

ORGANIZATIONAL MEMBERSHIP AND
ITS RELATION TO AUTHORITARIANISM AND
COGNITIVE RIGIDITY IN A PUBLIC SCHOOL SYSTEM

by

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B.Ed.(Sec.), University of Victoria, 1967

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the Faculty

of

Education

*Accepted for the
Faculty of Graduate Studies*

*Dean pro tem
4 May, 1972*

We accept this thesis as conforming
to the required standard

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ABSTRACT

This study, carried out in British Columbia School District #61 (Greater Victoria), tested a theory of organizational accommodation derived from the work of Presthus (1959, 1962). It was proposed that members with a long time span in the organization, both teachers and school administrators, would tend to be significantly more authoritarian and rigid than beginning teachers or teachers in training. Four groups were defined and delimited for study. These were: non-members, students in the Faculty of Education, University of Victoria; initial members, teachers with less than five years professional experience; conformists, teachers with fifteen or more years of professional experience; and upward-mobiles, school administrators with fifteen or more years of professional experience and more than five years administrative experience.

No significant difference was predicted between non-members and initial members; nor between conformists

and upward-mobiles on measures of authoritarianism and rigidity. Acculturated members, both conformists and upward-mobiles, were expected to be significantly more authoritarian and rigid than the other two groups. Authoritarianism was measured by responses to the California F Scale (Adorno et al., 1964, pp. 255-258). Rigidity was measured by the Fx (flexibility) Scale taken from the California Psychological Inventory (Gough 1956). In addition to testing hypotheses derived from the theory exploratory questions regarding the relationship of age and sex to authoritarianism and cognitive rigidity were investigated. A representative sample of students in their professional year in the Faculty of Education, University of Victoria comprised the non-member group. The samples that constituted the remaining groups were randomly selected from the professional staff of School District #61.

Data were subjected to the following statistical analyses:

1. Hypotheses and exploratory questions regarding age were tested using Single Classification Analysis of Variance and the post hoc Scheffé Multiple Comparison of Group Means test.
2. The exploratory questions regarding sex were examined with a t test.

3. Reliability of the scales was calculated using the Kuder-Richardson Formula 20.

4. Additional evidence of validity was provided by correlating the scales within and across groups.

All twelve hypotheses were sustained ($p < .01$). Investigation of the exploratory questions indicated that age, but not sex, was positively related to authoritarianism and rigidity. Later an Analysis of Covariance was conducted using age categories as the covariate. Results remained statistically significant ($p < .05$).

Examiners:

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ACKNOWLEDGEMENT

Grateful acknowledgement is made to: Consulting Psychologists Press Inc. for permission to use the Fx (flexibility) Scale; Harper and Row Publishers for permission to use the California F Scale; and the Greater Victoria School Board and the University of Victoria for permission to conduct the study.

The author further wishes to express his appreciation to: Dr. C. Hodgkinson, Dr. W. Muir, and Dr. R. Hagedorn for their counsel and guidance during this study; Mrs. P. MacLeod, Miss L. Kaiser, and Mrs. J. Fields for their assistance; the respondents for making this investigation possible; and his wife Lynn for her untiring effort.

CHAPTER I

INTRODUCTION

Much has been written in the literature of the behavioural sciences about the conflict between the individual and the organization. It is generally accepted by those scholars who have studied this problem that the organization exerts a powerful normative influence on the individual, which forces him to make some form of accommodation to it. Presthus (1962) proposes three ideal types of accommodation to the organization. These are indifferents, ambivalents and upward-mobiles. The indifferents who comprise the majority in any organization are defined as individuals who have made a bargain with the organization in return for economic sustenance. They conform to the organization for reasons of security but do not identify with its long range goals. The ambivalents form a group that desires success within the organization. However, they are unable to make the accommodation necessary to obtain it. Finally, upward-mobiles are those individuals who seek success by rising in the organizational hierarchy but, unlike the ambivalent, they are further typified by a willingness to comply with the demands of the organization. Hence, it would seem that if the individual is to gain security and achieve success within the organization he must modify his attitudes and behaviour so that they

are in accord with organizational norms. This contention is supported by extensive research concerning the influence of groups on the attitudes of individuals.

Following Presthus' argument it appears that accommodation to the organization causes the individual to undergo complex attitude changes that result in the replacement of his idiosyncratic attitude system with a narrower conformist one acceptable to the organization. Such adaptation allows the individual to accept the legitimacy of the organization and its authority structure. Moreover, research indicates that once organizational norms are accepted individuals tend to maintain them and resist further attitude change. Consequently, it might be argued that individuals who acculturate to organizations will tend to manifest attitudes that are generally authoritarian and rigid.

Presthus (1962, pp. 122-127) concurs with this when he indicates that the construct of the Authoritarian Personality (Adorno et al., 1964, p. 228) is congruent with his upward-mobile type. It is contended that the indifferent, who supposedly only makes an economic bargain with the organization, will also be authoritarian and rigid. It can be argued that his organizational survival and economic security depends primarily on two factors: his compliance with the demands of the organization and

maintenance of the organizational status quo. The term conformist will be applied to this mode of accommodation throughout this study. For as Thompson (1961) asserts: "the organization seeks converts. Hard work is not enough" (p. 184). Hence, only the ambivalent resists conforming to the organization. However, this form of accommodation is unstable for it results in a high level of "cognitive dissonance" (Festinger, 1957) that can only be reduced by complying to the organization, or leaving it. Thus, as acculturation takes place most ambivalents are under pressure to become either conformists or upward-mobiles.

It might now be concluded that upward-mobiles and conformists are stable modes of accommodation that foster organizational equilibrium. Moreover, these two categories are functional to the organization because the conformist does what is required of him and the upward-mobile sees that the organizational status quo is maintained. Thus, he assures his own security and that of the conformist. In summary, it is argued that upward-mobiles and conformists: are supportive of one another; form the bulk of the organization; and are an omnipotent force in resisting change.

Statement of Problem

The purpose of this study is to test this theory

regarding organizational accommodation, authoritarianism, and cognitive rigidity with particular reference to school teachers, school administrators and school systems. Four groups will be identified as follows:

1. A group of professional year education students who are yet to become members of a school system. Therefore, they may be considered to have made little or no accommodation to it.
2. A group in the initial stages of accommodation composed of teachers with limited professional experience.
3. A group of conformists composed of teachers who have become acculturated to the organization through long service to it.
4. A group of upward-mobiles made up of established school administrators.

Samples drawn from these groups will be surveyed to see if conformists and upward-mobiles are significantly more authoritarian and rigid than beginning teachers or teachers in training. Degree of authoritarianism will be determined from the scores respondents obtain on the California F Scale, Form 45-40 (Adorno et al., 1964, pp. 255-258). Rigidity will be measured by responses made to

the Fx (flexibility) Scale taken from the California Psychological Inventory (Gough, 1956).

Definition of Terms

The terms defined in this section have been used throughout this study to convey the following meanings:

Attitude. A psychological set predisposing response to an object or situation.

Value. A concept explicit or implicit distinctive of an individual or characteristic of a group, of the desirable which influence the selection from available means and ends of action (Kluckhohn, 1952, p. 395).

Authoritarianism. A psychological construct proposed by Adorno (1964) and his associates. The nine dimensions underlying this construct are: conventionalism; authoritarian submission; authoritarian aggression; anti-intraception; superstition and stereotype; power and "toughness"; destructiveness and cynicism; projectivity; and sex. The California F Scale was designed to measure this construct.

Cognitive Rigidity. A psychological set marked by the following characteristics: rigid adherence to internalized standards; inability to tolerate more complex, conflicting or open structures; desire for

a black and white dichotomy; quest for unqualified certainty; mechanical repetition of faulty hypotheses; and the intolerance of ambiguity and orientation to the concrete (Frenkel-Brunswik, 1957). Operationally, rigidity is measured by the Fx (flexibility) Scale from the California Psychological Inventory (Gough, 1956).

Organization. A human group with both formal and informal structures having a distinct purpose or purposes in the broader social context. In this study, a public school system - British Columbia School District #61, Greater Victoria.

Non-members. Individuals not employed by the organization. Operationally defined as students enrolled in their professional year in the Faculty of Education at the University of Victoria.

Initial-members. Individuals having a short time span in the organization. Operationally defined as teachers with less than five years professional experience.

Ambivalents. An unstable mode of organizational accommodation marked by a high level of cognitive dissonance created by the individual's resistance to the normative forces of the organization. Presthus (1959) described ambivalents as: "that small minority who can neither resist the appeals of power and

success available through the organization nor play the role required to attain them (p.71)."

Indifferents. A mode of organizational accommodation proposed by Presthus (1959) who indicated that this form of accommodation was: "essentially an economic bargain in which he (the indifferent) sells his time and energy for a certain number of hours per week but jealously guards the remaining time as his own (p.71)."

Conformists. A mode of organizational accommodation similar to but distinct from Presthus' indifferents in that such individuals have undergone attitude change in order to conform to the norms of the organization. Operationally defined as teachers having fifteen or more years of professional experience.

Upward-mobiles. A mode of organizational accommodation in which individuals change their attitudes to conform with organizational norms in order to move upward in the hierarchy. Presthus (1959) indicated that such individuals are able to: "accept the legitimacy and rationality of the organization the organization's values are accepted as decisive. An acceptance of the demands and operational necessity of the organization's authority and status systems seems

another functional attitude (p.70)." Operationally defined as school administrators with fifteen or more years professional experience and more than five years administrative experience.

Acculturated Members. Individuals with a long time span in the organization whose attitudes conform to organizational norms and standards. Operationally defined as teachers and school administrators having fifteen or more years professional experience.

Idiosyncratic Particularism. A psychological state within a group or groups where attitudes are divergent and particular to individual members.

Normative Conformism. A psychological state within a group or groups where attitudes of individual members are convergent in order to conform to established norms and standards.

CHAPTER II

REVIEW OF RELATED LITERATURE

This investigation required that several pertinent areas of consideration in the social sciences be reviewed. These areas are: theory concerned with the individual's accommodation and compliance to the organization; research regarding attitude change in individuals due to group membership and role enactment; theory and research linking the concepts of authoritarianism and rigidity to organizational accommodation; and theory and research indicating that cognitive rigidity is a dimension of authoritarianism.

Theory Regarding Organizational Accommodation

Beginning with the theory of organizational accommodation proposed by Presthus (1962) it becomes apparent that his three ideal types - indifferents, ambivalents, upward-mobiles, though oversimplified, are useful conceptual tools for the study of individual compliance to organizations.

First, Presthus (1959) declared that upward-mobiles are:

characterized by an ability to identify with the long-range abstract goals of the total organization and to make these a meaningful basis for participation, in other words to accept the legitimacy and rationality of the organization . . . the

organization's values are accepted as decisive. An acceptance of the demands and operational necessity of the organization's authority and status systems seems another functional attitude (p.70).

The primary assumption underlying this form of accommodation then is that if an individual wishes to rise in the organizational hierarchy he must then be prepared to comply completely with the explicit and implicit normative demands of the organization. Hughes (1958) saw the individual who seeks organizational success trapped by the formative influences of a web of values and expectations spun by the organization. Probably the most graphic description of the upward-mobiles commitment to the organization has been provided by Whyte (1956) in his book, The Organization Man.

Secondly, the indifferent is typified as an individual who conforms to organizational demands primarily for reasons of economic security. Presthus (1959) contends:

His relationship with the organization is essentially an economic bargain in which he sells his time and energy for a certain number of hours per week but jealously guards the remaining time as his own (p.71).

This oversimplified description of a large uncommitted majority requires careful scrutiny. It appears to indicate that the only cohesion in an organization comes from its administrative and managerial hierarchy. Such a proposi-

tion is not acceptable. Evidence will be presented later to show that group membership and role enactment do result in attitude change and that the direction of change is toward the acceptance of group or organizational norms. Moreover, the indifferent has a vested interest in the organization that goes beyond the mere fulfillment of job requirements. His economic security depends on the maintenance of organizational equilibrium.

Presthus (1962) does make an interesting distinction between "blue-collar" and "white-collar" indifferents that lends some support to this argument. In remarking about the latter classification he states:

its members are in a sense exceptionally vulnerable to its (the organization) structural conditions and to its claims because, as we have seen, their aspirations have been higher than those blue-collar workers. (p.233)

Teachers, the subjects of this study, fall into this category. It can be concluded then that the accommodation such indifferents make to the organization is rather more than a simple economic bargain. Hence, for the purpose of this study the term conformists is introduced and will be consistently applied to this mode of accommodation. Furthermore, it is maintained that both conformists and upward-mobiles are assimilated by the organization and together provide organizational cohesion

that maintains equilibrium and resists change.

Finally, Presthus (1959) sees the ambivalents as:

that small minority who can neither resist the appeals of power and success available through the organization nor play the role required to attain them. The ambivalent seems to need security, which the organization's structure and power could provide, but he is temperamentally unable to make the accommodation necessary to obtain it. (p.71)

For the purpose of this study it will be contended that this mode of accommodation is highly unstable and becomes increasingly difficult to maintain as the individual's time span in the organization increases. The theory of cognitive dissonance proposed by Festinger (1957) is helpful in examining this affirmation. The ambivalent's failure to change his attitudes so that they are congruent with organizational norms would tend to create cognitive dissonance. This is defined as psychological tension having drive characteristics and seeking reduction. This concept of the individual seeking cognitive consistency is supported by the work of Lund (1925) who speaks of a need for consistency and Newcomb (1953) who proposes a strain towards symmetry.

As a member of the organization the ambivalent finds that the more he resists its normative influences the more his cognitive dissonance increases. Festinger (1957) presents several strategies that the individual may employ to reduce this dissonance. Generally these are

all means the ambivalent can use to rationalize organizational behaviour that is at variance with his attitudes.

Moreover, Festinger (1957) asserts that:

if a man can be induced to take some action that does not 'follow from his beliefs' then the accomplished action will exert a force on his beliefs in the direction of a change to rationalize what he has done (p.53)

It appears, therefore, that as the ambivalent attempts to reduce his cognitive dissonance his attitudes are being changed so that they are moved closer to consonance with organizational norms. Evidence to support this argument is found in the results of a study conducted by Asch (1951). In it individuals were pressured by the group to accept judgements they knew were incorrect. Many subjects rationalized these discrepancies thereby making it possible to conform to majority opinion. In conclusion, then, ambivalents who remain in the organization are pressured by external and internal pressures to make further accommodation to it. Thus, though they struggle, they are eventually assimilated and acculturated.

An interesting theory relevant to an examination of organization accommodation is presented by Argyris (1960). He contends that individuals develop from a state of dependence to a state of independence. Associated with this movement toward independence is an increase in self-

initiative and self-determination. Conflict arises when the individual, upon entering the organization, is placed in a subordinate position that requires him to be dependent and submissive. Argyris (1960. p. 149) proposes eight modes of adaptation to the ensuing frustration which indicate that compliance is necessary for organizational survival and success. For example, he states that individuals may de-emphasize the importance of money and other material rewards. Scott (1959) supports Argyris' contentions when he reports that young college and university students valued highly: individuality; self-sufficiency and independence while a middle aged suburban group gave little consideration to such qualities. Hence, the work of Argyris tends to strengthen the theoretical rationale of this study.

Merton (1957) posed a question of considerable importance to this investigation. He wished to know the extent that individual personalities were modified by various bureaucracies. Bridges (1965) in his study of school principals offers a reply to this question when he states that as they gain experience:

principals tend to become more alike
with behavioural differences attributable
to personality becoming less evident (p.25)

He goes on to assert that organizational survival and

ascendancy depend upon the individual's willingness and capacity to express the valued bureaucratic outlook. In order to examine Merton's question further two areas of research will be reviewed. These are: studies concerning the influence of the group on the attitudes of the individual; and investigations regarding the effect of role enactment on individuals.

Research Concerning Group Influence on Individuals

First, note will be taken of some of the more important research bearing directly on the question of group influence on the individual. Sherif (1937), using the auto kinetic phenomenon, a single small source of light, discovered that subjects tend to establish a norm or standard peculiar to the individual in single subject situations. In group situations, however, a group norm tends to become established, within a short period of time. Individual members of the group then conform to this standard in their judgements. Moreover, when confederates of the experimenter are used as members of the group and give predetermined judgements, the experimental subjects usually conform to the pre-established norm. Instead of disappearing the convergence toward the group norm increased when the subject was removed from the group. Sherif's findings have been substantiated by the work of McCord (1948), cutaneous

perception of warmth; Bovard, (1951) estimates of size; and Mausner, (1953) aesthetic judgement.

Additional evidence of the influence of the group on the individual is provided by Asch (1952). Using an experimental situation where all members of the group, except the experimental subject were confederates of the experimenter Asch placed the individual in a situation where the group norm was obviously in error. Still, a large percentage of the individuals yielded to the pressure of group opinion and responded with judgements contrary to what they felt was correct. Moreover, many individuals rationalized this discrepancy in order to conform to the group.

The significance of these findings to an investigation of organizational accommodation is pointed to by Davis (1964) when he states:

if the effect of such experimentally created groups....upon the norms and attitudes of the individual is so compelling how much more compelling must the effect on the individual be of groups who have very definite emotional and practical significance to him. (p.23)

The organization, in this case the school system, then is clearly able to exert considerable pressure toward conformity on the individual.

Furthermore, Kelly and Volkart (1952) have shown that attempts to change group-anchored attitudes usually

meet with resistance. The amount of resistance generally depends upon the degree to which the group is considered by the individual to be a reference or membership group. In another study Kelley (1955) demonstrated clearly the positive relationship between 'salience of membership' and the resistance to change of group attitudes.

Research Regarding the Effects of Role Enactment on Individuals

Having provided empirical evidence of group influence on the individual's attitudes, attention will now be turned to an examination of the effect of role enactment on individuals. Bridges (1965), it will be recalled, reported that school principals became more alike as they gained experience in the role. Regarding such observations of role incumbency Sarbin and Allen (1964) state:

these observations support the general proposition advanced by role theory that prolonged occupancy of any position in the social structure affects the individual's total cognitive structure, including the self. (p. 183)

Evidence to support this proposition is found in early studies by Merton (1940) on bureaucrats and Waller (1932) on teachers. Still, the results of these studies are subject to alternative explanations. These major alternatives are: persons having attitudes congruent with the role are attracted to and selected as incumbents; or role

enactment causes attitude changes in role incumbents. The more recent investigations of Janis and King (1954), King and Janis (1956), Culbertson (1957), and Lieberman (1956), lend convincing experimental support, however, to the contention that role enactment is conducive to a change in the incumbent's attitudes.

To conclude, then, empirical evidence has been offered that provides considerable support for the theory of organizational accommodation presented previously. Furthermore, individuals who acculturate to organizations may be considered to have attitude systems that are: similar, conforming, conventional, and generally resistant to further attitudinal change.

Theory and Research Associating Authoritarianism, Rigidity and Organizational Accommodation

Oversimplification is a hazard that must be avoided when studying the individual's accommodation to the organization. It is maintained, therefore, that such accommodation is an extremely complex, n dimensional social psychological concept. This is supported by Gouldner (1965) when she states:

organizational commitment is not a homogeneous, and unidimensional variable but is instead a multidimensional phenomenon (p. 469)

One complex cluster that appears to be part of this

concept is the psychological construct of authoritarianism and an apparent dimension of authoritarianism worthy of consideration is that of flexibility-rigidity. Thus, it would seem possible to investigate the proposed theory of organizational accommodation by obtaining measures of authoritarianism and cognitive rigidity from suitable groups. However, this contention is merely conjecture until evidence is provided to substantiate it.

Presthus (1962) associates authoritarianism and organizational accommodation when he indicates that the attitudes measured by the California F Scale (Adorno et al., 1964, pp. 224-279) a measure of authoritarianism, are congruent with those of his upward-mobile type. The psychological construct that underlies this scale contains nine variables. These are:

- a. Conventionalism. Rigid adherence to conventional, middle-class values.
- b. Authoritarian Submission. Submissive, uncritical attitude toward idealized moral authorities of the ingroup.
- c. Authoritarian Aggression. Tendency to be on the lookout for, and to condemn, reject, and punish people who violate conventional values.
- d. Anti-intraception. Opposition to the subjective, the imaginative, the tender-minded.
- e. Superstition and Stereotype. The belief in mystical determinants of the individual's fate; the disposition to think in rigid categories.

- f. Power and "Toughness". Preoccupation with the dominance-submission, strong-weak, leader-follower dimension; identification with power figures; overemphasis upon the conventionalized attributes of the ego; exaggerated assertion of strength and toughness.
- g. Destructiveness and cynicism. Generalized hostility, vilification of the human.
- h. Projectivity. The disposition to believe that wild and dangerous things go on in the world; the projection outwards of unconscious emotional impulses.
- i. Sex. Exaggerated concern with sexual "goings-on" (p.228)

Since this measuring device is employed as one of the scales in this study it will be thoroughly examined in a later discussion of instrumentation.

Kahn (1964) and his associates carried out an extensive investigation of organizational stress primarily concerned with personality factors involved in role conflict and ambiguity. Data was collected using both interview and questionnaire techniques. Factor analysis of the questionnaire results yielded a dimension of flexibility-rigidity. Rigid persons were described as inner-directed, dogmatic and authoritarian. Interviews indicated that the rigid organizational member was highly accepting of organizational authority.

Cognitive rigidity was considered to be one of the major dimensions of authoritarianism by Adorno (1964) and his colleagues. Frenkel-Brunswik (1957) proposed that

the characteristics of rigidity were: a rigid adherence to internalized standards; an inability to tolerate more complex, conflicting or open structures; a desire for a black and white dichotomy, a quest for unqualified certainty; a mechanical repetition of faulty hypotheses; an intolerance of ambiguity and an orientation to the concrete. Millon (1957) using the auto kinetic phenomenon (a moving light) found that high scorers on the California F Scale were quicker to establish norms. Under conditions of high involvement the authoritarian subjects resisted change in situations which generally produced change.

In reviewing several of his own studies on authoritarianism Harvey (1963) provided evidence that authoritarianism led to faster, more rigid structuring of novel material. Moreover, it was noted that authoritarians ward off changes in their concepts. Hence, Kirscht and Dillehay were prompted to conclude that:

Cognitive rigidity and haste in resolving conceptual ambiguities seem to be characteristics of authoritarian persons (p.46)

Further evidence connecting organizational accommodation and authoritarianism was presented by Vaughan and White (1966) in a study that showed conformity was associated with higher scores on authoritarianism. Crutchfield (1955) and Canning and Baker (1959), using the F Scale discovered tendencies toward greater conformity

among authoritarian subjects.

Importance of Study

The merit of an investigation of organizational accommodation, authoritarianism and cognitive rigidity is upheld by Kirscht and Dillehay (1967) who indicate that complex organizations are fruitful research sites.

Moreover, they state that:

on one hand, authoritarian dispositions can be treated as a factor mediating effects of situational, role, and structural variables on performance and attitudes. On the other hand, researchers may study organizational effects on personality itself. (pp. 125-126)

Regarding this contention they point specifically to the work of: Siegel and Siegel (1956) - organizational effects on personality; Levinson (1959) - role, personality and social structure; and a previously cited study by Lieberman (1956). Merton (1957) provides additional support when he states that:

the bearing of bureaucratic structure upon the development of an occupational personality constitutes an avenue of fruitful study - one which requires more cumulative empirical research than it has been accorded. (pp. 124-125)

To conclude, a rationale has been presented indicating that acculturated members of organizations, both conformists and upward-mobiles, tend to be both authoritarian and rigid. Furthermore, evidence in the literature

suggests that such individuals undergo considerable attitude change in accommodating to the organization. Therefore, this study was designed to empirically test this proposed theory in the particular context of a school system.

CHAPTER III

THE STUDY

Research Design

This investigation was confined to British Columbia School District #61 (Greater Victoria) and the Faculty of Education, University of Victoria. The population was defined as the total number of teachers and administrators employed by District #61 during the school year, 1971-72, and all students enrolled in the Faculty of Education who were in their professional year during the same period. Within this population four groups were delimited for study. A representative sample of forty professional year students was selected with the assistance of the university. For each of the remaining non-university groups a sample consisting of forty individuals was chosen at random in each category.

The specific description of each group was as follows:

1. Non-members: individuals enrolled in the professional year in the Faculty of Education, University of Victoria.
2. Initial-members: individuals with less than five years teaching experience.
3. Acculturated members (Conformists): individuals with fifteen or more years teaching experience.

4. Acculturated members (Upward-mobiles): individuals with fifteen or more years professional experience who have held one or more administrative positions for a period greater than five years.

Figure 1 below illustrates the postulated relationships between groups and dependent variables.

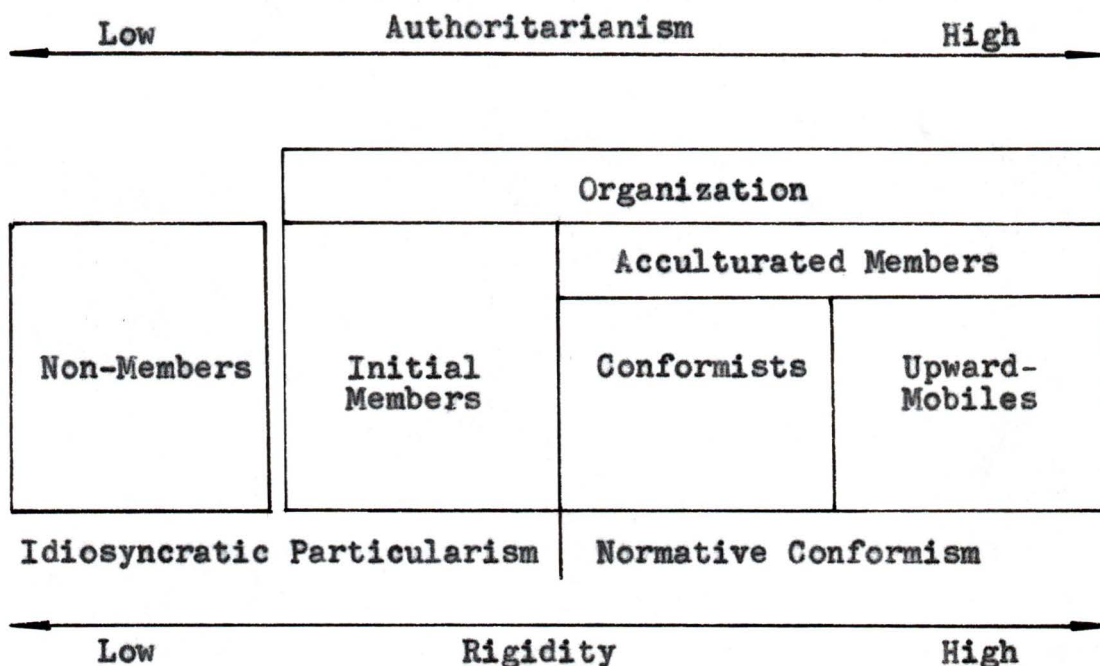


Figure 1. Theoretical Relationships Between Groups.

In line with the theory discussed previously (Presthus, 1959, 1962) the following rationale was developed.

First, non-members had had only superficial contact with the organization (a school system) while initial members had only limited exposure to its normative forces.

Therefore, it was proposed that both these groups would rank low on measures of authoritarianism and rigidity.

Secondly, acculturated members, both conformists and upward-mobiles, were considered to have attitude systems that were convergent, similar, resistant to change, and accepting of authority. Moreover, as previously contended these groups had vested interests in the maintenance and preservation of the organizational status quo. Hence, it was maintained that on measures of authoritarianism and rigidity both groups would obtain high scores.

Finally, the left hand side of the model was labelled idiosyncratic particularism because members of these groups would tend to have attitude systems that were divergent and particular to each individual. The term normative conformism was applied to the right hand side. Here, attitudes were convergent and increasingly stable. Thus, this side provided for cohesion and equilibrium within the organization.

Hypotheses

In order to empirically investigate the proposed

relationships the samples drawn from the groups were measured on Form 45-40 of the California F. Scale (Adorno et al., 1964) and the Fx (Flexibility) Scale taken from the California Psychological Inventory (Gough, 1956).

The following hypotheses were tested using the .05 level of significance:

- H₁ There will be no significant difference between non-members and initial members on the California F Scale.
- H₂ There will be a significant difference between non-members and conformists on the California F Scale. Conformists will obtain the higher mean score.
- H₃ There will be a significant difference between non-members and upward-mobiles on the California F Scale. Upward-mobiles will obtain the higher mean score.
- H₄ There will be a significant difference between initial members and conformists on the California F Scale. Conformists will obtain the higher mean score.
- H₅ There will be a significant difference between initial members and upward-mobiles on the California F Scale. Upward-mobiles will obtain the higher mean score.

- H₆ There will be no significant difference between conformists and upward-mobiles on the California F Scale.
- H₇ There will be no significant difference between non-members and initial members on the Fx Scale.
- H₈ There will be a significant difference between non-members and conformists on the Fx Scale.
Conformists will measure as more rigid.
- H₉ There will be a significant difference between non-members and upward-mobiles on the Fx Scale.
Upward-mobiles will measure as more rigid.
- H₁₀ There will be a significant difference between initial members and conformists on the Fx Scale.
Conformists will measure as more rigid.
- H₁₁ There will be a significant difference between initial members and upward-mobiles on the Fx Scale.
Upward-mobiles will measure as more rigid.
- H₁₂ There will be no significant difference between conformists and upward-mobiles on the Fx Scale.

These hypothetical group relationships are illustrated diagrammatically by Figure 2.

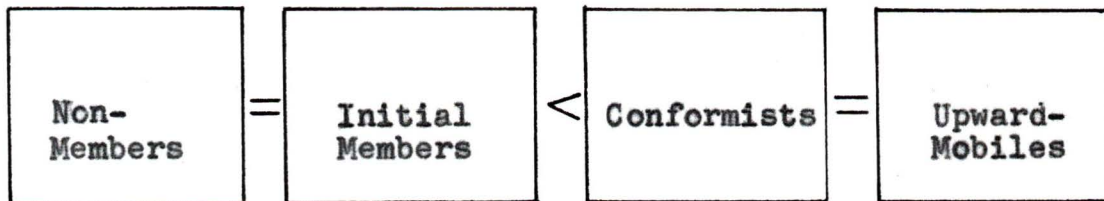


Figure 2. Hypothetical group relationships with regard to Authoritarianism and Cognitive Rigidity.

In addition to testing these hypotheses the data were examined to see if the following exploratory questions could be answered:

1. What relationship, if any, exists between age and authoritarianism?
2. What relationship, if any, exists between sex and authoritarianism?
3. What relationship, if any, exists between age and rigidity?
4. What relationship, if any, exists between sex and rigidity?

Instrumentation

A. The California F Scale. The California F Scale was developed by Adorno and his associates and used as one of the instruments in their monumental study, The Authoritarian Personality (Adorno et al., 1964).

During this investigation it was revised several times in order to increase its internal consistency and discriminatory power. Since then it has received much scholarly attention having been used, criticized, and revised extensively.

This device was selected as the measure of authoritarianism in this study for the following reasons. First, Presthus (1962, p.122) indicated that the attitudes measured by the F Scale were congruent with his upward-mobile type. Secondly, studies of organizations using measures of general authoritarianism, such as Rokeach's Dogmatism Scale (Rokeach, 1960, pp. 71-80) have yielded rather inconclusive results. Thirdly, it has been generally agreed that the F Scale is a measure of conservative ideology rather than a measure of general authoritarianism. This indicated that it should be a suitable device to examine the theory presented in this study. Finally, examination of the content of the scale suggested that it was an adequate instrument for testing the proposed hypotheses regarding authoritarianism.

Reliability of Form 45-40 of the F Scale is indicated in Table 1. It should be noted that this form has a mean reliability of .90. The discriminatory powers of the scale items are shown in Appendix E. With regard to validity, the F Scale yielded high correlations (.52 to .77) with the other scales used in The Authoritarian Personality (Adorno et al., 1964, pp. 262-265). However, these scales are not measures of authoritarianism. Nevertheless high correlations (.54 to .77) with the Dogmatism Scale (Rokeach, 1960, pp. 71-80) are significant in terms of this study. Further evidence of validation by case studies is provided in The Authoritarian Personality (Adorno et al., 1964, pp. 269-278). Moreover, Presthus' acceptance of the scale indicated a degree of content validity. Finally, the design of this study provided for additional checks of reliability and validity. These will be discussed later.

Note was now taken of the extensive criticism the F Scale had received. The work of Kirscht and Dillehay (1967) and Hyman and Sheatsley (1954) was especially valuable in this regard. Of major importance to this investigation were criticisms regarding: difficulties in the interpretation of scores; and the problem of response bias. First, difficulties in the interpretation of scores was a problem with all attitudinal

TABLE 1

Reliability of the F Scale (Forms 40 and 45)

Group	N	Reliability Split-Half	Mean	S.D.	Range
Form 40:					
Geo. Washington Univ. Women	132	.84	3.51	.90	1.2 - 5.4
California Service Club Men	63	.94	4.08	1.03	1.8 - 7.0
Middle-Class Men	69	.92	3.69	1.22	1.3 - 6.7
Middle-Class Women	154	.93	3.62	1.26	1.1 - 6.7
Working-Class Men	61	.88	4.19	1.18	1.8 - 6.9
Working-Class Women	53	.97	3.86	1.67	1.3 - 6.6
Los Angeles Men	117	.92	3.68	1.17	1.1 - 6.0
Los Angeles Women	130	.91	3.49	1.13	1.2 - 5.8
Mean^a	779	.91	3.76	1.20	1.3 - 6.4
Form 45:					
Testing Class Women	59	.89	3.62	.99	1.3 - 5.9
San Quentin Men Prisoners	110	.87	4.73	.86	2.0 - 6.8
Psychiatric Clinic Women ^b	71	.94	3.69	1.30	1.0 - 6.3
Psychiatric Clinic Men ^b	50	.89	3.82	1.01	1.7 - 5.9
Mean	290	.90	3.96	1.04	1.5 - 6.2
Form 40 and Form 45:					
Employment Service Men Veterans	106	.89	3.74	1.04	1.2 - 5.8
Maritime School Men	343	.81	4.06	.77	1.6 - 6.1
Mean^a	449	.85	3.90	.90	1.4 - 5.9
Over-all mean	1518	.90	3.84	1.10	1.4 - 6.3

^aIn obtaining the combined group means, the individual group means were not weighted by N.

^bDue to a substitution of forms the F scale for the Psychiatric Clinic subjects contained only 28 items.

survey instruments. This problem was intensified with the F Scale because it purports to measure such a complex psychological construct. Hence the Fx Scale was included in this investigation as additional aid in testing the hypothesized group relationships. Secondly, the question of response bias with regard to the F Scale has been examined by many researchers. In reviewing the literature regarding this problem Kirscht and Dillehay (1967) were prompted to state:

Even after 15 years of research the influence of acquiescence on scores from the F Scale is difficult to assess. (p.25)

Furthermore, Rorer (1965) in a thorough discussion of response bias questioned the significance of evidence on acquiescence. The whole problem of acquiescent response set appeared to stem from the fact that all twenty-nine items of Form 45-40, responded to on a seven point Likert type scale, are positively worded so that agreement with an item indicates authoritarianism. Still, it has been maintained that a tendency to agree with authoritative declarative statements is an indication of authoritarianism. From this several investigators have concluded that the use of F positive items, rather than contaminating the results, increases the discrimination and validity of the scale. Here, note should be taken

of the work of Gage, Leavitt and Stone (1957) and Gage and Chatterjee (1960). Adorno and his associates also found F positive items had higher discriminatory powers.

Many attempts have been made to revise the scale in order to improve it and eliminate the problem of response bias. Reversing the scale does not appear to work as negative forms of the F Scale tend to yield low coefficients of reliability. Moreover, there has been difficulty establishing significant relationships between F positive and F negative scales. Balanced scales have also proved to be less effective than the original scale.

With the exception of scales developed by Smith (1965) and Berkowitz and Wolken (1964) revisions of the F Scale have not improved on the original. These two scales, however, require a considerable amount of effort on the part of the respondent. Since it is doubtful that any attitude measure could withstand the critical attention given the F Scale and taking note of its shortcomings this instrument was selected for use in this study.

B. The Fx (Flexibility) Scale. This scale is one of the eighteen that make up the California Psychological Inventory (Gough, 1956). Regarding the entire inventory Kelly (1965) stated:

the CPI in this reviewer's opinion is one of the best, if not the best, available instruments of its kind (p.169)

The Fx (Flexibility) Scale consisting of twenty-two items responded to as either true or false by the respondent was derived from the Gough-Sanford Rigidity Scale. (Rokeach, 1960, pp. 418-419). It is scored so that the lower the score the higher the degree of rigidity indicated. Thus, the manual (Gough, 1969) states that low scorers tend to be:

Deliberate, cautious, worrying, industrious, guarded, mannerly, methodical, and rigid; as being formal and pedantic in thought; and as being overly deferential to authority, custom and tradition (p.11)

Test-retest correlations of .67, .60, and .49 are reported for the Fx Scale in the manual (Gough, 1967).

With regard to validity the following is reported:

- a. In an assessment sample of 40 University of California graduate students Fx correlated - .48 with staff's rating of rigidity.
- b. In an assessment study of 40 University of California Medical School seniors, Fx correlated - .36 with staff's rating of rigidity.
- c. In a college class of 180 students, Fx correlated - .58 with the California F (authoritarian personality) scale. (p.24)

Furthermore, besides the bibliography contained in the manual an additional one with more than two hundred entries concerning publications to March 1969 is provided.

Procedure

Preliminaries. In October 1971 permission to conduct

the study was obtained from: Dr. J. Wiens, Director of Instruction, School District #61; Mr. G. Wall, Director of Research, Personnel and Development, School District #61; and Dr. H. Farquhar, Dean of Education, University of Victoria. Letters asking for permission to use the measuring instruments were sent October 7, 1971 to: Harper and Row Publishers Incorporated (The California F Scale); and Consulting Psychologist Press (Fx Scale). Follow-up letters were sent on January 10, 1972. District #61 administrators were introduced to the study in early October when the author requested co-operation at:

- a. A Principals' and Vice-principals' Sub-association meeting.
- b. A regular district administrators' meeting.

Sampling. A representative sample of forty professional year students obtained from the university comprised the non-member group. The remaining three groups were selected as follows:

1. 225 individuals were selected at random from the school district's alphabetical list.
2. These persons were then assigned to groups by school district secretaries using the district's personnel files and group definitions provided by the author. 157 potential respondents were identified.
3. From these 157 names the researcher randomly assigned forty individuals to each group.

4. More than 150 telephone calls were required in order to make contact with each potential respondent.

Three refused to participate in the study. These were replaced randomly.

Data Collection. On October 28, 1971 each respondent was sent an envelope containing: copies of the California F Scale (see Appendix A); the Fx Scale (See Appendix B); a covering letter (see Appendix C); and an addressed return envelope. A follow-up letter (see Appendix D) was sent on November 8, 1971.

Final tabulation after the deadline of November 12, 1971 showed 137 returns from 160 circulated questionnaires. Rate of response for the total study was 85.63%. Percentage for each group is indicated in Table 3.

Completed questionnaires were hand scored and data sheets were prepared from which data cards were punched for computer input. Totals used for statistical analysis were machine calculated.

The California F Scale employed a five point Likert type response for each item, scored as follows: strongly disagree (1); disagree (2); undecided (3); agree (4); and strongly agree (5). Totals were arrived at by summing scores for all items. Degree of authoritarianism increases with the magnitude of the total score. The Fx Scale was responded to and scored as indicated in the California

TABLE 2
Summary of Questionnaire Response

Group	Non- Members	Initial Members	Conformists	Upward Mobiles	Total
Number Circulated	40	40	40	40	160
Number Returned	36	36	32	33	137
% Response	90%	90%	80%	82.5%	85.63%

Psychological Inventory (Gough, 1956). Lower scores indicate higher levels of cognitive rigidity.

Statistical Analysis.

1. All hypotheses and questions were tested using the .05 level of significance.
2. The data from both the California F Scale and the Fx (Flexibility) Scale were subjected to a Single Classification Analysis of Variance to test for significant differences between group means. The post hoc Scheffé Multiple Comparison of Group Means test was also employed.
3. The Kuder-Richardson Formula 20 was employed to provide reliability coefficients within and across groups.
4. As an additional check for validity Pearson Product-Moment Correlation coefficients were calculated for the two scales within and across groups (Chapter IV, p. 56).
5. The questions concerning age; authoritarianism and cognitive rigidity were investigated using Single Classification Analysis of Variance and the post hoc Scheffé Multiple Comparison of Group Means test.
6. The questions with regard to sex; authoritarianism and cognitive rigidity were examined by use of a t test.

CHAPTER IV

RESULTS

The data from 137 completed questionnaires representing an 85.63% return were subjected to statistical analysis as indicated in Chapter III. Results fell into four categories. These were: data descriptive of the sample used in this study; findings with regard to the hypotheses tested; information concerning reliability and validity; and additional findings regarding the relationship of the variables age and sex to authoritarianism and cognitive rigidity.

Descriptive Data

Table 3 indicates the distribution of respondents by sex. It is interesting to note that males and females were virtually equally represented in the total sample. The non-member and conformist groups, however, were predominantly female. Because there are no female principals or vice-principals in District #61 the upward-mobile group was entirely male. Only initial-members were equally divided with regard to sex.

Distribution of respondents by age is shown in Table 4. The nine age categories were later reduced to three in order to examine the questions regarding age, authoritarianism and cognitive rigidity.

Frequency distributions of F Scale scores are shown in Table 5. This scale had a possible range of 29 - 145.

TABLE 3
Distribution of Respondents by Sex

Sex	Non-Members	Initial Members	Conformists	Upward Mobiles	Total
Male	9	18	9	33	69
Female	27	18	23	0	68
N =	36	36	32	33	137

TABLE 4
Frequency Distribution of Respondents by Age

Category	Age	f Non- Members	f Initial Members	f Conformists	f Upward- Mobiles	f Total
1	19-25	32	9	0	0	41
2	26-30	4	17	0	0	21
3	31-35	0	5	0	0	5
4	36-40	0	3	3	3	9
5	41-45	0	2	9	11	22
6	46-50	0	0	9	6	15
7	51-55	0	0	5	8	13
8	56-60	0	0	3	2	5
9	61-65	0	0	3	3	6
	N=	36	36	32	33	137

TABLE 5
 Frequency Distributions of F Scale Scores

Category	Score	f Non- Members	f Initial Members	f Conformists	f Upward Mobiles	f Total
1	30-39	0	1	0	0	1
2	40-49	2	5	0	0	7
3	50-59	8	9	2	0	19
4	60-69	13	10	4	10	37
5	70-79	10	8	12	11	41
6	80-89	3	2	10	8	23
7	90-99	0	1	4	3	8
8	100-109	0	0	0	1	1
	N=	36	36	32	33	137

High scores indicate a high level of authoritarianism. Actual range of the total group was 38 - 103. Lack of extremes was evident as only one score fell below 40 and only one exceeded 100. Ranges for each group are shown in Table 6. Means and standard deviations within and across groups are reported in Table 7.

Frequency distributions of Fx Scale scores are indicated in Table 8. Possible range of this scale is 0 - 22. Lower scores are indicative of high levels of cognitive rigidity. Actual range of the total group was 2 - 22. Ranges for each group are shown in Table 9. Means and standard deviations within and across groups are reported in Table 10.

Results of the Tests of Hypotheses

In order to test the 12 hypotheses the data were analyzed using the statistical techniques outlined in Chapter III. All hypotheses were supported. Predicted differences all exceeded the .01 probability level.

The first six hypotheses were concerned with differences between groups on the F Scale. Analysis of variance yielded a significant F of 16.29. The underlying assumption of homogeneity of variance was supported when testing produced a non-significant chi square value of 3.23. Comparison of group means on this instrument are shown in Table 11.

TABLE 6
Ranges of F Scale Scores

		Range
Possible		29 - 145
Actual	- Group	
	1. Non-Members	49 - 87
	2. Initial Members	38 - 90
	3. Conformists	56 - 98
	4. Upward-Mobiles	62 - 103
	Total	38 - 103

TABLE 7
Means and Standard Deviations - F Scale

Group	N	Mean	S. D.
1. Non-Members	36	65.25	10.37
2. Initial Members	36	62.42	13.32
3. Conformists	32	77.38	10.32
4. Upward-Mobiles	33	76.97	10.70
Total Group	137	70.16	13.00

TABLE 8
Frequency Distribution of Fx Scale Scores

Category	Score	f Non- Members	f Initial Members	f Conformists	f Upward Mobiles	f Total
1	0-4	0	0	1	1	2
2	5-9	0	1	11	8	20
3	10-14	20	15	12	20	67
4	15-19	12	18	8	4	42
5	20-24	4	2	0	0	6
	N=	36	36	32	33	137

TABLE 9
Ranges of Fx Scale Scores

	Range
Possible	0 - 22
Actual - Group	
1. Non-Members	10 - 20
2. Initial Members	8 - 22
3. Conformists	4 - 18
4. Upward-Mobiles	2 - 18
Total	2 - 22

TABLE 10
Means and Standard Deviations - Fx Scale

Group	N	Mean	S. D.
1. Non-Members	36	14.58	3.45
2. Initial Members	36	14.36	3.48
3. Conformists	32	11.28	3.86
4. Upward-Mobiles	33	10.82	3.21
Total	137	13.00	3.86

TABLE 11
Group Mean Comparisons - F Scale

Analysis of Variance				
	M.S.	df	F	p
Groups	2074.17	3	16.29	.000002
Error	127.34	133		

Homogeneity of Variance Test	
χ^2	p
3.23	.36

Probability Matrix - Scheffé Multiple Comparison
of Group Means

	1	2	3	4
1. Non-Members		p = .77	p = .0004	p = .0006
2. Initial Members			p < .0001	p < .0001
3. Conformists				p = .99
4. Upward-Mobiles				

Hypothesis 1. There will be no significant difference between non-members and initial members on the California F Scale (SUSTAINED).

Both groups tended to measure similarly low in authoritarianism.

Hypothesis 2. There will be a significant difference between non-members and conformists on the California F Scale. Conformists will obtain the higher mean score (SUSTAINED).

Conformists measured significantly higher in authoritarianism ($p = .0004$).

Hypothesis 3. There will be a significant difference between non-members and upward-mobiles on the California F Scale. Upward-mobiles will obtain the higher mean score (SUSTAINED).

Upward-mobiles measured significantly higher in authoritarianism ($p = .0006$).

Hypothesis 4. There will be a significant difference between initial members and conformists on the California F Scale. Conformists will obtain the higher mean score (SUSTAINED).

Conformists measured significantly higher in authoritarianism ($p < .0001$).

Hypothesis 5. There will be a significant difference between initial members and upward-mobiles on the California

F Scale. Upward-mobiles will obtain the higher mean score (SUSTAINED).

Upward-mobiles measured significantly higher in authoritarianism ($p < .0001$).

Hypothesis 6. There will be no significant difference between conformists and upward-mobiles on the California F Scale (SUSTAINED).

Both conformists and upward-mobiles measured significantly higher in authoritarianism than non-members and initial members.

The remaining hypotheses dealt with proposed differences between groups on the Fx Scale. Analysis of variance, here, yielded a significant F of 11.01. The underlying assumption of homogeneity of variance was again supported when testing yielded a non-significant chi square value of 3.23. Comparison of group means on this scale are reported in Table 12.

Hypothesis 7. There will be no significant difference between non-members and initial members on the Fx Scale (SUSTAINED).

Both groups measured similarly low in cognitive rigidity.

Hypothesis 8. There will be a significant difference between non-members and conformists on the Fx Scale. Conformists will measure as more rigid. (SUSTAINED). Conformists measured significantly higher in cognitive rigidity ($p = .003$).

TABLE 12
Group Mean Comparisons - Fx Scale

Analysis of Variance				
	M.S.	df	F	p
Groups	135.11	3	11.01	.000005
Error	12.27	133		

Homogeneity of Variance Test	
χ^2	p
3.23	.36

Probability Matrix - Scheffé Multiple Comparison
of Group Means

	1	2	3	4
1. Non-members		p = .99	p = .003	p = .0003
2. Initial Members			p = .006	p = .0009
3. Conformists				p = .96
4. Upward-Mobiles				

Hypothesis 9. There will be a significant difference between non-members and upward-mobiles on the Fx Scale. Upward-mobiles will measure as more rigid (SUSTAINED). Upward-mobiles measured significantly higher in cognitive rigidity ($p = .0003$).

Hypothesis 10. There will be a significant difference between initial members and conformists on the Fx Scale. Conformists will measure as more rigid (SUSTAINED). Conformists measured significantly higher in cognitive rigidity ($p = .006$).

Hypothesis 11. There will be a significant difference between initial members and upward-mobiles on the Fx Scale. Upward-mobiles will measure as more rigid (SUSTAINED). Upward-mobiles measured significantly higher in cognitive rigidity ($p = .0009$).

Hypothesis 12. There will be no significant difference between conformists and upward-mobiles on the Fx Scale (SUSTAINED). Both conformists and upward-mobiles measured significantly higher in cognitive rigidity than non-members and initial members.

The results of hypothesis testing are summarized in Table 13.

TABLE 13
Summary of Hypothesis Testing

Hypothesis	Groups Compared	Instrument	Findings	p
1	Non-members v. Initial members	F Scale	No significant difference in authoritarianism.	.77
2	Non-members v. conformists	F Scale	Conformists significantly higher in authoritarianism	.0004
3	Non-members v. Upward-mobiles	F Scale	Upward-mobiles significantly higher in authoritarianism	.0006
4	Initial members v. conformists	F Scale	Conformists significantly higher in authoritarianism	<.0001
5	Initial members v. Upward-mobiles	F Scale	Upward-mobiles significantly higher in authoritarianism	<.0001
6	Conformists v. Upward-mobiles	F Scale	No significant difference in authoritarianism	.99
7	Non-members v. Initial members	Fx Scale	No significant difference in rigidity	.99
8	Non-members v. Conformists	Fx Scale	Conformists significantly more rigid	.003
9	Non-members v. Upward-mobiles	Fx Scale	Upward-mobiles significantly more rigid	.0003
10	Initial members v. Conformists	Fx Scale	Conformists significantly more rigid	.006
11	Initial members v. Upward-mobiles	Fx Scale	Upward-mobiles significantly more rigid	.0009
12	Conformists v. Upward-mobiles	Fx Scale	No significant difference in rigidity	.96

Reliability and Validity (ex data)

The following data based information was derived from questionnaire responses.

Reliability coefficients were calculated within and across groups for both scales using the Kuder-Richardson-Formula 20. Computed reliability coefficients for the total group were: F Scale .853; Fx Scale .732. Reliabilities for both instruments are reported in Table 14.

To test for validity Pearson Product-Moment Correlation Coefficients were calculated between the two scales within and across groups. These are shown in Table 15. All correlations are statistically significant. The correlation coefficient of $-.567$ between the two scales for the total group is noteworthy considering that a similar correlation of $-.58$ was reported in the Manual for the California Psychological Inventory (Gough, 1969, p.24).

Exploratory Questions

In order to investigate possible relationships between sex and the variables of authoritarianism and cognitive rigidity the data from the 69 male and 68 female responses on both scales were analyzed using a t test. F Scale data yielded a nonsignificant t value of $-.027$. Data from the Fx Scale also provided a nonsignificant t value of $-.371$. Complete results of the

TABLE 14
 Kuder-Richardson - Formula - 20
 Reliability Coefficients

Instrument	Non- Members	Initial Members	Conformists	Upward- Mobiles	Total
F Scale	.777	.872	.705	.814	.853
Fx Scale	.672	.692	.746	.578	.732

TABLE 15
Correlation Coefficients Between
F Scale and Fx Scale

Group	N	r
1. Non-members	36	-.312*
2. Initial Members	36	-.522***
3. Conformists	32	-.446**
4. Upward-Mobiles	33	-.474***
Total	137	-.567***

* $p < .05$ one-tailed test

** $p < .05$

*** $p < .01$

t test are reported in Table 16. Findings in this study indicated that there are no significant relationships between sex and the variables of authoritarianism and cognitive rigidity.

Before the data were examined for possible relationships between age and the variables of authoritarianism and cognitive rigidity the nine original age categories were reduced to three. These are shown in Table 17. Means and standard deviations of these groupings on both scales are reported in Table 18.

Analysis of variance of F Scale data yielded a significant F value of 10.71. The underlying assumption of homogeneity of variance was supported when testing produced a nonsignificant chi square value of 2.46. Comparisons of age group means on the F Scale are shown in Table 19. Although no significant difference was observed between groups 1 and 2, highly significant differences were recorded between groups 1 and 3; and 2 and 3. Therefore, it appears that there is a relationship between age and authoritarianism and that authoritarianism increases significantly as one gets older.

When Fx Scale data were subjected to analysis of variance a significant F value of 7.33 was recorded. The underlying assumption of homogeneity of variance was

TABLE 16
t Test of Mean Differences Between
 Males and Females

Instrument	Male N = 69		Female N = 68		df	<u>t</u>	p (two tailed test)
	Mean	S.D.	Mean	S.D.			
F Scale	70.10	12.25	70.16	13.49	135	-.027	.98
Fx Scale	12.72	3.91	12.97	3.80	135	-.371	.71

TABLE 17
Age Groupings for Analysis of
Variance

Age Group*	N	Age Range
1	41	19 - 25
2	57	26 - 45
3	39	46 - 65

*for distributions within these groups see Table 5.

TABLE 18
Means and Standard Deviations of Age Groups
F Scale and Fx Scale

Age Group	Age Range	F Scale		Fx Scale	
		Mean	S.D.	Mean	S.D.
1	19 - 25	66.66	11.41	14.22	3.47
2	26 - 45	67.46	13.38	13.07	4.15
3	46 - 65	77.69	10.73	11.08	3.20

TABLE 19
Age Group Mean Comparisons - F Scale

Analysis of Variance				
	M.S.	df	F	p
Groups	1565.97	2	10.71	.00005
Error	146.27	134		

Homogeneity of Variance Test

χ^2	p
2.46	.29

Probability Matrix Scheffé' Multiple
Comparison of Group Means

Age Group	1	2	3
1		p = .95	p = .0004
2			p = .0004
3			

supported when a non-significant chi square of 3.37 was calculated. Comparison of group means on the Fx Scale are reported in Table 20. Findings, here, are similar to those derived from F Scale data. No significant difference was observed between groups 1 and 2 while significant differences were recorded between groups 1 and 3; and groups 2 and 3. Thus, it appears that there is a relationship between age and cognitive rigidity and that cognitive rigidity also increases significantly as one gets older.

To conclude, statistical analysis of the data collected tended to support the rationale presented in this study. Investigation of the exploratory questions indicated that age, but not sex, was positively related to the variables of authoritarianism and cognitive rigidity.

TABLE 20
Age Group Mean Comparisons Fx Scale

Analysis of Variance				
	M.S.	df	F	p
Groups	101.13	2	7.38	.0009
Error	13.70	134		

Homogeneity of Variance Test

χ^2	p
3.37	.19

Probability Matrix Scheffé Multiple
Comparison of Group Means

Age Group	1	2	3
1		p = .32	p = .001
2			p = .038
3			

CHAPTER V

CONCLUSIONS AND DISCUSSION

Conclusions

Findings in this study allow the following observations to be made about the population investigated. Firstly, professional year education students and beginning teachers tended to be low in both authoritarianism and cognitive rigidity. They also tended to be younger. Secondly, acculturated organization members, both experienced teachers and school administrators tended to be higher in authoritarianism and cognitive rigidity than the other two groups studied. Thirdly, no relationship was observed between sex and authoritarianism or between sex and cognitive rigidity. Finally, both authoritarianism and cognitive rigidity did tend to increase with age.

Conclusions arrived at from evidence gathered must remain in the realm of speculation for causality could not be established. Moreover, since the findings apply only to the organizational system studied generalizations beyond this population must be conjectural.

Results of this study indicate that cognitive rigidity is a dimension of authoritarianism as proposed by Adorno and his associates (1964, pp. 461-463). Thus, the statement of Kirscht and Dillehay (1967, p.46) that

cognitive rigidity is characteristic of authoritarian persons was supported. This is congruent with the findings of Kahn and his associates (1964).

Findings tended to give support to the contention that authoritarianism and cognitive rigidity increases in individuals as time span in the organization increases. Consequently, it might be argued that role enactment may bring about attitude change as Sarbin and Allen (1964, p. 183) asserted. There was no evidence to support the contention that authoritarian, rigid persons are attracted into the organization. On the contrary, individuals entering the organization tended, in general, to be more flexible and non-authoritarian than members who had been in the organization fifteen years or more.

Since authoritarianism and cognitive rigidity increase significantly with age in the population studied the data were subjected to an Analysis of Covariance in order to provide evidence that age alone might not account for the observed group differences. With age categories used as the covariate findings for both scales remained statistically significant ($p < .05$). Results of this analysis are reported in Table 21. Thus, it might be argued that psychological accommodation to the organization may result in increased authoritarianism and rigidity.

Upward-mobiles (school administrators) did measure

TABLE 21

Analysis of Covariance - Across Groups
 With Age Categories as the Covariate

Instrument		M.S.	df	F	p
F Scale	Groups	356.90	3	2.82	.04
	Error	126.70	132		
Fx Scale	Groups	34.85	3	2.82	.04
	Error	12.36	132		

as more authoritarian and rigid than education students and beginning teachers. Still, there was no evidence to indicate whether role enactment had effected their attitudes or whether they had been selected because they displayed attitudes congruent with the role.

Findings did, however, support the assumption that conformists (acculturated teachers) make more than an economic bargain with the organization. Their existence within it appears to bring about considerable attitude change.

Empirical evidence obtained in this study lends support to the contention that conformists and upward-mobiles are supportive of one another and are a potent force in resisting change. Further evidence of this was provided by Kelley and Volkart (1952) and Kelley (1955).

Discussion

This study provides evidence suggesting that acculturation to the organization, in this case a school system, leads to increased authoritarianism and cognitive rigidity. The organization is largely populated with and controlled by individuals who tend to be resistant to change in attitude (cf. Millon, 1957). The vested interests of acculturated members in the organizational status quo results in this group using both formal and informal means to bring about organizational accommodation

in new members. Thus, it might be contended that the bureaucracy distorts the individual to fit the organizational mould.

Furthermore, it might be argued that the organization serves to suppress that which is creative and idiosyncratic in individuals (cf. Sanford, 1964, p.100) by demanding passive acceptance of institutional norms. The organization is not, however, totally static. Where, then, are the catalysts of organizational change? Presthus (1962) contended that the ambivalents play this role. He stated that:

Despite his inability to meet bureaucratic demands, the ambivalent type plays a critical social role, namely, that of providing the insight, motivation and dialectic that inspire change (p.258).

This form of accommodation was not investigated in this study. However, it was contended previously that this mode was highly unstable and that the ambivalent was faced with the eventual choice of leaving the organization or acculturating to it (For a further discussion, see Chapter II, pp. 12-13). Although this contention is only conjecture until empirical evidence is provided to support it the organization studied can reasonably be typified as resistant to change. } ?

What implication does this have for education systems today? An interesting theory relevant to this

question is provided by Postman and Weingartner (1969). It is their belief that the most striking characteristic of the present day world is constant, accelerating, ubiquitous change. Schools they maintain, however, are generally repositories of conventional assumptions and standard practices. Within such institutions passive acceptance is preferred to active criticism and the voice of authority is valued more than independent judgement. Evidence in this study suggests that teachers and school administrators become more authoritarian and rigid as time span in the organization increases. Hence, it seems logical to assume that they tend to impart these attitudes to their students. Consequently, it might be proposed that schools do little to develop the attitudes and abilities necessary to deal adequately with social, political, economic, and cultural change.

If this argument is tenable then the rigidity and authoritarianism evident in the school system studied appears to negate the possibility of its serving the function proposed by Postman and Weingartner (1969). They asserted:

that the schools must serve as the principal medium for developing in youth the attitudes and skills of social, political and cultural criticism (p.2).

Neither is such a system likely to effectively implement contemporary educational theories such as that proposed by Glasser (1969).

It has been maintained that, within the school system investigated, there is attitude change brought about by accommodation to the organization. Note must now be taken of possible alternative explanations for the observed phenomena. First, should authoritarianism and cognitive rigidity be functions of age then the tested differences may not be primarily the result of organizational accommodation. However, time span in the organization and position in the hierarchy are associated with increasing age. Thus, the results of this study would still have significance for organizational theory.

Secondly, the findings could be indicative of a selective rather than a normative process. Flexible non-authoritarian individuals may leave the organization and rigid authoritarian ones may be selected for promotion. The first assumption is unlikely considering that most of the individuals who enter the organization remain within it. The latter, however, is possible although the study provides no empirical evidence to support it.

If organizational accommodation is marked by attitude change as indicated by Presthus (1962) and Katz and Kahn (1966) then what is the motivation for this change? Logically the answer lies in the realm of values. Woodruff and DiVesta (1948) showed that attitudes are functionally and cognitively connected with values. Rokeach (1968)

speaks of a hierarchically connected system of attitudes and values. Thus, it can be argued that the individual's value system underlies and motivates his attitudes.

Consequently, it is maintained that organizational accommodation modifies underlying values as well as surface attitudes. For as Schiebe (1970) affirms:

values are defined for new role occupants
as part of their initiation into these
roles (p.98)

It is suggested, therefore, that upward-mobiles align themselves with the organization both at the attitude and value level. Ambivalents, then, should have both value and attitude conflict with the organization. Conformists, however, may have modified their attitudes primarily for reasons of organizational survival and economic security. They may not identify strongly with the values of the organization. Hence, it is possible that the term indifferent might be correctly applied to this mode of accommodation at the value level.

Furthermore, similar attitudes might well be motivated by different values, sets of values, or orderings of values within the value systems of individuals. What is indicated, then, is a thorough empirical examination of values and organizational accommodation.

To conclude, the categories of organizational accommodation employed in this study were derived from the

three ideal modes proposed by Presthus (1959, 1962). Results of this investigation indicate that these categories are indeed useful tools in the study of organizations. Further research in varied organizational milieus utilizing such categories would seem to be desirable.

Recommendations for Further Research

The following recommendations for further research are made:

1. A study of authoritarianism and rigidity as a function of age is indicated. Authoritarianism and cognitive rigidity might be measured in age groups within and without the organization.
2. A longitudinal study of organizational accommodation should be conducted to determine if increased authoritarianism and cognitive rigidity is the result of aligning the individual's attitudes with organizational norms.
3. An investigation of the ambivalent mode of accommodation to discover whether this type endures, acculturates, or leaves the organization appears necessary.
4. Replication of this study in other organizational milieus is indicated.
5. A study might be designed to investigate the relationships between different forms of organizational accommodation and innovation and change within the organization.

6. A study of role expectations could be carried out to investigate the following question. Are those administrators and teachers who are generally considered successful high in authoritarianism and cognitive rigidity?

7. As previously mentioned studies of organizational accommodation and values should be conducted. Two questions that bear investigation are:

- a. What values are associated with different modes of organizational accommodation?
- b. What values are associated with authoritarianism and cognitive rigidity?

Summary

This study investigated postulated relationships between authoritarianism, cognitive rigidity, and organizational accommodation. It was carried out with the co-operation of British Columbia School District #61, Greater Victoria and the Faculty of Education, University of Victoria. In order to examine the rationale presented twelve major hypotheses were tested and all were supported. Results confirmed that acculturated members of the organization, both teachers and school administrators were significantly higher in authoritarianism and cognitive rigidity than student or beginning teachers.

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A P P E N D I C E S

APPENDIX A

THE CALIFORNIA F SCALE

THE FOLLOWING IS A SCALE DESIGNED TO SURVEY GROUP OPINIONS. THE BEST RESPONSE TO EACH ITEM IS YOUR OWN PERSONAL OPINION. MARK YOUR RESPONSES BY CIRCLING THE APPROPRIATE NUMBER FOR EACH ITEM.

KEY: 1. STRONGLY DISAGREE 2. DISAGREE
3. UNDECIDED 4. AGREE
5. STRONGLY AGREE

1. Obedience and respect for authority are the most important virtues children should learn. 1 2 3 4 5
2. A person who has bad manners, habits and breeding can hardly expect to get along with decent people. 1 2 3 4 5
3. If people would talk less and work more, everybody would be better off. 1 2 3 4 5
4. The businessman and the manufacturer are much more important to society than the artist and the professor. 1 2 3 4 5
5. Science has its place, but there are many important things that can never possibly be understood by the human mind. 1 2 3 4 5
6. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down. 1 2 3 4 5
7. What this country needs most, more than laws and political programs, is a few courageous, tireless devoted leaders in whom the people can put their faith. 1 2 3 4 5
8. No sane normal decent person could ever think of hurting a close relative or friend. 1 2 3 4 5

APPENDIX A (continued)

9. Nobody ever learned anything really important except through suffering. 1 2 3 4 5
10. What the youth needs is strict discipline, rugged determination and the will to fight and work for family and country. 1 2 3 4 5
11. An insult to our honor should always be punished. 1 2 3 4 5
12. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse. 1 2 3 4 5
13. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents. 1 2 3 4 5
14. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feebleminded people. 1 2 3 4 5
15. Homosexuals are hardly better than criminals and ought to be severely punished. 1 2 3 4 5
16. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things. 1 2 3 4 5
17. Every person should have complete faith in some supernatural power whose decisions he obeys without question. 1 2 3 4 5
18. Some people are born with an urge to jump from high places. 1 2 3 4 5
19. People can be divided into two distinct classes: the weak and the strong. 1 2 3 4 5
20. Some day it will probably be shown that astrology can explain a lot of things. 1 2 3 4 5
21. Wars and social troubles may someday be ended by an earthquake or flood that will destroy the whole world. 1 2 3 4 5

APPENDIX A (continued)

22. No weakness or difficulty can hold us back if we have enough will power. 1 2 3 4 5
23. It is best to use some prewar authorities in Germany to keep order and prevent chaos. 1 2 3 4 5
24. Most people don't realize how much our lives are controlled by plots hatched in secret places. 1 2 3 4 5
25. Human nature being what it is, there will always be war and conflict. 1 2 3 4 5
26. Familiarity breeds contempt. 1 2 3 4 5
27. Nowadays when so many different kinds of people move around and mix together so much a person has to protect himself especially carefully against catching an infection or disease from them. 1 2 3 4 5
28. Nowadays more and more people are prying into matters that should remain personal and private. 1 2 3 4 5
29. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it. 1 2 3 4 5

APPENDIX B

THE FX (FLEXIBILITY) SCALE

THE FOLLOWING IS A SIMILAR SCALE ONLY
IT IS RESPONDED TO BY INDICATING IF
EACH ITEM IS TRUE OR FALSE FOR YOU.
 CHOICE IS FORCED, PLEASE RESPOND TO
 ALL ITEMS. CIRCLE YOUR CHOICE.

- | | | | |
|-----|---|---|---|
| 1. | I often wish people would be more definite about things. | T | F |
| 2. | It is annoying to listen to a lecturer who cannot seem to make up his mind as to what he really believes. | T | F |
| 3. | I find that a well-ordered mode of life with regular hours is congenial to my temperament. | T | F |
| 4. | It is hard for me to sympathize with someone who is always doubting and unsure about things. | T | F |
| 5. | I often start things I never finish. | T | F |
| 6. | Our thinking would be a lot better off if we would just forget about words like "probably", "approximately", and "perhaps". | T | F |
| 7. | I never make judgments about people until I am sure of the facts. | T | F |
| 8. | A strong person will be able to make up his mind even on the most difficult questions. | T | F |
| 9. | For most questions there is just one right answer, once a person is able to get all the facts. | T | F |
| 10. | I like to have a place for everything and everything in its place. | T | F |
| 11. | I don't like to work on a problem unless there is the possibility of coming out with a clear-cut and unambiguous answer. | T | F |

APPENDIX B (continued)

- | | | | |
|-----|--|---|---|
| 12. | It bothers me when something unexpected interrupts my daily routine. | T | F |
| 13. | Most of the arguments or quarrels I get into are over matters of principle. | T | F |
| 14. | I am known as a hard and steady worker. | T | F |
| 15. | I don't like things to be uncertain and unpredictable. | T | F |
| 16. | Once I have my mind made up I seldom change it. | T | F |
| 17. | I think I am stricter about right and wrong than most people. | T | F |
| 18. | I am in favor of a very strict enforcement of all laws, no matter what the consequences. | T | F |
| 19. | I always see to it that my work is carefully planned and organized. | T | F |
| 20. | The trouble with many people is that they don't take things seriously enough. | T | F |
| 21. | I set a high standard for myself and I feel others should do the same. | T | F |
| 22. | People who seem unsure and uncertain about things make me feel uncomfortable. | T | F |

APPENDIX C

COVERING LETTER

South Park Elementary,
508 Douglas Street,
Victoria, B.C.,
October 28, 1971.

Dear

Here are the questionnaires to which you kindly agreed to respond. Would you return them completed by Friday, November 12th? You will find a self-addressed envelope enclosed. Returns should be made through the school mail.

In order to be sure that anonymity is maintained please do not identify yourself by name. Should any difficulty arise with regard to the questionnaires I can be contacted at 382-5234, during the day, and 658-8365, in the evening.

Thank you for your efforts on behalf of this study.

Yours truly,

David Allan, Principal,
South Park Elementary.

DA:la
Encl.

APPENDIX D

FOLLOW-UP LETTER

South Park School,
508 Douglas Street,
November 8, 1971.

Dear Respondent:

I would like to take this opportunity to thank you for participating in my study. Response to the telephone solicitation was most gratifying. There were only three refusals in more than one hundred fifty calls.

One small point of concern has been pointed out by some respondents. This concerns the typewritten number on the back of the return envelopes. Let me assure you that this in no way threatens anonymity. Respondents in this study were randomly assigned to four groups. The number is merely a group identification number that facilitates sorting returns. There are forty individuals in each group and absolutely no attempt is made to identify individuals. Not having informed you about this was an oversight on my part and I apologize.

Finally, let me point out that this study could not have been conducted without your time and effort on my behalf. To those of you who have made and are in the process of making returns to me I extend my thanks. If possible remaining returns should be made by this Friday.

Yours truly,

David Allan, Principal,
South Park Elementary.

DA:la

APPENDIX E

Means and Discriminatory Powers of the F Scale Items (Forms 40 and 45)^a

Item	Men's Groups				Women's Groups				Men & Women Combined			
	Mean	Rank	D.P.	Rank	Mean	Rank	D.P.	Rank	Mean	Rank	D.P.	Rank
1. (Obedience & respect)	5.41	(1)	2.70	(15)	4.67	(4)	3.91	(4)	5.04	(2)	3.31	(6.5)
2. (will power)	5.16	(4)	2.48	(20.5)	4.94	(1)	2.67	(23)	5.05	(1)	2.58	(22)
4. (Science)	4.20	(15)	2.55	(16)	4.32	(6)	2.89	(19)	4.26	(11)	2.72	(17)
6. (War and conflict)	4.69	(7)	2.32	(22.5)	4.26	(8)	2.98	(16)	4.48	(6)	2.65	(19)
8. (Supernatural power)	3.47	(22)	3.19	(5)	3.43	(18)	3.92	(3)	3.45	(20)	3.56	(4)
9. (Cheerful things)	3.80	(18)	2.52	(19)	3.71	(15)	3.14	(12)	3.76	(17)	2.83	(16)
12. (Bad Manners)	5.22	(2)	1.77	(27)	4.80	(3)	2.60	(24)	5.01	(3.15)	2.19	(26.5)
13. (Discipline & determination)	4.59	(8)	3.60	(3)	4.03	(11)	4.03	(2)	4.31	(10)	3.82	(2)
16. (Born with urge)	3.75	(19)	2.54	(17.5)	3.25	(19)	2.47	(26)	3.50	(19)	2.51	(24)
18. (Infection and disease)	4.53	(10)	2.82	(12)	4.13	(10)	3.52	(7)	4.33	(9)	3.17	(8.5)
19. (Honor)	3.50	(21)	2.74	(14)	3.11	(25)	3.12	(13)	3.31	(22)	2.93	(14)
21. (Rebellious ideas)	4.71	(6)	3.04	(7)	4.14	(9)	3.72	(5)	4.43	(7)	3.38	(5)
22. (Germany)	4.26	(14)	1.98	(24)	3.74	(14)	2.40	(27)	4.00	(14.5)	2.19	(26.5)
23. (Devoted leaders)	5.18	(3)	2.32	(22.5)	4.84	(2)	2.87	(20)	5.01	(3.5)	2.60	(21)
25/24. (Sex crimes)	4.54	(9)	3.68	(2)	4.29	(7)	4.32	(1)	4.41	(8)	4.00	(1)
26/25. (Weak and strong)	3.05	(26)	2.94	(9)	2.48	(29)	3.39	(8)	2.77	(26)	3.17	(8.5)
27/26. (Undying love)	4.09	(16)	3.76	(1)	3.21	(20)	3.66	(6)	3.65	(18)	3.71	(3)
29/27. (Astrology)	3.31	(24)	2.79	(13)	3.16	(22.5)	3.33	(10)	3.24	(24)	3.06	(11)
30/28. (Force to preserve)	2.92	(27)	2.54	(17.5)	2.47	(27.5)	2.73	(22)	2.70	(27)	2.64	(20)
31/29. (Prying)	4.34	(12)	2.98	(8)	3.66	(16)	3.02	(15)	4.00	(14.5)	3.00	(12)
33/30. (Earthquake)	2.58	(28)	1.76	(28)	2.59	(26)	2.19	(29)	2.59	(28)	1.98	(29)
34/31. (Immoral people)	3.38	(23)	2.90	(10)	3.16	(22.5)	2.85	(21)	3.27	(23)	2.88	(15)
35/32. (Wild sex life)	4.04	(17)	2.48	(20.5)	3.60	(17)	2.93	(17)	3.82	(16)	2.71	(18)
37/33. (Talk less)	4.88	(5)	2.84	(11)	4.59	(5)	3.10	(14)	4.74	(5)	2.97	(13)
38/34. (Plots)	4.32	(13)	1.97	(26)	3.99	(12)	2.54	(25)	4.16	(12)	2.26	(25)
39/35. (Homosexuals)	3.10	(25)	3.25	(4)	2.67	(24)	3.36	(9)	2.89	(25)	3.31	(6.5)
41/36. (Artists-businessmen)	2.36	(30)	1.58	(30)	1.88	(30)	1.88	(30)	2.12	(30)	1.73	(30)
42/37. (No sane person)	4.42	(11)	3.13	(6)	3.85	(13)	3.18	(11)	4.14	(13)	3.16	(10)
43/38. (Familiarity)	3.56	(20)	2.20	(25)	3.20	(21)	2.90	(18)	3.38	(21)	2.55	(23)
44/39. (Suffering)	2.54	(29)	1.70	(29)	2.47	(27.5)	2.29	(28)	2.51	(29)	2.00	(28)
Mean/person/item	4.00		2.64		3.63		3.08		3.81		2.85	

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