1998

The Effect of Developmental Process on the Cognitive Complexity of Stereotypes

Susan Blanchard Bosco
University of Rhode Island

Follow this and additional works at: https://digitalcommons.uri.edu/oa_diss

Recommended Citation

Bosco, Susan Blanchard, "The Effect of Developmental Process on the Cognitive Complexity of Stereotypes" (1998). *Open Access Dissertations*. Paper 912.
https://digitalcommons.uri.edu/oa_diss/912

This Dissertation is brought to you for free and open access by DigitalCommons@URI. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu.

Br 525
S63
B167
1998

THE EFFECT OF DEVELOPMENTAL PROCESS
ON THE COGNITIVE COMPLEXITY OF STEREOTYPES

BY

SUSAN BLANCHARD BOSCO

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
MANAGEMENT

410952 08
UNIVERSITY OF RHODE ISLAND

1998

Abstract

Diversity training, which deals with enabling people from different populations to work together, has been lead to date by practitioners. Much of diversity training includes helping people to become less stereotypical in the way they view people who are from groups different from their own. The lack of theoretical foundation for this training has been reflected in the lack of positive outcomes to diversity training and even the use of diversity training experiences as the basis for discrimination lawsuits against organizations. One area of theory which has lacked exploration is the relationship between how a person develops his or her stereotype and the mental or cognitive structure of the stereotype itself. This study addresses whether there are multiple processes from which people develop their stereotypes, and whether the type of developmental process determines the cognitive structure of the stereotype. Findings indicate that multiple processes do contribute to the formation of stereotypes. There are also indications that these processes exert an influence on the cognitive structure of the stereotype.

ACKNOWLEDGEMENTS

It is with great joy that I write what I feel to be the true conclusion of this dissertation, and thus, my doctoral studies. The journey has been filled with peaks and valleys - I have been fortunate to have had excellent company along the way.

First, I would like to thank my Major Professor, Elizabeth Cooper, for her support through these past four years. She provided insight into theory development, structure for the organization of ideas, and, of course, many helpful suggestions for methodological choices. But, most of all, she understood my life outside academia and that understanding kept me going probably more than she knows. Finally, her wonderful sense of humor reminded me that this process does have its moments of fun.

Next, I feel so grateful to have had as committee members Linda Randall and Albert Lott who each provided so much assistance in their areas of expertise and helped to make doing this research a pleasure rather than a burdensome task. Linda, your ability to see the framework behind the ideas helped me to become aware of so many important underlying issues and your precise comments made it easy to change that framework when it was needed. Al, you are a human citation index! I have not seen anyone have such a vast knowledge of the literature. You lead me in all the right directions and even helped me find the path.

A special thank you to the professors who conducted the doctoral seminars which were so inspiring - Laura Beauvais, Rick Scholl, and Sanjiv Dugal. I will keep building on what you have started.

I leave the last comments for those closest to my heart. First, my husband, Greg, who has been so supportive and positive and who never tired of saying “You can do this” - over and over again. He has kept me aware of life outside my doctoral pursuits so that I would still be myself at the end. Without him to keep me grounded, this final achievement would have remained a dream. To my daughters, Ariel and Deirdre, who continued to love me and keep me involved in their lives even when I was more a student than a mother. They kept my life from becoming too narrow by reminding me that there is a world out there beyond school. Fortunately, thanks to all of you, I will now have the good fortune to rejoin that world, somewhat changed, but hopefully, in some ways, better.

Table of Contents

Abstract	ii
Acknowledgment	iii
Table of Contents.....	v
List of Tables	vi
List of Figures.....	vii
Chapter 1: Introduction.....	1
Effects of Cultural Schemata on Interpersonal Relations	7
Chapter 2: Review of the Literature.....	17
Automatic versus Active Thinking	19
Simple versus Complex Schemata.....	23
Cultural Schema Formation	24
Motivational development	24
Categorical Development.....	26
Social Learning Development - Vicarious	28
Social Learning Development - Experiential..	30
Hypotheses.....	32
Chapter 3: Methodology	34
Instrument(s)	34
Subjects.....	38
Procedure	39
Measures.....	39
Chapter 4: Results.....	44
Chapter 5: Discussion.....	59
Chapter 6: Conclusions	65
References	69
Appendix A.....	73
Bibliography.....	79

List of Tables

1. Descriptive Analysis of Developmental Process for All Stereotypes Surveyed...	53
2. Measures of Graphical Indicators of Developmental Process Influence	54
3. Multivariate Analysis of Variance for Developmental Process Types and Probability of Differentiation, Mean, and Standard Deviation	55
4. Multivariate Analysis of Variance for Developmental Process Types and Probability of Differentiation, Mean, and Standard Deviation - Between Subjects Effects.....	56
5. Multiple Comparisons - Follow up Tukey To MANOVA for Overall Mean.....	56
6. MANOVA for Developmental Process and Worker Type using Probability of Differentiation, Mean, and Standard Deviation	58
7. Multivariate Analysis of Variance for Developmental Process Types and Worker Types - Between Subjects Effects	60
8. Multiple Comparisons - Follow up Tukey To MANOVA for Overall Mean.....	60
9. MANOVA for Subject School and Probability of Differentiation Index, Standard Deviation, and Mean.....	61
10. MANOVA for Subject School - Between Subjects Effects	62
11. MANOVA for PC Students and Probability of Differentiation, Mean and Standard Deviation	63
12. MANOVA for URI Students and Probability of Differentiation, Mean and Standard Deviation.....	63
13. Demographics of Household Income by Subject School.....	64
14. Demographics of Race by Subject School	64
15. Demographics of Mother's Education by Subject School	65
16. Demographics of Father's Education by Subject School.....	65

List of Figures

1. Louis and Sutton's Five Stage Cycle (1991)	21
2. Distribution Levels of Intellectual Ability Ratings	50

Chapter 1 Introduction

It has become increasingly apparent that the area of diversity training, because it has been lead by practitioners, is sorely lacking in theoretical foundation. The lack of such a foundation has resulted in training which not only fails to reeducate employees in the workplace, but, in some cases, provides a basis upon which employees successfully sue the company for discrimination.

What drives diversity programs, in part, is the bottom line, but also the realization on the part of corporations like Xerox, Corning, and IBM that demographics indicate that the majority of their employees will soon be drawn from the ranks of minorities (Fish, 1994). The year 2000 is soon approaching, and by then 85% of new potential employees will be female, African-American, Asian-American, Latino, or new immigrants (Johnston & Packer, 1987). Businesses need to be convinced that their survival is dependent on how well they manage cultural diversity (Sue, 1991).

Diversity is defined in current management literature as differences in race, gender, national origin, ethnicity, ability, and geographical origin (Larkey, 1996). In some large organizations, key executives are recognizing that a “divide and conquer” strategy with regard to intergroup relations will no longer be effective, in fact, it will create a level of discord that will be bad for business (Fish, 1994). Although there is a realization in most organizations that the workforce is becoming more diverse, in a survey of personnel directors nationwide, 61% felt that managers were less than moderately prepared or poorly prepared to deal with this change effectively (Hopkins, Starkel -Powell, Hopkins, 1994). Along with the realization that the workforce is changing, there is an increasing

awareness by corporate management that taking advantage of the varied abilities held by a diverse work population will provide them an often underutilized resource which will be a competitive advantage (Sue, 1991; Cox, 1994). Some of these advantages are: Better group decision-making due to the diversity of opinions available, reversal of the tendency for majorities to stagnate in traditional positions by introducing the presence of minority influence, and increased creative thinking which can be introduced from the presence of minorities in the group (Jones, 1986). Homogeneous societies, such as Japan, will not be able to compete with countries and companies that use their diverse talent fully (Thomas, 1991). Any corporation that can use diverse information sources effectively and efficiently will have the upper hand (Stephenson & Krebs, 1993; Thomas, 1991).

It appears, however, that few companies are capable of taking advantage of their diverse workforces. In a 1992 Hay Group survey, only five percent of 1,405 companies thought they were managing their diverse workforces well (Robinson & Dechant, 1997). Organizations which do manage diversity well reap the following benefits: Obtaining insight to international markets, providing better customer service given by a workforce that understands the differing needs and preferences of a changing customer base, having the ability to access a wider talent pool (Robinson & Dechant, 1997; Walton, 1994).

In order to derive these benefits, however, relationships with fellow employees must be developed based upon appreciation for the unique talents and skills each possesses *as an individual* (Walton, 1994) without regard for either the most obvious types of diversity: Ethnicity, race, and gender, or the less obvious types: Age, functional and educational backgrounds, socioeconomic standing, lifestyle preferences, tenure within organizations, and personality traits (Thomas, 1991; Cox, 1994). One of the goals of

diversity training is to create mutual understanding between workers and to develop the ability for them to view one another as persons (Harrison, 1970). Personalized responding removes the impetus to continue using prejudice as a basis for interpersonal interactions (Miller & Brewer, 1986). By improving the quality of worker interaction, companies hope to increase productivity. As research in comparing diverse versus homogeneous workgroups has found, productivity was better for diverse workgroups (Adler as cited in Cox, 1993; Bailey as cited in Cox, 1993).

The investment in diversity training programs can be costly which may prevent some organizations from using them. Some of these programs cost upwards of \$10,000 per day (Fish, 1994). However, companies which do make the investment in diversity training and support a diverse workforce gain the advantages of: 1) Attracting and retaining the best available human talent; 2) Enhanced marketing efforts; 3) Higher creativity and innovation; 4) Better problem solving; 5) More organizational flexibility (Cox, 1993).

There are also hard costs associated with *not* supporting diversity initiatives. In one case, for example, a company in which diversity was not well-managed experienced a cost differential of higher turnover rates for women and non-white men of \$3.8 million annually (Cox, 1993). In another instance, a Fortune 500 utility company found it was losing \$15.3 million annually because of high turnover resulting from gender bias (Robinson & Dechant, 1997). These cases illustrate where there can be a bottom line payoff for the training investment. Unfortunately, the payoff has not been systematically measured and documented as it has been for other types of corporate investments (Robinson & Dechant, 1997).

Although the challenge of managing a diverse workforce seems to be one of the more important topics in the areas of both organizational change and development and organizational behavior in the coming decade, relatively little work has been done to explore the full impact of the effects of diversity on the day-to-day workplace environment (Thomas, 1991). In fact, many existing diversity training programs are routinely conducted using a pre-programmed format as though all workers develop their stereotypes (commonly known as prejudices) of ethnicity and gender in the same way and that they share a common perception of the individuals with whom they interact each day. This is an inaccurate assumption because every person who attends a diversity training presentation filters the material through his or her own values and experiences, and views it differently (Thomas, 1994). Without proper evaluation of the potential trainees, popular tools and techniques for managing diversity will be misused, opening the door for more damage to be done to the organization than good (Joplin & Daus, 1997). Therefore, diversity training programs which do not address the varying perspectives of trainees will not achieve the program goal of developing a corporate culture that breeds harmony and rapport, which in turn encourages creativity, effective decision making, and better teamwork (Joplin & Daus, 1997; Thomas, 1994).

Diversity training should help people understand not only that stereotyping keeps people from working effectively together, but also the nature of stereotyping, the reasons people use stereotypes, and the manner in which it is different from acknowledging and valuing differences (Cox, 1993). According to Cox (1993), there are three factors which should guide the selection and development of a diversity training program: 1) Time available; 2) Knowledge of the intended audience; 3) Skill and experience of facilitators.

This paper addresses the second of these three concerns. Training personnel, whether in-house or consultants, should know the audience--how do these individuals perceive other group members, how were these perceptions formed, and, most importantly, how can these perceptions be changed?

In many cases people attend diversity training programs without experiencing any change in perceptions of other members of the workforce who they consider to be obviously different from themselves in race, gender, and/or ethnic background. Without a change in perception, it is unlikely that a change in behavior will occur. The more that outgroup members are seen as being alike, the more easily will discrimination be directed toward that group. This is a phenomenon known as deindividuation (Hamilton & Trooper, 1986). Research evidence has shown that individualization, that is, viewing a person according to his/her individual characteristics, reduces outgroup discrimination (Boski, 1988). Achieving a change in perception toward outgroups is one of the goals of diversity training because it will enable people to view one another as individuals within the workplace environment (Grant & Holmes, 1981). This does not mean that racioethnic or gender categories will not be noticed, rather they will become part of a person's identity along with his/her individual characteristics. Larkey (1996) calls this process specification, meaning the awareness of cultural difference does not result in the interpretation of those differences using stereotypes.

When conducting intergroup training to decrease stereotypes, Cook (1978) noted that positive change in interpersonal relationships was limited to specific members of the interdependent training group and did not extend to the racial group as a whole, therefore, it is not expected that training effects of corporate programs will extend to society as a

whole. Weissbach (1976) also reports that in researching mixed cultural groups within a workplace, contact in that situation, even that which results in positive feelings (toward other cultural groups), may not stimulate contact in other situations nor lead to a general reduction in intergroup hostility. Miller and Brewer (1984) also found that intergroup contact experiences which are positive rarely generalize beyond the immediate contact situation

In order to improve corporate diversity training, it is important for researchers to begin to address the issues involved in stereotyping. The process of how stereotypes form and how they are cognitively structured is one issue which must be better understood. Because diversity training deals with the topic of stereotyping others, an increased understanding of the manner in which stereotypes are formed will ultimately lead to more effective diversity training. In an effort to gain a better understanding of the stereotyping process, this dissertation will focus on the formation of stereotypes and how the formation process affects the resulting cognitive structure of stereotypes.

There have been many definitions of stereotypes throughout the years. All of them address a basic theme, that of prejudgment of individuals according to particular characteristics deemed to belong to that individual by virtue of his/her race, ethnic background, or other generally physically observable trait (Allport, 1954; Hamilton, 1979; Heilman, 1997). A better understanding of the phenomenon of stereotyping may be gained through a review of the literature of social cognition within the field of psychology.

Most of the research to date on stereotypes and their deactivation has taken place in the field of psychology (Petty, Wegener, & Fabrigar, 1997; Hamilton, 1979; Devine, 1995). In the mid 1980s, the schema approach was imported into the social cognition

field from general psychology (Boski, 1988). Schemata are patterns of thought and/or action that generate an automatic response to a particular stimulus (Bartlett, 1932). These patterns have had various labels throughout the literature including scripts (Abelson, 1976), belief structures (Fiske & Taylor, 1984) and theories of action (Argyris & Schon, 1974). Stereotypes are considered to be group schemata, part of the many subclasses of the broad concept of schema (Taylor & Crocker, 1981). Stereotypes may also be viewed as schemata in that they are structural frameworks within which information about others is processed. A stereotype is triggered when its target individual is encountered directly or indirectly (through conversation, for example). The stereotype directs thoughts and/or actions involving that person. In her research on gender stereotypes, Geis (1993) found that the general schema for women uses feminine characteristics and that as soon as someone is recognized as being a woman, this schema, or stereotype is activated. Because stereotypes operate automatically, the person using the stereotype is usually not even conscious that he/she is doing so. This characteristic of stereotypes makes it even more difficult to deactivate them. It is only by deactivating the stereotype, that is, changing the schema, that a person can begin to interact with others according to each one's individual characteristics.

Effects of Cultural Schemata on Interpersonal Relations

The presence of cultural schemata affects interpersonal relations, because these cognitive structures determine our expectations regarding the thought processes and actions of individuals from a particular group. These expectations form the basis for our evaluation of and behavior towards these individuals (Heilman, 1997). Schemata are resistant to change, even when information challenging their veracity is present (Gioia &

Sims, 1985; Pettigrew & Martin, 1987). For example, veteran white employees may seek out and remember facts about new black, personnel that are consistent with their stereotypes of low expectations for that ethnic group. As time passes, and the black employee is no longer “new”, those white employees will most likely recall instances where the black employee’s behavior was consistent with their stereotypes or schemata of black employees (Pettigrew & Martin, 1987). The goal of the schema is to maintain and preserve the existing belief system even if evidence must be created or ignored to do so (Hamilton & Trooper, 1986). This oversight of relevant information is an example of the faulty processing which occurs in the presence of cultural schemata. The use of stereotypes leads to generalizations and/or inaccuracies about the individual who is a member of the stereotyped group. These generalizations and inaccuracies create biases which are reflected in one’s feelings and, in turn, actions toward that group member (Heilman, 1997). The stereotype or schema is a cognitive structure which underlies our expectations and actions. This structure is reflected in our patterns of information processing which control the activities of retrieval, classification or encoding, and evaluation (Dovidio & Gaertner, 1986; Geis, 1993).

Information retrieval is the manner in which we collect information through observation of our environment. The retrieval method has an impact on the way we select information we then use in the evaluation process. A cultural schema acts as a filter, directing which observations are considered when we evaluate an individual or a situation. The individual attempts to fit his/her observations to the schema (Larkey, 1996). Observations are classified according to our relevant social categories, or cultural schema in order to simplify them (Hamilton & Trooper, 1986). Environmental information which

may be important is often ignored or overlooked because it cannot be classified according to the existing schema (Austin, 1995). For example, Geis (1993) notes that when a woman performs in a manner which is not consistent with her boss' schema of women, her actions are ignored - a phenomenon she calls perceptual bias. Because the schema filters out observations which do not fit the expected pattern, the resulting retrieval process is flawed because it is incomplete.

One effect of using a faulty retrieval method based on a cultural schema is known as confirmation-bias (Boski, 1988). Confirmation-bias affects the selection of observations to be used to acquire information about others by classifying the observations using an existing schema about a particular group of people. The information derived from this classification method determines the behavior of the observer toward the subject of those observations (Boski, 1988). The classification of selected observations assists us in anticipating others' behaviors according to the cultural schema with which they belong. Observations are classified according to whether they are schema-consistent or schema-inconsistent depending on the extent to which they match the existing schematic framework used by the observer (Boski, 1988).

Another inaccuracy in the observation process results when observations are classified as belonging to a particular schema, and additional attributes are assumed to be part of the other's behavior pattern solely because they are part of that schema. This linking between observed attributes and those from an existing schema is called the assimilation effect (Zebrowitz McArthur, 1982) or illusory correlation (Hamilton, 1979). Illusory correlation expresses this correlational effect which occurs when the observer creates a relationship between two variables based upon a stereotype or schema. Usually

one variable describes group membership (woman, blue collar) and the other is a psychological attribute (indecisive, vulgar). The observer typically overestimates the strength of the association between the two variables. Forming the relationship between the two variables requires accumulation of instances of a link observed, storage of these instances over time, and accurate judgment regarding the association itself. The observer overestimates the amount of confirming evidence which exists to support this link and underestimates the amount of disconfirming evidence. With so many complexities involved in this process, Hamilton (1979) concludes it is understandable that many of these relationships are incorrect.

In one study by Hamilton and Gifford (1976), two random groups were formed, Group A and Group B, for the purpose of illustrating confirmation-bias operating in an environment with groups which had no existing stereotypes about one another. In the study, observers were given statements about behaviors performed by members of both groups, with the number of statements being twice as frequent for Group A as they were for Group B. Group B, therefore, became distinctive in that statements about its members were less familiar. Behavior statements were mixed with regard to whether they were desirable or not desirable, but the ratio of bad to good behaviors was equal for both groups. Following this initial presentation of behaviors, subjects were given a list of behaviors and asked whether they would tend to be performed by members of Group A or Group B. Group B members were ultimately rated less favorably than Group A members and less desirable behaviors were credited to that group. An illusory correlation had been established between the two groups and expected behaviors although no such link truly existed if the data were to be considered objectively. Hamilton (1979) concludes that the

illusory correlation effect provides a possible explanation as to why minority group members tend to be associated with undesirable or uncommon behaviors. Just as in the experiment above, the smaller group, or minority group, is unfamiliar to majority group members. This lack of familiarity contributes to the formation of illusory correlations.

Another problem caused by the use of schema in selecting observations from the environment is the assimilation effect. The assimilation effect causes the ascription of attributes to an individual which are not related to that person's behavior, but rather, to the schema held by the observer. As schemata, stereotypes operate in this way - where the stereotype consists of a whole network of expectations about the observed individual (Harrison, 1970). When the stereotype is retrieved, it acts on the observer's thoughts and actions in an all-or-nothing fashion (Gioia & Sims, 1985). The expectations generated by the stereotype, or cultural schema, are based on the observed phenotype (outwardly visible signs of group membership) and they affect not only our observation of an individual, but may also predispose the observer to interact with an individual in a particular way because of his or her group membership (Cox, 1993). In research by Tajfel (1981), he presented three speakers on tape with various types of French accents: Parisian, French-Canadian, and bush accent and asked subjects to judge the speaker according to whether the person was a good leader. The subjects chose the best leader as the one with the Parisian accent and ascribed other qualities to the speaker of intelligence and self-confidence - a cluster of traits unsolicited by Tajfel.

In addition to adversely affecting observation and classification activities, use of stereotypes or cultural schemata also alters the manner in which observed actions are evaluated. Sometimes, a cultural schema can assist the observer in understanding and/or

anticipating an individual's behavior. When the schema is accurate for that individual, it can prove to be a valuable human relations tool. However, when the schema does not provide a correct framework within which to evaluate an individual's behavior, the result is an attribution error. This adverse evaluation effect occurs when an individual's action is evaluated only according to whether it is schema-consistent or schema-inconsistent (Weissbach, 1976).

One type of attribution error, confirmatory attribution, occurs when we evaluate someone's actions in such a way as to confirm our image of that person as it exists in our cultural schema. Actions are judged according to whether they "fit" the observer's stereotype. In fact, those actions which are inconsistent with the active schema are either ignored and/or forgotten once they have ceased (Hamilton & Troler, 1986). An example of this process may be seen in the workplace when women are considered for executive positions. Because the stereotype of women considers them as lacking the ability to perform well as high-level managers, it is expected that they will fail in these roles. Therefore, when women who hold these positions are evaluated, there is a negative bias toward their performance. Information which indicates a positive performance is discredited and/or distorted to fit the expectations of the stereotype (Heilman, 1997). A similar attribution error occurs in the case of a minority person who achieves great wealth, prominence in academics, or who has performed with courage against great odds, but is assumed to have done something unethical to have accomplished such uncharacteristic achievements (Pettigrew & Martin, 1987; Rowe, Bennett & Atkinson, 1994). Thus, the actor is never recognized for his/her success in a manner which would result in organizational rewards such as promotion and/or lucrative assignments.

Another type of attribution error which occurs as a result of using schema is causal attribution. When an individual who is a member of the observer's ingroup acts inappropriately, the action is determined to be situationally caused. The actor maintains his/her positive image as an ingroup member. If the actor is a member of a group the observer considers to be an outgroup, the causal attribution process changes. If this individual acts inappropriately, the action is determined to be caused by the individual's group membership - it is internally attributed (Hamilton & Trooper, 1986). In addition, the action is used to strengthen or maintain the schema for that outgroup. Actions by an outgroup member which do not fit the group stereotype should provide evidence which casts doubt on the stereotype, but instead, the behavior is attributed to the situation, leaving the stereotype intact (Hamilton, 1979). This is part of the process by which stereotypes or schemata can continue to exist in spite of contradictory evidence.

Memory of behaviors performed by certain individuals is also affected by the schema held of that individual. There is a tendency, for example, to better remember negative behaviors by an individual who is an outgroup member. Positive behaviors by ingroup members are also better remembered than negative behaviors by an ingroup member. Behaviors which the observer feels illustrate the schema he/she holds with regard to an outgroup are also better remembered than those which are inconsistent with that schema (Hamilton & Trooper, 1986).

Cohen (1977 in Hamilton) researched the effect of stereotyping on what is remembered about others. The stereotypes used as the basis of the experiment were those of a waitress and a librarian. Subjects viewed a videotape of a woman whom they were told ahead of time was a waitress or a librarian. She was dining in a restaurant with her

husband. Several characteristics considered to be indicative of the particular job, such as clothing and appearance, were included in the stimulus tape. A follow-up questionnaire asked subjects to remember several items from the tape, one being the type of drink, beer or wine, the subject had with her meal. Subjects remembered more accurately, even one week later, what the woman had to drink if the type of drink matched the expectations of the waitress stereotype (beer) or the librarian stereotype (wine).

Therefore, the use of schemata in the workplace alters our ability to interact in a productive manner with other employees. Rather than relating to an individual who belongs to a particular group as an individual, the relationship is based on the observer's schema about the group to which he or she is perceived to belong. The individual is perceived to be similar to other members of his/her "group" which has particular characteristics according to the observer's schema- variations between members of this "group" are ignored (Dovidio & Gaertner, 1986, Wilder, 1978a, 1981). Actions which vary from this schema, whether positively or negatively, are usually ignored or forgotten. Sometimes, however, an individual from an outgroup who exhibits behaviors which are atypical for his/her group is viewed as a threat to the ingroup. This person will be viewed with contempt and disdain for attempting to "break in" to the ingroup (Boski, 1988). By subconsciously labeling a person and using a stereotype, the observer misses the person's true words and/or actions. Even "positive" schemata prevent managers from effectively using the talents of employees, especially when a particular employee's talents do not match those which are part of the schema held by the manager (Walton, 1994). This static view limits the ability of the observed individual to enhance job performance or to be promoted because his or her image never changes in the eye of the observer to include

current work or contributions which do not "fit" the observer's schema. The company is also precluded from receiving the benefit of new ideas because his or her ideas are not noticed or acknowledged if they are inconsistent with the observer's schema. The actor is not viewed as an individual, rather he or she is viewed only as a group member with the fixed characteristics which are part of that group's schema.

Finally, another negative effect of using schema as the basis of reference when interacting with certain others is that it eventually creates a self-fulfilling prophecy (Geis, 1993). The example Geis (1993) uses is when women are not promoted to higher management positions in the workplace due to gender stereotypes. The use of these stereotypes negatively affects women who aspire to promotion within the corporate environment. Over a period of time, these women become doubtful of their abilities to succeed in higher level positions. They lose self-confidence which decreases their performance levels and further reduces their chances for promotion. The stereotype of women lacking the ability to perform at higher levels of management thus receives reinforcement (Geis, 1993).

In order for individualized evaluation to occur in the workplace, diversity training must expose and disassemble the schemata, which are the mental structures which prevent individualized evaluation. These mental structures, which contain "*the perceiver's knowledge, beliefs, and expectancies about some human group*" (Hamilton & Trooper, 1986, p. 133) are what we commonly know as stereotypes. Stereotypes may be considered as schemata because of their structural properties (Hamilton & Trooper, 1986). These structures provide the framework within which an individual observes, classifies and evaluates people within his or her environment. One reason that diversity

training programs fail to change these interpersonal perceptions and the resulting behaviors is because a generalized program is used to address all individuals without regard for the differences in their stereotypes or mental structures.

Chapter 2

Review of the Literature

The concept of schemata has been developed and promoted by several researchers in the areas of psychology and sociology (London & Poplawski, 1976; Louis & Sutton, 1991). A schema is a pattern of behavior which one calls into use when prompted by a particular situation. The schema is a form of non-thinking action, performed automatically, without conscious intent (Hamilton, 1979).

Schemata may be of various types; some control routine behaviors such as driving a car, others may control our self-image and maintain behaviors consistent with the mental model we have of ourselves (Gioia & Sims, 1985). There are also schemata which guide one's attitudes and behaviors towards individuals who are perceived to belong to a different cultural group from oneself. These are the schemata also known as stereotypes. They are also referred to as cultural schemata. Schemata promote and maintain a predetermined set of thoughts and behaviors which become engaged when a person who fits the schematic pattern is encountered physically or mentally (through conversation, for example) (Boski, 1988). These are the mental structures which diversity training is meant to disturb or dismantle.

Cultural schemata may be developed through cognitive, motivational, and social learning processes, but they all manifest themselves through effects on behaviors as described previously (Hamilton, 1979; Hamilton & Trooper, 1986). Tajfel (1981) notes that understanding the processes involved in the formation, dismantling, and functioning of

schemata is essential for their full and adequate analysis. This chapter will focus on the formation of schemata as they occur through four developmental processes.

The schema manifests itself through fixed mental images and opinions regarding a particular cultural group, and may extend itself through behaviors as well (Devine, 1995). The manifestation of a schema is indicated through the use of its mental structure to evaluate an individual who fits a particular schematic pattern. This mental structure manifests itself as prejudice. There have been many definitions of prejudice presented through the years, with the most common being “negative feelings toward persons based solely on their group memberships” (Devine, 1995, p. 486). Although two individuals may appear outwardly to possess the same stereotype, or schema, toward a particular group, their schemata may differ in structure due to the manner in which they were developed. This structure filters the individual's actions and/or words and then compares them to cultural group expectations as denoted in the schema. The schema held by the observer will pre-determine his/her actions and attitudes towards the other person.

What is necessary to develop a non-schema based (individualized) manner of interacting with others is to change one's cultural schemata. Diversity training should be able to disassemble a variety of schemata, clearing the way for unbiased evaluations. Previous methodologies have focused on changing schemata without considering how these various types of schemata were developed. This paper proposes that the process by which a schema is formed affects the resulting schematic structure which in turn determines which approach to diversity training will be most effective in disassembling that structure.

The need to provide individualized training is mentioned as a factor determining success of T-group (sensitivity) training research conducted by Roger Harrison. Harrison (1970) indicated that each individual in a training environment requires different interventions in order to encourage learning. Louis and Sutton (1991) also found in their experimentation with channeling individuals away from schematic-based thinking, that a person will respond to training differently depending on his or her prior experiences and predisposition which contribute to each one's sensitivity and openness to the training environment.

Automatic versus Active Thinking

The use of a cultural schema as a basis of evaluation for individuals and for decision-making is an example of automatic thinking (Friedman & Lipshitz, 1992). Automatic thinking results in actions being performed according to a predetermined pattern regardless of the nature of a particular situation. This automatic pattern of action is part of the schematic structure. Schemata can be positive in that they allow people to react quickly, and often effectively, in a variety of situations (Louis & Sutton, 1991). The behavioral process is simplified because the actor uses a limited set of environmental cues which determine a choice from a fixed set of certain responses to those cues (Friedman & Lipshitz, 1992). Under normal conditions of “business as usual”, these cognitive structures are efficient guides to perceiving, interpreting, and responding to the customary organizational environment (Louis & Sutton, 1991). However, the structures which provide the advantage of swift reaction to a situation become disadvantages when the situation takes place in an uncertain environment, such as in the increasingly diverse workforce environment. In an unfamiliar environment, people who follow schematic, automatic thought processes tend to see the situation in terms of what they expect it to be and ignore information which is different from those expectations.

When an individual proceeds to approach a situation in his/her automatic thinking mode, he/she no longer attempts to see the situation objectively. Instead, a reality is created in accordance with the schematic representation already in existence and the individual uses *that* reality as the basis for action. The individual's actions are controlled by his/her automatic thought processes or schemata which may or may not be appropriate for the true reality at hand. Behavior becomes insensitive to the context in which it occurs because it is determined by the schema rather than the reality of the situation. In practice much behavior *does* occur automatically rather than from conscious thought and people often resist changing from automatic modes of information processing to more active thinking (Louis & Sutton, 1991).

In order to change a person's schema, it is necessary to shift that individual's thinking process from automatic to active. Active thinking promotes the evaluation of situations on an individual basis. There are three conditions which may trigger a change from automatic to active thinking (Louis & Sutton, 1991). The first is when an individual experiences something unanticipated and unfamiliar in the environment. When the novel situation is encountered, existing schemata do not provide guidance as to its interpretation, therefore, active thinking must be enacted in order to begin the process of understanding. The second is when environmental observations do not match expectations. If the amount of discrepancy between observations and expectations exceeds the individual's comfort level, then the observer moves from an unconscious mode of operation to a conscious evaluation mode (Cowan, 1986; Austin, 1995). The third is when an individual is openly requested to change his/her mode of thinking to a conscious one. This may be done as a deliberate request, for example, in a diversity training session.

In the face of uncertainty and change in the current organizational environment, automatic thinking can be detrimental to management effectiveness because observations which do not "fit" existing schematic structures are ignored rather than examined, resulting in maintenance of out-dated mental images of the environment. Of particular

interest in the area of diversity management, is the observation that negative consequences of automatic thinking have included failures in interpersonal relations (Argyris & Schon, 1974).

In order to improve interpersonal relations through diversity training, this type of training should help individuals develop a thinking method which is active because this method of thinking promotes awareness of how one selects, interprets, and acts on information from the environment (Louis & Sutton, 1991; Friedman & Lipshitz, 1992). Resistance to thinking actively is related to how learners must reorganize their existing cognitive categories or schemata (Friedman & Lipshitz, 1974). Active thinking pushes the individual to examine existing schemata and contributes to the formation of new schemata which include newly absorbed environmental cues (Argyris & Schon, 1978). People become upset and defiant when they are confronted with the realization that their thought processes and/or actions lead to errors in judgement or contradictory results to expectations (Argyris & Schon, 1974).

Existing schemata are in equilibrium as a result of forces which resist change. This equilibrium must be disturbed in order to begin the change process, and, as noted above, people do not like to disturb the status quo. For example, if a person's self-perception is strongly disconfirmed there will be a resulting imbalance internally which will produce change in behavior and attitude (Harrison, 1970). This may occur at a performance evaluation when the employee expects a positive performance appraisal and the supervisor produces a negative appraisal which forces the employee to reevaluate his/her actions (Louis & Sutton, 1991). Another way in which a schema may be disturbed is when an action results in an unexpected outcome such as unexpected failure, or when a situation is truly novel and unfamiliar and is noticed as such (Louis & Sutton, 1991).

According to Louis and Sutton's (1991) proposal for switching thought processes back-and-forth between automatic and active states, it should be recognized that there is a necessity for automatic thinking in some circumstances and active thinking in others.

They propose the following model of a five stage cycle which illustrates that an individual needs to be adept at: 1) functioning in an automatic cognitive mode; 2) sensing when reliance on habits of mind or automatic processing is inappropriate; 3) switching from automatic to conscious cognitive processing; 4) functioning in a conscious cognitive mode; 5) sensing when active thinking is no longer necessary; 6) switching from conscious to automatic cognitive mode (See Figure 1).

Figure 1

Louis and Sutton's 5-Stage Cycle of Change(1991)

The characteristics of a particular situation should promote the type of cognitive processing which is appropriate. In a situation which is familiar and/or expected, automatic processing should be the norm because it will result in the most efficient behavior. However, when the situation is problematic and out of the ordinary, an active processing mode should take effect in order for the best solution to be accomplished. It is when active processing takes place under ordinary circumstances and when automatic processing takes place in unusual or unanticipated situations that efficiency and effectiveness are sacrificed and errors in judgment occur.

Simple versus Complex Schemata

In order to move individuals from automatic to active thinking, another aspect of schematic structure which should be considered in developing diversity training is the complexity of the schema (Weissbach, 1976). Schematic structures may be categorized as simple or complex. Simple schemata are cognitive structures which are poorly differentiated and poorly integrated. A simple schema is lacking in dimension and tends to be extreme in nature (Linville & Jones, 1986). The majority of simple ethnic stereotypes also tend to be negative rather than positive (Dovidio & Gaertner, 1986). For example, Kleinpenning (1993) found in research that a white individual with a simple schema which was negative towards blacks was negative toward any attempt to assist blacks in society. For this type of person, the only resolution to the negative situation of blacks being in the country was to make them leave the country.

Complex schemata are multidimensional. The individual possessing a complex schema is able to conceptualize matters in various ways. Kleinpenning's study found that white individuals with more complex schemata felt that affirmative action programs should be considered for blacks, although they maintained negative feelings toward blacks themselves. The schemata of these individuals consisted of several dimensions simultaneously. These complex schemata may also consist of some positive as well as negative characteristics (Larkey, 1996). Complexity may be further described as the number and distinctiveness of the dimensions used to represent members of a social group (Linville & Jones, 1980).

The difference in schematic structures was illustrated in research by Boski (1988) in which he compared structures between subjects who held an existing stereotype of a particular group and subjects who held no such pre-existing stereotype. The subjects, who were Nigerian and Canadian, evaluated individuals from cultural subgroups of Nigeria, Hausas and Ibos. Individuals representing these two cultural subgroups appeared in an interview on videotape which the subjects watched and then evaluated them using

perceptual scales from which they chose attributes for the actors. The Nigerian subjects operated using a cognitively complex categorical structure which included many attributes from the scales. The Canadian subjects, having no stereotypes to reference in their evaluations, used few dimensions or attributes from the perceptual scales to develop a simple stereotype of the Hausas and Ibos primarily based on appearance.

Cultural Schema Formation

The schematic development process determines to some degree the form of diversity training which will be effective for a particular individual. It is one of the determining variables in predicting what people will perceive about others in "real" situations (Gaertner & Dovidio, 1986). By increasing our understanding of how cognitive functioning is affected by various influences, the manner in which stereotyping processes function will be better understood (Hamilton & Trooper, 1986). Research conducted in the area of schematic development has resulted in four major theories of schemata formation. These major theories are applicable to cultural schemata. There has been a tendency in the research to attribute stereotype development to one source only. However, as humans, we learn in a variety of ways - through observation, demonstration, and experience (Bandura, 1986). There is no reason to assume that the manner in which we learn stereotypes varies from other types of learning. According to Hamilton and Trooper (1986), different types of learning produce specific judgmental and behavioral manifestations. That is, different developmental paths lead to variation in the resulting schematic structure. To be most effective, diversity training methodologies must focus on these differences in schematic structures (Cox, 1993).

Motivational development

The motivational development theory (Boski, 1988), empirically addressed by Tajfel (1978; 1979), proposes that individuals promote positive self-esteem and stronger self-identity through their identification with some homogeneous "in group". Erlich (1973) also described the origin of prejudices as being related to an individual's negative

self-concept. Hamilton and Trooper (1986) found that the use of stereotypes in this case was functional to maintaining self-esteem and coping with feelings of inadequacy. Hamilton (1979) stated that holding derogatory beliefs about a group outside one's own serves a psychological purpose by reducing anxieties and frustrations about the self. Individuals interested in enhancing their own self-esteem are motivated to create "outgroups" which they perceive as being lower on the social scale than themselves (Boski, 1988). Interactions are preferred with other members of the "ingroup", which allows for maintenance of the separation from the "outgroup" (Cox, 1993). Continuous contact with ingroup members promotes further intergroup competition and comparison (Tajfel, 1982; Tajfel & Turner, 1979). There are more positive feelings about ingroup members than outgroup members (Gaertner & Dovidio, 1986) and ingroup members are associated with more desirable personal and physical characteristics than outgroup members (Doise, Csepelik, et al, 1965).

An extension of this theory suggests that group interests are served by maintaining schemata which exclude "outgroups" from obtaining benefits or privileges enjoyed by the "ingroup"(Duckitt, 1992). Benefits may be social and/or economic. Ethnocentrism is a type of motivational schematic formation which occurs when an "ingroup" member evaluates an "outgroup" member according to the "ingroup's" standards. These group boundaries may be based solely on group identity--there may not be any "outgroup" members physically present--and it is these boundaries which are the basis for the development of schemata (Cox, 1993).

In a research study by Hamilton (1979), which examined this ingroup and outgroup relationship, he gave Hindu subjects written descriptions of four behavioral scenarios which included positive and negative behaviors. Subjects were asked to select reasons for the actors' behaviors in the four scenarios. In scenarios involving a Hindu actor behaving positively, the positive behavior was considered to be an indication of the actor's moral foundation. In scenarios involving a Hindu actor behaving negatively, the

negative behavior was considered to be a function of the circumstances of the situation. For scenarios involving Muslim actors, the reverse was true - positive behavior was considered a function of the situation whereas negative behavior was considered to be evidence of the actor's inferior moral foundation. The outgroup member's behavior was judged on the basis of his or her group membership, which were not the same standards used to judge the ingroup member.

The manner in which "ingroup" and "outgroup" motivational schemata function has also been demonstrated in research done by Allen and Wilder (1975). In one study, subjects were divided into two groups, ostensibly because of their preferences for paintings by a particular artist, but in reality by random assignment. Subjects were later asked to distribute monetary awards to members of each of the two groups. There was a strong bias in favor of the group to which the subjects had been assigned - not only did subjects allocate greater amounts of money to their own group members, but in fact, they attempted to maximize the differential between the amount given to their own group and the amount given to the other group. This action was based solely on the criterion of group membership - no contact had been made between members of the two groups and there was only a minimal amount of information given about any individuals within the groups. Allen and Wilder (1975) also found that subjects felt there was more similarity in beliefs between their own group members than in the outgroup members even though no factual basis existed for any level of similarity or dissimilarity between the two groups.

Categorical Development

The theory of schema development as a categorization process (Boski, 1988) states that schemata are mental structures which individuals create in hopes of achieving better information processing. These structures simplify the world and make perceptual and cognitive processing more efficient (Cox, 1993). There is a need to reduce the enormous amount of information we receive through our environment, otherwise, it would overload our cognitive processing and storage capabilities. Stereotypes provide simplicity

and order to an environment where there is complexity and nearly random variation (Gaertner & Dovidio, 1986). Therefore, we seek commonalities among the individuals we meet and use those commonalities as a basis for grouping individuals - those commonalities become schemata or stereotypes (Hamilton & Trooper, 1986).

In some cases, the simplification process may be triggered by anxiety which occurs when the environment is or becomes unfamiliar. This anxiety motivates the individual to "make sense" of the new environment (Goodman & Shah, 1992; Louis, 1980; Weick, 1992). In the case of schemata categorizing a person as a member of a particular group provides the anxious individual with an expectation of how that person will behave, thereby simplifying the interaction (Cox, 1993; Gaertner & Dovidio, 1986) and the environment. The disadvantage to using these schemata is that they can also distort reality by leading the user to "see" things in the environment which are not truly present and to ignore information which *is* there (Hamilton, 1979).

Through observation of others, we develop a schema which categorizes characteristics for a particular group. When confronted by an individual who fits our schema for that group, we attribute these characteristics to him or her, and therefore, expect certain behaviors from him or her. This behavior is activated on the basis of a type of categorization which uses a phenotype, that is, visible signals, such as skin color or clothing (Cox, 1993). In fact, the simple process of categorization engenders the assumption that the group members have similar attitudes to one another and different attitudes from oneself (Brewer, 1979; Doise, Csepelik et al., 1965; Gaertner & Dovidio, 1986; Rokeach & Mezei, 1966).

Cognitive schemata derived through this method have also been investigated using implicit personality theory (I.P.T.) which states that these schemata consist of sets of traits which represent the prototypes for particular groups of individuals (Grant & Holmes, 1981). In the case of cultural schemata or stereotypes, knowing that a person is from a particular ethnic or racial group invokes a cluster of traits based upon his/her membership

in that group. In a study by Grant and Holmes (1981) subjects were given information about individuals which identified them as being Chinese, Irish or Somalian and as having traits associated with those nationalities (derived from an earlier study). Subjects were asked to rate the individuals according to a group of traits associated with the Irish and Chinese stereotypes. Results indicated that subjects rated the individuals as possessing certain traits according to the category (stereotype) with which he or she was originally identified. An individual identified as Irish, for example, was rated highly in the traits of happy-go-lucky, talkative, and pleasure-loving. The individual identified as Chinese was characterized as using traits such as honest, courteous, neat and reserved.

The categorization method results in information processing which is highly efficient, but shallow and unelaborated (Gaertner & Dovidio, 1986). The categorization process itself has been linked to the strengthening of stereotypes (Larkey, 1996). The schematic structure is maintained by the incorporation of additional observations into the existing schema. Additional data which could challenge the original schema or are even contrary to it are mentally coded according to the schema which exists, therefore, the original structure does not change (Ross, 1979). Change to the original schema takes place only in the face of strong evidence which is consistently contrary to that schema. Because all observations are viewed in light of the existing mental structure, change takes longer than it would if no such structure were already in place (Ross, 1979).

Social Learning Development - Vicarious

A third theory ascribes cultural schema development to the social learning process. Social learning theory states that schemata can be developed through either experiential or vicarious learning processes (Bandura, 1986). Vicarious social learning occurs when we are taught about cultural groups by influential people (parents, peers) and/or other agents (television or books) which are part of our environment (Zebrowitz McArthur, 1982). Values and our own standards of behavior are to a large degree directed by the experiences of others (Bandura, 1986). One example of this is how the values we learn

result in behaviors which reflect our upbringing: how and where we grew up, family values, etc. (Ashmore & Del Boca, 1976; Bandura, 1986; Walton, 1994). Our cultural background provides experiences which shape our thought processes to be similar to those of our cultural group or social milieu (Hamilton, 1979; Cox & Blake, 1991).

The stereotypes which are learned through socialization, media influences, and the like are maintained by social reinforcements obtained from significant others and important reference groups (Hamilton & Trooper, 1986). In the workplace, for example, those individuals who have had little contact with people from minority groups rely on stereotypes provided for them by workers who are considered to be part of their reference group. Because people tend to seek out and interact with those who are more like themselves, the reference group consists of those with whom we identify and with whom we interact regularly. When the individuals who have had little minority group contact do eventually interact with a minority group worker, their observations are filtered through the schema which was provided by their reference group (Larkey, 1996).

By remaining in primary contact with these reference groups, and experiencing low levels of contact with a variety of cultural groups, there is a tendency to form a schema which has few dimensions in that and which consists of extreme characteristics which may be positive or negative (Jussim, Coleman & Lerch, 1987). This socio-cultural approach to schematic development stresses the social and cultural context within which the schemata develop, are reinforced, and are transmitted (Dovidio & Gaertner, 1986).

In the experiment discussed earlier which Boski (1988) conducted with the Nigerian and Canadian subjects, he illustrates the power of vicarious social learning in the formation and use of stereotypes. Boski used Nigerian and Canadian subjects to evaluate four videotapes which consisted of two interviews, schema-consistent and schema-inconsistent, of two cultural groups within Nigeria - the Hausa and the Ibo. The Nigerian subjects, most of whom were not from either of the aforementioned cultural groups, but who had learned about them from their families, perceived the schema-consistent actors

as such, and evaluated them using items from perception scales appropriate for the expected schema. Schema-consistent actors were also rated more positively on measures of Liking than were schema-inconsistent actors. The Canadian subjects functioned as a control group because they had no pre-existing stereotypes of the Hausa or the Ibo cultural groups. In their use of perception scales, items were unrelated to stereotypes as they existed for the Nigerian subjects. There was no difference in their ratings between schema-consistent and schema-inconsistent individuals. The Canadian subjects lacked the schematic structure to evaluate the Hausas and Ibos in the same way as the Nigerians who had developed such a structure from their cultural environments.

Social Learning Development - Experiential

The fourth theory attributes schema development to another type of social learning - experiential. Experiential learning occurs through direct contact with individuals from another cultural group (Bandura, 1986). These experiences form patterns of expectations which become schematata (Cox, 1993). As experiences with a group accumulate, they form a structure of expectations about individuals in that group (Gioia & Poole, 1984). This structure is a group stereotype. Future contact with unknown individuals who are perceived as being members of the same cultural group triggers behavior toward that individual which is guided by that group's schema (Cox, 1993).

In many organizations today, the use of workgroups to accomplish projects and tasks is common. Through these workgroups, individuals come into contact with people whom they perceive to be different from themselves. As these differences are perceived, they are organized and structured into a stereotype or schema for future reference by the observer (Larkey, 1996).

Experiential schema development may also originate through intergroup conflict. According to Cox (1993) conflict has five basic sources: 1) Competing goals, 2) Competition for resources, 3) Cultural differences, 4) Power discrepancies, and 5) Assimilation versus preservation of microcultural identity (culture which exists within the

Assimilation versus preservation of microcultural identity (culture which exists within the main culture of a group). Some examples of these types of conflicts provide further clarification for this cultural schema development process. For instance, competition over resources may result in conflict due to common claims on a parcel of land. One example of this type of conflict is the one which occurred between Euro-Americans and Native Americans over land and natural resources in the U.S. during the late 1800s (Cox, 1993). As the conflict continues through generations, it becomes a personal conflict as well as a material conflict. From this process a cultural schema develops which results in negative stereotypes between the conflicting groups (Cox, 1993).

Ashmore and Del Boca (1976) also describe how negative interactions with members of another group promote negative attitudes, emphasizing that this principle is basic to understanding the formation of prejudices. Conflicts between groups who decide to assimilate into the majority culture and those who choose to preserve a separate cultural identity result from misunderstandings and misperceptions caused by their differing worldviews (Alderfer & Smith, 1987; Daft & Sterns as cited in Cox, 1993).

Another aspect of the assimilation/preservation issue explains cultural schemata as defense mechanisms used by individuals to channel tensions and problems from environmental stresses, threats, and/or frustrations, away from themselves to some outside "target" which is perceived to be the cause of the frustration and/or stress. That target is the group against which the cultural schema develops (Duckitt, 1992). For example, now and historically, new entrants into the labor market have been viewed negatively as a threat to the established labor market. In the early part of this century, when a woman

became secretary to the president of the state senate in New Jersey, a local newspaper headline read 'Away Goes Another Man's Job' (Kessler-Harris, 1982).

More recently, this problem has been illustrated through the continuing conflict between men, women, and minorities for executive-level jobs (Cox, 1993). The stress from this conflict may be relieved in part by the traditional executive pool (white men) negatively targeting women and minorities who are perceived as non-legitimate competitors for these jobs. The targeting of these groups engenders the creation of cultural schemata which support negative stereotypes of those group members. As the conflict continues or intensifies, the cultural group identity becomes reinforced and perceived ingroup/outgroup differences solidify (Larkey, 1996). This developmental process may be viewed as having a situational basis in that it originates from a type of contact with a particular group. The situation determines the development of the type of cultural schema (Dovidio & Gaertner, 1986).

Hypotheses

Considering the existence of these different theories of origin, making the assumption that all stereotypes have the same cognitive structure is an oversimplification. Because of this oversimplification, diversity training programs do not address the possibility that using the same approach to teaching all individuals about working with diverse populations may not be effective. Assuming that the cognitive structures of all stereotypes are the same has its limits and those limits need to be identified (Hamilton & Trooper, 1986). One aspect of the differences between the cognitive structures is that for each developmental method the resulting schematic structure may be categorized as simple or complex. The simplicity or complexity of a schema has an impact on the type of diversity training which will be effective in changing that schema.

This research will address the importance of the developmental process of the stereotype as one of the influential factors in determining its cognitive structure. As previously noted, there are four developmental processes through which stereotypes, or cultural schemata, may be generated. The schemata which result will possibly differ in structure with regard to complexity. Linville and Jones (1980) propose that when people develop knowledge through experience, they develop more complex knowledge structures. Their representations of ingroups, for example, are multi-dimensional because of their personal experience with these individuals. Knowledge of the level of complexity of an individual's cultural schema would be of assistance in providing that person with the most appropriate type of diversity training.

Based upon the four methods of schema development discussed previously, the following hypotheses will be tested:

- H₁: Development of cultural schemata through four developmental processes: Social learning, conflict (experiential) , motivational, and categorization will be demonstrated.
- H₂: The cognitive structure of cultural schemata may be simple or complex, but cannot be predicted by the developmental process through which the schema was formed.

Chapter 3

Methodology

As noted in the previous chapter, four processes have been proposed by which a person can develop or learn a stereotype: Categorization, social learning - experiential, social learning - vicarious, and motivational. Previous research has explored all stereotype development in terms of only one method. In this model, stereotypes can be developed from any one of these four sources. The developmental process of the stereotypes will be ascertained through questioning of the subjects. It is expected that data will indicate the existence of all four processes.

The next step will be to determine the structure of the stereotype. Structure will be evaluated on whether it is complex or simple. Previous research has shown that stereotypes have a multicomponential nature with a variety of categories and subcategories depending on whether the person's schematic structure is complex or simple (Hamilton & Trooper, 1986). A complex stereotype is one which contains a variety of components and characteristics with a wide range of values. A simple stereotype contains only a few characterizations with a narrow range of values.

Instrument(s)

One significant problem with the psychological instruments which measure particular group traits is that many of them are outdated. Several use terminology which is today considered offensive to many ethnic groups. This problem exists because most of the tests were developed in the 1930s and 1940s with the most recent having been developed in 1981 (Robinson et al., 1991). The instruments also measure primarily racial prejudicial attitudes because so many of them were developed in an effort to understand

interracial problems in the U.S. in the 1950s and 1960s when desegregation was legislated (Devine, 1995). Therefore, measurement of attitudes towards women, men, gays, physically challenged workers, and others is still relatively undeveloped. As can be seen from the assessments of the psychological instruments used to determine the existence of prejudicial attitudes, these instruments are not as useful as they were thirty or forty years ago due to the manner in which they invite social desirability response bias from subjects. In fact, any instrument which openly asks subjects to evaluate people by using ethnic or racial stereotypes will probably not generate a truly honest response.

Because the nature of the stereotype evaluated is so important to the success of this study, the choice of stereotype has been decided upon through consideration of several factors:

1. Would the stereotype be one which subjects would be reluctant to admit to possessing? For example, one of the possible choices of stereotype was race, however, today's society does not approve of overt racism. In order to get subjects to reveal their stereotypes, it would be necessary to overcome social desirability characteristics.
2. Would the stereotype be one which could be clearly defined? For example, another choice of stereotype was gender. However, within gender there are many stereotypes which could exist. For women, for example, there are stereotypes for different kinds of women: Career women, homemakers, sex objects, to name a few (Noseworthy, 1984). Therefore, it would be difficult to restrict the study to one identifiable, comparable, stereotype.

3. Would the stereotype be one for which the source could be clearly determined?

For example, another problem with the use of gender-based stereotypes was the potential inability for subjects to be capable of isolating the method by which they developed their gender stereotypes. Contact between the sexes is constant from birth, therefore, it would be difficult to isolate anything apart from social learning as a development method.

4. Would the stereotype be one which would necessitate the subject to reveal something he/she would be reluctant to reveal. Another stereotype considered for examination was that of homosexuals. However, in order to research source of stereotype development, it would be necessary to ask whether knowledge of the stereotype was acquired from personal experience. It could be difficult to obtain honest answers from the subjects on this matter because of the implications involved.

It was finally decided that the socioeconomic stereotypes of blue collar worker vs. white collar worker would be those used. These stereotypes are not threatening to admit because there are no negative social repercussions to possessing them. Therefore, the subjects could call upon their stereotypes without fear of social sanction. Stereotypes could then be described honestly rather than in a socially desirable manner. In addition to the lack of a negative valuation, these stereotypes have also been determined to be acceptable to be measured according to their development method. Because all subjects would not be likely to have had pervasive personal contact with blue and white collar workers, it would be possible to find subjects whose stereotypes had developed through

social learning - vicarious, categorization, motivational, or social learning - experiential processes.

The survey used for this study contained three sections: One measuring developmental method of the stereotype, one measuring a set of characteristic evaluations, and the last measuring demographic information.

The first item on the survey is the characteristic set which is used to evaluate blue collar/white collar workers (alternating) and contains items pertaining to the following eight attributes from the Personal Value Scales (Scott, 1965): Intellectualism, Kindness, Social Skills, Loyalty, Academic Achievement, Status, Honesty, Physical Development. This scale has alpha reliability coefficients ranging from a low of .80 for the value of Honesty to a high of .89 for the value of Physical Development. The scales have been well validated for use with American college students (Robinson, Shaver & Wrightsman, 1991). Tajfel (1981) found dimensions similar to those used in the Personal Value Scales in his research of stereotypes. The manner in which subjects classified people into groups was using characteristics such as: lazy, honest, and intelligent and that knowledge about these characteristics was to some extent derived from class membership: trade unionist, undergraduate, animal lover, for example.

The next section asks subjects to answer questions regarding the manner in which their stereotypes developed for blue collar and white collar workers. Four statements, each describing one of the four developmental processes, were listed. Subjects then ranked the four processes from 1 to 4, with 1 being the process which was most influential in the development of his or her blue collar and white collar stereotype. These rankings are then marked by the subject on a graphic scale, a 10cm line with the leftmost end of the line

indicating the greatest influence to the other endpoint indicating no influence to further show the strength of influence possessed by each developmental process. This additional ranking was done in order to ascertain the strength of the first influence factor as it compared to the other three.

The last section requests biographical data: Gender, race, age, major, year in college, family background (blue collar or white collar), father's occupation, mother's occupation, father's education, mother's education, family income, most recent work experience (job title).

Subjects

Subjects were 283 college students. The number of subjects was determined by using Multipurpose Power Tables (Rosenthal & Rosnow, 1991). It was anticipated that the effect size would be small as is the norm for attitudinal measures. This number of students will result in a power of .60 at $p < .05$. Students were used because their lack of work experience will provide subjects with a range of various developmental methods, including categorization, social learning - vicarious, motivational, and social learning - experiential. Once individuals have more workplace experience, they are more likely to have had recent contact with blue collar and/or white collar workers, and thus have or develop more experiential sources for their stereotypes. A total of 147 students were from Providence College, a private Catholic college, and 136 were from the University of Rhode Island, a state university. The use of students from these two different types of institutions varied the subject pool demographically which was important due to the socio-economic nature of the stereotype being investigated. For purposes of this research, student subjects were preferred because their relative lack of work experience, compared

to the general population, made it more likely that developmental processes other than experiential would be exposed. .

Procedure

Each student completed a survey which measured his/her evaluation of members of blue collar and white collar jobs according to eight characteristics. The student was asked to determine how many of 100 members of a blue collar or white collar group possess a level of a particular characteristic. Each subject generated ratings for two stereotypes - one for blue collar workers and one for white collar workers. Two versions of the survey were randomly distributed - one listed blue collar characteristics first and the other listed white collar characteristics first. Students were advised that the survey was optional and were asked to sign a consent form.

Measures

In order to determine whether the schematic structure of the stereotype was simple or complex, a measure of the level of differentiation which occurs within the stereotype was used. The concept of differentiation has been used for distinguishing between group members on levels of various characteristics (Linville, Salovey & Fischer , 1986). The ability for an individual to differentiate between members of a particular group with regard to a particular attribute indicates whether the individual holds a simple or complex stereotype of that group. A well-differentiated schema uses multiple levels of a characteristic to describe a group. Therefore, the more differentiated the person's cultural schema is, the less stereotypic is his/her perception of that particular group (Hamilton &

Trooper, 1986). The measure of differentiation which will be used here is the Probability of Differentiation Index. It is defined by:

$$P_d = 1 - \sum_{i=1,n} P_i^2$$

where i is the level of the attribute in question (the five levels are numbered from 1 to 5), and P_i is the probability for the i th level of the attribute. P_d is the probability that a perceiver will differentiate between two randomly chosen instances of the category in terms of the attribute in question, that is, assign the two to having different levels of the attribute (Linville et al., 1986). If the observer is able to use a broad range of levels when assessing a characteristic, then that person is able to differentiate among members of a group because he or she has a more developed schematic structure. Group membership does not limit the individual within that group to possessing a specific level of a characteristic.

For an individual with a simple schematic structure, group membership signifies possession of a characteristic with very little variation from one member to the next. The Probability of Differentiation provides us with a measure of the number of levels among which the observer will choose when evaluating an individual on a particular characteristic. For example, the observer might be asked to categorize what proportion of blue collar workers read “frequently”, “less frequently”, “occasionally”, or “rarely”. By responding to this question on the basis of 100 percent, the portion of the observer’s blue collar stereotype relating to intellectual pursuits is revealed. This response reveals, through the P_d index, whether the observer holds a multi-level stereotype, however, it does not provide a measure of whether the perception of the observer is well distributed about the mean with regard to the level(s) of the characteristic.

Therefore, another measure which will be used in conjunction with the Probability of Differentiation is the Standard Deviation. The Standard Deviation will reveal whether the characteristic is perceived to occur only at the extremes from the mean, or whether the characteristic is more normally distributed from the mean. An observer with a simple stereotypic schematic structure may use two extreme levels of a characteristic when evaluating an individual from a particular group. By using only the Probability of Differentiation Index, that individual would appear to use a multi-level complex schema. However, when the Standard Deviation is measured as well, it will have a high value, indicating that the levels are not well distributed about the mean. The high SD in the case of an individual with a high Probability of Differentiation Index signifies that the observer's schematic structure is simple - it is only able to differentiate on extremes.

The ability to differentiate among members of a group with regard to various characteristics is an indicator of the complexity of a stereotype (Linville et al., 1986). A person who uses only a few levels of a characteristic to describe a group will hold a simple stereotype. A person who uses many levels of a characteristic is better able to distinguish among individuals in a group and, therefore, has a higher level of differentiation and a more complex stereotype.

Linville et al. (1986) used the Probability of Differentiation Index (P_d) to determine complexity of a stereotype in a study on ageism. Because it measures the same phenomenon as that being investigated here, it is appropriate for this analysis. Linville et al. (1986) provide the example in Figure 2 of the P_d index using two professors rating the intellectual ability level of a department's graduating class.

Figure 2

Distribution Levels of Intellectual Ability Ratings

Raters	Very Good	Good	Fair	Poor	Very Poor
Prof. Smith	5	10	70	10	5
Prof. Jones	15	20	30	20	15

Although it appears that each professor holds a complex stereotype of the students because each one uses all levels of the characteristic of ability, the Probability of Differentiation Index indicates that this is not the case. When the Probability of Differentiation Index (P_d) is calculated, Professor Smith's index is .485 compared to Professor Jones' index of .785. Professor Jones' categorizations were distributed more evenly over the five levels which indicates the ability to differentiate to a greater degree. Therefore, the index value for Professor Jones is higher.

As mentioned above, the Standard Deviation will be used in conjunction with the Probability of Differentiation index. Standard Deviation is calculated in this instance as follows: $SD = \sqrt{\sum P_i(X_i - M)^2}$. P_i denotes the probability for the i th level, X_i is the scale value for this i th level (Scale values are converted to whole numbers from 1 to 5).

It is possible for an individual to have a high index of probability of differentiation such as .660, yet to also have a high SD or 1.844 indicating that there is a use of various levels of a characteristic, however, that those levels tend to be at the extreme low and high levels of the characteristic (Linville et. al, 1986). In this case, the individual exhibits a less complex stereotype because it is extreme in nature in that it exhibits limited variation within the characteristic evaluated.

This type of measure which concentrates on determining types of cognitive structures which have an impact on the existence of prejudicial attitudes is also suggested for use by Robinson, Shaver and Wrightsman (1991) in their review of attitude scales. Just as noted above for the Probability of Differentiation index, they suggest measuring the following two items which are indicators of stereotypical processing:

- 1 - Simple cognitive structure, few differentiations
- 2 - Tendency to bifurcated evaluations - good/bad; black/white

The Probability of Differentiation Index measures the first characteristic of the structure of the stereotype which is level of complexity. Because characteristics which indicate the presence of a simple cognitive structure have been linked to a tendency to be prejudiced, an instrument which measures cognitive complexity is necessary. The possession of alternative cognitive organizations increases sensitivity and openness to the decisions and perceptions of others.

The Standard Deviation measures the second characteristic - extremes in characterization of group members. A higher Standard Deviation would indicate that the subject characterizes group members using the end points of the survey item.

A third measure which will be used is the Mean. The Mean will be used to determine the nature of the stereotype, that is, whether it is positive or negative. All characteristics are positively scored from 1 to 5 for purposes of calculating the mean. Therefore, the higher the score for a particular characteristic, the more positive the individual was viewed with regard to that characteristic. It will be calculated as follows:

$$\sum_{i=1,n} P_i * X_i$$

Chapter 4

Results

The initial analysis of survey results consisted of determining whether all four developmental processes are considered by individuals to be influential in the formation of stereotypes. The initial hypothesis put forth in this proposal was that four developmental processes exist and result in stereotypes or cultural schemata. An initial descriptive analysis of 566 stereotypes (two from each subject - one white collar and one blue collar) indicated that indeed all four developmental processes - experiential, vicarious, categorical, and motivational do exist and that each can be identified as a source of stereotypes. By reviewing the number of cases in each of the four developmental process cells in Table 1, it is clear that all four processes do contribute to the formation of stereotypes. Existing literature does not estimate expected populations for the various developmental processes because each process is considered as the only one responsible for these schemata. The experiential developmental process was the most common of the four according to this survey. The other three processes were also well represented among the stereotypes studied. Each of these processes appears to affect stereotype formation in nearly equal numbers. Again, no basis exists in the literature from which to determine any expectancies as to the numerical breakdown of the various types of processes.

Table 1

Descriptive Analysis of Developmental Process for All Stereotypes Surveyed

Developmental Process	Number	Percent of Total
Experiential	317	56.00
Vicarious	76	13.43
Categorical	94	16.61
Motivational	79	13.96

In additional support for hypothesis one, Table 2 provides the results of the graphic measures of developmental process rankings done by subjects as part of the survey. Of the 566 total stereotypes surveyed, 507 included complete data for the graphic measures portion. The breakdowns by type of developmental process reflected that of the entire sample population. Respondents were grouped by their primary developmental process type, then a Mean was taken of the measurements (0 to 10 cm) for each of the four types. From those measures, it was possible to determine whether all four developmental processes were viewed as having different levels of strength with regard to their influence on the stereotype structure itself. Not only were all four developmental types scored as four different processes, but it was also apparent from these measures that each process was viewed as separate with each process having its own mean value. No two process types were given the same value within the same respondent grouping.

Table 2

Measures of Graphical Indicators of Developmental Process Influence

In order to examine the influence of these four developmental processes in further detail, a Multivariate Analysis of Variance was performed to determine whether the stereotypes resulting from the four developmental processes differed significantly from one another using three measures: Probability of Differentiation Index, which measures the complexity of the schematic structure of the stereotype; Mean, which measures the characteristics of the stereotype; and Standard Deviation, which measures the range of variation in the schematic structure of the stereotype. The variables used in the MANOVA were the four developmental processes as the IVs and the three measures listed above as the DVs.

As can be seen in Table 3 below, using the Wilks' Lambda criterion for significance, there is a statistically significant difference among the stereotype structures depending on the developmental process type identified by the subjects. The type of developmental process by which a stereotype is formed does render it different in schematic structure depending on that process.

Table 3

Multivariate Analysis of Variance for Developmental Process Types and Probability of Differentiation, Mean, and Standard Deviation

	Value	F	Hypothesis df	Error df	p<
Wilks' Lambda	.97	1.94	9	1363.04	.05

Because the MANOVA was significant, follow up analyses were warranted. An ANOVA was done to investigate the relationship between the developmental process type and each of the three DVs individually. Upon review of this analysis, it can be seen that the difference in the schematic structure for each developmental process is significant for the DV of overall Mean. The mean measures the characteristics of the stereotype. Therefore, the differences in developmental process for each stereotype result in variances in the values of the characteristics which compose the stereotype. The Probability of Differentiation Index and the Standard Deviation were not significantly different from one another for the four developmental processes. The fact that these two measures were not significant means that the stereotypes did not vary in complexity, as measured by the P_d , nor in variation, as measured by the Standard Deviation. The lack of significant differences for these two DVs may be the result of having a more homogeneous subject pool than had been anticipated. If the subject pool does not vary significantly in the areas of complexity

and variation, then their schematic structures are quite similar. The results of this analysis appear in Table 4 below.

Table 4

Multivariate Analysis of Variance for Developmental Process Types and Probability of Differentiation, Mean, and Standard Deviation - Between Subjects Effects

Dependent Variable	Type III Sum of Squares	df	F	p<
Overall Mean	1.66	3	4.79	.01
Overall P _d	.00	3	.16	.92
Overall Standard Deviation	.04	3	.42	.73

In order to attempt to determine the source of the significant overall Mean result, a follow up Tukey was performed comparing the four developmental process types to one another. From this analysis, it appears that the significant difference in overall Mean occurs primarily between those individuals who develop a stereotype based on the experiential process and those who develop a stereotype based on the motivational process. The difference in overall Mean for these two groups is significant at $p < .01$ as seen in Table 5 below.

Table 5

Multiple Comparisons - Follow up Tukey To MANOVA for Overall Mean

Dependent Variable	Influence Factor Groupings		Mean Difference	Standard Error	p<
Overall Mean	Experiential	Vicarious	.08	.04	.24
	Experiential	Categorical	.04	.04	.76
	Experiential	Motivational	.15	.04	.01
	Vicarious	Categorical	-.04	.05	.86
	Vicarious	Motivational	.07	.06	.54
	Categorical	Motivational	.11	.05	.12

As was expected from the ANOVA in Table 4, there was no significant difference between the developmental process types for the measures of Probability of Differentiation nor the Standard Deviation. These analyses indicate that a stereotype developed from the experiential process does not differ in its complexity nor its variation from one which was developed from the categorical process.

Upon review of the Tukey, the overall Means were compared to further investigate the difference between the group whose developmental process was experiential and the group whose developmental process was motivational. The Mean value for the experiential group was 3.38 compared to 3.22 for the motivational group. The difference in overall Means indicates that individuals with an experiential developmental process type have a more positive stereotype than individuals with a motivational developmental process type.

Because developmental process explained only a small amount of the variance in schematic structure, it was decided to investigate other factors which could have contributed to that variance. In order to determine whether other factors could have contributed to the differentiation among schematic structures of these stereotypes, further analysis was also done to investigate that possibility.

The first factor analyzed with the development process variable was whether the blue collar and white collar workers' stereotypes themselves differed. As seen in Table 6, the MANOVA was significant for both the development process type and the worker designation. As seen in the earlier MANOVA in Table 3, the type of developmental process type was significant in determining the schematic structure of the stereotype at

$p < .05$. The worker type, blue or white collar, was significant at $p < .01$. These results indicate that there is an additional IV which is significant in explaining the differences between the schematic structures of these particular stereotypes. That IV is the group whose stereotype is being examined. The two stereotypes are thus shown to be different from one another, therefore, the stereotypes chosen for the survey, blue and white collar workers, are viewed as having different images as was expected. These variations are great enough to be reflected statistically. The interaction between worker type and developmental process was not significant, therefore, the developmental processes are independent of the type of worker for whom the stereotype exists.

Table 6

MANOVA for Developmental Process and Worker Type using Probability of Differentiation, Mean, and Standard Deviation

Dependent Variable	Wilks Lambda	F	Hypothesis df	Error df	p<
Worker Type	.89	22.20	3	556.00	.01
Developmental Process	.97	1.92	9	1353.31	.05
Worker * Process	.99	.82	9	1353.31	.60

Because the overall MANOVA was significant, an ANOVA was done in order to determine whether the distinctions in schematic structure of the stereotypes could be attributed to any particular variable or variables. As indicated in Table 7, for worker type, both the overall Mean and the overall Probability of Differentiation Index were significant. The overall Mean was significant at $p < .01$ and the Probability of Differentiation was significant at $p < .03$. Therefore, the schematic structure was different for blue collar and white collar workers. Both the characteristics of the stereotype, positive or negative, were different as indicated by the overall Mean. White collar workers had a more positive

stereotype than blue collar workers. The mean for white collar workers was 3.47 as compared to 3.21 for blue collar workers. Considering the status value society places on white collar workers, this positive image of these workers would be expected, particularly from college students who are attending college with the goal, presumably, of becoming white collar workers themselves.

The complexity of the stereotype also varied, as indicated by the overall Probability of Differentiation Index. The P_d for blue collar workers was higher at .69, than for white collar workers, for whom the P_d was .67. Although this is a small numerical difference, it reflects that a more complex stereotype exists for blue collar workers than for white collar workers (the higher the index value, the more well-differentiated, thus more complex, the schematic structure). It appears from this analysis that white collar workers are viewed with a more uniform stereotype than blue collar workers. The overall Standard Deviation approached significance at $p < .13$. The Standard Deviation for each group also differed somewhat indicating that the variation within each stereotype was not the same. For white collar workers, the SD was 1.07 which was lower than for blue collar workers whose stereotype SD was 1.11. The lower SD for white collar workers is indicative of the narrower, less complex stereotype held by the subjects for that group and reinforces the results of the Probability of Differentiation Index. Blue collar workers are seen as having a wider range of characteristics, therefore, as would normally be expected, the variation within each characteristic was greater as well. The IV of Developmental Process continued to be significant at $p < .01$ for the measure of overall Mean as indicated earlier. Therefore, the Developmental Process has its own impact on whether the characteristics of the stereotype are of a positive or negative nature.

Table 7

Multivariate Analysis of Variance for Developmental Process Types and Worker Types - Between Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	F	p<
Worker Type	Overall Mean	6.40	1	64.37	.01
	Overall P _d	.03	1	4.84	.05
	Overall Standard Deviation	.07	1	2.32	.13
Developmental Process	Overall Mean	1.47	3	4.92	.01
	Overall P _d	.00	3	.18	.91
	Overall Standard Deviation	.03	3	.38	.77
Worker * Process	Overall Mean	.05	3	.17	.92
	Overall P _d	.02	3	1.07	.36
	Overall Standard Deviation	.02	3	.25	.86

Because overall Mean was significant to the between subject analysis, a follow up Tukey was done to determine whether specific differences in developmental process types could be discovered. For all combinations of the developmental process types, only the experiential process compared to the motivational process yielded a significant result of $p < .01$ as seen in Table 8 below. The significant difference between these two groups is identical to that seen in the earlier MANOVA.

Table 8

Multiple Comparisons - Follow up Tukey To MANOVA for Overall Mean

Dependent Variable	Influence Factor Groupings		Mean Difference	Standard Error	p<
Overall Mean	Experiential	Vicarious	.08	.04	.18
	Experiential	Categorical	.04	.04	.71
	Experiential	Motivational	.15	.04	.01
	Vicarious	Categorical	-.04	.05	.83
	Vicarious	Motivational	.07	.05	.48
	Categorical	Motivational	.11	.05	.10

Another factor which could have contributed to the differentiation among schematic structures of these stereotypes was the different student populations used - the population from the University of Rhode Island versus that from Providence College. Using the two schools as the IVs and the Probability of Differentiation Index, Mean, and Standard Deviation as the DVs, the MANOVA was found to be significant at $p < .01$ as seen in Table 9 below. It was not immediately apparent why the two populations should differ significantly in their schematic structure of stereotypes, therefore further analysis was done.

Table 9

MANOVA for Subject School and Probability of Differentiation Index, Standard Deviation, and Mean

	Value	F	Hypothesis df	Error df	p<
Wilks' Lambda	.98	4.71	3	562	.00

Because the MANOVA was significant, a follow up analysis of between subjects effects was done. The dependent variable found to be significant at $p < .01$ was overall Standard Deviation. This result, indicated in Table 10 below, demonstrates that the two groups of subjects have different schematic structures of stereotypes with regard to the variation in the Standard Deviation for the characteristics of the stereotype. The Providence College subjects perceive that characteristics in the stereotype exist along a broader spectrum of possible values - this group has the higher Standard Deviation. The values of the Standard Deviation for this group ranged from .21 to 1.52 whereas the same

values for the URI students ranged from .45 to 1.48. The other two DVs - Probability of Differentiation Index and Mean approached significance at $p < .10$. This indicates that other variations in the schematic structure of the stereotype could exist, but are not large enough to be significant to this analysis.

Table 10

MANOVA for Subject School - Between Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	F	p<
Subject School	Overall Standard Deviation	.31	1	9.72	.01
	Overall Mean	.42	1	3.54	.10
	Overall P _d	.02	1	2.80	.10

Because there was a significant MANOVA for school affiliation of subject, a follow up analysis was performed on each group of subjects alone to determine whether the significant result was due to variation between subjects in each school when considered separately. Each school was analyzed using a MANOVA with developmental process types as the IVs, and the Probability of Differentiation, Mean, and Standard Deviation as the DVs. There were 298 stereotypes generated by 149 subjects from Providence College and 268 stereotypes generated by 134 subjects from the University of Rhode Island. Neither MANOVA was significant which indicates that the differences between the two subject groups could reflect variations between them and not variations within the two groups themselves. An alternate explanation is that the reduction in numbers from using subjects rather than stereotypes resulted in smaller power, therefore, any difference was not large enough to be detected. The results are displayed below in Tables 11 (Providence College subjects) and 12 (University of Rhode Island subjects).

Chi-squares were completed to determine whether there was a significant variation in the numbers for each types of development processes identified by the two subject pools. None of these analyses were significant, indicating that subjects in both groups exhibit similar groupings of developmental process types.

Table 11

MANOVA for PC Students and Probability of Differentiation, Mean and Standard Deviation

	Value	F	Hypothesis df	Error df	p<
Wilks' Lambda	.95	1.682	9	710.81	.10

Table 12

MANOVA for URI Students and Probability of Differentiation, Mean and Standard Deviation

	Value	F	Hypothesis df	Error df	p<
Wilks' Lambda	.95	1.56	9	637.80	.12

In order to attempt to determine the source of the variation between subjects from Providence College and those from the University of Rhode Island, demographic analyses were performed. Table 13 illustrates the variation in income levels for the two student survey populations. Although more Providence College students were from households with incomes of greater than \$60,000, both groups had few households with incomes of less than \$20,000. A MANOVA was performed to determine whether the difference in income levels was significant to the type of schematic structure, however, the results were not significant.

Table 13

Demographics of Household Income by Subject School

Income Levels	Number of Subjects - PC	Percentage of Total	Number of Subjects - URI	Percentage of Total
<\$20,000	4	3.00	7	4.70
<\$40,000	9	6.71	23	15.43
<=\$60,000	15	11.19	28	18.80
>\$60,000	90	67.16	73	49.00
N/A	16	11.94	18	12.07

Table 14 demonstrates the racial composition of the two subject pools. As is evident from this table, the vast majority of students from both schools are Caucasian. Due to this large racial imbalance, no analysis was done to determine whether there was any significant effect of race on the schematic structure of stereotypes. There were too few subjects of any race other than Caucasian to make any valuable determinations on this factor.

Table 14

Demographics of Race by Subject School

Racial Self-Identification	Number of Subjects - PC	Percentage of Subjects	Number of Subjects - URI	Percentage of Subjects
Caucasian	122	91.00	128	86.00
African-American	2	1.50	4	2.70
Asian	4	3.00	11	7.40
Middle Eastern	0	0.0	1	.60
Biracial	0	0.0	1	.60
N/A	6	4.5	4	2.70

The final demographic information which was considered as a possible influence on schematic structure differences between the two subject groups was parents' levels of education. Again, although in Tables 15 and 16 there are differences in the levels of education for the two groups, the majority of students are in households where at least

one parent has earned a bachelor's degree. There are also many student households where at least one parent has earned a graduate degree. One variation in education which seems to stand out is the number of households where at least one parent has earned no more than a high school diploma. Students from the URI subject pool were more likely to have parents with a high school diploma than a graduate degree, whereas, the PC subjects were equally likely to have parents with a graduate degree as they would a high school diploma.

Table 15

Demographics of Mother's Education by Subject School

Education Level	Number of Subjects - PC	Percentage of Subjects	Number of Subjects - URI	Percentage of Subjects
Less than high school	2	1.50	5	3.35
High school	26	19.40	44	29.54
Trade school	3	2.21	2	1.34
Associates degree	16	11.94	23	15.43
Bachelor's degree	51	38.10	51	34.23
Graduate degree	27	20.15	14	9.40
Post-graduate degree	1	.70	3	2.01
N/A	8	6.00	7	4.70

Table 16

Demographics of Father's Education by Subject School

Education Level	Number of Subjects - PC	Percentage of Subjects	Number of Subjects - URI	Percentage of Subjects
Less than high school	2	1.50	7	4.70
High school	21	15.60	39	26.16
Trade school	3	2.10	5	3.35
Associates degree	8	6.00	14	9.40
Bachelor's degree	53	40.00	55	36.90
Graduate degree	29	21.50	15	10.09
Post-graduate degree	14	10.30	7	4.70
N/A	4	3.00	7	4.70

Other demographic factors collected on the survey were also analyzed in order to determine whether any of them had any significant impact on the schematic structure of their stereotypes. None of these analyses was found to be significant, therefore, it appears that either these other factors are not indicative of the schematic structure which a person will possess or that the subject pool did not have sufficient variance in those factors to exhibit any significant differences.

Chapter 5

Discussion

The results of the statistical analysis indicate support for Hypothesis 1, that four developmental processes for schematic development do exist. Through the results of the line measures of levels of influence, it is clear that all four developmental processes are considered to be valid in contributing to the formation of stereotypes. The subjects selected all four processes to describe their schematic development. The fact that the experiential development process is prevalent, representing 56% of stereotypes studied, would be expected because much of our information about different types of individuals comes from our personal knowledge of them. The other three processes were well-populated, although with smaller percentages than experiential, which indicates that they are considered to contribute to schema formation. The ability for individuals to identify four different developmental processes as responsible for the formation of their stereotypes supports hypothesis one, which states that four developmental process types exist and that each contributes to the formation of stereotypes.

Upon reviewing the means for each respondent group, it can be seen that some developmental processes are considered to be close to one another in the level of influence each provides to the stereotype structure. For example, the respondents who ranked experiential as their major source of stereotype also gave high scores to vicarious development. Because both experiential and vicarious development are social learning processes, it is not unexpected that they would be viewed as closely aligned. Vicarious learning is influential because it is a means of learning from experience, albeit not one's own.

For each of the four respondent groups, however, the process which the subjects had chosen as most influential in the numerical ranking was clearly the most influential when the graphical data were measured as well. Because a difference in schematic structures was found to exist based upon developmental process, it is understandable that if one type of diversity training program is presented to individuals from each of the four groups, it is likely that some people will be changed by that training, but others will not. Diversity training is meant to dismantle schematic structures of stereotypes. When a multitude of such structures exist, it is unlikely that one method will be found which will properly address all of them.

Further analysis indicated that not only do all four processes exist, but they do result in differences in the schematic structures of the stereotypes. In particular, a significant difference in Means was found between the stereotypes developed through the experiential process and those developed through the motivational process. The stereotypes which were developed through the motivational process were more negative than those which were developed experientially. A difference in the stereotypes between these two groups would be expected because their developmental processes do vary from one another.

The experiential group develops a stereotypic schema through direct contact with a person from the stereotyped group. The resulting stereotype then is based, to some extent, on reality and actual events. For these individuals, the stereotype exists to simplify the environment by providing a basis upon which to anticipate other peoples' behaviors. There is less of an emotional identity link because the developmental process is a practical tool for everyday existence.

For the motivational group, the stereotypic schema is developed as a comparative exercise in order to bolster the image of their ingroup. Therefore, the resulting stereotypic schema is not based on any actual contact or experience with a person from the stereotyped group. In fact, people who develop a motivationally-based stereotype of an outgroup prefer not to interact with that group, which further reduces the possibility that the stereotype has any basis in reality. In addition, there is an emotional basis for the development of the stereotype in this case, because self-identity is at stake. The stereotype provides emotional comfort to an individual whose self-esteem is based upon feeling superior to a certain group of people.

The existence of a more negative stereotypic structure from a motivational development process difference may be explained by the fact that motivational development originates from an interest in improving one's self-esteem by denigrating some outgroup. Therefore, a more negative stereotype serves the purpose of improving the ingroup image as desired by this particular individual. The stereotype for the group with an experiential process type is based upon contact with individuals from the group described. The value of that stereotype is whether it provides its user with good guidelines for behavior. It does not, therefore, have to be of a negative nature, it only needs to be of assistance to the user.

The differences between the two structures are even more apparent when the two developmental process types are directly compared to one another. As explained above, a person who develops a stereotype through his or her own experience will have a different stereotype from a person who develops that stereotype, not through any real contact with members of the stereotyped group, but rather to provide a positive reflection of his or her

own ingroup. The stereotypes serve different purposes for individuals who have an experiential development method and for individuals who have a motivational development method. The origins of the stereotypes for each group are different, therefore, the outcomes, that is, the schematic structures, are also different. The fact that the outcomes vary per developmental process type provides another indication that the four development processes are separate and have different effects on individual schema.

The small difference in the Standard Deviation of the schematic structure resulting from these two developmental processes is another indication of their influence on schemata. By developing a stereotype through experience, a person uses the particular type of exposure he or she has had to the stereotyped group to form a schema for that group. The schematic structure which then develops will contain characteristics which were observed or demonstrated from this experience. The schema will be limited in that regard to a narrow range of characteristics exhibited during that experience, as indicated by the lower Standard Deviation for the experientially developed structure. In contrast, an individual who develops a stereotype in order to improve his or her self-image must develop a stereotype which addresses all the qualities which he or she wishes to include in that self-image. One's perception of oneself is likely to be more complex and contain more characteristics than one's perception of others, therefore, a stereotype which is established as a contrast to that self-image must also address a wider range of characteristics. This wider range of characteristics is exhibited in the higher Standard Deviation for the schematic structure for the stereotypes developed motivationally.

Analysis also revealed a significant difference in the schematic structures of stereotypes developed through the experiential, categorical, and motivational processes.

These processes were investigated separately because they differ from vicarious development in that they are developed internally by the person holding the stereotype. Vicarious development originates from an outside source who provides the stereotype to another individual. The manner in which these three processes differ from one another provides some explanation of these results. The experiential developmental process has its basis in direct contact with another person. The categorical development process has its basis in observation(s) of another person rather than actual contact. The motivational development process has its basis in a need for self-enhancement. Its principal focus, then is not truly the outgroup, but the result the schema has on the image of the ingroup.

This primary analysis of developmental processes did not indicate support for hypothesis two, that schemata vary in complexity. A secondary analysis of the blue collar and white collar stereotypes themselves did provide some support for that hypothesis. In that analysis, there was some evidence of significant variation between the complexity of the blue collar stereotype and the white collar stereotype as interpreted by these subjects. This result indicates that varying levels of complexity do exist between schemata and that the level of complexity can be measured. However, the frequency distribution for the Probability of Differentiation Index, which measures the complexity of the schematic structure, indicated a high P_d of .69 with a Standard Deviation of only .08. The reason that complexity did not seem to vary as much as expected in the initial analysis is most likely related to the homogeneity of the sample which was revealed in the demographic analyses.

Finally, the demographic analyses indicated that there was very little difference among the subjects included in this research. Most of the individuals (58%) live in

households with incomes in excess of \$60,000. The vast majority of subjects (88%) are white. More than half (52%) of the subjects have mothers with education levels of at least bachelor degrees and even more (63%) have fathers with at least an undergraduate degree. This level of similarity may have contributed to the lack of significant results when analyzing the effects of demographics on schematic structure.

Chapter 6

Conclusions

In summary, the findings of this study indicate that there is support for the first hypothesis which states that there are four separate developmental processes which may be responsible for the development of the schemata of stereotypes. There was limited support for hypothesis two which states that the schematic structure of stereotypes may be simple or complex.

This dissertation has initiated a theoretical basis for examining the formation of stereotypes and the manner which the developmental process in turn influences the resulting stereotype. One of the problems continually cited in this field of study has been the lack of examination of stereotypes from the viewpoint of their existence as schematic structures. This type of examination was done here by analyzing stereotypes as schematic structures using the literature in the field of schema development as the basis upon which to conduct the research project.

The development processes for stereotypes, like those for schemata, have been considered separately in most of the existing literature in this area. In this paper, a theoretical foundation was constructed using all four major development processes as acceptable contributors to stereotype formation. It can be seen from the results of the research that all four processes are recognized by individuals as valid and identifiable. Therefore, all four processes should be considered when investigating stereotypes and their components.

In addition, it was shown that not only do four valid developmental processes exist, but they have a significant impact on the resulting schematic structure of the stereotype. There seems to be a particularly large difference between the structures of individuals who develop a stereotype through the experiential process and those who develop a stereotype through the motivational process. The difference can be explained by considering the purposes served by stereotypes for these two groups. The purpose for developing a stereotype experientially is as an environmental aid to anticipate behaviors or others, whereas the purpose for developing a stereotype motivationally is to bolster one's self-image. These are different goals, which is reflected in the resulting difference in stereotypes which make them useful for the appropriate individual.

There are two limitations of this particular research which must be considered and improved upon in later work. One is that the experiential process was listed first on all surveys. It is possible that the large number of stereotypes attributed to this process could be partially due to the convenience factor of choosing the first item on the list. Future surveys should randomly vary the order of developmental processes. The other limitation was the use of subjects with similar demographic backgrounds. Possibly due to this similarity, the schematic structures of the stereotypes did not exhibit much variation. It is also possible that this demographic similarity contributed to the fact that statistical analysis revealed no differences in schematic structure when demographic variables were used as IVs.

Research which would contribute further in this area would use a more varied subject pool in order to find whether factors other than developmental process affect the schematic structure of a stereotype. Other stereotypes should also be studied in order to

determine whether the developmental process types affect their schematic structures as they did for those of blue collar and white collar workers. There should also be some consideration to investigating the relationship between group membership and stereotypes of the ingroup as compared to those of an outgroup.

By improving our understanding of the developmental processes of stereotypes, we should be able to design diversity training programs which will take into consideration how the differences in these developmental processes affect potential trainees. Obviously, individuals will hold various stereotypes of differing structures which must be addressed using a variety of techniques. This realization alone should prompt a review and reassessment of the use of standardized diversity training programs for all individuals. Instead, diversity training programs need to consider and address the variety of schematic structures which exist among individuals in the organization. By including several techniques within a training program, it would be possible to meet the needs of individuals in a way which would be effective for their differing schematic structures.

The task of designing new diversity training programs based on schematic structures of stereotypes will be challenging. Methods of measurement of existing schematic structures, as well as post-training structures must be refined for organizational use. The measurement method used in this research was able to provide an indication of the schematic structure of a stereotype in a manner which was relatively indirect, decreasing the social desirability effect. The training methods themselves will need to vary according to the individuals' needs as well. Practically speaking, the use of several training methods will usually need to be done within the same training session in order to be accomplished efficiently. However, the results of doing diversity training in the most

effective way possible will be the development of a workforce which can truly take advantage of its changing face in the new millennium.

References

- Abelson, R. P. (1976). Script processing in attitude formation and decision making. In J. S. Carroll & J. W. Payne (Eds.), Cognition and social behavior (pp. 36-46). Hillsdale, NJ: Lawrence Erlbaum.
- Allport, G. W. (1954). The Nature of Prejudice. Reading, MA: Addison-Wesley
- Argyris, C., Schon, D.A. (1974). Theory in practice: Increasing professional effectiveness. San Francisco: Jossey-Bass.
- Argyris, C., Schon, D.A. (1978). Organizational Learning. Reading, MA: Addison-Wesley.
- Ashmore, R.D., Del Boca, F.K. (1976). Psychological approaches to understanding intergroup conflicts. In P.A. Katz (Ed.), Toward the Elimination of Racism (pp. 73-123). New York: Pergamon.
- Bandura, A. (1986). Social Foundations of Thought & Action: A Social Cognitive Theory. Englewood Cliffs, NJ: Prentice Hall.
- Bartlett, F.C. (1932). Remembering. Cambridge: Cambridge University Press.
- Boski, P. (1988). Cross-cultural studies of person perception: Effects of ingroup/outgroup membership and ethnic schemata. Journal of Cross-Cultural Psychology, 19(3), 287-328.
- Cook, S. W. (1984). Cooperative interaction in multiethnic contexts. In N. Miller & M. B. Brewer (Eds.), Groups in contact: The psychology of desegregation (pp.155-185). New York: Academic Press.
- Cox, T. H., Jr. (1994). Cultural Diversity in the Workplace. San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Cox, T.H., Jr., Blake, S. (1991). Managing Cultural Diversity: Implications for Organizational Competitiveness. Academy of Management Executive, 5(3), 45-56.
- Devine, P.G. (1995). Prejudice and Out-Group Perception. In A. Tesser (Ed.), Advanced Social Psychology (467-525). New York: McGraw-Hill, Inc.
- Fish, S. (1994). Is Diversity Training Worth Maintaining? Business & Society Review, 89, 47-49.
- Fiske, S.T., Taylor, S.E. (1984). Social Cognition. Reading, MA: Addison-Wesley.

- Friedman, V. J. , Lipshitz, R. (1992). Teaching people to shift cognitive gears: Overcoming resistance on the road to model II. Journal of Applied Behavioral Science, 28, 118-136.
- Geis, F.L. (1993). Self-fulfilling prophecies: A social psychological view of gender. In A.E. Beals & R.J. Sternberg (Eds.), The psychology of gender (pp. 9-54). New York: Guilford.
- Gioia, D.A., Sims, Jr., H.P. (1985). Self-Serving Bias and Actor-Observer Differences in Organizations: An Empirical Analysis. Journal of Applied Social Psychology, 15-16, 547-563.
- Grant, P. R. & Holmes, J. G. (1981). The integration of implicit personality theory schemas and stereotype images. Social Psychology Quarterly, 44(2), 107-115.
- Hamilton, D. L. (1979). A cognitive-attributional analysis of stereotyping. Advances in Experimental Social Psychology, 12, 53-81.
- Hamilton, D.L., Trier, T.K. (1986). Stereotypes and Stereotyping. In J.F. Dovidio & S. L. Gaertner (Eds.), Prejudice, Discrimination, and Racism, (pp.127-164). New York: Academic Press, Inc.
- Hamilton, D.L. & Trooper, T. K. (1986). Stereotypes and Stereotyping: An Overview of the Cognitive Approach. In Prejudice, Discrimination, and Racism, J.F. Dovidio and S.L. Gaertner (Eds.), Orlando, FL: Academic Press, Inc.
- Harrison, R. (1970). Choosing the Depth of Organizational Intervention. Journal of Applied Behavioral Science, 6, 181-202.
- Hopkins, W.C., Sterkel-Powell, K. Hopkins. S.A. (1994). Training priorities for a diverse work force. Public Personnel Management, 23(3), 429-435.
- Johnston, W. B., Packer, A. E. (1987). Workforce 2000: Work and Workers for the Twenty-first Century. Indianapolis: Hudson Institute.
- Jones, J.M. (1986). Racism: A Cultural Analysis of the Problem. In Prejudice, Discrimination, and Racism, J.F. Dovidio and S.L. Gaertner (Eds.), Orlando, FL: Academic Press, Inc.
- Joplin, J.R.W., Daus, C.S. (1997). Challenges of leading a diverse workforce. Academy of Management Executive, 11(3), 32-47.
- Kleinpenning, G., Hagendoorn, L. (1993). Forms of racism and the cumulative dimension of ethnic attitudes. Social Psychology Quarterly, 56, 21-36.

- Kessler-Harris, A. (1982). Out to Work. New York: Oxford University Press.
- Larkey, L.K. (1996). Toward a theory of communicative interactions in culturally diverse workgroups. Academy of Management Review, 21(2), 463-491.
- Linville, P.W. & Jones, E.E. (1980). Polarized Appraisals of Out-Group Members. Journal of Personality and Social Psychology, 38(5), 689-703.
- Linville, P.W., Salovey, P. & Fischer, G.W. (1986). Stereotyping and Perceived Distributions of Social Characteristics: An Application to Ingroup-Outgroup Perception. In Prejudice, Discrimination, and Racism, J.F. Dovidio and S.L. Gaertner (Eds.), Orlando, FL: Academic Press, Inc
- London, M. , Poplawski, J. R. (1976). Effects of information on stereotype development in performance appraisal and interview contexts. Journal of Applied Psychology, 61(2), 199-205.
- Louis, M.R., Sutton, R.I. (1991). Switching Cognitive Gears: From Habits of Mind to Active Thinking. Human Relations, 44, (1), 55-76.
- Miller, N. & Brewer, M.B. (Eds.). Groups in contact: The psychology of desegregation. New York: Academic Press.
- Pettigrew, T.F. & Martin, J. (1987). Shaping the Organizational Context for Black American Inclusion. Journal of Social Issues, 43 (1), 41-78.
- Petty, R.E., Wegener, D.T., Fabrigar, L.R. (1997). Attitudes and Attitude Change. Annual Review of Psychology, (48), 609-647.
- Robinson, G., Dechant, K. (1997). Building a business case for diversity. Academy of Management Executive, 11(3), 21-31.
- Robinson, J.P., Shaver P.R., Wrightsman, L.S (1991). Measures of Personality and Social Psychological Attitudes. San Diego, California: Academic Press.
- Rosenthal, R. & Rosnow, R.L. (1991). Essentials of Behavioral research: Methods and Data Analysis. NewYork: McGraw-Hill.
- Ross, L. (1979). The Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process. Advances in Experimental Social Psychology, 12, 173-217.
- Rowe, W., Bennett, S.K., Atkinson, D.R. (1994). White Racial Identity Models: A Critique and Alternative Proposal. The Counseling Psychologist, 22(1), 129-145.

- Stephenson, K., Krebs, V. (1993). A More Accurate Way to Measure Diversity. Personnel Journal, 66-74.
- Sue, D.W. (1991). A Model for Cultural Diversity Training. Journal of Counseling & Development, 70, 99-105.
- Tajfel, H. (1978). Interindividual behavior and intergroup behavior. In H. Tajfel (Ed.), Differentiation between social groups. London: Academic Press.
- Tajfel, H. (1979). Social stereotypes and social groups. In J.C. Turner & H. Giles (Eds.), Intergroup behaviour. Oxford: Basil Blackwell.
- Taylor, S.E. & Crocker, J. (1981). Schematic bases of social information processing. In E.T. Higgins, C.P. Herman & M.P. Zanna (Eds.), Social cognition: The Ontario symposium (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum.
- Thomas, R. R., Jr. (1991). Beyond race and gender: Unleashing the power of your total work force by managing diversity. New York: AMACOM.
- Walton, S.J. (1994). Cultural Diversity in the Workplace. New York, NY: Irwin.
- Weissbach, T. A. (1976). Laboratory controlled studies of change of racial attitudes. In P. Katz (Ed.) , Towards the Elimination of Racism (pp. 157-182). New York: Pergamon Press, Inc.
- Zebrowitz McArthur, L. (1982). Judging a book by its cover: A cognitive analysis of the relationship between physical appearance and stereotyping. In A. Hastorf, A. Isen (Eds.), Cognitive Social Psychology (149-212). New York: Elsevier North Holland, Inc.

Appendix A

Worker Characteristics Survey

Part A. For each of the following characteristics, estimate the percentage of **blue collar workers** who fall into each of the levels of each characteristic. In other words, among 100 workers, please indicate how many fall into each level.

Intellectualism

_____	_____	_____	_____	_____	=100
Dislikes cultural activities	Uninterested in cultural activities	Some interest in cultural activities	Moderately interested in cultural activities	Very interested in cultural activities	

Kindness

_____	_____	_____	_____	_____	=100
Ignores needs of others	Uninterested in needs of others	Somewhat interested in needs of others	Moderately interested in needs of others	Very interested in needs of others	

Social Skills

_____	_____	_____	_____	_____	=100
Has poor social skills	Has minimal social skills	Has some social skills	Has good social skills	Has excellent social skills	

Loyalty

=100

Supports poor
image of own
social group

Little
positive support
for own social
group

Some
support for
own social
group

Moderate
support for
own social
group

Strong
support for
own social
group

Academic Achievement

=100

Puts down
educational
activities

Little interest
in educational
activities

Some interest
in educational
activities

Moderate
interest in
educational
activities

Very
interested in
educational
activities

Status

=100

Is looked down
on by others

Has little
respect from
others

Has some
respect from
others

Well respected
by others

Greatly
respected
by others

Honesty

=100

Usually
deceives
others

Often
deceives
others

Sometimes
deceives
others

Rarely
deceives
others

Never
deceives
others

Physical Development

=100

_____	_____	_____	_____	_____
Inactive lifestyle	Rarely does athletic activity	Occasional athletic activity	Moderate athletic activity	Regular athletic activity

Part B. Each of us develops our images of others in different ways. Listed below are four ways in which we commonly develop those images. Please read the four descriptions below and rank them in order from 1 to 4 with 1 having the most influence on your image of **blue collar workers**.

- _____ I have associated with people in this group myself.
- _____ I have heard about people in this group from family members who have associated with them personally.
- _____ I have observed people in this group on television or by reading about them in newspapers and/or magazines.
- _____ I have developed an image of this group based on how it compares to the group with which I identify myself.

Using the rankings you made above, write the numbers on the line below according to the amount of influence each has had on you:

Part C. For each of the following characteristics, estimate the percentage of **white collar workers** who fall into each of the levels of each characteristic. In other words, among 100 workers, please indicate how many fall into each level.

Intellectualism

_____	_____	_____	_____	_____	=100
Dislikes cultural activities	Uninterested in cultural activities	Some interest in cultural activities	Moderately interested in cultural activities	Very interested in cultural activities	

Kindness

_____	_____	_____	_____	_____	=100
Ignores needs of others	Uninterested in needs of others	Somewhat interested in needs of others	Moderately interested in needs of others	Very interested in needs of others	

Social Skills

_____	_____	_____	_____	_____	=100
Has poor social skills	Has minimal social skills	Has some social skills	Has good social skills	Has excellent social skills	

Loyalty

_____	_____	_____	_____	_____	=100
Supports poor image of own social group	Little positive support for own social group	Some support for own social group	Moderate support for own social group	Strong support for own social group	

Academic Achievement

=100

_____ Puts down educational activities	_____ Little interest in educational activities	_____ Some interest in educational activities	_____ Moderate interest in educational activities	_____ Very interested in educational activities
---	--	--	---	---

Status

=100

_____ Is looked down on by others	_____ Has little respect from others	_____ Has some respect from others	_____ Well respected by others	_____ Greatly respected by others
---	---	---	--------------------------------------	--

Honesty

=100

_____ Usually deceives others	_____ Often deceives others	_____ Sometimes deceives others	_____ Rarely deceives others	_____ Never deceives others
--	--------------------------------------	--	---------------------------------------	--------------------------------------

Physical Development

=100

_____ Inactive lifestyle	_____ Rarely does athletic activity	_____ Occasional athletic activity	_____ Moderate athletic activity	_____ Regular athletic activity
--------------------------------	--	---	---	--

Part D. Each of us develops our images of others in different ways. Listed below are four ways in which we commonly develop those images. Please read the four descriptions below and rank them in order from 1 to 4 with 1 having the most influence on your image of **white collar workers**.

_____ I have associated with people in this group myself.

_____ I have heard about people in this group from family members who have associated with them personally.

_____ I have observed people in this group on television or by reading about them in newspapers and/or magazines.

_____ I have developed an image of this group based on how it compares to the group with which I identify myself.

Using the rankings you made above, write the numbers on the line below according to the amount of influence each has had on you:

Part E. Please answer the following questions as accurately as possible.

1. I am a _____ male _____ female
2. I am _____ years old
3. I am in my _____ year of college
4. My major area of study is _____
5. My race and/or ethnic origin is _____
6. I am from a _____ blue collar _____ white collar family
7. My father's occupation is _____
8. My mother's occupation is _____
9. My father's level of education is _____
10. My mother's level of education is _____
11. My combined household annual income is [] under \$20,000 [] 20,000-40,000
[] 40,000-60,000 [] 60,000+
12. My job title at my most recent job was _____ (If none, write NA)

Bibliography

- Alderfer, C.P., Smith, K.K. (1987). Studying Intergroup Relations Embedded in Organizations. Administrative Science Quarterly, 27, 35-65.
- Allport, G. W. (1954). The Nature of Prejudice. Reading, MA: Addison-Wesley.
- Argyris, C., Schon, D.A. (1974). Theory in practice: Increasing professional effectiveness. San Francisco: Jossey-Bass.
- Argyris, C., Schon, D.A. (1978). Organizational Learning. Reading, MA: Addison-Wesley.
- Aronson, E. , Bridgeman, D. (1979). Jigsaw groups and the desegregated classroom: In pursuit of common goals. Personality and Psychology Bulletin, 5, 438-466.
- Baker, R.W. & Siryk, B. (1984). Measuring adjustment to college. Journal of Counseling Psychology, 31, 179-189.
- Bandura, A. (1986). Social Foundations of Thought & Action: A Social Cognitive Theory. Englewood Cliffs, NJ: Prentice Hall.
- Bargal, D., Bar, H. (1992). A Lewinian approach to intergroup workshops for Arab-Palestinian and Jewish youth. Journal of Social Issues, 48, 139-154.
- Beaver, W. (1994/1995). Let's stop diversity training and start managing for diversity. Industrial Management, 37, 7-9.
- Blackmon, D. (1997, March 11). Consultant's Advice on Diversity was Anything but Diverse. The New York Times, pp. 1,4.
- Boski, P. (1988). Cross-cultural studies of person perception: Effects of ingroup/outgroup membership and ethnic schemata. Journal of Cross-Cultural Psychology, 19(3), 287-328.
- Cook, S. W. (1984). Cooperative interaction in multiethnic contexts. In N. Miller & M. B. Brewer (Eds.), Groups in contact: The psychology of desegregation (pp.155-185). New York: Academic Press.
- Cox, T. H., Jr. (1994). Cultural Diversity in the Workplace. San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Cox, T.H., Jr., Blake, S. (1991). Managing Cultural Diversity: Implications for Organizational Competitiveness. Academy of Management Executive, 5(3), 45-56.

- Devine, P.G. (1995). Prejudice and Out-Group Perception. In A. M. Tesser (Ed.), Advanced Social Psychology (pp.467-524). New York: McGraw-Hill, Inc.
- Dovidio, J.F. , Evans, N. and Tyler, R.B. (1986). Racial Stereotypes: The Contents of Their Cognitive Representations. Journal of Experimental Social Psychology, 22, 22-37.
- Dovidio, J.F. and Fazio, R.H. (1992). New Technologies for the Direct and Indirect Assessment of Attitudes. In J.M. Tanur (Ed.), Questions About Questions: Inquiries into the Cognitive Bases of Surveys (pp.204-237). New York: Russell Sage Foundation.
- Eagly, A.H. (1983). Gender and Social Influence: A Social Psychological Analysis. American Psychologist, 38, 971-981.
- Fazio, R.H. (1990). A Practical Guide to the Use of Response Latency in Social Psychological Research. Review of Personality and Social Psychology, 11, 74-97.
- Fish, S. (1994). Is Diversity Training Worth Maintaining? Business & Society Review, 89, 47-49.
- Friedman, V. J. , Lipshitz, R. (1992). Teaching people to shift cognitive gears: Overcoming resistance on the road to model II. Journal of Applied Behavioral Science, 28, 118-136.
- Geis, F.L. (1993). Self-fulfilling prophecies: A social psychological view of gender. In A.E. Beals & R.J. Sternberg (Eds.), The psychology of gender (pp. 9-54). New York: Guilford.
- Gioia, D.A., Sims, Jr., H.P. (1985). Self-Serving Bias and Actor-Observer Differences in Organizations: An Empirical Analysis. Journal of Applied Social Psychology, 15-16, 547-563.
- Goodman, P. S., Shah, S. (1992). Familiarity and Work Group Outcomes. In S. Worchel, W. Wood, J.A. Simpson (Eds.), Group Process and Productivity (pp.276-298). Newbury Park: Sage Publications.
- Gordon, J. (1995). Different from what? Diversity as a performance issue. Training, 32, 25-34.
- Grant, P. R., Holmes, J. G. (1981). The integration of implicit personality theory schemas and stereotype images. Social Psychology Quarterly, 44(2), 107-115.

- Haemmerlie, F.M. & Merz, C.J. (1991). Concurrent Validity Between the California Psychological Inventory-revised and the Student Adaptation to College Questionnaire. Journal of Clinical Psychology, 47(5), 664-668.
- Hamilton, D. L. (1979). A cognitive-attributional analysis of stereotyping. Advances in Experimental Social Psychology, 12, 53-81.
- Hamilton, D.L., Trolie, T.K. (1986). Stereotypes and Stereotyping. In J.F. Dovidio & S. L. Gaertner (Eds.), Prejudice, Discrimination, and Racism, (pp.127-164). New York: Academic Press, Inc.
- Harvey, O.J. & Sturied, H.M. (1963). Cognitive aspects of Self and Motivation. In O.J. Harvey (Ed.), Motivation and Social Interaction (pp. 95-124). New York: The Ronald Press Company.
- Harrison, R. (1970). Choosing the Depth of Organizational Intervention. Journal of Applied Behavioral Science, 6, 181-202.
- Harrison, R. (1962) Defenses and the need to know. In R. T. Golembiewski & A. Blumberg (Eds.), Sensitivity Training and Laboratory Approach (1970)(pp.80-85). Ithasca, Illinois: F. E. Peacock Publishers, Inc.
- Hewstone, M., Jaspars, J. (1980). Explanations for racial discrimination: the effect of group discussion on intergroup attributions. European Journal of Social Psychology, 12, 1-16.
- Hill-Storks, H. (1994). Sensitivity training: Do it right! Texas Banking, 83, 1,22-25.
- Hollister, L.A., Overmyer Day, N.E. & Jesaitis, P.T. (1993). Diversity Programs: Key to competitiveness or just another fad? Organization Development Journal, 11, 49-59.
- Jackson, S. E. (1992). Team Composition in Organizational Settings: Issues in Managing an Increasingly Diverse Work Force. In S. Worchel, W. Wood, J. A. Simpson (Eds.) Group Process and Productivity. Newbury Park, CA: Sage Publications, Inc.
- Johnston, W. B., Packer, A. E. (1987). Workforce 2000: Work and Workers for the Twenty-first Century. Indianapolis: Hudson Institute.
- Joplin, J.R.W., Daus, C.S. (1997). Challenges of leading a diverse workforce. Academy of Management Executive, 11(3), 32-47.

- Jussim, L., Coleman, L., Lerch, L. (1987). The Nature of Stereotypes: A Comparison and Integration of Three Theories. Journal of Personality and Psychology, 52(3), 536-544.
- Kessler-Harris, A. (1982). Out to Work. New York: Oxford University Press.
- Kleinpenning, G., Hagendoorn, L. (1993). Forms of racism and the cumulative dimension of ethnic attitudes. Social Psychology Quarterly, 56, 21-36.
- Lake, D.G., Miles, M.B. & Earle, R.B. (1973). Measuring Human Behavior. Columbia University: Teachers College Press.
- Larkey, L. K. (1996). Toward a Theory of Communicative Interactions in Culturally Diverse Workgroups. Academy of Management Review, April, 463-491.
- London, M. , Poplawski, J. R. (1976). Effects of information on stereotype development in performance appraisal and interview contexts. Journal of Applied Psychology, 61(2), 199-205.
- Louis, M.R., Sutton, R.I. (1991). Switching Cognitive Gears: From Habits of Mind to Active Thinking. Human Relations, 44(1), 55-76.
- Lunt, P. (1994). Should you do diversity training? ABA Banking Journal, 86, 53-54.
- Nemetz, P.L. & Chistensen, S.L. (1996). The challenge of cultural diversity: Harnessing a diversity of views to understand multiculturalism. Academy of Management Review, 21(2), 434-462.
- Overmyer Day, L.E. (1995). The pitfalls of diversity training. Training and Development, 49, 24-29.
- Paskoff, S.M. (1996). Ending the workplace diversity wars. Training, 33, 42-47.
- Pettigrew, T., Martin, J. (1987). Shaping the organizational context for Black American inclusion. Journal of Social Issues, 43, 41-78.
- Robinson, G., Dechant, K. (1997). Building a business case for diversity. Academy of Management Executive, 11(3), 21-31.
- Robinson, J.P. , Shaver, P.R. (1973). Measures of Social Psychological Attitudes. Ann Arbor, Michigan: Institute for Social Research, University of Michigan.
- Robinson, J.P., Shaver P.R. & Wrightsman, L.S (1991). Measures of Personality and Social Psychological Attitudes. San Diego, California: Academic Press.

- Shaw, M.E., Wright, J.W. (1967). Scales for the Measurement of Attitudes. New York: McGraw-Hill, Inc.
- Sherif, M. (1966). In Common Predicament. Boston: Houghton Mifflin.
- Stephenson, K., Krebs, V. (1993). A More Accurate Way to Measure Diversity. Personnel Journal, 66-74.
- Stuller, J. (1995). Doing what comes unnaturally. Across the Board, 32, 27-30.
- Tajfel, H. (1978). Interindividual behavior and intergroup behavior. In H. Tajfel (Ed.), Differentiation between social groups. London: Academic Press.
- Tajfel, H. (1979). Social stereotypes and social groups. In J.C. Turner & H. Giles (Eds.), Intergroup behaviour. Oxford: Basil Blackwell.
- Tan, D.L., Morris, L. & Romero, J. (1996). Changes in attitude after diversity training. Training, 50, 54-55.
- Thomas, R. R., Jr. (1991). Beyond race and gender: Unleashing the power of your total work force by managing diversity. New York: AMACOM.
- Thomas, V. C. (1994). The downside of diversity. Training & Development, 48, 60-62.
- Van Hutton, V. (1990). Test Review: The California Psychological Inventory. Journal of Counseling and Development, 69, 75-77.
- Walton, S.J. (1994). Cultural Diversity in the Workplace. New York, NY: Irwin.
- Weissbach, T. A. (1976). Laboratory controlled studies of change of racial attitudes. In P. Katz (Ed.), Towards the Elimination of Racism (pp. 157-182). New York: Pergamon Press, Inc.
- Worchel, S., Wood, W., Simpson, J. A. (Eds.), (1992). Group Process and Productivity. Newbury Park, CA: Sage Publications, Inc.
- Wortley, R.K. & Homel, R.J. (1995). Police Prejudice as a Function of Training and Outgroup Contact. Law and Human Behavior, 19, 305-317.

Wyer, R. S. , Jr., Srull, T. K. (Eds.) (1984). Handbook of Social Cognition Volume 1. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.

Zebrowitz McArthur, L. (1982). Judging a book by its cover: A cognitive analysis of the relationship between physical appearance and stereotyping. In A. Hastorf, A. Isen (Eds.), Cognitive Social Psychology (149-212). New York: Elsevier North Holland, Inc.