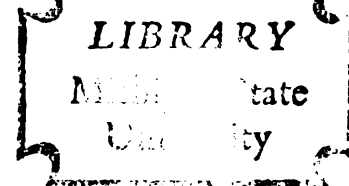


THE DEVELOPMENT OF AN INSTRUMENT
DESIGNED TO ASSESS THE POTENTIAL
FOR CONFLICT RELATIVE TO
FACULTY-ADMINISTRATOR RELATIONSHIPS

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
DAVID ALLEN HARRIS

1970



This is to certify that the

thesis entitled

THE DEVELOPMENT OF AN INSTRUMENT
DESIGNED TO ASSESS THE POTENTIAL
FOR CONFLICT RELATIVE TO FACULTY-
ADMINISTRATOR RELATIONSHIPS

presented by

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has been accepted towards fulfillment
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Major professor

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ABSTRACT

THE DEVELOPMENT OF AN INSTRUMENT DESIGNED TO ASSESS THE POTENTIAL FOR CONFLICT RELATIVE TO FACULTY- ADMINISTRATOR RELATIONSHIPS

By

David Allen Harris

Statement of Problem

The purpose of this study was to develop an instrument, the Potential for Institutional Conflict Questionnaire (P.I.C.Q.), designed to assess the potential for conflict relative to faculty-administrator relationships at selected public Michigan institutions of higher education.

In the development of the instrument (P.I.C.Q.) emphasis was given to establishing consistency with present theoretical knowledge about the nature of organizations, in isolating and studying the major dimensions incorporated in the instrument, and in obtaining acceptable internal reliability.

Method of Investigation and Analysis

A basic Likert-type instrument (P.I.C.Q.) was developed using empirical and inductive procedures. A combination of these two approaches was considered useful in checking theoretical assumptions against numerical values.

Items were included in the P.I.C.Q., Form I, that related to collective negotiations, morale, shared

administrator-faculty decision making, and student, governing body and state legislature status and involvement in the institutional setting. A tentative listing of dimensions was developed on the basis of item-sorting, panel agreement, induction, and theoretical knowledge.

The P.I.C.Q., Form I, was then field tested with the responses subjected to a number of statistical procedures including item analysis, internal reliability analysis, and cluster analysis. The P.I.C.Q., Form I, was studied relative to item content, item clarity, levels of internal reliability, and in determining the extent to which the projected dimensions had received statistical support.

Based upon the multiple analysis of the P.I.C.Q., Form I, a new dimensional classification schema and the P.I.C.Q., Form II, were developed.

The P.I.C.Q., Form II, was administered to a random and stratified sample drawn from the population of four public Michigan institutions of higher learning. The responses were subjected to factor analysis. Factor analysis was used in isolating and studying those dimensions accounting for the most variance. Based upon this analysis final names were assigned to the major dimensions and the P.I.C.Q. Form III, was developed for use in assessing the potential for conflict relative to faculty-administrator relationships.

Major Findings

The multiple analysis of the P.I.C.Q., Form I, resulted in 61 items being eliminated from the original 151 item

instrument.

Acceptable levels of internal reliability are found for the total instrument and for the two sub-scales relating to Collective Negotiations and Morale. The two sub-scales relating to Environmental Constraints (Now Applies) and Environmental Constraints (Should Apply) displayed low levels of internal reliability.

Factor analysis of the P.I.C.Q., Form II, revealed that four basic dimensions were incorporated in the instrument that related to the potential for conflict relative to faculty-administrator relationships:

1. Administrative Leadership
2. Shared Academic Governance (Normative)
3. Collective Negotiations (Utilitarian)
4. Morale

The factor analysis of the P.I.C.Q., Form II, provided positive support for four basic sub-scales of 81 items. On this basis the P.I.C.Q., Form III, was developed.

The P.I.C.Q. should be of intrinsic interest to the faculty and administrations; the findings from it can be used for purposes of faculty-administrator self-evaluation relative to the potential for conflict.

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THE DEVELOPMENT OF AN INSTRUMENT
DESIGNED TO ASSESS THE POTENTIAL
FOR CONFLICT RELATIVE TO FACULTY-
ADMINISTRATOR RELATIONSHIPS

By

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CHAPTER I

The Problem

Need

Higher education is experiencing a period of critical stress on its traditional organizational patterns. Existing patterns of institutional governance have become problematic. Faculty and administrator uncertainty toward existing and proposed institutional governance designs is a topic of concern in the present period of stress confronting higher education.¹

From the Report of Committee T on the Place and Functions of Faculties in University Government and Administration² issued in 1920 to the report on Faculty Participation in Academic Governance in 1967,³ studies and reports have stressed the lack of faculty participation in academic governance and faculty discontent toward their role in

¹ Clyde Moyers and Gerald Pinson, "Collective Negotiations in Colleges and Universities," School and Society, November 1, 1966, p. 390.

² J. E. Leighton, "Report of Committee T on the Place and Function of Faculties in University Government and Administration," American Association of University Professors Bulletin, Vol. 6, No. 3, March 1920, pp. 17-47.

³ Faculty Participation in Academic Governance in 1967, Report of the AAHE Task Force on Faculty Representation and Academic Negotiations Campus Governance Program, Washington, D. C., American Association for Higher Education, 1967.

institutions of higher learning in the United States. Today the demand for change, the rate of change, and the implementation of new modes of institutional governance are creating increasing tensions within higher education.

Within this context of stress and change, collective negotiations are emerging as a new and pervasive force which is modifying the traditional governance patterns in American higher education. Boards of Trustees, administrators, and faculty members in states having public employee legislation, are faced with a new organizational mode which may fundamentally modify the decision-making process in American higher education.

Erickson views collective negotiations in higher education as paralleling, in substance and scope, the development of collective negotiations in the public schools.⁴ A recent study by the American Council on Education found that most institutional members and faculty respondents view collective negotiations as becoming a common feature of higher education.⁵

There is a general agreement concerning the development and expansion of collective negotiations in higher education. There is no general agreement concerning the appropriateness of collective negotiations, the institutional

⁴ Donald A. Erickson, "A Fast Express Named Militance," The North Central Association Quarterly, Vol. XLII, No. 3, Winter, 1968, pp. 229-230.

⁵ "Study by the American Council on Education on Attitudes Toward Collective Negotiations," Chronicle of Higher Education, (editorial project for education), Oct. 28, 1968.

viability of collective negotiations, support by faculty members and administrators for collective negotiations, or the factors that correlate with support and non-support for collective negotiations as an institutional governance design.

Writers support, in general, one of two perceived governance designs within institutions of higher education. The first governance model reflects the principal of shared authority in a community with common interests. The second governance model reflects an absence of common interests and the assumption of permanent conflict between faculty members and administrators requiring collective negotiations.⁶ A few writers see both governance designs existing in variable form within institutions of higher learning.⁷

There are few studies that have attempted to analyze faculty member and administrator attitudes toward variant governance designs within institutions of higher learning. As important is the need to investigate what factors contribute to faculty member and administrator preferences toward particular governance designs within institutions of higher learning. If institutions are to be viable in resolving insitutional conflict, there may exist a need to

⁶ Algo D. Henderson, "Control in Higher Education: Trends and Issues," The Journal of Higher Education, Vol. XL, No. 1, Ohio State University Press, January, 1969, pp. 6-8.

⁷ George Madden, "A Theoretical Basis for Differentiating Forms of Collective Bargaining in Education," Education-
al Administration Quarterly, Vol. 5, No. 2, University
Council for Educational Administration, Spring, 1968, pp. 76-90.

develop instruments that measure membership attitudes toward organizational conflict and particular governance modes. Essential in developing such instruments is the importance of ascertaining what factors underlie the potential for institutional conflict.

Purpose

It was the purpose of this study to develop an instrument designed to assess the potential for institutional conflict relative to faculty-administration relationships.

Hypotheses of the Study

Hypothesis A:

It will be possible to develop the basis for an instrument that seeks to assess the potential for institutional conflict relative to faculty-administrative relationships that has theoretical support.

Hypothesis B:

It will be possible to develop a basic instrument that will have acceptable internal reliability.

Hypothesis C:

It will be possible to ascertain what dimensions underlie the basic instrument. This will serve as an empirical check against the theoretical assumptions upon which the basic instrument was developed.

Method of Research

A basic attitude scale instrument was developed on the basis of existing theory and knowledge relative to institutional conflict in higher education. The instrument was pre-tested and subjected to statistical tests to ascertain the levels of internal reliability. Sub-test scales were refined using cluster analysis. The final form of the basic instrument was subjected to factor analysis in order to study the dimensions that are reflected in the instrument.

Significance of the Study

The significance of this study stems in part from the fact that little is known about university faculty and administrator attitudes toward institutional conflict and organizational modes of resolving conflict. This study should be of interest to the following groups of persons:

1. College and university administrators who are or who anticipate being involved in using collective negotiations as a new governance design.
2. Faculty members and their organizations anticipating using collective negotiations within their institutions.
3. Labor relations specialists interested in data and methods of acquiring data concerning structures, processes, and behaviors involved in resolving conflict with the model of collective negotiations in higher education.
4. Scholars of organizational theory interested in

institutional conflict and institutional attempts in resolving conflict.

5. Labor organizations that seek to expand their influence in higher education.
6. Individuals aspiring to become college and university administrators. This group may increase their understanding of some of the problems of academic administration.

Assumptions and Limitations of the Study

The study is based upon the following assumptions and limitations:

1. Conflict is not inherently bad or unwholesome.
2. Institutions produce, experience, and reflect conflict.
3. It is possible to construct the basis of an instrument that will analyze attitudes of faculty and administrators toward institutional conflict and collective negotiations as an institutional attempt to resolve conflict.
4. Dimensions of institutional conflict cannot be posited on an a priori basis but rather through a combination of appropriate theoretical understanding of conflict and an application of factorial techniques.
5. The attitudes of organizational members will influence their behaviors in attempting to resolve conflict within an institutional setting.

6. The basic instrument was considered as an attempt to describe, in a tentative form, the dimensions of conflict and conflict resolution within selected institutions of higher learning.
7. It was not considered to be within the scope of this thesis to apply the final form of the instrument to selected institutions.
8. The study was limited to selected institutions of higher learning in Michigan.

Description of Terms Used

In order to reduce semantic confusion in the interpretation of this study the following descriptions were used:

Attitude - an attitude is a tendency or disposition to respond in a certain way to specified stimuli.

Conflict - divergence of opinions or interests of groups that occur within an institutional setting.

Faculty member - full-time instructor or researcher with no supervisory authority over other faculty members involving evaluation relative to salary, promotion, and retention.

Administrator - full-time person who has supervisory authority over other faculty members involving evaluation relative to salary, promotion, and retention.

American Association of University Professors - an association, operating exclusively on the college or university level, founded in 1915 with the declared intent of maintaining academic integrity of higher education by protecting the rights of professors.

National Education Association - an association that represents the largest teacher organization in the United States. Its membership contains both teaching and administrative personnel. It consists primarily of elementary and secondary teachers. The NEA refers to itself as a "professional association" as contrasted to union terminology.

American Federation of Teachers - an association that represents teachers on all levels. Founded in 1916 the AFT, an affiliate of the AFL-CIO, considers itself as an employee organization, rather than a professional organization.

Potential for Institutional Conflict Questionnaire (P.I.C.Q.) - this term refers to the instrument constructed by the investigator. The categories of this instrument are analyzed in greater detail in Chapter Four of the study.

Sub-tests - this term describes the tests which make up the P.I.C.Q.

Overview of the Study

Chapter II discusses the literature pertinent to the study.

Chapter III presents the analysis of the instrument and the research design of the study.

Chapter IV consists of the results of the statistical analysis that tested the hypotheses of the study.

Chapter V is a summary of the study in which the findings, conclusions and investigator's recommendations are presented.

CHAPTER II

Selected Review of Literature

Four general areas of the literature were related to this study. The first dealt with organizational conflict and control. This area was reviewed in order to establish the background for the development and analysis of the topic and instrument being developed.

The second area was related to the development of collective negotiations in general with special reference to the public sector. A review of the literature in this area was made in order to identify the basis of collective negotiations and its emergence in the public sector.

The third area reviewed the history of collective negotiations in public education. This area was reviewed in order to determine the extent to which similarities may exist between public education (K-12) and higher education.

The last area reviewed was related to the historical development of institutional governance in American higher education. Collective negotiations were examined in this section as the emergence of a new governance form.

Organizational Theory: Conflict, Control, and the Impact of the Professional on Organizational Structures

There are multiple theories of conflict pertaining to organizations. One view contends that conflict is a

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resultant of the failure of the social system to implement alternative organizational modes of group interaction. Accommodation, competition, assimilation, cooperation, and collusion are cited as variant group interactional modes.⁸

An alternative school holds that if the organizational membership accepts the concept of partnership, the process of sharing will reduce or terminate intra-system conflict. Conflict is that which retards goal attainment.⁹

A third view, represented by Argyris¹⁰ and Merton,¹¹ posits that conflict is a psychological phenomenon. Students of this school are interested in reducing conflict through reducing the stimuli responsible for undesirable behavior.

A fourth view of conflict states that conflict is a dynamic element in all social systems. Heraclitus viewed life as movement based upon successive conflict involving opposites. Moore¹² has detailed a similar view of conflict in the writings of Machiavelli. In the early development of sociology as a discipline, conflict was considered to be a

⁸ Robert Dubin, "A Theory of Conflict and Power in Union-Management Relations," Industrial and Labor Relations Review, Vol. 13, No. 4, Cornell University, July 1960, p. 502.

⁹ Ibid. p. 502.

¹⁰ Chris Argyris, Personality and Organization, New York Harper and Brothers, 1957.

¹¹ Robert K. Merton, Social Theory and Social Structure, Glencoe: The Free Press, 1957.

¹² Sam Moore, "Machiavelli Has A White Hat, Too," Michigan Journal of Secondary Education, Vol. 8, No. 2, 1967, Michigan Association of Secondary School Principals, East Lansing, Michigan, p. 28.

universal factor found in all social systems: substantial current research is based upon this view.¹³

Relative to contemporary research a number of views regarding the nature and scope of conflict have emerged. Dubin,¹⁴ Gross,¹⁵ Etzioni,¹⁶ and Simmel¹⁷ regard conflict as having a neutral loading. The organizational members determine the extent to which conflict in a given situation is negative, positive, or integrative. Such views by leading organizational theorists support a more objective analysis of conflict operating within an institutional setting.

Bennis,¹⁸ Simmel,¹⁹ Gross,²⁰ Walten and McKersie,²¹

¹³ Robert E. Ohm, "Collective Negotiations: Implications for Research," in Collective Negotiations and Educational Administration, ed. by Roy Allen and John Schmid, University of Arkansas: The University Council for Educational Administration, 1966, p. 98.

¹⁴ Dubin, A Theory of Conflict and Power in Union-Management Relations, p. 501.

¹⁵ Bertram M. Gross, Organizations and Their Managing, New York: The Free Press, 1968.

¹⁶ Amitai Etzioni, Modern Organizations, Englewood Cliffs: Prentice-Hall, Inc., 1964.

¹⁷ George Simmel, Conflict and the Web of Group Affiliations, Glencoe: The Free Press, 1964.

¹⁸ Warren Bennis, "Leadership Theory and Administrative Behavior," Administrative Science Quarterly, Vol. 4, December, 1959, pp. 259-301.

¹⁹ Ibid.

²⁰ Bertram Gross, Organizations and Their Managing, 1968.

²¹ Richard E. Walton and Robert B. McKersie, A Behavioral Theory of Labor Negotiations, New York: McGraw Book Company, 1965.

and Coser²² have in recent studies and theoretical views, contended that conflict is not only ubiquitous to organizational life but essential to the well being of the organization. Ohm²³ states that the lack of conflict within an organization cannot be interpreted as a sign of institutional stability.

There appears to be general agreement among contemporary students of organizational life that conflict is common to virtually all organizations and that effective organizations are those organizations that transform conflict into organizational assets.²⁴ Collective negotiations are viewed as an emerging mode of resolving conflict within an organizational setting.

Increasing attention has been given to the relationship between the professional and the manager within organizations. Thompson,²⁵ Parsons,²⁶ Etzioni,²⁷ and others consider that the growth in the number of professionals have modified elements of the Weberian bureaucratic model. Etzioni

²³ Ohm, "Collective Negotiations: Implications for Research," pp. 100-112.

²⁴ Rensis Likert, "A Motivational Approach to a Modified Theory of Organization and Management," Modern Organization Theory, Ed. M. Haire, New York: John Wiley and Sons, 1969, p. 204.

²⁵ Victor A. Thompson, "Bureaucracy and Innovation," Administrative Science Quarterly, Cornell University: Graduate School of Business, N.Y., Vol. 20, June, 1965, pp. 1-20.

²⁶ Talcott Parsons, Structure and Process in Modern Societies, New York: The Free Press, 1960.

²⁷ Amitai Etzioni, A Comparative Analysis of Complex Organizations, New York: The Free Press, 1961.

has proposed that the Weberian bureaucratic model is inverted in terms of the traditional views of line and staff in organizations that sponsor and augment the construction, synthesis, utilization, and communication of knowledge.²⁸ Corwin predicts increased conflict as professionals engage the organizational managers in attempts to gain increased participation and control over the institutional decision making centers.²⁹ Collective negotiations appear to be, at least in part, an organizational response to the tension between the professional and bureaucratic principles of organization.³⁰

Organizational viability is in large measure dependent upon the institutional forms which are constructed to channel and resolve organizational conflict. Studies that investigate conflict and the organizational responses to conflict are important if man is to use conflict as an organizational asset.

Collective Negotiations: Historical Development and Expansion Into the Public Sector

Collective negotiations is an organizational process wherein an employee group and an employer engage in a series of maneuvers involving offers and counter offers that

²⁸ Ibid.

²⁹ Roger G. Corwin, A Sociology of Education, New York: Appleton-Century-Crofts, 1965.

³⁰ Ohm, Collective Negotiations: Implications for Research, p. 112.

maintain or modify the organizational employment relationship.³¹ Good faith and a written document are assumed conditions of the process. Moscow states that the function of bargaining power in the private sector is to influence change in one group's position in order to achieve agreement.³²

In 1935 the United States Congress passed the National Labor Relations Act, known as the Wagner Act. Lieberman says of this Act:

"...one of the most significant labor laws ever enacted in the United States. It was based in part upon the view that employer refusal to permit employees to organize and to bargain collectively with their employer through the organization of their own choice was a major cause of industrial conflict."³³

The public sector had been traditionally considered by Americans to be outside of the pale of collective negotiations. Legally the public sector was constrained from replicating the industrial model of collective negotiations. This condition was modified during the 1960's.³⁴

In 1961 President Kennedy appointed a task force to analyze the question of employee-management relations in the federal government. On January 17, 1962, President Kennedy

³¹ Michael H. Moscow, Teachers and Unions: The Applicability of Collective Bargaining to Public Education, Philadelphia: Industrial Research Unit, University of Pennsylvania, 1966, p. 210.

³² Myron Lieberman and Michael H. Moscow, Collective Negotiations For Teachers: An Approach to School Administration, Chicago: Rand McNally, 1966.

³³ Ibid. p. 68.

³⁴ Ibid. pp. 87-88.

issued Executive Order 10988 which granted the right of collective negotiations to federal employees. The affect of the Executive Order 10988 has been pervasive in stimulating state and local employee groups to secure similar legislation on state and local levels.³⁵

A number of conditions contributed to a change in public attitudes and legislation toward the use of collective negotiations in the public sector. Lieberman and Moscow state that when union membership declined in the industrial sector during the 1950's union attention was directed to the large and expanding work force in the public sector. The aggressive expansion of the American Federation of Teachers is regarded as a direct result of union interest in expanding their influence into the public sector.³⁶

Zack indicates that federal, state, and local employees have in recent years realized that workers holding an equivalent position in the private sector have had many rights denied to workers in the public sector. Since the 1930's workers in the private sector have had the legal right to form, join, and engage in collective bargaining. This added to higher remuneration and better working conditions in the private sector and slow governmental responses to public employee felt needs has increased public employee

³⁵ Arnold M. Zack, "Why Public Employees Strike," The Arbitration Journal, Vol. 23, No. 2, American Arbitration Association, 1968, pp. 69-74.

³⁶ Ibid. pp. 87-88.

dissatisfaction.³⁷

Lieberman and Moscow³⁸ and Zack³⁹ emphasize the importance of union activity in the public sector, growing disparity between public and private workers, entrance of younger and more highly educated staff members into the public sector, and modifications of existing labor legislation as factors in extending collective negotiations into the public sector.

Historical Review of Collective Negotiations in Public Education (K-12)

Stinnett states that Connecticut experienced the first written agreements between school boards and teacher association in the 1940's.⁴⁰ Lieberman⁴¹ views 1960 as the real beginning of collective negotiations in public education. The development of collective negotiations in public education has been a development of the 1960's. Two teacher organizations have played significant roles in the expansion and implementation of collective negotiations: the American Federation of Teachers and the National Education Association.

³⁷ Arnold M. Zack, Why Public Employees Strike, pp. 70-71.

³⁸ Lieberman and Moscow, Collective Negotiations For Teachers, pp. 22-26.

³⁹ Zack, Why Public Employees Strike, pp. 69-74.

⁴⁰ T. M. Stinnett, Jack H. Kleinmann, and Martha L. Ware, Professional Negotiations in Public Education, New York: MacMillan Company, 1966, p. 7.

⁴¹ Lieberman and Moscow, Collective Negotiations for Teachers, p. 35.

The American Federation of Teachers, an affiliate of the AFL-CIO, has been in existence since 1916. However, its development as a viable national teacher organization is a phenomenon of the 1960's. The majority of its membership comes from urban areas. New York City has been the center of AFT activity. The union contract negotiated there in 1961 had a major impact upon the National Education Association Administration organizations, and teachers throughout the nation.⁴²

In contrast the National Education Association (NEA) was founded as a professional organization. Until the mid-1960's all certified employees of a given school district were eligible for membership: the AFT excludes administrators from membership.

Until the early 1960's the NEA's official position relative to collective negotiations was negative. Collective negotiations with the implied use of the strike was considered to be unprofessional.⁴³

The 1962 NEA Delegate Assembly probably represented the last strong stand against collective negotiations with the possible use of the strike. Dr. Corey, Classroom Teacher Association Executive Secretary, viewed the use of such devices as "inappropriate, unprofessional, illegal, outmoded,

⁴² Ibid. pp. 34-55.

⁴³ National Educational Association, "Addresses and Proceedings," National Education Association, Vol. 101, Washington, D. C., 1963, p. 465.

and ineffective,"⁴⁴ By 1966 there were 142 work stoppages by public employees and from September 1967 through March 1968 work stoppages had involved 133,000 teachers.⁴⁵

The NEA's 1962 and 1963 resolution on professional negotiations contained this statement:

"Under no circumstances should the resolution of differences between professional associations and boards of education be sought through channels set up for handling industrial disputes. The teacher's situation is completely unlike that of an industrial employee. A board of education is not a private employer and a teacher is not a private employee. Both are public servants. Both are committed to serve the common, indivisible interest of all persons and groups in the community in the best possible education for their children. Teachers and boards of education can perform their indispensable functions only if they act in terms of their identity of purpose in carrying out this commitment. Industrial disputes conciliation machinery which assumes a conflict of interest and diversity of purpose between persons and groups, is not appropriate to professional negotiation in public education."⁴⁶

A fundamental change occurred in the NEA's view of collective negotiations between 1963 and 1968. The NEA 1968 official position relative to collective negotiations stated:

"The National Education Association believes that local associations and school boards must establish written professional negotiation agreements.

⁴⁴ Classroom Teachers Association, "Responsibilities of Teacher Power," Classroom Teachers Association Journal, October, 1968, p. 5.

⁴⁵ Ibid. pp. 5-6.

⁴⁶ Ibid.

It (the NEA) recognizes that under certain conditions of severe stress, causing deterioration of the educational program, and when good faith attempts at resolution have been rejected, strikes have occurred and may occur in the future. In such instances, the Association will offer all of the services at its command to the affiliate concerned to help resolve the impasse.

The Association denounces the practice of staffing schools with any personnel when, in an effort to provide high quality education,⁴⁷ educators withdraw their services."

In addition the 1968 official resolution called for binding arbitration, released time without loss of time for negotiations and the extension of negotiations to institutions of higher learning.⁴⁸ The NEA drastically modified its position relative to collective negotiations: today there are few differences between the NEA and the AFT.

Lieberman⁴⁹ states that collective negotiations are a reality in public education and that it will continue to emerge in states that have permissive legislation as well as those states that lack permissive legislation and/or regulating negotiations in public education.

Both the AFT and the NEA are investing at least seven times the amount of money that the National School Boards

⁴⁷ National Education Association, Addresses and Proceedings, Vol. 106, Washington, D. C., 1968, pp. 526-527.

⁴⁸ Ibid. p. 526.

⁴⁹ Myran Lieberman, "Collective Negotiations: Status and Trends," The Educational Digest, Vol. 32, No. 4, December, 1967.

Associations are investing in negotiations. With expanding and accelerating teacher organization activity in collective negotiations it is estimated that by 1972 some 80 per cent of the nation's teachers will be teaching in districts having contracts or engaged in negotiations requiring management changes.⁵⁰

The following factors have been cited as motivating public school teachers toward accepting and using collective negotiations as an organizational process:

1. Conflict over resource allocation.
2. Conflict over the perimeters of employee-employer relationships.
3. Conflict over the nature and functions of the teacher as a professional.
4. Loss of personal identity through school district reorganization.
5. Teacher shortage and resultant increased teacher ability.
6. Success of the union movement in the private sector.
7. Increased competition between teacher organizations.
8. Higher visibility of minority groups in our culture and their impact upon education.
9. Changing state legislation authorizing collective negotiations.⁵¹

⁵⁰ Ibid. pp. 24-26.

⁵¹ Moscow, Teachers and Unions, p. 2.

10. Desire for increased teacher participation in institutional decision-making process.
11. Increase in the proportion of teachers who are males.
12. Increase in the proportion of teachers whose fathers were blue collar workers.⁵²

A cluster of factors, many of them complex in composition and reciprocal in influence, appear to have shaped the emergence of collective negotiations in public education during the 1960's.

In a study dealing with teacher perceptions of, and attitudes toward, the uses of collective bargaining power Evans found that few teachers were militant enough to strike, apply sanctions, or pressures to achieve resolutions of the negotiations problems presented. Teachers were most militant about the right to negotiate, fair representation, salaries, fringe benefits, and grievance policies. They were less aggressive about a voice in educational decision-making processes.⁵³

⁵² Doherty and Oberer, Teachers, School Boards, and Collective Bargaining: A Changing of the Guard, Cornell University: The State School of Industrial and Labor Relations, 1967, p. 20.

⁵³ Geraldine A. Evans, Perceptions of and Attitudes Toward the Use of Collective Bargaining Power, (unpublished doctoral dissertation, University of Minnesota, 1968).

Queen⁵⁴ and Fisher⁵⁵ ascertained in recent studies that attitudes toward collective negotiations on the part of teachers and administrators were significantly different.

In another analysis Rosenthal indicated considerable difficulty in studying membership in teacher unions and related dependent variables. Organizational change is occurring at such a rapid rate in public education that dependent variables have become unstable from one time to the next in the same school system. He calls for imaginative research in this area.⁵⁶

A study by Midjaas investigated the extent to which different attitudes existed toward the negotiability of certain items between teachers, administrators and board members within three types of districts. He found that teachers, administrators and board members varied in their attitudes toward what was negotiable. Teachers ranked as more negotiable areas relating most directly with the teaching process; administrators ranked as more negotiable salary and fringe benefit areas; with board members ranking as more negotiable

⁵⁴ Bernard Queen, Relationship of Teacher Collective Activity to Attitudes of Classroom Teachers, School Administrators and School Board Members, (unpublished doctoral dissertation, Ohio State University, 1967).

⁵⁵ James R. Fisher, The Relationship of Sex, Level and Position of Oregon Educators to Attitudinal Statements That Deal With Collective Negotiations and Sanctions, (unpublished doctoral dissertation, University of Oregon, 1967).

⁵⁶ Alan Rosenthal, "The Strength of Teacher Organizations: Factors Influencing Membership in Two Large Cities," Sociology of Education, Vol. 39, No. 4, Fall, 1966, pp. 378-380.

areas involving school-community interests.⁵⁷

In a national survey completed in 1966, Hopkins found that teacher opinions in school districts with existing contracts expressed desire to negotiate class size, in-service training, dismissal practices, extra-curricular activities, assignment of duties, and transfer, the boards and school administrators displayed negative opinions concerning the negotiability of these items.⁵⁸

A study by Carlson of North Carolina on public school teacher attitudes toward collective negotiations and sanctions relative to an independent variable, traditional-progressive educational attitudes, resulted in the following findings:

1. Significant correlation between attitudes toward collective action and progressivism.
2. Male teachers more favorable toward the use of collective negotiations than female teachers.
3. Lack of consistency among participants of educational beliefs. It is possible for teachers to maintain progressive beliefs in one area and traditional beliefs in other areas.⁵⁹

⁵⁷ Carl L. Midjaas, Differential Perceptions of Negotiability in Selected Illinois Public Secondary School Districts, (unpublished doctoral dissertation, Univ. of Illinois, 1966).

⁵⁸ J. E. Hopkins, A National Survey of Collective Negotiations in Public School Systems With Advanced Negotiation Agreements, (unpublished dissertation, Ohio State Univ., 1965).

⁵⁹ P. W. Carlson, Attitudes of Certified Instructional Personnel in North Carolina Toward Questions Concerning Collective Negotiations and Sanctions, (unpublished doctoral dissertation, University of North Carolina, 1966).

Gregg found in a Michigan Study that teachers are becoming increasingly interested in participating and determining school policy changes other than salary through the use of collective negotiations.⁶⁰

Corwin investigated the relationships between professionalism and militancy in teachers. His hypothesis stated that the effects of professionalizing teachers (involvement in professional organizations) would increase teacher militancy. He found that personal and professional characteristics were related to attitudes toward the use of collective negotiations.⁶¹

Herberston analyzed and correlated AFT and NEA members, superintendents, and board members attitudes toward collective negotiations. Board members were most conservative and AFT members were most liberal. All the groups were found to be more politically conservative than the general public.⁶²

In an investigation of teacher attitudes toward the willingness to support the right of teachers to strike, Clark found that 55 per cent of all teachers responded in the affirmative. Administrators were overwhelmingly opposed

⁶⁰ Perry K. Gregg, A Case Study of the Public School Collective Negotiations Process Designed For the Use of Administrators In-Training, (unpublished doctoral dissertation, 1969), New York University.

⁶¹ Ronald G. Corwin, "Professional Persons in Public Organizations," Educational Administration Quarterly, Autumn, 1965, p. 17.

⁶² Jack R. Herberston, Teacher Negotiations as Perceived by Representatives of Teacher Groups, Superintendents, and School Board Presidents, (unpublished doctoral dissertation, Colorado State College, 1966).

to the strike.⁶³

Recent research indicates that teachers favor collective negotiation more than do school administrators or board members; experience in the collective negotiations process increases teacher militancy, men are more favorable than are women toward collective negotiations, liberal attitudes relate to acceptance of collective negotiations, and that experience with collective negotiations increases the area considered to be negotiable (economic to non-economic) by teachers.

Historical Analysis of Institutional Governance in American Higher Education

Conflict and control were early organizational realities facing American higher education as they are yet today. Only the context and the actors have changes from time to time.

Early American colleges were controlled by external governing bodies that were religious in overtone. The faculties were very weak and the presidents, with few exceptions, were the creatures of the governing bodies. Gradually, during the nineteenth century, the president became the center of control with the governing bodies using a corporate structure delegating more and more to the president.⁶⁴ A major trend

⁶³ Robert L. Clark, The Roles and Positions of the NEA and the AFT in Negotiations: Opinions of Teachers and School Administrators of Five Selected School Districts in Illinois, (unpublished doctoral dissertation, Univ. of Illinois, 1965).

⁶⁴ Frederick Rudolph, The American College and University, New York: Alfred A. Knopf, 1968).

in American higher education has been the slow movement away from external sources of power and control toward sources of internal control.⁶⁵

This movement away from external to internal sources of control is seen by Clark as the result of secularization, the broadening of the function of higher education, the ideal and operational reality of the university, and the increasing scale of organization. The expanding scale of organization creates more sub-divisions, more specializations and a diffusion downward of technical authority.⁶⁶

College faculties had not attempted to assert themselves through collective action since the early days of William and Mary:⁶⁷ in general the college teacher of the eighteenth and nineteenth centuries had few moral, institutional, or legal rights. In 1878 a trustee of Cornell University seriously argued for the right of the university to hire and fire professors as a factory owner hires and fires workers.⁶⁸

During the late nineteenth century the dissatisfaction with the absence of a legal basis for tenure and termination of tenure stimulated the rapid professionalization of college and university teachers. The establishment in 1915 of the

⁶⁵ Burton R. Clark, "Faculty Authority," American Association of University Professors Bulletin, Winter 1961, p. 294.

⁶⁶ Ibid. p. 294.

⁶⁷ Walter Metzger, Academic Freedom in the Age of the University, Columbia University Press, New York, 1955, pp. 186-187. (3 call 587-598).

⁶⁸ Rudolph, The American College and University, p. 415.

American Association of University Professors (AAUP), a professional society dedicated in particular to the development and enhancement of standards of freedom and tenure, created an organizational mode of offering protection to faculty members from the institutions of higher education.⁶⁹

In 1920 the Report of Committee T on the Place and Functions of Faculties in University Government and Administration was published. The findings of this committee were that faculty participation in academic governance had been decreasing for at least a quarter of a century. The need for more faculty involvement in institutional decision-making processes was cited as a major objective of the AAUP.⁷⁰

The AAUP has released similar reports since the 1920 report and has reported on a slow but steady increase in faculty participation in the governance of institutions of higher education. The AAUP has maintained a pervasive interest in increasing the role of faculties in the governance of colleges and universities.⁷¹

The AAUP has emphasized the principle of shared decision making and authority within an academic community characterized by common interests. The AAUP's formal statement of

⁶⁹ George Strauss, "The AAUP as a Professional Occupational Association," Industrial Relations, Vol. 5, No. 1, October 1965, p. 129.

⁷⁰ J. E. Leighton, "Report of Committee T on the Place and Function of Faculties in University Government and Administration," pp.17-47.

⁷¹ Strauss, The AAUP as a Professional Occupational Association, pp. 129-131.

principle states:

"The faculty should have primary responsibility for determining the educational policies of the institution.... Educational policies include...subject matter and methods of instruction, facilities and support for research of faculty members and students, standards for admission of students, for academic performance and for the granting of degrees.... The faculty is also properly concerned and should actively participate in decisions made on other matters that may directly affect the educational policiesthe size of the student body, significant alterations in the academic calendar, the establishment of new schools on divisions, the provision of extension services to the community, and assumption by the institution of research or service obligations to private or public agencies.⁷²

Bertram H. Davis, Executive Director of the AAUP, has stated that the 1962 policy statement captured considerable faculty imagination across the nation. Davis feels that all policy matters are appropriate matters of concern to the faculty and requires their consideration. Such concerns should occur in an atmosphere of mutual respect through an Academic Senate or Council. The AAUP, states Davis, does not see any basic differences, in an ideal sense, between administration and faculty because both groups are members of the academic community which is identified by common interests.⁷³

⁷² American Association of University Professors, "Faculty Participation in College and University Government: Statement of Principles Approved by the Council," American Association of University Professors, Vol. 3, No. 4, December, 1962, pp. 321-323.

⁷³ Bertram H. Davis, "The Faculty and Institutional Policy," The Educational Record, Vol. 47, No. 2, Spring, 1966, pp. 185-191.

Although the AAUP has maintained an official position of faculty and administrator cooperation in academic governance as the ideal state, the spread of collective negotiations into higher education has produced pressures for a change in its official position concerning collective negotiations.

Until the 1960's unionism and the collective negotiations process was not an operational alternative mode of academic governance in higher education. During the 1960's it has become an alternative strategy.

Clark predicted in the early 1960's that the result of having institutional authority and operational control move downward in higher education would produce conflict between administrators and faculty. Clark stated:

"This conflict has natural, not manufactured, sources and each side has a cogent cause. Going into battle, the faculties march under the banner of self-government and academic freedom, emphasizing equality of relations among colleagues and deemphasizing administrative hierarchy. The administrators move forward under a cluster of banners: Let's bring order out of chaos or at least reduce chaos to mere confusion; let's increase efficiency, utilize our scarce resources of men and money effectively; let's give the organization as a whole a sense of direction, with knowledgeable hands on the helm; let's insure that we handle external forces--the legislature or our constituencies in a way that will insure the survival and security of the whole enterprise.⁷⁴

Clark viewed the future in 1961 as increasing power for

⁷⁴ Clark, Faculty Authority, p. 296.

both faculty and administration. While predicting greater administrator-faculty conflict, he saw faculties gaining greater institutional authority in a decentralized organizational setting.⁷⁵

During the 1960's increasing numbers of institutions of higher education experienced increased faculty militancy, collective negotiations, and the use of the strike. In 1968 it was estimated that of the 300,000 college faculty members throughout the nation in excess of 15,000 belonged to over 100 union locals: most are AFT affiliates.⁷⁶

In 1969 the faculty union of the City University of New York entered into a contract with the trustees representing the first collective negotiations agreement at a major public university. The negotiated salary scale was the highest in the nation.⁷⁷

Again, in 1969, faculty members of the Wisconsin State University System voted 1,531 to 835 in favor of collective negotiations with the board of regents. Also during the same year all six state colleges in New Jersey and Central Michigan University entered into collective negotiations.⁷⁸

⁷⁵ Ibid. pp. 293-302.

⁷⁶ Israel Kugler, "The Union Speaks for Itself," The Educational Record, Vol. 49, No. 4, Fall, 1968, p. 414.

⁷⁷ American Council on Education, Higher Education and National Affairs, Vol. 28, No. 33, September, 1969, p. 4.

⁷⁸ National Education Association, NEA Newspaper, No. 322, November 10, 1969, p. 16.

In early 1968 the AAUP, the American Council on Education, and the Association of Governing Boards published a statement emphasizing faculty responsibility to participate in institutional governance through appropriate and well-defined procedures. The statement concluded that collective negotiations, including the use of the strike, is not considered an appropriate means for faculty participation.⁷⁹ This position is similar to positions articulated by public education associations during the early 1960's.

However, in the same year, the AAUP released a formal statement on faculty participation in strikes that modified in substance its previous absolute opposition to the use of the strike. The statement declared that in some situations affecting an institution which

"...so flagrantly violate academic freedom (of students as well as of faculty) or the principles of academic government, and which are so resistant to rational methods of discussion, persuasion, and conciliation, that faculty members may feel impelled to express their condemnation by withholding their services, either individually or in concert with others. It should be assumed that faculty members will exercise their right to strike only if they believe another component of the institution is inflexibly bent on a course which undermines an essential element of the educational process."⁸⁰

⁷⁹ Peggy Heim, "Growing Tensions in Academic Administration," The North Central Association Quarterly, Vol. 37, No. 3, Winter 1968, pp. 244-245.

⁸⁰ American Association of University Professors, "Statement on Faculty Participation in Strikes," American Association of University Professors Bulletin, Vol. 54, No. 2, Summer, 1968, p. 157.

The American Federation of Teachers and its higher education unit, the United Federation of College Teachers, maintains the same position in higher education as it does relative to public education (K-12).

Israel Kugler, President of the United Federation of College Teachers, an AFL-CIO affiliate, stated the AFT position relative to higher education:

"The board of directors is the board of trustees; the managers are the presidents and the hosts of deans. It is these groups that wield the power and authority and determine the destiny of a university. To be sure, they have woven a web of faculty senates and councils which simulate the original role of policy-making that university faculties once had. The advisory nature of these bodies provides them with some active role in curriculum and student affairs, but virtually no part to play in securing the necessary finances to provide professional salaries, work load, and working conditions.⁸¹

The NEA's higher education division is militant and aggressive in expanding into higher education. Alan Stratton, Executive Director of the NEA's Higher Education Division, indicates that his division will be aggressive in establishing new college units and in extending assistance to existing college units.⁸²

As the differences blurred between teacher organizations during the early 1960's, relative to collective

⁸¹ Israel Kugler, AAUP and AFT - Which Way for the Professors?, Washington, D. C., American Federation of Teachers, pp. 1-11.

⁸² A. Stratton, private interview held during a trip to Washington, D. C., December, 1969.

negotiations and the use of the strike, so the differences appear to be blurring today that distinguish college faculty organizations and their acceptance of collective negotiations and the use of the strike.

The majority of institutional, administrator, and governing board associations are negative toward collective negotiations and the use of the strike. This seems to be true for public and higher education.

Davis details some of the factors involved in increasing faculty militancy as the rapid growth of institutions, construction of statewide systems of higher education under central control, impersonal power exercised by administrators, power of budget officials to modify or cancel academic decisions, increasing numbers of probationary faculty members, economic gains won by public school teachers through collective negotiations, the civil rights movement, and autocratic administrators.⁸³

Marmion found that unionization made its first inroads into junior colleges, transitional normal schools, and church-related colleges. The reason is the absence of a well-established mode of faculty participation in the decision-making processes of these institutions.⁸⁴

Case found that California faculties prefer, in terms of

⁸³ Bertram H. Davis, "Unions and Higher Education: Another View," American Association of University Professors Bulletin, Vol. 54, No. 3, Autumn, 1968, pp. 317-320.

⁸⁴ Harry A. Marmion, "Unions and Higher Education," Educational Record, Vol. 49, No. 1, Winter, 1968, p. 42.

the academic senate arrangement, a relationship of shared authority and partnership. Faculties reject the relationships in which the administration dominates the faculty or where the faculty dominates the administration. This study did not analyze administration reactions and preferences to the governance model of the academic senate.⁸⁵

Ortell, in another study dealing with California Junior Colleges, found that leaders of the teacher associations favored a broad scope of negotiations, mass resignations over salaries and unsafe conditions for students, compulsory arbitration, exclusion of deans from the bargaining unit, inclusion of department heads in the bargaining unit, and written contracts.⁸⁶

Gross and Grambsch, based on an extensive national survey found that administrators and faculty tend to agree on institutional goals and related factors to a degree greater than is assumed to be the actual case. They observed that the high degree of congruence that exists between perceived and preferred goals at various colleges and universities reflects institutional success in attracting and holding faculty and administrators who accept the institution's goals. They appear to infer that there doesn't necessarily exist a basis

⁸⁵ H. Case, Faculty Participation in the Governance of Junior Colleges: A Study of Academic Senates in California Junior Colleges, (unpublished doctoral dissertation, University of California, 1968.)

⁸⁶ Edward Ortell, Perception of Junior College Leaders With Respect to Selected Issues in Professional Negotiations, (unpublished doctoral dissertation, U. S. International University, 1968.)

for conflict between faculty and administrators due to the control of greater power by the administration. This does not seem to be in conflict with university purposes.⁸⁷

Dykes, in a study of faculty participation in Academic decision-making, found faculty members asserting faculty participation as essential but assigning a low priority in terms of their own participation and negative toward their colleagues that do. Most faculty members desired a town hall form of government with the belief that in times past faculties had greater control in institutional governance than is the case today.

Faculty members divided decisions into educational and non-educational categories and ascribed appropriate faculty influence to the educational category.

Dykes concluded his study with the observation that faculty members hold a simplistic view of the distribution and functioning of power and control within the university. This study was conducted with the College of Arts and Sciences of a large Midwestern University and was based upon personal interviews.⁸⁸

In a recent study Bylsma observed that collective negotiations in community colleges in Michigan have acted to

⁸⁷ Edward Gross and Paul V. Grambsch, University Goals and Academic Power, Washington, D. C., American Council on Education, 1968.

⁸⁸ Archie R. Dykes, Faculty Participation in Academic Decision-Making, Washington, D. C., American Council on Education, 1968.

democratize these institutions. The center of decision-making has shifted from pervasive administrator control to a near division of control with faculty in most areas. It was also found that the bureaucratic structure became more formal as a consequence of collective negotiations.⁸⁹

SUMMARY

In the first area of the literature reviewed in this chapter the emphasis was upon organizational conflict and control. Conflict was seen as being ubiquitous to organizations, essential to a vital organization, and given meaning in particular situations by the organizational members. Effective organizations appear to be able to resolve conflict in ways that enable the organization to adjust to new conditions.

Control was seen by a number of students of organizational behavior as being in the processes of change. Professionals have increased throughout organizations and are challenging the organizational managers for increased participation in, and control over, organizational decision-making. Collective negotiations were seen as an organizational response to the tension between the professional and bureaucratic principles of organization.

The second area of the literature reviewed in this

⁸⁹ Donald Bylsma, Changes in Locus of Decision-Making and Organizational Structure in Selected Public Community Colleges in Michigan Since 1965, (unpublished doctoral dissertation, University of Michigan, 1969.)

chapter examined the development of collective negotiations in general and with special emphasis given to the public sector.

The development of collective negotiations in the private sector during the 1930's was contrasted with the public attitudes toward and legal constraints against collective negotiations in the public sector.

President Kennedy's Executive Order 10988, union interest in organizing an expanding work force in the public sector, increased public employee dissatisfaction and changing demographic patterns within the public sector have contributed to collective negotiations becoming an organizational reality throughout the public sector.

The third area of the literature reviewed in this chapter described the development of collective negotiations in public education and relevant research concerning collective negotiations in public education (K-12).

The development of collective negotiations was considered to have been a phenomenon of the 1960's. In the early 1960's the AFT and the NEA were seen as two distinct organizations, in terms of organizational goals membership, and behavior. However, by the late 1960's there appeared to be few substantive differences between the NEA and the AFT. Collective negotiations had become a permanent feature of public education.

The reasons for teacher acceptance of collective negotiations were described as complex in composition and

and reciprocal in influence.

Relevant research found that teachers favored collective negotiations more than did school administrators or board members, experience in the collective negotiations process increases teacher militancy, men tended to be more supportive of collections than did women, support for collective negotiations was correlated with liberal attitudes, and that experience in the collective negotiations process increases the areas considered to be negotiable.

The fourth and last area of the literature reviewed in this chapter was related to the historical development of institutional governance in American higher education with collective negotiations considered to be an emerging governance mode. Relevant research concerning academic governance in higher education was discussed.

Conflict and shifting patterns of control was seen as a permanent feature of American higher education. Control has steadily shifted away from external sources to internal sources of control.

The development of the AAUP was seen as an organizational attempt in protecting its members from the cohesive authority of institutions of higher education. The major thrust of the AAUP has been to increase faculty participation and control in the decision-making processes of institutions of higher education.

A highly normative view of how decisions should be made in higher education has been the major theme of the AAUP.

This official position of faculty and administrator cooperative in academic governance as an ideal state was seen as coming under increasing pressures during the 1960's with the expansion of collective negotiations into higher education.

The NEA and the AFT have aggressively sought to expand into higher education using the same techniques that achieved success for them in public education during the mid-1960's.

It appears from recent official statements of the AAUP that faculty participation in strikes under certain circumstances is justified. As the differences became minute between public educational teacher organizations and labor unions during the early 1960's, concerning collective negotiations and the use of the strike, so did the differences appear to be blurring that distinguish college faculty organizations and their acceptance of collective negotiations and the use of the strike.

A number of the reasons cited for acceptance of collective negotiations by college faculty were seen as similar to the reasons given for teacher acceptance of collective negotiations in public education.

It was found that those institutions that early embraced collective negotiations had inadequate means for resolving institutional conflict.

Recent studies have found considerable agreement between faculty members and administrators concerning institutional goals and faculty members holding simplistic views

toward participation in decision making.

The review of literature supported the writers contention that collective negotiations has become an alternative strategy in higher education. If institutions of higher education are to translate conflict into tangible institutional assets, attitudes toward institutional conflict and those factors that contribute to these attitudes should be understood.

CHAPTER III

Design and Procedures

This chapter sets forth the design and procedures used in the construction and evaluation of the P.I.C.Q.

The first section of this chapter dealt with the general characteristics of the instrument with emphasis given to a description of the initial attitude scale construction.

The second section of this chapter dealt with the development of the instrument concerning the pre-test, statistical tests used to ascertain internal reliability of the instrument, inter-item correlation matrix, cluster-analysis, and the construction of the final form of the instrument.

The third section of this chapter dealt with the implementation of the instrument to the selected population with factor analysis used to study what dimensions are reflected in the instrument.

The fourth and final section of this chapter dealt with the samples in this study in terms of method of selections and selected characteristics of the populations from which the samples were selected.

General Characteristics of the Instrument

The purpose of this study was to construct a measure of institutional conflict between faculty and administrators

based upon relevant literature in higher education, organizational theory, and use of an appropriate research design.

The investigator was influenced by Halpin and Crofts' research into the construction on an instrument to measure the organizational climate of schools⁹⁰ and the Educational Testing Service's development of an instrument to measure institutional vitality.⁹¹ Each effort at instrument construction was regarded as a preliminary step toward developing a measure that, after considerable field testing, might provide useful techniques for describing and understanding some of the bases of human behavior in particular institutional setting. Each effort relied upon the construction of experimental questionnaires that, it was assumed, represented multi-dimensions of institutional conflict and modes of resolving conflict.

The development of the attitude scales in the instrument was based upon the method of summated attitude scale construction designed by Likert (1932).⁹² He found that scores based upon the relatively simple assignment of integral weights correlated .99 with more complicated normal

⁹⁰ Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools, Chicago: The Midwest Administration Center, The University of Chicago, 1963, p. 130.

⁹¹ R. E. Peterson and D. E. Loye (Eds.), Conversations Toward a Definition of Institutional Vitality, Princeton, Educational Testing Service, 1967, pp. 1-112.

⁹² Fred N. Kerlinger, Foundations of Behavioral Research, New York: Holt, Rinehart and Winston, 1967, pp. 483-486.

deviate system of weights.⁹³

A summated rating scale is a set of attitude items, all of which are considered of approximately equal intervals, and to each of which subjects respond with degrees of agreement or disagreement (intensity). The scores of the items are summed and averaged over all statements.

It was decided that the "don't know" or "not sure" categories on the Likert scale would be eliminated. The respondent must choose among alternatives. Kerlinger states that although some respondents may be irritated by being forced to choose, choosing is a standard human behavior.⁹⁴

Likert-type items provide measures of preceptions and not fact. When a university faculty member or administrator is asked to describe institutional conflict, the investigator obtains a description of institutional conflict based upon the preceptions of each respondent.

Any item answered in the same way by all respondents from all institutions would be of limited value because it would provide little strength to the instrument. An intent of the investigator was to construct an instrument, using Likert-type items, that would have an acceptable level of accuracy in terms of internal reliability and that would have discriminable power.

⁹³ Allen L. Edwards, Techniques of Attitude Scale Construction, New York: Appleton-Century-Crofts, Inc.; 1957, p. 151.

⁹⁴ Kerlinger, Foundations of Behavioral Research, p. 498.

For statements expressing potential or actual conflict, the "strongly agree" response was given the weight of four, the "agree response" a weight of three, the "disagree response" a weight of two, and the "strongly disagree" response a weight of one. For statements expressing a potential for non-conflict, the scoring system was reversed, with the "strongly disagree" being given the four weight and the "strongly agree" response being given the one weight.

Items were constructed on the basis of data obtained from persons involved in the management of conflict within institutions of higher learning, of theoretical concepts relative to organizational behavior, of a selected review of the literature and of speculations of the investigator and certain Michigan State University staff members concerning some of the probable patterns of institutional conflict.

The investigator, using these multiple approaches for obtaining items, compiled 446 items. The items were screened for clarity and redundancy. 151 items survived this preliminary screening. These items formed the core of the instrument that was analyzed by a panel of experts and subsequently field tested.

The items were submitted to a panel of professional educators in higher education, organizational theory, and labor and industrial relations. Each panel members was requested to read each item and indicate if, in his opinion, the item expressed potential or actual conflict or non-conflict. Based upon the recommendations of the Office of

Educational Research any item that lacked eighty percent agreement, in terms of the direction of conflict or non-conflict, was considered as a probable reject. However, all items were retained for the field test.

Preceding the questionnaire items was a set of instructions which directed the respondent in the proper manner of indicating his responses to the questionnaire items. In addition, each respondent was requested to leave his questionnaire unsigned and to place it in the return envelope that was attached to each questionnaire.

Pre-test and Statistical Tests

The items were sorted on the basis of how the items seemed to constellate. Four potential subtests were identified as possible dimensions of institutional conflict. These names are listed in Table 1.

The first version of the Potential for Institutional Conflict Questionnaire (P.I.C.Q.) was administered to a stratified random sample of an institution's faculty members and administrators. The chief criterion in choosing this sample was the heterogeneity of the colleges within the institution and economic limitations of administering the instrument.

One of the major tasks in constructing a new educational instrument is in experimenting and determining the item content and item clarity. The investigator used the Generalized Item Analysis Program (GITAP) that is a part of

FORTAP, a Fortran test analysis program.⁹⁵ The GITAP program was used in analyzing the item content and item clarity.

The items in the instrument were qualitative and were expressed in attitudes. This created difficulties in analyzing such data: the data should be quantified. In order to quantify and establish reliability, the Method of Reciprocal Averages was used. The procedure employed a priori set of item response weights assigned by the investigator for each item. The Reciprocal Averages Program (RAVE), that is part of the FORTAP program, was used to score the response choices of the subjects and to compute the Hoyt internal consistency reliability coefficients.⁹⁶

Hoyt's procedure for determining test reliability is based upon the analysis of variance theory. This procedure provides an estimate between the obtained variance and the true variance that is more accurate than that obtained by an arbitrary division of the test into two halves or into other fractional parts.⁹⁷

The RAVE program was used to analyze the entire instrument as well as the four subtests.

In the construction of the instrument it was considered

⁹⁵ F. B. Baker and T. J. Martin, "Fortap: A Fortran Test Analysis Package," Laboratory of Experimental Design, University of Wisconsin, 1968, pp. 1-15.

⁹⁶ Ibid.

⁹⁷ Robert L. Ebel, "Estimation of the Reliability of Ratings," Psychometrika, Vol. 16, 1951, pp. 407-424.

relevant at the pre-test level to ascertain the extent to which items were aligning themselves on a discernible dimension. All data were configured into a single inter-item correlation matrix.

The "BASTAT" routine was used by the investigator to establish simple Pearson product moment correlations. The simple correlations were organized into a matrix of results on printed output.⁹⁸

Next, the investigator cluster-analyzed, by inspection, the correlational matrix. This allowed the investigator to identify those items which appeared to group together along a discernible pattern.

The content of those items which the statistical analysis had indicated to group together were examined for content fit. Some 61 items were deleted due to a low inter-item correlation.

Implementation and Analysis of Form II of the P.I.C.Q. Based Upon the Preceding Analysis

Some 90 items survived. The final form for the purposes and scope of this study was administered at four institutions of higher education in Michigan.

Because of the complexity and nature of the instrument, not all responses included complete data. It was important to compensate for missing data in a way that would not affect

⁹⁸ Agricultural Experiment Station, "BASTAT: Calculation of Basic Statistics on the BASTAT Routine," Michigan State University, 1969, pp. 22-30.

the correlation matrix in either a positive or negative manner. The investigator used the Incomplete Data Correlational Program (IDCORR), in order to construct the basic correlation matrix to be used in subsequent factor analysis.⁹⁹

This program computed the correlations only from observations which included measurements on relevant variables. Missing data are suppressed in order that it does not affect those correlations based on actual data. The program provides a punched output of the correlations in a symmetric correlation matrix with the matrix row and columns specified on each card.

The resulting correlation matrix was subjected to factor analysis. The investigator was interested in isolating the number and nature of the dimensions incorporated in the instrument.

Panel agreement, item analysis, internal reliability and cluster analysis had resulted in tentative sub-test scales. The investigator hoped to locate and identify unities or dimensions that underlay the instrument on a more objective basis. Such an exploration of variable areas is considered to be valuable in conceptualizing constructs. Factor analysis, in the analysis of the instrument under consideration, was considered as a useful construct validity tool.

⁹⁹ David Kline, "IDCORR: Incomplete Data Correlation Program," Computer Institute for Social Science Research, Michigan State University, 1968, pp. 1-16.

The main statistical routine in factor analysis is common factor variance. Thus, through the use of factor analysis, the investigator was able to study the constitutive meaning of the constructs upon which the instrument was based. By correlating data obtained with a given variable with data from other measures theoretically related to it the investigator was able to check his theoretical constructs.

The symmetric correlation matrix (90 x 90) was subjected to Factor A, a basic factor analysis program. This program provides components (principal area) and analytic orthogonal rotational solutionals.¹⁰⁰

The Kiel-Wrigley criterion was used. If K , $K-1$, is the criterion value, the principal axes solution was rotated using Quartimax and the Varimax rotational codes in sequence until a factor was found on which fewer than K variables have their highest loading.¹⁰¹

The resulting principal axes, Varimax and Quartimax factor loadings, were analyzed to study the dimensions underlying the instrument.

Population and Sample

The random stratified sample of the study was drawn from the total faculty and administrator population of four public Michigan institutions of higher learning.

¹⁰⁰ Anthony V. Williams, "Factor A," Computer Institute for Social Science Research, Michigan State University, 1969, pp. 1-5.

¹⁰¹ Ibid.

These four institutions were selected because each appeared to have experienced different academic governance modes.

Institutional Profiles

Institution A is a large university with a 1969 enrollment of approximately 44,000 students of which 7,000 were enrolled in graduate programs. The faculty and staff total approximately 2,500. This institution is regarded as a phototype of the multi-purpose institution of higher education.

Institution B is a former state teachers college that became a state university some years ago. It had an enrollment in 1969 of 11,500 students of which 1,400 were enrolled in graduate programs.

Institution C is a former state teachers college that became a state university some years ago. In 1969 it had an enrollment of 15,000 students of which 2,000 were enrolled in graduate programs.

Institution D is a multiple-campus, two-year community college. In 1969 it had an enrollment of approximately 13,400 students.

SUMMARY

The first section of this chapter described the general configuration of the instrument with a discussion of the application of the attitude scales designed by Likert.

The second section of this chapter discussed what

statistical procedures would be used in analyzing the field test responses. These procedures included panel agreement, item analysis, cluster analysis, and internal reliability as relevant to the construction and analysis of the P.I.C.Q., Form I.

The third section of this chapter related information relative to the implementation of the P.I.C.Q., Form II to the selected population. This section, also, contained a discussion of why factor analysis appeared appropriate in studying the dimensions of the instrument.

The fourth section of this chapter indicated the bases for selecting the samples and certain selected general characteristics of those institutions from which the samples were drawn.

The analysis of results were reported in Chapter IV.

CHAPTER IV

Analysis of Results

The purpose of this study was to develop an instrument designed to assess the potential for conflict relative to faculty-administrator relationships at selected public Michigan institutions of higher education. A major focus of this study was to isolate the number and nature of the dimensions incorporated in the instrument.

Because the study involved essentially the development and analysis of an instrument, a number of guideposts were offered for use as points of evaluation and to outline the path the development and analysis would take. A discussion of each of these guideposts will be included in this chapter. At each step, the data relevant to that step will be presented.

1. P.I.C.Q., Form I.

- A. Construction of the P.I.C.Q., Form I.

The 151 items that had survived screening for clarity and redundancy were sorted on an intuitive and theoretical basis. To each constellation which emerged a plausible name was assigned. These dimensions are listed in Table 1. The 151 item P.I.C.Q., Form I, may be found in Appendix A.

TABLE 1.

Assignment of empirically derived constellations of 151 P.I.C.Q., Form I, items to a model of "Projected Dimensions" of institutional conflicts.

Projected Dimensions of Institutional Conflict		
Dimension	I	Environmental Constraints-Now Applies
Dimension	II	Environmental Constraints-Should Apply
Dimension	III	Collective Negotiations, Utilitarian
Dimension	IV	Morale

The four dimensions posited in Table 1 were viewed as very tentative. The development of these projected dimensions were viewed as a conceptual aid in linking theoretical views of institutional conflict, item content dealing with institutional conflict, and the actual views of institutional members toward institutional conflict.

The most tentative of the dimensions were the first two dealing with environmental constraints because they contained items relating to shared faculty-administrator academic governance and student, governing body, and state legislature roles in academic governance. Because of the generalized and broad scope of these two particular dimensions, the investigator was interested in ascertaining if they would remain intact after appropriate field testing and analysis.

B. Analysis of the P.I.C.Q., Form I, by a panel of experts.

The P.I.C.Q., Form I, was analyzed by a panel of professional educators in higher education, organizational theory, and labor and industrial relations. This analysis was intended to ascertain if the items expressed potential conflict or potential non-conflict based upon the recommendations of the Office of Educational Research. Any item that lacked at least 80 per cent agreement by the panel, in terms of the direction of conflict or non-conflict, was considered as a probably reject. Items discarded on the basis of the panel's analysis are reported in Table 2.

C. Testing of the P.I.C.Q., Form I, to examine item content.

In the P.I.C.Q., Form I, the responses to the 151 items were secured from 39 faculty members and administrators from a large number of colleges and departments within a large mid-western university. The response rates are reported in Table 2.

Based upon the field test of the P.I.C.Q., Form I, the Generalized Item Analysis Program (GITAP) was used to examine the items.¹⁰² Items

¹⁰² F. B. Baker and T. J. Martin, "Fortap: A Fortran Test Analysis Package," pp. 1-15.

TABLE 2.

Table of sample size and stratification by rank and administrative classification.

RANKS	NUMBER SAMPLED	RESPONSE RATE	USEABLE RESPONSES	PERCENT OF USEABLE RESPONSES
Professor	14	12	10	71
Assoc. Prof.	13	12	10	71
Ass't. Prof.	8	6	6	75
Instructor	11	9	7	66
Admin.	<u>9</u>	<u>8</u>	<u>6</u>	<u>57</u>
TOTALS	56	47	39	71

discarded on the basis of this analysis are reported in Table 3.

D. Analysis of the P.I.C.Q., Form I, by cluster analysis.

Based upon the field test all 151 items were pooled into an inter-item correlation matrix. The simple (Pearson product moment) correlations were displayed in a matrix approximately 151 x 151. The matrix was cluster analyzed by inspection suppressing inter-item correlations below the .005 level.

The investigator was interested in identifying potential dimensions within the correlation matrix and to check the content, or the perceived meaning, of those items which might be

TABLE 3.

P.I.C.Q., Form I, items discarded based on panel analysis, item analysis, and cluster analysis.

ITEM	REASON FOR DISCARDING	ITEM	REASON FOR DISCARDING	ITEM	REASON FOR DISCARDING
1	1, 3	22	3	60	1, 2, 3
2		23	1, 3	61	1, 2, 3
3		24	1, 3	63	3
4	1, 3	27	1, 2, 3	65	1, 3
5	1, 3	30	3	66	1, 3
6	1, 2, 3	32	3	67	1, 2, 3
7	1, 3	33	2, 3	68	1, 2, 3
8	1, 2, 3	38	2, 3	82	3
9	1, 2, 3	39	3	83	3
10	1, 3	41	1, 3	84	3
11	1, 3	42	3	85	1, 2, 3
12	3	43	1, 2, 3	86	3
13	1, 3	44	3	99	2, 3
14	3	45	3	100	3
15	3	49	1, 3	130	2, 3
16	1, 2, 3	50	1, 3	131	2, 3
17	1, 3	51	3	137	3
18	1, 3	52	1, 2, 3	145	2, 3
19	1, 3	53	1, 2, 3	146	2, 3
20	3	54	1, 3	147	2, 3
21	1, 3	58	3	151	3

1. Less than eighty percent agreement by panel.
2. Weak in terms of analysis of item clarity and item-content.
3. Low inter-item correlation, at the .005 level of significance, and failure to group together along a discernible pattern.

grouped into dimension. Items discarded on the basis of this analysis are reported in Table 3.

E. Testing of the P.I.C.Q., Form I, to examine internal reliability.

Reliability is defined as the proportion of true variance to the total obtained variance.

There is no way to directly calculate the

variance of true scores, but it can be established by subtracting the error variance from the total variance. This follows from the fact that total variance equals the sum of the true score variance and the error variance. In the analysis of variance model, the mean square for individuals is the total obtained variance, and the mean square for error is the error variance. Thus, the reliability of an instrument can be computed by the following formula:

$$R = \frac{MS \text{ Ind.} - MS \text{ Error}}{MS \text{ Ind.}}$$

Using an a priori set of item weights for each item, the Reciprocal Averages Program (RAVE) was used to compute the Hoyt internal consistency reliability coefficients which is based upon the above mentioned reliability formula.¹⁰³ In Tables 4 through 8 the total instrument and sub-test reliability coefficients are reported using this formula.

F. Summary of the analysis of the P.I.C.Q., Form I.

Panel members experienced difficulty in deciding if many of the items contained in the first two sub-tests displayed weakness based upon item clarity and item content.

103 Ibid.

TABLE 4.

P.I.C.Q., Form I, total internal reliability analysis.

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	RELIABILITY
Individuals	111.08	32	3.47	.8688
Items	855.14	149	5.73	
Error	<u>2172.00</u>	<u>4768</u>	.45	
TOTAL	3138.23	4949		

TABLE 5.

P.I.C.Q., Form I, Subtest I (environmental constraints-now applies) internal reliability analysis.

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	RELIABILITY
Individuals	22.88	32	.715	.3808
Items	162.31	43	3.77	
Error	<u>609.29</u>	<u>1376</u>	.442	
TOTAL	794.48	1451		

TABLE 6.

P.I.C.Q., Form I, Subtest II (environmental constraints-should apply) internal reliability analysis.

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	RELIABILITY
Individuals	20.38	32	.636	.2865
Items	383.83	43	8.926	
Error	<u>625.25</u>	<u>1376</u>	.454	
TOTAL	1029.46	1451		

TABLE 7.

P.I.C.Q., Form I, Subtest III (collective negotiations)
internal reliability.

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	RELIABILITY
Individuals	173.00	32	5.40	.9228
Items	165.35	42	3.93	
Error	<u>560.68</u>	<u>1344</u>	.417	
TOTAL	899.03	1418		

TABLE 8.

P.I.C.Q., Form I, Subtest IV (morale) internal reliability
analysis

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	RELIABILITY
Individuals	84.64	32	2.64	.8773
Items	31.38	16	1.74	
Error	<u>186.93</u>	<u>576</u>	.324	
TOTAL	302.95	626		

Cluster analysis indicated that a considerable number of items included in the first two subtests lacked inter-item correlations at the .005 level or failed to align themselves on a discernible dimension.

Finally, internal consistency reliability analysis revealed that although the total instrument

had acceptable reliability, the first two subtests displayed low internal reliability.

Thus, the empirical findings (panel agreement, item analysis, cluster analysis, and internal reliability) supported the need to modify the classification schemes. It may be recalled that the first two dimensions had been questioned by the investigator because of the varied items included under Environmental Constraints-Now Applies and Environmental Constraints-Should Apply. It seemed appropriate, on the bases of the multiple analyses of the P.I.C.Q., Form I, to develop a new taxonomy model. The taxonomy may be found displayed in Table 9.

TABLE 9.

Revised projected dimensions of institutional conflict.

DIMENSIONS
I. Environmental Constraints
II. Shared Academic Governance "Normative"
III. Collective Negotiations "Utilitarian"
IV. Morale

2. P.I.C.Q., Form II.

A. Development of the P.I.C.Q., Form II.

Based upon the multiple forms of analysis that were made on the P.I.C.Q., Form I, a considerable number of items "washed out" of the 151 items that were incorporated in the instrument; 90 survived the four types of analysis described above. The remaining 90 items appeared to constellate into four major dimensions, reported in Table 9. All four dimensions appeared to relate, in a positive way to current knowledge about organizational theory.

It was believed that the P.I.C.Q. had been pre-tested sufficiently to permit its use with a broader sample of institutions of higher learning.

B. Administration of the P.I.C.Q., Form II.

A random and stratified sample was drawn from the population of four public Michigan institutions of higher education. The following table presents relevant data concerning population size, sample size, and type of stratification used in the testing of the P.I.C.Q., Form II.

TABLE 10.

Table of population, sample size, and stratification by rank and administrative classification.

RANKS	INSTITUTIONS			
	A.	B.	C.	D.
Professor	50	15	10	3
Assoc. Prof.	50	21	20	10
Ass't. Prof.	30	47	40	40
Instructor	30	37	40	53
Admin.	<u>20</u>	<u>16</u>	<u>20</u>	<u>24</u>
SAMPLE TOTALS	180	130	130	130
Institutional Population TOTALS	2,467	500	740	328

The sample size represents approximately 20 per cent of the population. Rates of return and breakdowns by categories and institutions are presented in the following table:

TABLE 11.

Rates of returns on an institutional basis.

	INSTITUTIONS			
	A.	B.	C.	D.
No. Mailed	180	130	130	130
No. Returned	140	90	65	60
No. Non-useable	35	30	25	5
No. Useable	105	60	40	65
Responded in Percent of Total Sample Size	57%	69%	50%	50%

The response rate of return represents approximately 72 per cent of the total sample size of 570. The useable responses, in terms of per cent of the total sample size, represents approximately 54 per cent. The return rates compare favorably with other recent studies dealing with perceptions of faculty and administrators within institutions of higher learning.¹⁰⁴

C. Preparation of data for factor analysis.

Because of the complexity and nature of the instrument, not all responses included complete data. The Michigan State University factor analysis computer programs did not compensate for missing data. For this reason the Incomplete Data Correlational Program was used.¹⁰⁵ The mean and standard deviation for each variable was based only on observation including measurements of that variable and correlations were computed only from observations which included measurements on both of the relevant variables. A punched inter-item correlation matrix, 90 x 90, was prepared by this program for use in factor analysis.

¹⁰⁴ Edward Gross and Paul V. Grambsch, University Goals and Academic Power, pp. 21-22.

¹⁰⁵ David Kline, "IDCORR: Incomplete Data Correlation Program," Computer Institute for Social Science Research, pp. 1-16.

D. Factor analysis to ascertain the dimensions underlying the variable areas.

Halpin and Croft in their developement of the OCDQ stated that:

"the use of numbers, in itself, guarantees no greater fidelity to the events to be signified than is to be found in the original descriptions we make of the observed behavior. Statistical procedures, no matter how elaborate, can never compensate for imprecise raw data. Indeed, neither words nor numbers should be construed as the criterion against which the other is to be evaluated; the best we can do is to establish a "useful" concordance between these two types of symbols, especially in respect to the events that they signify..."¹⁰⁶

In a similar fashion the investigator applied both statistical procedures and theoretical knowledge relative to the items and probable dimensions of the instrument. The number of items and the probable dimensions had been modified as a result of using both approaches. A major thrust of this study was to ascertain what the major dimensions were that underlie the instrument. Factor analysis appeared to offer a useful technique in deriving abstractions from large groupings of inter-relating data. The symmetric correlation matrix, 90 x 90, that was put in punched out-put by the IDCOR Program, was used as the basic in-put for

¹⁰⁶ Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools, p. 14.

the factor analysis program.¹⁰⁷

E. Factor analysis of the P.I.C.Q., Form II, Item Matrix.

The first step in the factor analysis of the instrument was to obtain from the Factor A program on unrotated item factor matrix.¹⁰⁸ This matrix is listed in Appendix C.

The investigator next entered an eigenvalue threshold of 2.500 in determining which factors would be extracted for rotation. An eigenvalue represents the relative strength of the factor. Those eigenvalues with a value of 2.500 or higher are listed in Table 12.

TABLE 12.

Eigenvalues 2.500 and higher.

EIGENVALUES	
1. 19.6319	4. 3.7554
2. 6.8622	5. 2.7686
3. 3.8090	6. 2.5870

¹⁰⁷ David Kline, "IDCORR: Incomplete Data Correlation Program," pp. 1-16.

¹⁰⁸ Anthony V. Williams, "Factor A," pp. 1-5.

There were six factors with eigenvalues above 2.500 that were extracted from the matrix. In order to ascertain which dimensions would account for the variance in the six factors a quartimax rotational solution using the Kiel-Wrigley criterion was used. Two, three, four, five, six, and seven factor rotational solutions were obtained using this procedure. It was found that fewer than three items were displayed in the fifth rotational solution, thus the four factor rotational solution was examined in detail. The matrix for the four-factor rotational solution for the 90 items, grouped according to factors, is presented in Table 13.

Eighty one items loaded (3.50^{\pm}) into the four factors: nine items failed to load (3.50^{\pm}) into the four factors. The item content and factor loadings for the questions in Factor I are listed in Table 14.

The item content and factor loadings for the questions in Factor II are listed in Table 15.

The item content and factor loadings for the questions in Factor III are listed in Table 16.

The item content and factor loadings for the questions in Factor IV are listed in Table 17.

TABLE 13.

Rotated item factor matrix for 90 items of the P.I.C.Q.,
Form II.

VARIABLES 1-47 (N=278)				
ITEM NO.	FACTOR I	FACTOR II	FACTOR III	FACTOR IV
1	-.027	-.026	.430	.239
2	-.268	-.134	.386	.022
3	.090	.143	-.091	-.486
4	.218	.060	-.208	-.354
5	.221	.246	-.279	-.422
6	.153	.044	-.113	-.414
7	.341	.080	-.456	-.003
8	-.007	-.012	.027	.552
9	-.101	-.261	-.045	.326
10	-.201	-.350	.139	.100
11	.375	.141	.157	.156
12	.332	.361	-.255	.448
13	-.243	-.405	.016	-.346
14	-.139	-.331	.011	-.031
15	.172	-.086	-.103	.325
16	-.103	-.353	.243	-.333
17	-.161	-.356	.147	-.319
18	.027	.336	.013	.007
19	-.229	-.351	.143	.130
20	.108	-.260	-.045	.077
21	.426	.116	-.437	.124
22	-.019	.092	.242	.610
23	-.048	.098	.068	.631
24	-.330	-.070	.386	.066
25	-.009	-.018	.246	.467
26	.029	.005	-.024	.007
27	.077	.032	.166	.178
28	.317	.112	-.490	.098
29	-.081	-.537	.185	.104
30	.155	.594	.232	-.096
31	.139	.542	.126	-.081
32	.216	.516	.228	-.078
33	.336	.461	.028	-.010
34	.077	.526	.249	.114
35	.657	.078	.073	-.029
36	-.061	-.510	-.059	.126
37	.744	-.042	-.225	-.118
38	.607	-.118	-.152	-.255
39	.733	-.136	-.173	-.158
40	.747	-.065	-.075	-.156
41	.733	-.103	-.078	-.170
42	.593	.027	-.026	-.085
43	.441	.222	.086	-.222
44	.301	.069	-.187	-.160
45	.514	.050	-.084	-.051
46	.603	.087	-.199	-.101
47	.698	.139	-.024	.016

TABLE 13. (Continued)

VARIABLES 48-90 (N=278)				
ITEM NO.	FACTOR I	FACTOR II	FACTOR III	FACTOR IV
48	<u>.812</u>	.059	.017	.060
49	<u>.782</u>	.069	.103	.039
50	<u>.784</u>	.116	-.021	.105
51	<u>.798</u>	.052	.096	.062
52	<u>.776</u>	.173	-.014	-.037
53	<u>.791</u>	.174	.002	.031
54	<u>.794</u>	.086	-.015	.096
55	<u>.765</u>	.074	-.080	.135
56	<u>.610</u>	.089	-.084	.036
57	<u>.852</u>	.101	.043	.013
58	<u>.280</u>	-.372	-.071	.182
59	<u>.384</u>	-.080	-.055	.191
60	<u>.425</u>	-.009	-.016	.218
61	<u>.783</u>	-.051	-.196	.005
62	-.451	-.040	.177	-.018
63	<u>.599</u>	-.223	-.140	-.033
64	<u>.546</u>	-.016	-.037	.026
65	<u>.583</u>	.036	-.182	.061
66	<u>.640</u>	.130	-.106	.060
67	<u>.745</u>	.065	-.062	-.016
68	<u>.668</u>	.098	-.003	.047
69	<u>.803</u>	.123	.069	.064
70	-.412	.220	.071	.219
71	-.651	.206	.120	.219
72	-.319	<u>.359</u>	.230	.080
73	-.314	<u>.413</u>	.254	.107
74	-.395	<u>.419</u>	.116	.074
75	-.676	<u>.213</u>	.121	.147
76	-.202	.108	<u>.603</u>	-.093
77	-.046	.294	<u>.513</u>	.024
78	-.263	.062	<u>.591</u>	-.042
79	-.241	.211	<u>.526</u>	-.030
80	.144	.171	-.573	.076
81	-.153	.191	<u>.513</u>	.117
82	.143	-.055	-.464	.015
83	-.299	.069	<u>.586</u>	.138
84	-.231	.119	.274	-.065
85	.137	-.308	-.597	-.040
86	.136	.082	-.377	-.066
87	-.047	.003	<u>.551</u>	-.003
88	-.063	.127	<u>.529</u>	.099

Variables at 3.50 level underlined to show loading in a particular factor.

TABLE 14.

Item content and factor loadings for questions in Factor I.

ITEM NO.	QUESTION	FACTOR LOADING
3	Our College is too centralized in terms of authority.	.486
4	Administrators, by virtue of their position, are unable to speak in behalf of the interests and/or concerns of the faculty.	.354
5	Our Administrators find it difficult to share decision-making powers with faculty members.	.422
6	The Board of Trustees favors the Administration over the faculty in terms of decisions relating to the allocation of economic resources.	.414
8	Our institutional problems are solved through interaction between faculty and Administration without undue pressure or defensiveness.	.552
12	The expectations held for faculty members is unreasonably high in such matters as teaching load, advisement, writing, and committee assignments.	.448
22	Our College is too centralized in terms of authority.	.610
23	Administrators, by virtue of their position, are unable to speak in behalf of the interests and/or concerns of the faculty.	.631
25	Our Administrators find it difficult to share decision-making powers with faculty members.	.467

TABLE 15.

Item content and factor loadings for questions in Factor II.

ITEM NO.	QUESTION	FACTOR LOADING
16	The College actively seeks to increase on a large scale the admission of minority peoples as both students and faculty members.	.353
17	The state legislature is very supportive of our College.	-.356
36	The size of the gap between faculty salaries and Administrative salaries is unreasonable.	-.510
10	Our faculty has substantive authority to make College policy.	-.350
13	The Board of Trustees are genuinely concerned about improving faculty conditions at the College.	-.405
19	Staff members have the right to disrupt our College community in behalf of their beliefs.	-.351
33	Our faculty has substantive authority to make College policy.	.461
34	Our College policies are made within an environment of Faculty-Administrators co-operation.	.526
58	A College organization charged with the responsibility for negotiating a contract for the Faculty should exclude department chairmen.	-.372
29	Our College Administrators further their own interests more than they further the interests of faculty members.	-.537
30	In general, our College Administrators and faculty members co-operate in solving our institutional problems.	.594

TABLE 15. (Continued)

ITEM NO.	QUESTION	FACTOR LOADING
31	Our institutional problems are solved through interaction between faculty and Administration without undue pressure or defensiveness.	.542
32	Our faculty has major recommending responsibilities in institutional governance.	.516
72	The most important problems facing our institution can only be solved within a climate of mutual trust between Administrators and Faculty.	.359
73	Faculty members increase the chances of solving institutional problems through participation in the Academic Senate or Council.	.413
74	The real need is to make the Academic Senate/Council a viable agency where Faculty and Administrators can work together in meeting the needs of our students.	.419

TABLE 16.

Item content and factor loadings for questions in Factor III.

ITEM NO.	QUESTION	FACTOR LOADING
11	Our College policies are made within an environment of Faculty-Administrators co-operation.	.375
21	In our institution, faculty members are not involved in making decisions on things that really matter.	.426
37	College faculty members, in order to fulfill the goals established by the institution, must establish some form of collective negotiations.	.744
38	Public demonstration by faculty members are necessary techniques for informing the Administration, Board of Trustees, and public of faculty demands.	.607
39	Under certain circumstances College faculty organizations should go out on strike.	.733
40	Faculty members should be willing to walk in a picket line that has been organized by the local faculty organization.	.747
41	In the event of a strike, faculty members should be willing to walk in a picket line.	.733
42	Faculty members should be willing to have their local organization notify accrediting agencies and national professional organizations of unsatisfactory conditions as a means of changing these conditions.	.593
43	If faculty organizations do not like teaching conditions the way they are, they should take active measures to change others to their way of thinking.	.441

TABLE 16. (Continued)

ITEM NO.	QUESTION	FACTOR LOADING
45	Faculty members who try to bring about changes through organized action are more professional than faculty members who never try to make changes.	.514
35	Administrators accept the concept of collective negotiations as a future reality at this institution.	.657
46	In public employment the success of demands depends on relative bargaining power.	.603
47	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees to secure clerical assistance for faculty members.	.698
48	College faculty organizations should negotiate with Administrators and/or Boards of Trustees to increase faculty salaries.	.812
49	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the improvement of retirement benefits.	.782
50	Local College faculty organizations should negotiate class size.	.784
51	Local College faculty organizations should negotiate with the Administrators and/or Boards of Trustees for fringe benefits.	.798
52	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal grievance procedures.	.776

TABLE 16. (Continued)

ITEM NO.	QUESTION	FACTOR LOADING
53	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal Sabbatical policies.	.791
54	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal Advisement load.	.794
55	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of a formal Academic Calendar.	.765
56	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for official recognition of the negotiating team.	.691
57	Local College faculty organizations should negotiate with the Administrators and/or Boards of Trustees personnel policies.	.852
59	A College organization involved in negotiating a contract for the faculty should exclude deans.	.384
60	A College organization provided with the power to negotiate for Faculty members should exclude from its membership the university president.	.425
61	Unsatisfactory conditions within the institution will not work themselves out without the intervention of a local Faculty negotiating organization.	.783
62	College Administrators should be permitted to be officers of local Faculty organizations.	-.451

TABLE 16. (Continued)

ITEM NO.	QUESTION	FACTOR LOADING
63	Faculty members should affiliate with a national teaching union to improve their condition of employment.	.599
64	Faculty members should affiliate with an independent organization to improve their conditions of employment.	.546
65	Local College faculty organizations should negotiate curriculum matters (items).	.583
66	Local College faculty organizations should negotiate conditions appropriate for student learning.	.640
67	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for representation on policy-making committees.	.745
68	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the recruitment of Faculty members.	.668
69	Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for leaves of absence.	.803
70	Faculty members and Administrators can solve institutional problems best through an academic senate.	-.412
71	Unionization creates an environment wherein co-operative problem solving is made very difficult.	-.651
75	Co-operation in solving individual and institutional problems is decreased when the Faculty is unionized.	-.676

TABLE 17.

Item content and factor loadings for questions in Factor IV.

ITEM NO.	QUESTION	FACTOR LOADING
1	The Board of Trustees are genuinely concerned about improving faculty conditions at the College.	.430
2	Our Administrators represent trained professionals who should accept faculty advice <u>but</u> maintain responsibility for policy formulation.	.386
7	In general, College Administrators tend to avoid responsibility for their actions when difficulties arise and place them on faculty members.	-.456
76	Various assignments I have completed received recognition as being particularly good pieces of work.	.603
77	I feel that I have received training and experience in my present position that has been constructive in my professional growth.	.513
78	I have had exceptionally good working conditions and equipment.	.591
79	I have felt secure in my position here at the College.	.526
80	I have had little feeling of achievement in the job I have been doing.	-.573
81	The working relationships I have had with my co-workers has been very good.	.513
82	I have received few particularly challenging assignments at the college.	-.464
28	In general, College Administrators tend to avoid responsibility for their actions when difficulties arise and place them on faculty members.	-.490

TABLE 17. (Continued)

ITEM NO.	QUESTION	FACTOR LOADING
24	Our faculty regards the Administrators as a facilitating agent for the faculty.	.386
83	I feel that there are adequate opportunities for promotions within the College.	.586
85	Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a College teaching-research career.	-.547
86	Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a College Administrative career.	-.377
87	My present position requires the use of my best abilities.	.551
88	I have felt that there is a good chance I will be promoted in my present position.	.529
89	The personnel policies of the College are known by the majority of my co-workers.	.419
90	I understand the basis for my annual salary increases.	.446

F. Summary of the Factor Analysis of the P.I.C.Q., Form II, and the revised dimensions based upon factor analysis.

The data in the 4-Factor Quartimax rotational solution supported three of the four dimensions that had been developed on the basis of theoretical knowledge, content analysis, and cluster analysis.

The dimensions dealing with collective negotiations (utilitarian), shared academic governance (normative), and morale remained stable. The items within each subtest (dimension) yielded high loadings on only one of the four factors. Each subtest (dimension) appeared to be relatively independent.

The dimension dealing with environmental constraints was modified as a result of the factor analysis. Eight of the items included in this projected dimension did not load high in any of the factors. The remaining items with high loadings appeared to represent attitudes toward administrative leadership. The projected dimension of Environmental Constraints was replaced with the new dimension of Administrative

Leadership. The projected dimensions of the P.I.C.Q., Form II, and the dimensions that resulted from factor analysis are reported in Table 18.

TABLE 18.

Projected dimensions of the P.I.C.Q., Form II, and dimensions based upon factor analysis.

PROJECTED DIMENSIONS	DIMENSION BASED ON FACTOR ANALYSIS
I. Environmental Constraints	I. Administrative Leadership
II. Shared Academic Governance (Normative)	II. Shared Academic Governance (Normative)
III. Collective Negotiations (Utilitarian)	III. Collective Negotiations (Utilitarian)
IV. Morale	IV. Morale

SUMMARY

First, the items that had survived initial screening were sorted. On this basis four probable dimensions were isolated.

Second, a panel of experts analyzed the item content relative to the direction of conflict or non-conflict. Approximately one-third of the items were weak in this regard but retained for subsequent statistical procedures.

Third, an analysis was made of the P.I.C.Q., Form I, to isolate weak items on the basis of item content and item clarity.

Fourth, cluster analysis was made of the P.I.C.Q., Form I, to isolate weak items and to reconsider the dimensional aspect of the instrument. Two of the dimensions appeared to be isomorphic with the dimensional construct developed earlier in the study; two appeared weak.

Fifth, the P.I.C.Q., Form I, was subjected to a series of statistical routines that computed the internal consistency reliability of the instrument (total and sub-scales). Two of the sub-tests appeared to be weak.

The results of these multiple analyses resulted in a reduction of the instrument by some 61 items and a reclassification of the dimensions.

Sixth, the P.I.C.Q., Form II, was applied at four public Michigan institutions of higher education.

Seventh, the data secured from a sample of four public Michigan institutions of higher education were prepared, through computer programs, for factor analysis.

Eighth, factor analysis was computed on the raw data. Three of the original dimensions received support from the analysis. The fourth dimension, Administrative Leadership, replaced the projected dimension of Environmental Constraints.

The summary and conclusions may be found in Chapter 5.

CHAPTER V
SUMMARY, DISCUSSION,
CONCLUSIONS, AND RECOMMENDATIONS

General Summary

The primary purpose of this study was to develop an instrument (P.I.C.Q.) designed to assess the potential for conflict relative to faculty-administrator relationships at selected public Michigan institutions of higher education.

The impetus for the study came from the widespread observation that higher education is experiencing, in the contemporary period, considerable stress on its traditional organizational patterns. It was found in the review of the literature that conflict is a part of almost every social organization, that conflict appears to be a vital component of the present crisis in institutional governance, and that no instrument has been developed that attempts to assess the potential for institutional conflict.

In the developement of the questionnaire it was considered to be of basic importance to establish consistency with present theoretical knowledge about the nature of organizations, to isolate and study the major dimensions incorporated in the instrument, and to obtain acceptable internal reliability.

Empirical and inductive procedures were used in the development of the P.I.C.Q.; a combination of these two

approaches was considered to be useful in checking theoretical assumptions against numerical values.

A modified Likert-type item questionnaire was developed on the basis of what seemed to make practical sense and on the basis of existing theoretical knowledge about the nature of organizational conflict. Items were included in the P.I.C.Q., Form I, that related to collective negotiations, morale, shared administrator-faculty decision-making, and student governing body, and state legislature status and involvement in the institutional setting. A tentative listing of dimensions was developed on the bases of item-sorting, panel agreement, induction, and theoretical knowledge.

The P.I.C.Q., Form I, was then field tested with the responses subjected to a number of statistical procedures which included item analysis, internal reliability analysis, and cluster analysis. The investigator was interested in studying item content and clarity, finding internal reliability coefficients for the total questionnaire and its sub-scales, and in determining the extent to which the projected dimensions had received statistical support. Based upon the multiple analyses a number of items were eliminated, a new taxonomy contained refined dimensions was developed and the P.I.C.Q., Form II, was developed.

The P.I.C.Q., Form II, was believed to relate in a positive way to current knowledge about organizational theory. It was further believed that the items had been sufficiently pre-tested to permit its use with a broader

sample of institutions of higher education.

A random and stratified sample was drawn from the population of four public Michigan institutions of higher learning. The response rate compared favorably with similar studies dealing with faculty and administrator attitudes toward institutional decision-making.

Subsequent to the implementation of the P.I.C.Q., Form II, the responses were subjected to factor analysis. Factor analysis was used in isolating and studying those dimensions accounting for the most variance. Based upon this analysis final names were assigned to the dimensions and the P.I.C.Q., Form III, was developed for use in assessing the potential for conflict relative to faculty-administrator relationships.

Discussion

The writer had hoped to study differences between faculty and administrator attitudes toward the potential for conflict within their respective institutions. However, the scope of the writer's initial intentions turned out to be naively ambitious. The scope of the study was confined to the development of an instrument designed to assess the potential for conflict relative to faculty-administrator relationships.

An attempt was made to include, based upon practical considerations, items relating to student rights and involvement in institutional decision-making processes. Theoretical support and statistical analyses failed to support the

retention of such items or projected sub-scales in the P.I.C.Q.

Perhaps such items incorporated into a student component might receive support in institutions experiencing radical student activism. None of the institutions sampled in this study had experienced radical student activism or overt violence in an extreme form.

A number of respondents attached to their completed questionnaires lengthy letters containing detailed explanations of their attitudes toward various items, the importance of the instrument, and how the instrument could be further improved. Many of the comments supported present knowledge about institutional conflict in higher education such as the need to seek ways of resolving conflict, the importance of understanding that administrator and faculty interests are not identical and that collective negotiations is becoming a reality in higher education.

For some respondents the questionnaire appeared to have created a degree of dissonance. Some respondents in this category seemed to the writer to be unable to accept the responsibility of making choices concerning a wide range of institutional activities.

Some respondents in the dissonance category indicated that "they resented being forced to choose." Others stated that the instrument was "biased," "simple statements of fact that needed no comment," or "constituted an invasion of their privacy." Still others indicated that "their actual

attitudes fell in-between the response choices," "did not believe in conflict," or viewed such questions as "unprofessional."

The majority of the administrative staff members of one institution declined to complete the questionnaire because of their involvement in current collective negotiations. A major administrator questioned the right of implementing the instrument in his institution, and long delays occurred in receiving the responses back from another institution in which the campus mail service had been used to disperse the questionnaire.

The writer found that the one institution that reported no dissonance in the form of written remarks or telephone messages was the one institution that had experienced collective negotiations over a period of some years.

It seemed to the writer that the P.I.C.Q. represented, because of the forced nature of the choices and the issues involved, a threat to a small but significant number of the respondents. The impulse to complete the questionnaire was probably dependent upon how relevant the respondent thought the items were, how aware the respondent was of the issues involved in the questionnaire, and the extent to which the respondent was free from conflicting interests.

Conclusions

The study resulted in the following findings related to the stages of instrument development and analysis:

1. Some 451 items were screened for clarity and for redundancy. Approximately 151 items survived this first screening. These items formed the core from which the writer subsequently identified the major dimensions of the P.I.C.Q.
2. The remaining 151 items were sorted on an intuitive and theoretical bases. To each constellation that emerged, a plausible name was assigned. The four projected dimensions were Environmental Constraints (Now Applies), Environmental Constraints (Should Apply), Collective Negotiations, and Morale.
3. The P.I.C.Q., Form I, was submitted to a panel to determine if the items expressed potential conflict or non-conflict. Some 32 items failed to receive the minimum eighty per cent panel agreement. However, rejection of items was deferred until after additional tests had been run on the items.
4. The P.I.C.Q., Form I, was field tested with the responses subjected to an analysis of item clarity and item content. Some 21 items were considered as probable rejects. Again, final elimination of items was delayed until other statistical procedures had been used with the responses.
5. Cluster analysis revealed that some 53 items had low inter-item correlations at the .005 level of

significance.

Combining the three procedures of panel agreement, item content and item clarity analysis, and cluster analysis 61 items were eliminated from the instrument.

6. Acceptable levels of internal reliability were found for the total instrument and for the two sub-scales relating to Collective Negotiations and Morale. The two sub-scales relating to Environmental Constraints (Now Applies) and Environmental Constraints (Should Apply) displayed low levels of internal reliability.
7. The empirical findings (panel agreement, item analysis, cluster analysis, and internal reliability coefficients) supported the need to modify the dimensional classification schema. The majority of the 61 items eliminated from the P.I.C.Q., Form I, were in the two sub-scales displaying low levels of internal reliability.

Thus, a modified dimensional schema was developed that retained the dimensions relating to Collective Negotiations, and Morale. A new dimension named Academic Governance (Normative) replaced Environmental Constraints (Should Apply). A single dimension entitled Environmental Constraints, containing

items relating to a number of theoretical considerations, was the final dimension included in the format.

8. The P.I.C.Q., Form II, was developed on the basis of the field test and multiple analyses of the P.I.C.Q., Form I. The 90 item questionnaire was administered to a random and stratified sample drawn from a population of four public Michigan institutions of higher education.

The responses were subjected to factor analysis. The analysis showed that the best factorial way for categorizing the behaviors described by the 90 items closely matched the modified dimensional schema. A factor pattern was obtained in which most of the items in a given sub-scale loaded on the same factor. Based upon an evaluation of the items included in the dimension named Environmental Constraints it was determined that the title Administrative Leadership better described the behaviors reflected in the items contained within that particular sub-scale.

Thus, the study revealed that the P.I.C.Q., Form II, contained four basic dimensions that related to the potential for conflict relative to faculty-administrator relationships:

- A. Administrative Leadership

- B. Shared Academic Governance (Normative)
- C. Collective Negotiations (Utilitarian)
- D. Morale

This dimension contains items that relate to attitudes concerning the extent to which authority is centralized within an institution, the extent to which administrators cooperate with faculty members in sharing power and in making decisions, and the extent to which administrators can represent faculty interests.

This dimension contains items that relate to attitudes concerning the extent to which faculty members and administrators display mutual trust, the extent to which the faculty is involved in policy recommendations and policy-making modes, and the extent to which the Academic Senate represents an organizational form that enables faculty and administrators to increase the possibilities of solving insitutional problems.

This dimension incorporates items that relate to attitudes toward the classical bargaining model that is based upon an adversary relationship between parties. Emphasis is given to a wide range of possible negotiable items and the types of action that faculty would support in achieving particular bargaining objectives.

This dimension contains items that relate to attitudes concerning the individual's feeling of self-worth, feeling of isolation, perceived support of the work-group, and opportunities for self-advancement within the institution.

9. The factor analysis of the P.I.C.Q., Form II, had shown strong support for four basic sub-scales consisting of 81 items. On this basis the P.I.C.Q., Form III, was developed. The P.I.C.Q., Form III, is displayed in Table 19.

The P.I.C.Q. is designed to be used by administrators in higher education concerned with the potential for conflict within their institutions. Higher total test scores and sub-scale scores should indicate greater potential for conflict.

The administration of the P.I.C.Q. at a given time within an institution measures attitudes toward conflict at that specific point in time. Changing conditions that are occurring in higher education can create or destroy faculty attitudes. This suggests the need for more frequent administrations of the P.I.C.Q. rather than using the results of a single administration of the P.I.C.Q. over an extended period of time.

Until relationships between the P.I.C.Q. measures

and external criteria of the institutions "state of faculty-administrator conflict" have been identified, each institution using the P.I.C.Q. should analyze the instrument on an item by item basis. Item analysis should be made with respect to the significance of that item to that specific institution. Such item analysis should help provide the institution with the full benefit of the instrument.

The P.I.C.Q. can be given in a group situation; it should require not more than thirty minutes. On an individual basis not more than fifteen minutes should be required for completion of the P.I.C.Q.

The P.I.C.Q. should be of intrinsic interest to the faculty and administration; the findings from it can be used for purposes of faculty-administrator self-evaluation.

Recommendations for Further Study

As a result of this study five areas for further research relative to the P.I.C.Q., Form III, were identified. They were, however, beyond the scope of this study.

1. Would the same results have been obtained by factoring similar data from an independent and large sample of institutions of higher learning? The P.I.C.Q. might be improved based upon such a cross-validation study.

TABLE 19.

P.I.C.Q., Form III.

SECTION I

Respond to each statement by marking either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE
as an acceptable condition or practice in your institution.

- | | |
|---|---|
| 1. Our College should not be too centralized in terms of authority. | 7. Our institutional problems are solved through interaction between faculty and administration without undue pressure or defensiveness. |
| 2. Our College is too centralized in terms of authority. | |
| 3. Administrators, by virtue of their position, are unable to speak in behalf of the interests and/or concerns of the faculty. | 8. The expectations held for faculty members is unreasonably high in such matters as teaching load, advisement, writing, and committee assignments. |
| 4. Our Administrators find it difficult to share decision making powers with faculty members. | 9. Administrators, by virtue of their position, should not speak in behalf of the interests and/or concerns of the faculty. |
| 5. Our Administrators should not find it difficult to share decision-making powers with faculty members. | |
| 6. The Board of Trustees favors the Administration over the faculty in terms of decisions relating to the allocation of economic resources. | |
-

SECTION II

- | | |
|---|---|
| 10. The College should actively seek to increase on a large scale the admission of minority peoples as both students and faculty members. | 11. The state legislature should be very supportive of our college. |
|---|---|
-

TABLE 19. (Continued)

SECTION II (Continued)	
12. The size of the gap between faculty salaries and Administrative salaries should not be unreasonable.	20. In general, our College Administrators and faculty members should cooperate in solving our institutional problems.
13. Our faculty has substantive authority to make College policy.	21. Our institutional problems should be solved through interaction between faculty and Administration without undue pressure or defensiveness.
14. The Board of Trustees should be genuinely concerned about improving faculty conditions at the College.	
15. Staff members should have the right to disrupt our College community in behalf of their beliefs.	22. Our faculty should have major recommending responsibilities in institutional governance.
16. Our faculty should have substantive authority to make College policy.	23. The most important problems facing our institution can only be solved within a climate of mutual trust between Administrators and Faculty.
17. Our College policies should be made within an environment of Faculty-Administrators co-operation.	24. Faculty members increase the chances of solving institutional problems through participation in the Academic Senate or Council.
18. A College organization charged with the responsibility for negotiating a contract for the Faculty should exclude department chairman.	25. The real need is to make the Academic Senate/Council a viable agency where Faculty and Administrators can work together in meeting the needs of our students.
19. Our College Administrators should further their own interests more than they further the interests of faculty members.	
SECTION III	
26. Our College policies are made within an environment of Faculty-Administrators co-operation.	27. In our institution, faculty members should be involved in making decisions on things that really matter.

TABLE 19. (Continued)

SECTION III (Continued)	
28. Administrators should accept the concept of collective negotiations as a future reality at this institution.	35. If faculty organizations do not like teaching conditions the way they are, they should take active measures to change others to their way of thinking.
29. College faculty members, in order to fulfill the goals established by the institution, must establish some form of collective negotiations.	36. Faculty members who try to bring about changes through organized action are more professional than faculty members who never try to make changes.
30. Public demonstration by faculty members are necessary techniques for informing the Administration, Board of Trustees, and public of faculty demands.	37. In public employment the success of demands depends on relative bargaining power.
31. Under certain circumstances College faculty organizations should go out on strike.	38. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees to secure clerical assistance for faculty members.
32. Faculty members should be willing to walk in a picket line that has been organized by the local faculty organization.	39. College faculty organizations should negotiate with Administrators and/or Boards of Trustees to increase faculty salaries.
33. In the event of a strike, faculty members should be willing to walk in a picket line.	40. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the improvement of retirement benefits.
34. Faculty members should be willing to have their local organization notify accrediting agencies and national professional organizations of unsatisfactory conditions as a means of changing these conditions.	41. Local College faculty organizations should negotiate class size.

TABLE 19. (Continued)

SECTION III (Continued)	
42. Local College faculty organizations should negotiate with the Administrators and/or Boards of Trustees for fringe benefits.	48. Local College Faculty organizations should negotiate with the Administrators and/or Boards of Trustees personnel policies.
43. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal grievance procedures.	49. A College organization involved in negotiating a contract for the faculty should exclude deans.
44. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal Sabbatical policies.	50. A College organization provided with the power to negotiate for Faculty members should exclude from its membership the University president.
45. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal advisement load.	51. Unsatisfactory conditions within the institution will not work themselves out without the intervention of a local Faculty negotiating organization.
46. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of a formal Academic Calendar.	52. College Administrators should be permitted to be officers of local Faculty organizations.
47. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for official recognition of the negotiating team.	53. Faculty members should affiliate with a national teaching union to improve their condition of employment.
	54. Faculty members should affiliate with an independent organization to improve their conditions of employment.

TABLE 19. (Continued)

SECTION III (Continued)	
55. Local College faculty organizations should negotiate curriculum matters (items).	59. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for leaves of absence.
56. Local College faculty organizations should negotiate conditions appropriate for student learning.	60. Faculty members and Administrators can solve institutional problems best through an academic senate.
57. Local College faculty organizations should negotiate with Administrators and/or Board of Trustees for representation on policy-making committees.	61. Unionization creates an environment wherein cooperative problem solving is made very difficult.
58. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the recruitment of Faculty members.	62. Co-operation in solving individual and institutional problems is decreased when the Faculty is unionized.

SECTION IV

Respond to each statement as it applies to yourself.

63. Various assignments I have completed received recognition as being particularly good pieces of work.	66. I have felt secure in my position here at the College.
64. I feel that I have received training and experience in my present position that has been constructive in my professional growth.	67. I have had little feeling of achievement in the job I have been doing.
65. I have had exceptionally good working conditions and equipment.	68. The working relationships I have had with my co-workers has been very good.
	69. I have received few particularly challenging assignments at the college.

TABLE 19. (Continued)

SECTION IV (Continued)	
70. The Board of Trustees are genuinely concerned about improving faculty conditions at the college.	76. My present position requires the use of my best abilities.
71. In general, College Administrators should not avoid responsibility for their actions when difficulties arise and place them on faculty members.	77. I have felt that there is a good chance I will be promoted in my present position.
72. Our Administrators represent trained professionals who should accept faculty advice <u>but</u> maintain responsibility for policy formulation.	78. The personnel policies of College are known by the majority of my co-workers.
73. I feel that there are adequate opportunities for promotion within the College.	79. I understand the basis for my annual salary increases.
74. Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a College teaching-research career.	80. In general, College Administrators tend to avoid responsibility for their actions when difficulties arise and place them on faculty members.
75. Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a College Administrative career.	81. Our faculty should regard the Administrators as a facilitating agent for the faculty.

2. The present data on the P.I.C.Q. cannot yet be used for normative purposes. Application of the P.I.C.Q. to an independent and large sample of institutions of higher education is needed in establishing test norms.
3. There exists a need to determine the relationship between the P.I.C.Q. measures and external criteria of the institutions "state of faculty-administrator conflict."
4. There exists a need to develop, based upon an independent and large sample, institutional types relative to the potential for conflict.
5. Would an analysis of respondent demographic data reveal variant attitudes toward the potential for institutional conflict? It would be interesting to study the relationship of academic rank and attitudes toward institutional conflict within and across institutions.

These recommendations could be of considerable importance to the field of organizational theory and educational administration. Each recommendation offers promise for a significant project.

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APPENDICES

APPENDIX A
P.I.C.Q., FORM I
COPY OF ACCOMPANYING LETTER

January 5, 1969

Dear Fellow Educator:

The relationships between university faculty members and administrators in Michigan and throughout the United States has been a topic of intense concern in the second half of the past decade. Unfortunately there is a general lack of information about faculty and administrator attitudes toward the resolution of institutional problems. The enclosed questionnaire is part of a study dedicated to a better understanding of these relationships from both the faculty members' and administrators' points of view.

Although the questionnaires are coded in order to maintain accurate records of return, all mailing lists will be destroyed at the conclusion of the study and in no case will information be available or published by individual or university.

The information will be used in completing my Ph.D. dissertation which will be published and available through Michigan State University or University Microfilm in Ann Arbor.

Because a sampling process has been used, a small number of questionnaires have been issued. In order to complete a valid study a high percentage of return is necessary. The time needed to complete the questionnaire is approximately fifteen minutes.

We earnestly hope that you will be able to assist us. Thank you for your time and consideration.

/S/

David Harris
Graduate Fellow
Michigan State University

/S/

Dr. David Smith
Department of Administration
and Higher Education
Michigan State University

TO THE RESPONDENT:

This is a questionnaire for institutional decision-making processes. In it you will be asked for your perceptions about what your institution is like - administrative policies, faculty practices, how decisions are made, how decisions should be made, characteristic attitudes of groups of people, etc. This questionnaire is not a test; the only correct answers are those which reflect your own perceptions, judgments, and opinions.

Confidentiality of responses can be maintained by not writing your name on the answer sheet.

DIRECTIONS:

1. PENCILS. Use any soft lead pencil, No. 2 (preferably a machine scoring pencil). Do not use an ink or ball-point pen.
2. MARK ONLY ON THE SEPARATE ANSWER SHEET. Please make no marks in the questionnaire booklet, which may be reused.
3. MARKING YOUR RESPONSES. Section I consists of statements about groups of people, policies and programs at your institution. Different individuals at your university will have different opinions or attitudes toward these statements as they apply now and as they should apply in the future at your institution.

For Part A of each question, please indicate your opinion by marking square 1 for Strongly Agree, square 2 for Agree, square 3 for Disagree, and square 4 for Strongly Disagree with the statement as it applies now to your

institution. Part B of each question should be answered in the same manner, but as the statements should apply to your institution in the future.

4. IDENTIFYING QUESTIONS. Please answer the questions printed on the background sheet that apply to you, blackening the appropriate box for each question.
5. RESPOND TO EVERY QUESTION. Please attempt to answer each statement in the questionnaire.

NOTE

Questions 1-42, Part A, correlate with questions 1-42 in Table 3.

Questions 1-42, Part B, correlate with questions 43-84 in Table 3.

Questions 45-107, Section II and III, correlate with questions 85-151 in Table 3.

SECTION I Environmental Constraints

Respond to each statement by mark sensing
for Part A either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to Part A of each question as it now applies to
your institution. Respond to Part B of each question as it
should apply to your institution.

- | | |
|---|--|
| 1. Use of group action by University faculty organization is necessary in order to present a united front to the University Administration and Board of Trustees. | 7. Our students have the resources to close down the University. |
| 2. The Board of Trustees are genuinely concerned about improving faculty conditions at the University. | 8. Our University emphasizes its role as a research-oriented institution. |
| 3. Our Administrators represent trained professionals who should accept faculty advice <u>but</u> maintain responsibility for policy-formulation. | 9. Our University is involved in active social reform. |
| 4. Because of area specializations our faculty are unaware of the many and diverse problems confronting our University Administrators. | 10. Our student radicals have an open voice on the University campus. |
| 5. Faculty involvement on policy-making committees tends to slow down the decision making processes. | 11. The University actively seeks to increase on a large scale the admission of minority peoples as both students and faculty members. |
| 6. Faculty involvement in decision-making tends to make it difficult for administrators to cope with campus emergencies. | 12. The state legislature is very supportive of our University. |
| | 13. Our University is allocating its funds in an appropriate manner. |
| | 14. Student radicals have the right to disrupt our University community in behalf of their beliefs. |

Respond to each statement by mark sensing

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to Part A of each question as it now applies to your institution. Respond to Part B of each question as it should apply to your institution.

- | | |
|---|--|
| 15. Staff members have the right to disrupt our University community in behalf of their beliefs. | 23. It is not possible for one faculty member, as an individual, to solve problems of working conditions which affect an entire faculty. |
| 16. Our students can recommend the elimination of or creation of learning experiences that lack relevancy to them | 24. To the extent that our faculty members achieve a position of greater power within the institution, the Administration will experience a decrease in power. |
| 17. People in our society desire higher pay and reduced job requirements. | 25. Our University is too centralized in terms of authority. |
| 18. Our faculty members desire to emphasize teaching and/or research and leave to the Administration the management of the University. | 26. Administrators, by virtue of their position, are unable to speak in behalf of the interests and/or concerns of the faculty. |
| 19. Our faculty members desire responsibility in many institutional programs, but dislike being held accountable for their responsibilities | 27. Our faculty regards the Administrators as a facilitating agent for the faculty. |
| 20. In our institution, faculty members are not involved in making decisions on things that really matter. | 28. Our Administrators find it difficult to share decision-making powers with faculty members. |
| 21. Our University Administrators play the same roles as do management in industry. | 29. The Board of Trustees favors the Administration over the faculty in terms of decisions relating to the allocation of economic resources. |
| 22. Our faculty members are skilled specialists within the University complex. | |

Respond to each statement by mark sensing

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to Part A of each question as it now applies to your institution. Respond to Part B of each question as it should apply to your institution.

- | | |
|---|---|
| 30. A major concern of our Administration is the control of the University complex. | 38. Our staff members are involved in all policy making committees of our University. |
| 31. In general, University Administrators tend to avoid responsibility for their actions when difficulties arise and place them on faculty members. | 39. Our Faculty members are, in general, treated equally by University Administrators. |
| 32. Our University Administrators further their own interests more than they further the interests of faculty members. | 40. The expectations held for Faculty members are unreasonably high in such matters as teaching load, advisement, writing, and committee assignments. |
| 33. In general, our University Administrators and faculty members co-operate in solving our institutional problems. | 41. The major problem facing our University is in making learning relevant to our students. |
| 34. Our institutional problems are solved through interaction between faculty and Administration without undue pressure or defensiveness. | 42. The extent to which Faculty salaries increase, to that extent Faculty work loads increase. |
| 35. Our faculty has major recommending responsibilities in institutional governance. | 43. Administrators accept the concept of collective negotiations as a future reality at this institution. |
| 36. Our faculty has substantive authority to make University policy. | 44. The size of the gap between Faculty salaries and Administrative salaries is unreasonable. |
| 37. Our University policies are made within an environment of Faculty-administrator co-operation. | |

SECTION II

Respond to statements on this page
by mark sensing either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to each question as an acceptable condition or practice at your institution.

- | | |
|---|--|
| <p>45. University Faculty members, in order to fulfill the goals established by the institution, must establish some form of collective negotiations.</p> | <p>51. If Faculty organizations do <u>not</u> like teaching conditions the way they are, they should take active measures to change others to their way of thinking.</p> |
| <p>46. Public demonstrations by Faculty members are necessary techniques for informing the Administration, Board of Trustees, and public of Faculty demands.</p> | <p>52. Faculty members who take part in organized attempts to pressure the Administration into making changes should <u>not</u> be restricted in any way.</p> |
| <p>47. Under certain circumstances University Faculty organizations should go out on strike.</p> | <p>53. Faculty members who try to bring about changes through organized action are more professional than Faculty members who never try to make changes.</p> |
| <p>48. Faculty members should be willing to walk in a picket line that has been organized by the local Faculty organization.</p> | <p>54. In public employment the success of demands depends on relative bargaining power.</p> |
| <p>49. In the event of a strike, Faculty members should be willing to walk in a picket line.</p> | <p>55. Faculty members should bargain about anything they desire to bargain about.</p> |
| <p>50. Faculty members should be willing to have their local organization notify accrediting agencies and national professional organizations of unsatisfactory conditions as a means of changing these conditions.</p> | <p>56. Faculty members may bargain about only the things specifically stated in the law.</p> |
| | <p>57. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees to secure clerical assistance for Faculty members.</p> |

Respond to statements on this page
by mark sensing either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

- | | |
|--|---|
| <p>58. University Faculty organizations should negotiate with Administrators and/or Boards of Trustees to increase Faculty salaries.</p> | <p>65. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of a formal Academic Calendar.</p> |
| <p>59. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for the improvement of retirement benefits.</p> | <p>66. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for official recognition of the negotiating team.</p> |
| <p>60. Local University Faculty organizations should negotiate class size.</p> | <p>67. Local University Faculty organizations should negotiate with the Administrators and/or Boards of Trustees personnel policies.</p> |
| <p>61. Local University Faculty organizations should negotiate with the Administrators and/or Boards of Trustees fringe benefits.</p> | <p>68. A University organization charged with the responsibility for negotiating a contract for the Faculty should exclude department chairmen.</p> |
| <p>62. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal grievance procedures.</p> | <p>69. A University organization involved in negotiating a contract for the faculty should exclude deans.</p> |
| <p>63. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal Sabbatical policies.</p> | <p>70. A University organization provided with the power to negotiate for Faculty members should exclude from its membership the University president.</p> |
| <p>64. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal advisement load.</p> | |

Respond to statements on this page
by mark sensing either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

- | | |
|--|--|
| <p>71. Unsatisfactory conditions within the institution will not work themselves out without the intervention of a local Faculty negotiating organization.</p> | <p>79. Local University Faculty organizations should negotiate with Administrators and/or Boards for leaves of absence.</p> |
| <p>72. University Administrators should be permitted to be officers of local Faculty organizations.</p> | <p>80. Faculty members and Administrators can solve institutional problems best through an academic senate.</p> |
| <p>73. Faculty members should affiliate with a national teaching union to improve their condition of employment.</p> | <p>81. Unionization creates an environment wherein co-operative solving is made very difficult.</p> |
| <p>74. Faculty members should affiliate with an independent organization to improve their conditions of employment.</p> | <p>82. The most important problems facing our institution can only be solved within a climate of mutual trust between Administrators and Faculty.</p> |
| <p>75. Local University Faculty organizations should negotiate curriculum matters (items).</p> | <p>83. Faculty members increase the chances of solving institutional problems through participation in the Academic Senate or Council.</p> |
| <p>76. Local University Faculty organizations should negotiate conditions appropriate for student learning.</p> | <p>84. The real need is to make the Academic Senate/Council a viable agency where Faculty and Administrators can work together in meeting the needs of our students.</p> |
| <p>77. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for representation on policy making committees.</p> | <p>85. Co-operation in solving individual and institutional problems is decreased when the Faculty is unionized.</p> |
| <p>78. Local University Faculty organizations should negotiate with Administrators and/or Boards of Trustees for the recruitment of Faculty members.</p> | |

Respond to statements on this page
by mark sensing either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

86. Collective negotiations
by Faculty organizations
destroy the traditional
role of tenure.

87. Faculty members should
affiliate with the
American Association of
University Professors
to improve their condi-
tions of employment.

SECTION III

Respond to statements on this page
by mark sensing either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to each question as it applies to yourself.

- | | |
|---|---|
| <p>88. Various assignments I have completed received recognition as being particularly good pieces of work.</p> | <p>96. I feel that there are adequate opportunities for promotions within the University.</p> |
| <p>89. I feel that I have received training and experience in my present position that has been constructive in my professional growth.</p> | <p>97. I have received adequate remuneration for the work I have been doing at the University.</p> |
| <p>90. I have had exceptionally good working conditions and equipment.</p> | <p>98. Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a University teaching/research career.</p> |
| <p>91. I have felt secure in my position here at the university.</p> | <p>99. Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a University Administrative career.</p> |
| <p>92. I have had little feeling of achievement in the job I have been doing.</p> | <p>100. My present position requires the use of my best abilities.</p> |
| <p>93. I have not been given adequate assistance from my department head in meeting my assigned responsibilities.</p> | <p>101. The relationship I have had with my students has been very good.</p> |
| <p>94. The working relationships I have had with my co-workers have been very good.</p> | <p>102. I would enjoy spending the rest of my career doing what I am doing now.</p> |
| <p>95. I have received few particularly challenging assignments at the University.</p> | <p>103. There is nothing seriously wrong with working conditions in my present position the way that they are.</p> |
| | <p>104. I have felt that there is a good chance I'll be promoted in my present position.</p> |

Respond to statements on this page
by mark sensing either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

105. The personnel policies of
the University are known
by the majority of my
co-workers.

106. I understand the basis
for my annual salary in-
creases.

107. I find it difficult to
communicate with today's
students because of a
"generation gap."

SECTION IV

BACKGROUND DATA

This section contains questions about the background of the respondents in this study. The results are to be used in a statistical form.

Please mark sense the bubble that approximates your status in each question.

108. In which one of the following categories do you fall?

- | | |
|-------------------|-----------------|
| 1. Married Female | 3. Married Male |
| 2. Single Female | 4. Single Male |

109. In which of the following age categories do you fall?

- | | |
|----------|----------|
| 1. 20-30 | 4. 51-60 |
| 2. 31-40 | 5. 61-70 |
| 3. 41-50 | |

110. How many dependents do you claim for income tax purposes?

- | | |
|--------|--------------|
| 1. 0-1 | 3. 4-5 |
| 2. 2-3 | 4. 6 or more |

111. Political party registration:

- | | |
|----------------|----------|
| 1. Democrat | 4. Other |
| 2. Republican | 5. None |
| 3. Independent | |

112. Religious affiliation:

- | | |
|---------------|----------|
| 1. Catholic | 4. Other |
| 2. Protestant | 5. None |
| 3. Jewish | |

113. Salary this year:

- | | |
|------------------------|------------------------|
| 1. Less than \$7,999 | 4. \$13,000 - \$14,999 |
| 2. \$8,000 - \$9,999 | 5. \$15,000 and over |
| 3. \$10,000 - \$12,999 | |

114. Is your present position your only source of income?

- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

115. What is the highest degree that you hold?

- | | |
|--------------|--------------|
| 1. Bachelors | 3. Doctorate |
| 2. Masters | |

BACKGROUND DATA

This section contains questions about the background of the respondents in this study. The results are to be used in a statistical form.

Please mark sense the bubble that approximates your status in each question.

116. How many years of experience do you have at this University?

- | | |
|--------|---------------|
| 1. 0-1 | 4. 7-10 |
| 2. 2-3 | 5. 11 or more |
| 3. 4-6 | |

117. Occupation of parents:

- | | |
|--------------------|--------------------------|
| 1. Farmer | 4. White collar or sales |
| 2. Unskilled labor | 5. Business management |
| 3. Skilled labor | 6. Professional |

118. Was either (or both) parent or guardian a member of a labor union?

- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

119. Your present academic rank:

- | | |
|--------------------|------------------------|
| 1. Instructor | 3. Associate Professor |
| 2. Assistant Prof. | 4. Full Professor |

APPENDIX B
P.I.C.Q., FORM II
COPY OF ACCOMPANYING LETTER

January 5, 1969

Dear Fellow Educator:

The relationships between university faculty members and administrators in Michigan and throughout the United States has been a topic of intense concern in the second half of the past decade. Unfortunately there is a general lack of information about faculty and administrator attitudes toward the resolution of institutional problems. The enclosed questionnaire is part of a study dedicated to a better understanding of these relationships from both the faculty members' and administrators' points of view.

Although the questionnaires are coded in order to maintain accurate records of return, all mailing lists will be destroyed at the conclusion of the study and in no case will information be available or published by individual or university.

The information will be used in completing my Ph.D. dissertation which will be published and available through Michigan State University or University Microfilm in Ann Arbor.

Because a sampling process has been used, a small number of questionnaires have been issued. In order to complete a valid study a high percentage of return is necessary. The time needed to complete the questionnaire is approximately fifteen minutes.

We earnestly hope that you will be able to assist us. Thank you for your time and consideration.

/S/

David Harris
Graduate Fellow
Michigan State University

/S/

Dr. David Smith
Department of Administration
and Higher Education
Michigan State University

TO THE RESPONDENT:

This is a questionnaire for institutional decision-making processes. In it you will be asked for your perceptions about what your institution is like - administrative policies, faculty practices, how decisions are made, how decisions should be made, characteristic attitudes of groups of people, et. al. This questionnaire is not a test; the only correct answers are those which reflect your own perceptions, judgements, and opinions.

Confidentiality of responses can be maintained by not writing your name on the answer sheet.

DIRECTIONS:

1. PENCILS. Use any soft lead pencil, No. 2 (preferably a machine scoring pencil). Do not use an ink or ball-point pen.
2. MARK ONLY ON THE SEPARATE ANSWER SHEET. Please make no marks in the questionnaire booklet, which may be reused.
3. MARKING YOUR RESPONSES. Section I consists of statements about groups of people, policies and programs at your institution. Different individuals at your university will have different opinions or attitudes toward these statements as they apply now and as they should apply in the future at your institution.

For Part A of each question please indicate your opinion by mark sensing square 1 for Strongly Agree, square 2 for Agree, square 3 for Disagree, and square 4 for Strongly Disagree with the statement as it applies to your institution.

4. IDENTIFYING QUESTIONS. Please answer the questions printed on the background sheet that apply to you, blackening the appropriate answer box for each question.
5. RESPOND TO EVERY QUESTION. Please attempt to answer each statement in the questionnaire.

SECTION I

Respond to each statement by marking for
Part A either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to Part A of each question as it now applies to your
institution.

- | | |
|--|---|
| <p>1. The Board of Trustees are genuinely concerned about improving faculty conditions at the College.</p> | <p>8. Our institutional problems are solved through interaction between faculty and administration without undue pressure or defensiveness.</p> |
| <p>2. Our Administrators represent trained professionals who should accept faculty advice <u>but</u> maintain responsibility for policy formulation.</p> | <p>9. Our faculty has major recommending responsibilities in institutional governance.</p> |
| <p>3. Our College is too centralized in terms of authority.</p> | <p>10. Our faculty has substantive authority to make College policy.</p> |
| <p>4. Administrators, by virtue of their position, are unable to speak in behalf of the interests and/or concerns of the faculty.</p> | <p>11. Our College policies are made within an environment of Faculty-Administrators co-operation.</p> |
| <p>5. Our Administrators find it difficult to share decision-making powers with faculty members.</p> | <p>12. The expectations held for faculty members is unreasonably high in such matters as teaching load, advisement, writing, and committee assignments.</p> |
| <p>6. The Board of Trustees favors the Administration over the faculty in terms of decisions relating to the allocation of economic resources.</p> | |
| <p>7. In general, college administrators tend to avoid responsibility for their actions when difficulties arise and place them on faculty members.</p> | |

SECTION II

Respond to each statement by marking for
Part A either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to Part B of each question as it should apply to your
institution.

- | | |
|---|--|
| 13. The Board of Trustees are genuinely concerned about improving faculty conditions at the College. | 21. In our institution, faculty members are not involved in making decisions on things that really matter. |
| 14. Our Administrators represent trained professionals who should accept faculty advice but maintain responsibility for policy formulation. | 22. Our College is too centralized in terms of authority. |
| 15. Because of area specializations our faculty are unaware of the many and diverse problems confronting our College Administrators. | 23. Administrators, by virtue of their position, are unable to speak in behalf of the interests and/or concerns of the faculty. |
| 16. The College actively seeks to increase on a large scale the admission of minority peoples as both students and faculty members. | 24. Our faculty regards the Administrators as a facilitating agent for the faculty. |
| 17. The state legislature is very supportive of our College. | 25. Our Administrators find it difficult to share decision-making powers with faculty members. |
| 18. Our College is allocating its fund in an appropriate manner. | 26. The Board of Trustees favors the Administration over the faculty in terms of decisions relating to the allocation of economic resources. |
| 19. Staff members have the right to disrupt our College community in behalf of their beliefs. | 27. A major concern of our Administration is the control of the College complex. |
| 20. Our faculty members desire to emphasize teaching and/or research and leave to the Administration the management of the College. | 28. In general, College Administrators tend to avoid responsibility for their actions when difficulties arise and place them on faculty members. |

SECTION II (Continued)

Respond to each statement by marking for
Part A either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to Part B of each question as it should apply to your
institution.

29. Our College Administrators further their own interests more than they further the interests of faculty members.
30. In general, our College Administrators and faculty members co-operate in solving our institutional problems.
31. Our institutional problems are solved through interaction between faculty and Administration without undue pressure or defensiveness.
32. Our faculty has major recommending responsibilities in institutional governance.
33. Our faculty has substantive authority to make College policy.
34. Our College policies are made within an environment of Faculty-Administrators co-operation.
35. Administrators accept the concept of collective negotiations as a future reality at this institution.
36. The size of the gap between faculty salaries and Administrative salaries is unreasonable.

SECTION III

Respond to each statement by marking either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to each question as an acceptable condition or practice at your institution.

- | | |
|---|---|
| <p>37. College faculty members, in order to fulfill the goals established by the institution, must establish some form of collective negotiations.</p> | <p>43. If faculty organizations do not like teaching conditions the way they are, they should take active measures to change others to their way of thinking.</p> |
| <p>38. Public demonstration by faculty members are necessary techniques for informing the Administration, Board of Trustees, and public of faculty demands.</p> | <p>44. Faculty members who take part in organized attempts to pressure the Administration into making changes should <u>not</u> be restricted in any way.</p> |
| <p>39. Under certain circumstances College faculty organizations should go out on strike.</p> | <p>45. Faculty members who try to bring about changes through organized action are more professional than faculty members who never try to make changes.</p> |
| <p>40. Faculty members should be willing to walk in a picket line that has been organized by the local faculty organization.</p> | <p>46. In public employment the success of demands depends on relative bargaining power.</p> |
| <p>41. In the event of a strike, faculty members should be willing to walk in a picket line.</p> | <p>47. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees to secure clerical assistance for faculty members.</p> |
| <p>42. Faculty members should be willing to have their local organization notify accrediting agencies and national professional organizations of unsatisfactory conditions as a means of changing these conditions.</p> | <p>48. College faculty organizations should negotiate with Administrators and/or Boards of Trustees to increase faculty salaries.</p> |

SECTION III (Continued)

Respond to each statement by marking either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

- | | |
|---|---|
| <p>49. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the improvement of retirement benefits.</p> | <p>56. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for official recognition of the negotiating team.</p> |
| <p>50. Local College faculty organizations should negotiate class size.</p> | <p>57. Local College faculty organizations should negotiate with the Administrators and/or Boards of Trustees personnel policies.</p> |
| <p>51. Local College faculty organizations should negotiate with the Administrators and/or Boards of Trustees for fringe benefits.</p> | <p>58. A College organization charged with the responsibility for negotiating a contract for the Faculty should exclude department chairmen.</p> |
| <p>52. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal grievance procedures.</p> | <p>59. A College organization involved in negotiating a contract for the faculty should exclude deans.</p> |
| <p>53. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal Sabbatical policies.</p> | <p>60. A College organization provided with the power to negotiate for Faculty members should exclude from its membership the University president.</p> |
| <p>54. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of formal advisement load.</p> | <p>61. Unsatisfactory conditions within the institution will not work themselves out without the intervention of a local Faculty negotiating organization.</p> |
| <p>55. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the establishment of a formal Academic Calendar.</p> | <p>62. College Administrators should be permitted to be officers of local Faculty organizations.</p> |

SECTION III (Continued)

Respond to each statement by marking either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

- | | |
|--|---|
| 63. Faculty members should affiliate with a national teaching union to improve their condition of employment. | 70. Faculty members and Administrators can solve institutional problems best through an academic senate. |
| 64. Faculty members should affiliate with an independent organization to improve their conditions of employment. | 71. Unionization creates an environment wherein cooperative problem solving is made very difficult. |
| 65. Local College faculty organizations should negotiate curriculum matters (items). | 72. The most important problem facing our institution can only be solved within a climate of mutual trust between Administrators and Faculty. |
| 66. Local College faculty organizations should negotiate conditions appropriate for student learning. | 73. Faculty members increase the chances of solving institutional problems through participation in the Academic Senate or Council. |
| 67. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for representation on policy-making committees. | 74. The real need is to make the Academic Senate/Council a viable agency where Faculty and Administrators can work together in meeting the needs of our students. |
| 68. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for the recruitment of Faculty members. | 75. Co-operation in solving individual and institutional problems is decreased when the Faculty is unionized. |
| 69. Local College faculty organizations should negotiate with Administrators and/or Boards of Trustees for leaves of absence. | |

SECTION IV

Respond to each statement by marking either

1 STRONGLY AGREE 2 AGREE 3 DISAGREE 4 STRONGLY DISAGREE

Respond to each question as it applies to yourself.

- | | |
|--|---|
| 76. Various assignments I have completed received recognition as being particularly good pieces of work. | 85. Under prevailing circumstances I could <u>not</u> encourage anyone to undertake a College teaching-research career. |
| 77. I feel that I have received training and experience in my present position that has been constructive in my professional growth. | 86. Under prevailing circumstances I would <u>not</u> encourage anyone to undertake a College Administrative career. |
| 78. I have had exceptionally good working conditions and equipment. | 87. My present position requires the use of my best abilities. |
| 79. I have felt secure in my position here at the College. | 88. I have felt that there is a good chance I will be promoted in my present position. |
| 80. I have had little feeling of achievement in the job I have been doing. | 89. The personnel policies of the College are known by the majority of my co-workers. |
| 81. The working relationships I have had with my co-workers has been very good. | 90. I understand the basis for my annual salary increases. |
| 82. I have received few particularly challenging assignments at the college. | |
| 83. I feel that there are adequate opportunities for promotions within the College. | |
| 84. I have received adequate remuneration for the work I have been doing at the University. | |

SECTION V

BACKGROUND DATA

This section contains questions about the background of the respondents in this study. The results are to be used in a statistical form

Please mark sense the bubble that approximates your status in each question.

91. In which one of the following categories do you fall?

- | | |
|-------------------|-----------------|
| 1. Married Female | 3. Married Male |
| 2. Single Female | 4. Single Male |

92. In which of the following age categories do you fall?

- | | |
|----------|----------|
| 1. 20-30 | 4. 51-60 |
| 2. 31-40 | 5. 61-70 |
| 3. 41-50 | |

93. How many dependents do you claim for income tax purposes?

- | | |
|--------|--------------|
| 1. 0-1 | 3. 4-5 |
| 2. 2-3 | 4. 6 or more |

94. Political party registration:

- | | |
|----------------|----------|
| 1. Democrat | 4. Other |
| 2. Republican | 5. None |
| 3. Independent | |

95. Religious affiliation:

- | | |
|---------------|----------|
| 1. Catholic | 4. Other |
| 2. Protestant | 5. None |
| 3. Jewish | |

96. Salary this year:

- | | |
|-------------------------|-------------------------|
| 1. Less than \$7,999 | 4. \$13,000 to \$14,999 |
| 2. \$8,000 to \$9,999 | 5. \$15,000 and over |
| 3. \$10,000 to \$12,999 | |

97. Is your present position your only source of income?

- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

SECTION V (Continued)

98. What is the highest degree that you hold?

- | | |
|--------------|--------------|
| 1. Bachelors | 3. Doctorate |
| 2. Masters | |

99. How many years of experience do you have at this University?

- | | |
|--------|---------------|
| 1. 0-1 | 4. 7-10 |
| 2. 2-3 | 5. 11 or more |
| 3. 4-6 | |

100. Occupation of parents:

- | | |
|--------------------|--------------------------|
| 1. Farmer | 4. White collar or sales |
| 2. Unskilled labor | 5. Business management |
| 3. Skilled labor | 6. Professional |

101. Was either (or both) parent or guardian a member of a labor union?

- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

102. Your present academic rank:

- | | |
|------------------------|------------------------|
| 1. Instructor | 3. Associate professor |
| 2. Assistant Professor | 4. Full professor |

APPENDIX C Inter-Correlation Matrix

INTER-CORRELATION MATRIX

	1	2	3	4	5	6	7	8	9	10
1	1.0000									
2	0.1591	1.0000								
3	-0.1153	0.3127	1.0000							
4	-0.1312	-0.0997	0.1867	1.0000						
5	-0.1172	-0.2950	0.4150	0.1804	1.0000					
6	-0.0715	-0.1037	0.2034	0.2287	0.3344	1.0000				
7	-0.0345	-0.3507	0.0838	0.1943	0.3240	0.1992	1.0000			
8	0.2194	0.2177	-0.2044	-0.3937	-0.1607	-0.1434	0.3127	1.0000		
9	0.0714	0.3515	-0.1135	-0.1174	-0.1334	-0.1225	0.0154	0.2911	1.0000	
10	0.1733	0.3138	-0.1073	-0.0627	-0.0522	-0.0514	-0.1769	0.0761	0.1953	1.0000
11	0.1423	-0.3394	0.0579	0.0800	-0.1138	-0.0481	0.0389	0.0404	-0.0517	-0.0735
12	-0.3337	-0.3642	-0.1479	0.3332	0.1105	-0.3047	0.5244	0.2284	0.0185	-0.1420
13	-0.0142	0.1101	-0.1104	-0.1112	0.1101	0.1041	-0.1421	-0.1153	0.0424	0.1388
14	-0.1777	0.1103	-0.1103	0.1103	-0.1073	-0.0977	-0.0473	-0.3311	0.0394	0.1496
15	0.1141	-0.3303	-0.1438	-0.3014	0.0233	-0.0830	0.1171	0.1480	0.1596	-0.0225
16	0.1334	0.1184	0.3043	0.1080	0.0210	-0.0414	-0.1238	-0.0274	-0.0837	0.1754
17	-0.1354	0.2648	0.1274	0.2457	-0.0724	0.1750	-0.1537	-0.1479	0.1937	0.1509
18	0.1351	-0.1400	-0.3757	-0.3030	0.0195	-0.0423	-0.0525	0.0358	0.0453	-0.0131
19	0.2255	0.1230	-0.0293	-0.1172	-0.0594	-0.1075	-0.1162	0.1042	0.2084	0.2220
20	0.1141	0.3290	-0.0012	-0.3104	0.0106	0.3073	0.1304	0.1137	0.1580	0.1401
21	-0.1271	-0.2746	0.2219	0.2948	0.4501	0.2874	0.5191	-0.0907	-0.1002	-0.0850
22	0.1424	0.1174	-0.2075	-0.1791	-0.3163	-0.2138	-0.1198	0.2402	0.0827	0.0482
23	0.3492	-0.1055	-0.3840	-0.1279	-0.3612	-0.2894	-0.1192	0.2271	0.1901	0.1141
24	0.1593	0.2778	-0.1848	-0.1344	-0.3421	-0.1452	-0.4255	-0.0407	-0.0144	0.1128
25	0.1433	0.3658	-0.1749	-0.1654	-0.2475	-0.1453	-0.3345	0.1122	0.0750	0.0754
26	-0.3202	0.0506	-0.3137	0.1531	-0.0192	0.0031	-0.3377	0.0415	-0.0444	-0.0411
27	0.1120	0.1134	-0.0101	0.0474	-0.3353	-0.0314	-0.3023	0.0739	-0.0351	-0.0050
28	-0.1091	-0.1451	0.3506	0.2387	0.2099	0.1171	0.3332	0.0461	-0.0431	-0.2014

29	-0.0014	1.0033	-0.0071	-0.0106	-0.0087	-0.0019	0.1110	0.1560	0.1494	0.2001
30	1.1127	-0.1060	0.0101	0.1216	0.1204	0.0030	-0.1226	-0.0694	-0.1567	-0.1901
31	-0.0234	-0.0339	0.0030	0.1066	0.1148	0.0033	-0.0027	-0.0189	-0.1154	-0.1262
32	-0.0097	-0.0051	0.1051	0.0457	0.1570	0.1131	0.0090	-0.0652	-0.1016	-0.1259
33	0.0524	-0.1019	0.0032	0.0012	0.1753	0.1144	0.1538	-0.1125	-0.1071	-0.2796
34	1.1450	-0.1171	0.0040	-0.0742	0.0460	-0.0015	-0.0076	0.0318	-0.0150	-0.0762
35	1.0224	-0.1350	0.0013	0.2207	0.0561	0.1500	0.1450	-0.0238	-0.2087	-0.1963
36	-0.0077	0.0203	-0.0358	-0.0031	-0.1446	0.0024	0.0637	0.0084	0.1416	0.1683
37	-0.1628	-0.2673	1.1595	0.2240	0.2554	0.2030	0.0767	-0.0384	-0.1054	-0.1234
38	-0.1772	-0.2355	0.0405	0.1693	0.2300	0.2402	0.2984	-0.1613	-0.1010	-0.1517
39	-0.1733	-0.3330	0.0417	0.2749	0.2470	0.2091	0.3755	-0.1143	-0.0451	-0.1115
40	-0.0176	-0.2353	0.0727	0.2222	0.2313	0.1544	0.3402	-0.0563	-0.0067	-0.1475
41	-0.0563	-0.2524	0.0673	0.2157	0.2337	0.1441	0.3758	-0.1182	-0.0551	-0.1790
42	-0.0532	-0.1100	1.1554	0.2044	0.1916	0.2030	0.2127	0.0583	0.0028	-0.0856
43	-0.0071	-0.1100	0.2145	1.1745	0.1733	0.1704	1.2391	-0.0551	-0.2037	-0.0920
44	-0.1192	-0.1141	0.0564	0.2671	0.2035	0.1134	1.1325	-0.0323	-0.1588	-0.2049
45	-0.1112	-0.1460	0.0079	0.1107	0.1272	0.1420	0.1977	0.0062	-0.0003	-0.1051
46	-0.0021	-0.2234	0.0473	0.1524	0.2504	0.1532	0.2757	-0.0018	-0.0154	-0.1480
47	-0.0535	-0.1438	0.0056	0.1370	0.1987	0.1331	0.1913	-0.0130	-0.0090	-0.2616
48	-0.0475	-0.2727	0.0050	0.1441	0.1530	0.0090	0.2170	0.0693	-0.0244	-0.1603
49	0.1048	-0.1057	0.0517	0.1221	0.1245	0.0636	0.1555	0.0725	-0.0461	-0.1385
50	-0.0182	-0.2145	0.0014	0.1220	0.2240	0.1324	0.2025	-0.0107	-0.1396	-0.1542
51	0.0071	-0.1034	0.0410	0.1005	0.0020	0.0522	0.1640	0.0047	-0.0574	-0.1574
52	-0.0040	-0.1622	0.0075	0.1872	0.1751	0.0033	0.2764	0.0065	-0.1481	-0.2725
53	0.0142	-0.1033	0.0370	0.2152	0.1438	0.0025	0.2576	0.0057	-0.1028	-0.1923
54	-0.0133	-0.1371	0.1040	0.1461	0.2136	0.0017	0.2061	0.0152	-0.1062	-0.1786
55	-0.0291	-0.2272	0.0472	0.2238	0.1784	0.0059	0.2713	0.0339	-0.0068	-0.1393
56	-0.0548	-0.3241	0.0725	0.1957	0.2130	0.1097	0.1834	0.0416	-0.0403	-0.1786
57	-0.0364	-0.1048	0.0050	0.1801	0.2054	1.1201	0.2360	0.0124	-0.1276	-0.2763
58	-0.0032	-0.1169	-0.0517	-0.0025	0.0075	0.0022	0.1015	0.0030	0.1420	0.0019

59	-0.1479	-0.1462	0.0745	-0.0443	0.1244	0.1194	0.1115	0.0320	0.0093	-0.0097
60	-0.1454	-0.1465	0.0672	-0.0504	0.0954	0.1124	0.1142	0.0565	0.0044	-0.0710
61	-0.1424	-0.1401	0.1413	0.2271	0.1924	0.1513	0.1114	0.0113	0.0040	-0.1454
62	0.1021	0.1637	-0.1035	-0.1433	-0.1430	-0.1430	-0.2614	0.0484	-0.0092	0.0373
63	-0.1204	-0.1214	0.0214	0.2174	0.1070	0.0034	0.1464	-0.0107	-0.0164	-0.0021
64	-0.1442	-0.1447	0.0516	0.0930	0.0577	0.0012	0.1020	0.0364	-0.0402	-0.1324
65	-0.0744	-0.0661	0.0954	0.1024	0.2151	0.0043	0.1340	0.0464	-0.0037	-0.0060
66	-0.1022	-0.1240	0.0027	0.1043	0.2344	0.1454	0.1074	0.0500	-0.1231	-0.1444
67	-0.0024	-0.1060	0.1722	0.2142	0.2001	0.0083	0.2407	-0.0474	-0.0497	-0.2040
68	0.1054	-0.2254	0.0294	0.0753	0.2043	0.0017	0.2270	-0.0716	-0.1440	-0.1702
69	0.1402	-0.1485	0.1243	0.1705	0.2031	0.1051	0.2047	0.0194	-0.1432	-0.1774
70	0.1454	0.1434	-0.0344	-0.1262	-0.0905	-0.0024	-0.1352	0.1064	0.0454	0.0244
71	0.1144	0.2303	-0.0031	-0.1143	-0.1054	-0.0022	-0.2523	0.1631	0.0424	0.0433
72	0.1145	0.2510	-0.0130	-0.1064	-0.0542	-0.1073	-0.1164	0.2144	0.0043	0.0114
73	0.1773	0.1034	0.0131	-0.1274	0.1010	-0.0044	-0.2402	0.1463	-0.0040	0.1171
74	0.1414	0.1564	-0.1022	-0.1061	-0.0357	0.1003	-0.1214	0.1173	-0.0034	0.0453
75	0.1554	0.2392	-0.0047	-0.2073	-0.2101	-0.1434	-0.1050	0.0074	0.0107	0.1412
76	0.2484	0.2297	-0.0632	-0.1320	-0.0022	-0.1017	-0.2234	0.0290	-0.0044	0.0401
77	0.1594	0.1054	-0.0250	-0.1602	-0.0093	-0.1034	-0.1133	-0.1071	-0.1024	0.0093
78	0.2014	0.1234	-0.1110	-0.1531	-0.1453	-0.0421	-0.1030	0.0375	-0.0040	0.1520
79	0.1413	0.1015	0.0212	-0.1101	-0.1071	-0.1073	-0.2052	0.0771	-0.0097	0.0462
80	-0.1453	-0.1435	0.0444	0.1243	0.1552	0.1034	0.1473	-0.0005	-0.0041	0.0120
81	0.2221	0.1440	0.0107	-0.1604	-0.1240	-0.1414	-0.1130	0.0064	0.0207	0.0025
82	-0.1004	-0.1402	0.1025	0.1324	0.1422	0.1430	0.2011	-0.0434	-0.0143	0.0117
83	0.2031	0.1630	-0.0044	-0.1024	-0.1001	-0.1173	-0.2050	0.0194	0.1034	0.1443
84	0.1621	0.1440	0.0023	0.1030	0.0022	0.1034	-0.1093	0.0040	0.0212	0.1230
85	-0.1024	-0.1170	0.1150	0.1072	0.1121	0.1031	0.1172	0.0254	0.1254	-0.0124
86	-0.1774	-0.1267	0.1541	0.1173	0.2130	0.1030	0.2004	-0.0451	0.1074	-0.0064
87	0.1097	0.1050	0.0231	-0.1174	-0.1030	0.0034	-0.1167	0.0304	0.0712	0.0070
88	0.2161	0.1374	-0.1133	-0.2003	-0.1447	-0.1430	-0.1402	-0.0001	-0.0001	0.0250
89	0.2061	0.2704	-0.1540	-0.2494	-0.1054	-0.1030	-0.1010	0.1454	0.1407	0.2211

9) 0.2215 1.1167 -0.0377 -0.1004 -5.0439 -0.0437 -0.1311 0.0561 -0.0093 0.0935

	11	12	13	14	15	16	17	18	19	20
11	1.0000									
12	0.2617	1.0000								
13	-0.2357	-0.4186	1.0000							
14	-0.1932	-0.2838	0.3905	1.0000						
15	0.0412	0.1598	-0.0832	-0.0336	1.0000					
16	-0.1109	-0.3295	0.3658	0.1723	-0.0988	1.0000				
17	-0.0554	-0.3549	0.3913	0.2802	-0.0645	0.3447	1.0000			
18	0.0489	0.1639	-0.0416	-0.1628	-0.0613	0.0046	-0.0090	1.0000		
19	-0.1155	-0.1997	0.0249	-0.0264	-0.0599	0.1904	0.1279	-0.0577	1.0000	
20	-0.0503	-0.3201	0.1936	0.3210	0.0846	0.0747	0.0438	-0.1434	-0.0856	1.0000
21	0.0449	0.2039	-0.1056	-0.1324	0.1097	-0.1219	-0.0781	0.0084	-0.1354	0.1377
22	0.0454	0.1964	-0.1988	-0.0186	0.0019	-0.2074	-0.0816	0.0147	0.0578	0.0068
23	0.0087	0.2094	-0.0863	0.0451	0.0745	-0.0494	-0.1356	-0.0174	0.0209	-0.0217
24	-0.0921	-0.3535	0.1217	0.1212	-0.1603	0.1439	0.1998	-0.0430	0.0228	-0.0104
25	0.1793	0.1394	-0.0939	0.0063	0.1460	-0.1483	0.0123	0.0614	0.0484	0.0311
26	0.0764	0.1359	-0.0636	0.0787	-0.0941	0.0493	0.0362	-0.0263	-0.0878	-0.0302
27	0.0424	0.1394	-0.0051	0.0391	0.0331	-0.0007	-0.0933	-0.1371	0.0392	0.0378
28	0.0765	0.1406	-0.2868	-0.0621	0.2132	-0.1230	-0.1963	-0.0209	-0.1169	0.0442
29	-0.1273	-0.0913	0.1270	0.1123	0.1710	0.1233	0.1153	-0.2196	0.2217	0.1001
30	0.1911	0.1683	-0.1350	-0.1364	-0.1244	-0.1407	-0.0477	0.2783	-0.1930	-0.1587
31	0.1100	0.1214	-0.2267	-0.1358	-0.1241	-0.1532	-0.0835	0.1342	-0.2150	-0.0249
32	0.2403	0.2174	-0.1434	-0.1851	-0.0785	-0.0985	-0.0272	0.1873	-0.2437	-0.0257
33	0.2061	0.2405	-0.1531	-0.2132	-0.0222	-0.0421	-0.1171	0.1984	-0.2985	-0.0075
34	0.0972	0.1189	-0.1346	-0.1261	0.0221	-0.1274	-0.1127	0.2434	-0.1201	-0.0778
35	0.2770	0.1466	-0.1756	-0.1442	0.0614	-0.1024	-0.1177	-0.0009	-0.1463	-0.0334
36	-0.0249	-0.1386	0.1820	0.0747	0.0496	0.1523	0.1127	-0.2173	0.2563	0.0868
37	0.2164	0.2494	-0.1115	-0.1573	0.1202	-0.1173	-0.1178	0.0321	-0.2605	0.0749
38	0.1897	0.1618	-0.0451	-0.1794	0.0931	-0.0349	-0.1135	0.0065	-0.2410	0.0267

39	0.2459	0.2649	-0.0033	-0.1069	0.0035	-0.0481	-0.11249	0.0467	-0.1896	0.0071
40	0.3198	0.2528	-0.1690	-0.1136	0.0622	-0.0273	-0.1124	0.0459	-0.1704	0.0708
41	0.3059	0.2115	-0.1022	-0.0787	0.0379	-0.0503	-0.0765	0.0403	-0.1301	0.1003
42	0.2986	0.1781	-0.2211	-0.1923	0.0748	-0.1415	-0.1747	0.0228	-0.1895	0.0436
43	0.1937	0.0688	-0.2380	-0.1658	0.0102	-0.0695	-0.0808	0.0016	-0.1402	0.0403
44	0.1092	0.0412	-0.0780	0.0406	-0.0977	-0.0544	-0.0757	-0.0938	-0.2443	0.0738
45	0.2214	0.1736	-0.1285	-0.0726	0.0508	-0.0916	-0.1761	-0.0388	-0.1919	0.0006
46	0.1071	0.2847	-0.1635	-0.0834	0.1219	-0.2012	-0.1944	0.0468	-0.2467	0.0097
47	-0.1963	0.2822	-0.1967	-0.0784	0.1568	-0.0344	-0.0838	0.1603	-0.2517	0.0295
48	0.2740	0.2444	-0.1953	-0.1282	0.1109	-0.1135	-0.2010	0.0202	-0.1439	0.0049
49	0.2484	0.2071	-0.1488	-0.0873	0.1276	-0.0970	-0.1244	0.0931	-0.1147	0.0437
50	0.2488	0.2962	-0.2434	-0.0444	0.2012	-0.1440	-0.1454	0.0774	-0.2045	0.0638
51	0.2642	0.2208	-0.1471	-0.0841	0.1020	-0.0837	-0.1142	0.0949	-0.1284	0.0416
52	0.2369	0.2445	-0.2011	-0.1215	0.0845	-0.0910	-0.1384	0.0433	-0.2119	0.0404
53	0.2584	0.2074	-0.2677	-0.0864	0.1780	-0.1670	-0.1378	0.0788	-0.2404	0.1404
54	0.2240	0.2526	-0.2646	-0.0297	0.1707	-0.1071	-0.1597	0.0086	-0.2605	0.1178
55	0.2367	0.3428	-0.2980	-0.0326	0.1490	-0.1091	-0.1377	0.0989	-0.1591	0.0061
56	0.3387	0.3065	-0.1276	-0.0948	0.0905	-0.1797	-0.0940	0.0071	-0.1612	0.0211
57	0.2429	0.2621	-0.2793	-0.0427	0.2003	-0.1254	-0.1211	-0.0424	-0.2144	0.0005
58	0.1346	0.0781	0.0176	0.0781	-0.0477	-0.0594	-0.0170	-0.1805	0.1026	0.1120
59	0.1557	0.1892	-0.1140	-0.0455	0.0434	-0.1348	-0.0463	-0.1284	-0.0065	0.0659
60	0.1293	0.1796	-0.1385	-0.0779	0.0869	-0.1435	-0.0595	-0.0437	-0.2040	0.1177
61	0.2912	0.2673	-0.1392	-0.0969	0.2114	-0.0650	-0.1978	0.0449	-0.2139	0.0755
62	-0.1916	-0.2273	0.0216	0.0331	-0.0946	0.0704	0.0195	-0.0745	0.1074	-0.1779
63	0.1074	0.1039	-0.0440	-0.1157	0.0645	-0.0479	-0.0906	0.0138	-0.1774	0.1102
64	0.2511	0.1268	-0.0971	-0.0878	0.1007	-0.1577	-0.0793	-0.0582	-0.1079	-0.0904
65	0.2000	0.2574	-0.1947	-0.0674	0.0853	-0.0503	-0.1809	-0.0056	-0.1104	0.1082
66	0.1938	0.3237	-0.2381	-0.1477	0.0826	-0.0682	-0.2678	0.0321	-0.1998	0.0009
67	0.2342	0.2785	-0.1228	-0.0828	0.1420	0.0106	-0.1258	0.0197	-0.1813	0.0425
68	0.2373	0.2907	-0.2130	-0.1885	0.1743	-0.0211	-0.2385	0.0021	-0.1908	0.0019

69	0.3295	0.3367	-0.2508	-0.1504	0.1774	-0.1097	-0.0985	0.0545	-0.2165	0.0356
70	-0.0002	-0.0974	0.0332	0.1719	0.0353	-0.0112	0.0487	0.0010	0.1453	0.0077
71	-0.1395	-0.0947	0.0120	0.0845	-0.0648	0.0149	0.0772	-0.0207	0.0021	-0.1379
72	-0.1139	-0.0850	-0.0602	-0.0776	-0.1410	0.0136	-0.0780	0.1978	0.0070	-0.0505
73	-0.0201	-0.1187	-0.0144	-0.0201	-0.1692	-0.0192	-0.0036	0.0747	0.1003	-0.1158
74	-0.0959	-0.0876	0.1151	0.0330	-0.0515	0.0259	-0.0304	0.1065	0.0056	-0.0275
75	-0.1770	-0.1733	0.0650	0.1051	-0.1473	0.0014	0.0741	0.0617	0.1024	-0.1709
76	-0.0519	-0.1961	0.0161	-0.0736	-0.0566	0.0674	0.0013	0.0115	-0.0154	-0.0370
77	0.1875	0.0502	-0.2639	-0.1794	-0.0302	-0.1533	-0.0769	-0.0427	-0.0216	-0.0959
78	0.0050	-0.1090	-0.0306	-0.0253	-0.1029	0.1023	0.0393	0.0203	0.1195	-0.0673
79	0.0805	-0.1000	-0.0745	-0.0778	-0.1728	-0.0037	-0.1023	0.0208	0.0170	-0.1479
80	-0.0996	0.9807	0.0218	0.0409	0.1030	-0.0419	0.0302	0.0575	-0.0004	0.0902
81	0.0600	0.0067	-0.1249	0.0306	-0.0439	0.0631	0.0048	-0.0497	0.1415	-0.0555
82	-0.0202	0.1231	0.0052	-0.0435	0.1127	-0.1474	-0.0476	-0.1410	-0.0034	0.0770
83	-0.0547	-0.1517	-0.0027	-0.0310	-0.0508	0.1544	0.0282	-0.0548	0.2326	-0.1010
84	-0.1390	-0.1093	-0.0119	-0.0133	0.0412	0.1400	-0.0117	-0.0314	0.0994	-0.1277
85	-0.0725	0.0055	0.0726	0.0411	0.0157	-0.0037	0.0434	-0.2240	-0.0100	0.1136
86	-0.0805	0.0730	-0.0624	-0.0090	0.0966	-0.1024	-0.0716	-0.1406	-0.1243	0.0794
87	0.0147	-0.1130	-0.0150	0.0399	-0.0464	0.1202	0.0504	-0.0425	0.1990	0.0745
88	0.1969	0.0404	-0.1032	-0.1013	0.0499	0.0777	-0.0595	-0.0020	0.0283	-0.0341
89	-0.0034	-0.1347	0.0337	-0.0022	0.0591	0.0209	0.0693	-0.0496	0.1233	-0.0489
90	0.0517	0.0206	-0.1047	-0.0774	0.0262	0.0652	-0.0299	0.0047	0.0041	-0.0153

	21	22	23	24	25	26	27	28	29	30
21	1.0000									
22	-0.1589	1.0000								
23	-0.1477	0.5120	1.0000							
24	-0.4535	0.3117	0.3077	1.0000						
25	-0.0437	0.3334	0.3567	0.1430	1.0000					
26	-0.0494	0.0476	0.0101	-0.0110	0.0186	1.0000				
27	-0.0142	0.1520	0.1490	-0.0007	0.1144	0.0454	1.0000			
28	0.4841	-0.0980	-0.0281	-0.0741	-0.1477	0.1313	-0.0411	1.0000		
29	0.1354	-0.0938	0.0577	-0.1741	-0.0104	0.0431	-0.0375	0.1258	1.0000	
30	-0.0492	0.0852	-0.0133	0.1130	-0.0707	-0.0074	0.0504	-0.0413	-0.0501	1.0000
31	0.1165	0.1454	-0.0372	0.0623	-0.1204	0.0131	0.0677	-0.0182	-0.0395	0.6214
32	0.1731	0.2104	-0.0450	0.0614	0.0890	0.0143	0.0697	-0.0460	-0.0243	0.3422
33	0.2017	0.0117	0.1450	0.0505	0.0462	0.0737	-0.0763	0.1404	-0.0275	0.1002
34	-0.0724	0.2770	-0.0303	-0.0693	0.0488	-0.0512	0.1202	-0.0433	-0.0250	0.4055
35	0.2431	0.0020	-0.0260	-0.0540	-0.0317	0.0570	0.2037	0.1005	-0.0107	0.1717
36	-0.0726	0.0001	0.1457	-0.1564	0.0495	-0.0317	0.0788	0.0737	0.4530	-0.3540
37	0.4708	-0.1214	-0.1165	-0.3520	-0.1212	0.0097	0.0734	0.3535	0.0129	-0.0275
38	0.3130	-0.1939	-0.0964	-0.2882	-0.1495	-0.0131	-0.0661	0.2230	0.0037	-0.0042
39	0.3310	-0.1252	-0.0752	-0.2752	-0.0563	0.0074	0.0190	0.2704	0.0434	0.0678
40	0.2946	-0.1016	-0.0614	-0.2551	-0.0942	0.0250	0.0024	0.2677	-0.0494	0.0669
41	0.2723	-0.0991	-0.0875	-0.2502	-0.0863	-0.0277	0.0300	0.2224	-0.0485	0.0604
42	0.2459	-0.0635	-0.0086	-0.2507	-0.1121	0.1259	-0.0064	0.2504	0.0556	0.0603
43	0.2460	0.0167	-0.1421	-0.0798	-0.0343	0.0293	-0.0172	0.1486	-0.0094	0.2517
44	0.2312	-0.1514	0.0049	-0.0714	-0.0032	0.0524	-0.0080	0.1457	-0.0420	0.0647
45	0.2203	0.0079	0.0171	-0.1721	-0.0734	0.1394	0.0111	0.2305	-0.1009	0.1305
46	0.3796	-0.0697	-0.0259	-0.2470	-0.1593	0.0494	0.0472	0.3351	-0.0454	0.0828
47	0.2453	-0.0174	-0.0911	-0.2245	-0.0132	0.0439	-0.0214	0.2864	-0.0117	0.1583
48	0.3765	0.0052	-0.0057	-0.2261	-0.0511	-0.0114	0.0497	0.2078	-0.0189	0.1763

49	0.2453	0.0258	-0.0566	-0.2138	-0.0379	0.0145	0.0858	0.2278	-0.1284	0.1979
50	0.3613	-0.0801	-0.0400	-0.2961	0.1956	0.0156	0.0080	0.2976	-0.1255	0.1323
51	0.2229	0.0306	-0.0420	-0.2103	-0.0210	-0.0115	0.0594	0.2169	-0.1400	0.1943
52	0.3332	-0.0243	-0.1191	-0.2526	-0.0670	0.0825	0.0433	0.2382	-0.2890	0.2193
53	0.2042	0.0299	-0.0891	-0.2187	-0.0651	-0.0013	-0.0329	0.2839	-0.1403	0.2455
54	0.3075	-0.0367	-0.0747	-0.3112	0.0421	0.0589	0.1005	0.2954	-0.1312	0.1013
55	0.3070	0.0452	-0.0606	-0.3492	0.0019	-0.0004	0.1355	0.3068	-0.0150	0.0074
56	0.3505	0.0243	-0.0567	-0.3321	-0.0459	-0.0134	0.0681	0.2498	-0.1294	0.1786
57	0.3330	-0.0304	-0.0705	-0.3115	-0.0189	0.0525	0.0138	0.2499	-0.1342	0.1895
58	0.1687	-0.0663	0.1400	-0.3801	0.0477	0.0037	-0.0982	0.0804	0.0796	-0.1493
59	0.2781	0.0368	0.0549	-0.1197	0.0184	0.0022	0.0951	0.1646	0.0417	0.0228
60	0.2394	0.0715	0.1039	-0.3058	0.0283	-0.0314	0.0008	0.1472	-0.0237	0.1173
61	0.4559	-0.0210	0.0126	-0.3155	-0.0613	-0.0477	0.0093	0.3096	-0.0344	0.0212
62	-0.3514	0.0343	0.1149	0.2394	-0.0362	0.0379	-0.0463	-0.1580	0.1394	-0.0890
63	0.2369	-0.0291	0.0591	-0.2754	-0.1754	-0.0545	0.0153	0.2228	0.0870	0.0237
64	0.0961	-0.0205	-0.0684	-0.2154	0.0219	0.0253	0.0250	0.1142	-0.0159	0.1056
65	0.3379	-0.0332	-0.0328	-0.3139	-0.0052	-0.0037	0.1043	0.2285	-0.0154	-0.0031
66	0.3634	-0.0389	-0.0654	-0.3417	0.0487	0.0532	0.0479	0.2467	-0.0287	0.0745
67	0.3207	-0.0569	-0.0053	-0.2777	0.0225	-0.0230	0.0085	0.2354	-0.0123	0.1312
68	0.2929	-0.0558	-0.0408	-0.2850	0.0030	0.0612	0.0522	0.2166	-0.0418	0.0402
69	0.2979	0.0321	-0.0466	-0.2930	0.0189	0.0245	0.0840	0.2215	-0.1466	0.1729
70	-0.1493	0.0946	0.1037	0.1556	0.0868	0.0731	0.0045	-0.1137	-0.0050	-0.0365
71	-0.3703	0.2693	0.1222	0.2535	0.1351	0.0980	0.0192	-0.2414	-0.0951	-0.0265
72	-0.2558	0.1020	-0.0537	0.2240	-0.0010	-0.0003	0.0912	-0.1278	-0.0833	0.1613
73	-0.1972	0.1152	0.0394	0.1267	-0.0026	-0.0033	0.0064	-0.1496	-0.1490	0.1357
74	-0.1551	0.0541	0.0504	0.0672	0.1023	-0.0259	0.0804	-0.1269	-0.1935	0.1112
75	-0.3481	0.1333	0.1159	0.2544	0.0605	-0.0005	-0.0310	-0.2318	-0.0794	0.0700
76	-0.2494	0.0624	-0.0216	0.2249	0.1550	-0.0134	0.0675	-0.3351	-0.1471	0.1977
77	-0.1991	0.1551	-0.0190	0.1088	0.2036	0.0242	0.1043	-0.1971	-0.2133	0.1622
78	-0.3532	0.1307	-0.0025	0.2761	0.0921	-0.1023	0.0900	-0.3199	-0.1421	0.0547

79	-0.2785	3.1109	0.0182	0.2224	0.1072	-0.0275	0.1249	-0.3202	-0.1278	0.1400
80	0.2134	-0.3732	-0.0139	-0.1310	-0.1736	0.0433	-0.0350	0.1954	0.1403	-0.1027
81	-0.1051	3.1492	0.0234	3.1094	0.1170	-0.0253	0.0441	-0.1106	-0.1250	0.1021
82	3.2121	-0.1927	-0.3487	-0.1726	-0.0438	-0.0520	-0.0776	0.2274	0.0007	-0.1424
83	-0.2780	0.2757	0.1746	0.2740	0.3190	-0.0916	0.0949	-0.3620	-0.0125	0.1233
84	-0.1979	-0.1006	-0.1150	-0.1051	0.0794	-0.1439	0.1423	-0.2576	-0.0149	-0.0060
85	0.2037	-0.1756	0.0077	-0.1646	-0.1125	-0.0606	-0.0532	0.2407	0.1703	-0.2740
86	0.3220	-0.1304	-0.1269	-0.2349	-0.0771	-0.0185	-0.0964	0.2275	-0.0100	-0.0173
87	-0.1517	0.0679	-0.0157	1.1147	0.1473	0.0032	0.0413	-0.1708	-0.0310	0.1523
88	-0.1770	0.1444	1.0023	0.0934	0.1601	0.0079	0.0074	-0.1427	0.0012	0.0615
89	-0.2423	0.2421	0.1006	0.2745	0.1421	-0.0438	0.0346	-0.2510	-0.0435	0.0156
90	-0.1002	3.1520	0.1285	0.0956	0.1525	-0.0433	0.1296	-0.1599	-0.0039	0.0607

59	0.0911	0.0607	0.0609	0.0762	0.1537	-0.0003	0.2401	0.2104	0.2533	0.2109
60	0.1551	0.1336	0.1109	0.1160	0.2913	-0.0401	0.2745	0.2349	0.2211	0.2113
61	0.1117	0.1444	0.2091	0.0352	0.4742	-0.0155	0.6526	0.5099	0.5683	0.5648
62	-0.1899	-0.1371	-0.1091	-0.0708	-0.1603	0.0785	-0.3328	-0.2251	-0.3719	-0.3103
63	0.0163	-0.0231	0.0997	-0.0173	0.3963	0.1533	0.5395	0.4861	0.5416	0.5477
64	-0.0125	0.1245	0.2470	0.0155	0.4259	0.0672	0.4767	0.2686	0.4067	0.4329
65	0.0701	0.0914	0.1645	-0.0163	3.3201	-0.0231	0.4873	0.3003	0.3074	0.3403
66	0.1331	0.2147	0.2107	0.1104	0.4183	-0.0595	0.4920	0.2043	0.4232	0.3035
67	0.1151	0.1405	0.2772	0.0774	5.3291	-0.0351	0.5218	0.3162	0.4711	0.4772
68	0.0702	0.1151	0.2558	0.0420	0.4203	-0.1101	0.4730	0.3725	0.4415	0.3993
69	0.1751	0.2104	0.2262	0.1340	0.5363	-0.1150	0.5581	0.4296	0.4087	0.5086
70	-0.0445	0.0702	-0.0174	0.0488	-0.2263	-0.0024	-0.3574	-0.3131	-0.3723	-0.3058
71	-0.0111	-0.0582	-0.1183	0.0406	-0.3215	0.0353	-0.5344	-0.5307	-0.6022	-0.6082
72	0.1264	0.1334	0.0167	0.2726	-0.1754	0.0150	0.3272	-0.3727	-0.3401	-0.2590
73	0.1112	0.1483	0.0060	0.2552	-0.1110	-0.1150	-0.3172	-0.3121	-0.2827	-0.2100
74	0.0441	0.1129	0.1176	0.2235	-0.2210	-0.1415	-0.2043	-0.3290	-0.3392	-0.2768
75	0.0191	-0.0572	-0.1341	0.0332	-0.4442	0.0076	-0.5484	-0.5210	-0.5728	-0.5314
76	0.0171	0.1405	-0.0100	0.0715	-0.1177	-0.0011	-0.2801	-0.1613	-0.2864	-0.1406
77	0.1407	0.2111	0.0763	0.2024	0.0333	-0.1731	-0.1701	-0.0114	-0.1222	-0.0073
78	0.0260	0.0734	-0.1100	0.0703	-0.1536	-0.0708	-0.2994	-0.2128	-0.2736	-0.2689
79	0.1151	0.1724	0.0015	0.1163	-0.0329	-0.0459	-0.2691	-0.1125	-0.2281	-0.2631
80	-0.0734	-0.2115	-0.0664	-0.2127	0.1153	0.0014	0.2440	0.1104	0.1572	0.1005
81	0.0511	0.1014	0.0727	0.2664	-0.1254	-0.1034	-0.2272	-0.2744	-0.3262	-0.2362
82	-0.0951	-0.1405	0.0716	-0.1742	0.1208	0.0440	0.2104	0.1878	0.2073	0.1725
83	0.1036	0.0405	-0.0122	0.2120	-0.2229	0.0407	-0.3684	-0.3162	-0.2801	-0.2000
84	0.0270	0.0305	-0.0035	0.1876	-0.2057	-0.0414	-0.1034	-0.2277	-0.2154	-0.2131
85	-0.1493	-0.2167	-0.1605	-0.3308	0.0434	0.1487	0.2228	0.1867	0.2808	0.1824
86	-0.0337	-0.0302	0.1061	-0.1346	0.1172	-0.0294	0.1844	0.1904	0.1488	0.1344
87	0.0718	0.0602	-0.0127	0.1331	-0.0529	0.0404	-0.1502	-0.1404	-0.1120	-0.1177
88	0.0051	0.2222	0.1110	0.1264	0.0107	-0.0300	-0.1108	-0.1033	-0.1428	-0.0531

	31	32	33	34	35	36	37	38	39	40
31	1.0000									
32	0.9933	1.0000								
33	0.2101	0.9998	1.0000							
34	0.9966	0.4448	0.2426	1.0000						
35	0.1124	0.1457	0.3763	0.1245	1.0000					
36	-0.2701	-0.2584	-0.2556	-0.2355	-0.1890	1.0000				
37	-0.0154	0.1134	0.1994	-0.1102	-0.5554	-0.0192	1.0000			
38	0.0031	0.0074	0.2215	-0.0755	0.3983	0.0454	0.5473	1.0000		
39	0.0401	0.1207	0.2712	-0.0674	0.3899	0.0732	0.5774	0.6617	1.0000	
40	0.0744	0.1790	0.2836	-0.1115	0.4027	-0.1115	0.5576	0.6200	0.8058	1.0000
41	0.0023	0.1021	0.2457	-0.1053	0.3863	0.0120	0.5752	0.6168	0.8213	0.9005
42	0.1112	0.0940	0.1684	-0.1106	0.3745	0.0270	0.4766	0.3674	0.4705	0.5379
43	0.1357	0.2762	0.1882	0.1838	0.2015	-0.1290	0.3425	0.2287	0.3269	0.3975
44	0.0024	0.0153	0.1940	-0.1650	0.3140	0.0124	0.2606	0.3146	0.2716	0.2713
45	0.1160	0.1413	0.1403	0.0327	0.3264	0.0095	0.3047	0.3232	0.4468	0.4162
46	0.0081	0.1160	0.1941	0.0977	0.3620	-0.1100	0.5493	0.4199	0.4543	0.4415
47	0.1101	0.1171	0.2762	0.0744	0.4150	-0.1089	0.4366	0.3603	0.4426	0.4454
48	0.1168	0.1308	0.2185	0.0560	0.5523	-0.1040	0.5017	0.4108	0.5480	0.5514
49	0.1327	0.1407	0.2466	0.1015	0.5179	-0.1030	0.5525	0.3368	0.5171	0.5315
50	0.1101	0.1107	0.2723	0.1134	0.5085	-0.1174	0.5535	0.3862	0.4998	0.5113
51	0.1267	0.1108	0.2420	0.0947	0.5432	-0.1034	0.5305	0.3506	0.4884	0.5237
52	0.1144	0.1009	0.2985	0.0975	0.5818	-0.1095	0.5533	0.4246	0.4873	0.5092
53	0.2121	0.2791	0.3710	0.1515	0.5585	-0.1192	0.5456	0.4015	0.4908	0.5176
54	0.0917	0.1363	0.2827	0.0547	0.5262	-0.1072	0.5337	0.3650	0.4391	0.4622
55	0.0750	0.1717	0.2713	0.1048	0.4619	-0.1047	0.5367	0.3152	0.5063	0.5109
56	0.0063	0.1391	0.2964	0.1011	0.4396	-0.1005	0.4871	0.3168	0.4716	0.4802
57	0.1448	0.1325	0.3333	0.0704	0.5493	-0.0930	0.5782	0.4433	0.5143	0.5590
58	-0.0324	-0.1305	0.0433	-0.1315	0.0775	0.1474	0.1466	0.2715	0.2424	0.2307

89	0.6332	-0.0034	-0.0074	0.1040	-0.1093	0.0201	-0.3116	-0.2681	-0.2674	-0.2067
90	0.1147	0.1552	0.0329	0.2500	-0.0093	0.0237	-0.0074	-0.0439	-0.1321	-0.1024

	41	42	43	44	45	46	47	48	49	50
41	1.0000									
42	0.4627	1.0000								
43	0.3829	0.4561	1.0000							
44	0.2109	0.2098	0.2009	1.0000						
45	0.3900	0.3907	0.4094	0.2629	1.0000					
46	0.4210	0.4200	0.3017	0.2956	0.4092	1.0000				
47	0.4976	0.3662	0.3030	0.2250	0.2046	0.4719	1.0000			
48	0.5303	0.4027	0.3102	0.2000	0.3037	0.4010	0.0227	1.0000		
49	0.5895	0.4711	0.3576	0.1066	0.3447	0.4075	0.5935	0.0325	1.0000	
50	0.5317	0.3600	0.2437	0.1610	0.3426	0.4634	0.0452	0.5012	0.5761	1.0000
51	0.5410	0.4670	0.3402	0.1751	0.3576	0.4085	0.0071	0.0340	0.0952	0.0017
52	0.5123	0.4331	0.3576	0.1737	0.3604	0.4331	0.2415	0.7114	0.3752	0.0200
53	0.4953	0.4740	0.3576	0.2020	0.3771	0.4757	0.5071	0.3425	0.6017	0.0514
54	0.4639	0.4113	0.2370	0.2154	0.3407	0.4012	0.4620	0.6362	0.5914	0.0793
55	0.5045	0.4341	0.2600	0.1500	0.3437	0.4441	0.5953	0.5060	0.6016	0.7119
56	0.4960	0.3970	0.2900	0.2153	0.3161	0.4211	0.4440	0.6057	0.6300	0.9101
57	0.5175	0.4000	0.3027	0.1153	0.4219	0.5115	0.6095	0.6094	0.6773	0.7305
58	0.2400	0.1013	-0.0904	0.0602	0.1307	0.1007	0.0042	0.1013	0.1310	0.1700
59	0.2400	0.1400	0.0956	0.1314	0.2461	0.3593	0.2750	0.3227	0.2910	0.2704
60	0.2405	0.1004	0.1570	0.1639	0.2410	0.3403	0.2071	0.4034	0.2003	0.3245
61	0.5596	0.4452	0.3310	0.2010	0.4277	0.4083	0.5365	0.5650	0.5700	0.6005
62	-0.3812	-0.1955	-0.2167	-0.2743	-0.2295	-0.2665	-0.3605	-0.4100	-0.3990	-0.3305
63	0.5132	0.3524	0.1640	0.2050	0.3597	0.3574	0.2952	0.4790	0.4990	0.3793
64	0.3091	0.3140	0.2124	0.1256	0.2150	0.2901	0.4043	0.4035	0.4954	0.4005
65	0.3892	0.3003	0.2235	0.1311	0.2711	0.2022	0.4170	0.4431	0.3407	0.5242
66	0.3806	0.3005	0.2495	0.1369	0.1636	0.2020	0.4060	0.4220	0.4031	0.5000
67	0.4910	0.4330	0.3121	0.2544	0.3100	0.3744	0.3023	0.6044	0.5910	0.5000
68	0.3062	0.2633	0.2240	0.1234	0.2016	0.2970	0.3570	0.4731	0.4267	0.5000

69	0.4841	0.4261	0.2793	0.1560	0.3818	0.4449	0.5822	0.6386	0.5791	0.6934
70	-0.2938	-0.2833	-0.1926	-0.1437	-0.2517	-0.3132	-0.2002	-0.2664	-0.1672	-0.1929
71	-0.5934	-0.3804	-0.2710	-0.1886	-0.3743	-0.5030	-0.3419	-0.4050	-0.4516	-0.4307
72	-0.2911	-0.1110	-0.0342	-0.0651	-0.1797	-0.1037	-0.0950	-0.1563	-0.0823	-0.2159
73	-0.2725	-0.2032	-0.1292	-0.0545	-0.1297	-0.1500	-0.1331	-0.0955	-0.0799	-0.1542
74	-0.2847	-0.2423	-0.1601	-0.1282	-0.1522	-0.2013	-0.1411	-0.2450	-0.2310	-0.1653
75	-0.5423	-0.3714	-0.2026	-0.2199	-0.3835	-0.4167	-0.3978	-0.4683	-0.3893	-0.4887
76	-0.1505	-0.0510	0.0077	-0.1529	-0.1532	-0.2121	-0.1568	-0.1601	-0.1705	-0.1733
77	-0.1983	0.0162	0.1126	-0.0761	-0.0810	-0.1141	-0.0878	0.0102	0.0853	-0.0580
78	-0.2664	-0.1054	-0.0187	-0.1755	-0.1568	-0.2337	-0.3195	-0.2855	-0.1789	-0.1999
79	-0.2482	-0.1012	0.0760	-0.1119	-0.1160	-0.2316	-0.2431	-0.0939	-0.0738	-0.2556
80	0.1102	0.0764	0.0045	0.1764	0.0647	0.1237	0.1757	0.1205	0.0684	0.1494
81	-0.2854	-0.1397	0.0343	-0.1711	-0.1484	-0.1386	-0.0964	-0.1419	-0.0525	-0.1113
82	0.1000	0.1542	-0.0071	0.1641	0.0515	0.0923	0.0452	0.1179	0.0486	0.1894
83	-0.2890	-0.1904	-0.0270	-0.1968	-0.3076	-0.3024	-0.1528	-0.2179	-0.2274	-0.1940
84	-0.1419	-0.1434	-0.1701	-0.1075	-0.1542	-0.2521	-0.2208	-0.2557	-0.1973	-0.0699
85	0.2429	0.0510	-0.0395	0.1154	0.1265	0.1409	0.0824	0.1417	0.0481	0.0618
86	0.1353	0.1478	0.0667	0.1414	0.1517	0.1094	0.0773	0.1416	0.1139	0.0654
87	-0.1421	-0.0300	0.0281	-0.1163	-0.0252	-0.0967	-0.0064	-0.0078	-0.0251	-0.0397
88	-0.0610	-0.0264	0.0478	-0.1100	-0.0822	-0.1579	-0.0091	-0.0752	-0.0188	-0.0326
89	-0.2312	-0.0020	-0.0992	-0.1807	-0.1466	-0.2631	-0.1141	-0.1536	-0.1707	-0.1802
90	-0.0804	-0.0454	-0.0602	0.0155	-0.0069	-0.1004	0.0635	0.0017	-0.0167	0.0697

	51	52	53	54	55	56	57	58	59	60
51	1.0000									
52	0.7055	1.0000								
53	0.7298	0.6351	1.0000							
54	0.6110	0.6413	0.6823	1.0000						
55	0.5930	0.5975	0.6533	0.7466	1.0000					
56	0.6437	0.5828	0.5467	0.5738	0.6228	1.0000				
57	0.7030	0.7476	0.7896	0.7691	0.8792	0.8520	1.0000			
58	0.1414	0.0677	0.0214	0.2059	0.1516	0.1091	0.1819	1.0000		
59	0.2005	0.2084	0.1754	0.2859	0.3129	0.2765	0.3016	0.5352	1.0000	
60	0.3143	0.2984	0.2830	0.3572	0.3598	0.2621	0.3455	0.4103	0.7828	1.0000
61	0.5782	0.5607	0.5923	0.5057	0.5580	0.5857	0.6456	0.2805	0.3296	0.3619
62	-0.3773	-0.3200	-0.2873	-0.3262	-0.3433	-0.3446	-0.3063	-0.2498	-0.4268	-0.4722
63	-0.4355	0.3770	0.4102	0.3176	0.4531	0.3977	0.3590	0.2226	0.1145	0.1268
64	0.4797	0.4238	0.4410	0.4110	0.3723	0.3895	0.4449	0.1141	0.1068	0.1764
65	0.3323	0.4130	0.4569	0.5075	0.5241	0.4255	0.4606	0.0965	0.0835	0.1251
66	0.4044	0.5077	0.4982	0.5580	0.5496	0.3514	0.5145	0.8401	0.0770	0.1499
67	0.5968	0.6092	0.6351	0.5935	0.6327	0.5310	0.6913	0.0727	0.1470	0.1051
68	0.4130	0.5109	0.4992	0.5683	0.5273	0.4591	0.5849	0.1068	0.1047	0.1089
69	0.5807	0.6453	0.6794	0.7226	0.6540	0.5315	0.7498	0.1780	0.2902	0.3361
70	-0.2316	-0.2128	-0.2503	-0.2105	-0.2283	-0.2329	-0.2563	-0.1759	-0.1740	-0.1353
71	-0.4980	-0.4692	-0.4178	-0.4215	-0.4457	-0.4375	-0.4460	-0.2728	-0.1898	-0.1933
72	-0.1171	-0.1778	-0.1484	-0.2671	-0.1282	-0.1427	-0.2204	-0.2347	-0.1797	-0.1107
73	-0.0935	-0.1495	-0.1155	-0.1771	-0.1035	-0.1325	-0.1822	-0.1952	-0.1257	-0.1343
74	-0.2326	-0.2102	-0.2423	-0.2116	-0.2623	-0.1824	-0.2948	-0.3009	-0.2455	-0.2269
75	-0.4101	-0.4292	-0.4306	-0.4803	-0.4200	-0.4925	-0.5172	-0.2684	-0.2238	-0.1813
76	-0.1407	-0.1417	-0.1025	-0.1645	-0.2561	-0.1926	-0.0962	-0.1224	-0.0802	-0.0025
77	-0.8101	-0.8326	-0.8524	-0.8680	-0.1700	-0.1294	0.8168	-0.0051	0.8166	0.0053
78	-0.2150	-0.1781	-0.1412	-0.1866	-0.2484	-0.2128	-0.1595	-0.1448	-0.2165	-0.1216

79	-0.0056	-0.1033	-0.1788	-0.2575	-0.2130	-0.1743	-0.2477	-0.2518	-0.1982	-0.1031
80	0.0724	0.1223	0.1340	0.2025	0.1910	0.1035	0.1076	0.1101	0.0996	0.0958
81	-0.0395	-0.1363	-0.1295	-0.0920	-0.0780	-0.1064	-0.0581	-0.0321	0.0089	0.0507
82	0.0723	0.1172	0.1496	0.1544	0.1176	0.1294	0.1545	0.1383	0.0492	0.0055
83	-0.0257	-0.3227	-0.2714	-0.2243	-0.2163	-0.2797	-0.2730	-0.1288	-0.0599	-0.1141
84	-1.2167	-1.2167	-1.2167	-0.0786	-0.0419	-0.0981	-0.1439	-0.1924	-0.1624	-0.1051
85	0.0027	0.0027	0.0027	0.0590	0.1401	0.1535	0.0425	0.1559	0.0721	0.0691
86	0.1081	0.2066	0.0985	0.0982	0.1207	0.1591	0.1069	-0.0186	0.1760	0.1389
87	-0.0539	-0.0735	-0.0740	0.0031	-0.0721	-0.1144	0.0109	-0.0486	0.0385	0.0812
88	-0.0142	-0.0460	-0.0435	-0.0076	-0.1301	-0.1533	-0.0009	-0.1161	-0.0464	-0.1290
89	-0.1595	-0.2131	-0.2064	-0.1222	-0.1517	-0.1381	-0.1538	-0.0094	-0.0901	-0.0411
90	-0.0325	-0.0404	-0.0600	0.0044	0.0566	-0.0580	0.0305	-0.0468	0.0229	0.0241

	61	62	63	64	65	66	67	68	69	70
61	1.0000									
62	-0.4444	1.0000								
63	0.5124	-0.2241	1.0000							
64	0.4127	-0.1269	0.3311	1.0700						
65	0.4714	-0.2464	0.3297	0.2461	1.0000					
66	0.4742	-0.2715	0.3651	0.3159	0.7683	1.0000				
67	0.5982	-0.2760	0.4463	0.4215	0.6149	0.6794	1.0000			
68	0.4940	-0.2461	0.3262	0.3328	0.6243	0.7072	0.6817	1.0000		
69	0.6459	-0.3243	0.4010	0.4154	0.5054	0.5083	0.6599	0.6883	1.0000	
70	-0.3390	0.2036	-0.3926	-0.1491	-0.6135	-0.2597	-0.2911	-0.2154	-0.2457	1.0000
71	-0.5570	0.2873	-0.5397	-0.3346	-0.3352	-0.3674	-0.4193	-0.3665	-0.3404	0.3960
72	-0.3104	0.1171	-0.2264	-0.1447	-0.2052	-0.1981	-0.1765	-0.2323	-0.2064	0.2691
73	-0.3404	0.1271	-0.2759	-0.1429	-0.2461	-0.2432	-0.2459	-0.2003	-0.1577	0.5501
74	-0.3441	0.1326	-0.3442	-0.2104	-0.1057	-0.2015	-0.2053	-0.1752	-0.2261	0.5302
75	-0.5439	0.2467	-0.5114	-0.3736	-0.4136	-0.4449	-0.4462	-0.4749	-0.4014	0.4132
76	-0.2467	0.2016	-0.2372	-0.1946	-0.2064	-0.2054	-0.2021	-0.1791	-0.0921	0.8084
77	-0.1050	0.1080	-0.2043	-0.0767	-0.1777	-0.0451	-0.1674	-0.0021	0.0765	0.0402
78	-0.3746	0.2700	-0.2044	-0.2064	-0.2224	-0.1910	-0.2663	-0.1722	-0.0404	0.1736
79	-0.2940	0.1923	-0.1123	-0.2432	-0.2195	-0.2351	-0.2411	-0.1832	-0.1410	0.1373
80	0.2404	-0.1424	0.1640	0.1346	0.2222	0.0954	0.1450	0.1460	0.1334	-0.0099
81	-0.2077	0.0474	-0.2771	-0.1346	-0.1493	-0.1234	-0.1477	-0.1127	-0.1093	0.1494
82	0.1005	-0.1131	0.1155	0.1777	0.1373	0.0447	0.0977	0.1171	0.1442	0.0839
83	-0.3352	0.1744	-0.2950	-0.1593	-0.2744	-0.1842	-0.2149	-0.1664	-0.2327	0.1474
84	-0.1951	0.0020	-0.2773	-0.2082	-0.0374	-0.0130	-0.1161	-0.0220	-0.0407	0.1616
85	0.2932	-0.1774	0.2597	0.0310	0.1450	0.1943	0.1362	0.0174	0.0476	-0.1253
86	0.1129	-0.0944	0.1203	0.1259	0.0487	0.1307	0.0424	0.0414	0.0474	0.0207
87	-0.1972	0.0734	-0.1443	-0.0473	-0.0722	-0.0532	-0.0492	0.0302	-0.0214	0.0699
88	-0.1424	0.1997	-0.1271	-0.1047	-0.2111	-0.1224	-0.1421	-0.0074	-0.0047	0.1293

89	-0.2702	0.2891	-0.2597	-0.1971	-0.2202	-0.2453	-0.2235	-0.1618	-0.1152	0.3535
90	-0.0971	0.0154	-0.0547	-0.1917	0.0755	0.0489	-0.0105	0.0946	0.0804	0.1940

	71	72	73	74	75	76	77	78	79	80
71	1.0000									
72	0.3112	1.0000								
73	0.3526	0.4725	1.0000							
74	0.3713	0.4789	0.6806	1.0000						
75	0.6970	0.3828	0.3402	0.3573	1.0000					
76	0.2020	0.1764	0.2157	0.1671	0.2150	1.0000				
77	0.1376	0.1036	0.2497	0.0000	0.0000	0.4161	1.0000			
78	0.2110	0.2148	0.2030	0.1520	0.2357	0.4807	0.3711	1.0000		
79	0.2137	0.2017	0.2868	0.2122	0.2754	0.3352	0.3480	0.4502	1.0000	
80	-0.1530	-0.1522	-0.2277	-0.1038	-0.1108	-0.4720	-0.4605	-0.3627	-0.4730	1.0000
81	0.1761	0.2110	0.2703	0.1665	0.2790	0.3837	0.4169	0.3046	0.3110	-0.4426
82	-0.1205	-0.2158	-0.0271	-0.0543	-0.1117	-0.2983	-0.1742	-0.2243	-0.2269	0.3753
83	0.2043	0.3099	0.2610	0.2572	0.2493	0.3730	0.3164	0.3104	0.4195	-0.3059
84	0.2381	0.1423	0.1430	0.2301	0.2711	0.2207	0.1365	0.2828	0.2152	-0.2061
85	-0.2490	-0.2432	-0.2709	-0.2148	-0.2707	-0.3752	-0.3469	-0.3394	-0.4058	0.4010
86	-0.1373	-0.1447	-0.0439	-0.0304	-0.1372	-0.0548	-0.0370	-0.2108	-0.2450	0.1203
87	0.1103	0.2136	0.1129	0.1350	0.1111	0.2081	0.2491	0.3241	0.1770	-0.3978
88	0.1768	0.0329	0.2122	0.0210	0.1113	0.4937	0.3395	0.3358	0.3429	-0.3721
89	0.2309	0.1107	0.2558	0.1722	0.2797	0.2634	0.2113	0.2932	0.2198	-0.0803
90	0.1453	0.1064	0.1959	0.1375	0.1433	0.2554	0.2389	0.2249	0.2124	-0.2421

	81	82	83	84	85	86	87	88	89	90
81	1.0000									
82	-0.3575	1.0000								
83	0.3745	-0.2568	1.0000							
84	0.1121	-0.1106	0.3283	1.0000						
85	-0.4452	0.3491	-0.3968	-0.2200	1.0000					
86	-0.0561	0.1602	-0.2751	-0.1115	0.3416	1.0000				
87	0.3961	-0.3823	0.5815	0.1982	-0.1752	-0.1558	1.0000			
88	0.2481	-0.1331	0.3783	0.1673	-0.3708	-0.1278	0.2285	1.0000		
89	0.2141	-0.0773	0.3101	0.2701	-0.1896	-0.0018	0.2132	0.2964	1.0000	
90	0.2490	-0.0494	0.3396	0.3534	-0.2424	-0.1114	0.2468	0.3246	0.5908	1.0000

APPENDIX D
P.I.C.Q., FORM III
WEIGHTINGS BASED UPON DIRECTION OF CONFLICT OR NON-CONFLICT

ITEMS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1	1	2	3	4
2	4	3	2	1
3	4	3	2	1
4	4	3	2	1
5	1	2	3	4
6	4	3	2	1
7	1	2	3	4
8	4	3	2	1
9	4	3	2	1
10	1	2	3	4
11	1	2	3	4
12	1	2	3	4
13	1	2	3	4
14	1	2	3	4
15	4	3	2	1
16	1	2	3	4
17	1	2	3	4
18	4	3	2	1
19	4	3	2	1
20	1	2	3	4
21	1	2	3	4
22	1	2	3	4
23	1	2	3	4
24	1	2	3	4
25	1	2	3	4
26	1	2	3	4
27	1	2	3	4
28	4	3	2	1
29	4	3	2	1
30	4	3	2	1
31	4	3	2	1
32	4	3	2	1
33	4	3	2	1
34	4	3	2	1
35	4	3	2	1
36	4	3	2	1
37	4	3	2	1
38	4	3	2	1
39	4	3	2	1
40	4	3	2	1
41	4	3	2	1
42	4	3	2	1
43	4	3	2	1
44	4	3	2	1
45	4	3	2	1
46	4	3	2	1
47	4	3	2	1
48	4	3	2	1

ITEMS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
49	4	3	2	1
50	4	3	2	1
51	4	3	2	1
52	1	2	3	4
53	4	3	2	1
54	4	3	2	1
55	4	3	2	1
56	4	3	2	1
57	4	3	2	1
58	4	3	2	1
59	4	3	2	1
60	1	2	3	4
61	1	2	3	4
62	1	2	3	4
63	1	2	3	4
64	1	2	3	4
65	1	2	3	4
66	1	2	3	4
67	4	3	2	1
68	1	2	3	4
69	4	3	2	1
70	1	2	3	4
71	1	2	3	4
72	1	2	3	4
73	1	2	3	4
74	4	3	2	1
75	4	3	2	1
76	1	2	3	4
77	1	2	3	4
78	1	2	3	4
79	1	2	3	4
80	4	3	2	1
81	1	2	3	4

NOTE: Item weightings were determined by a jury of experts. Any item with a 1 weight assigned to the Strongly Agree choice was considered by the panel of experts to reflect a low potential for conflict in terms of respondents strongly agreeing with that particular item. Conversely, any item with a 4 weight assigned to the Strongly Agree choice was considered by the panel of experts to reflect a high potential for conflict in terms of respondents strongly agreeing with that particular item.

High sub-scale scores and total test scores should reflect a high potential for conflict.

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