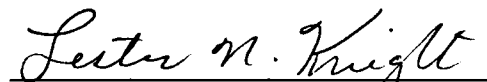
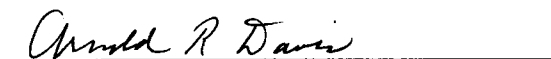


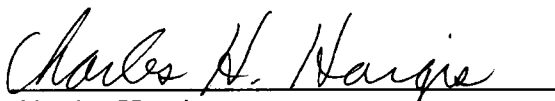
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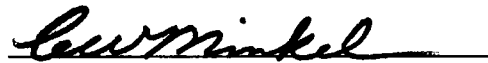
We have read the dissertation
and recommend its acceptance:


Arnold Davis


Charles Hargis


Ronald Taylor

Accepted for the Council:


Associate Vice Chancellor
and Dean of The Graduate School

The Conception of Self of Left-handed Individuals

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Lyle Milford Craig

August, 1996

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DEDICATION

This dissertation is dedicated to William L. ("Bill") Butefish who encouraged me to return to the field of education and who has provided guidance and state-of-the-art teaching skills to pre-service teachers and veteran educators during his distinguished career at the University of Tennessee.

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The members of my committee were extremely inspirational in the classroom and were a positive influence on my philosophical, instructional, and moral approach to education. From the instruction of Dr. Lester Knight I was able to connect various disciplines into a unified approach to education. Dr. Arnold Davis introduced me to the field of mathematics education and provided numerous opportunities for me to develop and test new ideas while working with him in the classroom. The writings of Dr. Charles Hargis inspired me to use his model for assessment and evaluation in the classroom. Dr. Ronald Taylor's instruction enlightened my understanding of research methodologies and provided exceptional expertise, guidance, and patience that enabled me to use the mathematical pattern recognition required for this qualitative investigation.

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Finally, in a strategic move I thank my wife, Judy, for her patience and support in the hope that we shall have at least another 15 years in marriage and my young sons Jeremy and Eric whom I hope will develop an enthusiastic dedication for life-long learning.

ABSTRACT

There have been very few studies that focus on the self-concept of left-handers. The approach to research in the areas of self-concept and handedness has traditionally been quantitative. This investigation focused on the conception of self of left handers through the use of qualitative methodology. In order to define the self-concept of left handers there was an emphasis on identifying the cognitive processes of agency, reflexivity, continuity, and individuality within the subjective self as well as descriptions of the objective self.

The findings from the interviews with left handers indicated that internal processes of self-regulation as well as external influences affected their conception of self with respect to their handedness orientation. The participants' left-handedness was a major defining characteristic of their objective self. Identified with the subjective self processes was a strong resistance, revealed by the participants, to external influences that disrupted the continuity of self. Of the numerous characteristics that left handers assigned to themselves, accommodating behavior was mentioned most frequently. Even though the participants revealed many inconveniences and misconceptions with respect to their handedness orientation, their conception of self remained very positive over their life-time. It was concluded that left-handedness is a source of uniqueness that provided the participants with individuality and a very positive conception of self. Implications and recommendations include a need for teachers to identify unique characteristics in children and to design opportunities for individual distinction that may provide sources of positive influence on the conception of self.

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Chapter I

Background and Rationale

Introduction

Educators have studied various groups of students with relation to race, gender, socioeconomic status, and special needs in an effort to make recommendations for improving opportunities and promoting equality in various educational settings for all students. Even with the best of intentions by researchers and educators, pockets of misleading and confusing information about some groups remain. An awareness of potential problems resulting from inadequate information is a step toward alleviating unintended unequal treatment of students. Students who are left-handed belong to one such group in which information about them is not readily available, inadequate, and possibly misleading. This investigation is concerned with adding to the base of knowledge that exists regarding left-handedness.

Although there have been over 11,000 articles, established by an ERIC search, listed in *Psychological Abstracts* involving self-concept and self-esteem in the years between 1974 and 1996, very little research has been conducted to investigate self-concept with respect to handedness, according to Hattie (1992,

p.180). At least 10% of the population is left-handed according to Tapley and Bryden (1980), and left-handers have been singled out in hundreds of investigations as seen in the compilation of research noted by Annett (1985), Beaton (1990), and Coren (1991). Because of the large group of individuals who are left-handed and the interest that researchers have placed on the phenomenon, it is surprising that so little emphasis has been placed on the self-concept of left handers. The focus of this investigation is on the conception of self of left-handed individuals. The importance of the conception of self for education is that it may influence (1) achievement although there is evidence by Scheirer and Kraut (1979) and Hansford and Hattie (1982) that indicates that there are cases in which there is no correlation, (2) efficacy and competency as noted by Byrne (1984), and (3) emotional and social development.

While many handedness studies have filled the literature in the last thirty years, there are questions that remain unanswered regarding the phenomenon of left-handedness. A recently published language arts book by Tomkins and Hoskin (1991, p. 482) used for graduate studies in at least one state university has three pages devoted to left-handed individuals. While trying to point out that left-handed individuals may require special consideration, in the statement that follows the authors have unintentionally labeled *all* students who write with their left hands as problematic:

Left-handed students have unique handwriting problems, and special adaptations of [the] procedures for teaching right-handed students are necessary [for left-handed writers].

Such blanket statements as the one above exemplifies the misinformation regarding left-handed individuals. Another statement in the book points out a mechanical difference between left and right handers during the process of writing as follows:

Right-handed students pull their hands and arms toward their bodies as they write, whereas left-handed writers must push away.

The basis for the statement above as written by Tomkins and Hoskin (1991, p. 483) is a citation by Howell (1978). The Howell article is a compilation of other articles. It is not a primary source, and its citation in the book serves to lead readers to preconceptions, if not misconceptions, about left handers. The quote is not an entirely accurate portrayal of the left-handed writing process. Depending on the hand used by the writer the movements that are used to make a cursive letter are a series of strokes that represent both forward and backward movement in *either* hand with respect to the position of the body. The fact that the arm moves toward the center of the body as a left-hander writes from left to right is a mechanical difference that has little consequence on the writing process when the left hand is positioned properly in mirror-image to that of a right-handed writing position. The authors do not mention routine difficulties that left-handed individuals encounter such as writing in notebooks with large rings for holding paper or writing on desks made specifically for right-handed students.

The lack of understanding of actual difficulties that left-handers routinely experience is a symptom of the lack of information regarding the left-handed

experience. Parents of students with special needs have legal rights to have their children included in regular classrooms, yet Tomkins and Hoskin (1991) and Bloodsworth (1993) suggest that *all* left-handed students should be grouped together for handwriting instruction. While some students of either handedness identification may need special help, a preconception that left-handed students will have problems and must sit in a certain part of the room is an unnecessary segregation based solely on handedness identification rather than assessed need.

Misinformation and preconceptions are the basis of some left-handed individuals' social interactions that occur solely on the basis of their handedness identification. Social interactions have meaning to individuals and provide individuals with information which influences their concept of self. By investigating the areas of the self-concept related to handedness identification, this investigation will search for patterns that reveal the conception of self in individuals who identify themselves as left handers.

Handedness Identification

Membership into the group called left handers does not necessarily mean that an individual uses the left extremities for every physical activity. Although about 10% of the population is left-handed according to Tapley and Bryden (1980), Hardyck and Petronovich (1977) note that left handers are actually composed of individuals who are mixed-handed, who are 6-7% of the population, and individuals

who are strongly left-handed, who are 3-4% of the population. Hatta and Kawakami (1994) reported similar percentages in Japanese college students who were 4.8% strongly left-handed and 5.9% mixed-handed. Mixed handers may use the left hand for writing and eating, for example, and use the right hand for throwing a ball, use a bat in a right-handed position, and use the right foot to kick a ball. Several scales to measure the extent of left-handedness have been constructed in which individuals are observed while engaging in various activities where a preference for either the left or right hand, arm, foot, eye, and ear is determined by survey or direct observation. Annett's (1970) conclusion on the multidimensional aspect of handedness orientation implies that research that investigates handedness should separate individuals into groups of individuals that are strongly left-handed and groups that are mixed-handed.

Although there are variations in the amount of tasks for which individuals prefer to use a left extremity, ear, or eye, those who write left-handed are generally considered by others as well as themselves to be left-handed. For the purpose of this investigation, it will *not* be necessary to distinguish between the trait of being extremely left-handed and mixed-handed. The reason that the distinction between extreme left-handed and mixed-handed is not necessary is based upon the focus of this investigation which lies in the area of the individual's perceptions. If an individual is labeled left-handed, there is no social distinction between mixed-handed and extremely left-handed individuals. For example, an individual who is singled out and engaged in a conversation because of being labeled left-handed has engaged in a

social interaction based solely on the handedness orientation of the individual regardless of the extent to which the individual may be measured on a scale of left-handedness.

Problem Statement and Research Question

Handedness studies have a tradition of searching for a correlation between cognitive, affective, and psycho-motor variables and left-handedness. Many of the variables chosen for investigations in order to find a correlation with the phenomenon of left-handedness are abnormal conditions and have negative associations. The findings in numerous handedness investigations imply that left-handedness is an indicator of predisposed physical and mental abnormalities. In addition, some research focused on finding a correlation between extraordinary abilities and left-handedness. Even when research has reported no correlation between left-handedness and certain variables, additional research was conducted using the same variables. Lubs (1993), for example, found no correlation between dyslexia and left-handedness which had been previously reported by at least 21 researchers spanning from 1932 to 1987 and listed by Bishop (1990) who states that

Despite the largely negative evidence from population studies, the notion persists that non-right-handedness is associated with developmental disabilities, especially disorders of spoken and written language...[p. 117]

Retesting the same variables numerous times implies that researchers have preconceived attitudes and ideas regarding left-handed individuals that are not

dispelled with the findings of others. The range of variables associated with left handedness coupled with preconceptions of others is an indication that left-handedness is a trait that is singled out as something different from the normal.

Just as researchers continue to hold presumptions that may be interpreted both negatively and positively regarding left handers, there are similar attitudes toward left handers outside of the researcher community. From a pilot study that was conducted as a prelude to this investigation, it was found that left-handers identified social interactions that occurred only because of their handedness orientation. It is an assumption of this investigation that if a group of individuals has a characteristic (1) that singles them out as being different and (2) that is identified as a source of social interaction that otherwise would not have occurred, then there is an invitation for an inquiry to find patterns in the perceptions of left-handed individuals that may be identified with their conception of self.

Social experiences are a basis for the development of the conception of self in humans as written by a variety of social scientists such as James (1890), Baldwin (1897), Cooley (1902), Mead (1934), and Blumer (1969) to name only a few. If left handers, as a group, experience social interactions based solely on their handedness orientation, then patterns may exist that would reflect their conception of self. In the previously cited pilot study to this investigation it was determined that left-handed individuals do develop a conception of self based on their handedness orientation. The problem of this study is to investigate the conception of self of left-handed

individuals. Through the process of identifying patterns in the data pertaining to the participants' conception of self with respect to left-handedness, this investigation addresses the following research question:

What is the conception of self in left handers.

Significance and Rationale

The phenomenon of left-handedness exists in all cultures and occurs naturally in at least 10% of the population. It is dispersed evenly throughout the population. Left-handedness is a visually identifiable characteristic. As a phenomenon it is, at best, a subject that elicits curious speculation and numerous scientific investigations and, at worst, it is a subject filled with misunderstanding and ridicule as a result of misinformation that may be reflected in cultural and religious bias. If left-handedness is singled out for any number of reasons by both researchers and others in society, then it is a reasonable expectation that those who are members of the group having left-handed orientation engage in social interactions that occur based solely on their handedness orientation. Within such social interactions left handers have numerous opportunities for others to provide information to them which influences their conception of self.

As previously stated the concept of self of left handers has been rarely investigated according to Hattie (1992, p. 180). With respect to handedness research in general, there have been few instances in which qualitative approach was used.

Most research involving handedness has used quantitative methodology while searching for a correlation between various variables and left handedness. While valuable information has been gathered on the phenomenon of left-handedness, the exclusive use of the quantitative approach for research narrows the philosophical view and risks overlooking valuable information that may be revealed by a different approach.

Researching a well-established phenomenon such as left-handedness from a different prospective provides the opportunity to open up new lines of interpretation and increase understanding. The use of a qualitative approach may also help to confirm or deny previous quantitative research that has failed to provide consistent conclusions. Speculation for new opportunities to further research in the area of handedness may also be revealed as a result of using a qualitative approach in an area historically dominated by quantitative thinking.

Those who work with young children who, in their stage of human development, are most receptive to the influence of the appraisals by others may benefit from research that finds patterns that reflect the self concept. Whether or not certain feelings and self evaluations are warranted, if left handers exhibit patterns in their assignments of meaning and importance as revealed through their perceptions of social interactions that are unique to their group, then such information may add to the understanding of self-concept of left-handed individuals.

Limitations

This study is limited to a descriptive interpretation of the data. Although committed to neutrality, the researcher is left-handed and his interpretation may be affected by this fact. While there is a reasonable expectation that the findings may be generalizable and replicable, there is no emphasis placed on replication or generalizability in a qualitative investigation. Although it is the researcher's position that paid volunteers do not necessarily present a potential for distortion of the data, for disclosure purposes it is noted that some of the volunteers were paid \$10.00 for their participation.

Definitions

agency	volitional control over thoughts and actions (Damon and Hart, 1988, p. 129), a process of deliberate, intentional, conscious action that provides active structuring of experiences through calculated or mediated choices
cognitive processes	actions of agency, reflexivity, continuity, and distinction from the subjective self (Damon and Hart, 1988, p. 123)
continuity	process of providing cognitive connections resulting in sameness of the self over time, a function of memory
distinctness	actions that provide individuality

global self	combination of the subjective and objective view of self
handedness inventory	a questionnaire used to determine the use of the extremities for certain manual manipulations
left-handed	a label that an individual carries with respect to handedness orientation
objective self	the aspect of self concerned with physical traits, abilities, possessions (James, 1890)
reflexivity	the ability to observe oneself from the view of others and involves assessing and evaluation of the self
research approach	the categorization of an investigation as either quantitative or qualitative and based upon philosophical assumptions
self-concept	beliefs about oneself which are cognitive appraisals of the attributes about ourselves (Hattie, 1992 p. 10), "...an organized, fluid, but consistent conceptual pattern of perceptions and relationships ...(Rogers, 1961)
self-regulation	active control of external influences on the self, ability to control one's learning (Schunk, 1991)
self-report	an instrument or technique used by an investigator to collect data that reveals some aspect of self in an individual

subjective self

the part of the self that engages in cognitive processes
such as thinking and affective processes such as
feelings

Chapter II

Review of Literature

Left-handedness

Introduction

There have been numerous investigations to determine whether or not there are significant differences between groups of individuals having different handedness orientation. Although it is not an exact measure, handedness is an indication of cerebral dominance in humans. The categories of left-handed, mixed-handed, and right-handed are used for handedness investigations. Significant differences may reveal implications that are reflected in the self-concept of those who identify themselves as left handers which is important for the purpose of this investigation. A review of the literature focuses on whether or not significant differences between the three handedness groups have been reported and on the extent to which the area of self-concept has been investigated with respect to left handers.

Nineteenth century researchers Dax (1836) and Broca (1863) were the first to observe that speech disorders have a correlation with damage to the left hemisphere of the brain. Their findings indicated a localized center in the brain for speech. Ball

(1884) established that the hemispheres of the brain had specialized functions from which hemispheric dominance was associated.

Some initial research in the area of handedness was used to perpetuate prejudice and myths associated with sinistrality, left-hand preference. Gould (1907) suggested that the right hemisphere in human brains was inferior. Hollingsworth (1923) reported a higher than expected proportion of criminality and insanity associated with left handers. Their views have not been substantiated by research during the remainder of the 20th century. From a more informed view Nebes (1974) explained that both hemispheres are important and necessary for the normal functioning of humans. Research by Healey, Liederman, and Geschwind (1976) argued that handedness is not unidimensional because some manual operations of the hand can be performed using muscles controlled by one hemisphere while cognition of the same operation is controlled by the opposite hemisphere. Therefore, the use of both hemispheres to control a single operation is vital, according to Chiarello (1991), and indicates a reliance on the integrated and overlapping controls in the brain. Chiarello also provided evidence that both hemispheres access semantic information.

Even though there is evidence that action in both hemispheres is necessary for most behaviors, there is a dominant control of numerous cognitive, affective, and physical behaviors by one hemisphere. It is assumed that the dominance of one hemisphere over the other results in differences between left handers and non-left

handlers. Identifying the differences is the basis of handedness investigations that are reviewed in this chapter.

Variables Associated With Left-handedness

Introduction

There are numerous implications found in the literature involving various variables associated with hand preference. There is an absence of data related to the social environment and interactions encountered by left handlers as well as studies on the self concept of left handlers. The following investigations have been chosen to represent the subject areas of left handedness that have been investigated.

Intelligence

Studies have focused on the intelligence of left handed individuals to find if groups of left handlers have higher, lower, or similar intelligence scores than groups of non-right handed individuals. Levy (1969) and Hardyck, Petronovich, and Goldman (1976) found no significant difference in intelligence between groups of left and right handlers. There is a need to separate mixed-handed from right and strongly left-handed individuals in order to interpret the significance of the variable being investigated according to Annett (1967). Accounting for mixed handlers that have not been segregated in some studies, Annett (1970) reported groups of mixed handlers scored lower on vocabulary tests than groups of right or strongly left-handed individuals. Swanson, Kimbourne, and Horne (1980) supported Annett's findings

noting that mixed handers had lower scores than right or left handers on Thurston's Primary Abilities Test. Sunseri (1982), however, found no significant difference in cognitive performance between right and left handers, but he failed to differentiate mixed handers from the strongly left-handed individuals. O'Boyle and Benbow (1990a,b) found a higher incidence of left-handed individuals (male and female) scored above 630 on the verbal section of the SAT and above 700 on the mathematical section. Wiley and Jenkins (1991) did not find that students who scored extremely high scores on the SAT were more likely to be left-handed.

Creativity

The creativity of various handedness groups has been studied. Mebert and Michel (1980) reported that art students' responses on a handedness test shifted away from right handedness more than for students in other fields of studies. Peterson and Lansky (1974, 1977) found there were proportionately more architecture students who were left-handed and that proportionately more left-handed than right-handed architecture students graduated. Combs, Holbick, Czarnecki, and Kamler (1977) found that students in language arts-related fields were more right-handed. In addition, as an indication of activation of a given hemisphere to process information, they found that in response to verbal and nonverbal questions language arts students tended to gaze toward the right which was significantly different from students in a control group of students with other backgrounds and interests. The findings imply that left handers have a tendency to choose fields of study that emphasize right

hemispheric processing of information such as art, architecture, music, and mathematics. The possible implications is that those who tend to rely more on left hemispheric processing of information choose fields in the humanities. If creativity is associated with the fine arts, then it may be noted that Newland (1981) found that left handers demonstrated greater creativity than right handers on the Torrence Test of Creative Thinking. Bower (1985) found that 12 and 13-year-old students who showed higher than normal mathematical ability were two times more likely to be left-handed. Deutsch (1980) reported that left handers were superior to right handers on judgment of pitch. Craig (1980) reported that left handers were superior to right handers on judgment of rhythmic patterns. The findings may have implications for those who are in the field of music or fields where an advantage in auditory discrimination acuity is required.

Field dependency

External control from factors in the environment of the individual and internal control arising from the ability within individual to consciously control his/her behavior has been studied with relation to handedness orientation. The Rod and Frame Test is a measure of an individual's ability to determine whether or not a rod is vertical within a frame that distorts the perception of what is vertical. If individuals are influenced by the frame, then they are classified as field dependent. If not, then they are field independent. Garrick (1978) notes an association between field independence and right hemispheric functioning, and Hicks and Pelligrini (1978c)

associate externally controlled individuals with field dependency. They also note in their findings that mixed handers were more externally controlled than right-handed individuals or strongly left-handed individuals. Rotter's (1966) study argues that externally controlled (field dependent) individuals take less responsibility for their actions whereas internally controlled (field independent) individuals tend to see themselves as primarily responsible for their actions. Weiner (1986) found that those who have a high degree of internal locus of control are more likely to tolerate the frustration of failure than those who do not. Snyder and Canter (1980) associate those who have a higher degree of external locus of control tend to depend more on the opinions of others and tend to use the interpretation of other's to monitor and assess their actions. The implication is that mixed handers who have a higher field dependency than right or extremely left-handed individuals may tend to be influenced more by other's opinions, to use other's confirmations and disconfirmations of their self-worth, and to be high self-monitoring individuals.

Gender

The relationship of gender and handedness orientation has been a major area of investigation in handedness studies. Annett (1973), Bryden (1977), and Longstreth (1980) found that males are more likely than females to be left-handed. A study by Bishop (1990) supports this view. Their findings are not supported by research by Ellis, Ellis, and Marshall (1988) who reported from a survey of over 6000 individuals no significant difference in the frequency between left and right-handedness between

males and females. When handedness is differentiated with respect to sex, females are not as likely as males to exhibit abnormalities in critical learning areas such as reading and in areas important for communicating such as speech, according to Geschwind and Galaburda (1987).

Dependencies

The tendency to use addictive substances has been investigated with respect to handedness orientation. Bakan (1973) reported that left handers have a higher incidence of alcohol addiction than right handers. Harburg, Felstein, and Papsdorf (1978) found proportionately more left handers than right handers smoked more than 10 cigarettes a day. If dependency on addictive substances is associated with a tendency toward neurotic tendencies, then it is also important to note that Marsie-Taylor (1981), who administered a personality inventory test on groups of left and right handers, found that right handers tended to be less neurotic than left handers (mixed handers were not separated as a group in this study). Halpern and Coren (1990) found substance abuse along with other factors to be a possible link in explaining lower life spans in left handers.

Life span

Studies have reported life span differences between handedness groups. Halpern and Coren (1986) found that mortality rate for right handers to be at a 2% advantage over left handers after the age of 33 in a study of baseball players during a

50-year period. He suggested that the mortality rate may be due to a tendency of left handers to be more accident prone or more susceptible to diseases after the age of 33. The latter is suggested by Geschwind and Galaburda (1987) and Geschwind and Behan (1982) who report that there are more auto-immune diseases in left handers than in right handers. Higher levels of testosterone found in males have been linked with a predisposition to immune deficiency diseases reported in left handers to be 2 to 1 by Geschwind and Galaburda (1987). Coren and Halpern (1991) used this statistic to explain why right handers live longer than left handers. Halpern and Coren (1990) provide evidence that left handers' mortality rate may be due to an inability to resist physical and environmental assailants, problems in sleeping patterns, and a tendency for substance abuse.

Motor skills

The skill levels and abilities of left-handed individuals have been an area of interest since handedness is an observable, physical trait. Peters and Servos (1989) compared left, mixed, and right handers on tests of manual skill, speed, strength, and articulation and verbal fluency. His findings included better performance by mixed handers of fine motor skills when using the left hand and increased strength using the right hand. He argued that the incomplete dominance exhibited by most mixed handers may hinder performance requiring both fine motor skills and strength. His findings also included superior performance on fluency and articulation skills by left handers compared to right handers.

Implications of his findings were that incomplete dominance may require usage of both hemispheres of the brain in a way that certain skills are performed better than if only one hemisphere is activated. Kilshaw and Annett (1983) found an advantage of left handers over right handers in visuo-motor speed.

Anxiety

Due to possible lower life expectancies and possible dependencies associated with left handers, anxious behavior has been investigated and compared between left handers and non-left handers. The literature in the previous sections notes significant differences between various handedness groups which may place a different amount of expectations on left-handed individuals than right-handed individuals. Bakan (1971) and Hicks and Pelligrini (1978b) reported that first born and only children are more frequently left-handed than those who were not. Schacter (1959) found that first born and only children have a higher degree of susceptibility of arousal to anxiety than those born later. Altus and Altus (1982) found that there were more first born individuals among left handers with reading problems. This finding was later supported by Hicks and Pelligrini (1978a). Orme (1970) reported a greater occurrence of emotional instability among left handers than right handers. Hicks and Pelligrini (1978a) support Orme in finding that left handers and mixed handers showed significantly more anxiety than right handers on an anxiety questionnaire. Further, Hicks and Pelligrini (1978a) found that females and left handers showed higher anxiety

levels than mixed handers. Opposite findings were noted by Weinrich, Wells, and McManus (1982) who note that anxiety scores that correlated with respect to gender and handedness found that strongly left and right handers were more anxious than mixed handers. Beaton and Moseley (1984) reported that there is no significant relationship between handedness and anxiety using the Spielberger Anxiety Questionnaire and Annett's Handedness Inventory. Beaton and Moseley (1991) also recalculated and corrected their 1984 findings but still reported no significant differences in anxiety levels between groups of right, mixed, and strongly left-handed individuals.

Summary

The review of literature on handedness shows significant differences between left and right handers. While self-concept and handedness have been correlated in only one study by Hattie (1992) who cites an unpublished pilot study by Boundy (1990), there are implications that the differences that left handers perceive between themselves and others may be a source of influence on their self-concept. The review of handedness literature supports the conclusion that there is gap in research of left handers with respect to the area of self-concept and with respect to a qualitative approach.

Self-concept

Introduction

The concept of self in humans has been a subject of interest since ancient times. As a consequence of its enduring interest to writers, the concept of self has several definitions. Historically, the concept of self has been approached from more than one field of thought including philosophy, religion, sociology, and psychology. Interest in the "self" from ancient times to the present is an understandable consequence of a characteristic of humans to try to understand and explain their behavior. Even though each individual has a unique self exhibiting both continuity and change, writers have searched for meaning, generalities, and defining aspects of the conception of self.

Searching the literature related to self conception is a humbling experience as one is confronted with the range of views available. The literature is like a self-concept junkyard where a mountain of information can be found and where nothing has been thrown out since its beginning. The quantity of writings and range of views is an indication of the complexity of the subject. Heroic efforts to organize the vast amount of literature on self-concept are found within books written by Neisser (1993), Hattie (1992), Jones (1992), Brinthaupt and Lipka (1992), Burns (1979), Wells and Marwell (1976), and Gordon and Gergen (1968). With the exception of Hume who does not agree that there *is* a self, there seems to be an implicit respect for divergent views of the self and an acknowledgment that all of the views have some

degree of merit. In the shadow of those who have devoted generous amounts of their professional lives to researching the conception of self, the next section shall first review the milestones regarding the conception of self and then review articles that can be compared and contrasted with the philosophical and theoretical basis for this investigation.

Milestones in Self Writings

Introduction

Hattie (1992) provides an analogy to emphasize the problem that researchers encounter when attempting to define the conception of self. Those who try to define self-concept are like physicists who try to define electricity or magnetism. He wrote that a physicist would not define either of the ideas with operational definitions but, instead, would describe how each reacts. Similar to electricity and magnetism, self conception can be observed only by indirect means. In order to adhere to professional demands to quantify observations and measurements, researchers have constructed operational definitions that function to help in an indirect observation and measurement of the *effects* of self-concept.

Some of the terms that have been developed that label the various operational definitions of constituent parts of the conception of self are self-appreciation, self-comparison, self-consistency, self-deception, self-dissatisfaction, self-efficacy, self-esteem, self-evaluation, self-image, self-knowledge, self-perception, self-presentation, self-regard, self-validation and self-verification. Gordon and Gergen (1968, p. 471-

472) listed over 50 constituent parts of self. It is acknowledged that operationalizing various categories of self have helped to advance knowledge in the area of self-concept research and shall continue to do so. For the purpose of this investigation there is no exacting need to operationally define self-concept nor is there a need to fragment the term into smaller units. There is a working definition of self as listed in Chapter I that applies to the treatment of self within this investigation.

Pre-James writers

The acceptance that there exists a non-tangible part of human existence that is separate from the physical body is a major tenet for the understanding the concept of self. Hattie (1992) wrote that ancient philosophers, Socrates and Plato, and religious writers, such as St. Augustine and Buddha, have commonly acknowledged an understanding of the existence of a human characteristic that is labeled the self. William James (1890) writings are cited in the literature for providing the foundation for research and understanding of the conception of self. Some of James' predecessors who may have influenced his writings and provide valuable insight into the views of self are Descartes, Locke, Hume, and Mill. Descartes whose famous statement, "Cogito, ergo sum," concluded that the self is our thoughts and that the ability to think indicates our existence. John Locke characterized the self as having a reflexive quality and as being a cognitive action resulting in thoughts that develop through experiences. David Hume disagreed with viewing self as an entity and, by contrast, felt that the self is really only perceptions. John Stuart Mill focused on

memory as the best way to understand self by noting that memory provides a bridge from the consciousness of the present to the consciousness of the past.

William James

Notwithstanding the insightful writings over the ages that preceded his, James' (1890) contribution to understanding the concept of self is a definitive article that is mentioned in numerous historical accountings of the concept of self. James is cited for his foundational information for self-concept research as noted by Marsh, Byrne, and Shavelson (1992) who provided an analysis of James' contribution by listing the following categories that he developed for understanding the self:

- (1) The *I* (self-as-knower or active agent) and *Me* (self-as-known or the content of experience) distinction;
- (2) The multifaceted, hierarchical nature of self-concept;
- (3) The social self ; and
- (4) The definition of self-esteem as the ratio of success to pretensions and a function of an activity's subjective importance.

James viewed the self as the sum of two entities which he called aspects,

- (1) the self as knower, the subject, or "I," and
- (2) the self as known, the object, or "Me."

James' notion of "I" is one that provides the continuity across time as a function of memory that binds experiences and consciousness. "I" is the subject, the part of the self that is reflexive, and the part that is responsible for thinking. The part of the self that is categorized as "Me" is the object that can be reflected upon and is the contents of experience. The "Me" can change and is able to take on different characteristics.

James also wrote that the various objective selves that combine to form the “Me” have a hierarchy of importance to the individual.

The dual nature of self, the “I-Me,” theorized by James has approached cautiously by some investigators as a possible “superfluous and artificial categorization,” according to Gordon and Gergen (1968, p. 5), reflecting the movement of Dualism, a 19th-century way of thinking in which various phenomena were forced into two constituent parts. James’ insights, however, are more than a dualistic view of self, and they continue to be a reference for research and understanding the self. The influence of dualism may be less than some have portrayed when it is noted, first, that James was sensitive to the criticism of separating the self into two entities. In a close analysis of his writings it may be argued that James does not advocate a separation of the self into two entities except for the purpose of discussion. This is evident in the following quote from James (1910):

...the total self...partly known and partly knower, partly object and partly subject, must have two aspects discriminated in it of which for shortness we may call the *Me* and the other the *I*. I call these “discriminated aspects,” and not separate things... [p. 177]

James noted that it is through the use of language that writers are able to categorize the self into ‘Knower’ and ‘Known’ and that the “I” and the “Me” are meant to be “aspects” of a single process. He wrote

...the very act of their [I and Me] discrimination...must not be undermined by our terminology here... [p. 177]

Secondly, James explored the concept of self as an object through the use of a framework, reprinted by Gordon and Gergen (1968), that is not dualistic and that discusses the self by dividing "Me" into the following areas for discussion:

- (1) its constituents,
- (2) feelings and emotions that they arouse, and
- (3) the acts to which they prompt. [p. 41]

James further categorized the constituents, above, of the objective "Me" into the three following categories:

- (1) material Me;
- (2) social Me; and
- (3) spiritual Me. [p. 41]

The material "Me" is a reference to an individual's possessions which include the body and the family as well as any personal items. The social "Me" is concerned with others' perceptions of the self. The spiritual "Me" is the part of the self that thinks and feels and is viewed as the center for all other identifiable parts.

The social "Me" arises from how the individual views his/her self in relation to others and was emphasized by James. The process of comparing oneself to others implies that others are necessary for the formation of the conception of self. In addition, the comparison of one's self with others implies an evaluation of the objective self by the subjective self through the process of reflection.

James' acknowledgment that self is a single entity but having constituent parts, the "I" and the "Me," led to his identification of self-esteem and self-appreciation. He identified constituent parts as arising from feelings and emotions.

The evaluation is a process of the subjective self that becomes a part of the objective self.

James Baldwin

Baldwin (1897) explained that the development of self is influenced by others in the following quote:

...the sense of self always involves the sense of the other. And in this sense of the other is but that of another "self," where the word "self" is equivalent to myself, and the meaning of the word "other" is that which prevents it from being myself. [p. 23]

Baldwin also provided an example of what Mead (1934) would later call significant others. He noted that a child

...imitates everything, being a veritable copying machine....[t]he child imitates his elders, not from choice, but from his heed of adaptation to the social environment. [p. 24]

Baldwin implied that the self develops from a behavioral response of the individual in order to adjust or adapt to the environment. The explanation has overtones of Darwinian influences by implying that certain responses influence the advantageous development of in order to provide the greatest chance of survival.

Charles Horton Cooley

The writings of Cooley (1902) discuss the theory of the *looking-glass self* which is best known for the often quoted lines that he borrowed from a Ralph Waldo Emerson couplet,

Each to each a looking-glass
Reflect the other that doth pass (p. 152)

and illustrates the idea that the self-concept is at least influenced by, if not solely a product of, what an individual feels that others think about him or her. Wells and Marwell (1976, p. 16) noted that Cooley viewed the concept of self as an instinct that unified and stimulated the individual's behavior. Cooley implied that the objective self emerges as a result of the individual's interaction with society. The concept of self is formed from following process or principal elements according to Cooley (1902):

- (1) the imagination of our appearance to the other person;
- (2) the imagination of his judgment of that appearance; and
- (3) some sort of self-feeling, such as pride or mortification [p.151-2].

The first and second elements indicate Cooley's recognition of the reflexive quality of the self. The third element indicates Cooley's emphasis on the effects of others' judgments which results in feelings within the self. Burns (1979) noted that Cooley's view of the objective self

...arises out of symbolic interaction between an individual and his various primary groups...The face-to-face relationships within the group serve to produce feedback for the individual to evaluate and relate to his own person. Hence the self concept is formed by a trial-and-error learning process...[p.14].

Cooley also recognizes the process in which the subjective self is able to reflect upon the objective self in the following quote:

...man is not *immediately* dependent upon what others think; he has worked over his reflected self in his mind until it is a steadfast portion of this thought, an idea and conviction on his part, in some measure from its external origin. [p. 182]

George Herbert Mead

Mead (1934) expanded the view of self-concept while acknowledging James' "I-Me" aspects of a single self and Cooley's emphasis on the development of self through the experience of social interactions. Mead explained that an individual's self is developed through social interaction within the context of the culture and language of the individual. Mead's contribution was to focus on the development of the social aspect of the objective self. Mead discussed how attitudes of others are internalized into the self. From perceiving the attitudes of others an individual is able to take the role of another person to see him/herself as an object. Specific individuals such as family members, friends, and individuals who engage in frequent, face-to-face interaction with the individual were labeled significant others by Mead.

Mead's most notable contribution is his recognition that individual's are able to construct a *generalized* picture, a composite, which constructed from an average idea of the view that others have of them. This perception is called the 'generalized other' and is derived through process whereby an individual symbolically forms an idea of what he/she feels others perceive him/her to be. Mead (1925) wrote the following:

It is just because the individual finds himself taking the attitudes of others... that he becomes an object for himself. It is only by taking the roles of others that we have been able to look back on ourselves....the various parts of the whole social act carried out by other members of the society are in some fashion present in the conduct of the individual. It is further true that the self can exist for the individual only if he assumes the roles of the others....We appear as selves in our conduct insofar as we ourselves take the attitude that others take toward us...called the

“generalized other.” And in doing this we appear as social objects, as selves. [p. 57]

Mead characterized the self as dependent upon language usage and as a “symbol-using or symbol-dependent process,” according to Wells and Marwell (1976, p. 17) who also noted that the generalized other “...is clearly a result of the symbolic nature of the self.”

James, Baldwin, Cooley, and Mead are representative of the treatment of the concept of self upon which later articles are based. From their views investigations of the self have had to deal with several issues. Some of the main issues that are found in the literature have been organized for discussion purposes within this investigation. Figure 1 on the next page is an original construction developed as part of this investigation to be used as an organizational guide for self-concept research.

Issues in the Literature of Self

Primary control of self

The concept of self is defined, controlled, and developed from processes that are either external or internal to the individual. The issue is whether to investigate influences that are (1) external to the self arising from social interaction involving individuals, groups, and/or organizations and/or genetic predisposition or (2) internal to the self arising from the initiation of actions by the individual through exercising selectivity and filtration of external influences. Hattie (1992, p. 107) describes the issue as “classic free-will versus determinism.”

MODEL FOR ORGANIZATION OF ISSUES IN SELF-CONCEPT RESEARCH

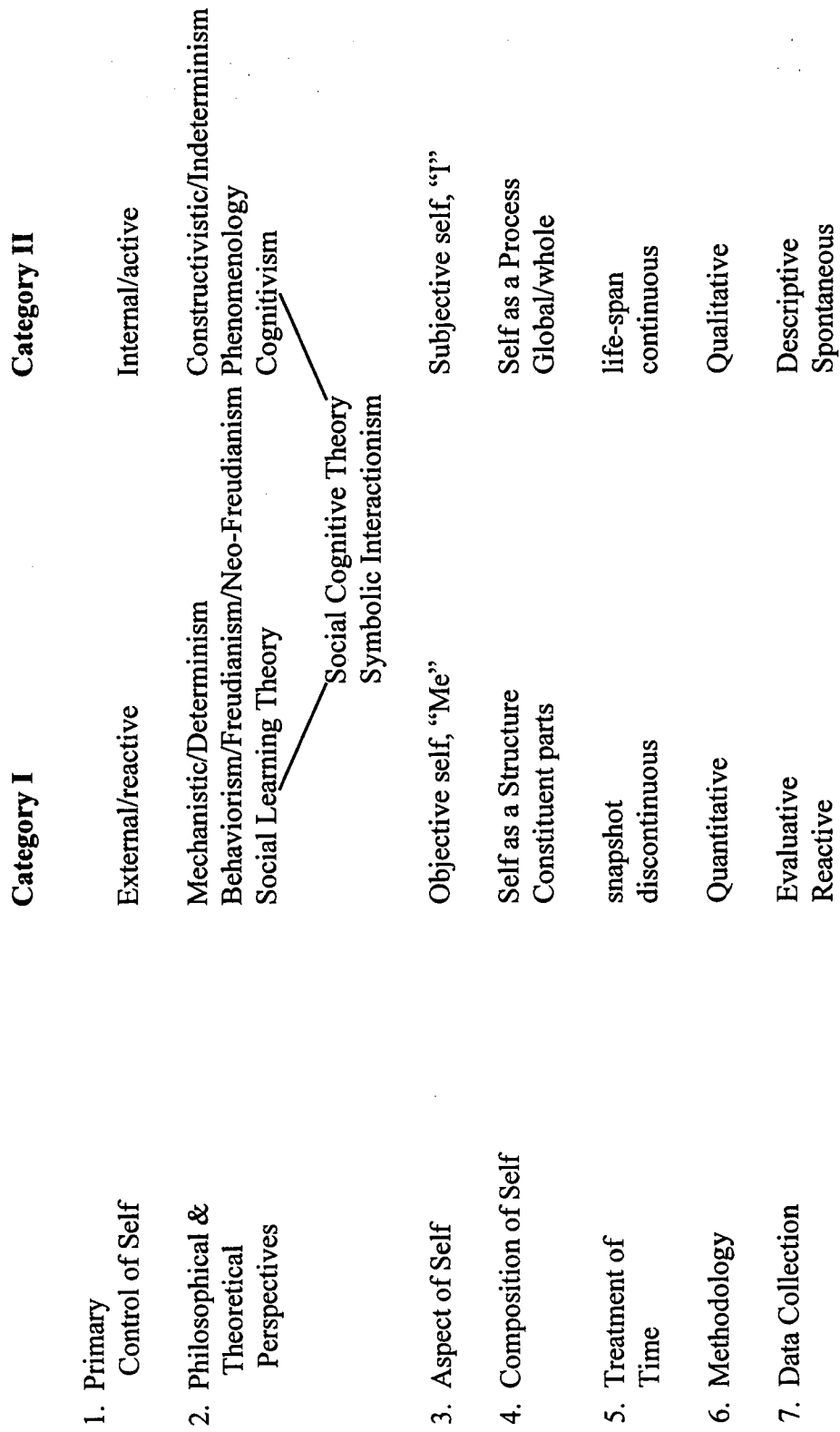


Figure 1

Philosophical perspective

Determinism

A mechanistic view is born out of determinism that explains that the self is *primarily* ordered by external forces outside of the *conscious* control of the individual as explained by Parsons (1968). It is also identified with (1) behaviorism where the self is viewed as a single entity arising from a set of responses to stimuli and (2) Freudian and neo-Freudian perspectives where the self arises from genetic predisposition and is formed through unconscious behavior. From a behaviorist perspective external forces, such as social interaction, are seen as the stimuli which initiate responses that lead to the formation of the conception of self in an individual. Mead (1925) explained that social acts are stimuli that evoke a certain conduct or behavior from which the concept of self emerges.

James, Baldwin, Cooley and Mead were the first to recognize that social interaction, being external to the self, is the primary source of the conception of self. Sherif (1967) later argued against a conception of self that is consciously controlled by the individual and supports Mead's emphasis on the influence of social interaction. Sullivan (1953) noted that the self develops from a social interaction experience but added that even when the self is alone, social interactions may be remembered. The memories act as internal representations that acts as stimuli to influence the self. The Freudian perspective especially emphasizes genetic influences and unconscious behavior as primary ingredients to the development of the self. A Freudian view

stresses the self as an unconscious response to social stimuli due to genetic predisposition. The individual has no control over self development from a Freudian perspective.

There are other articles that reflect an emphasis on the external forces that influence the self. Mahoney and Thorensen (1972) emphasized the need to understand the "controlling variables of the self." Bandura (1986) emphasized that the environment provides the model for the self. Economic determinism, a Marxist concept, was reviewed by Parsons (1968) in order to explain the external affects of political, social, and economic organizations on the conception of self of individuals. Implying a behaviorist view of negative reinforcement, Horney (1942) and Sullivan (1953) explained that the self takes the roles prescribed by external controls in order to avoid anxiety arising from isolation and lack of affection. While anxiety is an internal feeling, the controlling agent of the self are the social interactions that help individuals avoid situations that induce anxiety. Similarly, Day (1977) wrote that the self develops in a way that progresses toward affiliation with a group and moves in a path that provides the least negative reinforcement. The Deterministic view emphasizes that the autonomy of the self is lost to unalterable influences outside of the control of the individual.

Constructivism

A constructivist view of self recognizes the *conscious* ability from within an individual as the *primary* force (1) to control the conception of self by regulating

external forces and (2) to be the primary architect of the self which may include improvement of the self. This view acknowledges the ability of the individual to make choices resulting in *active* control of the conception of self. Adler (1927) recognized a dimension in humans that enabled them to consciously plan and guide their actions. The idea was presented by Alder that human agency or human effort as an internal force or process acts on rather than reacts to external forces. In the process individuals strive for a “creative self” which is described by Adler as an organizing and creating process. As contrasted with a deterministic view in which the individual is controlled by the social situation, the individual is moved to action through his/her own agency with respect to the meaning that has been placed on the social interaction engaged by the individual. While Adler did not write from a constructivist perspective, Burns (1979) explains that within Alder’s view the self

...acts as a selective screen...[with]...selective attention to the wealth of stimuli that impinge on the person...In other words, then it is the individual’s concept of himself that determines the kind and quality of the experiences perceived. [p. 19]

Also recognizing the process of human agency, Stone and Farberman (1970) write that

One regulates what he is doing at the time in terms of his anticipations of the other’s proposed actions and vice versa [p. 17]...we readily adopt and cast aside some selves, but not other selves...[p. 17-18]

Goffman’s (1969) dramaturgical metaphor, which is phenomenologically based and may be considered as subset of symbolic interactionism, exemplifies how individuals

are able to “present” themselves to others in order to exercise impression management. Impression management may be interpreted as a control of social interaction with direct consequences to the conception of self.

Regarding the second item, a constructivistic view of self emphasizes the individual’s capacity to create and control the conception of self and to make cognitive decisions that lead to improvements, according to Aiken (1993, p. 186). It views the self as being able to construct and direct experiences in order to make self *improvements*. Alder’s writings, as interpreted by Zurcher (1977), indicated the improvement of self,

...spoke of the human effort to overcome feelings of inferiority...the healthy individual directed a striving for superiority...[p. 68]

Rogers (1951) viewed the self as being able to assess which experiences are potentially beneficial and to evaluate when experiences justify a change in values. Rogers’ (1961, p. 27) client-centered therapy, Jourard’s (1968) self-disclosure, and Maslow’s (1954) self-actualization are built on the view that the self can be improved through an internal, conscious control of the self. Rogers used the view to assist clients in therapy to help themselves. Jourard used self-disclosure as a measure of how well an individual’s self has developed. Maslow advocated that the self is consciously constructed by the individual in order to find its greatest potential which he termed self-actualization. An article by Wallach and Wallach (1983, p. 165) implied that the self that is actualized is less dependent on external forces such as the real world, other people, or culture.

Other writers have explained the self from a constructivist position. Horney (1968, p. 404) noted that individuals have a “constructive force” to make decisions and “develop [their] own beliefs” from which the “real self” emerges. G. Allport (1955) used the term “proprium” to explain the self-concept as active, organizing, and able to use the capabilities of the mind rather than being acted upon from the outside. Piaget (1951) views individuals as self-generating. Piaget (1954) characterized humans as able to initiate their own actions by constructing knowledge rather than by acquiring it from influences described by Atkinson’s (1983, p. 16) as “passive experience, socialization, or teaching.” Piaget’s writings emphasize the ability of the individual to shape the concept of self and refer to the term self-regulating. Self-regulation, according to Piaget, enables the individual to regulate information from the environment and mediate the influence of social interaction. Wicklund and Eckert (1992) described the “inborn kernel of self” position that looks for an innate self that

[b]y definition...cannot be shaped by *any* outside factors whatsoever, and such elements as socializing influences are seen as merely disrupting or interfering with the workings of the innate self. [pp. 2-3]

Theoretical perspective

Behaviorism

Hattie (1992, p. 30) characterized the conception of self from a behaviorist perspective as a response to stimuli in the environment. Behaviorism places little credit for the self to engage in thought or action on its own as noted by Skinner (1974) who wrote

[t]here is no place in the scientific position for a self as a true originator or initiator of action [p. 185].

The self from a behaviorist perspective is an organization of cognitive structures composed of empirical selves and is a resultant of experience, according to Sarbin (1962). Zurcher (1977, p. 83) reviewed a theory by Dollard and Miller (1950) that explains the self in terms of stimulus-response involving “established ‘habits’ and socially derived hierarchies of response” and concludes that the self from a behaviorist view “...is no more than a connected group of independent and dependent variables.”

Behaviorism influenced the methodology as well as the philosophy of self investigations during the first 40 years of the 20th century according to Burns (1979, p. 10-12). As a result the self has been viewed as structured (Parsons, 1968, p. 15), static, consistent, and unchanging (Lecky, 1945), and reduced to constituent parts which have been operationally defined for quantitative study (Burn’s 1979, p. 11). As a consequence, according to Burns, the study of self conception was limited within the behaviorist perspective until

...evidence began to accumulate that could not be explained without recourse to internal processes [p. 11].

Freudian & Neo-Freudian perspective

From a Freudian perspective the self can be interpreted as a composition of id, ego, and superego although Freud used the term self sparingly, if ever, according to Loevinger (1976). The Freudian perspective emphasizes a control of the self from

unconscious forces arising from genetic predisposition as well as social interaction. Burns (1979, p. 18) wrote that the id is viewed as being unaffected by social interaction but is controlled by the thinking and reasoning process of the ego. The ego may be equated with the global self (the subjective and objective self combined). The superego is similar with the ideal self (the self as the individual would like it to be). The ego balances the urges of the id with social conformity of the superego. A Freudian view of self or ego, according to Burns (1979, p. 18), "...has its roots in unconscious dynamics..." Erikson (1968) explains the relationship between Freud's terminology and the self,

One could argue that it may be wise in matters of the ego's perceptive and regulative dealings with its self to reserve the designation "ego" for the subject, and to give the designation "self" to the object. [p. 199]

In their writings neo-Freudians such as Jung, Adler, Sullivan, and Horney had in common the idea that the self is "an accumulation of social contacts and experiences," according to Burns (1979, p. 19). Adler (1927) wrote that the self is realized from a conscious effort to organize and guide behavior. Sullivan (1953) on the other hand viewed self as emerging from acts that are met with approval, disapproval, or indifference by others. Horney (1950) placed the importance of reinforced behaviors with respect to the concept of self. The similarity between behaviorism and Freudian and neo-Freudian perspectives is the view that the self is controlled by influences beyond the control of the individual.

Phenomenology

Jones (1992, p. 7) noted that constructivist views of self are compatible with phenomenology where an individual's perception of the self and internal actions are the most important considerations. Jones (1992) defined phenomenology and the phenomenal self as

...a philosophical system which asserts that reality lies not in the event, but in the individual's perception of the event (the phenomenon)....The phenomenal self is the self of whom we are aware, the self who is our constant companion, the self who judges our behaviors and performances and compares their outcomes to the "ideal" self. [p. 7-8]

Self investigations from a phenomenological point-of-view emphasize a study of the perspectives of the individual which are unique having been formed from the individual's experiences, constructed meanings, and interpretations of reality according to Combs and Snygg (1959). Phenomenological studies of the self look inward toward the individual as opposed to looking outward at a situation. Aiken (1993, p. 168-9) characterized the phenomenal self as active, aware, creative, and capable of conscious decisions rather than being controlled by instincts or regulated by genetic predisposition. It follows that studies of the self may reveal the most useful information for understanding if done from the individual's point-of-view. Phenomenology accepts the individual's perception of reality rather than trying to establish a single reality. Battle (1982, p. 13-14) noted that verbal information obtained from an individual is a reliable representation of the individual's perception of reality.

Phenomenology, according to Aiken (1993) is

...a philosophy developed primarily by Edmund Husserl during the early part of the twentieth century, [that] emphasizes the importance of immediate, subjective sense impressions in the individual's conception of reality...Everyone has a different internal frame of reference, so in order to understand a person one must somehow learn to empathize with that person and see things from his or her point of view....phenomenology is the study of the unique, private experiences or meanings that an individual assigns to events. [p. 168]

Aiken offered that a phenomenological explanation of self recognizes (1) the importance of the individual's perception of the environment and (2) the ability of the individual to make choices that will help achieve self-actualization and reduce unhappiness.

Social learning theory

The self view from a social learning theory focuses on the influence of external social forces. Bandura (1986) and Schunk (1989) emphasized modeling as a primary source of control of behavior with implications that the self is developed by observing others. Individuals may imitate the modeling of others and their behavior is reinforced by additional social interactions.

Cognitivism

Cognitivism focuses on the thought processes of an individual rather than the individual's behavior. Behaviorism does not account for the role of human agency in the development of self. Cognitivism views behavior as more than an analysis of stimulus-response because humans are able to override stimuli and consequently

neutralize the effects of external control. Cognitivism recognizes that the self is able to exercise a degree of control of social influences.

Cognitivism has its roots in Gestalt psychology which is associated with the writings of Wertheimer (1912), Kohler (1925) and Koffka (1933). Gestalt psychology acknowledges that individual's perception may be different from the actual experience, the whole individual is more than the sum of what can be defined as constituent parts, individuals impose structure and organization on situations, and problem-solving involves recombining information or elements to solve the problem using a process of insight rather than a random trial and error process. Other researchers whose work contributed to the development of the theory of cognitivism are Tolman (1932), Piaget (1928, 1977) and Vygotsky (1962, 1978) whose views of behavior included an emphasis on human action. Piaget and Vygotsky viewed humans as processors of information not just receptors which is an important departure from a purely behaviorist view of self.

Social cognitive theory

Social learning theory has incorporated ideas from cognitivism (Ormrod, 1995, p. 131) and cognitivism has incorporated ideas of social learning theory (Bruning, Schraw, and Ronning, 1995, p. 130). Damon and Hart (1988) consider a combined approach as being interactional and in their words

...they are the ones committed to the assumption that the knowledge is shaped *both* by features of the environment and by features of the cognizing subject.
[p. 11]

Symbolic interaction and social cognitive theory have overlapping assumptions with respect to their views of the development of self conception. Both views acknowledge the influences of social interaction and cognitive action the development of the self. Damon and Hart stress reflexivity as the important process on which to focus in terms of understanding the self. Further, an interactionist approach such as social cognitive theory emphasizes the subjective as well as the objective aspects of self.

Social cognitive theory incorporates a combination of viewpoints. It places equal emphasis of the development of the self as a result of internal decisions or human agency and the influence of social interaction. Social cognitive theory, therefore, acknowledges both external and internal controls that influence the development of self. Social cognitive theory is aligned with Bandura's (1986) model of reciprocal determinism where the self can be viewed as developing from a combination of (1) personal factors, (2) behavioral factors, and (3) environmental factors. From Bandura's model all three factors interact and have an equal share in the development and maintenance of the self. The emphasis on the cognitive aspect incorporates the process of self-regulation which is an ability to predict which behavior is needed in a situation and to know the expected future outcome of that behavior. Bandura (1977) and Zimmerman (1990) used the term self-regulation in which the individual is able to set goals and engage in self-observation, self-judgment, and self-reaction. The acknowledgment of both of external and internal

influences on the self is the reason that social cognitive theory is placed in the middle of both columns on the issues model, Figure 1.

Symbolic interactionism

Kuhn has been cited for his analysis that the “I-Me” aspects of self can be shifted between being viewed as externally or internally controlled. The same may be true of all of the issues in Figure 1 that are aligned with either Category I which is the externally controlled-mechanistic-deterministic-behaviorist or Category II the internal control-constructivistic-indeterministic-phenomenologicistic treatment of self. The symbolic interaction perspective can be used to support the study of the self from either orientation. Damon and Hart (1988, p. 11) categorized a cognitive approach to self as taking a “middle ground” or interactionist perspective that acknowledges the influence of the environment or external factors and the ability of the “cognizing subject” to exercise control through internal actions. From Bogdan, Biklen, and Knopp (1982, p. 32) symbolic interaction is

- (1) compatible with a phenomenological perspective where reality from the perspective of the individual is of primary importance,
- (2) based on the assumption that human experience is mediated by interpretation;
- (3) meaning is conferred on objects, people, and events rather than the same possessing their own meaning;
- (4) the meaning given by people to their experience and their process of interpretation is essential and constitutive, not accidental or secondary to that of the experience;
- (5) the process of interpretation is neither autonomous nor determined by external forces;

- (6) people are defining, interpreting, symbolic animals who do not act on the basis of predetermined responses to predefined objects;
- (7) individuals construct meaning through social interaction and meaning is subject to negotiation;
- (8) the self is the definition that is created through social interaction where people attempt to see themselves as others see them by
 - (a) interpreting gestures and actions directed toward them and
 - (b) placing themselves in the role of the other person;
- (9) the definition of self enables people to grow and change.

Both the constructivist and mechanistic perspective acknowledge the important role of social interaction in the development of self which is aligned with the description of symbolic interaction above. It is the issue of how much control the individual has within the subjective self on the conception of self that separates the two views.

Symbolic interaction addresses the mediation and negotiation between the self and others. It does not address to what extent the subjective self is able to control the external forces acting upon it. Investigations may focus on the issue of external or internal control from a symbolic interaction perspective but at the same time do not need the perspective to support or deny findings. The three basic premises of symbolic interactionism presented by Blumer (1969) are

- (1) Human beings act toward things on the basis of the meanings that the things have for them.
- (2) The meaning of such things is derived from or arises out of, the social interaction that one has with one's fellows.
- (3) These meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters.[p. 2]

The self as viewed from a symbolic interactionist perspective is developed as a result of social interactions which addresses the importance of external control of the self. The meaning that is assigned to an interaction shapes the concept of self within the individual addresses the importance of internal control. The subjective self, the "I," is viewed as having the capability to select, check, suspend, regroup, and transform meanings from which actions are directed using Blumer's (1969, p. 5) explanation. Goffman (1956) observed that the self actively chooses a role or objective self according to the meaning that is assigned to a social interaction. Braroe (1970) wrote that

Roles and the self are seen as growing out of continuous social symbolic interaction in which an individuals present and express themselves in ways intended to influence a shared definition of the situation. [p. 166]

Braroe also found that people have a tendency to "arrive at a working consensus" or an "agreement about how they will behave toward one another and upon the symbols and meanings which will guide this action." This is a statement explaining negotiation and medication that is assumed in a symbolic interaction perspective. The subjective "I" chooses a particular role or objective "Me" to present in a social interaction through mediation and negotiation with others.

Aspect of self

From James' breakdown of self into the subjective "I" and the objective "Me," the aspect of the self called "I" can be viewed as being indeterminate. The "I" is the

part of the self which has the capability to initiate action by accepting or rejecting outside influences, thereby constructing the self through choices. The aspect of the self called "Me" can be viewed as determinate. The objective "Me" is shaped by outside forces into numerous selves or roles. In other words, the "I" is the part of self that is capable of reflection and as it matures is able to regulate external influences on the self. The "Me" is what is reflected upon, what is determined from social interaction or genetic predisposition. This general explanation does not go far enough, according to Kuhn (1964), to explain the various uses of the determinate and indeterminate aspects. Kuhn concluded that the ambiguities in the treatment of James' two aspects of self have provide numerous partial orientations indicating "varying relationships to the general point-of-view."

With Kuhn's analysis acknowledged, there is general agreement in the literature that the self has elements of both determinism and indeterminism. There are even cases where both indeterminate and determinate treatments of the self are revealed within the work of a single writer. For example, Mead (1934), who has been cited for explanations involving deterministic views regarding the conception of self, wrote that role-taking is a conscious act which is similar to a constructivist view. While Cooley (1902) developed the looking-glass self which is deterministic, he also observed that there is a self-control factor implying an constructivistic view of self. In Erikson's (1968) view the self emerges from social influences (i.e. determinanism) but only to the extent that the influences are able to provide the individual with

opportunities for free-choice and a choice of a variety of selves to take (i.e. indeterminism).

Peevers (1987, p. 147) analysis of self research concluded that most investigations have focused on the objective self, "Me." The subjective component of self, "I," is not as well represented in the literature because

...of the logical impossibility of directly observing it, and partially because of the reluctance of psychologists to accept language, or verbal accounts, as observable human behavior (attributed to Farr, 1981)...the subjective self is amenable to study through the accounts which people give, directly or indirectly, of their subjective processes [p. 148].

Peevers' rationale for the lack of research in the area of the subjective "I" is an indication of the philosophical issues involved. Figure 1 suggests that a phenomenological approach is best suited for understanding the subjective component of the self. Peevers wrote that the subjective self can be studied by "accounts which people give" which implies gathering information from individuals through interviews. The phenomenological approach emphasizes gathering information from the individual's point-of-view. It is understandable that if researchers are not able to work within the phenomenological philosophy then the subjective aspect of the self will receive less attention. Another issue is whether or not individuals can accurately report their perceptions of their subjective self. Again, from a phenomenological perspective's emphasis on the individual's perceptions, the participants in the investigation are the *only* ones who can accurately report their perceptions.

Composition of self

Self as a structure

When structure is the focus of an investigation of self, researchers look at the content or constituent parts. Many researchers have looked at self as a structure with respect to a single area such as Ogilvie and Clark's (1992) study involving gender. Others investigated multiple areas as defined in Shavelson, Hubner, and Stanton's (1976) study that outlines a multifaceted, hierarchical structure of self-concept that is composed of academic (English, history, math, science) and non-academic (social, emotional, physical) objective selves.

When treating the self as a structure, various constituent parts are named. Viewing the self as a structure and focusing on the objective self assumes that the self has an evaluative character and is testable according to Marsh, Byrne, and Shavelson (1992, p. 48). With an emphasis on the structure of the self, researchers have been able to operationally define and measure the constituent parts for quantitative analysis.

As previously noted, Gordon and Gergen (1968, 471-472) listed more than 50 constituent parts that researchers have been investigated in order to determine the structure of the self. The mechanistic view of self calls for examining the structure of the self, identifying constituent parts, and forming operational definitions as seen in a study by Ashmore and Ogilvie (1992, p. 236). Structural investigations are well-suited to quantitative research of the objective self.

Self as a process

The weakness in viewing the self as a structure was noted by Blumer (1969) who concluded that such research misses the reflexive properties of the self. The omission risks delegating the self to

...merely an organization awaiting activation and release without exercising any effect on itself or on its operation [p. 63]

Gordon and Gergen (1968, p. 5) observed that the self may be considered a process as well as a structure. Hattie (1992, p. 58-60) cited Rosenberg (1979) and Coombs and Snygg (1959) as researchers who have viewed the concept of self as a process that is more than "...simply adding up the parts in order to assess the whole." Gordon (1968, p. 116) wrote that the

...self if *not* a thing; it is a complex *process* of continuing interpretive activity-
-simultaneously the person's located subjective stream of *consciousness*...and
the resultant accruing *structure of self-conceptions*...

Damon and Hart (1982) noted that the subjective self is the aspect of self that is involved with processes that provide continuity across time, individuality or distinctness, volition or agency, and reflexivity. Investigations of the processes of the self look toward internal control and constructed decisions in order to understand the self.

Gordon (1968, p. 5) wrote that understanding the self as a process helps to answer questions regarding the elements of the self as well as establish *patterns*. The search for *patterns* rather than constituent parts within the constructions calls for the self to be viewed as a process rather than a structure. An analysis of Mead's writings

by Blumer (1969, p. 63) found that Mead viewed the self as a process and cited, as examples, the reflexive process (i.e. self-interaction) and the process of assigning meaning to objects and situations. An example of explaining the self as a process can be found in Goffman's writings regarding the dramaturgical metaphor when the self engages in a process described as an act in which the self consciously manipulates the image that others perceive.

Time Issues

When investigating the self as a structure, the self may be observed during a short interval of time and is consistent with a mechanistic view of self. On the other hand, an investigation of the self as a process involves viewing the self as changing or evolving over a period of time, a process consistent with a constructivist view of the self. To observe a process or changes involving the self, Brinthaupt and Lipka (1992) advocated studying the self across the life-span.

Zurcher (1977, p. 14) investigated self-concept over time where the "mutable" self is described as both process and object. The arguable point is that the aspect of the self that changes is the part that engages in self processes which has been previously described as the subjective self. Therefore, Zurcher's investigation follows the constructivist orientation with regard to changes in the self over time. From a constructivist view the objective self may be viewed as unchangeable over time. Objective selves are added to or deleted from the global self. When they are changed they become new selves. For example, an individual may have an objective

self described as a student. Over time the 'student' self may be discarded and a 'former-student' self may be added to the repertoire of the global self. The status of the self as student cannot change; it can only be added or deleted.

The continuous quality of the self is noted by Erikson's (1968) observation that an individual does not wake each morning as a stranger to him/herself. Gergen (1968, p. 299) explained the position that continuity of the self results in a self that is stable because perceptions have a tendency to remain unchanged. Festinger's (1957) model called cognitive dissonance attributes self-conception to social influence is based on the assumption that the self tends to progress toward stability. It is the cognitive processes of the subjective self that provide continuity over time as the objective selves are added and deleted.

Erikson (1968) wrote that the ego (which he equates with self)

...as a central organizing agency, is during the course of life faced with a changing self which, in turn, demands to be synthesized with abandoned and anticipated selves [p. 199].

Within the process of accepting or denying other's praise or condemnation, the subjective aspect of the self may experience change which has been studied by Coopersmith (1967). Gordon (1968, p. 116) explained that transformations in the self can be described as the

'self I used to be,' the current perspective of the self, and the prospective future selves [116].

The subjective aspect of the self is able to engage in a process that results in a manipulation of the environment in order to consciously *change* the self into what is

considered a more ideal self. This process is explained in Goffman's (1956) description of the presentation of self and impression management. Engaging in impression management implies an active role of the subjective self in maximizing others' positive appraisals toward the objective self which may serve to change the perception of the self by the individual.

Methodological Issues

The philosophical and theoretical view of self as either mechanistic, (i.e. primarily concerned with external control), or constructivistic, (i.e. primarily concerned with internal control), may be used to justify the approach to research and the methodology used to collect data. A mechanistic view of self characterizes the self as

- (1) emanating primarily from social interaction,
- (2) being able to be divided into parts that are operationally definable,
- (3) being objective,
- (4) having a static quality, and
- (5) having structural traits.

The mechanistic view has traditionally used evaluative measures within a quantitative research approach. A constructivist view of self characterizes the self as

- (1) emanating from internal control of social interaction,
- (2) having no further reducible traits,
- (3) being subjective,

(4) evolving over time, and

(5) being a process.

The constructivist view supports the use of descriptive measures within a qualitative research approach. Shavelson, Hubner, and Stanton's (1976) model of the structure of self-concept was described by Marsh, Byrne, and Shavelson (1992, p. 50) as having *both* descriptive and evaluative aspects,

...such that individuals may describe themselves ("I am happy") and evaluate themselves ("I do well in mathematics").

It may be argued that there is a distinction implied within their statement. The aspect of the self that states "I am happy" is the subjective self, and the statement "I do well in mathematics" is a statement of the objective self. Therefore, descriptive and evaluative methods are suited to different aspects of the self.

Burns (1979, p. 10) attributed the emphasis on quantitative methodology to the influence of behaviorism in the early decades of the 20th century. More recently, L'Écuyer (1992, p. 127-8) wrote that qualitative analysis of the self (1) may reveal variations that would otherwise be missed and (2) provide "for a deeper understanding of the organization of self within a group, between groups, and...the development of the self across the life span."

Brinthaup and Erwin (1992, p. 147) noted that data collection within a quantitative and qualitative approach may be either (1) evaluative or (2) descriptive. Measures may be categorized as reactive or spontaneous. Reactive measures are closed-ended instruments and are the most widely used device in self research

according to Brinthaupt and Erwin (1992, p. 147) and Wylie (1974). Reactive instruments were described by Brinthaupt and Erwin (1992) where the

...approach requires subject to react to a few or a great many researcher-provided dimensions, usually through a constrained or closed-end response format in which subjects are asked to locate themselves on a scale representing these dimensions. [p.147]

Brinthaupt and Erwin list the Piers-Harris Children's Self-Concept Scale by Piers (1984), the Coopersmith Self-Esteem Inventory by Coopersmith (1967), and the Self-description Questionnaire by Marsh (1988) as examples of reactive measures.

Spontaneous measures are used to minimize the effects of the researcher and allow an unconstrained flow of information from the participants' perspective. Open-ended questions and long-interviews as described by Brenner, Brown, and Cantor (1985) are examples of spontaneous measures that are consistent with a qualitative approach to study the processes involving internal control and changes in the subjective self.

Need for a Combination of Views of Self

Approaching the self from one perspective does not necessarily have to result in the exclusion of some of the complexities in the self, but the mechanistic approach has such an emphasis on the objective self and the structure and function of it that has led to an uneven treatment in the literature of that part of the self. The constructivist perspective does not deny the influence of social interaction on the self but opens up the processes involved in the phenomena of self to be studied along with the agency

of the subjective self. The match between the philosophical and theoretical perspective and the orientation toward the self comes at the possibility of excluding the benefits and insights from another, equally valid point of reference. Hattie (1992) observed that neither the mechanistic or the constructivistic view

...claims that only the environment or only the individual is the central controller and/or the source of self concept [p. 107]

and that researchers acknowledge the role of each. Burns (1979) noted that while behaviorism and phenomenology are at opposite ends of a spectrum

...to make self theory and behaviorism mutually exclusive is erroneous. Both approaches are necessary in order to understand in full the complexity of human behaviour, and in fact they support each other [p. 11].

Hattie (1992, p. 107) observed that writers have not advocated complete mechanistic or constructivistic views regarding the self. Hattie grouped the behaviorists Cooley, Mead, and Goffman as emphasizing social experience as a deterministic factor of the conception of self, and he grouped Rogers and Piaget as emphasizing cognitive constructions on the conception of self which would be indeterminate.

While the researchers mentioned have a respect for both determinism and constructivism, the inclusion of Goffman in the first group does not take into account his primary tenet of presentation of self. Goffman (1956) described the presentation of self in various roles, or "Me's," as a calculated and skillful act that is decided upon by the subjective self, "I." Like Mead's view of self, the self in Goffman's view is as much indeterminate and determinate.

Gordon and Gergen (1968, p. 2) from a philosophy of realism noted that the self is not an actuality having real-world properties. They also offer a phenomenological point-of-view by noting that the self is an "artifact" (p. 3) which implies that it is a construction of humans. The separation of the self into the subject, "I," and the object, "Me," may be an artifact or a human construction, but it serves to illustrate the determinism and indeterminism points-of-view found in the literature. It was important for this investigation to distinguish between the "I" and the "Me" during the treatment of data. This investigation used the constructivist perspective and subscribes to the philosophy of phenomenology and associated methodology but was open to interpretations that may be classified as mechanistic since mechanistic and constructivistic views are not mutually exclusive.

Summary

Implied in the literature is a treatment of self that may be mechanistic or constructivistic. The social cognitive theory of learning may be used to understand the conception of self and emphasizes both external controls and internal controls that influence the development and maintenance of the self. The related assumptions of the conception of self that may be considered within a mechanistic/deterministic philosophy are

- (1) the view that external controls such as, but not limited to, social interaction are primarily responsible for the conception of self;

- (2) the focus is on structure in order to understand the objective aspect of the self which is consistent over time; and
- (3) data regarding the self is best measured quantitatively and analysis is evaluative.

The constructivist view extends the mechanistic philosophical view of self. While the constructivist view acknowledges the important role of external influences of the self their are assumptions that provide a distinct contrast with deterministic points of view. The constructivist assumptions related to the conception of self are

- (1) the view that internal controls expressed as conscious acts by the individual are primarily responsible for the conception of self;
- (2) the focus is on processes in order to understand the subjective aspect of self which may undergo change over time; and
- (3) data from the self is best examined qualitatively in order to provide a descriptive analysis of the global self.

Hattie (1992, p. 107) noted that neither view excludes the assumptions of the other.

In the assumptions stated above, it may be noted that the use of the word 'focus' implies that there are other things that are considered; similarly, the choice of the words 'primarily responsible' implies that there may be things that are secondarily responsible. The complexity of the phenomenon of self allows for the two different philosophical approaches to be used for investigation and interpretation of the data,

but it also seems that the constructivist/phenomenological approach may open up a greater range of possibilities and interpretations of the conception of self.

Chapter III

Research Design

Philosophical Foundation

Introduction

The two research approaches that were considered for this investigation are (1) quantitative and (2) qualitative. Investigations in the social sciences in general and in the areas of handedness and self-concept specifically have traditionally used a quantitative approach to the exclusion of others. By contrast and with a break in tradition, this investigation used a qualitative approach. The choice of a qualitative approach was not made for the sole purpose of using a different approach from the normal, but rather it was a decision that meets

- (1) the requirements for the purpose of this investigation which is to establish a description of the conception of self of left handers,
- (2) for the expertise of the investigator, and
- (3) for addressing the issues involved in the areas of handedness and self-concept.

Most investigations into the concept of self have focused on the objective self. This investigation focuses on the subjective self as well as the objective self. The

subjective self is composed of cognitive and affective processes. Damon and Hart (1988) wrote

Without an account of the cognitive processes that people use in construing the nature of self, there can be no satisfactory analysis of self-concept. [p. 14]

In order to understand the subjective self Damon and Hart state that cognitive activity, emanating from the subjective self, "...must be assessed in qualitative terms." A discussion of the philosophical foundations of both quantitative and qualitative research is provided in order to justify the choice of a qualitative approach for this investigation.

Research Approach

Philosophies Associated with Quantitative Research

The treatment of reality is a major area of contrast between the approaches of quantitative and qualitative research. Research using quantitative methodologies is based upon assumptions regarding the nature of reality that can be traced to the influence of several philosophies such as realism, essentialism, objectivism, positivism, and atomism. Jonassen (1991) explained that reality from the perspective of realism is viewed as "external and independent of human experience" and assumes that humans gain the same understanding and hold the same interpretation when placed in a given situation. He explained that essentialism acknowledges a stable, static reality and that the uniqueness of any one thing in reality is dependent on its

“essential” properties. These “essential” properties are external to and independent of human interaction. “Essential” properties are viewed as nonnegotiable, incontestable, and unchanging over time. Quantitative research assumes that such “essential” properties can be found through observation, testing, and deduction.

Lakoff (1987) noted that objectivism has its roots in realism and essentialism. Objectivism holds that the world is real outside of and independent of human experience, that it is structured, and that its structure can be modeled so that others may learn the structure. Noting the influence of positivism on quantitative research Taylor and Bogdan (1984, p. 1) wrote that quantitative research “seeks facts or causes...apart from the subjective states of individuals.” Reality in the view of positivism consists of facts and these facts place an external influence on humans, but humans place no influence on the facts that exist in their external world.

Atomism closely parallels the philosophy of realism and its view of reality. Atomism defines reality in materialistic terms reducing it to logical components or “atoms” as noted by Tulley (1988). With respect to those engaging in quantitative research the philosophy of atomism is a closed system and holds that research can move toward a value-neutral position. Ancient Greek views were responsible for viewing reality as space and atoms outside of human control.

From the foundations of realism, essentialism, objectivism, positivism, and atomism a quantitative approach to research assumes that reality

(1) is external to the knower and independent of human experience,

- (2) is a single entity that is unchanging over time,
- (3) has a structure determined by its essential properties, and
- (4) can be reduced into constituent parts for study.

Researchers who use quantitative methodology view reality as a set of facts.

Quantitative methodology holds the assumption that reality is interpreted the same by everyone and that there is one truth to be found about any given phenomenon. The purpose of quantitative research is to build up as many observable facts as possible in order to reveal a single structure of the world and create a model for understanding. Models of reality are assembled block by block. Quantitative research assumes that reality can be reduced to its constituent parts for a complete understanding. The more facts that are revealed, the more a single reality is confirmed to the researcher.

The drive for quantification of phenomena studied in the social sciences is revealed in the compilations of statistical facts that characterizes self-concept and handedness investigations. The facts have been derived from a reduction of phenomena into quantified parts that are compared and tested for significance. Burns (1979, p. 12) noted that the use of quantitative methods used in early self-concept research was influenced by behaviorism although some quantitative articles on self-concept appear before the rise of behaviorism. Through the use of operational definitions early self-concept researchers were able to test hypotheses and obtain quantifiable data from what Burns describes as “precise, experimental, and systematic” measurements. The practice continues to dominate social science

research in general and in the areas of self-concept and handedness specifically. In a drive to align professional standards and research standards with those of the natural sciences, social scientists endeavored to quantify most of the phenomena that they studied. The continued use of quantitative research reflects the view that without statistical measurement the self-concept and handedness phenomena cannot be properly studied.

In order to quantify the phenomenon of self-concept numerous operational definitions have been developed. The result produced a fragmentation into atomized, constituent parts which were termed self-comparison, self-consistency, self-deception, self-dissatisfaction, self-efficacy, self-esteem, self-evaluation, self-image, self-knowledge, self-perception, self-presentation, self-regard, and self-verification. Over 50 were listed by Gordon and Gergen (1968, p. 471-2). All of the hyphenated words are constituent parts of self.

It is the phenomenon of self that quantitative researchers attempt to identify, describe, measure, and predict through the identification of constituent parts. It can be argued that the numerous operational definitions of the conception of self are concerned with the *effects* of self-concept rather than self-concept itself. Quantitative research using the various operational definitions of self-concept obtain data about the self-concept indirectly by focusing on effects. Self-concept is like the wind whose effects can be seen and measured, but the wind itself cannot. It was an inevitable

outcome for researchers who view reality as independent from and external to human existence that investigations focus on the objective self for its ability to be quantified.

Philosophies Associated With Qualitative Research

Using another set of assumptions and beliefs there are opportunities to study the entire phenomena of self-concept rather than the effects of it and do so in a direct manner by using a qualitative approach to research. The philosophical foundations for a qualitative investigation are related to idealism, phenomenology, and specifically the symbolic interaction perspective. The view of reality of idealism, phenomenology, and symbolic interactionism is very different from the philosophies associated with quantitative research. Idealism in the view of Kant as noted by Bruner (1986, 1990) supports a belief in an external reality, but, contrasted to realism, reality cannot be understood except through human sensations. Blumer (1969, p. 22) wrote that “the traditional position of idealism is that the ‘world of reality’ exists only in human experience and that it appears only in the form in which human beings ‘see that world.’” While idealism looks for universal truths and a single reality (which is not compatible with a qualitative philosophy), it also emphasizes that human interpretation is a necessary ingredient for unlocking the truths. An important assumption of qualitative researchers is that the truths that define reality do not occur outside of human experience.

Similarly, phenomenology treats reality in terms of humans interpretation. The influence of phenomenology on qualitative methodology is exemplified by the

writings of Husserl according to Bogdan (1984, p. 31) who wrote that reality is not only constructed from within the human mind but that

...multiple ways of interpreting experiences are available to each of us through interacting with others, and that it is the meaning of our experiences that constitutes reality.

Taylor and Bogdan (1984) wrote that the influence of phenomenology on qualitative research provides an understanding of phenomena from a person's own perspective and that the "important reality is what people perceive it to be." This is an important ingredient of qualitative research for those who study self-concept since an understanding of the subjective self can only come from data derived from the interpretations of the individual participant who is studied.

Qualitative methodology parallels the views of phenomenology and views the world as having multiple realities depending on human interpretation. Mead (1934) acknowledged the importance of human interaction in establishing reality. Influenced by Mead's writings Blumer (1969) developed the symbolic interaction perspective that views reality as having no meaning until humans interact to confer meaning upon it. Central to the view of the symbolic interaction perspective is the belief that reality results from the mediation or negotiation that occurs when humans interact. Rather than being fixed or immutable, reality is continually "recast," according to Blumer (1969, p. 22). Blumer explained that reality "...exists only in human experience and appears only in the form in which human beings 'see' that world."

With the influences of idealism, phenomenology, and symbolic interactionism qualitative research views reality as

- (1) arising from the internal interpretations of humans as a result of human interaction,
- (2) changing over time,
- (3) as a process, and
- (4) the entire phenomenon is more than the constituent parts are able to reveal when studied separately.

For purpose of this investigation that lies within the areas of self-concept and left-handedness, it was the judgment of this investigator that the assumptions and philosophical perspectives associated with a qualitative approach provided the most appropriate methodology for collecting, analyzing, and interpreting the data. This decision was based on the premise that the problem of this investigation which is to determine the conception of self from the participants' point of view influenced the choice of the approach to be used.

Taylor and Bogdan (1984, p. 2) suggested that different types of research demand different methods. Research involving the natural sciences seeks to find a cause or correlation and leans toward the philosophy of positivism upon which assumptions within quantitative methodologies are founded. On the other end of the spectrum, research involving humans strives for understanding of the beliefs, motives, and actions of humans as well as the processes leading to them. Such research leans

more toward the philosophy of phenomenology upon which assumptions within qualitative methodologies are founded. Freeman (1992, p. 38) noted “insurmountable difficulties” when studying the concept of self from a “systematic experimental framework.” While distinguishing himself as a “scientist” and not a humanist, he questioned the exclusion of qualitative methods and calls “...for a form of science broadly enough conceived to properly accommodate the phenomena being studied...” Although qualitative research avoids separating phenomena into atomized parts, L’Écuyer (1992, p. 101), wrote that a “...qualitative analysis of the material classified in each dimension of the self seems to be a very good, adequate, and sometimes vital device for this purpose...” The subjective nature of self calls for an approach that is able to use subjectivity to investigate self phenomena. By using methods that emphasize the perspective of the individual, the entire self can be studied without the necessity of operational definitions and subsequent artificial dissection and fragmentation of the phenomenon. This can be accomplished based on the assumption that individuals are able to reveal the subjective self through qualitative methods such as the open-interview.

In addition to the treatment of reality and the nature of the investigation there are several other characteristics of qualitative research that may be contrasted with quantitative research. Articles by Bogdan, Biklen, and Knopp (1982) and R. Taylor (1994a) explained the way in which people make sense out of reality and place meanings on objects, situations, and events is a primary focus of qualitative research.

On the other hand, quantitative research finds no need to discuss, let alone study, the way humans place meaning on objects or situations because it assumes that meaning is dictated by and inherent in the object or situation. Meaning to quantitative research is seen as external to and independent of humans. If meaning varies during the course of an investigation, a quantitative researcher would attribute the variation as a discrepancy and look for additional data in order to support one meaning. As a consequence quantitative methodology avoids, denies, and discourages any meanings brought about by human interaction. By contrast, meaning to qualitative researchers is believed to be determined by humans and is of primary importance. The assignment of meaning is a process that may reveal information to help understand the phenomenon studied in an investigation.

Blumer (1969) connected the perspective of symbolic interactionism with meaning by noting that it is created from the “defining activities of people as they interact.” Implied within Blumer’s interpretation of meaning is the idea that humans act toward a phenomenon depending upon what meanings they have previously assigned it. R. Taylor (1994b) explained that within a qualitative approach meaning is a central concept, arises out of social interaction, changes over time, changes as the context changes, and is the product of individual interpretation as well as shared interpretations. Qualitative research looks to uncover how and why meaning is assigned to a particular phenomenon by humans.

An assumption of qualitative research is that thoughts and symbols emerge from physical and social experiences reflecting Gestalt properties. Gestalt properties reject analysis derived as a result of a summation of individual parts as explained by F. Allport (1955). That is to say that while quantitative research breaks the whole into parts for investigation, qualitative research views the whole phenomenon as more than what can be revealed by an analysis of the parts. Qualitative research endeavors to study phenomena in their entirety and believes that the context affects the particular phenomenon within it and therefore the phenomenon should not be fragmented.

Summary

The drive for quantification of phenomena studied in the social sciences has resulted in investigations into the areas of self-concept and handedness that may be characterized as compilations of statistical facts that have reduced phenomena to numbers as noted by Damon and Hart (1988, p. 15). These 'facts' are derived primarily from reactive self-reports as noted by Brinthaupt and Lipka (1992, p. 6). With respect to self-concept operationalized definitions have actually been definitions of the effects of self-concept which focus only on the objective self. In order to operationalize the effects of self-concept, there the phenomenon of self-concept was fragmented into constituent parts.

To study the subjective self with the same emphasis as has been given to the objective self calls for the use of a phenomenological approach that focuses on the

understanding the phenomena of left-handedness and self-concept from the participants' points-of-view. A qualitative methodological device such as the open interview used in this investigation provides a way to investigate the subjective self from the point-of-view of the individual. Qualitative methodology also provides a process that enables the researcher to search for patterns in the data in order to arrive at an understanding without the burden of a hypothesis built upon previous theories or findings. It is for the reasons stated in this chapter that this investigation used the qualitative approach as a vehicle to provide the most efficient tools for understanding the self conception of left-handed individuals.

Description of Participants

Rationale for Selection

Only individuals who were aged 18 and older were considered for this investigation because self-conception is (1) a latent phenomenon and (2) a developmental process according to Hattie (1992). Brinthaupt and Erwin (1992, p. 146) wrote that developmental differences affect the process of reporting about the self. They also reported that older individuals are able to increase their attention to internal and external self-related cues. In a review of other research Brinthaupt and Erwin noted that there is no integrated conception of self in children (Damon and Hart, 1982) and that the description of self shifts from an objective to subjective as individuals move toward adolescence (Harter, 1983). Leahy and Shirk (1985, p. 145)

noted that children around the age of five have similar interpretations of self and other making distinctions difficult to understand from their point-of-view. Further, when individuals reach the age of young adults they are able to acknowledge qualities of the subjective self that are not apparent to children. Assor and Cannell (1992, p. 28) noted that there may be a "source of invalidity" when relying on the responses from children because they "may not be able to assess their own competence or efficacy. Since this investigation was particularly interested in the subjective self, the choice of adults maximizes the chances that participants would reveal data that indicates action of the subjective self.

The difficulty in observing the conception of self in children as noted by G. Allport (1937) is that they are able to easily depersonalize themselves during play and in speech. There are potential problems with using a long-interview format with open-ended questions with children. Freeman (1992, p. 28) suggested that children may not have sufficient vocabulary and may need assistance in choosing words to express their thoughts.

Adults have a better capacity than children for engaging in the process of retrospection. The process of retrospection, according to Freeman (1992), provides the opportunity for the investigator to obtain interpretations and evaluations of a past event or situation from the participants. Freeman credited Freud with the idea that eventful situations may be better explained from a historical point-of-view where the individual has the opportunity to place interpretations and evaluations on past events.

This idea was presented by Gusdorf (1956) who wrote that mature individuals exercise an "aerial view." An aerial view enables an individual to be able to look back to past events that have been concluded from a perspective not available while the individual is engaged in the event. An individual is able to place a mental distance between present events and those of the past in order to evaluate the outcomes of the events. Compared to adults children have far fewer experiences from which to draw comparisons that are required for a retrospective process.

The decision to use adults was based solely on the information cited from the literature in the area of self-concept. The need for individuals to convey their perception of self-concept required that individuals to be at a stage of development in which a fully developed self-concept could be expected. In addition, there are requirements associated with the use of the long-interview such as retrospection, mature thinking, and vocabulary that favored the use of adults as participants.

Population

There were 18 participants chosen from 36 volunteers who ranged from the age of eighteen to the mid-forties. This number of participants is sufficient for a qualitative investigation as supported by R. Taylor (1994b, p. 272). All of the participants were associated with the University of Tennessee as a student, faculty, or a wife or husband of a student or faculty member. There were 10 females and 8 males who were interviewed. Even though the participants were paid \$10.00 for their time, their participation was very enthusiastic and all exhibited a genuine interest in

the investigation. Several participants said they would have participated without the monetary incentive.

Treatment of Data

Data Collection

In a response to a call for left handers to participate in this investigation, approximately 36 individuals volunteered and 18 were interviewed. Participants were scheduled to meet the interviewer at their convenience during a two-week period of time. There were no more than two interviews scheduled per day. At the time they were scheduled for their interview, the participants were told that the focus of the interview was to talk about being left-handed. Premature closure was avoided by providing the participants with only a general idea of the topic for the interview.

Participants met the interviewer in a classroom that was chosen for its ability to provide a natural setting. It fulfilled the natural setting requirement because it was familiar to the participants and provided a neutral atmosphere for both parties. The participants and interviewer sat in similar seats facing each other. The participants were told that their conversations would be recorded but kept confidential. The participants were also provided anonymity in order to protect their privacy and to provide an atmosphere that would be non-threatening with the expectation that the conversations would be as candid as possible.

In order to increase the validity of the data collected a triangulation technique was used. Triangulation of data sources was first advocated by Norman Denzin (1978, p. 301). For this investigation triangulation of data means collecting data from multiple types of self-reports. The three types of self-reports that were used are as follows:

- (1) a handedness inventory in order to confirm participants' handedness orientations.
- (2) an open-ended interview; and
- (3) a reading by the participants of a transcription of their interviews with an opportunity to amplify, clarify, or correct meanings.

Prior to the interview, participants were asked to fill out a handedness inventory form which is classified as a reactive data collection technique by Brinthaup and Erwin (1992, p. 147). Reactive self-reports are closed-ended and are based on the researcher's point-of-view with a minimum of interaction between the research and participant. The handedness inventory is located in Appendix B. The inventory served three purposes. First, it confirmed that the participant was left-handed. Second, it provided a time for the participant to relax and for the interviewer and participant to get to know each other. Finally, the inventory provided an opportunity for a smooth transition into a conversation about handedness. The inventory took less than 5 minutes for all participants.

After the participants completed the handedness inventory (see Appendix B), the open interview began. The interview method that was used is classified as a spontaneous data collection technique involving an open-ended questioning technique as described by Brenner, Brown, and Cantor (1985), Filstead (1970), and Lofland (1971). A spontaneous self-report involves a high degree of interaction and questions are open-ended according to Brinthaup and Erwin (1992). The data is less structured since it comes from open-ended questions that elicit responses that are worded from the participant's point of view. The in-depth interview was chosen because it met the research needs of this investigation, was conducive to gaining information from the participants' points-of-view, and was a very practical method of obtaining data. The interviewing method used conforms to the guidelines set by Taylor and Bogdan (1984, p. 80) for selecting a data gathering technique.

The participants were engaged in normal conversation which qualifies as a natural act and a technique prescribed by qualitative researchers such as Blumer (1969). Rather than using a rigid interview guide, participants were asked only a few opening questions as suggested by R. Taylor (1994b, p. 273) such as

“What comes to mind when you think of being left-handed,”

“Tell me about being left-handed,” or

“What kinds of experiences do you recall that surround your being left-handed.”

The initial questions were very general and purposely designed to be left open to the participants' interpretations. Participants were allowed time to respond in-depth. Short answers were followed by the questions "Could you elaborate on that" or "Could you tell me more about that." During the start of the interview the participants were told, once again, in general terms, the focus of the investigation. No other information was provided in order prevent premature closure as suggested by R. Taylor (1994b, p. 273). The interviews lasted from 45-90 minutes which included the time required to fill out the handedness inventory.

After the 18th interview it was determined that there were sufficient similarities and repetitions in the data to conclude that continued interviewing would probably provide no new categories. Transcripts were made from the recordings. The third self-reporting technique involved an opportunity for the participants to read the transcripts in order to add, delete, or better explain the data. The process of amplification, clarification, and correction of the data provided another data gathering technique. The data collected from this process was combined with the previously collected data and included in the analysis.

Organization of the Data

Coding process

Data was grouped into categories using a coding process as described by Strauss and Corbin (1990). The coded interviews were reviewed by a panel of three independent researchers all of whom agreed with the coding scheme. The coding

process is an organization of the data according to patterns that emerged from the data and subsequently identified by the researcher. The investigator functioned as a research instrument by utilizing prerequisite pattern recognition, grouping, and categorizing abilities in order to organize, analyze, and interpret the data and then to refine the coding scheme.

The first step in the coding process was to identify as many categories as possible in order to provide a rich description of the data. A hierarchy was established in which patterns were nested or subcategorized in an outline form. Finally, patterns between categories were identified in order to develop summary statements. The summary statements were used for the broadest categories in the scheme. The coding scheme that was used to organize the data is listed in Appendix A. The selection of data was based on a decision to sort the participants' statements within the coding scheme in order to support the analysis process. A progression of quotes is organized ranging from statements concerned with social interactions to statements related to participants' view of self. The supporting statements are discussed in the Analysis of Data in the same order as the outline for the coding scheme.

External or internal control

This investigation allowed the data to fall into categories without prejudice to either the mechanistic or constructivistic theoretical perspective as discussed in the

review of literature in Chapter II. Within the review of literature Hattie's (1992, p. 107) analysis of the perspectives shows that

- (1) commonalities exist between both perspectives and differences lie in the placement of emphasis and the assignment of priority,
- (2) the perspectives are not to be mutually exclusive categories, and
- (3) researchers use a combination of items from the views in their investigations and explanations of the conception of self.

In keeping with a qualitative approach this investigation remained open to the consideration of the data for any category that emerged. The analysis of data in Chapter IV shall provide the rationale to support classifying the data into the mechanistic or constructivistic categories. The purpose of the investigation was best served by allowing an understanding of the self-concept of left handers from both perspectives. The openness to both perspectives may be considered a variation of Denzin's (1978, p. 301) methodological triangulation or data triangulation.

Chapter IV

Analysis of Data

Introduction

In order to determine the conception of self of the left-handed participants in this study, this chapter presents the findings within an organization of data that emerged from the results of the interviews. The Findings section presents the data within categories that correspond with the coding scheme in Appendix A. The findings are analyzed in the Interpretation of Data section. The data is presented within the three following categories:

- I. responses of others to the left-handed participants (social interaction noted in the writings of James, Baldwin, Cooley, and Mead),
- II. left handers' responses to others (human agency or self-regulation from the writings of Rogers, Piaget, Bandura, Blumer, and Goffman), and
- III. self-reflection and evaluation (self-esteem from the writings of James, self-feeling from the writings of Cooley, and self-feeling from the writings of Turner, 1968).

The Interpretation of Data section identifies the cognitive and affective aspects of the subjective self along with the descriptions of the various objective selves in order to establish a full description of the conception of self.

Findings

Responses of others to left handers

When the handedness orientation of the participants was noticed by others during social interaction there were certain events that occurred. The events were recalled by the participants during the interviews. The categories included expectations that others held about the participants. Many preconceptions regarding the participants' handedness orientation were also revealed. The participants recalled responses in which they were labeled as left-handed. Some expectations of others forced a situation in which the participants made decisions involving conformity.

Expectations of others

The interviews provided data that revealed the participants' explanations of how they had engaged in social interaction because of their handedness orientation. In social interactions participants named specific events that exemplified how others placed expectations on them. The statements that follow indicate expectations that were directed toward the participants:

...other [right-handed] people expect us to do some things different...like write strangely...or be awkward...[e37q]

My grandmother [who was changed from left to right-handed]...has put a lot of things in my head toward left and right [handedness]...[k325e]

Participants explained that subtle expectations that others provided could be amusing and annoying, but none told of any disparaging remarks. A participant who did not feel particularly predisposed to the fine arts remarked that

...if someone finds out your left-handed, they always say, 'Do you draw or are you creative?' [l246e]

Others expressed similar thoughts based on experiences that coalesced into generalized statements such as

...we've [referring to left-handers] heard...that people who are left-handed are more artistic...[k101n]

Some expectations were made in reference to the use of the left hand. After not being able to use right-handed scissors in the first grade, a participant remembers a teacher expecting her to simply change hands. She recalls the teacher saying

...you put them in your right hand, and they work fine. And I thought, 'No they don't work fine.' [e37q]

Another participant recalled a teacher trying to overcompensate by offering too many alternatives with the expectation that the participant would adapt a different writing technique. The participant felt that she had already exhibited a perfectly acceptable writing technique and stated,

I can remember the teacher trying to teach me several ways...to turn my paper this way or that way and trying to hold my hand a certain way...but I remember thinking, 'This is the only way I can write.' [k72c]

There were recollections by the participants of judgments directed toward the participants regarding their handedness orientation. For example, one participant felt that the teacher expected her writing to be unacceptable as follows:

...when I was learning to write my teachers would tell us that left handers don't have a nice curve, like a slant in cursive writing. [c122i]

The examples above indicate that the handedness orientation of the participants was the basis of social interaction. If participants identified themselves as artistic because 'everyone' expects them to be artistic, then the social interactions may be interpreted as a contributing influence on the objective self. That is to say that if everyone expects a left-handed individual to be creative, then one of the descriptions that an individual reveals about his/her objective self may be creativity. Yet, the participants revealed a strong resistance to allowing others to label them. The human agency involved in the process of resistance identifies activity of the subjective self. For example, participants stated that even though they were aware that others expected them to be awkward, uncoordinated, odd, or dysfunctional in any way, they expressed their exceptions to the false label.

Labeling by others

Another area within the category of 'Responses of others' combined the statements that revealed others' reactions to the phenomenon of left-handedness. The responses to the participants' handedness orientation were taken as mild kidding and

not perceived as ridicule. The participants were not offended and actually enjoyed the light banter. Some of the following are examples:

One of my buddies gives me a hard time. He says I eat like I write... [e316h]

She [My daughter] does make a remark about my writing. 'How do you read your writing,' or 'When your writing gets cold you can't read it.' [k205c]

A couple of friends have repeated the saying 'left-handed people are the only ones in their right mind' or something like that. [m97c]

Other comments directed toward the participants from right-handed individuals serve to emphatically label the participants' handedness orientation as different. Left-handers in the investigation were amused at the preoccupation of right-handed strangers to point out what left-handers obviously already know--the fact that they are left-handed. One participant humorously described the labeling process as if there was a "secret society" that lies in wait to point out the left-handed people in the world. Some of the examples provided by the participants are as follows:

Everybody seems kind of...interested...[and they say] 'Oh, you're left-handed.' You never hear anybody go, 'Oh, you're right-handed.' [k108n]

You have people ask you why you write funny. [They] want to know what it feels like to hold your pencil... [k120e]

It happens a lot in basketball because at first they don't notice...then I'll do something left-handed and they'll say, 'Nice left,' or they'll ask me, 'Are you left-handed?' or 'you're left handed.' [e38h]

Left handers think that the attention from strangers that accompanies their handedness orientation is not a burden. Yet, participants feel that they are 'on-stage,'

It might be someone at a cashier's desk saying, 'Oh, you're a southpaw,' or something like that. So people do notice. [t191c]

Preconceptions of others

Left handers have a view of how others perceive them. The participants' view of what preconceptions others hold may be viewed as a 'generalized other.'

Contrasted with the previous sections that described the expectations of others and reactions to left-handedness by others, the generalized view of others held by left handers revealed that the participants perceived they were being judged and the judgment evoked a response from the participants. The influence of the judgment of others was counteracted by the left-handed participants through the process of denial, being defensive, or rationalizing as conveyed in the following quotes:

judgment - denial

...they just thought it was awful to be left-handed...and, of course, it's not. [k30c]

judgment - defensive

I've had people who have said to me, 'You write well for a left-handed person.' They assume that right-handed people are more neater and much more legible. But I write OK. [t100c]

judgment - rationalization

They think that [left handers] are flaky and off in left field...I've heard those comments a lot...they may refer to my left-handedness as being the reason that I might have misplaced [something]...but that's a high organization skill to be able to do seven things at once. [k208,357c]

judgment - rationalization

I think that they [right handers] think we're pretty weird [spoken humorously]...but maybe they made us that way. [s491e]

The participants related that such judgments were “no big deal,” a term used several times by the participants to assure others that the judgments were not taken too seriously. Yet, the responses to the judgments by others indicates that the participants felt some need to neutralize the remarks that were attributed to others perception of them as left handers.

Forced conformity

Forced conformity was a process that most left-handers consciously avoided. Participants gave numerous examples of social pressure to change hands as described in the following statements:

...one day my parents brought in a teacher. And she said this teacher was going to teach me how to be right-handed because at that time it wasn't good to be left-handed. It was considered awkward...[k35c]

At my age...it wasn't considered quite acceptable as a child to be left-handed. So I've had many instances of people trying to change my [use of] hand at school. []

...my father had been left-handed, and then his first grade teacher changed him. I had the same first grade teacher, and she attempted to change me...she kept changing things for me. She would give me a pencil in the other [right] hand, the scissors had to be right-handed. [e134q]

...there was nowhere else to sit [the left-handed chairs were bunched together in the back corner of the room] so I had to sit in a right-handed desk. [l202c]

The participants cited lack of control as a concern when talking about forced conformity. Some stated that they lacked power and yielded to the forced conformity. Others felt like they were just trying to be accommodating and were passively relenting.

Responses of left handers to their environment

The environment is made up of other individuals, situations, and objects that provide social interaction. Social interaction that involved the handedness orientation of the participants led to various responses. Responses were made with reference to other individuals, to situations, or to use or manipulation of objects and involved the cognitive and affective aspects of the subjective self. Some of the processes may be associated with identification of the objective self when the subjective self engages in evaluation and judgments of the self.

Community of left handers

Left handers notice other left handers and may consider them as part of a community based on their handedness orientation. The process may be similar to individuals from the same city noticing each other when they visit another country. The participants expressed a high degree of comradeship toward other left-handed individuals. In the following examples an identification with other left-handed individuals is indicated:

It's weird how I notice...left-handed people. It stands out to me a lot. [e38h]

It's the first thing I notice about somebody, usually. [e123q]

I think that I pick it out before most right-handed people will. [n178q]

One participant spoke of the first time he met his spouse who is left-handed. He noticed "right off" that she was left-handed.

Accommodation

The accommodation process involves an individual's ability and willingness to cope, adapt, alter, modify, or change behavior that is associated with their handedness orientation in order to be able to interact with others or engage in certain activities. Categories were general statements regarding accommodation, adjustments during instructional or educational events, and adaptations in order to use of tools and equipment.

Social interaction--general

The participants recalled incidents involving the process of accommodation. As stated by one participant,

I think my whole life has been an adaptation...I just adjusted to the world. [w125u]

Participants used the following words in their interviews to describe their behavior:

conform, adaptation, shifting, accommodation, dealing with, coping, adjusted.

Participation in events such as having dinner with friends called for advanced planning and calculated effort. Many comments were about eating with others.

...we talked about that the last time we were eating. We [two left handers] tend to try to find a spot that we're not going to run into someone else. I usually take the responsibility [to find the spot]. [t225c]

Oh gosh, eating out I constantly always have to sit on the end of the table...and people tease me like, 'Well, there's the end.' [k389e]

I'm very considerate of everybody [when sitting down to eat] and don't just take any space. [w51u]

No participant considered any action other than complete accommodation when direct social interaction were involved. All of the participants felt it was *their* responsibility to position themselves in a way that would not inconvenience others.

One participant had to accommodate the way documents were filed. In order to keep from inconveniencing right handers the documents were purposely filed with the tops of the documents toward the left. Another participant arranged a drawer holding utensils to accommodate her husband's use of the drawer although it was inconvenient for her to use as a left hander.

Social interaction--instruction

Left handers engaging in various instructional processes have experiences involving accommodations and adaptations related to physical, psychological, and spatial orientations. Instruction by right handers calls for left handers to reverse images or think in mirror-opposites.

When people have tried to teach me [how to play pool] I had to switch things around. They would tell me how they do it, and I would...have to turn it around. [c158i]

Some participants felt that their handedness orientation prevented them from learning a task or excelling in a particular endeavor.

Tying a tie. That's backwards. I don't know how to tie a tie yet. When people try to teach me...it's different. And they'll say, 'Oh, gosh. I'm trying to teach you a different way.' [c137i]

Participants recalled situations that can be characterized as instruction of left handers by right handers on equipment *for* right handers when learning to play the guitar or

drums, learning to use golf clubs, and in a production job where the workers made fishing lures. Other instruction that participants found difficult with right-handed instruction on equipment that was not hand-specific was crocheting, batting, and bowling.

All of the participants had right-handed teachers for their writing instruction. All were aware of the position of their hands and arms while writing. They described their hand/arm position as either mirror-image or hooked. Those who hooked their arms felt that this position was inferior or awkward in appearance. Those who had a mirror-image handwriting position were proud that they were able to adapt to that particular posture.

I write just the opposite way, my hand position looks just the opposite of a right-handed person. I'm glad I don't hold my hand in a strange way. [m277c]

Teaching right handers was also a problem for some participants.

My daughter is right-handed. When I tried to teach her to tie her shoes...she just couldn't comprehend. [k325c]

I don't even try to teach right-handed people how to serve [in tennis]. [m190c]

Tools and equipment

Using tools that are manufactured for right-handed individuals involves adaptation or a change of hands for left handers. One participant told about a button located on the grip of a Sears^a power saw that served as a safety feature. The engage-button on the power saw could only be depressed by using the right hand and depressing the button with the right thumb.

I still used my left hand. It was awkward, but I was able to press the button with the side of my left, pointing finger. It was hard, but for me it was easier than trying to use my right hand. [m142c]

There were other tools that were mentioned with regularity during the interviews.

Accommodations were made in order to use scissors, notebooks, chained pens, handles on strainers, manual can openers, and printing on measuring cups. Less frequent references were made to other right-hand specific items such as coin-operated machines, cranks on paper towel or roll towel dispensers, and start-buttons on electric hand dryers in rest rooms. The latter items were not seen as being extremely inconvenient but were items that were noticed by the participants as being oriented for right-handed individuals. Selected references are as follows:

scissors

...what always got me...were...those scissors...they were all made for right-handed people, and when you try and cut paper [with the left hand], it wouldn't cut. The paper would just fold. [k220n]

notebooks

I have to take a sheet of paper out of a [three-ringed] notebook to use it...because of the round rings. [k111c]

...the spirals are a pain, so I buy special [top spiral] notebooks. [c47i]

chained pens

...the pens are stuck on the right side [of a bank teller's window], so you have to reach over and the chain lays over what you're writing. [k285e]

kitchen utensils

...and strainers with a handle force you to hold a pot in the right hand...there is no option...also measuring cups are printed so that you have to hold the cup in your right hand to read the increments. [m160c]

desks

I've adapted to using my hand without [having] any [arm] support. [c42i]

Now it doesn't bother me at all to shift a little bit and turn to one side and use a right-handed desk. [k216n]

After about 15 minutes of writing my arm starts to hurt so I just stop and rest it for a minute, but it does take a lot of concentration to keep writing when your forearm is aching. [m125c]

You couldn't have books where you could see them...and having to use your left arm on the little space was difficult. [e16q]

With a right-handed desk I...have my notebook in my lap and write [on it] that way...it's not more convenient, but it might be more comfortable. [l138e]

An additional finding was the *false* perception of accommodation by the participants. Items were named that seemed to favor right-handed people but actually were equally advantageous and disadvantageous to both right *and* left handers. The first item that was mentioned by some participants was the position of knobs on entrance doors or interior room doors (not cabinet doors). Participants who mentioned door knobs and door handles as favoring right-handed individuals explained that many doors had the door knob on the right side, and they would reach for it with the left hand. Consequently, in order to use their left hand they had to reach across their body to open a door. Their observation was correct that many doors have knobs and handles positioned on the right-hand side. With the exception of designer doors that have knobs positioned in the middle, exactly one-half of *all* doors have knobs or handles positioned on the right-hand side. (This is

determined by the fact that *any* door having the knob positioned on the right side will have the same knob located on the left when approached from the opposite side.) What was not observed by the participants is that the *same* doors approached from the opposite side have the knob or handle positioned on the left side. Because opposite sides of doors are mirror images, if an individual is disadvantaged on one side of the door, the opposite is true on the other side. In their desire to name items that posed problems for them, there were participants who erroneously attributed problems to their handedness orientation when the items were not specifically designed for either right or left-handed people. Participants named other items that had mirror-image designs such as car door handles, sliding doors, and arm rests that are equally inconvenient or convenient to both left- and right-handed individuals. Items were also mentioned that have *no* hand-specific grip such as screw drivers, jar lids, and paint rollers.

Participants' perceptions of left handers

The participants had definite ideas about left handers. There are implications that their perceptions of left handers in general were developed through projection of how they view themselves as much as from actual observation of other left handers.

...just about everyone that I've spoken to that is left-handed seems a little more creative than most [right-handed people]. [l254e]

I have a multi-task position....That's the type of organization that I have seen in left-handed people. [k347e]

...they are usually smart people. [c71i]

I find that left-handed people seem to like richer, warmer things as far as taste. [k416e]

...they're always doing stuff just to be doing it. You know, they don't have to think about it forever to do it. [k432e]

I think that left-handed people are more left-handed than right-handed people are right handed. [exxxh]

Self-appraisals of the participants

The participants reflection of their own characteristics as left handers provided data regarding the objective self. It reveals a process of self-evaluations resulting in the characterization of the participants as they reflect on their own characterizations.

Positive and negative feelings

The appraisal that individuals make of themselves has been called positive and negative self-concept, self-esteem, and self-evaluation. Participants related appraisals of themselves as left handers. Most of the appraisals of participants as left handers can be characterized as extremely positive. The words that were used by the participants to describe themselves were special, advantageous, proud, superior, out-of-the-ordinary, unique, and different. The most used descriptive words were "unique" and "different."

Actually, I kind of feel unique. It's different. In middle school...I knew somebody that was left-handed, and we'd be like, 'Yeah. We're different. We're cool. [e226a]

Although each participant expressed positive feelings about being left handed, there were some implied negative appraisals revealed. The negative appraisals were neutralized by a positive comment.

Actually, I think I have a slight disadvantage because I don't fit the same, rigid ideals that seem to be present in that field [engineering]. [c63e]

...it's kind of sad because I can't write with my right hand. I mean, it's such the norm....I kinda feel like an outcast. [c177a]

Other words that were used that may be associated with negative feelings were awkward, abnormal, confused, uncoordinated, and odd. The negative aspects of their left-handed identity were downplayed and were immediately counteracted with positive comments. Overall they had very good feelings toward being left-handed.

Cognition

The process of thinking and problem-solving was discussed by the participants. The common denominator for this category is that all believed that they, as left handers, think differently from right-handed individuals and have an ability to solve problems in creative ways.

I find that I think creative-like solutions to things, like ideas--more than just the normal, flat-out way of seeing things. I feel that I do things differently than most people...I see things differently. [e170a]

I've always looked at life a little differently [than right-handed people]...[d82e]

...because we are continually dealing with right-handed objects...we have to think backwards...more divergent thinking. [t479c]

Many believed that because they were able to think differently that they were more creative and had a deeper understanding of abstract ideas. Others felt that there was

something internal or genetic that predisposed them to think in patterns that were different from non-right-handers.

Camaraderie

The participants provided examples of social interactions with other left-handed individuals. Conversations were built around being left-handed. Similar to the category of the 'community of left handers' where left handers noticed other left-handed individuals, feelings of comradeship were described to relate how left handers feel toward friends that are left-handed.

It's kind of neat to find somebody that's left-handed, and you like to think that you have something in common. [c62i]

It can be a nice conversation piece...I'll usually talk to them about it. [n67q]

I had a teacher in high school that told me that she actually felt almost like we had a bond because we were both left-handed...so I think she kind of liked me just because I was a little different from everybody else. [l415e]

I think that left handers have a bond. [w69u]

When I taught high school, they [the students] noticed that I was left-handed...the ones that were left-handed like you to know they're like you. [s76e]

Identity

At the end of the interview the participants were asked hypothetically if they would prefer to be a right-handed individual if they could be changed instantly. All of the participants without exception expressed strong desires to remain left-handed. The participants explained that the phenomenon of left-handedness was just different enough to provide the participants with pride, individuality, and a unique identity.

They enjoyed being a little different and felt a special individuality. Some thought that they had an advantage in playing basketball and baseball. Others said it was part of their “psyche” or “essence.” Even with the inconveniences, according to one participant, the benefits of being left-handed “overshadow any possible desire to be anything but left-handed.”

Summary

The participants provided data within the interview process that was grouped into categories based on similarities of topics. The categories corresponded with writings found in the literature that was related to external and internal influences on the development of the conception of self. The last two categories were especially interesting findings because they revealed processes associated with the subjective self that are not usually emphasized in self research.

Interpretation of Data

Introduction

This section is a descriptive interpretation as contrasted to an evaluative interpretation of the data in keeping with the format of a qualitative approach and to answer the previously stated research question, “What is the conception of self in left-handed individuals.” The participants’ perspectives provided data that describes both the self-as-object and self-as-subject. There is an emphasis within the interpretation

of data on a description of the subjective self in reference to Damon and Hart's (1988, p. 9) observation that most self studies fail to properly focus on the self-as-subject.

Damon and Hart (p. 9) identified four cognitive aspects of the subjective self which are the "understanding of his or her agency, continuity, distinctness, and reflection." Feelings and emotions mentioned by the participants were used as indicators of the affective processes of the self-as-subject. The process of agency involves the autonomy of the self to actively structure experiences through calculated or mediated choices. When an individual assesses and evaluates the self the process of reflexivity is engaged. The process of continuity involves conscious actions that provide stability or sameness to the self over time. When an individual engages in processes that involve distinction, actions are taken to separate the self from others resulting in individuality.

Contrasting with Damon and Hart's focus on the participants' understanding of the cognitive aspects of self, the interpretation of data *identifies* the various processes of the self with reference to left-handedness. The self-as-object is obviously perceived as left-handed, but additional roles and labels associated with the participants handedness orientation are noted.

The discussion follows the coding scheme described in Chapter 3 and listed in Appendix A. From the assumption that the self is influenced by others, the perceptions of the participants regarding how others view them is discussed first. Second, the responses of the participants to social interaction is discussed in order to

establish the role of social interaction from the participants' point-of-view. Third, in order to understand the subjective self of left handers the processes of agency, reflexivity, continuity, and distinctness are discussed in order to arrive at the view of the self of the participants and answer the research question, "What is the conception of self of left-handed individuals?"

Interpreting the data through an inductive process is concerned with the self-as-subject and the self-as-object. By finding patterns and similarities the interpretation of data develops explanations to compare and contrast explanations within symbolic interaction perspective and the social cognitive theory.

Responses of others to left handers

The data in the following sections supports the view that the self is influenced externally by the responses of others. The perceptions of the participants of how others view them as left handers may be from actual experiences or imagined constructs. The data also reveals cognitive processing and affective descriptions from the subjective self. Whether or not their perceptions of the participants are congruent with reality, the phenomenological perspective of this investigation emphasizes the importance of the point-of-view of the participants.

Expectations of others

Based on their handedness orientation, participants named expectations that others placed upon them. Expectations can affect how one is treated during social

interaction as noted in a study by Harris and Rosenthal (1985) in which expectations of teachers regarding students affected the teachers' interactions with the students. Rosenthal and Jacobson's (1968) finding that expectations of teachers can affect the performance of students is further evidence of the power and influence of expectations within social interactions.

Significant others

Some expectations were conveyed from interactions from *significant* others such as teachers, parents, spouses, friends, or acquaintances. The data supports the view that the self is influenced by others while at the same time exercising what Bandura (1989) termed self-regulation to control external influences. For example, the teacher who expected one participant to be able to change hands in order to use right-handed scissors set up a situation that forced the participant to either change hands or discontinue the activity of cutting. The participant's response was to acknowledge to herself, a reflective process, that she could not change hands. The possible effect on the self of the participant was to first to reaffirm the left-handedness of the individual. The process may be interpreted as a confirmation of the objective self as being 'left-handed.' The process of confirmation is carried out by the subjective self. The subjective self in this example exhibits continuity by acknowledging the limitations or capabilities of the individual and using its view of the objective self (a poor, right-handed scissors user) to make a decision. As a process of agency which is carried out by the subjective self, the decision was to

discontinue the activity. Second, a decision was made by the participant to discontinue the activity without comment. The action may be interpreted as a process of passive accommodation which is also a process of agency carried out by the subjective self. Next, the subjective self evaluated the 'scissors activity' using the process of reflection. The evaluation, an action accomplished by the subjective self, may influence the individual's objective self. The objective self may take on the label or confirm the label of 'poor scissors user' from the process of evaluation.

There were additional episodes involving significant others that were recalled by the participants. The episodes may be used to confirm that left handers engage in social interactions that are based solely on or arise out of their handedness orientation. One participant told of favoritism on a baseball team because he was expected to be an advantage for the team. Another participant was initially denied a job because of expectations that she would not be able to perform a manual operation with the same precision as right-handed people. She had to convince the interviewer of her ability in order to acquire the job. Over time such episodes may serve to establish the trait of left-handedness in the objective self of the participants while activating the subjective self to confirm or deny expectations of others.

It is significant to note that social interactions with significant others involving the handedness orientation of the participants had an effect on *both* the objective self and subjective self, the subjective self engaged in a regulation or filtering of the labeling process of the objective self, and the data revealed equal

activity from processes involving the subjective self and the objective self. Filtering of others' expectations seemed to take place when incentives such as rewards and punishment were not present which supports findings by Bandura (1986).

Generalized others

Some participants made generalized statements regarding their imagination of how others perceived them. For example, participants made comments about what 'people' think about them. The use of an average accounting of nonspecific others refers to the *generalized other* from a description by Mead (1934). The comments 'people think we're artistic' or 'people think we're creative' indicate that participants have taken a few specific episodes of social interaction with significant others and made generalizations from them. The generalized other may also be an expression of wishful thinking. The participant who commented that 'people *always* say' is an example of an overgeneralization that may reflect what the participant wishes *everyone* to think.

On the other hand, participants resisted labels such as creative or artistic even though they feel that 'everybody' thinks that they are. The process of resisting perceived labels by generalized others indicates action by the subjective self. Also, the process of evaluation of one's abilities, a subjective self process, is also implied.

The category of generalized others is similar to the expectations of significant others. There is evidence of some overgeneralizing which may indicate that individuals wish to see themselves in the most favorable manner. Swann (1985)

found that individuals have a strong tendency to confirm their self-perceptions and discard information that differs from their own. There is significance in the interpretation of the data that finds equal subjective and objective self processes at work as the participants' generalized others were revealed in the interviews.

Expectations of others effect on the self

The participants provided no data to support that expectations of others had a particularly negative affect on the self conception of the participants. Harter (1990) wrote that the feedback from other people affect the self concept of children. The implication is that when confronted with the influence of the expectations of others, individuals will internalize those expectations into their conception of self. Since the data does not support this phenomenon, there may be another explanation. First, the participants were adults. The self becomes increasingly more stable as individuals mature and less susceptible to the influence of the expectations of others, according to O'Malley and Bachman (1983) and Raudenbush (1984). Second, participants may conform to the finding of Swann (1992) who found that individuals tend to filter information in order to confirm what they already believe about themselves and Coopersmith (1967) who found that individuals minimize negative distortions from appraisals of others. Therefore, the positive aspects of being left-handed possibly overshadow or neutralize the any negative effects of the expectations of others.

Preconceptions of others

Preconceptions of others are an external influence on the self and involve a judgment by others through their assessments and evaluations from a right-handed perspective. Within the data that involved preconceived ideas of others, participants felt some pre-judgment by others because of their handedness orientation.

Participants provided examples of preconceptions that others held toward left-handedness which the participants sometimes characterized as unfairly judgmental. Statements in this category represented only the generalized other and were notably accompanied by a response by the participants. The process of responding to the preconception is an agentic function of the subjective self and serves to counteract a perceived labeling of the objective self by the generalized other. Responses that the participants made and reported in the section entitled "Findings" were denials, defenses, rationalizations.

Managing preconceptions involved an evaluation by the subjective self of the objective self. The responses included acceptance or denial of the preconceptions of others. Implied in the denial of preconceptions of others was an internal confirmation of the objective self involving evaluation, a reflexive process of the subjective self. The significant interpretation in this category is that the cognitive processes that take place within the subjective self seemed to be invoked when the objective self is questioned or threatened.

Forced conformity

Forced conformity as revealed by the participants was identified in the data when participants explained that others tried to change the handedness orientation of the participants or when the participants were confronted with having to change hands in order to use tools or equipment designed to be used by the right hand. Most of the participants were not a victim of forced change by others, but nearly all *knew* of a particular situation that involved a left hander being forced to use the right hand and were very eager to tell about the event. The fact that most participants easily recalled forced conformity is significant because it shows that the event made an impact on the participants. The recalling of a significant event may also indicate a concerted effort by the participants to maintain the objective self as left-handed.

Some participants felt that the action of changing their handedness orientation was similar to taking away part of their unique identity, their individuality. This supports the view in the literature exemplified by Festinger (1957) that the self develops a consistency or internal accord over time and resists change. Other participants felt that forced conformity was a negative reaction to their handedness orientation and resulted in a reevaluation of their worth as left handers. Participants indicated that the perception of negative reactions of others did not cause them to think negatively toward themselves and none indicated any long-term negative effects on their conception of self. The external influences that were perceived as forcing the participants to conform to a right-handed situation were the single most assault on the

identity of the participants. There was universal expression of extreme resistance to forced conformity.

Within a symbolic interaction perspective and from Mead's description of the effects of social interaction on the development of self conception, it is expected that individuals would adhere to the conforming demands of others. Therefore, it is very significant that in the area of self that is concerned with left-handedness identification there is a strong resistance to conformity. Since changing the use of the hand in order to perform certain tasks is equally mentally and physically difficult for right or left handers, the strong resistance to change could be explained as an avoidance of an unpleasant physical maneuver. Participants, however, revealed that there was more to their resistance to changing hands than the avoidance of discomfort. The significance of their resistance was that they felt that part of their uniqueness was being taken away. Of equal significance is that the agency process of the participants resulted in their maintaining consistency and distinction.

Responses of left handers to the environment

From a symbolic interactionist perspective the data indicated that individuals develop a conception of self as a response to social interaction. Within a social cognitive theoretical perspective the cognitive processes that regulate the external influences of social interaction were clearly identified and implications of their influence on the conception of self is noted. From a phenomenological perspective this section interprets the data that is related to how the participants responded to

others during social interaction involving circumstances associated with the participants' handedness orientation. It also addresses any cognitive action that manages the external influence through self-regulatory processes.

Community of left handers

Participants exhibited curiosities or urges that prompted them to notice and even seek out others who are left-handed. With reference to bowling, one participant expressed a strong curiosity for observing the technique of other left-handed bowlers. The curiosity may be seen as having a practical benefit of improving the technique of the participant. Other participants looked for left handers in sports like baseball, basketball, and golf but did always use their observation to compare or improve their techniques. Many others mentioned either a curiosity or an urge to look for left handers in public gatherings such as classes or cafeterias.

Seeking out others who have similar traits may be interpreted as satisfying the need to belong as described by Maslow (1959). Even though the participants felt positively about their individuality with respect to being left-handed, there was a strong indication that importance was placed on being part of a group of left handers. This was evident in the participants' willingness to, at times, seek out strangers, an agentic act, who were left-handed and compare their experiences with reference to being left-handed. The process of reflexivity may be implied. Identification with others having similar traits may indicate the process of confirmation or reinforcement of the self. The feeling of being part of a community of left handers may be

categorized as an affective process of the self-as-subject. Also, the identification of oneself as part of a group of left-handers is an act that of confirmation of the objective self as being left-handed. Without previous contact, it is significant that the participants considered strangers to be part of a community of left handers with the assumption that they have had similar experiences and presumably hold the same ideas because of their handedness orientation.

Accommodation

The accommodation process involves an individual's ability and willingness to cope, adapt, alter, modify, or change behavior in order to be able to interact with others or engage in social activities. The data indicated that the process of accommodation may involve interactions with others or interaction with inanimate objects. The process involves an individual's judgments and subsequent decisions of how best to proceed in a situation that poses a social or physical barrier based on an individual's handedness orientation. The accommodations mentioned by the participants involved both active and passive compliance.

Accommodation during social interactions

Social interactions that were affected by the participants' handedness orientations involved sitting with others at a dining table or in a few instances to write. The consensus was that the participants felt that it was their responsibility to sit in a position that would not inconvenience others. There was no agency action revealed by the participants to express their individuality by assertively sitting in a

choice spot that might inconvenience others. The active, calculated effort to accommodate others may be interpreted as relenting to others' expectations, avoidance of attention or uncomfortable physical contact, and/or an act of prosocial behavior as described by Ormrod (1995). The situation may also may be interpreted as a passive, compliant act arising from perceived social mores that moved the individuals to maintain their good relations with the group.

Since several participants felt that they were in the minority and that the problem was theirs alone, there is an indication of a process of evaluating ones worth in relation to others. No one felt such high social standing or such high self-worth that the comfort of others was overlooked. Participants labeled themselves, a process of reflection by the subjective self, as easy-going, considerate, and helpful in addition to the word 'accommodating' which revealed their perception of the objective self.

Accommodation during instructional interaction

Receiving instruction from right handers involved reversing the fingering when learning the guitar, reversing the grips and swing in tennis and golf, and reversing the grip and pivot hand in pool. Though not specifically mentioned, the same reversing process would be true for the grips for bowling, batting a baseball, and throwing a baseball. The possible labels that develop to describe the objective self are 'left-handed bowler,' 'left-handed batter,' and 'left-handed pitcher' and become part of the objective self. It is implied that the attention placed on the left-handed

orientation of the participants in these social interactions is unavoidable because the very nature of the event is dependent upon the use of the extremities.

There were also no choices available to the participants who wished to learn from an instructor who was right-handed. Those who were able to adapt were able to successfully learn a particular skill. Not being able to learn a skill because of being left-handed was expressed with the words "inadequacy" and "inability" which imply self-judgment, a process of reflexivity of the subjective self. Participants were readily able to describe their objective self in terms of their ability to adapt. Descriptions such as "poor-at-crocheting," "an OK bowler," "artistic," and "a pretty-good slugger" are examples of the perceived role of the objective self that emerged from the social interaction of instruction from a right-handed perspective.

Writing instruction occurred at such an early age for the participants that there are less details than were revealed to describe other events. Physical adaptations are apparent in the handwriting of the participants since most modeling of handwriting is done by right-handed teachers. All were able to describe their handwriting position as either being a mirror-image of right handers' or being "hooked." Some of those who described their writing as hooked felt this was an inferior or less socially acceptable hand position revealing a judgment. The judgment of their hand position implies a comparison to right-handers' hand positions which is a reflective process engaged by the subjective self. The standard for their comparison was the right-handed position. The data suggested a perception by the participants of some social stigma regarding

their writing with their arm in a hooked position. Some attributed their teachers as the origin or source of the hooked style of writing. Others attributed the hooked style as a natural feel that they developed. In either case the hooked position of the hand/wrist/arm was contrasted with the style of right-handed writers and involves a judgment as to how well the position of the arm fares with respect to right handers.

Tools & equipment

Instances were noted in which the participants had to adapt physically in order to use tools and equipment designed for the right handers. Because left-handed scissors were not available some left handers learned to use the right hand for cutting. Many felt that since they had learned to use the right hand for tools and equipment that they exercised more overall adaptability than those who did not. Most participants had a mental list of items as noted in the sections entitled "Findings" for which they had adapted the use of their right hand in order to use the mentioned items. The fact that those participants easily recalled various right-handed tools and readily referred to a fairly detailed mental list of objects indicates their awareness of their difference from right handers. Their awareness indicated a process of reflexivity and possible labeling of the objective self as different.

Significance of accommodation

The significance of finding a somewhat universal behavior of accommodation is that the participants assigned the responsibility for this action to themselves. Secondly, the participants expressed a view of the objective self as being a person

who is more socially and physically adaptable than the average person. Finally, the comparisons of themselves with others during accommodation indicates the processes of reflexivity, self-confirmation, and distinction, all of which are actions of the subjective self.

Participants' perceptions of other left handers

The participants had preconceived ideas of other left handers. Overall the participants felt that left handers were more accommodating, artistic, and creative than others. Ascribing common traits to all left handers may have been an expression of 'conventional wisdom' rather than being based on experience. Participants used conventional wisdom to rationalize that if *they* had to adjust to numerous situations because of *their* handedness orientation that it would follow that *all* left-handed people had a trait of being accommodating toward others. If so, then their view was a projection of the way they felt about themselves to the way they feel about all left-handed people. It may also have been a way of presenting themselves in the best possible manner. This may be interpreted as the cognitive process involving the maintenance of self-consistency where an individual chooses to remember experiences that provide support of one's values and reject experiences that are inconsistent with the values that they hold. This interpretation supports Festinger's (1957) cognitive dissonance theory where individuals try to establish internal harmony and consistency with respect to the values they hold and how they view themselves.

The significance of the way that the participants viewed other left handers is that their view was extremely positive. There was no indication that they felt that left handers as a group were at a disadvantage or being unfairly treated. The participants did feel that left handers had to exert more compliant behavior in order to get along with others and with the situations that they encountered, and they felt that left handers had developed better social and mental attitudes because of these actions.

Self-appraisals of the participants

The view of oneself is a reflective process engaged by the subjective self describing and evaluating the roles and traits of the objective self. This section is not an analysis of *how* the participants' arrived at their view of self which has been attributed to mediation and negotiation during social interaction with others (Mead, 1934 and Blumer, 1969), but rather it is an interpretation of the descriptions of the view that the participants have of themselves. There is some evidence that the view that the participants hold of themselves is the view that they perceive others to hold of them which serves as a confirmation of their conception of self. Most self-appraisals are descriptions of the objective self, so there is a special consideration of identifying any indications of the processes of the subjective self.

Positive and negative feelings

The participants expressed a high regard and self-worth for themselves as left handers. They attributed their positive feelings to the fact that they felt individuality and uniqueness because of their left-handedness. Some had very positive feelings because they were treated well by others in sports in which they engaged. Some felt extra-ordinary, special, and unique because of the extra attention that was given to them by others. The attention was just enough to make them feel special but not odd. Left handedness may be interpreted as being different to the point that it provides positive feelings associated with individuality and uniqueness but falls short of being so different that others would stare at, unfairly discriminate, or ostracize left handers. The positive feelings expressed are an indication of the process of the affective domain of the subjective self and the description of being a good person is a role description of the objective self.

Accommodating behaviors

Some participants thought that their overall attitude was shaped by the considerable amount of accommodations that they had to do all of their life. The view of themselves as individuals who make daily decisions to adjust socially with others or to be able to work with certain physical inconveniences is a basis of their overall positive self-regard. Social accommodations are agentic actions that serve as investments in which they draw upon to assure themselves that they are people who choose the right social actions which defines part of their objective self.

Ormrod (1995, p. 144) associates field dependency with a sensitivity of individuals to being more tactful and considerate with respect to their relations with others. Hicks and Pelligrini (1978b) characterize left handers as field dependent in correlation studies which implies a susceptibility to external controls. There is little evidence from the data to support the view that left handers more externally controlled than non-left-handers. There is significance in the interpretation that left-handed individuals accommodate socially in order to confirm their positive attitudes toward themselves.

Cognition

Many participants felt that they, as left handers, had different thought patterns from non-left-handers. This may be interpreted as rationalizing their bazaar or unconventional behavior. It may also be interpreted as rationalizing behavior that is more creative than what is normally expected. It is difficult to separate the individuals' views of themselves from the view that they feel others hold regarding cognition. Since some of the participants thought that their behavior was unconventional, their description may be an internalized view that originally came from others. From the statement, "I think weird," (i.e. the person thinks strangely) that was followed by the statement, "Everybody always says that to me," the objective self has acquired the role of 'weird-thinker' from either (1) the statements of others (a confirmation of self) or (2) a comparison of oneself to others (an evaluation of self). While this example could have been categorized in the section "Responses to

others," it is a statement of how the individual views the objective self whether the origin is from external influences or internal processes.

Some participants felt that their creativity was due to a different way of thinking from non-right-handers. None of the participants was a professional artist or worked in a profession where the job description was based on creative productions. There was a conspicuous absence of attributing their perceived creativity to learned behavior through formal or informal instruction and subsequent practice. Rather than attributing their creativity to their own volition, the participants believed, instead, that any creativity above what is normally expected was due to their left-handedness.

Those individuals who ascribe ability to their own effort have a high degree of internal control (Rotter, 1966, p. 1). By not attributing their creativity to their own efforts the participants displayed the reliance on a factor beyond their control, being left-handed. Field dependency is associated with external control implying a tendency to be controlled by others or forces external to the agentic efforts of the individual. Garrick (1978) associated field dependency and right hemispheric functioning. This finding may indicate a weak support that left handers may tend to be more externally controlled.

Another, more conservative interpretation of creativity being attributed to left-handedness rather than the individual's own action is that the context of the interview focused on left-handedness and overshadowed other data from the participants. The participants may have selectively omitted the idea that skill practice may also have

been a factor in their creativity. The significant point is that left handers felt that they were more creative than others because of their left-handedness.

Camaraderie

As the participants perceived other left handers as part of a community of non-right-handed people, they also saw themselves as part of the community. The special bond with others who are like them is an expression of a desire to belong and to assure themselves that there are others like themselves who have the same thoughts, traits, and inconveniences. The camaraderie feeling is invoked when coming into close social interactions with other left handers. Conversations were recalled that were engaged based upon talking about being left handed. Seeing oneself as part of a fellowship of left handers has significance if interpreted to show that subgroups based on commonalties are important to individuals. The active positioning of the participants in order to interact with other left handers is an act of agency that controls the external environment of the self.

Sense of place--identity

Left handers feel a sense of place in which they feel comfortable and secure. The strong negative responses to the thought of being changed to a right-handed person indicates the process of distinction that provides an extreme satisfaction by the participants with their sense of place or identity. Left handers' sense of place is very significant when considering it serves to set them *apart* from most of the population

including members of their own family and close friends even though there is a need to belong to such groups. Since there are other ties that continue the bonds with family members and close friends, it is significant that such closeness needs some form of separation that the trait of left-handedness provides. It is significant to note that while individuals have a strong need to belong to a group there is an equally strong need to express and maintain individuality.

Summary of interpretation of significant findings

The data revealed equal activity from processes involving the subjective and the objective self during social interaction involving the handedness orientation of the participants. Human agency, reflexivity, continuity, and distinction within the cognitive processes of the subjective self enabled a self-regulation with respect to the expectations and preconceptions of others and during events of forced conformity and labeling. The process of regulating the effects of expectations, preconceptions, labeling, and forced conformity resulting from social interaction was exhibited by an extremely strong resistance against the social influences on the conception of self.

The agency process of resistance may be interpreted as a response to the threat of losing some aspect of distinctness and continuity of self. The process of maintaining individuality serves to provide continuity for the conception of self. Another interpretation is that the perception of positive qualities associated with being

left-handed overshadowed numerous negative associations expressed by others in their expectations and preconceptions.

Cognitive processes that take place within the subjective self seemed to be invoked when the objective self is questioned or threatened by preconceptions of others. The significance of their resistance was that they felt that part of their uniqueness was being taken away. Of equal significance is that the agency process of the participants resulted in their maintaining consistency and distinction.

The participants considered left-handed strangers to be part of a community of left handers with the assumption that they have had similar experiences and presumably hold the same ideas because of their handedness orientation. The labeling of oneself as part of a group indicates the need to belong, yet at the same time serves to provide individuality from the general population. Seeing oneself as part of a fellowship of left handers has significance if interpreted to show that subgroups based on commonalties are important to individuals. It is significant to note that while individuals have a strong need to belong to a group there is an equally strong need to express and maintain individuality.

Labeling of oneself is a process of reflection and continuity engaged by the subjective self has an affect on the development of the various objective selves. Some of the labels that were used to describe the objective selves by the participants were "easy-going," "considerate," "accommodating," and "helpful." The significance of accommodating behavior is that the participants assigned the

responsibility for action to themselves. Secondly, the participants expressed a view of the objective self as being a person who is more socially and physically adaptable than the average person. There are implications of a great amount of comparison between themselves and others during accommodation which may indicate the process of self-confirmation. Overall, the participants felt that they had developed better social and mental attitudes because of the accommodations that were made throughout their lifetimes. As a result, some thought that left-handed people could be trusted more than others, all other things being equal.

The positive feelings expressed regarding their handedness orientation are an indication of the process of the affective domain of the subjective self, and the description of being a "good," "neat," adaptable," or "easy-going" person is a role description of the objective self. Left handers may be motivated to accommodate in social situations in order to confirm their positive attitudes toward themselves. Some participants acted in an accommodating manner because they wished to be considered an accommodating person by themselves and others. There is a hint of impression management that may reflect the desire to be considered a good person. With respect to the objective self, accommodation was the most frequently used descriptive word.

Further insight into the reflexive view of the participants revealed that most believed they were more creative than others due to their left-handedness irrespective of any formal training. The idea that there is some innate quality that allows an extra spark of ingenuity or unique problem-solving ability in left handers may be a product

of social interaction involving rumor, innuendo, and lay interpretations of findings in the literature of handedness studies. Most believed that left handers had different thinking processes from non-left handers. Their justification was a belief that they used part of the brain that non-left handers did not use. Whether or not their justifications are correct, and most of the reasoning that was expressed relied on very shaky evidence, the overall selection of qualities with respect to their handedness orientation indicates a very positive conception of self.

Chapter V

Conclusions, Implications, and Summary

Conclusions

A descriptive interpretation of the conception of self of the left handers who participated in this study was derived from the data by identifying the subjective as well as the objective aspects of self. The objective self was identified using the words from the self-descriptions of the participants along with implied descriptions from events and processes that the participants revealed. The description of the subjective self was constructed from the identification and interpretation of (1) the cognitive processes of agency, reflexivity, continuity, and distinction and (2) the affective processes that involve feelings and attitudes. While the objective self was easily identified using descriptive words from the participants, the subjective self was an implicit construction that was revealed by identifying the cognitive processes involved during social interaction.

The objective self

The *objective self* of the participants is first described as left-handed. The left-handers also have a loose identification with a 'community of left handers' that share similar feelings, attitudes, and problems. There are collateral meanings of the

objective self as being left-handed. Left handers are accommodating toward individuals, groups, and situations. There 'accommodating self' of the left handers in this investigation was found to be

- (1) sensitive and respectful toward others and socially oriented having easy-going attitudes and compliant behaviors,
- (2) responsible for their situation,
- (3) willing to change perspectives,
- (4) have the ability to adapt, adjust and cope with inconveniences and misinformation, and
- (5) easy-going and compliant with the wishes of others in situations where the conception of self is not unduly threatened.

Another objective self that the participants expressed was individuality based upon their handedness identification. The individuality of the participants is described as persons who, because of their left-handedness are

- (1) unique,
- (2) special,
- (3) unusual, and
- (4) different.

On the other hand, the objective self described as 'individual' was *not* perceived by the participants as (1) odd, (2) strange, or (3) peculiar.

The objective self of left handers in this study is very positive with respect to their abilities. Left handers in this study are people who

- (1) are proud of their ability to use the left hand and would not change given the hypothetical possibility,
- (2) express advantages in sports, and
- (3) have a feeling that their abilities are natural, innate, and more creative than non-left-handed people.

A somewhat elusive description of the objective self of left handers in this study may be described as persons who use conventional wisdom (i.e. wisdom not necessarily corroborated by facts) to express beliefs about themselves. The left handers believe that they

- (1) are 'different thinkers,'
- (2) have an innate quality to be creative, and
- (3) are above-average 'thinkers' and are otherwise mentally different (albeit in a positive way) from others.

The subjective self

The *subjective self* of left handers in this investigation is interpreted as engaging in identifiable cognitive processes involving agency, reflexivity, continuity, and distinction. The subjective self exhibits a high degree of agency with respect to handedness orientation as evidenced by an active control that counteracts unfair or uninformed expectations and preconceptions of others. The subjective self with

respect to left-handedness is a regulator of external influences. Whether engaged in passive or active regulation of social interactions involving expectations and preconceptions of left-handedness, the agency process invites a description of the subjective self with respect to left-handedness as engaged in actions of extreme resistance. The actions of extreme resistance from the data are as follows:

- (1) protective of the established self-evaluations and self-appraisals of the left-handed individual,
- (2) unwilling to take on descriptions of others from casual social interaction,
- (3) highly alert to situations of forced-conformity with respect to their handedness orientation.

The subjective self of the participants was also interpreted as engaging in reflexive processes identified with self-evaluations that regulate the influence of the conceptions and preconceptions that others had on the participants. The reflexivity of the subjective self of the left handers was highly involved in instantaneous, evaluative decisions. When evaluative decisions were engaged during certain social interactions self-judgments were placed on the individuals as a left handers. The participants were constantly reflexive during social interactions where both incidental and concerted judgments by others were made regarding their handedness orientation. During the process of reflexivity, the participants compared the judgments of others with their own judgments of self. The cognitive processes that occurred were mediation, negotiation, or ignoring the judgments of others.

The subjective self of the participants in this investigation is also characterized as engaging in the processes of maintaining a continuous conception of self and distinction from others. The left-handed participants engaged in cognitive processes that are interpreted as seeking out, soliciting, and holding to the positive qualities that are expressed by others regarding left-handedness. The subjective self counteracted and rejected negative qualities ascribed by others that disrupted the continuity of the self as a left hander. The subject self engaged in processes that maintain distinction of the self from others in the area of left-handedness in which the quality of being left-handed provides a positive separation from others. The affective aspect of the subjective self coincides with the cognitive processes. Evidence from the data concerned with the affective aspects of the subjective self may be described as the positive feelings and attitudes toward being left-handed. The positive feelings and attitudes accompany agency action, self-evaluations during reflection, and the processes that enable the continuity of the self and distinction and individuality from others.

Implications and Recommendations

The objective self of the participants in this investigation is described as being a left-hander. They assigned meaning to their handedness orientation that is not usually found in individuals who are not left-handed. The numerous additional meanings associated with left-handedness are products of the influence of external

forces derived from social interaction and the internal processes of agency, reflection, continuation, and distinction of the conception of self. The impact of the conception of self of left handers with respect to learning and education may be outlined within the assumptions of social cognitive theory of learning. Ormrod (1995) names the assumptions as follows:

- (1) People can learn by observing others.
- (2) Learning is an internal process that may or may not result in a behavior change.
- (3) Cognitive processes play a critical role in determining what is learned.
- (4) Behavior is directed toward particular goals that people have set for themselves.
- (5) Behavior eventually becomes self-regulated.
- (6) Reinforcement and punishment have several indirect effects (rather than a direct effect) on learning and behavior.

Learning by observing others

Contrasted with a behaviorist's view of learning, individuals may learn simply by observing others. A left-handed child is slightly disadvantaged during the most vulnerable part of schooling and self-concept formation. Children entering formal education in either a pre-school or kindergarten setting usually have right-handed individuals for models. At the pre-school and kindergarten age children according to Piaget and Inhelder (1969) are in the preoperational stage of maturity. Modeling by others is very important consideration at this age where the conception of self is less stable. If a child is properly trained and appropriately praised with respect to learning

that is associated with and accompanied by left-handedness, then their handedness orientation would provide no negative effects on the conception of self. Improperly informed role models who could be teachers, parents, and instructors in the areas of sports and music may provide negative external influences on children. Even peers who laugh or ridicule an individual because of handedness orientation are sources of negative influence on the conception of self.

From the strong identification with being left-handed that the individuals in this investigation expressed, it is implied that other minor physical, social and mental differences are melded into the objective self of students at an early age. Since humans have a capacity for absorbing into their conception of self such a variety of identities and at such an early age, those who work with children must be sensitive to the small, seemingly inconsequential differences that children feel are part of their essence. A child with well-informed models may develop a positive self-image with respect to cultural background and ethnicity. With respect to children who have decreased social, mental, and physical capabilities, teachers who are aware of the impact of those limitations on the conception of self may find areas within the range of abilities of students from which they can build a positive self-regard. Without a sensitivity for the effects of differences in students that label them and place them in a minority position, teachers risk providing inadequate or even harmful experiences for students. Inadequate and harmful experiences may linger in the conception of self as

poor attitudes in achieving goals or working with others, feelings of inadequacy, and self-evaluations that are expressed as lower than expected self-worth.

Internal process of learning

Learning may not be immediately observable although individuals have processed information that may be used at a later time. Left handers encountered may experiences from which they learned. Many learned that they were accommodating when compared to others. The 'accommodating self' developed after several encounters with situations in which the individuals had to react with adaptations in order to meet a goal. Some left handers had to draw upon several situations that occurred in a disconnected series of events from which a conclusion of self-worth or positive self-regard was drawn. The events by themselves did not provide the left handers with a behavior change. There was a process of formulating a conclusion based on an analysis of separate events.

The example above implies that individuals may show the effects of learning in their conception of self long after the events occurred that provided the experiences. Teachers who view learning from a behaviorist position may expect immediate behavior changes. Using the social cognitive assumption that is illustrated in this investigation with respect to the processes of learning within left-handed individuals, those who teach may not always be able to observe a behavior change immediately after a teaching episode. Some effects of learning on the conception of self may not be observable by those who are responsible for the educational

experiences encountered by students. The long-term consequences that each individual has on the conception of self of others is important. It should be understood by those who attend children that effects of social interaction, whether good or bad, may not immediately observable.

Cognitive processes and learning

The participants in this investigation revealed numerous examples of the cognitive processes of agency, reflection, continuation, and distinction of the self. Cited above in the assumptions of Ormrod the "critical role" of cognitive processes on learning is to provide a filtering process of the external influences of social interaction. Left handers were able to retain positive information and discard negative information with respect to their handedness orientation. The cognitive processes are much less developed in children. As a consequence, children do not have the full ability to decide on which information from others is crucial and which is unimportant.

The implications for very young children is that they may not recognize the difference between mild and severe reprimands. They may not understand the difference between a quiz and an achievement test. Children do not have the full ability to exercise agency to counteract scolding or ridicule. They have not developed sufficient reflexive qualities for certain situations that require their reconstruction of previous actions in a way to benefit from past experiences. Their continuity of self is continuously interrupted as new information is absorbed during social interaction, and

what makes them distinct from others may be fragile. Consequently, the influence of others on their conception of self is potentially very extreme. It is recommended that teachers and parents recognize that children are not able to discard or defend against assaults on their conception of self. Skills that protect the conception of self could be taught by setting up situations that are not overly competitive, planning for activities that each student can be successful, and providing individual recognition for students no matter the range of abilities encountered.

Since the participants were mature the experiences that they relate regarding their childhood were those that they remember as having made the most impact on them. The act of pulling away part of their identity was the greatest single memory revealed and was a formidable assault on their conception of self. The participants had a common recollection of events in which their handedness identity was assaulted. While many events in childhood are forgotten, the participants recalled vividly those situations that affected their handedness identity. Many knew that they did not have the power to act because they were so young. The implication for teachers is that assaults on the identity of young people are a very memorable if not traumatic experience. Ethnicity, physical traits, and general abilities must be accepted. Where changes are prescribed, the impact of the changes must be calculated and adjusted in order to prevent an unintentional violation on the harmony within the conception of self.

Behavior directed toward goals

Left handers as individuals have personal goals of attaining well-being, of having a high self-worth, of feeling a high self-regard toward their abilities, and of establishing some type of distinction. The participants in this investigation had the ability to use the left hand. This simple act provided a source of positive feeling than enabled them to meet the personal goals of establishing distinction and high self-worth. There is no doubt that the individuals had other characteristics that helped them meet their goals, yet left-handedness remained an ingredient for their success in meeting their needs, even in adulthood. The strength of possessing this unique difference was substantial and was revealed by the rich experiences that surrounded their social interactions involving their handedness identification.

Through the use of a hand that others do not use the participants were able to satisfy needs and attain goals. The implications lie in the fact that if a seemingly inconsequential physical and mental ability such as being left-handed provides a positive conception of self, there should be additional sources of positive effects on the self. Teachers have fertile ground for finding similar, seemingly insignificant, unique qualities in children from which personal goals may be attained and a positive self-conception developed and maintained.

Self-regulation

The left handers in this investigation revealed a high degree of self-regulation. As left-handed individuals mature they tend to be increasingly more self-regulating

through the use of cognitive processes. Additionally, the participants told of experiences in which the self-regulating process of human agency was expressed at an early age. Resistance to external influences is an agentic act and serves to provide continuity to the conception of self. For example, those situations where left-handedness provided an obstacle to using tools and where there were social interactions that produced anxiety or other discomforts, the participants exhibited some degree of accommodation. Being able to accommodate enabled the participants to assess and evaluate themselves in a positive manner. With respect to the expectations and preconceptions of others, left handers asserted their internal regulation of negative external influences on the conception of self.

Several situations were revealed that indicated that even in childhood the left handers in this investigation had an unexpected capacity of self-regulation with respect to being left-handed. Although it was not fully developed, the self-regulation balanced out or filtered actions from others that may have been harmful on their conception of self. It is recommended that teachers need to be aware that resistance and uncooperative behavior may be an expression of self-regulation as a response to a threat against the stability of the self. It is also recommended that teachers learn the world of the student when a high degree of resistance is encountered since resistance is an act that preserves the existing conception of self.

The roles of reinforcement and punishment

Social cognitive theory recognizes an indirect rather than direct role of rewards and punishment with learning. The expectations that the left-handers in this study held regarding the actions of others affected their cognitive processes. For example, left handers expected to be the ones who had to accommodate others. They also expected more inconveniences in their environment than actually occurred (i.e. when items were mentioned as being oriented to right-handed individuals when, in fact, they were not). The expectations of probable future inconveniences masked over the reality that some situations were equally inconvenient to both left and right handers. The social cognitive theory would explain that having been 'punished' with certain inconveniences that left handers in this investigation come to expect more inconveniences than actually occur. On the other hand, the distinctiveness that accompanies left-handedness was expressed as a positive reward associated with the phenomenon. There was an expectation of the participants that the future would bring continued good feelings from the individuality that arises from being left-handed while at the same time the future may continue to provide certain inconveniences.

With respect to the social cognitive theory of learning, rewards and punishment (created by teachers and parents) may affect the cognitive processes and, hence, the conception of self in children. In addition, children's cognitive processes affect their future behaviors and self-conception. There is a phenomenon of interdependence of actions and reactions called reciprocal causation by Bandura

(1989). Each action and set of learning experiences of teachers affect the future episodes encountered by students. The connections between the personal influence of the teacher, the strategies used for teaching, and the interrelationships of the students form an interconnected environment where no action is completely separated from those that occur before. Since there is an interdependence between students' actions and reactions with those of the teacher, the instruction, and the curriculum, it is recommended that differences that occur between students, such as left-handedness, should be an integral part of lesson and curriculum planning.

Implications for teaching left-handers

The data in this investigation indicates that there are several ways in which teaching left-handed students can be improved in the early grades. The recommendations are as follows:

1. Allow left-handed students to be left-handed and do not try to make them right handers. Expecting a child to simply change hands in order to use right-handed scissors can be a difficult task. Similarly, expecting left-handed children to adapt to various implements by using the right hand may cause unnecessary inconveniences or in extreme cases a block in their learning of certain tasks. Handedness orientation is so strong that children should not be asked to change.

2. Children who are learning to write should be shown how to write in a position that is a mirror-image of the position of right-handers. There is no need to position the hand, arm, pencil, paper, or desk in an extra-ordinary manner. A simple

mirror-image will result in a comfortable, natural position of the hand and arm.

Teaching left handers by modeling a mirror-image position of right-handers should not be difficult. If the hand and arm is placed in a mirror-image position, then the formation of the letters can be copied from the teacher who models writing on the board for either handedness orientations.

3. Acknowledging left handers is a positive experience for children and serves to provide them with individuality. The data shows that positive feelings toward their left-handedness orientation began in childhood.

4. Teachers should be aware that children who are left-handed are not predisposed to pathological conditions. For example, if a child happens to be dyslexic and left-handed the literature reports that there is no correlation. Teachers should not expect pathological conditions in left handers at a rate higher than for right handers.

5. Left handers should not be separated from non-left handers in a classroom. Such grouping may stigmatize children that need only slight adjustments in teaching habits and awareness of the left-handedness experience.

6. Left handers may need more time to figure out how to adjust to a small amount of psychomotor activities especially if the activities involve implements or tools that are designed for right-handed individuals. Learning to adjust develops self-efficacy that has been shown by Bandura (1993) to decrease stress by developing the ability to cope with anxiety.

7. Music teachers should be aware of the handedness orientation of students which may affect their learning a skill. Drums (a trap set) and stringed-instruments have to be changed if played from a left-handed orientation. Similarly, physical education involves skills that if taught from a right-handed perspective would have to be changed for left-handed students. Batting, throwing, tennis, billiards, and archery have different orientation although the implements are the same as for right handers. Catching, bowling, and golf require left-handed gloves, bowling balls (if drilled on a slant for the fingers), and clubs, respectively. Left-handed deaf students may also need more time during signing instruction in order to sign in a mirror-image of right-handed teachers. Even computer teachers need to be aware that a right-handed mouse may be awkward for a left-handed student to use.

Part of the teachers role is to provide a little more time and encouragement to left handers when their handedness orientation is a factor in their learning. Teachers should encourage left-handed children to be left-handed and take advantage of the positive conception of self that develops from the small distinction that separates left-handed individuals from the majority of individuals.

Summary

In order to provide a descriptive analysis of the conception of self in left-handed individuals the subjective and objective aspects of self were identified from data obtained from open-ended interviews. The fields of self-concept and handedness

research have traditionally been approached using quantitative methodology. This investigation used a qualitative approach that enabled an equal emphasis on (1) the subjective self, an area that is omitted in most self-concept studies, and (2) the objective self.

Handedness investigations have focused on variables having negative associations in order to find a correlation between items such as dyslexia, allergies, reading difficulties (to name only a few) and left-handedness. Even with published findings showing that no correlation exists between variables that were chosen from pathological conditions, researchers have continued their predisposition toward viewing left-handedness as being associated with a variety of maladies. A perception of the participants was that left-handedness is viewed by non-left handers as something strange and social interactions occur because of individual's left-handedness orientation. From the data it was revealed that the conception of self of left handers in this particular study was influenced through social interaction. The perceptions and preconceptions of others regarding the trait of left-handedness was an external influence on the development and maintenance of the conception of self of the individuals.

The participants in the study provided an assortment of data that indicates that they had engaged in some social interactions based solely on their handedness orientation. They indicated misconceptions of others and inconveniences in their environment because of their handedness orientation. Yet, overall the conception of

self of the participants with respect to being left-handed was shown to be very positive. The source of the positive conception of self may be from the individuality provided to the participants from their handedness identification. They explained that being left-handed was just unique enough to provide a positive distinction between them and the rest of society.

In order to maintain their individuality it was found that left handers engaged in extreme resistance to the external influences of others and especially to forced conformity when their handedness identity was threatened. The identification of agency, a cognitive process of the subjective self, was a finding that may explain the action of individuals to maintain their conception of self. During certain interactions where their handedness identification was judged, the participants revealed self-evaluations that provided a protection against unfair opinions from others. Self-evaluations indicated reflexivity, a cognitive process of the subjective self, that also served to maintain the positive conception of self with respect to the participants' handedness identification. The cognitive processes of continuity of the self and distinction were also identified and were shown to be equal sources for the positive conception of self of the left handers.

The objective self with respect to left-handedness was perceived by the participants as being very accommodating along with placing the responsibility for adjustments to the environment on themselves. Even though some of the literature implies that left-handed individuals may have a tendency to assign responsibility of

problem circumstances on external controls and the action of others, the findings implied just the opposite. The participants showed an extreme positive attitude and willingness to cope, adjust, or change when confronted with circumstances arising from their handedness orientation and placed no blame on others for their condition.

The objective self of left handers was reinforced by perceived associations with other left handers. Many expressed the feeling that they were part of a loose community of left-handed individuals, and they actively looked for other left handers in classrooms or other public places. Left handers were also reminded by others that they were left-handed while playing sports and performing various activities especially when right-handed equipment was the only type available.

Left handers viewed themselves as unique and highly individual based solely on their handedness orientation. They also viewed all left handers as being more creative and able to think in patterns that were different from non-left handers. The feelings associated with the descriptions of the participants of themselves and other left handers indicates that overall the conception of self of left handers is positive.

An implication for education and for anyone working with children, whose conception of self is still developing, is that seemingly inconsequential physical traits and abilities may provide a positive influence on the conception of self. Additionally, resistance in children toward external controls and influences may indicate a threat to their identity. Left handers should be encourage to remain left-handed and teachers should take into consideration the orientation of left-handed students especially in

psychomotor areas. Identifying and enhancing qualities and abilities in all children that help them to feel special should be a priority.

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Appendices

Appendix A

Coding Framework for Organization of Data

- I. Responses from others toward left handers
 - A. Expectations and reactions of others
 - 1. Friends, family
 - 2. Acquaintances
 - 3. Strangers
 - B. Preconceptions of others toward left handers
 - C. Forced conformity
- II. Left handers' responses to others
 - A. Community of left handers
 - B. Accommodation, adjustments, coping
 - 1. Social interaction
 - 2. Using tools, implements
 - 3. Instruction
 - C. Left handers perception of left handers
- III. Self-appraisals
 - A. Feelings
 - 1. Positive
 - a. special, different, unusual, unique
 - b. proud
 - c. superior, advantage
 - d. natural, normal
 - e. no big deal
 - 2. Negative
 - a. abnormal, different, odd
 - b. confused, uneasy, uncomfortable, embarrassed
 - c. awkward, clumsy, uncoordinated
 - B. Cognition
 - C. Camaraderie
 - D. Sense of Place
- IV. Aspects of Self
 - A. Objective
 - B. Subjective
 - 1. Cognitive processes
 - a. agency
 - b. reflexivity
 - c. continuity
 - d. distinctness
 - 2. Affective processes

Appendix B

Handedness Inventory Report

Name (optional) _____ Age _____

Address (optional) _____ Gender _____

Phone (optional) _____ Year in school or highest degree _____

Directions: Please circle your answer to each question.

1. Which hand do you use for normal writing? Left Right Either
2. Which hand do you use for throwing a ball? Left Right Either
3. When using a fork, which hand do you use? Left Right Either
4. Please indicate your hand preference on the following hand tools:
 - a. hammer Left Right Either
 - b. screw driver Left Right Either
 - c. saw Left Right Either
 - d. electric drill Left Right Either
5. When holding a bat for a game such as baseball, what type of batter are you? Left Right Either
6. When or if you play a game such as bowling, which hand would you use to hold the ball? Left Right Either
7. If you looked down a site for a rifle or if you used a monocular microscope, which eye would you prefer to use? Left Right Either
9. When you clap your hands, which hand is on top? Left Right Either
10. When kicking a ball, which foot do you use? Left Right Either
11. When a left-handed desk is available in a classroom, would you prefer using it or would you prefer using a right-handed desk? Left Right
12. During your experience at U.T. have left-handed desks been
 - a. available b. available sometimes c. not available d. no experience at U.T.

You may comment on any of the above questions below and on back of this paper.

VITA

Lyle Craig graduated with a Bachelor of Science degree in the College of Liberal Arts at The University of Tennessee in 1975 with a major in Sociology and minor in Botany.

During the next year he completed courses for a Masters Degree in Secondary Education in order to receive secondary teaching certification in Biology and has experience in elementary, middle, and high schools. After free-lance editing of business textbooks, he moved to the field of business. He researched demographics for businesses that were planning expansions, developed on-going business educational training, and started his own business. As an entrepreneur his business career culminated with the sole ownership of a company that owned electronics and video stores in the states of Tennessee, Kentucky, and Alabama and employed nearly one hundred workers.

Lyle Craig returned to The University of Tennessee in 1992 to pursue his life-long academic interests. He received a Masters of Science Degree in elementary education and certification in secondary mathematics in 1993. As a graduate assistant he supervised teaching interns for three years, taught graduate level courses in mathematics education, and taught the mathematics education component for graduate-level teaching interns. Mr. Craig has an adjunct faculty position with Roane State Community College where he teaches several mathematics courses some of which are part of the distance learning program for several campuses. Mr. Craig will continue teaching evening classes for the University of Tennessee and Roane State Community College while teaching mathematics at a local high school during the 1996-1997 school year.