AGE AND DRESS OF PROFESSORS:
INFLUENCE ON STUDENTS' FIRST IMPRESSIONS
OF TEACHING EFFECTIVENESS

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Dissertation submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY
in
Clothing and Textiles

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February 5, 1992
Blacksburg, Virginia
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(ABSTRACT)

Using the framework of attribution theory, the variables of age of professors, formality of dress of professors, and class of student were tested for their influence on college students' expectations of the teaching effectiveness of college professors in a first impression situation. A rating questionnaire containing ten positive professors' traits was developed. An older male and a younger male were photographed in black-and-white in three outfits, for a total of six photographs. The sample consisted of two groups: 179 freshmen and 175 seniors. Each student was randomly assigned one of the six photographs to rate.

A Pearson correlation of the ten traits revealed two groups of closely related traits plus some miscellaneous traits. One group represented competence and one represented approachability.

A multivariate analysis of variance indicated that the factors of age and formality were significant. Overall, the older professor rated significantly higher than the younger.
The older professor received higher scores on knowledge, preparation, and organization, while the younger professor received a higher score on sympathy toward students. The lowest formality rated the highest of the three levels, with the moderate level receiving the lowest score. The lowest level rated significantly higher on clarity of communication. This trait had the highest negative association with formality. The highest and lowest level rated significantly higher for well-prepared. The older professor in the lowest formality of dress rated the highest of all six photographs. The factor of class was not significant. There were no significant two- or three-way interactions.

Overall, results indicate that older males are expected to be more effective professors than younger males. Evidently age gives an impression of experience. Casual dress conveys the best impression. Perhaps students can relate more to professors when professors are dressed more like them.
ACKNOWLEDGEMENTS

For their help in producing this dissertation, I want to extend my gratitude to the following persons:

Dr. Lois Gurel, Chairperson of my dissertation committee, for her continual encouragement and guidance.

Dr. Marilyn Lichtman, member of my dissertation committee, for her assistance with the statistical analyses.

Dr. Marjorie Norton, member of my dissertation committee, for her expertise in research and editing.

Dr. Carolyn Moore, member of my dissertation committee, for her expertise in editing.

Dr. Samuel Morgan, member of my dissertation committee, for giving an outsider's view of research in clothing and textiles and for not allowing me to do less than my best.

Dr. Robert Frary, Director of the Computer Test Scoring Center, for his advice in constructing the questionnaire.

Mark Archibald and Bill Absher for their patience in modeling.

Gentry Studio for their photographic and reproduction skills.

The college students who participated in this research and their teachers who allowed me to use their valuable class time.
The faculty, graduate students, and secretaries of the Clothing and Textile department for their interest and encouragement.

My two children, Paul and Diana, for their years of patience and tolerance during this research.

Last, but not least, to my searcher of lost files, formater and printer of this document, and listener of my complaining and rejoicing, my husband Bill.
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CHAPTER I
INTRODUCTION

Background and Importance

A controversy continues in the research literature and among college faculty over whether student ratings of teachers are a true reflection of teachers' effectiveness. Not only do many influences in the classroom bias these ratings, but the traits that constitute a good teacher are quite varied and it is difficult for teachers to be rated well on all of them. Teachers have many roles in the classroom. They are a source of authority, a primary medium for the transmission of knowledge, and a possible trusted confidante. To facilitate these roles, it may be helpful if teachers were more aware of the influences on students' perceptions of their effectiveness.

The theories related to the perception of persons originate from social psychology. Social cognition is the study of the cognitive processes individuals use to make judgments about people (Lennon and Davis, 1989). The particular social cognition theory that applies to the present study is attribution theory, which deals with the meanings that behaviors acquire through social interactions. People make inferences about the cause of behaviors by
observing others and subsequently attributing certain traits to them (Heider, 1958; Jones and Davis, 1965; Kelley, 1971). Personal appearance, including clothing, is one of the things that is observed (Kaiser, 1985). The selecting and wearing of clothing is a behavior in itself.

The way people dress is a behavior that is a form of nonverbal communication (Rosenfeld and Plax, 1977). Other forms of nonverbal communication include distance between communicator and receiver, body positioning, hand gestures, touch, and especially facial expression. Whether we are conscious of the message or not, we still perceive it unconsciously. Nonverbal messages are often more important than verbal messages (Hatfield and Gatewood, 1978), especially when there is incongruity between the two (Carroll and Tosi, 1977). When there are contradictory messages, the nonverbal behavior is more likely to be believed (Carroll and Tosi, 1977). A qualifying condition exists in regard to whether we will attribute traits based on a behavior. When we observe others, we decide whether certain behaviors resulted from factors not under the person's control, for example, if the person was being coerced or under the influence of drugs. If the behavior did not result from these factors, we deduce that they were the result of certain personal traits.
Because of stereotypes about people who have certain appearances, a whole set of traits may be attributed to them when they are first observed (Kaiser, 1985). Until or unless their behaviors convince us otherwise, we continue to attribute these traits to them.

According to McCall (1976), a person's social identities are perceived from their appearance as well as their actions. During the course of social interactions, clothes serve to (1) negotiate identities (McCall, 1976) and (2) define the situation (Thomas, 1923). In the classroom, as in other situations, clothing may define roles, such as which person is the teacher, and, more specifically, may define personality traits, status, age, and sex (Kaiser, 1985).

Attributions of traits are made the first time a person is encountered. An impression is formed and the decision of whether or not to continue the interaction is made. In fact, it has been said that this decision is made within the first four minutes of contact (Zunin and Zunin, 1972)—or possibly within only the first three seconds (Fiel, 1991). Once an initial impression is formed it is difficult to change (Cho and Grover, 1978). People cling to it even when faced with contradictory information (Fazio and Sherman, 1982). However, it is not irreversible if the individuals
realize the assumptions may have been only superficial (Zunin and Zunin, 1972).

Not only will a first impression continue to influence perceptions of a person long after an initial encounter, but it will also be used to decide whether further interaction will ensue. The enduring effect of a first impression is called the primacy effect. Some traits, such as likableness or high intelligence, are more stable than traits related to individual efforts, such as motivation or industriousness (Greenberg, Saxe, and Bar-Tal, 1978). The more stable traits are of central importance in studying first impressions.

A series of three studies by Lennon and Davis (1988) illustrates how significant appearance is in forming first impressions. The relative importance of various categories of traits was investigated using university student as subjects. In Study 1, 33 people viewed one of three slides of a female model dressed in different clothing and rated them on a 15-statement measure. The statements consisted of five categories: appearance, attitudes, character, behavior, and demographics. In study 2, 30 people viewed one of the same three slides and were asked to estimate the percentage of their impression which was based on each of the five categories. In study 3, 39 people viewed one of the same three slides and were asked to write at least three
sentences about the person in the slide. Responses were content analyzed in terms of the five categories. For study 1 and 3, category usage was calculated by computing a percentage of the subject’s total impression for each category. From 20% to 35% of the students’ impressions were based on appearance traits—a large percentage considering the number of categories. The percentage depended on whether categories were researcher-provided or those actually used by the subjects when they wrote verbal descriptions. The results of this study demonstrated the importance of appearance in forming first impressions.

The effect of teachers’ dress, a component of appearance, on students’ perceptions of teachers’ traits has been studied by a number of researchers (Bishop, 1980; Butler and Roesel, 1989; Chowdary, 1988; Creson, 1983; Engelbach, 1978; Johnson, 1985; Lamb, 1987; Liepins, 1987; Lombardo and Tocci, 1979; Reeder and King, 1984; Rollman, 1977). These studies provided some insights into the influence of teacher dress on students’ perceptions. For example, teachers who are dressed most formally, such as in business suits, are perceived as knowledgeable and organized, while teachers wearing less formal clothing, such as casual shirts and slacks by men or casual blouses and skirts by women, are perceived as friendly and approachable.
Teachers in very unfashionable attire are perceived poorly on positive traits (Engelbach, 1978).

Despite all the studies that have been done there is still much that is unknown about the influences of teachers' dress on student perceptions. No research was found which discovered (1) whether there are differences between college freshmen's and college seniors' perceptions of teachers as affected by teacher dress, and (2) whether the age of the teacher influences students' perceptions.

Past studies have used either high school or college students as subjects. Only two teacher dress studies were found that mentioned the effect of age or class level of student (i.e., freshman, sophomore, junior, or senior). No differences were found based on age or class level for college subjects in Engelbach's study (1978). Reeder and King (1984), who used tenth- and twelfth-grade subjects, reported that only in a few instances did responses differ significantly by grade level. They did not report what those differences were. Neither age nor class were primary variables under investigation by Engelbach (1978) or Reeder and King (1984). The question of whether freshmen's perceptions of teachers differ from those of seniors in college has never really been asked in any of the reviewed research. There may be a difference between the two because of the greater maturity and number of experiences attained
by the seniors. These experiences include, of course, exposure to more professors. A difference in perceptions is important in that professors who teach primarily freshmen classes may need to dress differently from professors who teach primarily senior classes in order to facilitate student/teacher communications.

There is some evidence that perceptions of others change in the process of maturation during the college experience. White (1975), a highly respected author in the adult development field, reported on case studies following subjects from high school age to college graduation age. He found these growth trends during young adulthood: (1) the stabilizing of ego identity; (2) the freeing of personal relationships; (3) the deepening of interests; (4) the humanizing of values; and (5) the expansion of caring. In White's case studies, the high school age persons were so immersed in themselves that they failed to perceive clearly those with whom they interacted. During the college years, progress was made toward becoming more noticing of things in those with whom they interacted. Relations became more friendly, warm, and respectful. There arose a tendency to interact with others in their own right as individuals.

On the basis of White's case studies, seniors should be more tolerant while being more perceptive than freshmen when perceiving the teachers. Heilmann and Armentrout (1936) did
an analysis of students' ratings of teachers at Colorado State College of Education. They concluded that the chances are very high that the more mature student rates teachers higher. If maturation is a dominant effect in operation, then seniors should rate all professors higher than freshmen rate professors on positive traits.

An additional factor may account for a difference in ratings between freshmen and seniors. College seniors have been more exposed to professors' dress, so may judge newly encountered professors based on previous experiences. According to the concept of categorization, a concept of social cognition theory, we tend to organize stimuli into categories which we have formed based on past experiences and observations (Kaiser, 1985). These categories are called schemata; when referring to person perception, schemata may be called stereotypes. Freshmen may have inaccurate or nonexistent schemata for the social object "college professor". This is not to say that each senior's schema for "college professor" is not limited or biased.

Thus, three forces may influence ratings by students of varying class level. One is a probable lack of schemata for the concept "college professor" in freshmen's minds. Two others are an expansion of caring as well as an improvement in perceptiveness on the part of seniors.
Another unanswered question about influences on student evaluations is whether age of teacher is a factor in the effect of teacher dress on student perceptions. To the author's knowledge, this question has never been investigated. Rollman (1980) speculated that subjects' guesses about the age of the teachers may have entered into subjects' evaluations of the teachers' traits. One of Rollman's subjects reported that he envisioned the teacher dressed in informal attire as a graduate assistant. The moderately dressed teacher he envisioned as a new assistant professor. The formal style made him think of a full professor. This subject's comments suggest that increasing formality could be associated either with increasing age or increasing rank or both. If so, it could be important for graduate assistants and new, young professors to dress formally to convey such traits as organization and knowledgeability.

This speculation about the age of the teacher based on the teacher's dress could also contribute to a difference between freshmen's and seniors' perceptions. Freshmen may not know the difference between graduate assistants and professors or between professors of different ranks. Thus seniors might be more likely to distinguish between professors of different ages, thinking that they were of

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different ranks. This would lead to an interaction between the factors of class of student and age of professors.

**Purposes and General Objectives**

There were three purposes of this study. The first was to determine whether students’ first impressions were influenced by the formality of professors’ dress, as they were in previous studies reported in 1977 (Rollman) through 1989 (Butler and Roesel). Professors in more formal dress may be perceived as more knowledgeable and better organized. This may be because the wearing of business suits is traditionally associated with higher status, i.e., being well-educated, being well-off financially, and having a professional job. Professors in more casual dress may be perceived as closer in status to the student and thus more friendly.

The second purpose was to investigate whether there were differences between college freshmen and college seniors in their first impressions of professors as influenced by professors’ dress. Since seniors have had more life experiences and have had more years to mature beyond adolescence, they may be more tolerant despite being more perceptive than freshmen.

The third purpose was to investigate whether the age of
the professor influenced the students' first impressions of professors. A younger professor will be perceived as closer in age to the students and thus may be seen as friendlier than the older. The older professor may be perceived as having more years to accumulate knowledge.

It was also important to look for a possible age with formality interaction, as evidenced by the speculations about professors' ages as reported in Rollman (1980). It is commonly believed that young adults in more formal dress are perceived as older than when they wear more casual dress.

The results of this study might be useful for teachers who wish to improve their interactions with students as well as their student evaluation ratings. Administrators might use this information to help teachers improve interactions with students. For example, if a teacher has a low rating on friendliness, the teacher might try dressing less formally.

This study only looked at first impressions in that subjects were exposed to photographs of certain teachers only once and cues were limited to appearance. Long-term effects of being exposed to various states of appearance of these particular teachers were not examined; neither was inconsistency of dress. Further study might be done on the effects of dressing formally one day and informally the next.
CHAPTER II
REVIEW OF LITERATURE

Introduction

Literature was reviewed on the topics of dress as nonverbal communication, specifically, general traits conveyed by dress, traits conveyed by dress in various roles, and the effect of teachers’ dress on students’ evaluations. Background on traits conveyed by dress was necessary in order to know which ones are attributed and what effect they have. Since these traits may be related to the roles that are being portrayed in any situation, literature relevant to this topic was reviewed, especially relating to the role of teacher. Relevant to the variable of age of professor was literature on how the age of the perceived affects attributions. Finally, the general topic of real in-classroom student evaluations of teachers was reviewed to see which traits were most often evaluated and to discover any effects of the age of the teacher or the class level of the student.
General Traits Conveyed by Dress

Among the personal traits included in attribution studies were competence, credibility, expertness, trustworthiness, helpfulness, and intelligence. Other traits were talent, sincerity, imagination, likability, respect, and ability as a writer. Some of these traits may be comparable to traits that are considered important for professors. Competence and credibility may be comparable to "knowledge of subject matter," and "likability" may be comparable to "friendliness toward students."

The influence of attire on perceptions of competence and credibility has been shown by a number of researchers. Bassett (1979), for example, showed slides of two white male and two white female speakers to 40 male and 40 female undergraduate students. Each undergraduate was majoring in business, pharmacy, or education at a major university. The slides shown to one half of the subjects consisted of males and females in "low status" attire. The other half of the subjects were shown slides of males and females in "high status" attire. Low status male attire consisted of work jeans and work shirt. Low status female attire consisted of skirt and blouse, with no stockings and no jewelry. High status male attire consisted of a suit, while high status female attire consisted of dress, stockings, heels, and
jewelry. On scales measuring credibility according to four dimensions (potency, character, composure, and competence), high status clothing had positive effects on judgments of competency of both the two males and the two females, with mixed results for the other three dimensions. Of the four dimensions the perceived competence of a speaker was most linearly related to credibility. Therefore, it was concluded that competence alone may account for the influence of high status clothing on credibility. If "high status" clothing is comparable to high formality clothing, then high formality may also convey an impression of credibility.

Lennon and Miller (1984) studied the salience of dress and appearance cues to impression formation with regard to the traits of likableness, intellectuality, and respect. Salience is the relevance of cues in a situation. Line drawings of females were shown to the subjects. Each of the manipulated factors had two levels each. They were: color of hair (red and brown), glasses (with or without), blazer (with or without), length of skirt (knee or calf), and hairstyle (bun or loose), to make a total of sixteen slides, including a "standard" female. The researchers found that the long skirt was salient (in a negative direction) to judgments of liking and not salient to judgments of respect. Glasses were salient to judgments of liking (in a negative
direction), to intellectuality (in a positive direction), and to respect (in a positive direction). The blazer was salient to respect (positive), intellectuality (positive), and liking (negative). Red hair was salient to judgments of respect (in a negative direction). Different dress cues may also be salient to judgments of different traits of teachers.

Roll and Roll (1984) conducted research on the effect of an inexperienced counselor’s attire and college students’ perceptions of expertness, trustworthiness, and attractiveness. Attractiveness was defined as interpersonal attraction, not beauty. A live stimulus person spent 50 minutes talking with subjects about college life in each of four sessions. Since it was expected that the counselor would improve with practice, the first and fourth sessions were treated with the informal attire and the second and third session with formal. Informal attire was clean, unfaded blue jeans and a beige sweater. Formal attire was a tailored, beige wool suit with hose and dress shoes. Subjects were solicited from undergraduate psychology classes at one college. Six females and seven males participated in the informal condition. Six females and eleven males were in the formal condition. Although formal attire was rated as more professional, both conditions were rated as appropriate. In the informal attire, the counselor
was rated more expert, trustworthy, and helpful. The authors speculated that because the counselor in the informal condition was dressed like the students, they felt she should know more about college life. Likewise, if professors were to dress like students, then students may feel the professors should understand college students' lives. This may lead to higher ratings on friendliness and sympathy for students.

Lapitsky and Smith (1981) studied the impact of attractiveness (beauty) of clothing on impressions of personal characteristics and writing ability. There were eight experimental treatments involving: an interesting/uninteresting essay, two writers, and attractive/unattractive clothing in black and white photographs. For example, one of the treatments was an interesting essay credited to writer #1 who was dressed in attractive clothing. Five personal characteristics of the writer were judged: intelligence, talent, sincerity, imagination, and overall ability. Creativity, ideas, style, organization, and general quality were the five judged essay qualities. Significantly higher ratings were found with attractive clothing for the five personal traits and for four of five essay qualities. More "attractive" clothing for professors might result in higher ratings on personal and performance-related traits.
Traits Conveyed by Dress in Various Roles

Personal traits are attributed during the nonverbal communication which occurs as a result of the observation of dress worn by a person. The majority of attribution studies focus on the effect of clothing, sex, and/or attractiveness on perceptions of managerial traits (Cash and Kilcullen, 1985; Forsythe, Drake, and Cox 1984; Heilmann and Saruwatari, 1979; Johnson and Roach-Higgins, 1987). The effect of preschool children’s clothing and sex on perceptions of their competency has also been studied (Johnson and Workman, 1989). In Seffens’ (1972) study, teachers evaluated the traits of high school boys and girls, each in four different outfits of varying appropriateness for school wear. However, these studies shed little light on the students’ perceptions of professors of different ages in different formalities of dress. Research on the influence of formality on perceptions of people in different roles is reviewed in this section.

Some researchers have examined the influence of attire on perceptions of therapists’ characteristics, such as Heitmeyer and Goldsmith (1990), who found that over 80% of the clients preferred moderately formal attire for both male and female counselors. There was a strong positive association found between perceptions of personal
characteristics and formality of attire. Personal characteristics were: empathy, authenticity, competence, and trustworthiness.

The type of dress that communicates competence depends on the role and/or situation. Lennon (1988a) studied the effect of dress on perceived competence in an alleged perfume marketing session. Models dressed in attractive clothing were perceived as more competent than models dressed in unattractive clothing. Although a suit generally means competence for a businesswoman, a dress (meaning a one-piece skirted garment) communicates competence for a female extension home economist (Young, Davis, and Noyes, 1985). Young, Davis, and Noyes (1985) researched perceptions of professional credibility of extension home economists. Their subjects (the perceivers) were women in extension, businesses, and professions. The models (the objects) were women who were identified as extension home economists. There were four conditions of dress: business suit, casual suit, dress, and outdated pantsuit. These conditions might be interpreted as levels of formality; the outdated pantsuit introduced the variable of fashionability. The model in the dress was believed to possess higher psychological well-being, greater occupational success, and more femininity. This finding is contrary to findings in research on dress appropriateness for managerial jobs.
The researchers concluded that people tend to associate occupational success with a stereotypic image perceived about a certain occupation. There may be a stereotypic image of professors, too.

Kerr and Dell (1976) studied perceived interviewers' expertness and attire. They found an interaction between attire and behavior. Interviewed persons perceived interviewers as most expert when they not only dressed more professionally but also acted more "expert" (gave little emotional response, proceeded in a logical order, and used high structure in the interview). It is possible that professors would be judged more expert under similar conditions.

The effect of teachers' dress on administrators' decisions about the suitability of female teachers as candidates for promotion to an administrative position was studied by Fitch (1983). Administrators considered formal clothing more appropriate for teachers and administrators than informal clothing. Teachers who wore formal clothing were also considered more promotable than teachers who wore informal clothing.
Dress of Teachers

Attribution studies have also addressed students' perceptions of teachers. Researchers primarily dealt with the effect of formality or fashionability of teachers' dress on students' perceptions of teachers' traits.

Two teacher dress studies were discovered that were not relevant to the effect of formality of dress of college professors. Creson (1983) investigated students' perceptions of high school teachers' ability to discipline as influenced by teachers' dress. In Engelbach's (1978) research, fashionability of an educator's clothing, credentials of the educator, and degree of interest of the educator's written article were the manipulated variables.

Two more teacher dress studies were discovered which might be interpreted as having formality levels which influenced perceptions of an assortment of traits—Reeder and King (1984) as well as Butler and Roesel (1989). In both of these, students matched up pictures of teachers with descriptive statements.

Reeder and King's (1984) research would be relevant if it had not introduced femininity versus masculinity into the clothing styles for the models (which were female). High school students ranked teachers in four styles of dress from one to four beside twenty statements. The teacher in a
"feminine" dress was ranked highest in favorable characteristics. She was seen as the one who was most approachable, most likely to offer assistance in an emergency, most likely to allow students to make up missed work, and one for whom they would most likely purchase a gift. The teacher in the skirted, tailored suit was judged as being most capable of maintaining classroom order, most desired for a homeroom teacher, and one with whom a student could discuss a personal problem. According to the authors, the suit seemed to suggest leadership and trust. The teacher in a skirt, blouse, and vest and the teacher in the "masculine pantsuit" received the lowest ratings, with the pantsuit being chosen most often as possessing the least desirable traits. Those two were seen as the least intelligent and the most old-fashioned.

If the "feminine" dress is interpreted as a moderate formality of dress, it appears that moderate formality ranks highest—specifically as most approachable. The skirted, tailored suit seems to be of high formality. In that case, high formality was ranked high not only on leadership, trust, and discipline (possibly the same as competence), but also as being one with whom a student could discuss a personal problem (possibly the same as approachability).

The objective of Butler and Roesel's (1989) research was to investigate the influence of a female teacher's
clothing style on high school students' perceptions of approachability, respect, knowledge, and overall acceptability. The teacher wearing jeans was viewed as fun, approachable, not especially knowledgeable, commanding limited respect, not looking like a teacher, and generally preferable. In contrast, the suited teacher was seen as unapproachable, not especially fun, an authority figure who assigns homework, and possessing the image of a teacher. Students perceived the teacher in slacks and the teacher in a dress in a similar manner, with the informally dressed teacher seen as more approachable, less knowledgeable, and more acceptable than the more formally dressed teacher. This implies a negative relationship of formality with approachability and a positive relationship with knowledge and authority.

The teacher dress studies which exposed subjects to pictures of teachers in different levels of formality of dress, which some studies called "styles," and subsequently rated the teachers on a list of positive traits were Rollman (1977), Bishop (1980), Lamb (1987), Liepins (1987), and Johnson (1985). Because these procedures and variables were used in the present study, these five studies will be examined in detail.

The earliest discovered study of this type was Rollman's (1977, 1980), for which two sets of photographs
were prepared. One set was of three photographs of a male; one of a female. In each set, the models were shown from the neck down in informal, moderate, and formal attire. Males wore jeans and sneakers for the informal, sports jacket and turtleneck sweater for moderate, and dark suit, white shirt, and tie for the formal condition. Females were dressed in similar attire.

Rollman's subjects were college students from five sections of a course in speech communication. The subjects looked at the photographs, which were identified as teachers, and rated each on five-point scales covering ten positive characteristics. Fifty subjects rated the male teacher and another fifty subjects rated the female.

The significant differences showed that the male teacher in informal dress was rated higher on the traits of "sympathetic toward students' problems," "friendly," and "flexible." The male teacher in moderate dress was judged most "stimulating" and "clear." The most formally dressed male teacher was perceived to be most "knowledgeable," "organized," and "well-prepared" for class.

The female teacher in informal dress was perceived as most "fair," "sympathetic toward students' problems," "enthusiastic," "friendly," "flexible," and "stimulating." The moderately dressed female was judged to be most "clear." The female teacher, when dressed in the most formal style,
was thought to be "well-organized" and "well-prepared" for class.

The second known study of this type was done by Bishop (1980). Slides were made of one man and one woman, each in three levels of formality. The subjects were 289 students from various colleges at Virginia Tech. Each student was asked to rate all six slides on the following traits: "knowledgeable," "communicates well," "prepared and organized," "interest in class," "generates interest," "competent," "tests and grading," "enthusiastic," "rapport," and "credible." Choice of responses were: inferior, below average, average, above average, and superior.

Dress for females was shirt, long-sleeve pullover sweater, and corduroy skirt for "general" (which seems to be the informal condition), shirt, slacks, and blazer for "sportswear" (moderate), and dress blouse and two-piece skirted suit for "business" (formal). Dress for males was shirt, long-sleeve pullover sweater, and corduroy slacks for "general" (informal), shirt, slacks, and blazer for "sportswear" (moderate), and three-piece suit, shirt, and tie for "business" (formal).

Scores from the ratings sheets were cross-classified by sex of subject, sex of professor, and type of outfit worn. Multivariate analyses of variance were performed by trait to evaluate the influence of each of the three independent
variables on the scores. Significant differences between various means were evaluated by Duncan's test of multiple comparisons.

It was found that the professors wearing business suits were perceived as having the least rapport with the students but as the most knowledgeable, most prepared and organized, and most competent and credible. Clothing most influenced the perceptions of the professors' knowledge of the subject matter and state of preparation and organization. Clothing least influenced perceptions of enthusiasm. Female students rated professors more favorably than males. All students, male and female, rated the male professor higher than the female professor.

The third study of this kind was done in 1985 by Johnson. The sample was 168 tenth and twelfth grade high school students from three schools in southern Alberta, Canada. Subjects each viewed six slides illustrating male and female models in informal, moderate, and formal levels of dress. The specific attire is unknown.

The "teachers" in the slides were rated on a five-point scale on ten characteristics: "fair," "sympathetic toward students' problems," "knowledgeable," "enthusiastic," "friendly," "flexible," "organized," "stimulating," "well-prepared for class," and "clear." Analysis of variance was used to analyze the data. A Least Squares Differences
(LSD) test was used to analyze significant F-ratios in order to identify significant pairwise relationships.

Significant differences were found between all three formality levels. The more formal the dress level, the higher the score. Female teachers were rated lower than males for each formality level. Significant differences occurred between male and female raters for each dress style. Males rated the teachers lower than did females.

Male and female teachers dressed formally were perceived as more fair, knowledgeable, organized, well-prepared for class, and clear. Male and female teachers dressed very informally seemed to be perceived as friendly and flexible.

Lamb (1987), the fourth study, sampled 224 tenth-, eleventh-, and twelfth-grade students in one high school in Ruston, Louisiana. The questionnaire developed by Butler and Roesel (1986) was used. There were five sets of black and white photographs. Five female models were shown in five dress styles each (25 different photographs). Formality levels were: extremely casual (jeans and casual shirt), relatively casual (slacks and blouse), moderate (print dress or skirted outfit), relatively formal (dressy dress), and extremely formal (suit). The outfits within each level were not identical, but of the same type.

Each subject received a set of five photographs.
The questionnaire consisted of twenty descriptive statements, each of which was to be matched to the one photograph which best fit the statement. Some statements were positively worded and some negatively worded.

When the data were analyzed, the statements were divided into the categories of approachability, respect, and overall acceptability. (Butler and Roesel had an additional category, "knowledge," which Lamb included in the "respect" category.) Responses were tallied by each variable (sex and academic level) and by each photograph and percentages of each tally were figured. A chi square test of significance was performed to see if clothing was judged independently of the models on each of the twenty statements.

A chi square test of significance showed that teachers in more casual clothing, such as jeans, slacks, or a casual dress, were perceived to be more "approachable"; teachers in more formal clothing, such as a dressy dress or a suit, were more "respected" by students. The suit was chosen most often for negative approachability statements. The students preferred a casual dress as the attire of their teacher.

A Kolmogorov-Smirnov test of significance was performed by Lamb to determine significant differences between male and female subjects and between remedial level students and other students. When the student responses were analyzed by sex, a significant difference was found in the categories of
positive and negative approachability.

There was no significant difference between the opinions of the remedial level students and the other students in responses to statements concerning general acceptability. In the category of approachability, the greatest number of honor level and average level students chose the casual attire of jeans, slacks, or casual dress for the most approachable teacher. The suit received the most responses as the least "approachable" teacher. The greatest number of remedial level students chose the slacks, casual dress, or the dressy dress for most "approachable." The responses of the remedial group for negative approachability were divided among the jeans, slacks, dressy dress, and suit.

The greatest number of both honor level and average level students matched the casual dress with positive statements of "respect." On the other hand, the greatest number of remedial level students matched the casual dress with statements of least respect.

The greatest number of honor level students preferred the casual dress as the attire for their teacher, while the greatest number of average level students chose the jeans, and the greatest number of remedial level students preferred the suit. The greatest number of honors level and average level students chose the suit as the attire of the teacher.
they preferred "not to be placed" with in a class, while the remedial level students chose the jeans for this category.

In the fifth study, Liepins (1987), surveying 152 freshmen and seniors in three randomly selected high schools from a large school district in southern California, looked at the effects of California State Scholarship (CSF) membership, grade level, sex, and race on students' perceptions of teachers. Six line drawings represented three style categories: "career," "moderate," and "informal."

A questionnaire was developed using statements of the following positive teacher characteristics: "subject knowledge," "clarity," "fairness," "classroom discipline," "sympathetic understanding," "interest stimulation," "efficiency," "enthusiasm," "friendliness," "flexibility," "explanation ability," and "helpfulness." A five-point bi-polar scale was used to rank each statement from "strongly agree" to "strongly disagree."

Analysis of co-variance was computed to determine relationships between teacher sex, style of dress, respondent sex, respondent school year, respondent CSF membership, and respondent race. Seven of the twelve questions were found to have statistical significance. Informally dressed teachers were generally preferred and were ranked high in knowledge, interest, explanation
ability, discipline, and helpfulness. On the other hand, formally dressed teachers were ranked high on efficiency and flexibility.

Informally dressed female teachers were given low ratings on efficiency and flexibility. No significant differences were found in CSF membership versus non-membership, between the year in school of the respondent, nor among any of the ethnic groupings.

The high ratings for informally dressed teachers are contrary to the ratings in other studies and may be peculiar to the region. Southern California is notorious for its informal standards of dress.

In conclusion, when the results of these five teacher dress studies are organized into high, medium, and low levels of formality of dress, no one level of formality was rated highest for all traits. Subjects tended to rate teachers in high and moderate levels of dress higher for "organization," "knowledge," "well-prepared," and "competent." The moderate and lowest level were usually rated higher on "rapport," "friendliness," and "approachability."

There appear to be two sex biases operating in teacher dress studies--a bias in the rating of male and female teachers and a bias by the male and female students. In Bishop's (1980) and Johnson's (1985) studies, female
teachers were generally rated lower than male teachers for each formality level. Rollman (1977), the exception, reported male and female teachers were rated similarly. For studies that reported on sex of student as an independent variable (Bishop, 1980; Johnson, 1985; Liepins, 1987), females ranked teachers differently than males. The females in Liepin’s study ranked teachers differently than males for interest and enthusiasm. (Liepin does not state what the differences were.) Females gave teachers a higher overall rating than males did in Bishop’s study and M. Johnson’s study. These sex biases should be considered in designing research and analyzing data on the effect of teachers’ dress on students’ perceptions of teachers. Sex could be a confounding variable.

Age of the Perceived Object

According to the concept of similarity/attraction in attribution theory, we are attracted to those whom we believe are most similar to us. Dress is one of the bases of our judgments of similarity (Buckley, 1983). Age is another. College students, most of whom are young, may be more attracted to younger teachers. This attraction may affect perceptions of teachers’ approachability traits (friendliness and sympathy).
According to Riley, Ryan, and Lifshitz (1950), sociologists who were asked to analyze the student evaluation program at Brooklyn College, younger teachers, with few exceptions, ranked higher in student estimates. Although older and more experienced teachers are generally regarded as "knowing their stuff," their younger colleagues were looked upon as more successful on other counts.

Asking teachers to select working partners for a cooperative teaching relationship, Loker and Newhouse (1983) found that older female teachers were considered more desirable than younger teachers. Based on these findings, Thurston, Lennon, and Clayton (1990) suggests that age conveys an impression of experience and, therefore, competence. In the present study, traits such as leadership, knowledge, and respect, might be associated with the older teacher because of his expected greater amount of experiences and accumulated wisdom.

Although Peterson's (1964) sample was a group of public high school teachers and not college students, his findings might be applicable. Interviewing 56 teachers in a medium size city in the Midwest, he reported differences in the teachers' perceived relationships with students. The young teachers reported that there was little difference in age between them and their students and that there was "no distance between students and teachers . . ." Teachers and
students had joint activities. The young teacher also applied "herself" with vigor and enthusiasm. As teachers grew older, they felt a loss of intimate, friendly contact with students. As teachers became more parent-like authority figures, they felt that discipline problems increased. They also became subject to routinism in their teaching performance. By the time teachers were in their 60's, they complained that students were "undisciplined, uninterested, morally decadent," further illustrating the distance between teacher and student.

Contrary to Peterson (1964) and to Riley, Ryan, and Lifshitz (1950), no differences were found by Heilmann and Armentrout (1936) in ratings among groups of teachers who differed from 5 to 20 or more years in experience and none among those who differed from 5 to 30 or more years in age. Only on the measure of "Personal Appearance" did the teachers differ significantly. These results were from the Purdue Rating Scale administered to classes of 25 or more at the Colorado State College of Education. Comparisons were made to Purdue University ratings. The subjects for this study were college students.

Turning to a study specifically investigating the effect of age on judgments of dress, Thurston, Lennon, and Clayton (1990) investigated whether physical attributes such as age and body type (size) affected judgments of a female's
clothing. Although the models were not labeled as teachers, the study may be relevant. Subjects were 207 businessmen and businesswomen who volunteered to participate in monthly professional meetings. Participants viewed and responded to six black and white photographs of females, three wearing suits and three wearing dresses. They were asked to rate the degree of professionalism conveyed by each ensemble on six seven-point uni-polar adjective trait scales. Sums were calculated. The experimental design was a 3 (age of model) by 3 (body type of model) by 3 (garment fashion detail) incomplete randomized block design. Four different analyses of variance were performed.

It was discovered that age of model did not influence judgments of the professionalism of suits. However, there was a main effect for age of model when businessmen judged dresses on women. There was no corresponding effect when businesswomen judged dresses on women. These effects indicate that wearer's age does affect judgments of clothing. Post hoc analyses were performed with the following discoveries: 1) for both groups suits were judged as more professional than dresses, 2) businesswomen judged suits as more professional and dresses as less professional than businessmen, and 3) although both groups of subjects judged suits as equally professional when worn by all age groups, businessmen, but not businesswomen, judged dresses
as more professional when worn by the models in the oldest age group. Thurston et al. (1990) suggested that older women have more leeway in what they wear while still conveying a professional image. Perhaps younger women need the extra credibility conveyed by wearing a suit.

Indeed, Solomon and Anand (1985) claimed that the female business suit is a cultural artifact which is an important part of a modern rite of passage into a managerial position. Harragan (1977), author of *Games Mothers Never Taught You*, explains that upcoming women are being judged for future potential on the basis of dress. However, since there is ambiguity as to proper dress, the prevailing strategy has been to adopt the male uniform—the conservative business suit. A man's jacket, says Harragan, is his "mantle of authority."

**Student Evaluations of Teachers**

When conducting research on the effect of teacher dress on student ratings of teachers, one must know what traits to include on the ratings sheet. There has been extensive research on the characteristics of effective teachers, conducted at all levels of education including higher education. Murray (1980), who conducted a major review of this research, claims that a high level of agreement exists
between students and faculty members on what constitutes a good college teacher. On most evaluations of teaching, students are asked to rate their teachers on characteristics such as the following (Murray, 1980):

1) mastery of subject matter
2) concern for students
3) stimulation of student interest
4) clarity of explanation
5) enthusiasm for subject matter
6) encouragement of student participation
7) availability for consultation
8) fairness in grading
9) preparation and organization
10) public speaking ability

The traits most frequently listed on the student rating questionnaires which were used in teacher dress studies, with Murray's (1980) corresponding traits in parentheses, are:

1) fair (fairness in grading)
2) sympathetic toward students' problems
   (concern for students)
3) knowledgeable (mastery of subject matter)
4) friendly (concern for students)
5) flexible (not included in Murray's list of ten)
6) well-prepared and organized, or efficient
   (preparation and organization)
7) stimulating, or interesting
   (stimulation of student interest)
8) clear (clarity of explanation)
9) enthusiastic (enthusiasm for subject matter)

In addition, high school studies included:
10) ability to discipline or maintain classroom control

Wigington, Tollefson, and Rodriguez (1989) investigated six variables that previous research indicated influence student ratings of instructors in real classroom situations. These were the findings: ratings were much higher for discussion classes than for non-discussion classes; ratings for lower division courses were lower than for upper division and graduate courses; graduate teaching assistants and professors received lower ratings than assistant or associate professors; female instructors received higher ratings than male instructors; and instructors of small classes received higher ratings than instructors of moderate-size and large classes. The finding of higher ratings of female versus male instructors is contrary to the findings in teacher dress studies.

The effectiveness of graduate teaching assistants versus faculty is much debated. Wigington et al.'s findings on ratings of GTAs versus assistant and associate professors
are contrary to the findings of Nevill, Ware, and Smith (1978) who found that students judged both faculty and assistants to be similar in effectiveness. Since students may rate both faculty and assistants similarly, the present study did not label the professors to be rated as having any specific rank.

The effect of sex of teacher on ratings of effectiveness is also much debated. Some studies have found that males rate higher (e.g., Kierstead, D'Agostino, and Dill, 1988), some that females rate higher (e.g., Wigington, et. al., 1989). Wheeless and Potorti (1989) claimed that substantial evidence supports a positive evaluation for teacher qualities that can be defined as feminine or masculine. For example, warmth, often operationalized as showing interest and concern for students, a feminine trait, has consistently demonstrated a positive impact on both student learning and evaluation of teacher performance. Harris (1975) identified masculine qualities as self-confidence, independence, objectivity, logic, and aggression; whereas feminine qualities were awareness, gentleness, tactfulness, passiveness, sensitivity to feelings, and facilitating and showing concern for others.

Kierstead et al. (1988) had further evidence of the bias in ratings of male versus female professors. When these researchers presented hypothetical scenarios to
students, they found that teachers' behaviors which were indicative of friendliness toward students elevated ratings of instructors for female instructors but not for male instructors. In addition, these students rated male instructors as more effective than female professors, despite the condition that behaviors directly related to teaching were held constant.

A sex bias has been shown in ratings of college professors by lower and upper division college classes (Wigington et al., 1989). Upper division classes (juniors, seniors, and graduate students) rate males higher, and lower division classes (freshmen and sophomores) rate females higher. Wigington et al. makes this speculation: assuming that females are more expressive and males more instrumental, it seems reasonable to suppose that freshmen and sophomores who are new to the university would value the warmth and expressiveness of women, while juniors, seniors, and graduate students would value the more instrumental approach to instruction offered by males. It was possible that the freshmen in the present study would have rated the teachers lower than the seniors just because the teachers were male.

In conclusion, male and female professors may be rated differently in general, as well as differently by lower and upper class students. To avoid confusion, the present study
only used male professors as stimuli. Teachers of different ranks may or may not be rated differently. To simplify, the teacher in this study was not labeled as having a specific rank. In the real classroom situation, professors of lower division courses are rated lower than those of upper division courses, according to Wigington et al. (1989). Therefore, the freshmen in the present study were expected to rate the professors lower than the seniors did. Since the traits frequently used in other teacher dress studies (see the second list in this section) were similar to those used in real in-classroom evaluations, these nine traits were used in the present study. However, trait six was divided into two traits—1) well-prepared, and 2) organized—in case these were two different concepts. This resulted in a total of ten traits which were selected for the rating instrument.
CHAPTER III

STATEMENT OF PROBLEM

Theoretical Framework

The theoretical framework for this study is found within the area of social cognition. Social cognition is the study of cognitive processes which are the bases of the perceptions used to form impressions of people. The specific theory on which this study was based is attribution theory. This theory states that people observe the behaviors of others and subsequently attribute the causes of those behaviors to certain personal traits, or predispositions (Heider, 1958; Jones and Davis, 1965; Kelley, 1971). Perceivers tend to believe that these traits are inherent in the person and that they predispose one to behave in more or less predictable ways. The predictability is believed to depend on one's control of the situation. If the perceived person has control, then that person's traits are thought to be responsible for his or her behavior. Clothing behavior of adults is assumed to be under their control—that they have a choice of what they wear. Because of stereotypes, a whole set of traits may be attributed based on limited observations. It is possible that, not only is there a stereotype of "professor," but stereotypes
about those who wear certain outfits of clothing. Thus, students will be more likely to attribute certain positive teacher traits to certain styles of dress.

Attributions of traits to another person are made the first time we meet someone. Based on these attributions, we form an impression of the person and decide whether or not to continue our encounter. Zunin and Zunin (1972) said that we make this decision within the first four minutes of contact, while Fiel (1991), originator of the term, "body language," claims that we make a judgment in the first three seconds. Once an initial impression is formed it is difficult to change (Cho and Grover, 1978). However, it is not irreversible if the individuals realize the assumptions may have been only superficial (Zunin and Zunin, 1972).

In this study, the questions were (1) What effect, if any, does formality of dress of professors have on students' attribution of positive teacher traits? (2) What effect, if any, does age of professor have on students' attributions of positive teacher traits? (3) What effect, if any, does maturation of perceivers from the freshman to the senior year of college have on their perceptions of professors? (4) Do the three independent variables of formality of professors' dress, age of professor, and maturation of students interact?
This study may help to build theory in that it has determined the salience of formality of dress and age of the perceived to the situation of college professors being perceived by college students. The findings pertain to first impression formation and, because of the enduring effect of first impressions, have implications for the understanding of professor/student interactions. For example, if older professors and their students do not communicate well, this situation might result from a tendency of students to perceive older professors as unfriendly and unsympathetic.

**Specific Objectives**

The three main objectives in this study were: (1) to determine whether formality of professors' dress influences students' first impressions of professors' traits, (2) to examine the effect of age of professors on students' first impressions of professors' traits, and (3) to compare the first impressions of college freshmen with the perceptions of college seniors. The possibility of significant interactions between any two or three of the following factors--formality of professors' dress, age of professor, and class of student--was also investigated.
Hypotheses

Three research hypotheses were formulated to guide the research.

Hypothesis 1: Students' first impressions of professors' traits will be significantly different by formality of dress.

1a: The moderate and low levels will be rated higher (more positively) than the high level for friendliness and sympathy toward students.

1b: The high and moderate levels will be rated higher for knowledge of subject matter, well-prepared for class, and organization of the course.

1c: The highest level of formality will be rated the highest overall, followed by the moderate level, and then the lowest level.

Hypothesis 1 has been supported in numerous studies, such as Bishop (1980) and Rollman (1977). The sub-hypotheses reflect the general trend in similar research.

Hypothesis 2: Students' first impressions of professors' traits will be significantly different for the younger and the older professors.

2a: The older professor will be rated higher on knowledge.
2b: The younger professor will be rated higher on friendliness and sympathy toward students.

Age has an effect on judgments of similarity and thus on attraction. Attraction is the tendency to want to associate with persons, thus it may be related to judgments of friendliness. Younger professors may be judged as more similar to the students than the older professors, resulting in more positive ratings of friendliness. The younger professors may be judged more positively on sympathy because of their perceived similarity and ability to relate to the students. Older professors may be rated higher on knowledge because they have lived long enough to acquire more knowledge and/or because they are expected to have a higher professorial rank.

**Hypothesis 3:** College freshmen’s first impressions of professors will be significantly lower than college seniors’ perceptions.

A number of influences may be affecting the outcome of this hypothesis, so the results are difficult to predict. These influences are maturity differences, lower versus upper division course differences, and experience differences. Experience differences are defined as exposure or non-exposure to professors. Freshmen, presumably, have limited exposure to professors while seniors have had much exposure. Freshmen may also have limited exposure to male
teachers since most high school teachers are female. The seniors have been exposed to mostly male college professors since they are a majority at this university. Wigington et al. (1989) found that freshmen rate female professors higher and seniors rate male professors higher; therefore, freshmen may rate male professors lower than seniors rate them simply because the professors are male.

Maturity differences may also have an effect. Based on White's (1975) case studies, college seniors should be more noticing than freshmen of things in others with whom they interact. If this is so, they may be more perceptive of any differences between the professors, so that seniors' ratings of various professors may show wider variances than freshmen's ratings of the same professors. Seniors should be more tolerant, friendly, warm, and respectful of others. Students in upper division courses (juniors and seniors) have been shown to rate their professors higher, in general, than students in lower division (freshmen and sophomore) courses.

**Interaction Hypotheses:** There will be an interaction between the factors of formality of professors' dress and age of professor. It is commonly believed that persons in more formal dress are perceived as older. All possible interactions will be investigated.
Assumptions and Limitations

Assumptions of this study are:

1. The subjects formed impressions and were able to rate each professor on ten positive teacher traits in a forced-choice (as opposed to free descriptive) format. They were able to do so based only on a photograph and a neutral script provided by the researcher.

2. The dress chosen for the photographs represented to the subjects low, medium, and high levels of formality for university professors’ dress.

3. The dress on the younger model was perceived as identical to the dress on the older model.

4. The differences in perceptions between the younger and older models were caused by the factor of age and not by other personal differences.

Limitations of this research are:

1. The results may be applicable only to the cohort attending a University in southwestern Virginia in the fall semester of 1991. Different cohorts seem to put emphasis on different values. The present cohort seems to value career preparation highly because of the current economic recession (Astin, 1990). Thus the students might be especially concerned about the professors’ abilities to prepare them for a career.
2. The results may not be applicable to every region of the country. For example, from Liepins (1987) research it appears that students in California may have different reactions to formality than students in other regions.

3. The applicability of the findings to the actual classroom situation is limited by the use of black and white photographs. In a real situation, additional cues are available for forming impressions so that clothing cues become less important. Forsythe and Pratt (1987) have shown that clothing cues are more important in forming impressions when subjects view photographs than when they view videotapes. Videotapes provide more information, similar to viewing live persons. In addition to clothing, other nonverbal cues are available in a videotape for use in forming an impression. However, the use of photographs helps to eliminate extraneous variables so that the effects which are measured are associated with the clothing cues.

4. The ten traits on the rating instrument are salient to students' judgments of photographs of professors.

5. The students' ratings of the ten traits are indicative of their expectations of the professors' overall teaching effectiveness.
CHAPTER IV
DESIGN OF RESEARCH

Introduction

Using the framework of attribution theory, the influences of formality of professors' dress and age of professor on students' expectations of professors' teaching effectiveness in a first impression situation were investigated. Freshmen's perceptions were compared to seniors' perceptions. Three main hypotheses and five sub-hypotheses were formulated. This chapter will cover operational definitions, selection of instruments, sampling procedures, method of collecting data, design, and data analysis used in this research.

Operational Definitions

Roach-Higgins and Eicher (1989) defined "dress" as "an assemblage of 1) modifications of the body and 2) supplements to the body." For the purpose of this study, dress was defined as supplements to the body. More specifically, dress was an assemblage of garments on the human body. Shoes, glasses, and jewelry were not included.
"Class level of student" was defined as year in school—in other words, freshman, sophomore, junior, or senior. Only freshmen and seniors were of interest to this study.

"Freshmen" were defined as students enrolled during the fall semester of 1991 at Virginia Tech who had earned less than 28 hours of credit in college.

The definition of "seniors" was the same as "freshmen" except that these students had completed 96 or more semester hours but had not yet earned a Bachelor's degree.

"Positive teacher traits" was defined as ten traits, including personality traits and professional abilities, which have most often been listed as important traits for teachers to possess.

"Perceptions of professors" was defined as college students' ratings of ten positive teacher traits based on their observations of the photographs of the models which were identified on the instruction sheet as "professors."

"High formality of dress" of professors was defined as a two-piece solid grey business suit (matching jacket and slacks), a white button-up front dress shirt with collar, and a conservative tie.

"Medium formality of dress" of professors was defined as unbuttoned solid grey sportcoat, dress slacks,
long-sleeved, striped, button-up front dress shirt with collar, and no tie.

"Low formality of dress" of professors was defined as solid grey casual slacks (not jeans), short-sleeved white polo shirt with collar (shirt unbuttoned), and no tie.

"Older professor" was defined as a male model who was perceived in a pilot test using college freshmen majoring in Clothing and Textiles as being about 55 to 65 years old.

"Younger professor" was defined as a male model who was perceived in a pilot test using college freshmen majoring in Clothing and Textiles as being about 25 to 35 years old.

Selection of Instruments

There were three types of instruments: six black and white photographs, an instruction sheet with a neutral script, and a combination rating sheet/demographic questionnaire.

Photographs of male models identified as professors were used. Line drawings have been used in teacher dress research, but these studies did not involve discrimination of age of professor. Drawings were considered inadequate to convey an impression of different ages. Live models were not used because this would have introduced extraneous variables of nonverbal, and perhaps verbal, communication. Videotapes
involves nearly as many extraneous variables as live models. Photographs have been used in other first impression studies involving dress of the perceived object.

In order to limit variables to a manageable number, color, texture, shade, shoe style, and lower pant leg style were eliminated or minimized. Black and white photographs were chosen for the purpose of eliminating the variable of color, since different colors have different meanings. Textures and shades of gray between the three different outfits were identical. Models were photographed from the knee up to eliminate the variables of shoe style and lower pant leg style.

There was a total of six different photographs—2 ages x 3 levels of formality (See Appendix A). Only male models were used to eliminate the confounding variable of a sex bias toward professors as well as a sex bias between freshmen and senior raters. Males were chosen because they predominate among the professors at Virginia Tech. There were two models, one young and one old. The two teacher ages, as perceived in a pilot test by college freshmen majoring in Clothing and Textiles, were (1) beginning career age for professors (25 to 35 years) and (2) near retirement age (55 to 65 years). These two vastly different ages were chosen so the age differences would be easily perceived.
Clothing for the photographs was comparable to that used in similar studies so that comparisons could be made and previous findings could be built upon. Each age of professor was attired in three levels of formality. Each wore: 1) slacks and polo shirt for the informal level, 2) slacks, shirt, and sportcoat for the moderate level, and 3) two-piece suit, shirt, and tie for the formal level. The outfits for the older and the younger model were identical except for a slight difference in size so that any differences in perception of them would not be attributable to different outfits.

In order to further minimize appearance variables and limit them to those of formality and age, models were chosen based on the following criteria: lack of facial hair, lack of baldness, conservatism of hairstyle, and an absence of obvious ethnic characteristics. The younger and older model were as similar as possible in attractiveness (beauty), skin and hair coloring, body type and size, and height. The two models were determined in a pilot study to be similar in attractiveness.

Attractiveness has been shown to be an important variable in perception by numerous authors, such as Dion, Berscheid, and Walster (1972), Cash and Kilcullen (1985), Johnson (1985), Heilmann and Saruwatari (1987), and Johnson and Roach-Higgins (1987). The effect of body type and size
on perceptions has also been well-documented (Lennon, 1988b; Lennon, 1989a; Thurston, Lennon, and Clayton, 1990). Height is well-established as a variable (Dannenmaier and Thumin, 1964; Ehman, 1977; Koulack and Tuthill, 1972; Wilson, 1968). The effect of hair on the face and/or head has also been shown to be a variable (Lennon and Miller, 1984; Pancer and Meindl, 1978; Peterson and Curran, 1976).

Models were Caucasian, since the majority of the population at Virginia Tech is Caucasian. Glasses were not worn, since this also affects perceptions of traits (Hamid, 1972; Lennon and Miller, 1984).

A neutral script of words that each professor would supposedly say on the first day of classes was provided in case subjects felt that they could not make judgments based only on a photograph. This script was identical for each photograph.

Instructions informed the students of the procedure for completing the survey, of the voluntary nature of their participation, and of the nature of the study—that this was a study of students' first impressions of professors. The variables of age and dress of professor were not mentioned so that these influences on them would be as normal as possible. Since students may have been enrolled in more than one of the classes which were surveyed, they were
requested not to complete the survey again if they had participated previously.

The demographic data requested were: college major, sex, class (freshman or senior), age, region of country from which they came, and previous residence in a metropolitan area or small town or rural area. Additionally, they were asked if they had resided in the United States for ten years or more, and if they had seen the person in the photograph before. Age of student categories were: 1) 19 or under (typical freshmen), 2) 20 to 24 (typical seniors), and 3) 25 or over. Freshmen who were not 19 years old or under were eliminated as were seniors who were not 20 to 24. Anyone 25 or over was eliminated. Those not of typical ages may have had atypical experiences in their lives, such as more experience with people, which could have influenced their perceptions. The residency question was used to eliminate those who may not be accustomed to the formality standards of the United States. The figure of ten years was chosen arbitrarily. The ratings sheets of those who have seen the photographed persons before were excluded from the statistical analysis since this was a study of first impressions. Sex of student was included so that if one sex was greatly over-represented that variable might explain some unexpected results. Rater’s sex has been shown to be an important variable in the rating of professors. Sex was
not used for the final statistical analysis.

The ratings questionnaire was similar to that used in previous teacher attribution studies so that comparisons could be made and previous findings could be built upon. It contained traits identical to Rollman's (1977) and Johnson's (1985) with modifications to make them more specific. Murray's (1980) review of teacher evaluation literature, as well as two other teacher dress studies--Bishop (1980) and Liepin (1987)--were compared and they contained traits similar to Rollman's and Johnson's. Help in constructing the questionnaire was obtained from the Computer Test Scoring Center at Virginia Tech. This center scores the teacher evaluation sheets for this University.

A pilot test confirmed the useability of the questionnaire and verified the perceived age of the young professor as 25 to 35 years old and the older professor as 55 to 65 years old. Their attractiveness was judged to be equivalent, that is, both were judged as average. Thirty freshman college students majoring in Clothing and Textiles were used as subjects. The test took place during a Clothing and Textiles class. Each subject received an instruction/script sheet, age and attractiveness questionnaire, rating/demographic questionnaire, and one of the six photographs (See Appendix A and B). Each was asked to complete a questionnaire about perceived age and
attractiveness first. Then a rating/demographic questionnaire was completed.

All instruments were identical for all subjects in the actual data collection and the pilot test, except for the photograph. The age and attractiveness questionnaire was not used in the actual data collection. The students rated each teacher in the photographs on the ten traits that were selected from the literature on teacher dress and student evaluations. Traits were expressed in precise phrases in order to prevent interpretations other than that intended by the researcher.

Instructions appeared on the top of the computer sheet to mark (1) for "far below average", (2) for "below average," (3) for "above average", and (4) for "far above average." This scale of 1 to 4 was converted routinely by the test-scoring computer to a scale of 0 to 3--computers normally use zero as a starting number. According to Dr. Robert Frary (Personal Communication, February 4, 1991) of the Computer Test Scoring Center at Virginia Tech, "good" is the average rating on teacher evaluations on a four-point scale using the terms "poor," "fair," "good," and "excellent." The traits to be rated were printed alongside the existing numbered circles on a standard optical scanned
computer sheet. The list of traits on the rating sheet appears below:

1) Fairness in grading
2) Sympathetic toward student's problems
3) Knowledge of subject matter
4) Enthusiasm for subject matter
5) Friendly toward students
6) Flexibility in dealing with students
7) Organization of the course
8) Stimulation of interest in the subject matter
9) Well-prepared for class
10) Clarity in communicating

The form allows 10 choices of responses to each question and the choices are numbered 1 to 10 (although only 1 to 4 were used).

Photographs were pre-marked by the researcher as A, B, C, D, E, or F on each rating sheet for the purpose of identifying which photograph was rated when scores were calculated. The identifying letter appeared at the top right-hand corner under the heading, "Form." Each questionnaire was also pre-identified by its own number under "Identification Number" to facilitate the location of missing data.

Thirty photographs (five sets of six different ones) were made. The pictures were taken and developed by a local
professional photographer. Because some of the senior classes were large, it became necessary to make two more sets totaling 42 pictures.

Each student's set of materials was put into an envelope. Envelopes were randomly numbered in sets of thirty.

**Sampling Procedures**

There were two sets of subjects in the actual data collection. One set of subjects was 234 freshmen who attended Freshman English classes at Virginia Tech during fall semester 1991. Out of 234 responses, 179 were useable. There were from 11 to 26 students per class. Seven sections were regular beginning English (English 1105 with about 100 sections offered), one was an honors class (English H1204 with twenty sections offered), and all three sections of Basic Writing Skills (English 1004) were included. Since Freshman English is required for all students, these classes contained a cross-section of college majors. All Freshman English teachers were solicited for the participation of their classes, and seven of these agreed (See "Letter to English Professors" in the Appendix on page 110).

The second set of subjects was 263 seniors from all colleges at Virginia Tech who attended classes during fall semester 1991. Class sizes ranged from 6 to 38. Out of 263
responses, 175 were useable. Teachers of senior classes were solicited for participation until there was a sufficient sample and every college was represented. These teachers were contacted by telephone. Fourteen teachers volunteered, representing fifteen sections. Most of the courses were required for the students of one or more departments or colleges. Courses included Business Writing, two sections of Social Psychology Lab, Food Communication Media, History of Interior Design, Professional Practice in Architecture, Sociology of Education, Technical Writing, Electrical Engineering, Consumer Behavior, Design of Agricultural Machine Components, Curriculum and Program Planning in Child Development, Strategic Marketing, Basic Apparel Lab, and Apparel Design Studio III.

Most subject losses resulted because the respondent was not a freshman (2) or a senior (60). The second largest number of losses were due to respondents not living in the United States ten years or more (29 freshmen and 6 seniors). Subject losses due to missing answers numbered 10 freshmen and 15 seniors. Five freshmen and one senior rated the professor on a scale other than one to four. Three freshmen were not of typical freshmen age, and five seniors were not of typical senior age. Five freshmen had seen the
photographed person before, while only one senior was in this category.

Method of Collecting Data

The researcher personally administered the survey. Data were collected in Freshman English classes during the second week of fall classes. Eight days later the senior survey administration began and took four weeks. The researcher informed the students that this was a study of their impressions of professors and told them that their participation was voluntary. Students were also told that if they had previously participated in this survey they should not do so again. Envelopes containing the materials were distributed in random order. The students then read the instructions/script and filled out the rating/demographic sheet while looking at the photograph. Students returned all materials immediately upon the class's completion of the survey. Every student in attendance was given a survey, but only data collected from freshmen and seniors were used. Faculty were given the option of allowing the survey to be given at the beginning or the end of their class session.

At the end of each class, photographs were transferred
to new envelopes already containing instruction and rating sheets.

Design

The methodology used was a three factor (A X B X C) design: A=class of student (freshman or senior), B=age of professor (young or old), and C=formality of dress (informal, moderate, and formal). There were two levels of A, two levels of B, and 3 levels of C. The design was completely randomized. Each person was randomly assigned one photograph. It is unknown whether this has been done before in a similar study. Most studies have used repeated measures designs where each subject receives all treatments (i.e., sees all the photographs) and results are analyzed by multiple analysis of variance or non-parametric tests. One exception is Rollman's (1980) teacher dress study in which half of the subjects viewed a female model and half viewed a male model. Rollman's data were analyzed by t-tests rather than analysis of variance.

A problem with simple repeated measures designs is the confounding of main effects and interactions (Keppel, 1982). This would not allow for the analysis of an interaction of age of professor and formality of dress, which was expected to occur.
Another problem with using a repeated measures design is that the dress and age of teacher variables would be obvious to the subject who would see all the photographs. Thus, the students may not respond as subconsciously about dress and age as they would if the purpose of the research were less obvious (i.e., with a completely randomized design in which they see only one photograph).

Repeated measures designs also require an additional statistical procedure of subtraction of practice effects, which apparently was not done in other teacher dress studies. Practice effects, an improvement or decline in the skill with which the subject completes the surveys, may distort the results.

A randomized design does require a larger number of subjects than does a repeated measures design. About thirty subjects per photograph per class of student should be more than sufficient to assume normality (thirty subjects \( \times \) six photographs \( \times \) two classes equals three hundred sixty). For this study, three hundred fifty-four useable responses were obtained.
Analysis of Data

Three null hypotheses were tested in accordance with the research hypotheses:

**Hypothesis 1:** Students’ perceptions of professors’ traits will not be significantly different by formality of professors’ dress.

1a: The moderate and low formality levels will not be rated higher (more positively) than the high level for friendliness and sympathy toward students.

1b: The high and moderate levels will not be rated higher for knowledge of subject matter, well-prepared for class, and organization of the course.

1c: The highest level of formality will not be rated highest overall, followed by the moderate level and then the lowest level.

**Hypothesis 2:** Students’ perceptions of professors’ traits will not be significantly different for the younger and the older professors.

2a: The older professor will not be rated higher on knowledge.

2b: The younger professor will not be rated higher on friendliness and sympathy toward students.

**Hypothesis 3:** College freshmen’s perceptions of
professors will not be significantly lower than college seniors' perceptions.

Interaction Hypotheses: There will be no interactions among the factors of formality of professors' dress and age of professor.

Scores from the rating sheets were summarized by the Virginia Tech Computer Test Scoring Center.

Using SPSS/PC+ Studentware, a Pearson correlation was calculated on the traits to see how much they were related. This software was also used to calculate Gamma, a measure of association for ordinal variables, to determine how much each factor (age, formality, and class) is associated with, or explains variances in, ratings on the ten traits.

Multivariate analysis of variance on each trait by the three factors of formality, age, and class was performed using the SPSS-X mainframe computer program. Multivariate analysis has been used in most of the similar teacher dress studies (except Rollman, 1977, who used non-parametric tests). Multivariate analysis permits many analyses to be performed without the danger of committing a Type I error--that is, of rejecting a null hypothesis when it is true. Many analyses were required in order to examine the effect of three factors with two to three levels on ten ratings of traits.
Multivariate tests of significance were performed, and Pillai's trace was the criterion test. According to the SPSS Advanced Statistics User's Guide (1990), Pillai's trace is the most powerful test, as well as the most robust criterion. That is, the significance level based on it is reasonably correct even when the assumptions are violated.

Multivariate tests of homogeneity of dispersion matrices were calculated to determine whether the treatment groups were equal in variance.

Means were calculated for each factor by each trait, for each factor by total ratings, and for each photograph.

The Tukey test of multiple comparisons was performed for formality and for photographs to see which pairs of treatment groups differed from each other. The Tukey test is designed to maintain the Type I error rate for the chosen value of alpha for the entire set of pairwise comparisons. The chosen value of alpha was .05.

Frequencies of responses to demographic questions were calculated on SSPC+. Percentages are included in a descriptive demographic table.
CHAPTER V
RESULTS AND DISCUSSION

Introduction

The purpose of this research was to determine the effect of class level of student (freshman and senior), professors' formality of dress, and professors' age on college students' first impressions of ten traits of professors. A combination rating sheet and demographic questionnaire was administered to Freshman English classes and to senior classes from all the colleges at Virginia Tech on a faculty volunteer basis. Each subject rated one randomly assigned photograph out of a set of six. Four hundred ninety-seven forms were completed and three hundred fifty-four were useable. A Pearson correlation of the ten traits was calculated. Multiple analyses of variance on each trait by formality, age, and class were performed. Means and standard deviations were calculated for each factor level by each trait. Simple effects of each factor were determined. Gammas were calculated to determine the power of the effect of each factor.
Description of Sample

The sample (Table 1) consisted of 179 freshmen who attended Freshman English classes and 175 seniors who attended senior level classes at Virginia Tech. The students were representative of all eight colleges. The largest percentage majored in Engineering (26.3%), followed by Arts and Sciences (20.1%), Business (18.9%), Human Resources (16.4%), and Architecture (10.7%). Each of the other colleges, Agriculture, Education, and Veterinary Medicine, represented from 0.3% to 3.1% of the sample. There were 154 females and 200 males. Students aged less than 20 years numbered 179 and those aged 20 to 24 years numbered 175. The majority of the students were from the Southeast United States (51.1%) and the Northeast (42.9%). Those from the Southwest were 2.5%, the Midwest were 2.0%, and the Northwest were 0.8% of the sample. Most were from a large metropolitan area (44.1%) or a small city or town (42.1%). Only 13.8% were from a rural area.

Results

The ten traits on which the professors in the photographs were rated were correlated by Pearson correlation (Table 2). There seemed to be two groups of
### Table 1

Frequency and Percent of Responses to Demographic Questions

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class and Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman--less than 20 years</td>
<td>179</td>
<td>50.6</td>
</tr>
<tr>
<td>Senior--20-24 years</td>
<td>175</td>
<td>49.4</td>
</tr>
<tr>
<td><strong>College</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture and Life Sciences</td>
<td>11</td>
<td>3.1</td>
</tr>
<tr>
<td>Architecture</td>
<td>38</td>
<td>10.7</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>71</td>
<td>20.1</td>
</tr>
<tr>
<td>Business</td>
<td>67</td>
<td>18.9</td>
</tr>
<tr>
<td>Education</td>
<td>2</td>
<td>.6</td>
</tr>
<tr>
<td>Engineering</td>
<td>93</td>
<td>26.3</td>
</tr>
<tr>
<td>Human Resources</td>
<td>58</td>
<td>16.4</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>Missing responses</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>154</td>
<td>43.5</td>
</tr>
<tr>
<td>Male</td>
<td>200</td>
<td>56.5</td>
</tr>
</tbody>
</table>

---

**Note.** Because percentages are only reported to one decimal place, totals for each category may not add up to 100%.
Table 1 (Continued)
Frequency and Percent of Response to Demographic Questions

<table>
<thead>
<tr>
<th>Region of United States</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>152</td>
<td>42.9</td>
</tr>
<tr>
<td>Southeast</td>
<td>181</td>
<td>51.1</td>
</tr>
<tr>
<td>Midwest</td>
<td>7</td>
<td>2.0</td>
</tr>
<tr>
<td>Northwest</td>
<td>3</td>
<td>.8</td>
</tr>
<tr>
<td>Southwest</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>Non-U.S. with more than 10 years residence</td>
<td>2</td>
<td>.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City/Rural</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large metropolitan area</td>
<td>156</td>
<td>44.1</td>
</tr>
<tr>
<td>Small city or town</td>
<td>149</td>
<td>42.1</td>
</tr>
<tr>
<td>Rural</td>
<td>49</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Note. Because percentages are only reported to one decimal place, totals in each category may not add up to 100%.

-70-
Table 2: Correlations of Ten Traits of Professors

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FAIR</td>
<td>.3981**</td>
<td>.1895**</td>
<td>.2733**</td>
<td>.3665**</td>
<td>.3697**</td>
<td>.1550**</td>
<td>.3067**</td>
<td>.1966**</td>
<td>.2936**</td>
<td></td>
</tr>
<tr>
<td>2. SYMP</td>
<td></td>
<td>.0738</td>
<td>.4429**</td>
<td>.6723**</td>
<td>.6592**</td>
<td>-.1181**</td>
<td>.4249**</td>
<td>-.0185</td>
<td>.1784**</td>
<td></td>
</tr>
<tr>
<td>3. KNOW</td>
<td></td>
<td></td>
<td>.2479**</td>
<td>.0723</td>
<td>.0449</td>
<td>.4282**</td>
<td>.1297**</td>
<td>.4440**</td>
<td>.1606**</td>
<td></td>
</tr>
<tr>
<td>4. ENTH</td>
<td></td>
<td></td>
<td></td>
<td>.5395**</td>
<td>.3817**</td>
<td>.0986*</td>
<td>.5906**</td>
<td>.2116**</td>
<td>.1862**</td>
<td></td>
</tr>
<tr>
<td>5. FRND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.7170**</td>
<td>-.0528</td>
<td>.6011**</td>
<td>.0395</td>
<td>.2284**</td>
<td></td>
</tr>
<tr>
<td>6. FLEX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.1047*</td>
<td>.4933**</td>
<td>-.0101</td>
<td>.1747**</td>
<td></td>
</tr>
<tr>
<td>7. ORG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.1051*</td>
<td>.5911**</td>
<td>.2493**</td>
<td></td>
</tr>
<tr>
<td>8. STIM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.1583**</td>
<td>.3170**</td>
<td></td>
</tr>
<tr>
<td>9. PREP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.3074**</td>
</tr>
</tbody>
</table>

(Coefficient / (Cases) / 1-tailed Significance)

N=354 for each pair of traits

**p=<.01   *p=<.05
highly correlated traits. One group was that of sympathy, friendliness, and flexibility. Another group was that of knowledge, organization, and preparation. The traits in one group tended to have very low positive or very low negative correlations with the traits in another. The correlation of organized to sympathy was -.1181, to friendliness was -.0528, and to flexibility was -.1047, while the correlation of preparation to sympathy was -.0185, to flexibility was -.0101, and to friendliness was .0395. The correlation of knowledge to sympathy was .0738, to friendliness was .0723, and to flexibility was .0449.

The four traits not included in the groups had low positive correlations to all ten traits (Table 2). Enthusiasm and stimulating were correlated to both clusters, but more closely to sympathy, friendliness, and flexibility. Fairness had a low correlation to all the traits, with the highest (.3697) to flexibility. Clarity had a low positive significant correlation (from .1606 to .2284) to all traits except stimulating and well-prepared, to which clarity had a moderate positive significant correlation (.3170 and .3074, respectively).

A multivariate analysis of variance was done of the traits by the factors of formality of dress, age of professor, and class of student. The interaction of age by formality by class was not significant (p=.601), as shown in
Table 3. The interaction of formality by class (p=.778), age by formality (p=.960), and class by age (p=.978) were not significant. There was no age by formality interaction. The effect of class of student was not significant (p=.118). For non-significant results, refer to Table C-1 in the Appendix. The effect for formality of dress was significant (p=.022), as was the effect for age of professor (p=.021). See Tables 3 and 7, respectively.

Null hypothesis 1, that first impressions will not differ significantly by formality level, was rejected (Table 3). The research hypothesis was supported. Students’ ratings of professors’ traits differed by formality.

Null hypothesis 1a, that the moderate and low levels of formality will not rate higher for friendliness and sympathy toward students, was not rejected. The research hypothesis was not supported. The moderate and low formality levels were not rated higher than the high formality level for friendliness and sympathy toward students.

Null hypothesis 1b, that the high and moderate levels of formality will not be rated higher for knowledge, well-prepared, and organization, was not rejected. The research hypothesis was not supported. The high and moderate levels were not rated higher for knowledge, well-prepared, and organization. Actually, the lowest level rated highest and the moderate rated lowest for preparation.
Table 3
Effect of Formality of Dress on Students' First Impressions of Professors as Measured by Ratings of Traits:
Multivariate Test of Significance

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.09983</td>
<td>1.75476</td>
<td>20.00</td>
<td>668.00</td>
<td>.022</td>
</tr>
</tbody>
</table>
There were no significant differences for the ratings on knowledge and organization.

Null hypothesis 1c, that the highest level of formality would not rate highest overall, was not rejected. The research hypothesis was not supported. The highest level of formality did not rate highest overall. The moderate level did not rate second highest, and the lowest level did not rate lowest. In fact, the highest level (mean=1.5112) was rated between the moderate and the lowest levels. The lowest level was rated highest (mean=1.6026). The moderate was rated lowest (mean=1.4547). The low and moderate levels were determined to be different by Tukey test. Refer to Table 5 for mean ratings of traits by formality.

For the factor of formality, only the two traits of well-prepared for class and clarity in communicating were significant (Table 4). For well-prepared, the high and moderate formality levels were significantly different from each other according to a Tukey test (Table 5), as were the moderate and low levels. The high and low levels rated higher for well-prepared than the moderate level. See Table 5 for mean ratings and Tukey test results. The high and low levels were not significantly different.

For clarity, only the moderate and low levels of formality were significantly different by Tukey test. The high level was not significantly different from the moderate
Table 4
Effect of Formality of Dress on Students’ First Impressions of Professors as Measured by Ratings of Traits:
Univariate F-tests

<table>
<thead>
<tr>
<th>Trait</th>
<th>Hypoth.SS</th>
<th>Error SS</th>
<th>Hypoth.MS</th>
<th>Error MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAIR</td>
<td>.32630</td>
<td>155.12454</td>
<td>.16315</td>
<td>.45358</td>
<td>.35969</td>
<td>.698</td>
</tr>
<tr>
<td>SYMP</td>
<td>2.95314</td>
<td>205.75912</td>
<td>1.47657</td>
<td>.60163</td>
<td>2.45426</td>
<td>.087</td>
</tr>
<tr>
<td>KNOW</td>
<td>1.04497</td>
<td>157.40046</td>
<td>.52248</td>
<td>.46024</td>
<td>1.13525</td>
<td>.323</td>
</tr>
<tr>
<td>ENTH</td>
<td>2.80971</td>
<td>277.00840</td>
<td>1.40485</td>
<td>.80997</td>
<td>1.73446</td>
<td>.178</td>
</tr>
<tr>
<td>FRND</td>
<td>3.92268</td>
<td>277.60517</td>
<td>1.96134</td>
<td>.81171</td>
<td>2.41630</td>
<td>.091</td>
</tr>
<tr>
<td>FLEX</td>
<td>1.20619</td>
<td>208.84724</td>
<td>.60310</td>
<td>.61066</td>
<td>.98761</td>
<td>.374</td>
</tr>
<tr>
<td>ORG</td>
<td>1.78731</td>
<td>171.35443</td>
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<td>1.78361</td>
<td>.170</td>
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<tr>
<td>STIM</td>
<td>3.76560</td>
<td>226.40217</td>
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<td>.060</td>
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<tr>
<td>PREP</td>
<td>5.05227</td>
<td>164.64785</td>
<td>2.52614</td>
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<td>5.24719</td>
<td>.006</td>
</tr>
<tr>
<td>CLEAR</td>
<td>7.86176</td>
<td>191.58729</td>
<td>3.93088</td>
<td>.56020</td>
<td>7.01696</td>
<td>.001</td>
</tr>
</tbody>
</table>
Table 5
Mean Trait Scores of Professors
by Formality of Dress

<table>
<thead>
<tr>
<th>traits</th>
<th>high</th>
<th>moderate</th>
<th>low</th>
</tr>
</thead>
<tbody>
<tr>
<td>fairness</td>
<td>1.5128</td>
<td>1.4444</td>
<td>1.5000</td>
</tr>
<tr>
<td>sympathy</td>
<td>.9487</td>
<td>1.0085</td>
<td>1.1667</td>
</tr>
<tr>
<td>knowledge</td>
<td>2.2137</td>
<td>2.0855</td>
<td>2.1356</td>
</tr>
<tr>
<td>enthusiasm</td>
<td>1.1624</td>
<td>1.3162</td>
<td>1.3833</td>
</tr>
<tr>
<td>friendliness</td>
<td>1.0171</td>
<td>1.0427</td>
<td>1.1073</td>
</tr>
<tr>
<td>flexibility</td>
<td>.9658</td>
<td>.9744</td>
<td>1.0917</td>
</tr>
<tr>
<td>organization</td>
<td>2.2479</td>
<td>2.0684</td>
<td>2.1667</td>
</tr>
<tr>
<td>stimulating</td>
<td>.9231</td>
<td>.8974</td>
<td>1.1333</td>
</tr>
<tr>
<td>*preparation</td>
<td>#2.3077</td>
<td>#+2.0684</td>
<td>+2.3417</td>
</tr>
<tr>
<td>*clarity</td>
<td>1.8120</td>
<td>@1.6410</td>
<td>@2.0000</td>
</tr>
<tr>
<td>means of totals</td>
<td>1.5112</td>
<td>^1.4547</td>
<td>^1.6026</td>
</tr>
</tbody>
</table>

Note. Scale = 0 - 3.
+ # @ ^ pairs that differ (Tukey)
* significant at p=.01
or low levels. The lowest formality had the highest rating for clarity of communication, while the moderate was rated the lowest. Both the young and old professors rated lowest on well-prepared and clarity in the moderate formality level. See Table 5a and 5b for mean ratings on these two traits by age and formality. All formality levels were rated high (greater than 2.0) on well-prepared, and higher than average (greater than 1.5) on clarity.

Goodman and Kruskal’s gamma for the association of the manipulation of the experimental factors with variances in the trait scores were calculated (Table 6). Formality has a negative association with ratings of friendliness, sympathy, stimulating, and clarity, while a lower negative association with enthusiasm and flexibility. The higher the formality, the lower the rating on these traits. Formality is positively associated with the variance in knowledge scores. The greater the formalities, the higher the knowledge score. Formality has little association with the variance in scores on preparation and fairness.

Null hypothesis 2, that perceptions will not differ by age of professor was rejected (Table 7). The research hypothesis was supported. Students’ first impressions of professors’ traits were significantly different by age of professor. The older professor received the higher mean rating of 1.531; the younger received the mean rating of
Table 5a
Mean Trait Scores for Each Professor on Well-Prepared by Formality of Dress

<table>
<thead>
<tr>
<th>age</th>
<th>formality</th>
<th>mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>young</td>
<td>high</td>
<td>2.002</td>
</tr>
<tr>
<td></td>
<td>moderate</td>
<td>2.017</td>
</tr>
<tr>
<td></td>
<td>low</td>
<td>2.224</td>
</tr>
<tr>
<td>old</td>
<td>high</td>
<td>2.424</td>
</tr>
<tr>
<td></td>
<td>moderate</td>
<td>2.121</td>
</tr>
<tr>
<td></td>
<td>low</td>
<td>2.452</td>
</tr>
<tr>
<td>age</td>
<td>formality</td>
<td>mean</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>young</td>
<td>high</td>
<td>1.759</td>
</tr>
<tr>
<td></td>
<td>moderate</td>
<td>1.712</td>
</tr>
<tr>
<td></td>
<td>low</td>
<td>1.966</td>
</tr>
<tr>
<td>old</td>
<td>high</td>
<td>1.865</td>
</tr>
<tr>
<td></td>
<td>moderate</td>
<td>1.569</td>
</tr>
<tr>
<td></td>
<td>low</td>
<td>2.033</td>
</tr>
</tbody>
</table>
Table 6
Association of Formality of Dress With Trait Scores: Power of the Effect of Formality on Students' First Impressions as Measured by Ratings of Professors' Traits

<table>
<thead>
<tr>
<th>trait</th>
<th>gamma*</th>
</tr>
</thead>
<tbody>
<tr>
<td>fairness</td>
<td>.00870</td>
</tr>
<tr>
<td>sympathetic</td>
<td>-.18050</td>
</tr>
<tr>
<td>knowledge</td>
<td>.11143</td>
</tr>
<tr>
<td>enthusiasm</td>
<td>-.11562</td>
</tr>
<tr>
<td>friendliness</td>
<td>.15856</td>
</tr>
<tr>
<td>flexibility</td>
<td>-.10879</td>
</tr>
<tr>
<td>organization</td>
<td>.06532</td>
</tr>
<tr>
<td>stimulating</td>
<td>-.14035</td>
</tr>
<tr>
<td>preparation</td>
<td>-.00557</td>
</tr>
<tr>
<td>clarity</td>
<td>-.13772</td>
</tr>
</tbody>
</table>

*Goodman and Kruskal's
Table 7
Effect of Professors’ Age on Students’ First Impressions
as Measured by Ratings of Professors’s Traits:
Multivariate Test of Significance

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Exact F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.06041</td>
<td>2.14091</td>
<td>10.00</td>
<td>333.00</td>
<td>.021</td>
</tr>
</tbody>
</table>
Table 8

Effect of Professor Age on Students' First Impressions as Measured by Ratings of Professors' Traits: Univariate F-tests

<table>
<thead>
<tr>
<th>Trait</th>
<th>Hypoth.SS</th>
<th>ErrorSS</th>
<th>Hypoth.SS</th>
<th>ErrorSS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAIR</td>
<td>.01656</td>
<td>155.12454</td>
<td>.01656</td>
<td>.45358</td>
<td>.03650</td>
<td>.849</td>
</tr>
<tr>
<td>SYMP</td>
<td>3.18101</td>
<td>205.75912</td>
<td>3.18101</td>
<td>.60163</td>
<td>5.28728</td>
<td>.022</td>
</tr>
<tr>
<td>KNOW</td>
<td>3.74089</td>
<td>157.40046</td>
<td>3.74089</td>
<td>.46024</td>
<td>8.12821</td>
<td>.005</td>
</tr>
<tr>
<td>ENTH</td>
<td>.28045</td>
<td>277.00840</td>
<td>.28045</td>
<td>.80997</td>
<td>.34624</td>
<td>.557</td>
</tr>
<tr>
<td>FRND</td>
<td>1.55802</td>
<td>277.60517</td>
<td>1.55802</td>
<td>.81171</td>
<td>1.91943</td>
<td>.167</td>
</tr>
<tr>
<td>FLEX</td>
<td>1.39840</td>
<td>208.84724</td>
<td>1.39840</td>
<td>.61066</td>
<td>2.28996</td>
<td>.131</td>
</tr>
<tr>
<td>ORG</td>
<td>6.21298</td>
<td>171.35443</td>
<td>6.21298</td>
<td>.50104</td>
<td>12.40026</td>
<td>.000</td>
</tr>
<tr>
<td>STIM</td>
<td>1.30606</td>
<td>226.40217</td>
<td>1.30606</td>
<td>.66199</td>
<td>1.97292</td>
<td>.161</td>
</tr>
<tr>
<td>PREP</td>
<td>3.20659</td>
<td>164.64785</td>
<td>3.20659</td>
<td>.48143</td>
<td>6.66061</td>
<td>.010</td>
</tr>
<tr>
<td>CLEAR</td>
<td>.02583</td>
<td>191.58729</td>
<td>.02583</td>
<td>.56020</td>
<td>.04611</td>
<td>.830</td>
</tr>
</tbody>
</table>

-83-
1.524 (See the last line of Table 9).

Null hypothesis 2a, that the older professor will not rate significantly higher on knowledge, was rejected. The research hypothesis was supported. See Table 8 for significance. The older professor did rate significantly higher on knowledge. The mean for the older professor was 2.2346 versus 2.0343 for the younger. See Table 9 for mean ratings of traits by age and for Tukey test results.

Null hypothesis 2b, that the younger professor will not rate higher on friendliness and sympathy, was rejected for sympathy but not for friendliness. The research hypothesis was not supported. The younger professor rated significantly higher on sympathy (1.1371) than the older professor (.9497), but the younger did not rate significantly higher on friendliness (Table 8). Refer to Table 9 for mean ratings of traits by age and Tukey test results.

For the factor of age of professors, the traits of sympathetic toward students’ problems, knowledge of subject matter, organization of the course, and well-prepared for class were significant (Table 8). The young professor rated higher for sympathy, as predicted. Actually, both professors rated lower than average (lower than 1.5) for sympathy. The older professor rated higher for knowledge, as predicted. Both professors rated high (greater than
## Table 9
Mean Trait Scores by Professors' Age

<table>
<thead>
<tr>
<th>traits</th>
<th>young</th>
<th>old</th>
</tr>
</thead>
<tbody>
<tr>
<td>fairness</td>
<td>1.4800</td>
<td>1.4916</td>
</tr>
<tr>
<td>*sympathy</td>
<td>1.1371</td>
<td>.9497</td>
</tr>
<tr>
<td>*knowledge</td>
<td>2.0343</td>
<td>2.2346</td>
</tr>
<tr>
<td>enthusiasm</td>
<td>1.3143</td>
<td>1.2626</td>
</tr>
<tr>
<td>friendliness</td>
<td>1.1714</td>
<td>1.0447</td>
</tr>
<tr>
<td>flexibility</td>
<td>1.0743</td>
<td>.9497</td>
</tr>
<tr>
<td>*organization</td>
<td>2.0286</td>
<td>2.2905</td>
</tr>
<tr>
<td>stimulating</td>
<td>1.0457</td>
<td>.9274</td>
</tr>
<tr>
<td>*preparation</td>
<td>2.1429</td>
<td>2.3352</td>
</tr>
<tr>
<td>clarity</td>
<td>1.8114</td>
<td>1.8268</td>
</tr>
</tbody>
</table>

| overall rating | 1.524 | 1.531 |

---

Note. Scale = 0 – 3

* significant at p=<.05
2.0) for knowledge. The older professor also rated higher for organization and well-prepared. Both professors rated high (greater than 2.0) on organization and well-prepared. See Table 9 for mean ratings.

Goodman and Kruskal's gamma showed that age of professor had a high positive association with the variance in scores on knowledge, prepared, and organized (Table 10). The older professor was more likely to rate higher on these traits. Age was negatively associated with sympathy scores. The younger professor was more likely to rate higher on sympathy.

Null hypothesis 3, that freshmen would not rate professors lower than seniors was not rejected. The research hypothesis that freshmen would rate professors lower than seniors did was not supported. Actually, freshmen rated professors higher (1.580) than seniors (1.474), but these differences were not significant.

Interaction hypothesis: There was no significant interaction between formality of dress and age. In fact, there was no significant interaction between class, age, and formality or between class and age or between class and formality.

For mean ratings by each photograph, refer to Table 11. The older professor in the lowest formality of dress was judged significantly different from the older professor in
Table 10
Association of Professor's Age with Trait Scores:
Power of the Effect of Age on Students' First Impressions
as Measured by Ratings of Professors' Traits

<table>
<thead>
<tr>
<th>trait</th>
<th>gamma*</th>
</tr>
</thead>
<tbody>
<tr>
<td>fairness</td>
<td>0.00602</td>
</tr>
<tr>
<td>sympathy</td>
<td>-0.20151</td>
</tr>
<tr>
<td>knowledge</td>
<td>0.24729</td>
</tr>
<tr>
<td>enthusiasm</td>
<td>-0.04757</td>
</tr>
<tr>
<td>friendly</td>
<td>-0.09398</td>
</tr>
<tr>
<td>flexibility</td>
<td>-0.11116</td>
</tr>
<tr>
<td>organization</td>
<td>0.32716</td>
</tr>
<tr>
<td>stimulating</td>
<td>-0.12455</td>
</tr>
<tr>
<td>preparation</td>
<td>0.24566</td>
</tr>
<tr>
<td>clarity</td>
<td>0.01911</td>
</tr>
</tbody>
</table>

*Goodman and Kruskal's
Table 11
Mean Trait Scores by Photographs

<table>
<thead>
<tr>
<th></th>
<th>high</th>
<th>high</th>
<th>moderate</th>
<th>moderate</th>
<th>low</th>
<th>low</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>young</td>
<td>old</td>
<td>young</td>
<td>old</td>
<td>young</td>
<td>old</td>
</tr>
<tr>
<td>trait</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fairness</td>
<td>1.5690</td>
<td>1.4576</td>
<td>1.4746</td>
<td>1.4138</td>
<td>1.3966</td>
<td>1.5968</td>
</tr>
<tr>
<td>sympathy</td>
<td>1.0862</td>
<td>.8136</td>
<td>1.1695</td>
<td>.8448</td>
<td>1.1552</td>
<td>1.1774</td>
</tr>
<tr>
<td>knowledge</td>
<td>2.1034</td>
<td>2.3220</td>
<td>2.0169</td>
<td>2.1552</td>
<td>1.9828</td>
<td>2.2258</td>
</tr>
<tr>
<td>enthusiasm</td>
<td>1.1724</td>
<td>1.1525</td>
<td>1.4746</td>
<td>1.1552</td>
<td>1.2931</td>
<td>1.4677</td>
</tr>
<tr>
<td>friendly</td>
<td>1.1034</td>
<td>.9322</td>
<td>1.2034</td>
<td>.8793</td>
<td>1.2069</td>
<td>1.3065</td>
</tr>
<tr>
<td>flexible</td>
<td>1.0345</td>
<td>.8983</td>
<td>1.1017</td>
<td>.8448</td>
<td>1.0862</td>
<td>1.0968</td>
</tr>
<tr>
<td>organized</td>
<td>.9655</td>
<td>#2.3898</td>
<td>#1.9661</td>
<td>2.1724</td>
<td>2.0172</td>
<td>2.3065</td>
</tr>
<tr>
<td>stimulating</td>
<td>2.1897</td>
<td>.8814</td>
<td>1.0339</td>
<td>.7586</td>
<td>1.1379</td>
<td>1.1290</td>
</tr>
<tr>
<td>preparation</td>
<td>2.1897</td>
<td>-2.4237</td>
<td>+2.0169</td>
<td>2.1207</td>
<td>2.2241</td>
<td>+2.4516</td>
</tr>
<tr>
<td>clarity</td>
<td>1.7586</td>
<td>1.8644</td>
<td>@1.7119</td>
<td>1.5690</td>
<td>1.9655</td>
<td>@2.0323</td>
</tr>
</tbody>
</table>

mean total 1.5638 1.5136 1.5170 1.3914 1.5466 1.6790

Note. Scale = 0 - 3.
- + # @ pairs that differ (Tukey)
moderate formality. The highest overall rating (mean = 1.67904) was received by the older professor in the lowest level of formality. The lowest overall rating (mean = 1.39138) was given to the older professor in the moderate level of formality. The other photographs were rated similarly to each other, from a mean of 1.5136 to a mean of 1.5638.

The Box M, a multivariate test for homogeneity of dispersion matrices, was performed. This test simultaneously considers both the variances and the covariances. Results (Box M= 749.45695) indicated that there was no reason to reject the hypotheses that the variances in ratings of the experimental conditions are equal (F with 605,87910 DF=1.06624, p=approx. .127; Chi-Square with 605 DF=650.23399, p=approx. .099).

Discussion

In this research the students’ ratings were based upon their first impressions of professors’ traits. The rating instrument was not measuring ten dimensions but basically two, along with four miscellaneous traits. One dimension might be called "competence," consisting of the traits of knowledge, preparation, and organization. The other dimension might be called "approachability," consisting of
the traits of sympathy, friendliness, and flexibility. A third dimension might be called, "miscellaneous," consisting of the traits of fairness, clarity, stimulating, and enthusiasm. Lamb (1987) also had three categories, "respect," "approachability," and "overall acceptability."

Like previous research, perceptions of professors differed by formality level. However, unlike previous research, with the exception of the study in California by Liepins (1987), the lowest level was rated the highest while the moderate level was rated the lowest. These levels affected ratings of the older professor much more than the younger. The younger professor was rated similarly in different formality levels. However, for the older professor, the lowest level was rated highest. The older professor in the moderate level rated lowest of all. In most studies, the moderate level rated between the highest and the lowest levels.

The highest and lowest levels of formality were rated the highest for being well-prepared for class, while previous research such as that of Rollman (1977, 1980), Bishop (1980), and Johnson (1985) found that only the highest level rated highest for well-prepared. The lowest formality gave the highest rating on clarity of communication, while Johnson (1985) found that the most formal level was judged most clear. Unlike Rollman's study
in which the moderate formality was rated highest for the trait of "clear," the moderate level was rated lowest for clarity of communication. It is possible that the traits, "clear" and "clarity of communication" are not perceived as the same concept.

The overall lowest first impression rating for the moderate formality of dress on the older professor was totally unexpected. Perhaps it was a reaction to his awkward posture (see photograph D in Appendix A).

Also unexpected was the highest rating for the older professor in the lowest formality. Perhaps older professors have more leeway in dressing professionally, as did the women in the Thurston et al. (1990) research in which older women in dresses were judged as more professional than were younger women in dresses. Students seemed to have judged the older professor as having the competence dimension (knowledge, preparation, and organization), so maybe the lower formality gave the impression of having the approachability dimension (friendliness, sympathy, and flexibility).

As expected, different ages of professors were rated differently overall. The young professor rated higher for sympathetic toward students' problems as expected. Being closer to their age, students probably felt that he could understand their problems, as found in research on
counselors (Heitmeyer and Goldsmith, 1989), and be less distant, as in a study on teachers (Peterson, 1964). This seems to support the similarity/attraction concept of attribution theory that we are attracted to those whom we perceive to be similar to us.

The older professor rated higher for knowledge, as expected. The students probably felt that he has had more years to accumulate wisdom. As Riley, Ryan, and Lifshitz (1950) reported, older teachers were seen as "knowing their stuff." Thurston et al. (1990) concluded that "age conveys experience." The older professor also rated higher for organization and being well-prepared for class. This was not predicted. However, in the Pearson correlation, it was found that these two traits closely correlated with knowledge.

Unexpectedly, the freshmen rated the professors higher than did the seniors overall, although the differences were not significant. No previous teacher dress studies used class as an important variable. However, some did report that there were no significant differences based on class, just as was found in this study. Surveys of student evaluations of real professors in real classrooms (done at the end of semesters) showed that professors of lower division courses rated lower than professors of upper division courses (Wigington et al., 1989). This may be a
function of size of class—larger classes rate lower than smaller classes. Most freshman classes are much larger than senior classes. This may also be a result of doing the evaluations at the end of the semester, after a lot of experiences have occurred. Freshmen may become disillusioned by the end of the semester.

Perhaps the first semester freshmen in the present study had high expectations for their professors this early in their college experience (the second week of the first semester), while seniors have become aware that professors do not know everything. Freshmen rated the professors higher on four traits than did the seniors: knowledge of subject matter, friendly toward students, stimulation of interest in the subject matter, and clarity in communicating. For the trait of knowledge, perhaps the freshmen rated the professors higher than the seniors did because these new freshmen felt that professors should know everything. Seniors are more acquainted with professors and know that they are only human. For the trait of friendly toward students, perhaps seniors have become disgruntled with some professors during their college years. Further teacher dress researchers may want to conduct student evaluations at the end of a semester rather than at the beginning.
There was no interaction with age and formality. Perhaps the limited levels of age (2) and formality (3) made any interaction difficult to determine, or perhaps there is no basis for the commonly held belief that higher formality creates a perception of greater age. After all, no research was found on this subject.

The implications of this study are that formality of dress affects students' first impressions of professors' traits of being well-prepared and being clear in communicating. Both the younger and the older professor rated lowest for these traits in the moderate formality. Based on this finding, professors who want to improve the impressions they project in these areas would do well to avoid moderate dress. Older professors may receive higher evaluations overall if they dress informally.

Young and old professors are rated differently on sympathy, knowledge, organization and preparation. Younger professors are judged higher on sympathy, while older are judged higher on knowledge, organization and preparation. Administrators who use student evaluations for tenure decisions should be aware of this bias.
CHAPTER VI

SUMMARY

Introduction

When people first observe others, they form impressions of those others in a short amount of time, often with limited information. Some of this information is derived from dress and from the body and face. Since first impressions are long-lasting and difficult to change, they are important to our understanding of the perception of others, including an understanding of students' perceptions of teachers.

Statement of the Problem

There is a question of whether student evaluations are a true measure of teaching effectiveness. Many influences can bias these evaluations.

A review of literature revealed that formality of teachers' dress affected students' perceptions of teachers. However, these studies were conducted in the last decade or before. The effects of dress on perceptions may change as students' attitudes toward dress, toward professors, or
toward education change. The literature review failed to reveal conclusive evidence about the effect of class of student on perceptions of professors. No literature, other than case studies, was discovered which used age of professor as a variable. The objectives of this study, then, were:

1. to determine whether formality of professors' dress influences students' perceptions of teaching effectiveness in a first impression situation.

2. to examine the effect of the perceived age of professors on students' perceptions of teaching effectiveness in a first impression situation.

3. to compare the perceptions of college freshmen with the perceptions of college seniors in a first impression situation.

The research was conducted within the framework of attribution theory. When we observe others, we attribute the causes of behavior to certain traits. Based on these attributions, we form an impression and decide whether or not to continue our encounter with the observed persons. If teachers are to be effective, students must be willing to continue to interact with them.

Research hypotheses on formality, age of professor, and class level of student were formulated to guide the research. The formality hypotheses, which were based on the
general trend in the literature on students' perceptions of teachers as influenced by formality of dress, were:

1. Students' perceptions of professors' traits will be significantly different by formality of dress.

   1a. The moderate and low levels of formality will be rated higher than the high level for friendliness and sympathy toward students.

   1b. The high and moderate levels of formality will be rated higher for knowledge of subject matter, well-prepared for class, and organization of the course.

   1c. The highest level of formality will be rated the highest overall, followed by the moderate level, and then the lowest level.

The age hypotheses were hunches based on case studies in the reviewed literature. The research hypotheses about the effect of the age of the professor were:

2. Students' perceptions of professors' traits will be significantly different by age of professor.

   2a. The older professor will be rated higher on knowledge.

   2b. The younger professor will be rated higher on friendliness and sympathy toward students.
Based on case studies of the maturation of college students, the hypothesis on the effect of class level of student was:

3. College freshmen’s perceptions of professors will be significantly lower than college seniors’ perceptions. An interaction hypothesis was formulated, based on popular belief and on Rollman’s (1977) research:

There will be an interaction between age of professor and formality of dress.

Design of Research

A rating questionnaire and six photographs were developed to test the students’ expectations. The questionnaire listed ten traits to be rated on a four-point scale, from "far below average" to "far above average." Two male models were dressed in three identical outfits representing three levels of formality. In a pilot test, the older male was judged to be between 55 and 65 years old and the younger male was judged to be between 25 and 35 years old. In the actual data collection, three hundred fifty-four subjects (179 freshmen and 175 seniors) were each given one rating questionnaire and randomly assigned one photograph. Freshmen English classes and senior classes throughout one university participated.
A different design was used for this research than that in the teacher dress studies which were reviewed in the literature. Rather than a repeated measures design, a randomized design was used—that is, each subject saw only one photograph. This was planned in order to eliminate practice effects from rating multiple photographs, to make the dress and age variables less obvious, and to prevent the confounding of main effects with interactions. The research design was a three-factor \((A \times B \times C)\), completely randomized design.

The ten traits were correlated by Pearson Product Moment correlation. The ratings were analyzed by multivariate analysis. Goodman and Kruskal’s gamma was calculated for the power of the effects of the variables of age and formality on students’ ratings of traits.

**Results**

A Pearson Product Moment correlation revealed that knowledge, preparation, and organization were closely correlated. Friendliness, sympathy, and flexibility were also closely correlated. Knowledge, preparation, and organization were all negatively correlated to friendliness, sympathy, and flexibility. The remaining four traits—fairness, enthusiasm, stimulation, and clarity—had
low positive correlations to all ten traits.

Multivariate analysis of variance showed that the class level of student effect was not significant, although freshmen rated the professors a little higher than seniors. Thus Research Hypothesis 3 was not supported. No research was discovered that used class as a primary variable. However, Engelbach (1978) reported that there were no differences based on class for her college student subjects; Reeder and King (1984) reported that only in a few instances did responses differ for their high-school student subjects.

The formality of dress effect was significant, as in past teacher dress research. Thus, Research Hypothesis 1 was supported. Hypotheses 1a was not supported—-the moderate and low levels did not rate higher for friendliness and sympathy. Hypothesis 1b was not supported—-the high and moderate levels did not rate higher for knowledge, well-prepared, and organization. Unexpectedly, the lowest level rated highest overall, while the moderate rated lowest, possibly because of the awkward posture of the older professor in moderate dress. Based on these findings, Hypothesis 1c was not supported. Clarity in communication and preparation were the two traits which were significantly different for formality.

Age of professor was found to be a significant variable, with the older professor receiving the higher
rating. Hypothesis 2 was supported. The older professor rated higher on knowledge, as predicted. Thus, Hypothesis 2a was supported. The older professor also rated higher on preparation and organization. The younger professor rated higher on sympathy, as predicted, but not on friendliness. Thus Hypothesis 2b was not supported.

Two- and three-way interactions were analyzed for the factors of age, formality, and class. None were significant. The hypothesis of an age and formality interaction was not supported.

Goodman and Kruskal’s gamma showed some associations of variances in trait ratings with the factors of age, formality of dress, and class. Formality has a negative association with ratings of friendliness, sympathy, stimulating, and clarity of communication, as well as a weaker negative association with enthusiasm and flexibility. Formality is positively associated with knowledge. There is little association of formality with preparation or fairness. Age has a high positive association with knowledge, preparation, and organization, and a negative association with sympathy. Class of student is negatively associated with all trait scores.
Summary

Based on the results of this research, the formality of professors' dress as well as the age of professors do seem to bias student evaluations in a first impression situation. Class level does not significantly affect students' perceptions of the teaching effectiveness of professors. The traits which were used to measure perceptions of effectiveness were nearly all significantly correlated with each other. There seemed to exist two groups of traits plus some miscellaneous traits. One group seemed to measure competence and the other seemed to measure approachability. It appeared that the rating instrument was measuring at least two different dimensions of teaching effectiveness.
CHAPTER VII

SUGGESTIONS FOR FURTHER RESEARCH

The present research left some unexplored areas. Suggestions for further research include:

1. To compare responses of female professors of different ages to responses of male professors of different ages.

2. To include professors of more than two ages. One of middle-age should especially be included since that age was not in the present study and students' perceptions of the middle-age teacher are unknown. In addition, a formality by age interaction may be revealed with the inclusion of additional ages.

3. To divide actual live professors into three groups, have them dress in three different levels of formality, and compare their evaluations, either on a first-impression or long-term basis. For this to be a semester-long study, other variables, like types of courses and teaching abilities, would somehow have to be controlled.

4. To examine effects of inconsistency of dress, such as dressing formally one day and informally the next.

5. To see if there are any differences between freshmen and senior ratings at the beginning of a semester and at the end of a semester.
BIBLIOGRAPHY


Perceptual and Motor Skills, 46, 1328-1330.


APPENDIX A

SIX PHOTOGRAPHS
PHOTOGRAPH A

Young Professor in Highest Formality Level
PHOTOGRAPH B

Old Professor in Highest Formality Level
PHOTOGRAPH C

Young Professor in Moderate Formality Level
PHOTOGRAPH D

Old Professor in Moderate Formality Level
PHOTOGRAPH E

Young Professor in Lowest Formality Level
PHOTOGRAPH F

Old Professor in Lowest Formality Level
This is a trial to select models for a study of students' impressions of college professors. Please answer the questions on this page first.

1. Look at the man in the photograph. What age in years do you think he is? Put a check beside the age range:

   18-24___ 25-29___ 30-35___
   36-40___ 41-45___ 46-50___
   51-55___ 56-60___ 60-65___
   more than 66___

2. Still looking at the man in the photograph, rate him on attractiveness:

   less than average___ average___
   better than average___ much better than average___

Now, please read page two, beginning, "Dear Student."
Dear Student,

This is a survey of students' impressions of professors. I am conducting this survey for my dissertation at Virginia Tech. Your cooperation will make it possible to not only improve the teacher evaluation process but also to improve teacher performance. Your participation is voluntary.

Below is a transcript of the professor's introduction on the first day of fall classes. The course number, professor's name, and his lecture topic have been left out to protect his anonymity. Please read the transcript. Then look at his photograph. Rate your perception of him on the green computer-scanned sheet. Use a number 2 pencil and make dark marks. Erase completely any mistakes.

After you have completed the computer sheet, please replace all materials in the envelope and return them.

Thank you.

Margery Davis

_________________________________________________________

TRANSCRIPT

"This is Speech ______. My name is _______. Please look at the syllabus I have handed out. You will notice that there is a mid-term on October 11 and a final exam on December 17. Read the assignment for the next class meeting and come prepared to discuss it.

I am going to lecture now on the topic of _______."

*This was titled, "Page One" for the actual data collection.
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<th>Correct Mark</th>
<th>Use No. 2 Pencil</th>
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</table>

**NAME**  X X X X X X X X X X X X X X

**COURSE**

**DATE**

Please rate your impression of the professor on the traits listed beside items 1 through 10. Mark (1) for far below average, (2) for below average, (3) for average, (4) for above average, (5) for far above average.

Please answer questions 11 through 18 about yourself.

1. Fairness in Grading
2. Sympathetic toward Student's Problems
3. Knowledge of Subject Matter
4. Enthusiasm for Subject Matter
5. Friendly toward Students
6. Flexibility in Dealing with Students
7. Organization of the Course
8. Stimulation of Interest in the Subject Matter
9. Well-prepared for Class
10. Clarity in Communicating

**11. Have you seen the person in this photograph before? (1) Yes (2) No**

**12. Are you a: (1) Freshman (2) Sophomore (3) Junior (4) Senior (5) Graduate (6) Other?**

**13. Your college is: (1) Agriculture and Life Sciences (2) Architecture (3) Arts and Sciences (4) Business (5) Engineering (6) Human Resources (7) Veterinary Medicine (8) Undecided (9) Education**

**14. Your sex is: (1) Female (2) Male**

**15. Your age is: (1) 19 or under (2) 20-24 (3) 25 or over**

**16. What part of the U.S. are you from? (1) Northeast (2) Southeast (3) Midwest (4) Northwest (5) Southwest (6) Not from the U.S.**

**17. Are you from: (1) Large metropolitan area (2) Small city or town (3) Rural area?**

**18. Have you lived in the United States 10 years or more? (1) Yes (2) No**
100 Wallace Hall  
Virginia Tech  

August 26, 1991  

Dear Professor:  

I am conducting dissertation research aimed at improving student/teacher interaction. I will be distributing a short questionnaire in Freshman English during the first week or two of classes. It will take about five minutes for your students to complete. Please refer to the third paragraph of the Composition Committee Minutes dated March 26, 1991, which reads:

"Clothing and Textiles graduate student Marge Davis made a brief presentation with the request to visit Freshman English classes (eight or so) to administer a questionnaire (sic) on the impact of faculty dress on student perceptions of teaching. Despite some reservations, the committee agreed that she is free to ask individual teachers whether they would like to participate."

I believe their reservations had to do with whether Freshman English classes are representative of the student population. However, for my research these classes are the best choice.

If you have any questions, please call me at 951-4037 in the daytime or evening.

Please tear off and return by campus mail no later than Thursday, August 29, 1991, to: Margery Davis, 101 Wallace Hall.

___ Yes. I am willing to participate in your survey.
The best day for you to come is August _____ or September _____.
The best time is: at the beginning of class _____
at the end of class _____
other (Please specify.) _____
This class(es) meet at: ___________________________
APPENDIX C

NON-SIGNIFICANT EFFECTS

Table C-1
Students' First Impressions of Professors' Traits:
Non-Significant Effects of Multivariate Tests*

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3-way interaction

Age by For. by Class .05188  .88944  20.00  668.00  .601

2-way interactions

For. by Class .04375  .74690  20.00  668.00  .778
Age by Class .00923  .31036  10.00  33.00  .978
Age by For. .03050  .51725  20.00  668.00  .960

Main effect

Class .04465  1.55635  10.00  333.00  .118

Note. For. = Formality

*Pillais criterion

-122-
VITA

Margery Ann (Salisbury) Davis was born in Washington, D.C. in 1948 and presently resides in Blacksburg, Virginia.

Ms. Davis received a Bachelor of Science degree in Textiles and Clothing from the University of Illinois in June 1972. After one semester of graduate work at the University of Illinois in textiles and clothing, she took time off to raise a family. In 1985 she received a Master of Science degree in Adult Education from Virginia Tech. During the first three years of her doctoral studies, she held a graduate assistantship.

Ms. Davis is an active member of many organizations. The honorary organizations include Phi Kappa Phi, Phi Upsilon Omicron, and Kappa Omicron Nu. In 1988 she was named a Collegiate Scholarship All-American. Her professional involvements are in the Association of College Professors of Textiles and Clothing, the American Home Economics Association, the Virginia Home Economics Association, and the Blacksburg Home Economists in Homemaking. She is also active in campus concerns as a member of the Clothing and Textiles Graduate Student Assembly and a Representative to the Graduate Student Assembly of Virginia Tech. For her doctoral dissertation she received a Kappa Omicron Nu scholarship.