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ORIENTATIONS: A STUDY OF THE CHOICE OF
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MACHIAVELLIAN AND AUTHORITARIAN POWER
ORIENTATIONS: A STUDY OF THE CHOICE
OF TEACHING SPECIALITY BY
TEACHER ASPIRANTS

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
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degree of
DOCTOR OF PHILOSOPHY

BY
C. MARSHALL METZE, III

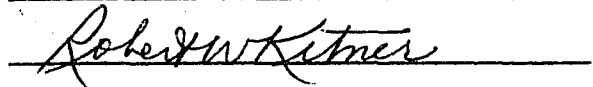
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APPROVED BY





DISSERTATION COMMITTEE

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CHAPTER I

INTRODUCTION

A consistent feature of studies on the characteristics of teachers is that the findings are remarkably inconsistent. One of the reasons for this ambiguity is the tendency to reiterate the obvious (Getzels, 1955). Another reason is that research interpretations are often based on findings which have no sound theoretical basis for contributing to a field of knowledge. Commenting on the prediction of teacher competence and effectiveness, Biddle pointed out that most of the studies in this area have "produced negligible results" (1964, p. 3); explaining this statement, he observed that the classification of behavior using terms like "warm" and "cold" was confusing because even though these characteristics could be observed there is no evidence to recommend their universal adoption in all teaching environments.

In an attempt to establish guidelines for research on teacher characteristics, the American Educational Research Association posed this question:

On what grounds in learning theory or social-psychological theory (or any other body of theory) can we justify hypothesizing that this characteristic is related to a given effect (Barr, et al., 1952, p. 255)?

There has been a tendency in research on teacher characteristics to develop experimental designs which tend to confirm society's expectation of the ethical and moral educator while avoiding the possibility of revealing characteristics of teachers threatening to the social need for the teacher to be an exemplar of virtue. One example of this tendency can be found in a widely used instrument for predicting success in teaching, the Minnesota Teacher Attitude Inventory (MTAI), which is considered by the authors as a valid measure of potentially good student relationships and satisfaction with teaching as a vocation (Cook, Leeds, & Callis, 1951). In a thorough review of studies which used the MTAI, Getzels and Jackson (1963) concluded that in view of the number of studies which indicated that there was no correlation between the MTAI and success in teaching, the MTAI could not be considered as a valid measure of attitudes about teaching. Summarizing the findings of all of the studies reviewed on teacher characteristics, Getzels and Jackson suggested the seriousness of this type of research:

The regrettable fact is that many of the studies so far have not produced significant results. Many others have produced only pedestrian findings. For example, it is said that after the usual inventory tabulation that good teachers are friendly, cheerful, sympathetic, and morally virtuous rather than cruel, depressed, unsympathetic, and morally depraved. But when this is said, not very much that is especially useful has been revealed. . . . What is needed is not research leading to the reiteration of the self-evident but to the discovery of specific and distinctive features of teacher personality (p. 574).

The problem for researchers, then, may not be the inquiry into the nature of the good teacher who may never be identified (Combs & Mitzel, 1964); the purpose of research should be oriented toward the establishment of specific teacher characteristics and, if possible, to define those characteristics in terms of educational environments (LeFevre, 1967; Getzels & Jackson, 1963). Another problem is that research should attempt to identify those characteristics using established psychological theory rather than developing a separate and questionably valid approach (see Meux & Smith, 1964; Ryans, 1960; Amidon & Flanders, 1963).

As the tendency to select teaching based on a consciously expressed need for power, group leadership, and guaranteed superiority (Redl & Wattenberg, 1959, pp. 479-482) has been indicated, it seems that these expressed motives, interpreted by the use of psychological theory, could establish the possibility of determining specific traits most compatible to various teaching environments. One of the reasons that it is difficult to interpret various

data like the need for group leadership is the tendency to distort theory and to describe teachers in equalitarian terms. The teacher has been accepted as an authority figure in the classroom (Washburne, 1957; Becker, 1953; Baron & Tropp, 1961; Anderson, 1959), but the need for power and guaranteed superiority are not compatible with that equalitarian type of teacher who is a group leader, at least in consciously expressed terms.

There is a tendency in educational literature to use the term leadership to describe the actual and potential behavior of the teacher in the classroom (Bruce & Holden, 1957; Bany & Johnson, 1964). From the standpoint of psychological theory, it is difficult to consider the teacher as a leader in most classroom settings; leadership can be clearly differentiated from headship or domination, the actual position of the teacher.

The principal differentia are these: (i) Domination or headship is maintained through an organized system and not by spontaneous recognition, by fellow group members, of the individual's contribution to group goals. (ii) The group goal is chosen by the head man in line with his interests and is not internally determined by the group itself The authority of the head derives from some extra-group power which he has over the members of the group, who cannot meaningfully be called his followers. They accept his domination, on pain of punishment, rather than follow (Gibbs, 1954, p. 882).

The concept of leadership is probably more compatible with democratic ideals and society's expectation of the teacher than the recognition of headship or domination status.

However, it is important to consider the possibility that

the headship status of the teacher may be an unconscious determinant of the choice of a teaching career.

An important distinction can be made between the use of the term leadership on the social level and the use of the term headship in psychological interpretation. Role theory has indicated that the accurate perception of a role is not a prerequisite for the behavior to occur; in terms of teaching, it may be concluded that a teacher does not need to be accurate in describing the teaching role for the behavior to occur; the teacher may consider the teaching role as leadership even though the actual behavior must be interpreted in headship performance.

Role-taking is very important for studying the headship role of the teacher (Mead, 1934; Coutu, 1951; Turner, 1956; Turner, 1962; Sarbin, 1943).¹ Role-taking is the fixed attitude about the headship role of the teacher. Since the teacher does not need to be aware of role-taking, a cognitive activity, the choice of a teaching career could theoretically be influenced by role-taking cognitions of the headship role of the teacher; the implication can be made, then, that the choice of a teaching specialty is related to the role-taking of a headship position. When teachers and teacher aspirants profess conscious needs for group leadership, it may be concluded that they are actually accepting

¹See Appendix F.

the role-taking cognitions of headship and domination of students in the classroom.

Because there is a tendency to refer to the teacher as a leader and paradoxically to recognize the teacher as an authority figure in the classroom (Becker, 1953; Boyan, 1967; supra, p. 4), a finer distinction needs to be drawn between authority of position and authority of leadership. Barnard (1938) held that authority of position is independent of personal ability and that authority of leadership rests on the superior ability of the individual without regard for the position he occupies.

A teacher can be considered as holding authority of position because this authority is delegated to the teacher by an extra-group power, the school administration. There may be settings within the teaching professions where authority of leadership could be a co-dimension of position; this would be necessary, for example, to obtain the number of students and the quality in those students needed for the development and success of a particular program.

A football coach must rely somewhat on his personal charisma to get qualified student athletes to try out for a team although peer acceptance is also a factor. If a school has a winning tradition, the football team will usually have enough interested students out for the team; this winning attitude becomes routinized and the charisma of the head coach may no longer be necessary for the continuation of the

team's success. However, if the performance level of the team should decline, resulting in a losing season or two, then the head coach must either exercise his charisma, under rather difficult circumstances, or the students and fans will abandon the team. The authority of leadership is quite important in this type of situation; the authority of position of the coach occurs only when the winning tradition becomes routinized.

This example was based on the outline of routinization of authority from charismatic leadership to bureaucratic leadership as developed by Weber (Gerth & Mills, 1946). A coach always has authority of position but as long as membership on teams is somewhat voluntary, he must also manifest authority of leadership. A distinction can be made, then, between a teacher who has authority of position and leadership and one who has only authority of position. Authority of position is the status of the teacher in those teaching specialties where enrollment is compulsory, e.g., in secondary schools, English, social sciences, etc., that do not require a teacher with authority of leadership. Following Gibb's definition (1954), authority of position is headship; if a teacher is placed in control of a group of students who have no voluntary membership status in the group, the teacher is not a leader but a head.

Power orientations, i.e., authority orientations, have been the objective of a considerable number of studies of

organizational structures and occupational groups. There seems to be some general agreement that official and formal positions require an entirely different type of power and authority than the type of control which is maintained by personal qualities, i.e., authority of leadership (Barnard, 1938; Bennis, 1959; Seeman & Morris, 1950; Etzioni, 1961; Bass, 1960). Some efforts to classify the power from authority in formal positions are:

1. direct physical power, rewards and punishments, and influence and opinion (Russell, 1938);
2. coercion, manipulation, authority, and persuasion (Gilman, 1962);
3. reward, coercive, referent, legitimate, and expert (French & Raven, 1959).

By considering the role of the teacher, it is easy to see that power orientations could fall at least into two categories: (1) manipulative or persuasive and (2) coercive or punitive. The administration of this power in the classroom is ecological control, the actual modification of social and/or physical environment (Cartwright, D., 1965). If the group or individual is not aware of the ecological control, the behavior of the power source, such as the teacher, can be considered manipulative (Gilman, 1962; Rosenbert & Pearlin, 1962) and the conclusion may be drawn that coercive and punitive ecological control are very rarely subtle; exerting power through the establishment of work groups and other changes in the learning setting is a

definite form of ecological control (Gump & Sutton-Smith, 1955).

Power seems to play an important part in the activities of the classroom although there appears to be some reluctance to admit that teachers do have these manipulative-persuasive or coercive-punitive power orientations. For example, in the search² for studies related to manipulation or persuasion as a teaching behavior, Lindgren (1967) states:

Another term for guidance of learning processes is manipulation. The teacher who is taking full charge of a learning situation will manipulate the learner and the situation in an attempt to produce the desired learning. Manipulation implies maneuvering, direction, and control and is contrasted with methods that allow the learner the maximum in freedom and self-direction. It may be argued that some manipulation is necessary to arrange the learning situation and to bring the learner face to face with stimulating problems. The difficulty appears to be, therefore, in the amount and kind of manipulation that is exercised (p. 326).

Lindgren contends that the methods used by the teacher are simply a degree of domination; teacher-centered classrooms, extreme domination behaviors, are the result of inadequate training for teachers which prevents them, from a cognitive standpoint, from studying psychological needs of students and the mechanics of ecological control. Lindgren implies that directive behaviors are a typical teacher role and that manipulative activities are not necessarily as undesirable teacher trait.

²It seems pertinent to note that, in a perusal of forty-five textbooks in educational psychology, teaching methods, and foundations of education, Lindgren was the only author who used the word "manipulate" to refer to teacher behavior.

Shostrom (1967) discusses the control aspect of manipulation as teacher behavior and claims that manipulative behavior is destructive to the development of creative talent and fosters conformity. Here is his list of six "tricks" to control students in the classroom: (1) the spy system to guard against violations of the school code; (2) the pet system to reward favorite pupils; (3) suspension or threat of suspension to promote good behavior; (4) embarrassment to ridicule difficult pupils; (5) punishment through grades; and (6) unfavorable comparison with peers and siblings. The effect of manipulating teachers and their specific behaviors are not clearly defined in Shostrom's description. There appears to be a confusion between the manipulative-persuasive type of power and the coercive--punitive type of power (supra, p. 8). Each of the six tricks described by Shostrom are more similar to coercive-punitive power orientations than they are to manipulative-persuasive control. This example illustrates the tendency to evaluate teaching in quasi-moralistic terms and to ignore the possibility of a need for a change from the traditional approach of symbolizing the teacher as friendly, cheerful, and moral (supra, p. 3) to attempting to define the teacher in terms of syntality, the product of the group.

There does, however, appear to be a shift in references to authority and power in the school. Lindgren's use of manipulation to refer to motivating the learner,

Shostrom's criticism of the dangers of the manipulator, and Boyan's discussion of teacher dissatisfaction with administrative authoritarianism (1967) all point to a revision of the traditional viewpoint of the good teacher. For example, Clark and Starr (1967) have approached the motivation dimension of teacher behavior as follows:

Remember that you are trying to sell a valuable commodity. People who dislike you, your product, and your store will not buy from you.

.
That a customer must be put in a receptive mood is almost axiomatic among salesmen it is not often that we find salesmen who try to sell their products by insulting the customers. So it is with teaching. What we are after is to get learning across to the pupils. Perhaps making your subject pleasant may seem to be "sugarcoating" it. If so, remember that it is the learning that counts. Any method or device, within reason, that you can use to expedite learning is legitimate. If to expedite learning one must "sugarcoat" the subject, then do not spare the sugar (pp. 68-69).

The resemblance of selling learning to manipulation of learning processes is quite obvious. But, while these examples are not unrealistic, teachers may very well find them unpopular. One explanation may be found in the tactics of business.

Many organizations who sell directly to the individual in his own home, e.g., encyclopedias, Bibles, vacuum cleaners, etc., now refer to their activities as public relations and not "selling." One of the reasons for this switch to "public relations" from "selling" is to attract more qualified salesmen to the company; another reason is that it seems to be more noble, i.e., there is more status

involved, to have a career in public relations rather than in sales.

An explanation of the identification of certain terms as socially undesirable can be found in a study reported by Fotheringham (1966). Using a cruel-kind semantic differential technique, subjects were asked to rate these words: (1) propaganda, (2) manipulate, (3) sell, (4) persuade, and (5) motivate. Propaganda received a 2.46 mean rating; manipulate received a 3.38 mean rating; sell had a 3.88 mean rating; persuade received a 4.00 rating; motivate had a 4.82 rating (pp. 156-166). It may be observed that the subjects in the preceding study seemed to prefer to motivate and seemed to dislike, since they were both below the mean of 3.5, propaganda and manipulation.

In this introduction, the confusion produced by educational research has been mentioned and one of the reasons for this confusion has been the need for research to confirm society's expectation of the teacher as a warm and understanding leader rather than either a dogmatic or manipulative head of the classroom. The tendency for teachers to be regarded as leaders has been placed in role theory and it was concluded that role-taking cognitions, although highly related to actual behavior, did not have to be compatible with consciously expressed needs of teachers or teacher aspirants to be group leaders and to be loved. It has been indicated that ecological control of a classroom,

the teacher aspirants' perception of this control, and the possible amount of training that a teacher aspirant receives are all related to the possibility of choosing a certain type of teaching specialty where authority of position or a combination of authority of position and leadership produce role-taking cognitions about that specialty role.

Two types of teaching behavior related to role-taking cognitions of power, control, and authority in a classroom have been isolated. Although these may not be the only two types, they appear to be two specific types which may be logically related to sound psychological theory. The two types of power orientations that were isolated were (1) manipulative or persuasive and (2) coercive and punitive.

In the following chapter, some relevant literature on two scales which measure manipulative-persuasive attitudes and coercive-punitive attitudes is reviewed. The Mach IV scale, an instrument measuring Machiavellian orientations, will be discussed rather thoroughly because there are very few published studies on the scale and it seems appropriate to present as much relevant data to this study as possible. The F-scale, an instrument measuring authoritarianism, will be discussed with an emphasis upon recent modifications in the interpretation of the authoritarian syndrome.

CHAPTER II

BACKGROUND AND RELEVANT LITERATURE

Control and authority have been the subjects of speculation by power theorists for at least two thousand years (Kung-sun Yang, 300 B.C.; Kautilya, 300 B.C.). In the twentieth century, power theorists have speculated on the more complex and elusive problems of control in an industrialized community as well as the resistance and acceptance of that authority (Lasswell & Kaplan, 1950; Fromm, 1941; Parsons, 1963; Adorno, et al., 1950).

Among the group of psychologists investigating the problem of power-over-others at the Center for Advanced Study in the Behavioral Sciences, Christie (1964, p. 2) has indicated that he was attracted to power as a legitimate field of psychological research particularly when a survey of research indicated that although there were a number of speculations about leaders, most of the data were on followers.

The following review of literature on both Machiavellian and authoritarian power orientations indicates that it has been possible to develop measures of attitudes

which can predict to some degree overt behavior in interpersonal situations.

Machiavellianism

The use of the term "Machiavellian" has been traditionally assigned to those individuals, particularly politicians, who combine guile, unscrupulous behavior, tricks, deception, and cunning to achieve certain goals without regard for the effect of the means that have been used.

For the purposes of this study, the term Machiavellian (see Appendix F) refers to the characteristic or role-taking cognition which is measured by the Mach scale (see Christie, 1964; Christie & Merton, 1958; Geis, 1965; Geis & Christie, 1965).

Some assumptions which directed the development of the Mach scale were that the Machiavellian manipulator has unconventional morality, an overconcern with means rather than ends, and successfully functions in the contemporary world. Christie explained the scale by pointing out that:

In popular usage, Machiavellian means principles of conduct characterized by cunning, duplicity, and bad faith. (Machiavelli himself, it will be remembered, was notoriously unsuccessful in this sense.) It might be entitled an "operator" or "manipulator" scale, but this would be unjustifiable.

.
The items in the scale express a conception of human nature as fallible and weak, a lack of affect (i.e., the value of detachment in dealing with other people), and the use of expedient procedures in social relations (Christie & Merton, 1958).

From the short essays of Machiavelli, certain statements were selected and converted into meaningful items which would be compatible with a contemporary opinion inventory (see Appendix A).

For example, "Most men mourn the loss of their patrimony more than the death of their fathers" was edited to read, "Most men forget more easily the death of their father than the loss of their property" . . . (ibid, p. 6).

The development of the scale including reversed items to counteract response set resulted in two instruments: (1) the Mach IV scale which uses a modified-Likert scoring system and (2) the Mach V scale which uses a forced-choice format.³ The development of the Mach scale has included several correlation studies to determine if there are any substantial relationships to standardized tests.

1. Mach IV and V do not correlate significantly with verbal scores of medical college students on the Medical College Admission Test;
2. Mach IV and V do not correlate with I.Q. measures given to students in the School of General Studies at Columbia University;
3. Mach V does not correlate with the aptitude battery given at Pennsylvania State University;
4. Mach IV does not correlate with the Navy's test of ability among a group of Naval enlisted men assigned to fire control training;
5. No correlation was found between Mach IV and intelligence test scores among students in a private prep [sic] school in New York State;
6. No correlations were found between Mach IV and V scores and the ability test given by the Peace Corps among trainees . . . (ibid., p. 11).

³Although not included as part of this study, the Mach V scale can be found for reference purposes in Appendix C.

There was also no correlation between the Mach IV or V scale and the F-scale (ibid., p. 12). This was explained qualitatively:

High scorers on both scales should agree with a simple statement, "Most people are no damn good". Underlying the F scale however, is a moralistic and judging predisposition: "Most people are no damn good but they should be", whereas a high Mach might say, "People are no damn good, why not take advantage of them". Those high in authoritarianism tend to evaluate others in moralistic terms, those high in manipulateness in opportunistic terms (ibid., p. 12).

The tendency for the Machiavellian personality to select occupational roles where a higher degree of interpersonal manipulation is involved has been reported in two studies (Christie & Merton, 1958; Back, 1959) on medical students and practising physicians and one study on Washington lobbyists (Milbrath, 1959; partially reported in Milbrath, 1963); furthermore Christie commented that social psychology students score higher on the Mach scale than any other population (1964, p. 14). The tentative conclusion on this data was that "individuals who were involved in formal social roles would tend to become 'cooler' and more impersonal in dealing with others than persons whose life was spent in less formalized roles" (ibid.).

In the two studies of medical students and practising physicians (Christie & Merton, 1958; Back, 1959), those in specialty areas, specifically psychiatry and pediatrics, requiring longer periods of contact with patients appeared to attract high scorers on the Mach scale while

low scorers were attracted to surgery and obstetrics-gynecology (OBGY). This was explained by pointing out that most patients who are referred to surgeons are sent there by another doctor, usually a general practitioner; in the case of OBGY, women were reported as feeling that they are part of an assembly line operation in the doctor's examining room (Christie, 1964, p. 13).

At the other extreme, psychiatrists typically spend at least an hour a week with a patient and this process has been known to endure for years. Pediatricians are also likely to have a continuing relationship with the families which choose them.

Another aspect is the degree of interpersonal manipulation involved. By definition a psychiatrist is attempting to influence the behavior of his patients, i.e., manipulate them. A surgeon is an "operator" in the technical but not in the popular sense (*ibid.*, pp. 13-14).

In Milbrath's study of Washington lobbyists (1959, 1963), using both the Mach scale and the F-scale, lobbyists were found to be neither high nor low in authoritarianism but the Mach scale did differentiate between those lobbyists who spent most of their time with members of Congress, entertaining and talking with people in various areas; the higher the Mach score, the more frequently the behaviors occurred. Another finding was that lobbyists who had only one client had lower Mach scores than those with several clients.

Although these are the only reported studies of occupational correlates of the Mach scale, there have been several investigations of the Mach scale which are of

interest. Weinstock (1964) reported a significant positive correlation between the Mach scale and the degree of acculturation of Hungarian refugees immigrating after the rebellion of 1956; the findings were interpreted as questioning whether the acculturation was successful because the immigrants were Machiavellian or if the immigrants became more Machiavellian after adapting to the American culture.

Singer (1964) obtained a significant positive correlation between Mach scores and grade point average among male undergraduates; female undergraduates did not have the same pattern: there was, however, a significant correlation between ratings of physical attractiveness and grade point average.

One of the early investigations of the Mach scale (Exline, Thibaut, Brannon, and Gumpert, 1961) discovered that high Mach Ss cheated less than low Mach Ss; in interviews following the experiment, high Mach Ss would look the interviewer in the eye significantly longer than low Mach Ss while steadfastly denying cheating. This behavior was identified as a defensive type of manipulation and prompted another study (Geis, Christie, & Nelson, 1963) to determine if offensive manipulation would be manifested in a variety of innovative behaviors in the laboratory. The results revealed that high Mach Ss produced significantly more manipulative behaviors than low Mach Ss and the high Mach Ss

indicated that they enjoyed the experimental task more than the low Mach Ss.

These two studies were some of the attempts to validate the Mach scale as a predictor of manipulative behavior in relevant situations. Geis (1965) indicates that these relevant situations are those of highly complex interpersonal relations and, since Machiavellianism is a social characteristic, "it would be difficult indeed to conceive of 'manipulation' outside of a social context" (ibid., p. 2). In "The Con Game", Geis also reports that High Mach Ss in three-person games have a significant ability in manipulating others and they have a definite willingness to do so (1965).

Geis and Christie (1965) summarized the interpersonal tactics of those who agree with Machiavelli in five parts:

1. Testing of limits;
2. A sense of timing and opportunism;
3. Initiation and control of structure;
4. Use of ambiguity;
5. Depersonalization of others (ibid., p. 3).

A composite description of the Machiavel can be molded from the extension of these categories as outlined above.

The Machiavel is flexible and shifty in dealing with other people and tests limits by concentrating on the results of interpersonal activities. The effective manipulator has a keen sense of timing; the accepting and rejecting of offers, for example, depends to a great extent on the timing

and opportunism which is needed to obtain the perceived type of pay-off. The initiation and control of structure is the tactic of concentrating upon behaviors which are actually relevant to the successful manipulation of others; another form of control is taking over in a group situation before someone else does. In one study, (Geis, Krupat, & Berger, 1965), small groups discussed various Mach items; at the end of the discussion period, both high Mach Ss and low Mach Ss agreed that high Mach Ss showed most leadership in the group setting. The use of ambiguity, or the toleration of it, is an important quality of the Machiavel; where ambiguous dimensions of games were structured, high Mach Ss would win more often (Kosa, 1961); where the structure of the environment was inherently ambiguous, like a classroom (Singer, 1964), high Mach Ss would be definitely more successful; in the breaking of coalitions, high Mach Ss take advantage of the confusion and conflict brought on by ambiguity to successfully form more advantageous coalitions. The de-personalization of others as a Machiavellian trait occurs because the Machiavel tends to use other people for his own end; in self-other perceptions, the high Mach Ss are more accurate in predicting others' characteristics. On the other hand, high Mach Ss tend to view everyone as a relatively high manipulator where low Mach Ss are more accurate in classifying others as either high Mach or low Mach. This may be due, in part, to the tendency for the Machiavel to be

cynical and suspicious; the Machiavel does have a generally unflattering view of others.

Jones, Gergen, and Davis (1962) found that high Mach females were extremely sensitive to their impressions on interviewers; they were quite willing to change their self-presentation to adapt to the real and imagined approval and disapproval of the interviewer. High Mach Ss were seen again as being rather detached in interpersonal relations; the low Mach Ss were conscious of placing affect in social relations and emphasized more than the high Mach Ss the need for warmth in dealing with others.

In another study of flattery and ingratiation, Jones and Daugherty (1959) found that high Mach Ss tend to devalue others with the same value system if a competitive situation is anticipated; the data indicated a significant relationship between the political value dimension of the Allport-Vernon-Lindzey Study of Values (1951).

Thornburg (1967) noted that there were no statistically significant correlations between attitudes of ministerial students toward sex and Mach scores when the data were controlled for age, undergraduate major, and liberal-conservative post-baccalaureate school of religion.

Marks and Lindsay (1966) utilized the Mach V scale to examine the relationship of Machiavellianism to scholastic achievement as well as test-taking behavior on the Mach V scale. A "reliable relationship" was found between the

Mach V scale and academic achievement independent of birth order and ability; subjects were also able to increase their Mach V scores on retesting after receiving instructions about the procedure recommended by Singer (cited in Marks and Lindsay, 1966, p. 23⁴). In a discussion of the scale, the Mach scale was reported as representing both a belief factor and a skill in implementing this belief, similar to the tactics belief discussed in Milbrath (1963); the latter skill component in Machiavellianism is seen as: involving "a cognitive sensitivity or awareness of the feelings and modes of thought of others, even when there is no affect associated with this sensitivity."

Geis and Christie (1965) have considered the possibility that super-high Mach Ss are so deceptive that they would deny manipulative characteristics on an opinion inventory by deliberately scoring low and hiding their true feelings. Speculating on this possibility, Geis and Christie believe that the super-Mach Ss, if they do exist, may be relatively ineffective in real life since they fail to win in highly competitive games. Also, high Mach Ss are quite transparent; they are easy to identify.

Perhaps part of the high Mach strategy is to act open, honest, and transparent. Or, perhaps high Machs are open, honest, and transparent-appearing, but other can't believe how Machiavellian they really are (ibid., p. 21).

Tolerance of ambiguity has been found to be another characteristic of the Machiavellian person (supra, p. 21;

Budner, 1962) which is not true of the authoritarian personality. This might suggest that there is a significant negative relationship between the Mach scale and the F-scale. However, it has been shown that the Machiavel and the authoritarian (supra, p. 17) have different orientations toward morality and others; there has been no relationship between authoritarianism and Machiavellianism established.

Authoritarianism

With the publication of The Authoritarian Personality (Adorno, et al., 1950), the immediate concentration of psychological research in this area produced a large number of criticisms, reviews, and modifications (see Christie & Jahoda, 1954; Christie & Cook, 1956; Christie, Havel, & Seidenberg, 1958; Titus & Hollander, 1957; Anderson, 1959). Considering the volume of material available on the authoritarian syndrome, it seems necessary here to mention a few selected studies which were pertinent to the development of this problem.

One of the main reasons for including the F-scale in this study is that the instrument is accepted, at least, as a measure of anti-equalitarian attitudes which are observable as definite types of behaviors.⁴ As ecological control

⁴A list of the F-scale items can be found in Appendix B. As previously noted, the Mach IV items are listed in Appendix A; Mach V items are listed in Appendix C.

varies to the subject matter taught and, in the case of the elementary school, with the specific grade level where the subject is taught, the type of power that the teacher uses in the classroom would vary according to the setting where the teacher is assigned.

Some of the more recent interpretations on authoritarianism (Byrne, 1966; Brown, 1964; Stewart & Hoult, 1959) have tended to underplay some of the Freudian dimensions of authoritarianism and have concentrated on the social and psychological characteristics such as rigidity, concern with weakness, and tendencies to select occupational roles in rigid bureaucratic structures.

Westie has summarized the personality characteristics of the authoritarian syndrome as follows:

The authoritarian loves power, he wants power, and he respects power. He idealizes power and authority in others and likes to think of himself in such terms. He has nothing but disdain for the weak, the soft, the deliberative person, and prefers situations in which decisions are made for him in which clear-cut answers to problems are readily available. He is intolerant of ambiguity; that is, he wants his world to be clearly separated into the black and the white, the good and the bad, the worthy and the unworthy; and where no clear dichotomies are apparent, he makes them in his mind. He wants to boss and be bossed and is impatient with the slow, deliberate, and often ambiguous democratic processes (Westie, 1964, p. 611).

The traditional view of the authoritarian personality is a combination of rigidly ethnocentric, anti-democratic, compulsively conventional, punitive, and authority submissive characteristics, a typology based on psychoanalytic theory (Stewart and Hoult, 1959). Stewart

and Hoult suggest that a social-psychological theory be subsumed which would stress that the degree of authoritarianism varies negatively with the number of social roles the individual has mastered. They believe that the authoritarian person is one who has not had an opportunity to learn a great number of roles; role-taking cognitions, resulting from diverse experiences are essential in the development of a variety of roles. Some unsupported but interesting hunches presented by Stewart and Hoult are:

1. High authoritarians in comparison with lows are accident prone automobile drivers;
2. Occupational success of salesmen is negatively correlated with authoritarianism;
3. Number of years spent in a given job is positively correlated with authoritarianism;
4. The horizontal mobility of a given individual is negatively correlated with authoritarianism, i.e., those who have traveled a good deal are lower in authoritarianism;
5. Social scientists in comparison with physical scientists are not authoritarian;
6. Professional fiction writers, in particular, are not authoritarian;
7. Among college graduates those with a liberal arts education are less authoritarian than those with specialized education;
8. Physicians are particularly authoritarian;
9. The success of a nurse in training as measured by those in charge of training is correlated positively with authoritarianism;
10. Children of immigrants as compared to native born children are authoritarian (p. 279).

In education, there seems to be an acceptance of authoritarianism as a teacher characteristic because of the ecology of the classroom and the necessity of the teacher to be an authority figure (McGehee, 1955; Anderson, 1959; Remmers, 1963; Becker, 1953; Baron & Tropp, 1961; Gump & Sutton-Smith,

1955). In some cases, authoritarianism is disguised by the use of novel terms descriptive of behavior. Amidon and Flanders (1963) developed a system for classifying teacher behaviors as "direct" or "indirect"; direct teacher methods represented rigid approaches in the classroom and indirect teacher methods represented a very flexible use of tactics and operations. These direct methods are very similar to one dimension of the authoritarian syndrome; indirect methods resemble the tactics of the Machiavel.

McGee (1955) developed a technique for relating a teacher's score on the F scale to actual behavior in the classroom; the F scale was held to measure authoritarian readiness; by definition, authoritarian readiness is very similar to role-taking cognitions of authoritarian power orientations. The verification of authoritarian tendencies occurred when:

it was observed that a teacher was severe; the teacher grabbed, shook, or otherwise 'manhandled' a child; the teacher was abusive, one interpretation was that this individual had a particularly strong concern with anti-weakness (p. 109).

McGee reported that there was a positive relationship between the measure of authoritarian readiness and the teachers' overt authoritarianism in the classroom; no significant differences in the level of authoritarianism were reported between any of the various sub-groups such as elementary-secondary, male-female, etc.

Some speculations have been made that authoritarianism has a negative effect on classroom learning but Stern (1963) reported that of 37 studies on the relationship of cognitive gain to either democratic or authoritarian teacher behavior, 35 of the investigations revealed either no differences or, in fact, negative findings. Brookover (1945) and Anderson (1959) support the findings of Stern that there appears to be no significant relationship between the degree of authoritarianism held by the teacher and the amount of learning by students in a classroom.

Wallen and Travers (1963) reviewed the change in emphasis from the traditional authoritarian to the progressive school approach to classroom management as reflected in the "Eight Year Study" and several other projects (including Jersild, et al., 1941; Pistor, 1937; Sax & Ottina, 1958; Washburne & Raths, 1927) and summarized the findings as indicating "no important differences in terms of subject-matter mastery and superiority of the characteristics" being developed in the progressive school.

In reviewing this authority effectiveness of a teacher, Wallen and Travers (1963) stated:

Two goals would appear to be achieved through the successful exercise of an authoritarian role. First, orderliness of the interactions among pupils may be such that even if learning is not facilitated, at least it is not interfered with. The real issue is whether such orderliness is most effectively achieved through the teacher functioning as an authoritarian figure or by other means. . . . A second issue is the social development which is likely in children exposed to predominantly authoritarian teachers. Educational

folklore suggests that such a role fosters dependency and interferes with what has been rather vaguely described as self-actualization. Psychological analysis does not indicate that this is necessarily so. An authoritarian teacher may still consistently reinforce leadership behaviors in the students, provided they do not conflict with the status of the teacher or the teacher's own leadership (p. 463).

In spite of the findings that authoritarianism does not necessarily result in impairment or improvement in academic skills, there is still opposition to the authoritarian teacher in the classroom. Weiss, et al., (1963) have compared the authoritarian personality to the self-actualizing person and implied that the authoritarian personality lies at one end of a scale and the self-actualizer is found at the other. The self-actualizer is reported as concerned with mankind's problems and is calm, serene, more objective, dependent upon himself, perceptually fresh, capable of profound interpersonal relations, childlike, not well adjusted to the culture, and a model of psychological health. The authoritarians are everything a teacher would not want to be; the authoritarian person projects unconscious desires and impulses on others including sexual concerns, exposes evil and all of its sinfulness, experiences extreme anxiety and guilt, and "may have" a paranoid viewpoint toward life (pp. 277-278). This commentary is a distortion of the authoritarian syndrome and it is of interest to note that there was no data presented to support these conclusions. Perhaps the description was directed to counteract the stereotype of teachers found in popular media. For example, Gurko (1953)

isolated three main types of teachers to be found in motion pictures, short stories, and novels: (1) a tall spinster with stringy hair, bloodless lips, neurotic and hysterical behavior; (2) the gentle schoolmarm, the mother hen, a kind, timid, patient teacher that all students love; (3) the masculine, aggressive woman with tweed suits, hostile and destructive.

From an empirical viewpoint, the differences between types of teachers have produced some interesting findings. Levin, Hilton, and Leiderman (1957) indicated that women in secondary teaching were more academically oriented than elementary teachers. Wandt (1952) reported that elementary teachers had better attitudes toward authorities of the school than secondary teachers. Bruce and Holden (1957) have isolated two types of elementary teachers: (1) the motherly type with a possessive attitude toward children and (2) the drillmaster who creates very negative feelings about school. In these three studies, the authoritarian-type teacher appears as part of the educational scene.

Summary

In the discussion of the literature relevant to this study, it has been indicated that secondary teachers appear to be more oriented toward academic fields and interests; elementary teachers have less interest in academic subjects and they may be more authoritarian; the elementary teacher enjoys the superior-subordinate relationship with the school

administration, another possible indication of authoritarianism; and the mother hen and the drillmaster in teaching are both authoritarian and manipulative.

If there is a single clue to be gleaned from these studies, it is that teachers who choose a teaching specialty where motivation is quite important, e.g., those in special fields, may tend to be more manipulative in their behavior than those teachers whose role is either highly protective, like elementary teachers, or whose role is associated with academic pursuits, e.g., secondary school academic subjects like English, social studies, foreign language, etc. Also, it can be assumed that those teachers whose role is primarily protective and instructive will be more authoritarian than those teachers who are less concerned with the pupils in their classes and more concerned with the learning and academic orientation of their students.

If these assumptions are warranted, the tendency for teacher aspirants to choose a particular teaching specialty could depend upon their role-taking cognitions about teachers who have reinforced their conscious and unconscious perceptions of a teaching specialty role. Because a career in teaching involves both extensive social interactions and the acceptance of working in a fairly rigid structure, authoritarian and Machiavellian role-taking may very well relate to the type of teaching specialty and the ecological control manifested by that specialty, e.g., the age of students, the

subjects taught, and degree of interest of the teacher in teaching subjects or students.

Statement of the Problem

Following the assumptions discussed above, the purpose of this study was based on the theory that role-taking as measured by the Mach scale and the F-scale has a relationship to the teaching specialty that prospective teachers select as well as to the eventual role, i. e., behavior, that the teaching specialty and ecological control accept and reinforce; if ecological control varies according to teaching specialty, then it may be proposed that control behaviors, i. e., power orientations, also change.

The main problem of this study was to determine if Machiavellian power orientations, as measured by the Mach IV scale, differ significantly among the four groups of teacher aspirants who were divided by their choice of teaching specialty. The secondary problem was to determine if authoritarian power orientations, as measured by the F-scale, also differentiated among the four groups of teacher aspirants. Finally, although the independence of the Mach scale and the F-scale have been claimed, the third part of this study was to test the degree of relationship of these two instruments in the four groups of teacher aspirants.

Hypotheses

Based on the information discussed previously, the following hypotheses were tested:

H₁1: There are statistically significant differences among the four groups of teacher aspirants on the Mach IV scale.

H₁2: On the F-scale, there are statistically significant differences among the four groups of teacher aspirants.

H₁3: There is no statistically significant correlation between the Mach IV scale and the F-scale considering the sample as a whole as well as each of the four groups of teacher aspirants.

The method which was used in this study is described in the following chapter.

CHAPTER III

METHOD

Introduction

The primary purpose of this study was to determine if differences existed between the Machiavellian orientations of teacher aspirants and their choice of teaching specialty. The secondary purpose of this investigation was to ascertain if differences existed between authoritarian attitudes and prospective teachers' choice of teaching specialty. Because Machiavellianism and authoritarianism have been found to be independent personality characteristics, the tertiary purpose of this study was to determine if these two variables were truly independent.

Subjects

The original pool of subjects consisted of 583 students enrolled in upper-division courses in the College of Education at the University of Oklahoma. Only those subjects who could actually specify a choice of teaching specialty, i.e., what subject or grade do you want to teach most?, were included in the final sample of 460 subjects. Excluded from the final sample were those subjects who

specified nonteaching specialties in education, e.g., prospective school librarians, guidance counselors, school nurses, etc.; also excluded from the final sample were those subjects whose errors on the questionnaire made scoring impossible.

Each of the 460 subjects in the sample studied was placed into one of the following categories, their choice of teaching specialty:

1. SP (SPs)--this symbol was assigned to those teacher aspirants who chose to teach in grades K-3, the primary grades, $n_{sp}=153$;
2. SI (SIs)--this symbol was assigned to those teacher aspirants who chose to teach in grades 4-6, the intermediate grades, $n_{si}=75$;
3. SA (SAs)--this symbol was assigned to those teacher aspirants who chose to teach academic subjects in the secondary grades, $n_{sa}=135$, e.g., English, social sciences, physical sciences, biological sciences, foreign languages, mathematics, etc.;
4. SSF (SSFs)--this symbol was assigned to those teacher aspirants who chose to teach special fields subjects in the schools, $n_{ssf}=97$, e.g., music, art, physical education, home economics, business education, etc.

Instruments

There were two attitude scales used in the study: the Mach IV scale (Christie, 1964; Christie & Merton, 1958)

and the F-scale (Christie, Havel & Seidenberg, 1958). In addition, a biographical data sheet (see Appendix D) was attached to each questionnaire to provide information on the choice of teaching specialty as well as data for future research.

The Mach IV scale is a twenty item instrument which consists of ten original and ten reversal statements based on the precepts found in The Prince and the Discourses by Niccolo Machiavelli, a 14th century Florentine statesman and diplomat. The scale measures individual differences in attitudes about interpersonal manipulations and scores reflect degrees of strong cynicism, depersonalization of others, and flexible morality. Those who score high on the scale are referred to as high Mach or high Machs; those who score low are called low Mach or low Machs; in most of the studies reported, high Machs tend to dominate and manipulate low Machs, e.g., high Machs are more successful in achieving interpersonal goals and they enjoy it more.

The F-scale (Christie, Havel & Seidenberg, 1958) is a modification of the California F scale (Adorno, et al., 1950) developed to counteract response set. The F-scale has twenty items, ten original and ten reversal, and purports to measure the authoritarian syndrome. The more authoritarian one is, the more rigid, unimaginative, concerned with anti-weakness, and anti-democratic he is.

Reliability

The reliability on the Mach IV scale has been reported by Christie (1964) as being consistently between .80 and .90. In the same study, Christie reported that the average reliability for the F-scale is about .68.

Procedure

The data were collected by the use of the Opinion 50 self-administering questionnaire with subject responses recorded on a separate answer sheet (see Appendix E). The instruments were distributed in upper-division courses in the College of Education at the University of Oklahoma. After all of the questionnaires were administered, the subjects' responses to their choice of teaching specialty were used to classify them into one of four categories: (1) SP, (2) SI, (3) SA, and (4) SSF. Then, each of the answer sheets was scored by hand using a Likert-type scoring system recommended by Christie (1966) and illustrated in Appendix E.

Means were computed from the scores. To test H_{11} and H_{12} , the one-way analysis of variance was computed. The third hypothesis was tested with the Pearson product-moment correlation. The results of these computations are found in the following chapter.

CHAPTER IV

RESULTS

Although the Mach IV scale and the F-scale have been found to be independent measures of personality characteristics, it was necessary to determine if any significant relationship existed between these two scales in the sample studied. As the data were continuous, it was appropriate to use the Pearson product-moment coefficient of correlation to test the null hypothesis of no significant relationship between the Mach IV scale and the F-scale in each of the four categories of teacher aspirants as well as the total sample. The results of this process are presented in Table 1.

TABLE 1
PEARSON PRODUCT-MOMENT COEFFICIENT OF CORRELATION
Mach IV scale and F-scale

Sample	N	r	p
Total	460	-.08	NS
SP	153	-.10	NS
SI	75	.00	NS
SA	135	-.02	NS
SSF	97	-.03	NS

As there were no significant correlations, it was not possible to reject the null hypothesis; the independence of these two scales appears to be supported. Because the Mach IV scale and the F-scale were found to be independent, the one-way analysis of variance was selected to test the following hypothesis:

H_{01} : There are no statistically significant differences in Machiavellianism, as measured by the Mach IV scale, among the four teaching specialty groups of teacher aspirants.

The first step was to determine if the assumption of homoscedasticity could be met. Bartlett's test was used to test the appropriateness of the F test. The results in Table 2 indicated that homogeneity of variance could not be assumed. Since the problem of the influence of heterogeneity of variance on the true p values has been considered as relatively unimportant (see Cochran, 1947; Welch, 1951; Box, 1954; Boneau, 1960; Anderson, 1961; Boneau, 1961; Kerlinger, 1964) if the alpha level is adjusted, the one-way analysis of variance was computed to ascertain the level of significance among the four groups and to determine if adjusting the alpha level would permit rejecting the null hypothesis. The results of the analysis of variance are presented in Table 3.

It was possible to reject the null hypothesis of no differences among the four groups of teacher aspirants. To support this decision, primarily because of heterogeneity of

TABLE 3

SUMMARY OF ANALYSIS OF VARIANCE
Mach IV scale

Source	S. S.	df	M. S.	F
Between	2839.19	3	946.40	5.79***
Within	74490.19	456	163.36	
Total	77329.38	459		
*** $p < .005$ adjusted to $p < .015$				

variance, a random sample of 70 Ss per group was drawn and a one-way analysis of variance was computed in order to support the adjustment suggested above.

Box (1954) and Boneau (1960) suggested that the adjustment of an alpha level within 1% can be accepted with a great degree of certainty if the cell sizes are equal. Since the cell sizes in this study were unequal, it was decided to draw a random sample from the four groups and to compute the one-way analysis of variance on that data. 70 Ss were drawn for each cell for a total N of 280. The results of that computation are presented in Table 4.

The results of this analysis indicate that even with an adjustment of the alpha level in this sample, the F test can be accepted at the .015 level.

Since it was determined that there were differences among the four groups in Machiavellian orientations, the next step was to determine where those differences occurred.

TABLE 4

ANALYSIS OF VARIANCE FOR EQUAL CELLS
Mach IV scale

Source	S. S.	df	M. S.	F
Between	3680.65	3	1226.88	10.66***
Within	43332.55	276	115.70	
Total	47013.20	279		

***p < .005

The Newman-Keuls test was used to probe for differences between the groups. The results can be found in Table 5.

Significant differences were found between the primary group, SP, and each of the other three groups. In each of those three instances, q_r was significant at least at the .05 level.

As previously reported, the Mach IV scale and the F-scale were found to be independent measures of personality characteristics. Thus, the following null hypothesis was tested using the one-way analysis of variance.

H_{02} : There are no statistically significant differences in authoritarianism, as measured by the F-scale, among the four groups of teacher aspirants divided according to their choice of teacher specialty.

The first step was to determine if homoscedasticity could be assumed. The results of that computation are presented in Table 6.

TABLE 5

NEWMAN-KEULS TESTS ON DIFFERENCES BETWEEN ALL PAIRS OF MEANS
Mach IV scale

Treatments		SP	SA	SSF	SI
	Means	65.23	69.73	70.78	71.09
SP	65.23	--	4.50**	5.55**	5.86**
SA	69.73	--	--	1.05NS	1.36NS
SSF	70.78	--	--	--	.31NS
SI	71.09	--	--	--	--

r=2 r=3 r=4

$q_{.95}(r, 456)$ 2.80 3.36 3.69

$\sqrt{MS_{\text{error}}/n}$ $q_{.95}(r, 456)=1.24$ 3.47 4.17 4.58

Computation for harmonic mean

$$\tilde{n} = \frac{4}{\frac{1}{153} + \frac{1}{75} + \frac{1}{135} + \frac{1}{97}} = 106.67$$

**p < .05

The chi-square for Bartlett's test for homogeneity of variance was not significant and the null hypothesis was not rejected. The use of the one-way analysis of variance to test the hypothesis of no differences among the groups on the F-scale was justified without the necessity of considering

TABLE 6

BARTLETT'S TEST: HOMOGENEITY OF VARIANCE
F-scale

Group	N	n-1	$\sum x^2$	s^2	$\log s^2$	$(n-1)(\log s^2)$
SP	153	152	24291.88	159.82	2.20363	334.95176
SI	75	74	12379.52	167.29	2.22347	164.53968
SA	135	134	22303.75	166.45	2.22138	297.66492
SSF	97	96	14026.23	146.11	2.16470	207.81120
Total		456	73001.38			1004.96756

$$\log \sum x^2(73001.38) = 4.86333$$

$$\begin{array}{rcl} \log n-1 (456) & = & 2.65896 \\ \text{difference} & & 2.20437 \end{array}$$

$$\chi^2 = 2.3026 \quad 456(2.20437) - 1004.96756$$

$$= .51845 \quad \text{NS (no correction factor needed)}$$

adjustment of alpha levels. The results of that computation are presented in Table 7.

TABLE 7

SUMMARY OF ANALYSIS OF VARIANCE
F-scale

Source	S. S.	df	M. S.	F
Between	3411.66	3	1137.22	7.10***
Within	73001.38	456	160.09	
Total	76413.04	459		

***p < .005

The F test was significant at the .005 level and the null hypothesis was rejected; it was not possible to reject

the substantive hypothesis and differences among the four groups of teacher aspirants on this measure of authoritarianism are statistically supported. The probing of the differences between the groups of pairs is presented in Table 8.

TABLE 8
NEWMAN-KEULS TESTS ON DIFFERENCES BETWEEN ALL PAIRS OF MEANS
F-scale

Treatments		SA	SI	SSF	SP
	Means	69.60	72.08	74.48	76.55
SA	69.60		2.48NS	4.88**	6.95**
SI	72.08			2.40NS	4.47**
SSF	74.48				2.07NS
SP	76.55				
			r=2	r=3	r=4
		$q_{.95}(r, 456)$	2.80	3.36	3.69
$\sqrt{MS_{\text{error}}/\tilde{n}}$		$q_{.95}(r, 456)=1.23$	3.44	4.13	4.53

Computation for harmonic mean

$$\tilde{n} = \frac{4}{\frac{1}{153} + \frac{1}{75} + \frac{1}{135} + \frac{1}{97}} = 106.67$$

**p < .05

Statistically significant differences were found between three pairs of means ($p = .05$): (1) SP and SI; (2) SP and SA; and (3) SA and SSF.

With the acceptance of the two substantive hypotheses (*supra*, p. 33) and with the significant findings of the Newman-Keuls tests, it seems appropriate to present for visual inspection the total and group means for the Mach IV scale and the F-scale as well as the rank-order of those means (see Table 9).

TABLE 9
MACH IV AND F MEANS AND RANKING: LOW TO HIGH

Group	Mach IV means	Rank Order	F-scale means	Rank Order
SP	65.23	1 (lowest)	76.55	4 (highest)
SI	71.09	4 (highest)	72.08	2
SA	69.73	2	69.60	1 (lowest)
SSF	70.78	3	74.48	3
Total	68.68		73.43	

In the following chapter, these findings will be discussed and summarized:

1. Significant differences were found among four groups of teacher aspirants in Machiavellian power orientations as measured by the Mach IV scale.

2. Significant differences were found among four groups of teacher aspirants in authoritarian power orientations as measured by the F-scale.

CHAPTER V

DISCUSSION

The purpose of this study was to determine if the Machiavellian or authoritarian power orientations would be significantly different in various types of teaching specialties whose formal roles required significantly different role-taking cognitions about those roles. The results of the statistical analysis of the data collected indicate that teacher aspirants do have different power orientations and that these differences can be supported through the most powerful statistical tests. Also, the independence of the two measures, the Mach IV scale and the F-scale, was maintained; no significant correlation was obtained in any of the computations within each group or with the sample as a whole.

Machiavellianism

The rejection of the null hypothesis was complicated somewhat by the problem of heterogeneity of variance. However, since the F test is a remarkably "robust" statistic (Boneau, 1960), it was possible to accept the alternative hypothesis of differences based on the theoretical procedure

of adjusting alpha levels. This procedure involves visual inspection of the data; if the scores which are affecting the homoscedasticity can be visually identified, then the alpha level can be accepted within .01 of the probability obtained. In this case, the alpha level was adjusted to $p < .015$. In Table 5, significant differences were obtained between the primary group and each of the other three groups. The rank order of the group means presented in Table 9 indicates that the primary group of teacher aspirants had the lowest mean of all four groups. From this data, it may be concluded that primary teacher aspirants tend to be less Machiavellian than other teachers perhaps because those who choose primary teaching as a career have established rather rigid role-taking cognitions about the role of the primary teacher; this role may be perceived as protective and dominative and, from the findings of this study, is probably not viewed as manipulative. Another interpretation is that primary teacher aspirants may be less willing to admit undesirable traits about themselves than other teacher aspirants; however, none of the group means was above the item mean of 4.0 which would indicate general agreement with Machiavellian precepts. It seems appropriate to conclude that teacher aspirants are not too Machiavellian or that this particular sample of teacher aspirants was not willing to admit to agreement with the viewpoints that the items expressed.

However, since those who tend to be more Machiavellian than others tend to be more successful than those with lower Mach scores, it appears that the demands of a role might very well determine the necessary power orientation which would produce relative success. As many elementary teacher aspirants do not always have a choice of assignment in their first teaching job, it is possible that a severe role conflict could occur when an intermediate teacher aspirant was assigned to a primary classroom or vice-versa. If the Mach IV scale actually measures a person's ability to get along in contemporary society, it may be that those teachers who view teaching as a stepping stone to a more preferred occupation would score higher than those who are somewhat more dedicated to the teaching profession, e.g. special fields versus primary or academic teacher aspirants.

Authoritarianism

The rejection of the null hypothesis of no differences in authoritarian power orientations among teacher aspirants was possible with a F ratio significant at the .005 level. Also, three of the six tests computed on the groups by pairs were significant at varying levels (see Table 8). It is interesting to note that, with the exception of means which adjoin each other (see Table 9), all of the significant differences support the prediction that authoritarian power orientations do differ according to the type of teaching specialty.

Primary teacher aspirants were found to be significantly higher in authoritarianism than (1) their elementary partners, the intermediate teacher aspirants, and (2) the secondary, academic teacher aspirants. Although the primary group had a higher mean than the special fields group, no significant difference was obtained. These results seem to support the contention that certain elementary teachers are either drillmasters or mother-hens (Bruce & Holden, 1957) or that primary teachers discourage student independence and actively prevent independent problem-solving (Wright & Tuska, 1967). Wright and Tuska also point out that secondary teachers, particularly those in fields requiring independent work, may demand performance but avoid directing students; that is, they see little value in working with pupils. This, to a degree, supports the findings that academic teacher aspirants are lowest of all groups in authoritarian attitudes and are also low in Machiavellian orientations.

One explanation of the middle location of the intermediate and special fields samples is that both type of teaching activities are essentially skill building, e.g., the intermediate teacher does not have to acculturate the student to the school and this leaves more time for teaching specific facts and skills (see Vessel, 1963; Flournoy, 1964; Mehl, Mills, & Douglass, 1960); the special fields teachers are concerned not only with teaching specific skills but

many of them are concerned with public appearance and public performance and this may direct them toward a more authoritarian posture than either intermediate or academic fields (see Feirer & Lindbeck, 1964; Fest & Cobin, 1964; Bookwalter, 1964). Another conclusion which seems appropriate is that most academic fields do not usually have voluntary student enrollment and the teacher of students in these courses may be less concerned with directing behavior, i.e., getting cooperation, than in getting performance, i.e., student achievement. The special fields are often areas where the student voluntarily enrolls or, at least, special fields are rarely required as a major part of a diploma granting program. The pressures on the special fields teacher may be such that authoritarian behavior is more compatible with winning either a sports event or a music contest; the voluntary pupil may endure, tolerate, or even enjoy the authoritarian direction which is congruent with the student's valence toward achievement of a very specific goal.

Summary

This study has confirmed the independence of the Mach scale and the F-scale as independent measures of attitudes about power as personality characteristics in the four groups of teacher aspirants from upper-division courses in the College of Education at the University of Oklahoma. Supporting the two substantive hypotheses that there would be significant differences among the four groups of teacher

aspirants divided by teaching specialty on the Mach IV scale and the F-scale, there appears to be a definite statistical relationship between the role-taking cognitions of the role required in different teaching specialties and prospective teachers' tendencies to choose those specialties.

Primary teacher aspirants, in the sample studied, tend to be the most authoritarian and least Machiavellian than any of the other teaching fields. Academic teacher aspirants were neither high in Machiavellianism nor in authoritarianism; they may be considered as more laissez-faire in power orientations than any other group. Intermediate and special fields teacher aspirants were found to be quite similar in both manipulative tendencies and authoritarianism.

As the orientation of this paper was toward using the concept of role-taking cognitions about the teaching role in different teaching specialties as a determinant of either (1) manipulative-persuasive or (2) coercive-punitive power orientations, it is possible to conclude that there does appear that there are significant differences in the power orientations of teacher aspirants in the different teaching specialties as defined by this study and as measured by the Mach IV scale and the F-scale.

CHAPTER VI

IMPLICATIONS

It is possible to suggest the following implications for research based on the findings of this study:

1. The difficulties experienced with the Mach IV scale might be avoided with the administration of the Mach V scale, the forced-choice version, which has a range of 0-20, compared to the 20-140 point range of the Mach IV.

2. If the Mach IV or Mach V were administered to a similar population, it seems advisable to control for community and regional origin as well as for religious preference. Although there are no indications to prompt this suggestion, it appears that some effort needs to be exerted to qualify the extent of seriousness with reference to choosing teaching as a career.

3. Since differences between the four groups were established on both scales, an examination of the differences between the various academic and special fields teacher aspirants as well as experienced teachers in those fields seems appropriate.

4. The differences in authoritarianism among the four teaching specialty groups of teacher aspirants suggests that a follow-up study of this same sample be attempted in three or four years to ascertain if there are differences in F-scale scores and to determine if actual teaching assignments are associated with the specified teaching interests as presented in the data of this study.

5. It would be interesting to investigate teachers with at least three or four years of experience to see if they have a similar authoritarianism difference. It is doubtful that a graduate college population would produce valid results since one of the descriptions of the authoritarian person is that there is little concern for academic achievement or intellectual interests.

6. No further investigation of the independence of the Mach IV scale and the F-scale seems necessary although it would be interesting to isolate subjects who score above one standard deviation on both scales and subject their attitudes and background to closer scrutiny.

7. It would be of value to develop an observation rating scale on Machiavellian tactics in the classroom that could be used in conjunction with the Mach scale to predict classroom performance.

8. Another possible study would be to determine if student teachers receive better grades and recommendations

as the result of high Mach scores, high F scores, or other combinations.

9. The differences in Machiavellianism among the four teaching specialty groups of teacher aspirants suggests that a follow-up study of this same sample be attempted in three or four years to ascertain if there are any changes in Mach scores and to determine if actual teaching assignments are associated with specified teaching interests, i.e., choice of teaching specialty, as indicated on the questionnaire.

10. It seems appropriate to suggest that a study of teachers with more than three years of experience, selected by teaching specialty, be undertaken to see if any differences exist between the Mach scale scores.

11. The final implication is best suggested by this question: Are judgments of teacher effectiveness based on any relationship between Machiavellian behavior and deliberate attempts to manipulate students and administrators or between authoritarianism and the conscious or unconscious compliance to role-expectations of the school administrator and fellow teachers?

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APPENDICES

APPENDIX A

MACH IV ITEMS

Original items:

1. Never tell anyone the real reason you did something unless it is useful to do so.
2. The best way to handle people is to tell them what they want to hear.
3. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
4. Generally speaking, men won't work hard unless they're forced to do so.
5. Anyone who completely trusts anyone else is asking for trouble.
6. The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.
7. It is wise to flatter important people.
8. It is hard to get ahead without cutting corners here and there.
9. People suffering from incurable diseases should have the choice of being put painlessly to death.
10. Most men forget more easily the death of their father than the loss of their property.

Reversal items:

1. When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight.
2. Honesty is the best policy in all cases.
3. Most people who get ahead in the world lead clean, moral lives.
4. Most people are basically good and kind.
5. All in all, it is better to be humble and honest than to be important and dishonest.
6. Barnum was wrong when he said that there's a sucker born every minute.
7. Most men are brave.
8. There is no excuse for lying to someone else.
9. One should take action only when sure it is morally right.
10. It is possible to be good in all respects.

APPENDIX B

F-scale items

Original items:

1. No sane, normal, decent person could even think of hurting a close friend or relative.
2. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.
3. Most people don't realize how much our lives are controlled by plots hatched in secret places.
4. Most of our social problems could be solved if we could somehow get rid of the immoral, crooked, and feeble-minded people.
5. Sex crimes, such as rape and attacks on children deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse.
6. No weakness or difficulty can hold us back if we have enough will power.
7. Every person should have complete faith in a supernatural power whose decisions he obeys without question.
8. Nowadays more and more people are prying into matters that should remain personal and private.
9. Human nature being what it is, there will always be war or conflict.
10. It is essential for learning or effective work that our teachers or bosses outline in detail what is to be done and how to do it.

Reversal items:

1. An urge to jump from high places is probably the result of unhappy personal experiences rather than anything inborn.
2. If it weren't for the rebellious ideas of youth there would be less progress in the world.
3. One of the most important things children should learn is when to disobey authorities.
4. Books and movies ought to give a more realistic picture of life even if they show that evil sometimes triumphs over good.
5. It is highly unlikely that astrology will ever be able to explain anything.
6. Most honest people admit to themselves that they have sometimes hated their parents.
7. People ought to pay more attention to new ideas, even if they seem to go against the American way of life.
8. The findings of science may some day show that many of our most cherished beliefs are wrong.
9. The artist and the professor are probably more important to society than the business man and the manufacturer.
10. In spite of what you read about the wild sex life of people in important places, the real story is about the same in any group of people.

APPENDIX C

Mach V Attitude Inventory

You will find 20 groups of statements listed below. Each group is composed of three statements. Each statement refers to a way of thinking about people or things in general. They reflect opinions and not matters of fact--there are no "right" or "wrong" answers and different people have been found to agree with different statements.

Please read each of the three statements in each group. Then decide first which of the statements is most true or comes the closest to describing your own beliefs. Circle a plus (+) in the space provided on the answer sheet.

Just decide which of the remaining two statements is most false or is the farthest from your own beliefs. Circle the minus (-) in the space provided on the answer sheet.

Here is an example:

	<u>Most True</u>	<u>Most False</u>
A. It is easy to persuade people but hard to keep them persuaded.	+	-
B. Theories that run counter to common sense are a waste of time.	(+)	-
C. It is only common sense to go along with what other people are doing and not be too different.	+	(-)

In this case, statement B would be the one you believe in most strongly and A and C would be ones that are not as characteristic of your opinion. Statement C would be the one you believe in least strongly and is least characteristic of your beliefs.

You will find some of the choices easy to make; others will be quite difficult. Do not fail to make a choice no matter how hard it may be. You will mark two statements in each group of three--the one that comes the closest to your own beliefs with a + and the one farthest from your beliefs with a -. The remaining statement should be left unmarked.

Do not omit any groups of statements.

88. A. It takes more imagination to be a successful criminal than a successful business man.
B. The phrase, "the road to hell is paved with good intentions" contains a lot of truth.
C. Most men forget more easily the death of their father than the loss of their property.
89. A. Men are more concerned with the car they drive than with the clothes their wives wear.
B. It is very important that imagination and creativity in children be cultivated.
C. People suffering from incurable diseases should have the choice of being put painlessly to death.
90. A. Never tell anyone the real reason you did something unless it is useful to do so.
B. The well-being of the individual is the goal that should be worked for before anything else.
C. Once a truly intelligent person makes up his mind about the answer to a problem he rarely continues to think about it.
91. A. People are getting so lazy and self-indulgent that it is bad for our country.
B. The best way to handle people is to tell them what they want to hear.
C. It would be a good thing if people were kinder to others less fortunate than themselves.
92. A. Most people are basically good and kind.
B. The best criteria for a wife or husband is compatibility--other characteristics are nice but not essential.
C. Only after a man has gotten what he wants from life should he concern himself with the injustices in the world.
93. A. Most people who get ahead in the world lead clean, moral lives.
B. Any man worth his salt shouldn't be blamed for putting his career above his family.
C. People would be better off if they were concerned less with how to do things and more with what to do.
94. A. A good teacher is one who points out unanswered questions rather than gives explicit answers.
B. When you ask someone to do something for you, it is

- best to give the real reasons for wanting it rather than giving reasons which might carry more weight.
- C. A person's job is the best single guide as to the sort of person he is.
95. A. The construction of such monumental works as the Egyptian pyramids was worth the enslavement of the workers who built them.
B. Once a way of handling problems has been worked out it is best to stick to it.
C. One should take action only when sure that it is morally right.
96. A. The world would be a much better place to live in if people would let the future take care of itself and concern themselves only with enjoying the present.
B. It is wise to flatter important people.
C. Once a decision has been made, it is best to keep changing it as new circumstances arise.
105. A. Barnum was probably right when he said that there's at least one sucker born every minute.
B. Life is pretty dull unless one deliberately stirs up some excitement.
C. Most people would be better off if they controlled their emotions.
106. A. Sensitivity to the feelings of others is worth more than poise in social situations.
B. The ideal society is one where everybody knows his place and accepts it.
C. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
107. A. People who talk about abstract problems usually don't know what they are talking about.
B. Anyone who completely trusts anyone else is asking for trouble.
C. It is essential for the functioning of a democracy that everyone votes.

APPENDIX D

Personal History

Instructions

Please circle the number on the answer sheet which corresponds to the correct answer; or where indicated, write in the appropriate answer in the space provided on the answer sheet.

108. What was the last grade in school which you completed?
- | | |
|---------------------------|-------------------------|
| 1. 6th grade or less | 5. Some college |
| 2. 7th, 8th, or 9th grade | 6. College degree |
| 3. 10th or 11th grade | 7. Some post-graduate |
| 4. 12th grade | 8. Post-graduate degree |
109. Age:
- | | |
|------------------|----------------|
| 1. 16 or younger | 5. 23-24 |
| 2. 17-18 | 6. 25-26 |
| 3. 19-20 | 7. 27-28 |
| 4. 21-22 | 8. 29 or older |
110. Sex:
- | | |
|---------|-----------|
| 1. Male | 2. Female |
|---------|-----------|
111. What is your height in inches? (write in)
112. What is your weight in pounds? (write in)
113. What is your family's religious preference? (write in)
114. Please circle in this row the number of the category which best describes your college major. (if other, leave blank)
- | |
|--|
| 1. Physical Sciences and Mathematics (physics, chemistry, biology, etc.) |
| 2. Engineering |
| 3. Business Administration |
| 4. Social Sciences (psychology, sociology, economics, government, etc.) |
| 5. Elementary Education |

6. Humanities (English, history, philosophy, religion, etc.)
 7. Agriculture
 8. Home Economics
 9. Secondary Education
115. Please write in the number of brothers and sisters that you have.
116. Please write in the number of brothers and sisters who are older than you.
117. What sort of job do you look forward to having in another 20 years? Be as specific as possible.
118. What was the last grade in school which your father completed?
- | | |
|---------------------------|-------------------------|
| 1. 6th grade or less | 5. Some college |
| 2. 7th, 8th, or 9th grade | 6. College degree |
| 3. 10th or 11th grade | 7. Some post-graduate |
| 4. 12th grade | 8. Post-graduate degree |
119. Please circle the number on the answer sheet corresponding to your father's most recent occupation.
- | | |
|---|-------------------------|
| 1. Professional (doctor, lawyer, professor, etc.) | 4. Skilled Laborer |
| 2. Businessman or proprietor | 5. Semi-skilled laborer |
| 3. White collar worker (office worker, salesman, clerk, etc.) | 6. Domestic |
| | 7. Farmer |
| | 8. Minister |
| | 9. None of these |
120. Write a precise one or two sentence description of your father's occupation or job.
121. What type of concern does your father work for?
- | | |
|---|------------------|
| 1. Self employed | 4. Business firm |
| 2. Government agency | 5. None of these |
| 3. Institution such as school, hospital, etc. | |
122. How large a firm (agency, institution, etc.) does your father work for?
- | | |
|-------------------------|-------------------|
| 1. 9 or fewer employees | 4. 100-499 |
| 2. 10-49 | 5. 500 or more |
| 3. 50-99 | 6. does not apply |
123. What was your father's age at his last birthday? (If deceased, how many years ago?)

124. What was the last grade in school which your mother completed?
- | | |
|---------------------------|-------------------------|
| 1. 6th grade or less | 5. Some college |
| 2. 7th, 8th, or 9th grade | 6. College degree |
| 3. 10th or 11th grade | 7. Some post-graduate |
| 4. 12th grade | 8. Post-graduate degree |
125. What was your mother's age at her last birthday?
(If deceased, how many years ago?)
126. Has your mother ever been employed? (Circle as many as apply)
- | | |
|--|---|
| 1. No. | 5. While I was in elementary school. |
| 2. Before she was married. | 6. While I was in junior or senior high school. |
| 3. After marriage but before I was born. | 7. Since I've been in college. |
| 4. Before I entered elementary school. | |
127. If your mother was ever employed, please describe in a few sentences a precise job description.
128. Please circle in this row on the answer sheet any numbers which apply to years that you lived at home with both parents (not when you were away from home at school, or one or both parents were not at home for a year or more during each three year period.) For example, if you lived at home from birth to 21 or over, then circle all 8 answers.
- | | |
|----------------------------------|-------------------|
| 1. from birth to 3 years of age. | 5. from 13 to 15. |
| 2. from 4 to 6. | 6. from 16 to 18. |
| 3. from 7 to 9. | 7. from 19 to 21. |
| 4. from 10 to 12. | 8. over 21. |
129. How many separate neighborhoods did you live in before you entered college? (If more than 9, circle 9 on the answer sheet.)
130. Indicate how many of your grandparents were born in the United States.
- | | |
|-------|-------|
| 1. 0. | 4. 3. |
| 2. 1. | 5. 4. |
| 3. 2. | |
131. Where were you born? (Write in city and state. If born outside U.S.A., also write in country.)
132. What was the last town or city you lived in before attending college?

133. From what high school and in what town or city did you graduate?
134. What grade level (s) and subject (if applicable) would you like to teach? (write in)
135. You may clarify any of your above answers on the reverse side of the answer sheet if you feel it would make them easier to interpret.

APPENDIX E

Subject's answer sheet and scoring procedure

Each subject was given a questionnaire which consisted of items listed in Appendices A and B and an answer sheet which contained an equal number of answer numbers corresponding to the instrument used. These item answers used the same number system for both the original and reversal scale items although they were scored differently. A sample of the answer sheet below includes both the actual answer sheet format and, in parenthesis, the score assigned to each response, usually in the form of a circle around the number, will be found.

Answer Sheet Sample

<u>Disagree</u>			<u>Agree</u>		
Strongly	Somewhat	Slightly	Slightly	Somewhat	Strongly
1	2	3	4	5	6

(The items were scored assigning these numbers to each response)

Original items scoring

1 (1)	2 (2)	3 (3)	4 (5)	5 (6)	6 (7)
-------	-------	-------	-------	-------	-------

Reversal items scoring

1 (7)	2 (6)	3 (5)	4 (3)	5 (2)	6 (1)
-------	-------	-------	-------	-------	-------

Note: For a number of reasons, some subjects will omit one of the items. If this occurs, then the omission is scored as a 4 which neutralizes the omission more effectively than ignoring the lack of response or attempting to assign another specific score.

APPENDIX F

DEFINITION OF TERMS AND SYMBOLS

1. Authoritarianism in this study refers to a personal characteristic which includes but is not limited to these traits: (1) an overconcern with power, loving power, wanting power, respecting power (Westie, 1964), (2) an intolerance for ambiguity, (3) a dislike for weakness, (4) anti-equalitarian or anti-democratic, (5) quite conventional, and (6) those anti-democratic characteristics listed in The Authoritarian Personality (Adorno, et al., 1950, p. 228). Authoritarian role-taking refers to the fixed attitude the teacher aspirants have about the behavior of a teacher, and this could include their own perception of themselves in a teaching position, in the classroom (see 3, below).

1a. These symbols are used in association with authoritarianism: The F-scale (with hyphen) is used to refer to the scale developed with both original and reversal items (Christie, Havel, & Seidenberg, 1958) and F scale is used to refer to the California F (Fascism) scale (Adorno, et al., 1950); High F refers to a person who scores above

the mean on either the F-scale or the F scale, the plural terms are high Fs and high F Ss (Ss for subjects); those scoring below the mean on either the F-scale or the F scale are assigned these symbols, low F, low Fs, and low F Ss.

2. From the writings of Niccolo Machiavelli, these terms refer to the characteristics of persons who accept in contemporary terms the precepts of: (1) manipulative behavior, (2) tolerance for ambiguity, (3) flexible personal behavior, (4) devaluation of others, (5) cynical and suspicious, (6) a concern with ends rather than means, and other similar characteristics as developed by Christie (1964).

Machiavellianism refers to the combination of Machiavellian role-taking, fixed attitudes, and Machiavellian behavior, role manifestations of attitudes. The Machiavel is a person who has the above characteristics.

2a. These symbols are used in association with Machiavellianism: The Mach IV scale is a 20 items, modified Likert-type scale (see Appendix E) measuring agreement with Machiavellian traits as developed by Christie (1964; Christie & Merton, 1958), the Mach scale is used to refer to the Mach IV scale; The Mach V scale (see Appendix C) refers to a forced-choice form of the Mach scale but it is not used in this study; High Mach refers to a person who manifests in overt behavior the characteristics

measured by the Mach scale and the high Mach is a person who scores above the mean on the Mach scale, the plural is either high Machs or high Mach Ss; the opposite of the high Mach is the low Mach a person who scores below the mean on the Mach scale, the plural is low Machs or low Mach Ss.

3. The use of the term role in this study refers to a collection of behaviors which make up an observable and meaningful unit (Turner, 1956). A position refers to a specific location in the social system structure which requires a role. A role-performance is the overt activity of a role. A role-expectation refers to the concept that a person holds about the behavior of an other, i.e., about a role, and infers the existence of norms, attitudes, and anticipated behaviors. A role-conflict arises when a person finds a discrepancy between role-expectation and role-performance or role, this discrepancy also includes feelings of uneasiness about these inconsistencies (Thomas & Biddle, 1966). Role-taking refers to taking the role of others (Mead, 1934) and is a fixed attitude about the role of an other; the other in role-taking may refer to the future role of the self but it is not limited to it; role-taking is the cognitive activity which precedes role-making or role-playing, role-taking cognitions refers to the attitudes based on knowing about a role from actual and vicarious experience (Rosencranz & Biddle, 1964, pp. 244-246). Machiavellian role-taking

refers to the fixed attitudes about relations with others and the reaching of a goal. Authoritarian role-taking refers to the attitudes that exist about traits of authoritarianism and how people should behave.

4. In this study, teacher aspirants and prospective teachers are terms which refer to those students enrolled in upper-division education courses in the College of Education at the University of Oklahoma. The teacher aspirants are those who have committed themselves to a career in teaching and who can state which type of specialty they are interested in teaching.

4a. These terms refer to teacher aspirants and teaching specialties: (1) SP (SPs, plural), those teacher aspirants who stated that they want to teach in the primary grades, K-3; (2) SI (SIs, plural), those teacher aspirants who stated that they want to teach in the intermediate grades, 4-6; (3) SA (SAs, plural), those teacher aspirants who stated that they want to teach academic subjects in secondary schools, e.g., English, social sciences, physical sciences, biological sciences, foreign languages, mathematics, etc.; (4) SSF (SSFs, plural), those teacher aspirants who stated that they want to teach special fields in the schools, e.g., music, art, physical education, home economics, business education, etc.