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THE UNIVERSITY OF ALBERTA

PERSONALITY TRAIT ATTRIBUTION  
IN AN EMPLOYMENT INTERVIEW.

by



TRACY M. KUIPER

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH  
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OF MASTER OF SCIENCE

IN

CLOTHING AND TEXTILES

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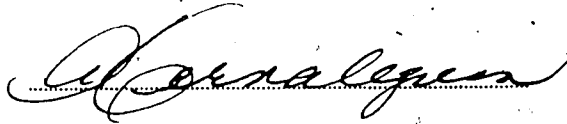
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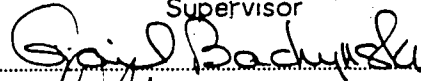
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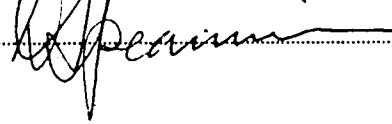
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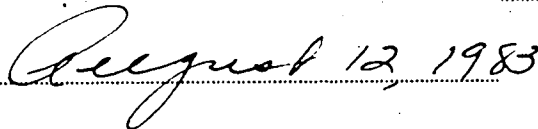


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## Abstract

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### Personality Trait Attribution in an Employment Interview

by

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University of Alberta, 1983

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The purpose of this study was to determine whether personality characteristics can be inferred to photographed models and if colour has a function in the decision of whom to hire in a simulated employment situation. It was hoped that the study would provide insight into appropriate dressing, in terms of colour of costume, for the interview situation. The theoretical basis for this study involved consideration of appearance as an integral part of social transactions; clothing as a cue in the formation of first impressions; and colour, an integral part of clothing, as a cue in this impression formation.

The sample consisted of thirty-nine randomly chosen female graduating students from the University of Alberta, and forty employers who normally hire, or recommend for hire, graduating students from the University of Alberta. The stimulus material consisted of five female models each wearing each of five identically styled, two-piece suits in five different hues: yellow, grey, off-white, pink, and blue. Along with each suit, models wore the same blouse, pumps, hose, make-up, and jewellery. The twenty-five resulting photographs were divided into five groups, with each group consisting of the five stimulus models wearing a different coloured suit. Each respondent was randomly assigned to one of the five variations of the stimulus material. Respondents recorded their choice of successful and unsuccessful applicants as well as their impressions on the

thirty-one personality variables of a modified form of the semantic differential instrument originally developed by Dion, Berscheid and Walster (1972) and later adapted by Nielsen (1975).

Other instruments in the testing included a questionnaire soliciting information regarding perceptions of a successful applicant as well as reasons for choosing the successful and unsuccessful applicants; a checksheet of attire describing the judge's mode of dress; and twenty-one plates of the Ishihara Tests for Colour Blindness, used to determine the presence of colour vision deficiencies. The data were analyzed using two-tailed tests of hypotheses and chi squares.

Statistical results indicate that prospective employers and female university students infer personality characteristics to a photographed model and that these inferences are not significantly different between employers and students. Ratings for the successful applicants, however, tended to be significantly different from those of unsuccessful applicants. With regards to choice of successful applicant, employers indicated a definite preference for applicants two and three respectively, while students indicated a slight preference for applicant three over number two. With regards to hue of the garment worn by the successful applicant, employers chose blue as most acceptable, while students indicated a preference for yellow and blue an equal number of times. Pink was found to be least appropriate by both groups. It would appear that total appearance has the greater function in the decision of whom to hire and that colour is but an integral part of appearance.

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## I. INTRODUCTION

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### A. Statement of Problem

"The apparel oft proclaims the man." (Act 1, Sc. 3). This quote from Shakespeare's Hamlet has become particularly true in a time when brief social contacts are an everyday occurrence. As one encounters more people each day, he forms impressions of those he meets based on very small amounts of information and in a limited period of time.

Stone (1965) indicates that the Symbolic Interactionist perspective demands that appearance be considered an essential part in the interpretation of selves in social transactions. He states that each transaction must be divided into at least two components - appearance, which is communicated by such nonverbal symbols as gestures, grooming and clothing, and discourse. He adds that appearance is at least as important as discourse in this process. As clothing covers most of the body, thus contributing to appearance, clothing is used as a cue in the formation of first impressions.

Exactly what characteristics of the wearer are determined on the basis of clothing? What are the functions of clothing in modern society? In the past, clothing served women on a functional level, for ease of movement and comfort while performing household tasks, and on a social level by symbolizing the husband's economic status in social situations. More recently, the functions of women's clothing may be changing as more women enter the work force. Women are spending less time in their homes, thus decreasing the need for purely functional clothing for household tasks while increasing the need for appropriate apparel in job situations.

Career apparel implies dressing for self in order to maintain or enhance self-esteem, and for others, by inducing desirable impressions. Tagiuri believes that the clothing one wears provides insight into the wearer's attitudes, ideas, emotions, abilities, purposes, thoughts, perceptions and memories (Tagiuri, 1969). Other researchers have studied the relationships between clothing and age, sex, occupation, status, and sociability as well as many personality factors.

As colour is an integral part of one's clothing, it seems logical to assume that when one reacts to another's clothing, he is also reacting to the hue of the garment worn. There has been a considerable amount of research conducted in order to establish relationships between colour choice or preference and various aspects of personality. Preferences for specific colours have been linked to biological, cultural, physiological and psychological determinants; the greatest emphasis being placed on the psychological aspects of colour.

First impressions are an essential aspect of the interview situation. In a very short time, and often with limited information regarding the applicant, a prospective employer judges the capabilities, attitudes and values of the applicant. Impressions of the applicant will be formed rapidly and will usually be enduring, even in cases where contrary information is later supplied. It is essential, therefore, that the applicant leave a positive impression of him/herself.

Expanding on such factors as interviewer stereotypes, personal characteristics of candidates, type and order of interview information and interview structure, McCormick and Ilgen (1980) and McCormick and Tiffin (1974) attempted to describe factors that influence the interviewer's decision. Appearance, a variable of the candidate's personal characteristics, was found to influence significantly hiring decisions as indicated by higher ratings for attractive persons over unattractive ones.

Schmitt (1976) developed a model describing possible determinants of interview outcome. Figure 1 describes how interviewer and interviewee background variables, behaviour and appearance, as well as job information, situational variables and attitudes, motivations, perceptions, expectations and stereotypes contribute to the outcome of an interview. The focus of the present study centres on the interviewee appearance variable, all other interviewee related variables were controlled as much as possible.

Assuming that providing a positive impression is of utmost importance in the interview situation, are female university graduates about to enter the work force prepared to present themselves the way an employer would expect? More specifically, are fourth year female university students equipped with sufficient knowledge regarding impressions conveyed by clothing and their hues to present themselves in a way that would be acceptable to employers?

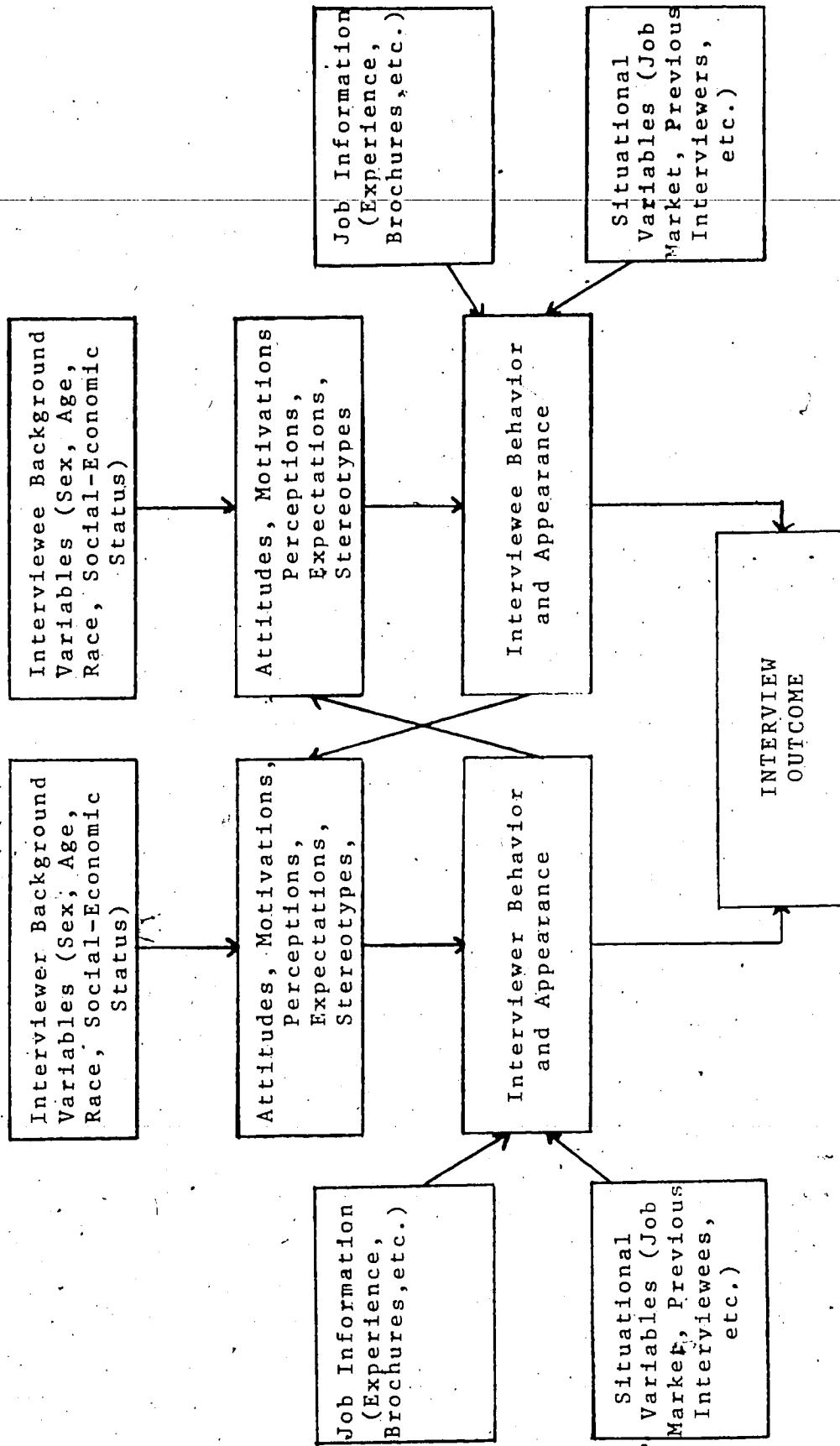


Fig.1. Variables relating to the interviewer and the interviewee that are possible determinants of the interview outcome. (Schmitt, 1976, p.93.)

The statement of the problem of this study:

In an interview situation are certain personality characteristics inferred to female applicants because of the hue of the costume worn?

Are prospective employers' attitudes similar to those of female university graduates about to enter the job market, with regards to the hue of the costume worn by the applicant in the initial interview?

### B. Justification

Sociologists have stated that due to increasing urbanization of modern society, social interactions are gradually moving away from primary, intimate relationships to more superficial, secondary ones. We see more people each day while at the same time, spending less actual time with each person. It is essential, therefore, that these brief encounters leave favourable and lasting impressions on those whom we meet.

In the initial interview, a first impression situation, the applicant's visual impression is of utmost importance. The prospective employer will make judgements which will determine whether or not the applicant is granted the position. Research shows that clothing affects this impression. Ryan (1966) states that "clothes do have a definite influence on the impressions or characteristics a person attributes to those he meets." (Ryan, 1966. p.13)

Several variables including texture, line and style are considered when one discusses clothing; however, with the recent increase of interest in colour analysis, it seems important to study the extent to which the colour of an applicant's clothing affects the first impression made on an employer. This study will attempt to determine if relationships do exist between the hue of the garment worn and the personality characteristics attributed to the applicant wearing the particular colour.

Colour concepts are relevant to today's career women. It is well known that the number of women entering or re-entering the work force has increased significantly in the past several decades. Keeping in mind the increase in secondary, relatively short interactions, many women are discovering the importance of presenting themselves in such a way that they leave a favourable impression. Such is especially true considering the time frame of an interview in which a prospective employer must be favourably impressed



within a limited period of time.

Clothing is but one of many variables important in visual communication. This study will focus specifically on colour as an aspect of clothing in relation to specific personality characteristics inferred to the wearer. Other variables such as stance, posture, height, weight and physical appearance will be held constant as far as possible. By using five stimulus models rather than one, it will be possible to determine if the variation in judgement of personality traits is attributable to the person or colour variable.

Several authors have described the most appropriate modes of career dressing (Cho, 1978, Molloy, 1977, Jackson, 1980). Such descriptions, however, fall short of providing empirical evidence supporting the claims. Based on literature concerning first impressions, impression formation and colour psychology, this study shall attempt to provide suggestions for appropriate dressing, in terms of colour of costume, for the interview situation.

## II. REVIEW OF LITERATURE

### A. Colour Psychology

A great deal of interest has been sparked recently in the area of Colour Psychology. This is indicated by the increasing number of such businesses as 'Colour Me Beautiful' which attempt not only to categorize people into specific colour groups but also to associate one's best colours with personality and a particular lifestyle. Jackson (1980) associates colouring with the four seasons – summer and winter having cool or blue skin undertones, and spring and autumn having warm or red/orange undertones. In describing the association between colour and personality, Jackson states that "the summer palette has classic colours, reflecting calmness and conservatism, and the summer woman is most often a poised, gracious, even tempered woman, ideal in classic clothes and soft prints. She's the elegant, but feminine type."(p.76). Jackson links the 'winter' person with a dramatic personality and the 'autumn' woman with a natural, informal, casual and sporty personality. Lastly, she describes a 'spring' as a friendly, informal, bubbly person who never seems to age and has a girlish, feminine quality to her clothing.

Molloy (1977), in his book The Women's Dress for Success Book, identified the most appropriate colours for women's career dress as grey (two to three shades lighter than charcoal) and medium-range blue. Other appropriate colours which he includes are navy, camel, black, dark brown, beige, deep maroon and deep rust. Colours to be avoided are most pastels, most shades of green and all bright colours including mustard. In an attempt to describe the impressions emitted by particular colours, Molloy credits colours with having personalities of their own. He states that "any time you wear a blue suit with a pale yellow blouse or a beige suit with medium or light blue blouse, you can sit at your desk and beam at everyone, and they'll think you're blissfully happy – while you're planning to take over the company."(p.61)

It is incorrect to assume that reactions to colour is a new area of study. Literature concerning these reactions to colour dates back to before the turn of the century. In 1894, J.Cohn conducted what is considered to be the first empirical study in the area of colour preferences. Although his work denied the existence of any specific order in

colour preferences, research in this and related areas has continued to flourish.

Studies have been conducted on the premise that preference for and choice of particular colours is associated with certain personality and mood characteristics of the individual. It is imperative, however, to realize that several factors may account for a specific colour preference.

It seems logical to assume that one's colour preferences might be culturally determined. Colour has become an important factor in women's fashions, an area which is very much culturally determined.

Abbot, in his book The Color of Life (1947), intimated that preferences for colours may be determined by aesthetic instinct, acquired knowledge and association. Culture, along with geographic location, also seems to be a determining factor, for Abbot stated that "blonds, and those who are native to the temperate zones of the world, seem generally to prefer blues and greens. Brunets, and those who are native to the tropical zones of the world, seem generally to prefer reds and other warm colors." (pp. 137, 138). Abbot associated colour (specifically for apparel) and personality characteristics almost to the point of assuming that colours have personalities of their own. He stated that "Everyone who has a preference should know the limitations of the preferred colour, should study its qualities and character and should learn in what form and manner it can be used with the greatest satisfaction." (p. 170). As examples, he associated black with maturity, age, death, wisdom, sophistication and seriousness; white with youth, innocence, purity; red with gaiety, youthfulness and life; yellow with youth; and brown with fresh, out-of-doors sportiness.

Murray and Deabler (1957) repeated a study by Wexner to explore cultural factors which associate colours with mood tones. They attempted to determine if socioeconomic level and mental health promote consistencies in these associations. Their findings indicated variations among people and the differences in associations strongly suggested that these associations are, at least partially, learned rather than inborn.

It has also been considered that colour preferences are determined by biological factors. Wexner (1954) stated that "In addition to the cultural factor which no doubt plays an important part in the associations of colours with certain mood tones, there seems to be the possibility of the existence of biological determinants" (p.434), these possibly

explaining consistencies among studies in the area of colour preference.

Wexner attempted to determine the extent to which colours or hues are associated with mood tones. Ninety-four male and female subjects were presented with eight stimulus colours and eleven moods. It was found that each mood tone was associated with one particular colour more often than with remaining colours. Red was most often associated with exciting and defiant mood tones; blue with secure, tender and soothing; orange with distressed; purple with dignified; yellow with cheerful and black with powerful.

Prior to Wexner's study in 1954, researchers had considered patterns or consistencies in colour preferences. The general findings of these studies seem to indicate biological factors as a possible reason for inconsistencies.

Eysenk (1941) attempted to resolve inconsistencies previously reported in the area of colour preferences, the relative popularity of saturated and unsaturated colours and sex differences in relation to colour preferences. Two groups of subjects ( $n=12$  and  $n=30$ ) were asked to rank ten Ostwald coloured papers in order of preference. The colours included fully saturated blue, green, red, violet, orange and yellow, tints of green, red and orange, as well as a yellow shade. In the second case ( $n=30$ ), results were analysed in order to determine if sex differences existed in order of preference for the Ostwald coloured papers. Eysenk's findings indicated general agreement among people on colour preferences. He indicated that this agreement is as strong as that among scores on intelligence tests and is not restricted to Europeans as it is also found among many coloured races, thus indicating the influence of biological factors. He also found high agreement between sexes on colour preferences. It was found that the average orders of preference for the colours tested given by the two sexes were virtually identical apart from a slight preference for orange among men and for yellow among women.

Phillip (1945) had subjects rank coloured reproductions of garments to determine whether men and women differ in their fashion preferences along the colour dimension. His findings contradict Eysenk's findings of no sex differences on colour preferences. He found that colour of the costume is a statistically significant factor in the fashion preference for men but not for women. His findings are in agreement with those of a previous study by Barr (1941) wherein the five most preferred colours were found to be

black/grey, blue, brown, red and green. Order of preferences for the colours were the same as in the studies by Barr and Phillip.

Another aspect of colour is its physiological effect. In describing a person's reaction to colour, Kargere (1949) explained that a real excitement or depression of the nervous system is often produced by colour. Her evidence supporting this claim of biological determinants, however, was questionable. She describes a situation of employees of the film factory 'Lumiere' in France wherein when working all day in a red light vibration, the workers were lively, and sang and 'gesticulated'. When the light was changed to green, however, the employees became less tired at night and much more calm. It is difficult to assume that this change in temperament was based solely on the change in lighting, especially since other variables were neither considered nor controlled.

In his paper entitled "Practical application of light and colour" (1973), Birren discussed the relationship between the colour of the environment and man's performance in industry. He stated that

if there is need for alertness in an environment (often a safety factor in industry) high brightness and warm colours (yellow, orange) will command the eye and draw attention outward. If there is need for inner concentration on complex visual or mental tasks, it is wise to lessen the distraction of the environment with softer, cooler colours on walls, such as green, aqua.

(Birren, 1973, p. 187)

The underlying question in considering studies on colour is one of reliability. Birren rarely disclosed actual empirical evidence supporting his beliefs. It is possible that duplication of his work could lead to different conclusions.

Wilson (1966) used measurements of galvanic skin response (GSR) to determine which colour, red or green, is more arousing. Exposing subjects (n=20) to sixty seconds each of five red and five green slides in alternating order, Wilson found red to have a significantly more arousing effect than green. Subjective data described red as being more stimulating, exciting, awakening, attention drawing, overpowering and lively.

Aside from cultural, biological and physiological factors associated with preference for particular colours, there is some information implying an association between colour and personality characteristics as well as mood tones. Kargere (1949) attempted to perform personality and character analysis on the basis of colour choices. Her conclusions, however, though entertaining, are not based on actual empirical evidence.

As an example, she describes the lover of the colour red as an extrovert who struggles ardently to overcome his natural timidity. He is given to action, tends to be vigorous, impulsive and courageous. (Kargere, 1949) He could get along with a 'green' personality, but a blue one would be liable to heckle him.

Birren contributed to the literature on the association between mood tones and particular colours. He indicates that

the colours of the spectrum are to be associated with two moods, the warm, active and exciting qualities of red and its analogous hues, and the cool, passive, and calming qualities of blue, violet, and green. Areas of these hues tend to enliven the mood or to quiet it. Likewise, light colours are active, while deep colours tend to be passive. (Birren, 1950, p. 141.)

Mahannah (1968) studied the influence of colour on the perception of Yinness (femininity) and Yangness (masculinity) of blonde and brunette stimuli persons. Forty-four male and female subjects assigned randomly to four groups were asked to complete a seven point semantic differential Personal Assessment form in order to record personality impressions of the stimulus figure presented. Variables manipulated were wig colour (blonde or brunette) and costume colour (with warm being a red-orange hue while cool, a 'cool' blue hue). Mahannah indicated that the average scale ratings were higher, or more Yang, for the warm costumes and lower, or more Yin, for the cool ones. The stimuli persons wearing the warm costume were considered taller, darker, more forceful, aggressive, independent, dominating and self-sufficient than the stimuli persons wearing the cool costume, who were considered to be more feminine, graceful, delicate, impulsive and submissive.

Borror (1964) explored possible relationships existing between certain personality characteristics, choice of warm or cool coloured garments and warmth or coolness of personal colouring. One hundred women were divided into four groups on the basis of warm or cool tones of skin, eye and hair colouring. The four groups (warm blonde, cool blonde, warm brunette and cool brunette) were then presented with three forced-choice preference tests, in the form of colour fans, and asked which colours they would prefer for their own clothing. Analysis indicated that in some cases, the warmth or coolness of personal colouring was related to the choice of warm or cool colours to be used for clothing and that warmth and coolness of personal colouring was not related to the specific personality characteristics measured. Borror found no significant relationship

existing in the interaction between personal colouring, specific personality characteristics measured and colour preferences.

In order to assess personality characteristics, Schaie and Heiss (1964) developed the Color Pyramid Test. Subjects were asked to place one inch coloured chips of twenty-four different coloured hues in the most pleasing manner possible. This procedure was repeated three times in total. The subjects were then asked, in three separate instances, to construct a pyramid as ugly as possible. The time taken to complete each pyramid was noted. Once completed, all six pyramids were coded and examined against a very complex set of criterion in order to interpret the association of colour and personality characteristics of the subjects. It was found that subjects who may be described as impulsive ridden and of extroversive temperament had elevated red scores and that an elevated purple score may generally be taken as an indication of emotional maladjustment. An extremely high purple score was to be taken as an index of psychopathology.

An author who has utilized a 'cook-book' approach to personality assessment through colour choices is Luscher (1971, 1980). Avoiding any association with colour of objects such as furnishings, clothing, cars etc., a subject is asked to rank eight stimulus colours (violet, grey, yellow, blue, brown, black, green and red) in order from most to least preferred. Through following a specific, though very complicated procedure, the subject is analysed in terms of physiological and psychological characteristics.

Lakowski and Melhuish (1973) described the Luscher test as eight colours divided into four basic or psychological primaries and four auxiliary colours. They tested the hypothesis that the two-fold division could be based rather on the saturation and brightness attributes of colour or on other cognitive aspects of visual perception. Following analysis of colorimetric measurements made on the Lobivond-Schofield Tintometer, Lakowski and Melhuish discuss whether colour has a structure (objective) and a function (subjective effect of colour on an individual). They indicate that, though not precisely defined, structure has the recognizable attributes of hue, saturation and brightness and that symbolic and affective values are probably involved. Although these values can be used in personality tests, the extent to which they affect the preferences for the eight colours cannot be assessed as such dimensions are not quantifiable at the

present time. On the basis of this research, one is forced to question the reliability and validity of the Luscher Color Test.

Much of Luscher's work has been conducted in an attempt to discover emotional instability through analysis of colour preferences. In The 4-Colour Person, Luscher indicated that colours have a symbolic meaning that can be associated with various senses of self. Green, for example, is associated with self-respect, yellow with self development, red with self-confidence and blue with self moderation. Luscher indicated that in the 'normal' person, there is a balance between these four factors. Luscher has written extensively in this area, however, he fails to produce empirical evidence substantiating his views.

There has been some empirical testing specifically associating clothing colour with personality characteristics. Rosenbaum (1973) indicated that "if there is a dominance of beige, dark green, brown or grey in the wardrobe, the individual will tend to shy away from emotional commitments and involvements." (p.94). She does not refer to research, however, to substantiate her claims.

One of the only published and valid tests measuring colour, texture and design preferences is the Compton Fabric Preference Test (1965). The instrument consists of paired fabric choices. Five variables are measured, three involving colour, one design size and one texture. Slides for the three colour variables include eighteen fabric pairs of red, orange, yellow, purple, blue and green hues, fifteen pairs of pattern fabrics displaying strong or weak figure-ground contrast and fifteen fabric pairs depicting warm-cool colour dimensions. The design variable consists of fifteen pattern fabric pairs of large or small design size while the texture variable consists of fifteen fabric pairs of rough or smooth textures. Using a forced choice situation, subjects are asked to indicate their preference for one of the two fabrics shown in each case.

In a study by Compton (1962), subjects were asked to complete the Compton Fabric Preference test and the California Psychological Inventory. Compton found that subjects scoring high in sociability were those preferring deep shades and saturated colours over tints.

As can be seen, there is still much work to be done in this area. In 1950, Birren appropriately stated:



...research in color goes on and perhaps will continue to be pursued indefinitely. If that which is so purely physical can be combined with that which is so definitely emotional and psychical, then man's future will be a bright one indeed. (Birren, 1950, p.281).

## B. Clothing Symbolism

### The Function of Clothing in Society

In modern society, clothing has many more functions than simply those of modesty, protection and adornment as was once postulated by theorists. Clothing acts to communicate such characteristics as role, occupation, status, performance, values, motivations and other personality attributes of the wearer. According to Sybers and Roach (1962), "clothing creates an image before the voice reaches; clothing's possibilities for communication are innumerable." (p. 186). It must be considered, however, that part of this communication is conducted below the level of consciousness. According to Douty (1963), "As explained by a social interactionist, many or most of perceptions of persons and reactions to them occur on a preconscious level of awareness." (p. 197).

In her text, Clothing: A Study in Human Behaviour (1966), Ryan discussed nine factors communicated by clothing, the two most obvious factors being sex and age. Clothing is used to communicate occupation, socioeconomic status and marital status. Ryan indicates that although only wedding and engagement rings indicate marital status in North America, clothing variations indicating marital status are utilized within other cultures. Other factors discussed were membership in special groups or organizations, attitudes, interests and values, moods, personality factors and stereotypes which, Ryan indicated, are nearly always pictured visually. Gibbins (1969) indicated that "outfits clearly distinguish the wearers in terms of age, occupational level, personality, dating pattern, sexual morals, smoking and drinking, hobbies, occasions on which the outfit is worn and, to a lesser extent, educational level." (p. 305).

Sybers and Roach (1962) considered that clothing acts to indicate social status, social mobility, occupation, social control, motivations and attitudes. They also stated that "contemporary 'best sellers' have disseminated much information linking status and the accumulation of material possessions, one of which is clothing." (p. 185). Demonstrating that there are various agents of social control which affect clothing habits, they stated that "reference groups other than the family and social class appeared to have strong socializing effects on clothing." (p. 186). In studying the effect that clothing has on the

structuring of the perceptions of persons, Douty (1963) found that judges associate status with clothing worn.

Bickman (1974) conducted a series of experiments in which clothing cues were varied in order to assess the importance of clothing as an indicator of social status. Subjects wearing high or low status clothing interrupted phone calls of 206 unsuspecting participants in order to retrieve a supposed lost dime from within a phone booth. Findings indicated that "the mode of dress (i.e. apparent social status) of the person who lost the dime made a significant difference [on whether or not the dime was returned]. Seventy-seven percent of the people returned the dime to the well dressed person, but only 38 percent returned it to the poorly dressed one."(p.49).

Form and Stone (1957) indicated that a person's status is recognizable through specific dress cues, with the urbanite placing much more emphasis on these cues than the small town resident. They stated that "the urbanite may frequently rely on appearance rather than reputation: status may be temporarily appropriated by the correct display and manipulation of symbols, while in the small town it is more permanently manifested by the direct enactment of rights and duties."(p.504). Through experimentation they found that "members of the 'working class' were identified not only by characteristic styles but also by object symbolism which singled out typical hats, shoes, occupational uniforms, or lunch pails" while "observations of anonymous members of 'high society' focused upon the visible and audible evidence of lifestyle (manners, conversation and dress) and the public display of possessions (jewelery, expensive clothing and imposing limosines)."(p.510). They found the use of style symbolism to be more important to respondents considered to be in the middle of the socioeconomic stratum in Lansing, Michigan and that white collar workers placed more importance on clothing than do manual workers. This seems to demonstrate that among white collar workers, greater emphasis is placed on clothing as a means of impressing the public than among manual workers.

Jasinski (1957) provided two purposes for the accepted mode of dress for office or plant:

1. It provides a cue or clue to the identity of the individual and his position in the organization.
2. It establishes an immediately recognizable level of achievement which elicits the

'right' behaviour from others and thus is rewarding to the wearer. (p.35).

Using a modified Thematic Aperception test, Rosencranz (1962) studied the relationship between clothing awareness and status. She stated that all indices related to social class including occupation, income, education, occupational membership and magazine readership were found to have significant relationships to clothing awareness. Only age and rural-urban background variables were found not to be significantly related to clothing.

Aside from being an indicator of class, status or occupation, clothing has also been associated with such characteristics as social and political attitudes, and sociability. Using photographs of models controlled for stance, position of hands and feet, and with blackened-out heads, Buckley and Roach (1974) attempted to determine whether clothing was perceived as a symbol of social and political attitudes. Results indicated that "attitudes toward social and political issues are perceived to be symbolized by the type of clothing worn."(p.98).

Johnson, Nagasawa and Peters (1977) asked male and female college students to assess the extent to which differences in clothing style influence impressions of sociability. Following analysis of the completed bi-polar instrument, they found that 'in fashion' clothing styles communicated a much greater impression of sociability than did the 'out of fashion' clothing styles.

If clothing acts as a communicator of many factors, it may be safe to assume that by altering the mode of dress, one may alter the impression he projects toward others. Clearly, then, one's motivation for dressing may be to better others' impressions of the wearer. Such a tactic, described by Snyder (1980), is termed impression management. Snyder hypothesized that individuals are composed of many selves, each of which comprises the individual's relationship with other individuals. He also believed that all of us are guilty of providing great inconsistencies between our private and our public selves, in other words, impressions that others have of us are not always congruent with our true selves.

Kelley et al. (1976) conducted studies to determine the importance of appearance, including clothing, in the obtainment of a job and promotion within the field. Following employer and employee interviews, clothing was found to be an important factor in

creating favourable impressions in the interview and on the job.

Without describing it as such, Molloy's text The Woman's Dress for Success Book (1977), emphasized impression management as it described the most appropriate modes of dress for career women. Molloy described his book as a classic 'how-to' book, whose purpose is to give every American woman a simple set of rules so that she can make her clothing and her accessories work for her. Extrapolating on undisclosed results, Molloy described a basic working uniform, a skirted suit and a man-tailored blouse, in terms of cut, fabric, pattern and colour in order that a woman be capable of 'packaging' herself most favourably. Thus, it appears that impression management is an important tool for today's career woman.

#### **Judgements Made Based on Mode of Dress**

When considering judgements, or impression formation, made based on mode of dress, one considers not only an individual's response or reaction to his own attire but also another's interpretation of that individual's attire. As Hartmann (1949) stated "...the fact that human beings wear apparel indicates that clothes are both a stimulus and a response...the use of an article of clothing is simultaneously a source of stimulation to the wearers and the beholders, as well as a reaction on their part to certain psychological needs, social expectancies and esthetic tensions focused in the individual."(p.295).

Social psychologists assume that an individual is aware of social determinants, or other's reactions to his attire, as motivation for clothing behaviour. We dress, therefore, to be socially accepted. Hamid expands on this statement:

Membership groups, status, role, etc., all involve certain expected behaviours, to a large extent, represented in symbolic form by the clothes a person wears. It is quite obvious that, during socialization, the child learns to attach cue values to what a person wears...Dress, therefore, provides an extremely reliable cue for role differentiation and later for personality typing. (Hamid, 1972, p.279).

Cannon, Staples and Carlson (1952) found desire for approval, for sexual attractiveness and for personal happiness and self confidence to be motivating factors behind mode of dress.

Research has been conducted in order to assess exactly how we react to the clothed person. Do we observe and react to clothing parts as individual, separate dimensions, or as a complex whole? Two studies with diverging outcomes attempted to

answer this question.

Gibbins and Coney (1981) asked thirty subjects to rate sixteen line drawings consisting of eight skirts in four lengths and two widths in combination with two different tops. It was determined that skirt length was associated with characteristics of youthful, outgoing and sophisticated, skirt width with friendly, sophisticated and arrogant and type of top with youthfulness, outgoing, friendly and sexy. An interesting finding was that none of the dimensions interacted with each other. The authors suggest that clothing is seen as a complex whole to the point where it becomes so familiar as to be stereotyped or to acquire idiosyncratic meanings.

Using multivariate analysis of a fifty-six scale semantic differential testing for differences among ratings of five photographed costumes, DeLong and Larntz (1980) found results contradictory to those of Gibbins and Coney. Their observations indicated that clothing is easily seen in terms of separate dimensions, even though the clothed body is a complex visual form.

Douty (1963) attempted to assess the role clothing plays in influencing or structuring person perception. Using an eleven point bi-polar instrument and projected coloured slides controlled for posture, grooming, expression and other variables, subjects rated four stimulus persons each in only one stimulus costume. Findings indicated that clothing greatly influenced the judge's impressions of the stimulus persons.

Conner, Peters and Nagasawa (1975) used a four by four factorial experiment to test the simultaneous effects of person and costume on athletic, social and intellectual impressions. The costume variable was found to have a major influence on the formation of social impression while the person variable had a greater influence on athletic impression, and neither person nor costume variables affected significantly the intellectual impression.

Hamid (1969) asked thirty male and thirty female subjects to rate, on ten concepts, eight photographs of adolescents under four conditions of dress. Findings indicated that subjects tend to make more extreme ratings for persons of the opposite sex and that there is a positive relationship between dress effects and sex stereotyping, thus emphasizing dress as one of the most salient cues in sex stereotyping. Interestingly, cues furnished nonverbally, through appearance, are more prominent when other information,

such as qualification, is minimal.

Researchers have discussed the possibility of clothing being an outward expression of the psyche thus, through the visual analysis of an individual's attire, one might gain insight into his personality. Gibbins (1969) found that apparel may distinguish a wearer in terms of age, occupational level and personality, and that not only will observers make that kind of judgement but also that there is very good inter-judge reliability on characteristics of the wearer. Douty also indicated that clothing has an effect on impressions of personal traits.

Aiken (1963) developed an opinionnaire in order to assess the relationship of various clothing types or dimensions to general personality variables. Five clothing dimensions or dress clusters, were determined, each dimension being associated with certain personality variables. 'Decoration in dress' was associated with conscientious, conventional, nonintellectual, sympathetic and sociable; 'comfort in dress' related to self-control, sociable and deferent to authority; 'interest in dress' was associated with conventional, conscientious, stereotyped in thinking, persistent, tense, suspicious and insecure; 'conformity in dress' was associated with conscientious, moral, sociable, traditional and submissive; and 'economy in dress' related to responsible, conscientious, alert, efficient, precise, controlled and intelligent.

Other personality variables found to be associated with clothing are social and political attitudes (Buckley and Roach, 1974) and sociability (Johnson, Nagasawa and Peters, 1977). Mahannah (1968) studied the influence of dress and hair colour on the perception of personality traits based on the Yin/Yang classification. Differences in colour of hair and dress, and their interaction, were found to have a significant effect on the perception of personality traits.

Using a test-retest situation in which the model's clothing had been altered, Thomas (1971) found that clothing influences the perception of personality traits. It should be noted that the subject's own personality characteristics affected his perception of traits in the stimulus person.

In considering the effects of dress on trait ratings in the first impression situation, Hamid (1972) found that such traits as conventional, friendly, neat, religious, self-confident, snobbish and sophisticated can be determined on the basis of whether

such dress forms as eyeglasses and makeup are worn. Gibbins and Gwynn (1975) presented line drawings of previously determined 'fashionable' and 'unfashionable' styles of clothing to a group of twenty-nine female college students in order to assess personality variables influenced by mode of dress. Using a modified semantic differential technique, the researchers found that subjects rated 'fashionably' dressed individuals as more youthful, novel, passionate, gay, free, romantic, luxurious, frivolous, naughty, bold, approachable, wild and thrilling than 'unfashionably' dressed individuals. It is of note that subjects rated their ideal self image, rather than their real self image, as closer to the 'fashionably' dressed individual.

Other attributes may be associated with an individual simply on the basis of first impressions. Veilhaber and Gottheil (1965) found that ratings of performance are made on the basis of an individual's appearance and manner. This rationale underlies Molloy's recommendation for career apparel.

Molloy (1977) attempted to dress career women so that they might look more authoritative, efficient and intelligent, thus becoming more worthy of respect and promotion within the job market. Dolber's study (1980) supported Molloy's findings in relation to men's dress by indicating that those wearing a three piece suit carry with them an aura of respect.

Kelley et al. (1976) indicated the importance of appearance in the interview situation, especially in those instances where qualifications are equal or information regarding them is minimal. Following extensive interviews, it was found that the determining factor in the decision of who to hire for the position would be appearance, especially in the case where other qualifications are equal.

Using a Likert-type opinionnaire, Kelley et al. (1982), attempted to determine if students and recruiters who visited their campuses had similar perceptions of the role of appearance in the business world, and if their opinions differed according to selected personal and employment characteristics. Both groups' general views regarding career appearance were found to be similar. Females placed more emphasis on appearance than males (indicating sex differences) and greater emphasis was placed on appearance as contact with clients increased. The authors suggested that socialization, after childhood, had contributed to the student's views being so similar to those of the recruiters.



Miller's study (1978) was unable to substantiate the findings that clothing and appearance play an important role in the first impression situation. Several reasons were given for the discrepancies. These included: the use of black and white videotapes which may have acted to accentuate physical features and mannerisms while deemphasizing clothing conditions; and that inexperienced actors as counsellors may have contributed to an air of 'uneasiness', thus affecting the viewer's impression.

At this point it is necessary to consider that the ratings of individuals may be affected by various other factors. McCormic and Ilgen (1980) describe possible distortions in ratings arising from rater's tendencies, contamination from extraneous sources and inappropriate weighting of factors. Of special interest in this discussion are common rater's tendencies which include the 'Halo effect', constant error, rating restriction and rater's stereotypes. In industrial situations, the 'Halo effect' describes a supervisor who is likely to rate an employee highly in other factors if he regards that employee as very satisfactory in one particular factor. Constant error describes the tendency to concentrate the ratings in one section of the rating scale, be it upper section (leniency/tendency), centre section (the error of central tendency) or the lower section of the scale. Rating restriction, linked with constant error stereotypes may also adversely influence ratings.

Conner, Peters and Nagasawa (1975) stated that "because we live in a society in which most of the body is hidden by clothing, it follows that costume would be a factor in impression formation."(p.33). Thus far in this review, the discussion has centred around the functions clothing play in the formation of first impressions. The following research discusses physical attractiveness as a factor in the formation of first impressions.

In order to assess the effect of the attractiveness of the clothed body, face and head in impression formation, Nielsen (1975) asked subjects to record impressions of photographed stimuli persons. It was found that only facial attractiveness had significant influence in the perception of physical attractiveness and that perceived future social and professional happiness was significantly related to attractiveness of the face and head.

Barocas and Karoly (1972) asked subjects to press a button on each occasion that they would have made rapport-building responses in reaction to each of four conditions. The conditions involved one attractive and one unattractive model in two video and two

audio conditions. Following this procedure, a ten step behavioural rating scale was completed for each condition. The authors reported that the attractive video condition evoked more positive responses with regards to social and cognitive-evaluative ratings.

Cannon, Staples and Carlson (1952) distributed scales and sociometric tests to male and female, elementary and highschool students in order to assess the relationship between personal appearance and social acceptability, or popularity. Sex and age differences were indicated in that significant relationships existed between personal appearance and popularity for the highschool girls but not for the elementary school girls, nor for either groups of boys. It is of note that the most popular girls from grades seven to twelve excel or conform closely to the norm for personal appearance.

In Industrial Psychology (1980), McCormic and Ilgen indicated that in levels of high, medium and low scholastic standings, recruiters provide higher mean ratings for attractive hypothetical applicants than for unattractive ones. Sex differences were also indicated in that the males were ascribed higher mean ranking than females.

Probably the most noteworthy research conducted dealing with physical attractiveness and subsequent ratings of personality traits has been conducted by Dion, Berscheid and Walster (1972). Subjects were asked to associate particular traits with photographed stimulus persons of high, medium and low attractiveness. Attractive stimulus persons were judged as more socially desirable and more competent spouses. In support of the adage that 'beautiful is good' the authors found that attractive stimulus persons were assumed to have better prospects for social and professional happiness. As demonstrated by these studies, it seems that by simply assessing an individual's appearance, be it physical attributes or external coverings, judges are more than able to infer a variety of personality traits.

### III. METHODS AND PROCEDURE

To be discussed in this chapter will be the following: objectives and hypotheses, the theoretical framework, stimulus material, instruments and their development, test administration, sampling of the subjects, procedure, definitions, limitations, and scoring and statistical treatment of the data.

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**A. Objectives**

1. To determine whether, in a first impression situation, a prospective employer infers certain personality characteristics on the basis of specific garments worn by the female applicant.
2. To determine which personality dimensions a prospective employer most often attributes to the successful and unsuccessful applicants.

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3. To determine if female university graduates about to enter the job market infer certain personality characteristics on the basis of specific garments worn by the female applicant.
4. To determine which personality dimensions a female university graduate most often attributes to the successful and unsuccessful applicants.
5. To determine whether the colour of the garment worn or the person variable is more important in deciding who to hire for the position.
6. To determine if a difference exists between prospective employers and female university graduates with regards to assumed personality characteristics of the applicant most likely, and least likely to be hired for the position.
7. To determine if agreement exists between prospective employers and female university graduates on whom to hire for the position.

**B. Null Hypotheses**

1. Prospective employers will not infer personality characteristics to female applicants.
2. Prospective employers' inferred personality characteristics are independent of success or nonsuccess of the applicant.
3. Female university graduates will not infer personality characteristics to female applicants.

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4. Female university graduates' inferred personality characteristics are independent of success or nonsuccess of the applicant.
5. Inferred personality characteristics are independent of rater (employer or student).
6. Choice of successful applicant is independent of rater (employer or student).

### C. Theoretical Framework

The increasing urbanization of modern society has brought about an increase in brief social contacts within which people form impressions of those they meet rapidly and often with limited stimulus information. Stone (1965) considered that appearance is an integral part in these transactions, for appearance is at least as important as discourse in the process of forming initial impressions of others. As clothing covers most of the body, thus contributing to appearance, it is considered a stimulus cue in the formation of first impressions. Such variables as line, style, fabric, and design details are considered when discussing clothing. Another variable that needs to be considered is colour.

Reaction to and preference for specific colours has been linked to biological, physiological and cultural sources, as well as to psychological determinants. Colour, therefore, as an integral part of clothing, should also be considered a cue in the formation of first impressions.

### D. Stimulus Material

The stimulus material was developed to assess a hypothetical job applicant on personality characteristics attributed to her by employers and students, as well as her success or nonsuccess based on appearance. Photographs were used rather than live models in order to control for inconsistencies in visual appearance as well as personality characteristics. The stimulus material consisted of five female models wearing five identically styled suits in five different colours providing a total of twenty-five stimulus photographs. The five stimulus models were pretested for similarities in height, weight and colouring. A profile of the models was developed to provide relevant material which could affect the results. (See Appendix E). Factors included were hair length and colour, height, size and weight, posture and level of attractiveness. Five models were used rather than just one in an attempt to control the 'Halo Effect'.

The colours of the five identically styled suits were determined by available spring stock at a local retail establishment. Colours of the garments worn by the stimulus models were interpreted according to the Munsell Colour System (1967). The yellow suit notation is interpreted as 4Y 5/8, the grey as 6B 7/2, the pink as 3R 7/4, the blue as 5B 3/6. The white suit notation is White 9/0. Interpretations may vary slightly as light and dark aspects

of the stimulus photographs make exact interpretation of colour ratings difficult.

A two-piece suit, consisting of a 'Chanel' type jacket and straight skirt, was used as several authors (Molloy, Cho) have considered the skirted suit to be the most appropriate mode of dress for the career woman. This style of suit was chosen since, as a classic, it transcends changing fashion trends.

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Along with each suit, all models wore identically-styled blouses, pumps, beige-coloured hose, makeup and jewellery. Attempt was made to control hairstyle in only one case. In all instances, however, the hair was dark brown and shoulder length or shorter.

Several photographs were taken for each of the twenty-five variations in order to obtain photographs with the most similar facial expressions and body positions. The twenty-five photographs were divided into five groups, with each group consisting of the five stimulus models each wearing a different coloured suit. Each group of stimulus photographs was presented in plastic sleeves in order that it be seen as a total package, thus facilitating comparisons. Each respondent was randomly assigned to one of the five treatments or variations of the stimulus materials.

A minimal amount of background information accompanied the photographs. Judges were told that each of the five stimulus models is applying for an executive or management position. Qualifications of the applicants were described as essentially equal. On the basis of the visual information provided, the judges were asked to choose which of the stimulus models they would be willing to hire and which of them they would not be willing to hire.

#### **E. Instruments and their Development.**

##### **Ishihara Tests for Colour-Blindness**

As this study dealt with colour, it was necessary to determine whether the subjects had colour vision deficiencies. The Ishihara plates, developed by Dr. Shinobu Ishihara as a rapid and accurate means of determining colour vision deficiencies of congenital origin, were used. These plates, or confusion charts, contain backgrounds of coloured dots among which a figure can be traced in dots of a different colour. These figures are

apparent to those of normal colour vision but are misinterpreted by those who have colour vision deficiencies. Although thirty-eight plates constitute the entire test, plates numbered one through twenty-one are sufficient providing that all participants are literate and the test is not being used for qualitative assessment. The last group of figures are designed with geometric shapes and figures to be used for those subjects who are unable to read English or for pre-school children who are unable to read. The plates were shown in a combination of artificial light and daylight. Each plate was held at right angles to the line of vision, seventy-five centimeters from the subject. Oral responses had to be given within three seconds of initial exposure and were recorded on a record sheet. Colour vision is considered to be normal if seventeen or more plates are read correctly. If thirteen or less plates are read correctly, the colour vision is regarded as deficient. In rare cases of fourteen to sixteen correct answers, the subject is considered 'borderline'. The Ishihara test was administered following the presentation of the stimulus material.

### **Semantic Differential**

A semantic differential technique was used to determine traits associated with the successful and unsuccessful stimulus models. It was chosen as it has been proven an effective means of measuring affective feelings. When testing adults, Osgood (1957) determined that a seven point scale is more effective than three, five or nine point scales. For this reason and because the uneven number of scales avoids a forced-choice situation, thus allowing judges to have neutral or undecided feelings in relation to the particular variable, the seven point semantic differential was used. The original instrument was designed by Dion, Berscheid and Walster (1972) and later modified by Nielsen (1975). Within the framework of this instrument, thirty-two scales represented concepts of social poise, friendliness, enthusiasm, physical attractiveness, trustworthiness, and social desirability. Through informal pretesting, it was felt that some of the adjectives in the Nielsen instrument were not pertinent to this study. Some of the scales, therefore, were altered while others were omitted entirely and new ones introduced. As this semantic differential was to be used in a simulated hiring situation, variables related to the intelligence dimension were added. All scales were then pretested for relevance. The final instrument consisted of thirty-one bi-polar adjectives placed on a seven point



continuum. (See appendix B).

### **Questionnaire**

A questionnaire was designed to solicit information regarding specific perceptions of a successful job applicant. Reasons for choosing the specific applicant as well as reasons for not choosing the remaining applicants were also requested. (See Appendix C).

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### **Checksheet of Attire**

As it was felt that the judge's mode of dress could affect his decisions, a checksheet describing the judge's attire was developed. The description included: specific garments worn, such as footwear, pants, skirts, suits or dresses for women, and footwear, two or three pieced suits or sports jackets and pants for men; the colours of those garments, presence and style of jewellery and other visual criteria including approximate age of subject and in the case of employers, sex. (See Appendix D).

### **F. Test Administration**

The data for this study were collected in the months of April and May, 1983. One interview for test administration was scheduled for each subject. Employers and students were randomly assigned to one of the five variations of the stimulus materials, with each subject being interviewed/tested individually. The instruments were administered in the same sequence for all subjects. The following order was consistent throughout: presentation of the stimulus material, the semantic differential, the questionnaire, the Ishihara Colour Plates, and the checksheet on judges attire.

This checksheet was completed by the test administrator, upon consent of the subject, once the test materials had been returned.

### **G. Sampling of Subjects**

Within the framework of this study, the total sample consisted of two distinct groups: employers who normally hire university graduates, and female graduating students of the University of Alberta.

## **Students**

A simple random technique was employed in the selection of students. Lists from various consenting faculties at the University of Alberta were obtained in order to collect the names of graduating female students. Forty names were randomly drawn from this universe and an additional twenty were randomly drawn to serve as a replacement list. Contact was made with each subject by telephone in order to obtain the student's voluntary participation in the project as well as to set up the time and place for testing.

Graduates from within the Clothing and Textiles department of the Home Economics faculty were not included in the sample. It was felt that these students may know the stimuli persons as some of these were chosen from the Clothing and Textiles department. It was also assumed that these students would be highly aware of the influence of clothing in an interview situation due to their study of the discipline, thus, may be lead to the conclusion that the garments, rather than the models, were being tested against each other. Students from the Departments of Foods and Nutrition and Family Studies were included in the population to be tested.

## **Employers**

Contact was made with the Campus Student Employment Centre in order to obtain a sample of employers who have visited the University of Alberta with the intention of hiring graduating university students. These employers represented such firms as banks, major retail department stores, accounting firms, management consultants, insurance and personnel agencies as well as various government agencies, including university hiring departments. A sample of forty employers, twenty-two males and eighteen females were interviewed. Each employer was randomly assigned to one of the five variations in the stimulus material.

## **H. Procedure**

Prior to testing, employers and students were informed that they were free to withdraw at any time.

## Students

At the prearranged time, each subject was escorted into a room and given a package containing one of the five treatments of stimulus photographs. She viewed the stimulus photographs and was asked to complete the semantic differential. These standard instructions were given orally to the students:

"Please assume that you are a hiring agent or personnel officer for a large firm. It is your job to hire graduating university students. You will be shown photographs of five women who have made application to join your firm. The qualifications of each applicant are essentially equal. After viewing the photographs, please choose the person you wish to hire and indicate her number in the space provided for you. Once you have made your choice and formed your impressions you will be asked to complete a seven point scale for the applicant most likely and least likely to be hired. Are there any questions?"

The group of five photographs was viewed for approximately two minutes after which time the subjects were instructed on the use of the semantic differential and a copy of the instructions was provided for each person. (See Appendix A). The same procedure was repeated for the selection of both the successful and unsuccessful applicants.

Following the administration of the semantic differential the subjects were asked to complete the short questionnaire. (See Appendix C). Although most students were individually tested, twelve subjects were tested in groups of two's. In these cases, each was given a different group of stimulus photographs and was requested to refrain from talking to each other. After the presentation of the stimulus material, the semantic differential and the follow-up questionnaire subjects were shown the Ishihara Colour plates. The following instructions were given verbally to each subject:

"This is a portion of the Ishihara Colour Test. As the photographs you saw were in colour, it is necessary to determine if you have any problems with colour vision. Please indicate aloud if you see anything on the plates in front of you."

Once this procedure was complete, any subjects assessed as colour deficient were removed from the sample and a replacement was assigned. The checksheet on attire was subsequently completed by the test administrator.

### Employers

The procedure used to test employers was similar to that used for the students.

Employers were interviewed/tested separately. The order for testing was similar for both students and employers.

Standard oral instructions for the presentation of the stimulus materials were as follows:

"I understand that you have interviewed graduating university students in the past for positions within your firm. With your cooperation, I would like to show you photographs of five applicants who would like to make application to join your company. Each applicant has had approximately the same work experience and has similar academic capabilities. Please choose the applicant most likely and least likely to be hired indicate their number in the space provided for you. Once you have made your choice and formed your impressions, you will be asked to complete a seven point scale for each. Are there any questions?"

The administration of the semantic differential to that for the students, and employers were asked to complete the same questionnaire as students did. The Ishihara Colour Plates and the checksheet on attire were administered in the same manner as for students.

## I. Definitions

1. Employers- Personnel officers recruiting graduating students from the University of Alberta in 1983. Both male and female, they are representative of such firms as banks, major retail department stores, accounting firms, management consultants, insurance and personnel agencies as well as various government agencies.
2. Students- Females graduating from the University of Alberta in 1983.
3. Personality Characteristics- Ratings on each scale of the semantic differential given to each stimulus model who is chosen as successful or unsuccessful applicant.
4. Successful Applicant- Stimulus model chosen most likely to be hired for a position.
5. Unsuccessful Applicant- Stimulus model chosen least likely to be hired for a position.
6. Colour- a measure of hue rather than of value or intensity of the hue.
7. Stimulus Material- five models wearing five identically styled suits in five different colours providing a total of twenty-five photographs. They were developed to assess a hypothetical job applicant on personality characteristics attributed to her by employers and students, as well as her success or nonsuccess based on appearance.
8. Total Look- includes grooming, hairstyle, colour and fit of garment, posture, the way an applicant holds her purse, and facial expression as well as specific garments worn by the applicant.

## J. Limitations

The limitations of this study were as follows:

1. Increase in intensity and value of the blue suit over the remaining suit hues may have affected the judges' choice of successful and unsuccessful applicants.
2. Visual characteristics such as posture, facial expression, height, hairstyling and grooming of models may not have been consistent throughout all stimulus photographs. This may have detracted judges' attention away from the hues of the garments worn.
3. The use of photographs rather than live models as stimulus material contribute to the assumption that all of the variables of the semantic differential are capable of being assessed on the basis of the photograph.
4. As the semantic differential was a modified instrument which had not been used previously for an interview situation, reliability and validity were not established for the specific situation tested in this study.
5. The results of this study cannot be generalized to any context outside University of Alberta graduates applying for positions in Edmonton establishments.
6. All respondents may not have completed the semantic differential and questionnaire with the same degree of conscientiousness.
7. Colour as studied in this research was limited to one specific variable—hue of the suit worn by female applicants. It is possible that other variables such as value, intensity and the amount of colour used may have produced very different results. Quite possibly, a specific colour which is not acceptable for a suit may receive a different degree of acceptability if used as an accent colour. Likewise a suit colour used in combination with various colours for the blouse may produce totally different results because of the simultaneous effects of colours when seen adjacent to each other.

### K. Scoring and Treatment of Statistical Data

Frequencies obtained from the checksheet provided the classification in age, sex, components of attire and presence and styling of jewellery. Ratings of the successful and unsuccessful applicants on the semantic differential were scored from one to seven for each of the thirty-one variables. The direction of the bi-polar words scale varied according to the assumed desirable-undesirable connotation of the word variable components, with '1' being assigned the desirable and '7' the undesirable evaluation. A median score of '4' was considered 'indifferent' or 'undecided'. Results were scored High(1-2), medium(3-5), or low(6-7).

The Two-Tailed Test of Hypotheses was used to assess whether the subjects were able to make inferences regarding personality traits of the stimulus models. Mean scores for each judge were tested to determine whether scores differ significantly from the '4' or 'undecided' category.

Within the scope of this study, the main objective was to determine whether differences exist between inferences of personality traits made by prospective employers and female graduating students and whether these inferences can be attributed to the stimulus model or the colour of her clothing. The statistical analysis included the determination of differences between the two groups. Based on these results, tests of independence were conducted. The same was done for all employer scores. Tests of independence were used to determine relationships between personality characteristics and raters as well as personality characteristics and success or nonsuccess of the applicant. Factor analytic procedures were followed to extract the factor components from the Semantic Differential results describing the most successful applicant.

## IV. Findings

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### A. Characteristics of Sample

The total sample consisted of two distinct groups: forty employers, twenty-two males and 18 females, who normally hire university graduates, and forty female graduating students of the University of Alberta. One subject was later removed from the sample due to incomplete data. Prospective subjects were contacted by telephone and asked if they would be willing to participate in a study concerning first impressions in interview situations. Background information collected included age of the subject and employer or student status. One male employer was diagnosed as colour vision deficient after correctly answering only one of the twenty-one Ishihara Colour Plates. He was removed from the sample and a replacement assigned. The other seventy-eight subjects correctly answered nineteen or more of the plates.

Table 1 presents the frequency distribution for the seventy-nine subjects. Ages ranged from twenty to fifty-five years of age.

The majority of the students wore jeans (N=23), a dressy (N=12) or casual blouse (N=18), a pullover sweater (N=15), runners (N=18), a watch (N=25), a necklace (N=16) and a pair of earrings (N=18). The majority of the male employers wore a two (N=10) or three (N=7) piece suit, a dress shirt (N=20), a tie (N=22), dress shoes (N=10) and a watch (N=18). The majority of the female employers wore a dress (N=5) or below the knee skirt (N=7), a dressy blouse (N=7), pumps (N=7) or sandals (N=5), a watch (N=16) and earrings (N=10). Clothing worn by judges' was grouped into categories and frequencies were calculated. Through comparison it was determined that clothing worn by all judges did not appear to relate to choices of successful applicant nor to the colour of the suit worn by the successful applicant.



Table 1. Frequency Distribution of SubjectsEmployers

	<u>Age Group</u>	<u>Frequency</u>	<u>Percentage</u>
Male	1 (20-25)	1	5
	2 (25-30)	5	23
	3 (30-35)	6	27
	4 (35-40)	4	18
	5 (40-45)	2	9
	6 (45-50)	3	14
	7 (50+)	1	5
		<u>22</u>	<u>100%</u>

Female	1 (20-25)	3	17
	2 (25-30)	3	17
	3 (30-35)	5	23
	4 (35-40)	2	9
	5 (40-45)	3	14
	6 (45-50)	1	5
	7 (50+)	1	5
		<u>18</u>	<u>100%</u>

Students

Female	1 (20-25)	28	72
	2 (25-30)	11	28
		<u>39</u>	<u>100%</u>

<u>Average Age</u>	Male	35.68
	Female	34.17
	Student	23.91

## B. Two-Tailed Tests of Hypotheses

The two-tailed test was carried out in order to determine if employer and student groups are able to infer personality characteristics to a female applicant. A five percent level of significance was used for acceptance or rejection. Data were analyzed to determine if each subject's scores for each variable were significantly different from 4, the mean. At the five percent level of significance, the total sample (n=40 employers and 39 students) was able to infer personality characteristics in the cases of both the successful and the unsuccessful applicants.

## C. Frequency Scores

Frequency scores were used to determine which applicants and which colours of garments worn were chosen most often in the employers' and students' choices of the successful applicant. Tables 2 and 3 describe the frequency diagrams placing applicant against colour for both employer and student ratings. In the case of employer's choice of the successful applicant, applicant number two was chosen in fifty-five percent of the instances while applicant number three was chosen twenty-five percent of the time. In terms of hue of the garments worn by the successful applicant, there is a slight tendency toward hue E, the bright blue, in that eleven out of forty employers (twenty-eight percent) chose the successful applicant wearing that particular hue. Hue C, pink, was found to be least chosen of the hues worn by the successful applicant. Within the student group, choice of the hue worn by the successful applicant is more obvious than in the employer findings. Hue A (yellow) and hue E (bright blue) both were worn in thirty-three percent of instances when student subjects chose the successful applicants. As in the employer sample, hue C was least worn by the successful applicants.

With regard to unsuccessful applicants, employers indicated applicant number five in twenty-eight of forty instances, while students indicated applicant number five as least successful in twelve instances, applicant number two in eleven instances and applicant number four in nine instances. In terms of colours worn by the unsuccessful applicants, employers indicated that hues white and pink, each being indicated twelve times, and grey, indicated nine times, were least appropriate. Hues indicated as least appropriate by the students were the same as those of employers. White was chosen in ten instances, and

Table 2. Frequency Distribution of Employer Ratings  
of Successful and Unsuccessful Applicant:

Person Variable & Colour Worn

Colour	Applicant					totals
	1	2	3	4	5	
A yellow	0 (1)	4 (0)	1 (0)	1 (0)	1 (4)	7 (5)
B grey	1 (2)	5 (1)	3 (0)	0 (0)	0 (6)	9 (9)
C pink	0 (2)	1 (1)	4 (0)	0 (1)	0 (8)	5 (12)
D white	2 (0)	4 (0)	2 (0)	0 (5)	0 (7)	8 (12)
E blue	1 (0)	5 (0)	3 (0)	0 (0)	2 (2)	11 (2)
totals	4 (5)	22 (2)	10 (0)	1 (6)	3 (27)	40 (40)

( ) Unsuccessful Applicant

Table 3. Frequency Distribution of Student Ratings  
of Successful and Unsuccessful Applicant:

Person Variable & Colour Worn

Colour	Applicant					totals
	1	2	3	4	5	
A						
yellow	2 (0)	4 (1)	3 (1)	2 (0)	2 (3)	13 (5)
B						
grey	2 (1)	4 (1)	2 (0)	0 (3)	0 (4)	8 (9)
C						
pink	0 (0)	0 (3)	1 (2)	1 (3)	0 (1)	2 (9)
D						
white	1 (0)	0 (4)	1 (1)	0 (3)	1 (2)	3 (10)
E						
blue	0 (2)	3 (2)	6 (0)	3 (0)	1 (2)	13 (6)
totals	5 (3)	11 (11)	13 (4)	5 (9)	5 (12)	39 (39)

( ) Unsuccessful Applicant

pink and grey were each chosen in nine of thirty-nine instances.

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#### D. Chi Square

Tables 4 and 5 describe chi squares placing employers and students against choice of the successful applicant and hue of the suit worn by the successful applicant. Choice of the successful applicant was found to be independent of judge: employers or students. This indicates employers' and students' choices of the successful applicants were not significantly different. The hue worn by the successful applicant was also found to be independent of whether the choice was made by students or employers. Choices of hues worn by the successful applicants, therefore, were not significantly different between the two rater groups.

At this point, it is of interest to discuss choices within the employer group. Choice of successful applicant was found to be dependent on whether the choice was made by male or by female employers. Male judges chose applicant number two in twelve of the twenty-two instances, or fifty-five percent of the time, whereas female judges did not choose any one applicant more often than any other. Male judges did not choose applicant one while female judges indicated applicant number one as their choice for the successful applicant in twenty-eight percent of instances ( $n=5$ ). Choice of hue worn by successful applicant was found to be independent of sex of the rater.

Chi squares were also performed on the employer and student ratings of successful and unsuccessful applicant (See Appendix F). Tests were conducted for each of the thirty-one personality variables of the semantic differential in order to determine whether inferred personality characteristics are independent of success or nonsuccess of applicant.

The student sample,  $N=39$  indicate that seven or 23% of the thirty-one variables were found to be independent of whether the applicant was successful or unsuccessful. In the cases of successful and unsuccessful applicants, ratings for the variables; sensitive, sincere, competitive, flexible, conventional, practical and humorous were not significantly different at the five percent level of significance. A total of twenty-four variables (77%) remain in which the ratings were significantly dependent on success or nonsuccess of applicant. In other words, there was a significant difference between ratings on these

Table 4. Successful Applicant: Student vs. Employer

	Applicant					totals
	1	2	3	4	5	
Empl.	4	22	10	1	3	40
Student	5	11	13	6	4	39
totals	9	33	23	7	7	79

$$\text{Sum of } (O-E)^2/E = 7.84$$

$$\chi^2_{4, .05} = 9.48$$

7.84 is less than 9.48, therefore, accept independence.

Table 5. Successful Colour: Student vs. Employer

	Colour					totals
	A	B	C	D	E	
Empl.	13	8	2	3	13	40
Student	7	9	5	8	11	39
totals	20	17	7	11	24	79

$$\text{Sum of } (O-E)^2/E = 5.61$$

$$\chi^2_{4, .05} = 9.48$$

5.61 is less than 9.48, therefore, accept independence.

twenty-four variables for the successful and unsuccessful applicants among the student judges.

Findings for the employer sample, N=40 indicate similar results to those of the student sample. Ratings for the variables, sensitive, flexible, conventional, humorous and modest did not differ significantly between successful and unsuccessful applicants. Ratings for five of the thirty-one variables or 16% for successful and unsuccessful applicants were found to be independent at the five percent level of significance. The remaining twenty-six or 84% variable ratings were found to be significantly dependent on success or nonsuccess of the applicant.

#### **E. Frequencies Obtained from Semantic Differential**

Tables 6 and 7 indicate frequencies of ratings for each of the thirty-one variables of the semantic differential for the successful applicant. From this information it is possible to determine those personality variables associated with the successful applicant. Students characterize a successful applicant as rating high in the following variables: intelligent, independent, outgoing, informed, poised, sensible, attractive, competent, dependable, organized, conscientious, perceptive and friendly. The variables sensitive, imaginative, sincere, creative, flexible, logical, quick, self-assertive, practical, sophisticated, refined, modest and concerned were rated moderate to high; competitive, domineering, conventional rated moderate; and the variables emotional and humorous rated moderate to low. Of note are the ratings for humorous, emotional and competitive. Throughout the testing, subjects indicated that these variables were not coupled with appropriate opposites. Most subjects felt that they would prefer, for instance, that competitive and cooperative be placed with other opposites, for a successful applicant would possess both qualities rather a continuum of the two qualities. This could explain the high frequency of 3,4,5 (M) ratings.

In the employer sample, the variables rated high were: intelligent, sincere, outgoing, poised, informed, sensible, attractive, competent, quick, dependable, organized, refined, conscientious, perceptive and friendly. The variables rated moderate to high were: sensitive, independent, competitive, creative, logical, self-assertive, practical, sophisticated and concerned; and the variables imaginative, flexible, domineering,



Table 6. Student Ratings of Successful and Unsuccessful Applicants.

<u>Desirable Characteristics</u>		<u>High</u>	<u>Medium</u>	<u>Low</u>
Intelligent	S	31	8	0
	U	12	25	2
Sensitive	S	16	23	0
	U	9	27	3
Independent	S	25	11	3
	U	8	23	8
Imaginative	S	15	21	3
	U	5	29	5
Sincere	S	20	18	1
	U	11	25	3
Competitive	S	9	22	8
	U	9	19	11
Creative	S	18	21	0
	U	4	29	6
Outgoing	S	28	11	0
	U	9	22	8
Flexible	S	14	24	1
	U	5	27	7
Logical	S	20	19	0
	U	8	29	2
Domineering	S	6	33	0
	U	7	22	10
Conventional	S	9	25	5
	U	14	23	2
Informed	S	26	13	0
	U	5	28	6
Poised	S	24	15	0
	U	6	27	6

Table 6 (cont.)

<u>Desirable</u>				
<u>Characteristics</u>		<u>High</u>	<u>Medium</u>	<u>Low</u>
Emotional	S	3	22	14
	U	8	29	2
Sensible	S	29	10	0
	U	4	29	6
Attractive	S	28	10	1
	U	13	26	0
Competent	S	28	11	0
	U	8	31	0
Quick	S	22	17	0
	U	5	28	6
Self-Assertive	S	22	17	0
	U	6	23	10
Dependable	S	27	12	0
	U	9	29	1
Practical	S	16	21	2
	U	10	24	5
Sophisticated	S	17	22	0
	U	5	24	10
Organized	S	31	8	0
	U	7	28	4
Refined	S	22	17	0
	U	8	30	1
Humorous	S	2	25	12
	U	3	31	5
Conscientious	S	24	15	0
	U	8	30	1
Perceptive	S	24	15	0
	U	4	32	3
Modest	S	8	30	1
	U	7	25	7

Table 6. (cont.)

<u>Desirable Characteristics</u>		<u>High</u>	<u>Medium</u>	<u>Low</u>
Concerned	S	21	18	0
	U	7	28	4
Friendly	S	28	11	0
	U	11	25	3

S-Successful Applicant  
U-Unsuccessful Applicant

Table 7. Employer Ratings of Successful and Unsuccessful Applicants.

<u>Desirable Characteristics</u>		<u>High</u>	<u>Medium</u>	<u>Low</u>
Intelligent	S	26	14	0
	U	3	36	1
Sensitive	S	16	24	0
	U	11	29	0
Independent	S	18	15	7
	U	4	29	7
Imaginative	S	14	24	2
	U	3	33	4
Sincere	S	28	12	0
	U	10	28	2
Competitive	S	17	21	2
	U	5	27	8
Creative	S	21	19	0
	U	2	33	5
Outgoing	S	30	10	0
	U	11	20	9
Flexible	S	13	26	1
	U	9	27	4
Logical	S	23	17	0
	U	1	36	3
Domineering	S	5	34	1
	U	4	24	12
Conventional	S	13	26	1
	U	11	24	5
Informed	S	26	13	1
	U	3	33	4
Poised	S	35	4	1
	U	3	32	5

Table 7 (cont.)

<u>Desirable Characteristics</u>		<u>High</u>	<u>Medium</u>	<u>Low</u>
Emotional	S	5	23	12
	U	9	31	0
Sensible	S	29	11	0
	U	2	35	3
Attractive	S	30	10	0
	U	15	24	1
Competent	S	28	12	0
	U	3	37	0
Quick	S	28	12	0
	U	3	36	1
Self-Assertive	S	24	16	0
	U	2	31	7
Dependable	S	25	13	2
	U	5	33	2
Practical	S	16	23	1
	U	4	25	11
Sophisticated	S	18	22	0
	U	1	31	8
Organized	S	29	11	0
	U	4	35	1
Refined	S	25	15	0
	U	8	32	0
Humorous	S	1	26	13
	U	3	30	7
Conscientious	S	28	12	0
	U	8	32	0
Perceptive	S	27	13	0
	U	2	34	4
Modest	S	9	30	1
	U	5	32	3

Table 7 (cont.)

<u>Desirable Characteristics</u>		<u>High</u>	<u>Medium</u>	<u>Low</u>
Concerned	S	23	17	0
	U	9	28	3
Friendly	S	34	6	0
	U	16	22	2

S-Successful Applicant

U-Unsuccessful Applicant

conventional, emotional, humorous and modest rated moderate. Employers expressed similar concerns as students regarding the competitive, emotional and humorous variables, thus may have affected results.

With both employers and students, ratings of the unsuccessful applicant tended significantly toward moderation. In the employer sample, only the variables attractive and friendly rated moderate to high while within the student sample, the variables intelligent, conventional and attractive rated moderate to high. All other variables' mean ratings were moderate.

#### **F. Factor Analysis**

Factor Analytic procedures were used for the semantic differential results to extract the factor components describing the successful applicants. Table 9 summarizes the results of this test. The thirty-one scales were originally divided into three concepts—trained for the job, social or interpersonal skills and intelligence. It was determined that the variables did not factor into the original concepts in the same way as expected. The variables intelligent, sensitive, imaginative, sincere, creative, outgoing, logical, informed, sensible, competent, quick, dependable, organized, conscientious, perceptive, concerned and friendly loaded heavily on factor one, a combination of the three original concepts. Factor one will be termed professionalism. The variables competitive, domineering, humorous, and modest factor into factor two, which will be termed interpersonal relationships on the job. Flexible factored negatively on this factor. The variables conventional, poised and attractive factored on factor three, which will be termed attractiveness. The variables independent, emotional, self-assertive, practical, sophisticated, refined and modest did not factor into any of the three factors.

#### **G. Questionnaire Results**

A frequency count of the subject questionnaires indicate the following results:

1. Students and employers perceive a successful applicant as well dressed (appropriate style and colour of outfit), neat, yet conservatively dressed, well groomed, professional-looking, confident, poised, friendly, physically attractive, interested and attentive, and slightly aggressive. Students also indicated that applicants should

Table 8. Varimax Rotated Factor Analysis

<u>Variable</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>
Quick	0.82981		
Competent	0.80960		
Conscientious	0.74843		
Concerned	0.74730		
Logical	0.74699		
Creative	0.73450		
Percetive	0.70662		
Dependable	0.69125		
Informed	0.68871		
Intelligent	0.65885		
Sensitive	0.64265		
Sensible	0.63870		
Imaginative	0.59786		
Organized	0.57285		
Friendly	0.54682		
Outgoing	0.46911		
Sincere	0.40627		
Domineering		0.64451	
Flexible		-0.61570	
Humorous		0.60597	
Competitive		0.49267	
Poised			0.59214
Conventional			0.45335
Attractive			0.41936



choose appropriate colours for their attire, avoiding dull pastels and bright hues.

2. Students chose the successful applicant for the following reasons: colour of garment, neatness of clothing, neatness and style of hair, apparent confidence while at the same time looking comfortable and relaxed, stance and poise, the way the applicant held her purse, the applicant's smile and her appearance of feeling good about herself.
3. Employers chose the successful applicant for the following reasons: hue of garment, appropriate dress, neatness of hair and clothing, air of confidence, apparent intelligence and professionalism, stance and poise, smile, cheerful appearance, expressive face and eyes, appearance of maturity and apparent ease of getting along with others.
4. Unsuccessful applicants were attributed the following characteristics: unprofessional hair style, messy clothing (referring to poorly pressed hems), nervous and either over confident or lacking confidence. Students were also concerned with the applicant wearing the wrong hue, while employers repeatedly emphasized apparent lack of maturity.

## H. Testing of Hypotheses

1. Based on the results of the two tailed tests of hypotheses performed on the data obtained from the personality scales of the semantic differential, Null Hypotheses 1 and 3 were rejected. The prospective employer and the female university graduates do infer personality characteristics to the female applicant.
2. Based on the results of the chi squares performed on the data obtained from the personality scales of the semantic differential, Null Hypotheses 2 and 4 were accepted for seven variables respectively and rejected for the remaining variables. Prospective employers' inferred attributes of sensitive, flexible, conventional and modest were independent of success or nonsuccess of applicants. Female university graduates' inferred attributes of sensitive, sincere, competitive, flexible, conventional, practical and humorous were independent of success or nonsuccess of applicants. For both groups, all remaining variables, twenty-six and twenty-four respectively, were dependent on success or nonsuccess of the applicants.
3. Based on the results of the chi square performed on the data obtained from the personality scales of the semantic differential, inferred personality characteristics are independent of the rater. Null Hypothesis 5 was, therefore, accepted.
4. Based on the results of the chi square performed on the data obtained from the subject's choice of successful and unsuccessful applicants, choice of successful applicant is independent of rater. Null Hypothesis 6 was, therefore, accepted.

## V. INTERPRETATION

The findings will be interpreted in terms of the theoretical framework discussed in chapter 3. The objectives of the study will form the organizational basis of this discussion.

The first and third objectives were to determine whether in a first impression situation, a prospective employer and female university graduates infer personality characteristics on the basis of specific garments worn by the female applicant. The findings indicate that personality characteristics are inferred on the basis of the 'total look' of the applicant. Judges indicated that as far as garment styles were concerned, all of the applicants were appropriately dressed for a managerial or executive position. This would seem to indicate that the Chanel style suit was an appropriate garment choice for this study. Findings, then, are somewhat in accordance with work conducted by Kelley et al. (1976) who found clothing to be an important factor in creating favourable impressions in the interview and on the job. This is especially true in those instances where qualifications are equal or information regarding the applicants is minimal. Findings are also in accordance with Molloy (1977) regarding appropriate dress for career women. Finding regarding colour of the successful applicant's garments do not, however, appear to agree with Molloy's writings.

Colours of the garments worn by the stimulus models were interpreted according to the Munsell Colour System (1967). Within the scope of this study, bright blue appeared to be the most acceptable colour for career apparel as indicated by both employers' and students' choices of the successful applicant most often wearing that particular hue. Molloy's findings indicate that of the 5 hues chosen for this study, grey would have been the only appropriate hue for career woman's wear. He indicated that grey two or three shades lighter than charcoal would be the most appropriate colour for career dress. That notation would be grey 6 or 7. Although colour notation of the grey suit used in the present study is consistent with the grey notation indicated by Molloy, this colour was not found to be the most often worn by the successful applicant.

It is suggested that the results support previous findings that physical appearance along with clothing, as a function of the 'total look' do, in fact influence the perception of personality traits, and that these inferences can be made rapidly and with limited amounts

of stimulus information, in the case of this study, a photograph. As indicated by the results of the two-tailed tests of hypotheses, judges appeared to have little trouble inferring a variety of personality attributes to the successful and unsuccessful applicants.

The second and fourth objectives were to determine which personality dimensions prospective employers and students most often attribute to the successful and unsuccessful applicants. Results indicate that perception of these attributes are more extreme, in most cases positive, for the successful applicant, whereas the ratings are much more moderate (less positive) in the case of the unsuccessful applicant. This would support the concept of the 'Halo Effect' whereby a judge who perceives a person as satisfactory in one particular would be likely to rate that person highly on all factors.

In order to determine whether hue or person variable is more important in the decision of whom to hire, frequency totals for applicants and hues were compared. Within the employer sample, the applicant appeared to play a more important function than hue of the clothing. Preference for applicant two was indicated in twenty-two of the forty instances (55%), while the most successful garment hue was blue, chosen in eleven of the forty instances (36.3%). Within the student sample, results are different. It would appear that hue and person variable are equally important in the hiring decision, as indicated by thirteen of the thirty-nine subjects choosing each of yellow and blue. In considering the relative importance of hue or person variable in the hiring decision, it is also necessary to consider responses from the follow-up questionnaire which solicited information regarding judge's perceptions of a successful applicant as well as reasons for choosing the successful and unsuccessful applicants. From this information, it is evident that hue of the garment is not as important as an applicant's total appearance in the hiring decision, for although preference for a particular hue was sometimes indicated, responses regarding physical appearance were mentioned more often. Choice of the unsuccessful hue is much more apparent than choice of hue worn by the successful applicant for pink is most often worn by the unsuccessful applicants. Comments indicated that pink is too frivolous and feminine to be worn by an executive. These findings would suggest that colour is but one of the variables to be considered when discussing clothing. It would appear that colour is part of the 'total look' provided by clothing and that clothing is but one of the many factors contributing to this 'total look'.

Objective six was to determine if a difference exists between prospective employers and female university graduates with regards to attributed personality characteristics of the applicant most likely to be hired for the position. Following analysis of chi squares performed on each of the variables, personality characteristics were found to be independent of rater. This would indicate that choices were not significantly different between the two groups. This finding is in accordance with those of Gibbins (1969) who found good inter-judge reliability on characteristics of the wearer.

Objective seven was to determine if agreement exists between prospective employers and female university graduates on whom to hire for the position. It was found that choice of successful applicant is independent of rater. This indicates that choices between the two subject-groups are not significantly different. Once again, these findings are in agreement with Gibbins' findings of good inter-judge reliability. It is not known whether the physical appearance of the hypothetical applicants could have been more controlled. There was definite reference to the length of hair worn by applicant number five, which could have been responsible for her not having been chosen more often. Most subjects felt that it needed to be shorter in order to be appropriate for an executive position. Other subjects indicated that applicants one, four and five appeared to be lacking maturity, an important factor in the hiring decision. The only comment regarding applicant number two was that she appeared over confident, too aggressive. Negative comments regarding applicant three were not given. These comments shall be considered limitations of this experimental procedure.

It would appear that several of the variables of the semantic differential may not have been appropriate for use in the present study. Findings based on Chi Square results indicate that the variables sensitive, flexible, conventional, humorous, modest, sincere, competitive and practical did not discriminate between successful and unsuccessful applicant. This causes one to question whether a judge is capable of inferring these characteristics to a photographed applicant and whether the variables are valid measures for interview situations. Further testing is necessary to determine their value in the semantic differential. It was also found that the variables independent, self-assertive, practical, sophisticated, refined and modest did not load on any of the three factors determined in the factor analysis. It is possible that these variables are not relevant to the

semantic differential. It should also be considered that additional variables may be incorporated into the semantic differential to further test those variables which did not load on any of the three factors, thus providing more factors relating to interview situations.

The results of this study generally suggest that first impressions can be formed very quickly and with limited amounts of stimulus information. These findings cannot be generalized to any context outside University of Alberta graduates applying for positions in Edmonton establishments, as the sampling was not entirely random. It was also found that employers' and students' choices of successful and unsuccessful applicants, appropriate and inappropriate hues of costumes worn, and personality ratings of the applicants, are very similar. It would seem, therefore, that these particular students are fairly well equipped to enter the work force, especially in terms of appearance, including dress, for the employment interview.

## VI. SUMMARY AND RECOMMENDATIONS

### A. Summary

The purpose of this study was to determine whether personality characteristics can be inferred to photographed models and if colour has a function in the decision of whom to hire in a simulated employment situation. It was also hoped that the study would provide insight into appropriate dressing in terms of colour of costume for the interview situation.

The theoretical framework for this study involved considering appearance as an integral part of transactions in which people form impressions of those they meet rapidly and often with limited amounts of stimulus information. Clothing is considered a cue in the formation of first impressions (Douty 1963, Hamid 1968, Hamid 1969, Thomas 1971, Conner 1973), and colour, being an integral part of clothing, should also be considered a cue in the formation of first impressions.

The sample consisted of thirty-nine randomly chosen female graduating students, from consenting faculties of the University of Alberta, and forty employers who normally hire, or recommend for hire, graduating students from the University of Alberta. The stimulus material consisted of five female models each wearing each of five identically styled, two-piece suits in five different hues: yellow, grey, off-white, pink and blue. Along with each suit, models wore identically styled off-white blouses and pumps, beige-coloured hose, make-up, and jewellery. In all instances the hair was dark brown and shoulder length or shorter. The twenty-five photographs were divided into five groups, with each group consisting of the five stimulus models each wearing a different coloured suit. Each respondent was randomly assigned to one of the five treatments or variations of the stimulus material. Participants recorded their choice of photographed successful and unsuccessful applicants as well as ratings of thirty-one personality variables. Impressions were recorded a modified form of the semantic differential instrument developed by Dion, Berschied and Walster (1972) and later modified by Nielsen (1975). Along with the semantic differential, other instruments included in the testing were a follow-up questionnaire soliciting information regarding perceptions of a successful

applicant as well as reasons for choosing the successful and unsuccessful applicants; a clothing checksheet designed to describe the judge's mode of dress; and twenty-one plates of the Ishihara colour test, used to determine the presence of colour vision deficiencies. The data were analyzed using two-tailed tests of hypotheses and chi squares.

Statistical results indicate that prospective employers and female university students inferred personality characteristics of a photographed female applicant and that these inferences are not significantly different between employers and students. Ratings for the successful applicants, however, tended to be significantly different from those of unsuccessful applicants. With regard to choices of successful applicant, employers indicated a definite preference for applicant number two ( $n=22$ ) and applicant number three ( $n=10$ ). Students indicated a slight preference for applicant number three ( $n=13$ ) over applicant number two ( $n=11$ ) when choosing the most successful applicant. With regards to the colour of the garment worn by the successful applicant, employers chose blue as most acceptable in eleven of the forty instances. Students indicated a preference for yellow and blue an equal number of times ( $n=13$ ). Pink was indicated as least appropriate by both groups. It would appear that total appearance has the greater function in the decision of whom to hire for and that colour is but an integral part of appearance.

## B. Recommendations

On the basis of this study, a number of recommendations for further research have been formulated:

1. The experimental design of this study did not allow for specific testing of the relative importance of hue of the garment. It is suggested that variables pertaining to physical appearance such as hairstyle and maturity factor be further controlled in order to allow greater focus on the colour variable.
2. Due to discrepancies regarding the bi-polar opposites of the semantic differential, it is recommended that further development and pretest is necessary to ensure that the variables are truly opposites and appropriate for an employment interview context. It is recommended that the variables humorous-serious, emotional-rational



and competitive-cooperative be reconsidered and if retained, coupled, with more appropriate opposites.

3. It is suggested that modifications to the 7-point semantic differential be adopted. The category of '4' was ambiguous, yielding an undecided rating or a rating being equally distributed between the bi-polar qualities. Further development of this 7-point scale is necessary.
4. As it was found that the variables sensitive, flexible, conventional, humorous, modest, sincere, competitive and practical did not discriminate between successful and unsuccessful applicants, further research on attributing personality characteristics to a photographed applicant is necessary. It is recommended that employer interviews be conducted in order to determine the relevance of these variables in interview situations.
5. As the variables independent, emotional, self-assertive, practical, sophisticated, refined and modest did not load on any of the three concepts determined in the factor analysis, attempts should be made to find other variables which would test those particular variables, providing more factors relating to interview situations.
6. It is suggested that the procedure be repeated using both actual models and photographs to determine whether certain different attributes are assessed to a live model than to a photographed model. Such research could validate the use of photographs for employment interviews.
7. As it was felt that the increase in intensity and value of the blue suit over the remaining suit hues may have affected results, it is suggested that other dimensions of colour, such as value and intensity, be considered in future research of this type.
8. Experts in the use of colour maintain that any colours can be combined depending on the proportions of each; hence, accent colours may create different effects. As well, colours produce different effects depending on colours adjacent to them. This study could be repeated using one suit colour with different accent colours for the blouse.

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VII. APPENDIX A

Here is how to use the set of scales which appear on the following two pages.

If you feel that one of the end descriptive terms of the scale is extremely representative of the person you have chosen, mark in the following manner:

EXAMPLE:

fair X : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ unfair

OR

fair \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : X : \_\_\_ unfair

If you feel that one of the end descriptive terms of the scale is quite representative of the person you have chosen, mark in the following manner:

EXAMPLE:

relaxed \_\_\_ : X : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ tense

OR

relaxed \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : X : \_\_\_ tense

If you feel that one of the end descriptive terms is slightly representative of the person you have chosen, mark in the following manner:

EXAMPLE:

active \_\_\_ : \_\_\_ : X : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ passive

OR

active \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : X : \_\_\_ : \_\_\_ passive

## APPENDIX A cont.

If you feel that one of the end descriptive terms is not representative of the applicant you have chosen, or you are undecided, mark in the following manner:

---

## EXAMPLE:

happy \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ sad

VIII. APPENDIX B

intelligent	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	unintelligent
sensitive	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	insensitive
dependent	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	independent
imaginative	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	unimaginative
insincere	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	sincere
competitive	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	cooperative
creative	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	unresourceful
outgoing	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	reserved
rigid	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	flexible
logical	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	illogical
domineering	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	subservient
unconventional	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	conventional
informed	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	uninformed
awkward	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	poised
emotional	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	rational
sensible	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	scatterbrained
physically attractive	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	physically unattractive
competent	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	incompetent
slow	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	quick
submissive	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	self-assertive
dependable	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	unreliable
practical	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	idealistic
naive	___	:	___	:	___	:	___	:	___	:	___	:	___	:	___	:	sophisticated

APPENDIX B cont

organized \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ disorganized

refined \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ crude

humorous \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ serious

lazy \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ conscientious

unobservant \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ perceptive

modest \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ vain

concerned \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ indifferent

unfriendly \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ friendly

IX. APPENDIX C

Please describe what a successful applicant should look like.

How did you come to the decision of whom to hire?

Why did you not choose the unsuccessful applicants?

X: APPENDIX D

CLOTHING CHECKSHEET

WOMEN

Aprox. Age \_\_\_\_\_

Skirted Suit

Colour

3 pc. \_\_\_\_\_  
2 pc. \_\_\_\_\_

matching \_\_\_\_\_  
separates \_\_\_\_\_

Skirt

short \_\_\_\_\_  
med. \_\_\_\_\_  
below knee \_\_\_\_\_

Blouse

dressy \_\_\_\_\_  
casual \_\_\_\_\_  
polo/T shirt \_\_\_\_\_

Sweater

cardigan \_\_\_\_\_  
pull-over \_\_\_\_\_

Pant suit

matching \_\_\_\_\_  
separates \_\_\_\_\_

Pants

dress \_\_\_\_\_  
casual \_\_\_\_\_  
cords \_\_\_\_\_  
jeans \_\_\_\_\_

Footwear

pumps \_\_\_\_\_  
sandals \_\_\_\_\_  
casual \_\_\_\_\_  
runners \_\_\_\_\_  
boots \_\_\_\_\_

Accessories

scarf \_\_\_\_\_ # \_\_\_\_\_  
hat \_\_\_\_\_  
watch Y N Which wrist? L R  
necklace/chains Y N #  
bracelets Y N #  
earrings Y N

APPENDIX D cont

CLOTHING CHECKSHEET

<u>MEN</u>	Colour	Approx. Age
<u>Suit</u>	3.pc. _____ 2.pc. _____	
<u>Sports Jacket</u>	_____	
<u>Other Jacket</u>	_____	
<u>Shirt</u>		
dress	_____	
Polo/T shirt	_____	
casual	_____	
<u>Sweater</u>		
cardigan	_____	
pull-over	_____	
<u>Tie</u>	Y    N	_____
<u>Pants</u>		
dress	_____	
casual	_____	
cords	_____	
jeans	_____	
<u>Footwear</u>		
dress	_____	
casual	_____	
runners	_____	
boots	_____	
other	_____	
<u>Jewellery</u>		
wrist watch	Lge.    Sm.	Which wrist?    L    R
pocket watch	Y    N	
bracelet	Y    N	#
chain	Y    N	#

XI. APPENDIX E

Applicant One,

Height- 5'4"

Size- Misses 7

---

Hair- dark brown, curly, short on top and sides, shoulder length in back.

Photographic Qualities- appears slightly shy, and younger than applicants two and three.

Considered 'high' in level of attractiveness.





Applicant Two

Height- 5'6"

Size- Misses 11

Hair- dark brown, slight wave, short all over

---

Photographic Qualities- appears older and slightly more confident than applicants one, four or five. Considered 'high' in level of attractiveness.



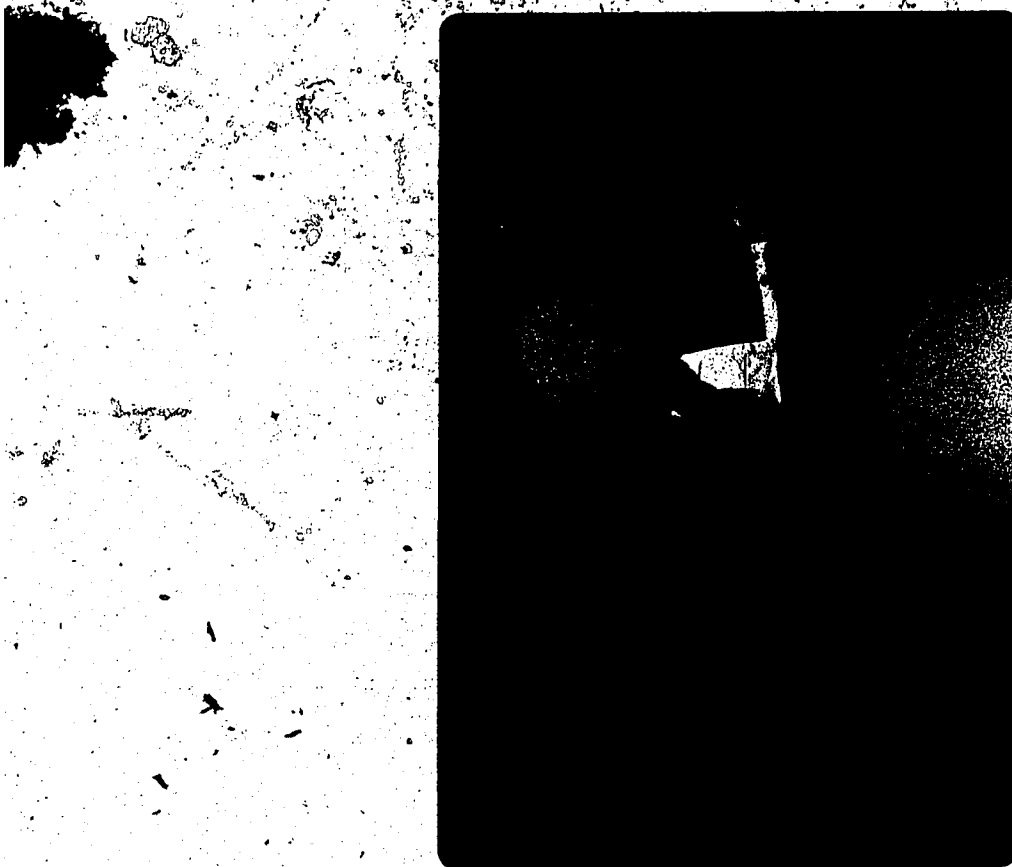
Applicant Three.

Height- 5'6"

Size- Misses 9-11

Hair- dark brown, curly all over, just touches collar in back

Photographic Qualities- appears mature, confident and professional. Considered 'high' in level of attractiveness.



Applicant Four.

Height- 5'4

Size- Misses 7-9

Hair- dark brown, slight wave, short all over.

Photographic Qualities- appears confident, younger than applicants two and three.

Considered 'high' in level of attractiveness.



Applicant Five.

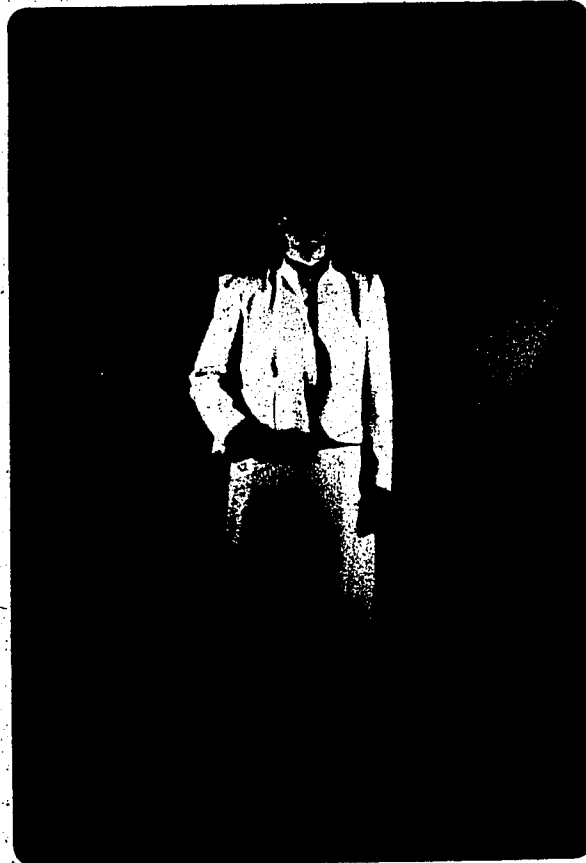
Height- 5'5"

Size- Misses 7-9

Hair- medium to dark brown, short bang, shoulder length in back. (Note: Hair was held off face with hair pins so that styling would be more similar to other applicants.)

Photographic Qualities- appears shy and less mature than applicants two and three.

Considered 'high' in level of attractiveness.



XII. APPENDIX F

SUCCESSFUL APPLICANT

Intelligent-Unintelligent

Sum of  $(O-E)^2/E = 2.05$ , accept independence

	High	Medium	Low	totals
Employers	26	14	0	40
Students	31	8	0	39
totals	57	22	0	79

Sensitive-Insensitive

Sum of  $(O-E)^2/E = .01$ , accept independence

	High	Medium	Low	totals
Employers	16	24	0	40
Students	16	23	0	39
totals	32	47	0	79

Independent-Dependent

Sum of  $(O-E)^2/E = 3.14$ , accept independence

	High	Medium	Low	totals
Employers	18	15	7	40
Students	25	11	3	39
totals	43	26	10	79

Imaginative-Unimaginative

Sum of  $(O-E)^2/E = 9.22$ , reject independence

	High	Medium	Low	totals
Employers	14	24	2	40
Students	3	33	4	39
totals	17	57	6	79

For sample  $X^2_{2, .05} = 5.99$

APPENDIX F cont

SUCCESSFUL APPLICANT

Sincere-Insincere

Sum of  $(O-E)^2/E = 3.54$ , accept independence

	High	Medium	Low	totals
Employers	28	12	0	40
Students	20	18	1	39
totals	48	30	1	79

Competitive-Cooperative

Sum of  $(O-E)^2/E = 6.08$ , reject independence

	High	Medium	Low	totals
Employers	17	2	2	40
Students	9	22	8	39
totals	26	24	10	79

Creative-Unresourceful

Sum of  $(O-E)^2/E = .32$ , accept independence

	High	Medium	Low	totals
Employers	21	19	0	40
Students	18	21	0	39
totals	39	40	0	79

Outgoing-Reserved

Sum of  $(O-E)^2/E = .10$ , accept independence

	High	Medium	Low	totals
Employers	30	10	0	40
Students	28	11	0	39
totals	58	21	0	79

For sample  $\chi^2_{.05} = 5.99$

## APPENDIX F cont

SUCCESSFUL APPLICANT

## Flexible-Rigid

Sum of  $(O-E)^2/E = .10$ , accept independence

	High	Medium	Low	totals
Employers	13	26	1	40
Students	14	24	1	39
totals	27	50	2	79

## Logical-Illigical

Sum of  $(O-E)^2/E = .31$ , accept independence

	High	Medium	Low	totals
Employers	23	17	0	40
Students	20	19	0	39
totals	43	36	0	79

## Domineering-Subservient

Sum of  $(O-E)^2/E = 1.08$ , accept independence

	High	Medium	Low	totals
Employers	5	34	1	40
Students	6	33	0	39
totals	11	67	1	79

## Conventional-Unconventional

Sum of  $(O-E)^2/E = 3.41$ , accept independence

	High	Medium	Low	totals
Employers	13	26	1	40
Students	9	25	5	39
totals	22	51	6	79

For sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

SUCCESSFUL APPLICANT

## Informed-Uninformed

Sum of  $(O-E)^2/E = .48$ , accept independence

	High	Medium	Low	totals
Employers	26	13	1	40
Students	26	13	0	39
totals	52	26	1	79

## Poised-Awkward

Sum of  $(O-E)^2/E = 8.90$ , reject independence

	High	Medium	Low	totals
Employers	35	4	1	40
Students	24	15	0	39
totals	59	19	1	79

## Emotional-Rational

Sum of  $(O-E)^2/E = .65$ , accept independence

	High	Medium	Low	totals
Employers	5	23	12	40
Students	3	22	14	39
totals	8	45	26	79

## Sensible-Scatterbrained

Sum of  $(O-E)^2/E = .03$ , accept independence

	High	Medium	Low	totals
Employers	29	11	0	40
Students	29	10	0	39
totals	58	21	0	79

For sample  $\chi^2_{2, .05} = 5.99$



## APPENDIX F cont

SUCCESSFUL APPLICANT

## Attractive-Unattractive

Sum of  $(O-E)^2/E = 1.06$ , accept independence

	High	Medium	Low	totals
Employers	30	10	0	40
Students	28	10	1	39
totals	58	20	1	79

## Competent-Incompetent

Sum of  $(O-E)^2/E = .03$ , accept independence

	High	Medium	Low	totals
Employers	28	12	0	40
Students	28	11	0	39
totals	56	23	0	79

## Quick-Slow

Sum of  $(O-E)^2/E = 1.56$ , accept independence

	High	Medium	Low	totals
Employers	28	12	0	40
Students	22	17	0	39
totals	50	29	0	79

## Self-Assertive-Submissive

Sum of  $(O-E)^2/E = .10$ , accept independence

	High	Medium	Low	totals
Employers	24	16	0	40
Students	22	17	0	39
totals	46	33	0	79

For sample  $\chi^2_{.05} = 5.99$

## APPENDIX F cont.

SUCCESSFUL APPLICANT

Dependable-Unreliable

Sum of  $(O-E)^2/E = 2.12$ , accept independence

	High	Medium	Low	totals
Employers	25	13	2	40
Students	27	12	0	39
totals	52	25	2	79

Practical-Idealistic

Sum of  $(O-E)^2/E = .41$ , accept independence

	High	Medium	Low	totals
Employers	16	23	1	40
Students	16	21	2	39
totals	32	44	3	79

Sophisticated-Naive

Sum of  $(O-E)^2/E = .01$ , accept independence

	High	Medium	Low	totals.
Employers	18	22	0	40
Students	17	22	0	39
totals	35	44	0	79

Organized-Disorganized

Sum of  $(O-E)^2/E = .52$ , accept independence

	High	Medium	Low	totals
Employers	29	11	0	40
Students	31	8	0	39
totals	60	19	0	79

For sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

SUCCESSFUL APPLICANT

## Refined-Crude

Sum of  $(O-E)^2/E = .30$ , accept independence

	High	Medium	Low	totals
Employers	25	15	0	40
Students	22	17	0	39
totals	47	32	0	79

## Humorous-Serious

Sum of  $(O-E)^2/E = .38$ , accept independence

	High	Medium	Low	totals
Employers	1	26	13	40
Students	2	25	12	39
totals	3	51	25	79

## Conscientious-Lazy

Sum of  $(O-E)^2/E = .63$ , accept independence

	High	Medium	Low	totals
Employers	28	12	0	40
Students	24	15	0	39
totals	52	27	0	79

## Perceptive-Unobservant

Sum of  $(O-E)^2/E = .31$ , accept independence

	High	Medium	Low	totals
Employers	27	13	0	40
Students	24	15	0	39
totals	51	28	0	79

For sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont.

SUCCESSFUL APPLICANT

## Modest-Vain

Sum of  $(O-E)^2/E = .05$ , accept independence

	High	Medium	Low	totals
Employers	9	30	1	40
Students	8	30	1	39
totals	17	60	2	79

## Concerned-Indifferent

Sum of  $(O-E)^2/E = .10$ , accept independence

	High	Medium	Low	totals
Employers	23	17	0	40
Students	21	18	0	39
totals	44	35	0	79

## Friendly-Unfriendly

Sum of  $(O-E)^2/E = 2.04$ , accept independence

	High	Medium	Low	totals
Employers	34	6	0	40
Students	28	11	0	39
totals	62	17	0	79

For sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

EMPLOYERS

Intelligent-Unintelligent

Sum of  $(O-E)^2/E = 28.92$ , reject independence

	High	Medium	Low	totals
Successful	26	14	0	40
Unsuccessful	3	36	1	40
totals	29	50	1	80

Sensitive-Insensitive

Sum of  $(O-E)^2/E = 1.39$ , accept independence

	High	Medium	Low	totals
Successful	16	24	0	40
Unsuccessful	11	29	0	40
totals	27	53	0	80

Independent-Dependent

Sum of  $(O-E)^2/E = 13.36$ , reject independence

	High	Medium	Low	totals
Successful	18	15	7	40
Unsuccessful	4	29	7	40
totals	22	44	14	80

Imaginative-Unimaginative

Sum of  $(O-E)^2/E = 9.20$ , reject independence

	High	Medium	Low	totals
Successful	14	24	2	40
Unsuccessful	3	33	4	40
totals	17	57	6	80

For Employer sample  $X^2_{2, .05} = 5.99$

## APPENDIX F cont

EMPLOYERS

Sincere-Insincere

Sum of  $(O-E)^2/E = 16.92$ , reject independence

	High	Medium	Low	totals
Successful	28	12	0	40
Unsuccessful	10	28	2	40
totals	38	40	2	80

Competitive-Cooperative

Sum of  $(O-E)^2/E = 10.90$ , reject independence

	High	Medium	Low	totals
Successful	17	21	2	40
Unsuccessful	5	27	8	40
totals	22	48	10	80

Creative-Unresourceful

Sum of  $(O-E)^2/E = 24.46$ , reject independence

	High	Medium	Low	totals
Successful	21	19	0	40
Unsuccessful	2	33	5	40
totals	23	52	5	80

Outgoing-Reserved

Sum of  $(O-E)^2/E = 21.14$ , reject independence

	High	Medium	Low	totals
Successful	30	10	0	40
Unsuccessful	11	20	9	40
totals	41	30	9	80

For Employer sample:  $X^2_{2, .05} = 5.99$

APPENDIX F cont

EMPLOYERS

Flexible-Rigid

Sum of (O-E)<sup>2</sup>/E = 2.54, accept independence

	High	Medium	Low	totals
Successful	13	26	1	40
Unsuccessful	9	27	4	40
totals	22	53	5	80

Logical-Illogical

Sum of (O-E)<sup>2</sup>/E = 29.98, reject independence

	High	Medium	Low	totals
Successful	23	17	0	40
Unsuccessful	1	36	3	40
totals	24	53	3	80

Domineering-Subservient

Sum of (O-E)<sup>2</sup>/E = 11.15, reject independence

	High	Medium	Low	totals
Successful	5	34	1	40
Unsuccessful	4	24	12	40
totals	9	58	13	80

Conventional-Unconventional

Sum of (O-E)<sup>2</sup>/E = 2.91, accept independence

	High	Medium	Low	totals
Successful	13	26	1	40
Unsuccessful	11	24	5	40
totals	24	50	6	80

For Employer sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

EMPLOYERS

Informed-Uninformed

Sum of  $(O-E)^2/E = 28.74$ , reject independence

	High	Medium	Low	totals
Successful	26	13	1	40
Unsuccessful	3	33	4	40
totals	29	46	5	80

Poised-Awkward

Sum of  $(O-E)^2/E = 51.39$ , reject independence

	High	Medium	Low	totals
Successful	35	4	1	40
Unsuccessful	3	32	5	40
totals	38	36	6	80

Emotional-Rational

Sum of  $(O-E)^2/E = 14.32$ , reject independence

	High	Medium	Low	totals
Successful	5	23	12	40
Unsuccessful	9	31	0	40
totals	14	54	12	80

Sensible-Scatterbrained

Sum of  $(O-E)^2/E = 39.04$ , reject independence

	High	Medium	Low	totals
Successful	29	11	0	40
Unsuccessful	2	35	3	40
totals	31	46	3	80

For Employer sample  $\chi^2_{2, .05} = 5.99$



## APPENDIX F cont

EMPLOYERS

Attractive-Unattractive

Sum of  $(O-E)^2/E = 11.76$ , reject independence

	High	Medium	Low	totals
Successful	30	10	0	40
Unsuccessful	15	24	1	40
totals	45	34	1	80

Competent-Incompetent

Sum of  $(O-E)^2/E = 32.92$ , reject independence

	High	Medium	Low	totals
Successful	28	12	0	40
Unsuccessful	3	37	0	40
totals	31	49	0	80

Quick-Slow

Sum of  $(O-E)^2/E = 33.16$ , reject independence

	High	Medium	Low	totals
Successful	28	12	0	40
Unsuccessful	3	36	1	40
totals	31	48	1	80

Self-Assertive-Submissive

Sum of  $(O-E)^2/E = 30.80$ , reject independence

	High	Medium	Low	totals
Successful	24	16	0	40
Unsuccessful	2	31	7	40
totals	26	47	7	80

For Employer sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

EMPLOYERS

## Dependable-Unreliable

Sum of  $(O-E)^2/E = 20.04$ , reject independence

	High	Medium	Low	totals
Successful	25	13	2	40
Unsuccessful	5	33	2	40
totals	30	46	4	80

## Practical-Idealistic

Sum of  $(O-E)^2/E = 15.61$ , reject independence

	High	Medium	Low	totals
Successful	16	23	1	40
Unsuccessful	4	25	11	40
totals	20	48	12	80

## Sophisticated-Naive

Sum of  $(O-E)^2/E = 12.37$ , reject independence

	High	Medium	Low	totals
Successful	18	22	0	40
Unsuccessful	1	31	8	40
totals	19	53	8	80

## Organized-Disorganized

Sum of  $(O-E)^2/E = 32.46$ , reject independence

	High	Medium	Low	totals
Successful	29	11	0	40
Unsuccessful	4	35	1	40
totals	33	46	1	80

For Employer sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont.

EMPLOYERS

## Refined-Crude

Sum of  $(O-E)^2/E = 14.91$ , reject independence

	High	Medium	Low	totals
Successful	25	15	0	40
Unsuccessful	8	32	0	40
totals	33	47	0	80

## Humorous-Serious

Sum of  $(O-E)^2/E = 3.08$ , accept independence

	High	Medium	Low	totals
Successful	1	26	13	40
Unsuccessful	3	30	7	40
totals	4	56	20	80

## Conscientious-Lazy

Sum of  $(O-E)^2/E = 20.21$ , reject independence

	High	Medium	Low	totals
Successful	28	12	0	40
Unsuccessful	8	32	0	40
totals	36	44	0	80

## Perceptive-Unobservant

Sum of  $(O-E)^2/E = 34.94$ , reject independence

	High	Medium	Low	totals
Successful	27	13	0	40
Unsuccessful	2	34	4	40
totals	29	47	4	80

For Employer sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

EMPLOYERS

## Modest-Vain

Sum of  $(O-E)^2/E = 2.20$ , accept independence

	High	Medium	Low	totals
Successful	9	30	1	40
Unsuccessful	5	32	3	40
totals	14	62	4	80

## Concerned-Indifferent

Sum of  $(O-E)^2/E = 12.88$ , reject independence

	High	Medium	Low	totals
Successful	23	17	0	40
Unsuccessful	9	28	3	40
totals	32	45	3	80

## Friendly-Unfriendly

Sum of  $(O-E)^2/E = 17.62$ , reject independence

	High	Medium	Low	totals
Successful	34	6	0	40
Unsuccessful	16	22	2	40
totals	50	28	2	80

For Employer sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont.

STUDENTS

Intelligent-Unintelligent

Sum of  $(O-E)^2/E = 19.16$ , reject independence

	High	Medium	Low	totals
Successful	31	8	0	39
Unsuccessful	12	27	2	39
totals	43	35	2	78

Sensitive-Insensitive

Sum of  $(O-E)^2/E = 5.28$ , accept independence

	High	Medium	Low	totals
Successful	16	23	0	39
Unsuccessful	9	27	3	39
totals	25	50	3	78

Independent-Dependent

Sum of  $(O-E)^2/E = 15.28$ , reject independence

	High	Medium	Low	totals
Successful	25	11	3	39
Unsuccessful	8	23	8	39
totals	33	34	11	78

Imaginative-Unimaginative

Sum of  $(O-E)^2/E = 6.78$ , reject independence

	High	Medium	Low	totals
Successful	15	21	3	39
Unsuccessful	5	29	5	39
totals	20	50	8	78

For Student sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont.

STUDENTS

Sincere-Insincere

Sum of  $(O-E)^2/E = 4.76$ , accept independence

	High	Medium	Low	totals
Successful	20	18	1	39
Unsuccessful	11	25	3	39
totals	31	43	4	78

Competitive-Cooperative

Sum of  $(O-E)^2/E = .70$ , accept independence

	High	Medium	Low	totals
Successful	9	22	8	39
Unsuccessful	9	19	11	39
totals	18	41	19	78

Creative-Unresourceful

Sum of  $(O-E)^2/E = 16.18$ , reject independence

	High	Medium	Low	totals
Successful	18	21	0	39
Unsuccessful	4	29	6	39
totals	22	50	6	78

Outgoing-Reserved

Sum of  $(O-E)^2/E = 21.42$ , reject independence

	High	Medium	Low	totals
Successful	28	11	0	39
Unsuccessful	9	22	8	39
totals	37	33	8	78

For Student sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

STUDENTS

## FLexible-Rigid

Sum of  $(O-E)^2/E = 5.76$ , accept independence

	High	Medium	Low	totals
Successful	14	24	1	39
Unsuccessful	9	27	7	39
totals	23	51	8	78

## Logical-Illogical

Sum of  $(O-E)^2/E = 9.22$ , reject independence

	High	Medium	Low	totals
Successful	20	19	0	39
Unsuccessful	8	29	2	39
totals	28	48	2	78

## Domineering-Subservient

Sum of  $(O-E)^2/E = 12.28$ , reject independence

	High	Medium	Low	totals
Successful	6	33	0	39
Unsuccessful	7	22	10	39
totals	13	55	10	78

## Conventional-Unconventional

Sum of  $(O-E)^2/E = 2.44$ , accept independence

	High	Medium	Low	totals
Successful	9	25	5	39
Unsuccessful	14	23	2	39
totals	23	48	7	78

For Student sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont

STUDENTS

## Informed-Uninformed

Sum of  $(O-E)^2/E = 25.70$ , reject independence

	High	Medium	Low	totals
Successful	26	13	0	39
Unsuccessful	5	28	6	39
totals	31	41	6	78

## Poised-Awkward

Sum of  $(O-E)^2/E = 20.22$ , reject independence

	High	Medium	Low	totals
Successful	24	15	0	39
Unsuccessful	6	27	6	39
totals	30	42	6	78

## Emotional-Rational

Sum of  $(O-E)^2/E = 12.24$ , reject independence

	High	Medium	Low	totals
Successful	3	22	14	39
Unsuccessful	8	29	2	39
totals	11	51	16	78

## Sensible-Scatterbrained

Sum of  $(O-E)^2/E = 34.20$ , reject independence

	High	Medium	Low	totals
Successful	29	10	0	39
Unsuccessful	4	29	6	39
totals	33	39	6	78

For Student sample  $\chi^2_{2, .05} = 5.99$



## APPENDIX F cont

STUDENTS

Attractive-Unattractive

Sum of  $(O-E)^2/E = 13.60$ , reject independence

	High	Medium	Low	totals
Successful	28	10	1	39
Unsuccessful	13	26	0	39
totals	41	36	1	78

Competent-Incompetent

Sum of  $(O-E)^2/E = 20.64$ , reject independence

	High	Medium	Low	totals
Successful	28	11	0	39
Unsuccessful	8	31	0	39
totals	36	42	0	78

Quick-Slow

Sum of  $(O-E)^2/E = 19.38$ , reject independence

	High	Medium	Low	totals
Successful	22	17	0	39
Unsuccessful	5	28	6	39
totals	27	45	6	78

Self-Assertive-Submissive

Sum of  $(O-E)^2/E = 20.04$ , reject independence

	High	Medium	Low	totals
Successful	22	17	0	39
Unsuccessful	6	23	10	39
totals	28	40	10	78

For Student sample  $X^2_{2, .05} = 5.99$

## APPENDIX F cont.

STUDENTS

## Dependable-Unreliable

Sum of  $(O-E)^2/E = 12.46$ , reject independence

	High	Medium	Low	totals
Successful	27	12	0	39
Unsuccessful	9	21	1	39
totals	36	33	1	78

## Practical-Idealistic

Sum of  $(O-E)^2/E = 2.86$ , accept independence

	High	Medium	Low	totals
Successful	16	21	2	39
Unsuccessful	10	24	5	39
totals	26	45	7	78

## Sophisticated-Naive

Sum of  $(O-E)^2/E = 6.90$ , reject independence

	High	Medium	Low	totals
Successful	17	22	0	39
Unsuccessful	10	24	5	39
totals	27	46	5	78

## Organized-Disorganized

Sum of  $(O-E)^2/E = 30.28$ , reject independence

	High	Medium	Low	totals
Successful	31	8	0	39
Unsuccessful	7	28	4	39
totals	38	36	4	78

For Student sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont.

STUDENTS

## Refined-Crude

Sum of  $(O-E)^2/E = 11.14$ , reject independence

	High	Medium	Low	totals
Successful	22	17	0	39
Unsuccessful	8	30	1	39
totals	30	47	1	78

## Humorous-Serious

Sum of  $(O-E)^2/E = 3.32$ , accept independence

	High	Medium	Low	totals
Successful	2	25	12	39
Unsuccessful	3	31	5	39
totals	5	56	17	78

## Conscientious-Lazy

Sum of  $(O-E)^2/E = 14.00$ , reject independence

	High	Medium	Low	totals
Successful	24	15	0	39
Unsuccessful	8	30	1	39
totals	32	45	1	78

## Perceptive-Unobservant

Sum of  $(O-E)^2/E = 23.42$ , reject independence

	High	Medium	Low	totals
Successful	24	15	0	39
Unsuccessful	4	32	3	39
totals	28	47	3	78

For Student sample  $\chi^2_{2, .05} = 5.99$

## APPENDIX F cont.

STUDENTS

## Modest-Vain

Sum of  $(O-E)^2/E = 11.19$ , reject independence

	High	Medium	Low	totals
Successful	8	30	1	39
Unsuccessful	7	25	7	39
totals	15	55	8	78

## Concerned-Indifferent

Sum of  $(O-E)^2/E = 13.18$ , reject independence

	High	Medium	Low	totals
Successful	21	18	0	39
Unsuccessful	7	28	4	39
totals	28	46	4	78

## Friendly-Unfriendly

Sum of  $(O-E)^2/E = 15.86$ , reject independence

	High	Medium	Low	totals
Successful	28	11	0	39
Unsuccessful	11	25	3	39
totals	39	36	3	78

For Student sample  $\chi^2_{2, .05} = 5.99$