in that its stated mission is "to improve the professional preparation of administrative personnel in education." An appropriate corresponding group of practitioners was seen to be practicing public school superintendents who had received doctoral degrees from UCEA member institutions (hereafter referred to as the population of superintendents). Samples were selected from these two specific populations, and the results of the survey are generalizable only to these specific groups.

To sample these finite populations, sample size was estimated from the basic notion that "as the sample size decreases, the approximation to a normal curve similarly decreases, the discrepancy becoming quite serious when \( N \) is 30 or less." In addition, since nonparametric statistical tests were to be used

7 The University Council for Educational Administration, "An Introduction to UCEA" (Columbus, Ohio: The Council, undated), p. 1.

8 Appreciation is here expressed to Dr. Robin Farquhar, Deputy Director, UCEA, who graciously provided a listing of superintendents who received advanced degrees from UCEA institutions during the period 1963-68.

in the analysis, chiefly Kendall's $W$, a somewhat larger $N$ would be desirable in view of the lower power-efficiency of the nonparametric tests. The judgment was made that an $N$ for each sample of approximately 40 would be sufficient. A projected total questionnaire return rate of about two-thirds was estimated, on the basis that one may normally expect about half of all respondents to reply to each mailing, and an initial mailing plus one follow-up mailing were planned. Consistent with this rationale, it was estimated that target samples of about 65 respondents should be identified on a systematic random basis for each of the two populations.

There were 669 professors and 329 superintendents in the respective populations to be sampled. To insure that each member of each population had an equal chance of being selected in each sample, subjects were assigned consecutive numbers within their respective groups. The first subject to be selected in each group was determined from a table of random numbers. From the random start for the professor population,

10 Siegel, Nonparametric Statistics, op. cit., p. 239.

every tenth name was drawn, yielding a target $N$ of 66 and a ten percent sample. From the random start for the superintendent population, every fifth name was drawn, yielding a target $N$ of 65 and a 20 percent sample.

**Questionnaire return.**—Questionnaires were mailed to the 131 subjects thus selected on May 1, 1971. Individual handwritten reminders accompanied by copies of the questionnaire and response form comprised a second mailing. This second mailing was posted to all subjects whose response to the first mailing had not been received by May 20, 1971. The cut-off date for all responses was June 15, 1971.

The combined net return for the mail survey was 72%. An analysis of the rate of response is shown in Table 8.

**TABLE 8**

RATE OF RETURN FOR MAIL QUESTIONNAIRE SURVEY

<table>
<thead>
<tr>
<th>Sample Population</th>
<th>Number Mailed</th>
<th>Net No. Mailed</th>
<th>Number Returned</th>
<th>Net Percentage Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>66</td>
<td>64$^a$</td>
<td>48</td>
<td>75</td>
</tr>
<tr>
<td>Superintendents</td>
<td>65</td>
<td>64$^b$</td>
<td>44</td>
<td>69</td>
</tr>
<tr>
<td>Total</td>
<td>131</td>
<td>128</td>
<td>92</td>
<td>72</td>
</tr>
</tbody>
</table>
Concept set relevance ratings from the survey

Part One of the questionnaire asked respondents to rate each of the nine social science concept sets as of High Relevance, Some Relevance, or No Relevance to the practice of educational administration. The primary data sought in the survey were the rankings from Part Two of the response form. The rating exercise in Part One of the survey was designed to familiarize respondents with the content of each concept set so that rankings would be made in Part Two on a knowledgeable basis. Nevertheless, the Part One ratings are of interest in themselves and are summarized in Table 9.

Some observations may be made on the data in Table 9. The general pattern of relevance rating for the nine concept sets is similar for both the professor and the superintendent groups, with the professors making a somewhat higher proportion of High Relevance ratings (53%) than the superintendents (46%). Total No Relevance ratings were also similar. Overall, 6% of the professors' ratings and 10% of the superintendents' ratings were in the No Relevance category.
TABLE 9

RELEVANCE RATINGS OF NINE SOCIAL SCIENCE CONCEPT SETS
MADE BY 48 PROFESSORS OF EDUCATIONAL ADMINISTRATION AND 43 SUPERINTENDENTS

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Professors</th>
<th></th>
<th>Superintendents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Some</td>
<td>No</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Relevance</td>
<td>Relevance</td>
<td>Relevance</td>
<td>Relevance</td>
</tr>
<tr>
<td>A. Urban-Rural</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>B. Cultural Influences</td>
<td>14</td>
<td>29</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>C. Ghetto Issues</td>
<td>31</td>
<td>64</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>D. Adoption of Innovations</td>
<td>15</td>
<td>32</td>
<td>32</td>
<td>66</td>
</tr>
<tr>
<td>E. Egal. and Elitism</td>
<td>44</td>
<td>92</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>F. Role Conflict</td>
<td>27</td>
<td>56</td>
<td>19</td>
<td>40</td>
</tr>
<tr>
<td>G. Urban Stress</td>
<td>14</td>
<td>29</td>
<td>26</td>
<td>54</td>
</tr>
<tr>
<td>H. Republicans, Democrats</td>
<td>18</td>
<td>38</td>
<td>24</td>
<td>49</td>
</tr>
<tr>
<td>I. Community Conflict</td>
<td>34</td>
<td>71</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>229</td>
<td>53</td>
<td>177</td>
<td>41</td>
</tr>
</tbody>
</table>

152
Judgments on three specific concept sets appear to account to a considerable degree for the higher proportion of total High Relevance ratings made by professors than by superintendents. For the concept sets Cultural Influences on Motivation, Egalitarianism and Elitism, and Alternative Ascendance of Republicans and Democrats, the proportion of professors who rated these concept sets as of High Relevance was ten percent or more greater than the proportion of superintendents who assigned them High Relevance ratings.

In general, the data from the relevance ratings indicate a similarity in the evaluation of the relevance of these social science concepts to the practice of educational administration by UCEA professors and by superintendents prepared at UCEA institutions, with the professors showing a tendency to rate such content as of High Relevance slightly more often than administrators.

Concept set relevance rankings from the survey

In Part Two of the response form, respondents were asked to rank the nine concept sets in the order of their relevance to the practice of educational administration. These rankings were the primary data sought in the survey. The rankings were accumulated
for each sample population to produce group rankings. In addition, the value for Kendall's coefficient of concordance ($W$) was computed for each group. $W$ is an index of the divergence of actual agreement among judges as found in the data from the maximum possible, or perfect, agreement. $W$ is expressed in positive values only, on a scale from zero (maximum disagreement) to one (maximum agreement). 12

The results of the survey rankings for the UCEA professors and the superintendents are shown in Table 10. As Table 10 indicates, the two groups placed the nine concept sets in identical rank order, indicating a very high level of between-group concordance and rendering the computation of $W$ for between-group agreement unnecessary.

To determine within-group agreement, $W$ may be used. Kendall's coefficient of concordance ($W$) is computed from the following formula: 13

$$W = \frac{\frac{s}{k^2} (N^3 - N)}{\frac{1}{12} k^2 (N^3 - N)}$$


<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Professors</th>
<th></th>
<th>Superintendents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of</td>
<td>Group Rank</td>
<td>Sum of</td>
<td>Group Rank</td>
</tr>
<tr>
<td></td>
<td>Ranks</td>
<td></td>
<td>Ranks</td>
<td></td>
</tr>
<tr>
<td>A. Urban-Rural Differences</td>
<td>263</td>
<td>6</td>
<td>251</td>
<td>6</td>
</tr>
<tr>
<td>B. Cultural Influences</td>
<td>218</td>
<td>4</td>
<td>198</td>
<td>4</td>
</tr>
<tr>
<td>C. Ghetto Issues</td>
<td>274</td>
<td>7</td>
<td>262</td>
<td>7</td>
</tr>
<tr>
<td>D. Adoption of Innovations</td>
<td>109</td>
<td>1</td>
<td>102</td>
<td>1</td>
</tr>
<tr>
<td>E. Egalitarianism and Elitism</td>
<td>223</td>
<td>5</td>
<td>228</td>
<td>5</td>
</tr>
<tr>
<td>F. Role Conflict</td>
<td>197</td>
<td>3</td>
<td>154</td>
<td>3</td>
</tr>
<tr>
<td>G. Urban Stress</td>
<td>327</td>
<td>9</td>
<td>314</td>
<td>9</td>
</tr>
<tr>
<td>H. Republicans, Democrats</td>
<td>295</td>
<td>8</td>
<td>297</td>
<td>8</td>
</tr>
<tr>
<td>I. Community Conflict</td>
<td>152</td>
<td>2</td>
<td>127</td>
<td>2</td>
</tr>
</tbody>
</table>
When \( N \) is larger than 7, the significance of \( W \) may be tested by finding the equivalent value of \( x^2 \) and then determining the probability that the \( k \) rankings are unrelated by reference to the appropriate table. The formula for determining the value for \( x^2 \) of a given value for \( W \) is: \(^{14}\)

\[
x^2 = k \cdot (N - 1) \cdot W
\]

Results of the computation of within-group values of \( W \) and the level of significance for each sample group are presented in Table 11.

**TABLE 11**

**WITHIN-GROUP VALUES FOR \( W \) AND LEVELS OF SIGNIFICANCE OF RELEVANCE RANKINGS MADE BY 46 PROFESSORS AND 43 SUPERINTENDENTS**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Professors</th>
<th>Superintendents</th>
</tr>
</thead>
<tbody>
<tr>
<td>( W )</td>
<td>( k = 46 )</td>
<td>( k = 43 )</td>
</tr>
<tr>
<td></td>
<td>( N = 9 )</td>
<td>( N = 9 )</td>
</tr>
<tr>
<td></td>
<td>( s = 38,651 )</td>
<td>( s = 44,722 )</td>
</tr>
<tr>
<td></td>
<td>( W = .3044 )</td>
<td>( W = .4031 )</td>
</tr>
<tr>
<td>( df )</td>
<td>( N - 1 = 8 )</td>
<td>( N - 1 = 8 )</td>
</tr>
<tr>
<td>( x^2 )</td>
<td>( 111.872 )</td>
<td>( 138.632 )</td>
</tr>
<tr>
<td>( P )</td>
<td>( P &lt; .001 )</td>
<td>( P &lt; .001 )</td>
</tr>
</tbody>
</table>

\(^{14}\) Ibid., p. 236
Interpretation.--Siegel notes that a high or significant value of $W$ may be interpreted to mean that the judges or observers have applied essentially the same standard in ranking the objects under study. The data in Table 11 indicate that this is the case with each of the two sets of rankings obtained in the survey. A high level of significance ($p < .001$) characterizes each set of rankings. The values of $W$ indicate that the superintendents' rankings ($W = .403$) reflect a somewhat greater degree of within-group agreement or concordance than do the professors' rankings ($W = .3044$).

As has been mentioned, both groups ranked the nine concept sets in identical orders of relevance, based upon the sums of ranks for each group. Siegel cites Kendall to this point, who states that "the best estimate of the 'true' ranking of the $N$ objects is provided, when $W$ is significant, by the order of the various sums of ranks." As the two groups ranked the concept sets in identical order, the coefficient of concordance for the two sets of ranks is 1,

15 Ibid., p. 237.
16 Ibid., p. 238.
indicating maximum agreement.

**Comparison of survey and criteria-based relevance rankings**

The concept set relevance rankings produced by application of the Charters criteria may now be compared with those obtained from the survey of professor and superintendent sample populations. The three sets of ranks are shown in Table 12.

The coefficient of concordance ($W$) for these three sets of ranks with $k = 3$, $N = 9$, and $x^2 = 439.5$ is $0.814$. This value of the coefficient reflects a marked degree of agreement among the three sets of ranks. It is, of course, influenced by the fact that the two sample populations produced identical rankings for the nine concept sets. The probability of Type I error ($p$) for this value of $W$ under the $x^2$ test of significance is less than $0.02$. These data are summarized in Table 13.

A final analysis was made to determine the relationship between the relevance rankings produced by the application of the Charters criteria and the professor group, and by the application of the Charters criteria and the superintendent group, respectively. Since the rankings produced by the evaluations of the professors and superintendents were identical, one set
TABLE 12

RELEVANCE RANKINGS FOR NINE SOCIAL SCIENCE CONCEPT SETS MADE BY 46 PROFESSORS, 43 SUPERINTENDENTS, AND THE APPLICATION OF THE CHARTERS CRITERIA

<table>
<thead>
<tr>
<th>Concept Set</th>
<th>Prof. Rank</th>
<th>Supt. Rank</th>
<th>Criteria Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Adoption of Innovations</td>
<td>1</td>
<td>1</td>
<td>2.5&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>I. Community Conflict</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>F. Role Conflict</td>
<td>3</td>
<td>3</td>
<td>2.5&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>B. Cultural Influences</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>E. Egalitarianism and Elitism</td>
<td>5</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>A. Urban-Rural Differences</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>C. Ghetto Issues</td>
<td>7</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>H. Republicans, Democrats</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>G. Urban Stress</td>
<td>9</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

<sup>a</sup> Tied rankings were assigned the average of the ranks they would have been assigned had no ties occurred.
of calculations sufficed to provide information on both pairs of relationships.

The Kendall rank correlation coefficient (tau), a more conservative statistic than the equally appropriate Spearman rho, was employed in this analysis. Tau is appropriate for providing an indication of the degree of association between two sets of ranks where measurement of at least ordinal level obtains for the two ranked variables. Because there was a tie in the rankings produced by the Charters

\[ df = N - 1 = 8 \]
\[ x^2 = 19.536 \]
\[ p < .02 \]

\[ W = .8139 \]
criteria, the formula for tau which accounts for ties was used. This formula is:  

\[ \tau = \frac{S}{\sqrt{\frac{1}{2}N(N-1)} - T_X \sqrt{\frac{1}{2}N(N-1)} - T_Y} \]

For the two sets of ranks under analysis, \( S \), which expresses the ordinal relationship between all possible pairs of ranks, was = 15; \( T_X \), an index to the number of tied observations in the professor/superintendent rankings, was = 0; \( T_Y \), an index to the number of tied observations in the criteria rankings, was = 1; and \( N \), the number of objects ranked, was = 9. Using these values in the formula, a value for tau of .4237 was obtained. When \( N \) is 10 or less, tabled data may be used to determine the level of significance for tau. 19 For this value of tau, \( p = .075 \).

**Summary**

This chapter has presented data and data analyses based on a questionnaire survey of two sample populations: UCEA professors of educational administration and practicing superintendents who received

---

18 Ibid., p. 218.

19 Ibid., p. 285.
doctorates from UCEA institutions during the period 1963-68. In addition, the results of the survey were related to the results of the investigator's effort to independently operationalize and apply a set of criteria of relevance. The survey data may be characterized as judgmental in nature, while the results of the investigator's effort may be characterized as analytical in nature.

A series of correlational analyses were performed, the results of which indicated a significantly high level of agreement both within and between groups of judges who ranked selected social science concept sets as to their relevance to the practice of educational administration. A significantly high level of agreement also was found to obtain between the survey rankings and the independent rankings of the investigator. Of particular interest was the finding that professors and practitioners placed the nine concept sets in identical rank order.

The data presented here provide a basis for responding to the questions which the study was designed to investigate. These conclusions, as well as implications which are perceived to issue from them, are presented in the following chapter.
CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

This study was designed to investigate a method of assessing the potential relevance of social science knowledge to the practice of educational administration. This problem was viewed as one aspect of the larger process of incorporating social science knowledge into preparation programs for educational leaders. A number of problems are implicit and explicit in this larger process. The principal condition that contributes to the several problem areas was seen to be the lack of fit or congruence between the goals of those who produce social science knowledge and the goals of those who would attempt to utilize that knowledge in dealing with concrete situations in the administrative environment.

The goal of the social scientist, in the formal and traditional sense, is to produce knowledge for its own sake -- to add to mankind's stock of demonstrable truth; the goal of the educational administrator is
to purposefully influence events in the concrete context of educational affairs. Although the domains in which social scientists and educational administrators work do overlap or intersect, this relationship is unsystematic. The unsystematic nature of this relationship leads to a series of problems in the identification, evaluation, selection, and articulation of relevant social science knowledge into programs for preparing educational leaders. These problems provide the setting within which the questions addressed by the study were formulated.

The purpose of the study was to explore the operationalization and application of an untested set of criteria which were designed to assess the relevance of selected social science concepts to the practice of educational administration. The specific questions which the study attempted to answer were:

1. Can the proposed criteria be defined operationally?
2. Do the criteria denote characteristics which can be identified in social science theories, orientational views, and concept sets?
3. Does the operational definition of the
criteria produce a set of measures which in fact discriminates among social science content as to potential relevance to educational administration?

4. What is the concurrent validity of the criteria set?
   a. What is the correlation between concept rankings generated by application of the criteria and concept rankings made by UCEA professors of educational administration?
   b. What is the correlation between concept rankings generated by application of the criteria and concept rankings made by superintendents who hold advanced degrees from UCEA institutions?

5. How can the criteria be refined?

As these questions indicate, the central purpose of the study was the exploratory operationalization and testing of a method rather than the collection of descriptive data. The general model for the investigation was conceived of as an analogue to the process of instrument development. Elements of this process which were incorporated into the study design included
the identification of a promising but untested set of provisional criteria; the attempt to operationally specify scaled definitions for each criterion; the application of these definitions to selected segments of social science knowledge in order to produce ranked preferences among them; and the accumulation of these rankings into an ordered array which reflected the potential relevance of the various concept sets to the practice of educational administration. This phase of the study was essentially a logical and analytic effort.

The analogue to instrument development was also reflected in the second phase of the study. In this second phase, an empirical investigation was undertaken. This empirical stage took the form of a survey designed to produce data from which estimates of the concurrent validity of the results of the logico-analytic phase could be evaluated. Throughout both phases, it was emphasized that the level of precision of discrimination sought was relatively gross, as is appropriate and frequently necessary in an exploratory study of this nature.

These two phases of the investigation were grounded in a conceptual framework which was viewed
as essential to a general understanding of the dimensions of the problem, its history, and its contemporary manifestations in practice. The underlying rationale for the study was grounded in assumptions about the desirability of expanding the rational base for administrative activity.

Conclusions

The results of this research provide a basis for responding to the specific questions which the study addressed. These responses are presented as the conclusions of the study.

1. Can the proposed criteria be defined operationally?

Conclusion. The attempt to specify operational definitions for the Charters criteria was presented in Chapter III. The format for presenting the development of operational specifications in Chapter III was intentionally chosen to make as clear as possible the basis for the numerous judgments which were made in the course of establishing operational specifications.

On the basis of the first phase of the investigation -- the logico-analytic effort -- the question may be answered in the affirmative. Chapter III
presents one such set of operationally specified definitions.

2. Do the criteria denote characteristics which can be identified in social science theories, orientational views, and concept sets?

Conclusion. The manner of presenting the steps in determining how the characteristics denoted by the criteria could be identified was, again, designed to expose as clearly as possible the basis for these judgments. The exercise performed in Chapter III indicates that, at least on the basis of one set of judgments, the criteria do indeed denote identifiable characteristics of social science concept sets. Thus, the research presented in Chapter III indicates that this question, too, may be answered in the affirmative.

3. Does the operational definition of the criteria produce a set of measures which in fact discriminates among social science content as to potential relevance to educational administration?

Conclusion. The operational specifications for ordinally distinguishable criterion measures
applicable to each of the Charters criteria made possible discrimination among the nine selected segments of social science knowledge as to the potential relevance of each one to educational administration. It should be noted that these discriminations were made only on a relative basis within the group of nine concept sets and do not purport to establish any "absolute" evaluation of relevance with respect to the universe of social science knowledge. Within these limits, it is concluded that this question may also be answered affirmatively.

4. What is the concurrent validity of the criteria set?
   a. What is the correlation between concept rankings generated by application of the criteria and concept rankings made by UCEA professors of educational administration?
   b. What is the correlation between concept rankings generated by application of the criteria and concept rankings made by superintendents who hold advanced degrees from UCEA institutions?

**Conclusion.** The concurrent validity of the results of the process of criteria operationalization
and application as performed by the investigator was tested by the empirical survey of sample populations of professors of educational administration in UCEA member institutions and practicing superintendents who had received advanced degrees from UCEA member institutions during the period 1963-68. The design for estimating concurrent validity consisted of collecting relevance judgments from the two sample populations on the same set of social science concept sets evaluated by the investigator; deriving estimates of within-group concordance for each sample population; and then deriving estimates of across-group concordance among the rankings produced by the sample populations and by the investigator's application of the criteria.

Specifically, for within-group values of $W$ ($W = .304$ for the professor sample and $.403$ for the superintendent sample), $p$ was less than $.001$. For the across-group value of $W$ which included all three rankings, $W$ was $.814$ with a value for $p$ less than $.02$. For the across-group value of $W$ which associated only two groups, the Charters criteria rankings and the superintendent rankings or the Charters criteria rankings and the professor rankings, a value for tau of $.424$ was obtained, with $p$ equal to $.075$. 
These measures of correlation indicate that there was a significantly high level of agreement both within the groups and across the group rankings of the judges and the rankings produced by the investigator's application of the criteria. Of particular interest was the finding that the professors and superintendents placed the nine concept sets in identical rank order of relevance.

It may thus be concluded that the application of the Charters criteria, as exemplified in this study, predicts to a significant degree the judgments of the sample populations as to the relevance of the selected social science content.

5. How can the criteria be refined?

Conclusion. Although application of the criteria in their unrefined form produced a significant degree of correlation between and among the three relevance rankings, it is possible that refinement of the criteria could lead to higher measures of correlation, or that similar results could be obtained from a modified and abbreviated set of criteria.

For example, an analysis might be performed which would produce rankings based on various combinations of the Charters criteria. These combinations
might include those where one or more of the criteria were omitted or where different weights were assigned to various criteria on the basis of the investigator's judgment of their relative significance for determining relevance.

At the same time, however, it may be suggested that the phenomena which were dealt with in this research are rather complex and that there is probably some reasonable limit to the degree of precision which should be sought in developing formal procedures for this kind of classification system. The general question of criteria refinement will be dealt with further in the section on suggestions for future research below.

From the results of the investigation based on the criteria as they stand, however, it may be concluded that it appears to be possible to develop systematic general criteria which can be used to make preliminary judgments as to the potential relevance of segments of existing and emergent social science knowledge to the practice of educational administration.
Implications

1. The development of a procedure or method frequently implies an audience of potential users of the procedure or method. The procedure for determining the potential relevance of specific social science concepts to the practice of educational administration which was investigated in this study is no exception. Potential users of the criteria and the procedure for their application would include those involved in planning preparation programs in educational administration which incorporate social science knowledge; professors of educational administration who wish to make determinations about the inclusion of specific social science concept sets in courses or seminars which they teach; administrators who wish to develop a systematic basis for discriminating among social science knowledge which they may encounter in personal or institutional learning situations; and students of educational administration who may wish to develop a basis for discrimination among social science content which they encounter in courses taught by specialists in social science disciplines.
2. The most common approach to incorporating social science knowledge into graduate preparation programs for educational leaders, the "across-campus" approach, may be relatively inefficient if the purpose of such exposure is to provide students of educational administration with access to social science concepts which are relevant to the practice of educational administration. This research suggests that discriminations can be made among social science concepts at a much more precise level than is possible when program options are presented only in terms of the rather broad areas of knowledge typified in many university course offerings in the social sciences. The isolation of selected highly relevant concept sets for intensive study might be seen as an alternative approach to this problem -- an approach which would appear to be enhanced in feasibility in view of the conclusions presented above. It should be emphasized, however, that the results of this study do not contribute to the basis on which judgments may be made regarding the perennial question of depth vs. breadth in training programs; they do, however, provide a procedure for identifying knowledge which might be the most appropriate focus of the preferred approach.
In addition to the "across-campus" approach to incorporating social science knowledge into educational administration preparation programs, three other approaches were identified, each of which is an attempt to modify the "across-campus" mode. In each of these three additional modes -- none of which is used extensively in comparison with "across-campus" -- there is a critical point at which judgments must be made as to the relevance of available knowledge to instructional and program goals. The procedure developed in this study would appear to offer one systematic basis for making such judgments. Further, when judgments as to the relevance of social science knowledge must be made by several persons from various disciplines, as is often the case, for example, in an interdisciplinary seminar, the criteria and procedure presented here might well serve as a point of departure for program decision-making that could be communicated rather easily across sometimes troublesome disciplinary boundaries.

3. The gap between practitioners and professors that is sometimes alluded to informally within the profession appears to be rather minimal in the area upon which this investigation concentrated. Results of
the empirical survey reported here -- in particular the finding that professors and practitioners ranked the nine concept sets in identical order of relevance -- may be seen to constitute one piece of evidence for evaluating the actual nature of this alleged disparity.

4. There appear to be limits to the precision with which relevance judgments may be made, incorporating, as they do, a considerable number of factors which may be quantifiable rather grossly, at best.

5. Social science knowledge appears to be viewed, at the present time, as of considerable relevance to the practice of educational administration, as reflected in the relevance ratings obtained from professors and superintendents for the nine concept sets used in this research. Whether this shared perception on the part of professors and practitioners reflects the objective utility of social science knowledge in administrative activity, is a function of the socialization process which operates in educational administration programs, or is attributable to other factors, is not known. Although this study implies that the social sciences do have objective utility in administering educational organizations, it should be
pointed out that this specific question was not investigated in this study, and that behavioral evidence pertinent to this relationship was not obtained.

**Recommendations for further study**

A number of recommendations for further study arising from this investigation may be made:

1. A validity study of the definition and application of the operational specifications might be made to evaluate the generalizability of the definitions and procedure developed by this investigator. This might be approached in one of at least three ways. First, other individuals could be asked to operationalize the Charters criteria and apply them to the nine concept sets, a replication of the investigator's work in this study. Two other alternatives could be used to reduce the effort required of individuals in the validity study. In the first alternative, other investigators could be asked to independently operationalize the criteria, but not apply them to the social science concepts. In the second alternative, other investigators could take the operationally specified definitions as developed in this study or by other individuals, and independently apply them to the concept sets.
Each of these three approaches would provide a basis for examining the validity of the procedure and the judgments made in this investigation, with the first approach providing perhaps the most satisfactory test.

2. Attempts to refine the criteria beyond those suggested above could be undertaken. Three purposes can be proposed to inform efforts towards criterion refinement. The first could seek to expand the conceptual basis of the criterion set to include other notions which are not presently represented in the set. The purpose of this attempt to develop a more comprehensive set of criteria would be to enhance the precision with which judgments as to relevance might be made. Another kind of effort directed toward this same purpose would involve the development of more extensive discrimination scales for each criterion. Five point scales, for example, might be developed for each criterion in contrast to the three point scales created for use in this study.

A second purpose for criteria refinement might be to reduce the number of criteria which are needed to obtain relevance judgments of the same order of significance as those obtained in the study. It may be that some combination of a limited number of criteria,
that is, less than the six proposed by Charters, is adequate to predict the potential relevance of social science knowledge to educational administration. This investigator would see this as an important effort, in view of the cumbersome nature of the analysis as presently constituted.

A third purpose to be pursued in refining the criteria would have to do with assigning differing weights to various criteria. This undertaking would need to reflect judgments as to the relative importance of individual criteria, and would require the development of a rationale for each weighting decision. Criteria which might be singled out for particular attention in such an effort could include those dealing with operationality, intervention capacity, and relevance of scope.

3. The method of this study might be applied to other groups of social science concept sets to expand the number of segments of social science knowledge for which relevance ratings and rankings are available.

4. This research was limited to the determination of the potential relevance of examples of social science knowledge for the practicing administrator.
Similar studies might be made to develop criteria of relevance for other specialists in educational administration, such as researchers, developers, and synthesizers.

5. Cognate studies might be made in other fields of administration to determine if criteria of relevance like those utilized in this study might be fruitfully developed for making determinations about the relevance of social science knowledge to the cognate area.

6. This study was limited to a single class of administrators -- superintendents. The study might be replicated for other groups of administrators, such as principals or administrators of higher education.

7. The sample populations used in this study were limited to individuals affiliated with UCEA member institutions. Further work might be undertaken to determine if both the findings and the empirical aspects of this study are generalizable to broader populations.
APPENDIX
May 1, 1971

Dear Colleague:

In the education of school administrators -- as, indeed, in many aspects of American life today -- the question of what is relevant is being raised with increasing frequency.

It is widely believed, for example, that the social sciences have much to contribute to the graduate education of American public school administrators. At the same time, the range of social science knowledge is great and constantly expanding, while the time and capability of any given individual, no matter how talented, is severely limited. This leads to two important questions: If social science knowledge is relevant to the pre-service and in-service preparation of school administrators, are some social science concepts more relevant than others? And, if they are, how can the more relevant ideas be identified so that our energies can be focused on them most productively?

This project is an attempt to seek some empirical answers to these questions. Nine social science concepts from various disciplines are briefly summarized in the attached questionnaire. You are asked to read each one and check in one of three boxes your judgment about its relevance to the practice of school administration today, as you see it. At the end of the checklist, you are asked to rank the nine pieces of social science content in order of relevance.

Although very little writing is required, it is obvious that the completion of the checklist will take a few minutes of your time. For this, I am most grateful.

The information you contribute to this project is to be used in dissertation research under the direction of Dr. Raphael O. Nystrand of The Ohio State University Faculty of Educational Administration.

Again, many thanks for your help.

Sincerely,

John A. Blough
Research Associate
The University Council for Educational Administration
Each item below is a summary of research or analysis which has been done by social scientists. Please read each item; then indicate your judgment of its relevance to the practice of educational administration by checking one of the three boxes next to the corresponding letter in Part One of the response card. After you have rated each of the items independently in Part One of the response card, you will be asked to rank them in Part Two of the response card.

You may be familiar with some, none, or all of the material in the nine items below. Please remember that you are to record only your judgment of the relevance of the material to the practice of educational administration, without regard to your previous knowledge of the material or to its significance for other professional or scholarly concerns.

A

The rural domination of state legislatures has long been a target of the critics of state and local government. To investigate this, a political scientist analyzed the roll-call votes in five biennial sessions of the Illinois and Missouri state legislatures -- two states where big-city and rural interests can be clearly contrasted. The study concluded that the traditional belief in bitter conflict between metropolitan and non-metropolitan interests in the state legislatures does not hold, at least in these states on roll-call votes.

More specifically, the investigator concluded that (1) urban legislators usually do not vote together with high cohesion; (2) when they do, they usually win; and (3) rural legislators seldom vote against urban legislators with high cohesion.

B

By analyzing a number of personal accounts of life in two different cultures, an anthropologist has examined the relationship between community values and the motivation of learning in young children. The two contrasting cultures which were studied were the "primitive" society of the Dakota Plains Indians and the highly literate communities of Eastern European Jews in the years before World War II. In both cultures, the education of the young child typically involved extreme physical hardship and demands that we might well consider to be beyond the biological capacity of children 3 to 8 years of age.

In both cultures, however, the children developed what could be termed a lifelong dedication to learning. The anthropologist concluded that education does not need to be externally motivated if it is seen as necessary to the deep and pervasive values of the community and to the carrying out of the significant role of the individual. In these circumstances, education is in general undertaken readily, through an inner urge, by the individual.

C

Using data from 15 large American cities, two social scientists investigated the conditions under which the issues of retail merchant exploitation and police brutality in ghetto areas become major public issues in those areas. Among other findings, the investigators concluded that (1) grass roots ghetto grievances against ghetto merchants and police usually are founded on fact; (2) ghetto consumers did not realize they were being exploited by ghetto retailers until this was pointed out to them by city and community leaders; and (3) the reputation of the local police chief has an independent effect on whether police brutality becomes a major issue -- where the police chief is sympathetic and responsive to black leaders, the rank and file of policemen are less likely to be abusive and police brutality is less likely to be a major issue in the ghetto.
Several hundred studies of the rate at which individuals and organizations adopt or accept new ideas and practices have been made since the end of World War II. The innovations studied in this research include new practices in health, agriculture, and education, as well as new products placed on the market by business and industrial corporations. After reviewing a large number of these studies, a sociologist concluded that:

1. In both urban and rural areas, personal influence seems to be more effective in gaining acceptance of change than do impersonal sources of influence, such as the mass media;
2. When the acceptance process is broken down into stages, mass media are more influential in the early stage of getting information, while personal influences are more of a factor in the later stages of deliberation and decision-making about acceptance of the innovation; and
3. "Early adopters" seem to be more influenced by agencies, mass media, or other formal and impersonal sources, while "late adopters" seem to be more influenced by personal, informal sources.

In a classic study of a small American community, a sociologist found that the American social system is permeated with two conflicting social principles. The first, most often expressed in words, says that all men are created equal. The second, most often expressed in action, declares that men are of unequal worth — that a few are superior to the many. Does this mean that honest men should abandon the rhetoric of equality because of the reality of American social class structure? No, concluded the investigator: the apparently conflicting belief in equality is absolutely essential to preserve such social class mobility as exists in the United States. Without the belief in equality, American social class structure would become rigid and inflexible.

No individual is ever able to respond with complete satisfaction to himself and to others in every social situation. This felt difficulty in fulfilling role obligations has been described by one researcher as "role strain." Role strain arises because, in general, every individual's total role obligations are overdemanding — they are numerous, distracting, inconsistent, and sometimes directly conflicting. Some socially acceptable ways of reducing role strain include (1) delegation of role obligations within the limits of societal values — a wife may delegate housekeeping but a student may not delegate examinations; (2) curtailment or elimination of some role relationships, although role obligations related to status positions are not easily eliminated; (3) extension, or the taking on of so many role obligations that some may be used as excuses for not performing others; and (4) erecting barriers against intrusion: the executive may make himself approachable only through his secretary, or the professor may go on sabbatical leave.
In a recent analysis of the relationship between violent crime and the shaping of the American big city environment, an urban sociologist concluded that our cities are becoming "fortified" at the present time, and that "defensive cities" will soon become a reality. Historically, when political institutions have failed to protect the public, individuals have taken steps on their own to safeguard the physical safety of themselves, their families, and their property. The steps being taken today by individuals include, among others, expanded illumination of streets, stairways, and hallways; trimming of trees and shrubbery; the increased use of locks, safety chains, and alarm systems; electrified fences; closed circuit television surveillance; guns, dogs, and chemicals used for self-protection; the employment of private guards, doormen, and vigilante security forces; and the closing of businesses after daylight hours.

The development of fortified and defensive urban areas is seen as dysfunctional in that (1) the social and economic consequences are costly and destructive, and (2) although defensive development of the cities can control the types and locations of crime, it will not attack the causes of crime, and may add to them. At the same time, it is acknowledged that we simply do not know whether improving the urban environment can influence positive behavior and reduce the overall volume of crime.

For a century neither the Republican nor the Democratic party has been able to control the government of the United States for more than twenty years at a time, and sometimes for only four. In analyzing the Eisenhower, Kennedy, and Johnson years, a political scientist concluded that the major cleavage between the two parties is not what a given policy should be, but is instead the tempo or speed with which a given policy should be pursued. This cleavage as to tempo is between activists and conservatives -- between those who would move more rapidly and those who would move more slowly in the pursuit of relatively similar policy goals. On this basis, the Democratic and Republican parties and their leadership may be depicted graphically as follows:

Party leadership must stand near the midpoint of its party. Hence, the Democratic party leadership will always be to "left of center," and the Republican party leadership will always be to "right of center." Two conclusions follow: (1) either party, when in control, finds itself to the left or right of center, hence in a state of disequilibrium with the electorate; and (2) government "by consensus," no matter how often it is proposed by Presidents, is in reality unlikely. Moving too fast and doing too much is the recurrent pitfall of the Democrats; moving too slowly and doing too little is the bane of the Republicans. The researcher concludes that once a party establishes its power, it is already on the way to losing its power -- hence government control alternates between the parties.
After an analysis of data on conflict and controversy in local communities, a researcher concluded that the following stages are typical of the sequence of events when community conflict arises over issues such as water fluoridation, what books should be on school library shelves, local "witch-hunts," and others:

1) A single issue is raised;
2) The issue disrupts community equilibrium;
3) Previously suppressed issues against the opponent begin to surface;
4) The opponent's beliefs increasingly become an issue in the disagreement;
5) The opponent appears totally "bad";
6) Charges are made against the person of the opponent;
7) Finally, the dispute becomes independent of the issue on which initial disagreement was raised.

Now that you have completed Part One of the response card, please fill in Part Two. In Part Two, you are asked to rank the nine items in order of relevance to the practice of educational administration, comparing them to each other. Write the number "1" next to the letter which corresponds to the item which you judge is most relevant, write "2" next to the letter which corresponds to the next most relevant item, and so on. The number "9" should be written next to the letter which identifies the least relevant item in the group.

After completing Part Two, fill in the brief personal data section in Part Three, and drop the stamped pre-addressed response form in the mail. Thank you.

Note: The number in pencil in the lower left corner of the response card is solely for use in survey follow-up. Identification of respondents will, of course, be held in absolute confidence and will not be released to any individual by the investigator.

If you prefer that your response remains anonymous, simply erase or obliterate the number, or cut off the lower left corner of the card which bears the number.
## PART ONE

### RATING OF INDIVIDUAL ITEMS

<table>
<thead>
<tr>
<th>Item</th>
<th>High Relevance</th>
<th>Some Relevance</th>
<th>No Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A... URBAN-RURAL LEGISLATORS.........</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>B... EDUCATION IN OTHER CULTURES.....</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>C... GHETTO POLICE AND MERCHANTS.....</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>D... ADOPTION OF INNOVATIONS.........</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>E... EQUALITY: RHETORIC AND REALITY..</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>F... ROLE STRAIN......................</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>G... FORTIFICATION OF CITIES.........</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>H... CONTROL OF FEDERAL GOVT.........</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>J... STAGES IN COMMUNITY CONFLICT....</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

## PART TWO

### RANKING OF ITEMS FROM 1 TO 9

1 = Most Relevant, thru 9 = Least Relevant

<table>
<thead>
<tr>
<th>Item</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>A... URBAN-RURAL LEGISLATORS.........</td>
<td>...A</td>
</tr>
<tr>
<td>B... EDUCATION IN OTHER CULTURES.....</td>
<td>...B</td>
</tr>
<tr>
<td>C... GHETTO POLICE AND MERCHANTS.....</td>
<td>...C</td>
</tr>
<tr>
<td>D... ADOPTION OF INNOVATIONS.........</td>
<td>...D</td>
</tr>
<tr>
<td>E... EQUALITY: RHETORIC AND REALITY..</td>
<td>...E</td>
</tr>
<tr>
<td>F... ROLE STRAIN......................</td>
<td>...F</td>
</tr>
<tr>
<td>G... FORTIFICATION OF CITIES.........</td>
<td>...G</td>
</tr>
<tr>
<td>H... CONTROL OF FEDERAL GOVT.........</td>
<td>...H</td>
</tr>
<tr>
<td>J... STAGES IN COMMUNITY CONFLICT....</td>
<td>...J</td>
</tr>
</tbody>
</table>

## PART THREE

### PRESENT POSITION:
- School Superintendent
- Professor of Ed. Admin.
- Other:

### AGE GROUP:
- 29 or under
- 30-44
- 45 or over

### Student Enrollment:
- University or School District:

### LOCATION:
- Central City
- Suburb

---

JOHN A. BLOUGH

2840 PROCTOR DRIVE

COLUMBUS, OHIO 43209
BIBLIOGRAPHY
BIBLIOGRAPHY

Books


Plato. The Republic.


Articles and Periodicals


Unpublished Material

