

THE RELATIONSHIP OF COGNITIVE STAGE TO
THE IMAGINARY AUDIENCE

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Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
December, 1989

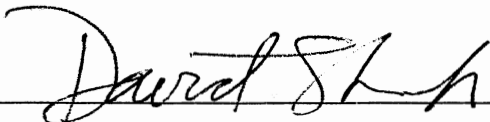
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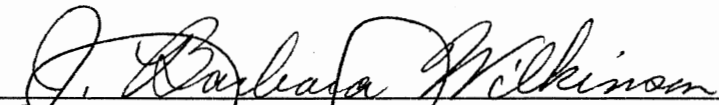
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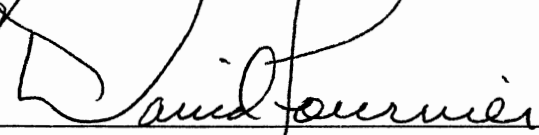
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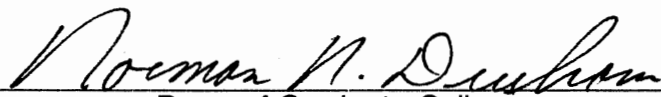


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ACKNOWLEDGEMENTS

Perseverance and endurance are defined as "persisting despite obstacles". When I began this doctoral program I had only a meager understanding of these words. I think I understand now.

There are many who have aided in my development throughout these years of work. I would like to thank Dr. Paul Warden, chairman of my doctoral committee, who has contributed to my personal and academic development.

Sincere appreciation is also extended to the members of my committee: Dr. David Lane, Dr. Barbara Wilkinson and Dr. David Fournier. Each has contributed much to my development as a professional. Special thanks is extended to Dr. Jo Campbell for her commitment to teaching and her students. Her efforts to teach me statistics has certainly been a test of her endurance. I also wish to thank Dr. Ross Atkinson and Sigrid Krause for their contribution to the completion of this project.

Special thanks goes to the students and faculty of Blackwell Public Schools, who have contributed greatly to my understanding of children.

I would also like to thank my mom, grandmother and stepfather for their continued support throughout my education. They never faltered in their love and support. I have learned much about life through observation of my mom and grandmother's perspective on life and sacrifices they made for me.

Finally, I dedicate this work to my husband, Lowell. God has truly blessed me with not only a companion but an editor, therapist, encourager and motivator. Lowell has learned more about psychology than any engineer should ever have to and certainly more than he ever intended to. I thank you for your

commitment and love. From this point on babe, it's vacations, a cooked meal occasionally, no more adventures into insanity and an exciting new concept- a semi-normal lifestyle.

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CHAPTER I

INTRODUCTION

The Research Problem

The topic of adolescent egocentrism continues to experience popularity as a primary area for research into adolescent cognitive and social development. It is the study of egocentrism that may provide a bridge between the study of cognitive structure and exploration of personality dynamics.

One of the most popular and debated theories of adolescent egocentrism is that of David Elkind's (1967, 1968, 1970, 1978a). Elkind's (1967) theory of adolescent egocentrism is based upon Piaget's theory of cognitive development. According to Piaget (1952), egocentrism is the inability to differentiate between any subject-object interaction. Egocentrism, as Piaget (1952) noted, is a constant companion to cognitive development and occurs at each new stage of mental development. At each of these new stages, the child's inability to differentiate assumes a unique form and is expressed in a novel set of behaviors. Piaget (1952) postulated that all acquired cognitive structures and thoughts are accompanied by egocentrism. This egocentrism is considered a negative byproduct of newly acquired cognitive structures and in a sense distorts the use of newly acquired cognitive structures.

Based upon Piaget's (1952) conception of egocentrism, Elkind (1967, 1968, 1970, 1978a) has elaborated the work into an expanded theory of adolescent egocentrism that is both popular and debated. According to Piaget (1952), adolescent egocentrism occurs during the cognitive stage of formal operations

(ages 11 and older).

Elkind (1967) noted that, according to the cognitive point of view, the major task of early adolescence is the conquest of thought. Formal operations permit the adolescent to cognitively construct all possibilities in a system, construct all contrary-to-fact propositions, conceptualize their own thought, and take their mental constructions as objects and reason about them. It also allows the adolescent to conceptualize the thought of others, and it is this capacity that serves as the crux of adolescent egocentrism. More specifically, adolescent egocentrism develops as a result of the teen's ability to recognize the thoughts of others while at the same time failing to differentiate between the objects toward which the thoughts of others are directed and those which are the focus of his or her own concern (Elkind, 1967).

The adolescent is also experiencing a physiological transformation during this time. These changes cause teens to be preoccupied with their physical self. This preoccupation with the physical self and the simultaneous occurrence of the failure to differentiate the thought of others from their own thoughts leads teens to believe that others are as obsessed with their behavior and physical appearance as the adolescent is with themselves. Elkind (1967) referred to the preoccupation with the physical self and the failure to differentiate between their thoughts and the thoughts of others as the identifiers of adolescent egocentrism.

One process that develops out of and is considered a consequence of the adolescent egocentrism is that of the "imaginary audience". Elkind (1967) stated that teens construct the imaginary audience as a result of their anticipation of the reaction of others. This anticipation is based upon the premise that others are as admiring or as critical of them as they are of themselves. The imaginary audience is an audience because teens believe they are the focus of a group of persons and as imaginary because, in actual social situations, that is usually not the case

(unless the teen contrives to make it so).

The significance of the audience stems from the premise that since the audience is the teen's own construction, it is aware of the teen's knowledge of himself or herself and therefore knows their behavioral, intellectual and cosmetic sensitivities.

Elkind (1978a) believed that teens are reluctant to reveal anything personal to the imaginary audience. He believed that the self is comprised of two components, the abiding self (AS) and the transient self (TS). The abiding self consists of long lived permanent personality traits, such as mental ability, where the transient self consists of more momentary and transient appearances and behaviors, such as a bad haircut, a spot on an outfit or unguarded inappropriate comment.

According to Elkind's (1967) theory, one probable negative byproduct of the imaginary audience is a heightened self-consciousness. Elkind (1967) stated that when adolescents feel critical of themselves, they anticipate that the audience will be critical, too. This often results in an increased wish for privacy and reluctance to reveal self. It is this reluctance to reveal oneself to an audience that Simmons, Rosenberg and Rosenberg (1973) have shown to be a measure of self-consciousness, and that which Elkind and Bowen (1979) note as a measurable implication of the imaginary audience.

Statistically, Elkind and Bowen (1979), as well as various replication studies (Adams & Jones, 1981; Mullis & Markstrom, 1986) have shown the imaginary audience to be a valid construct. However, research addressing the main premise of Elkind's theory of adolescent egocentrism, the relationship between formal operations and the imaginary audience, has yielded inconsistent results.

These inconsistencies fall into two primary groups: research that supports

Elkind's position on the relationship between formal operational thought and the imaginary audience, and research that suggests concrete operations or the transitional period are sufficient for the increased sensitivity to the imaginary audience (Gray & Hudson, 1984; Pesce, 1983; Pesce & Harding, 1986; Peterson, 1982; Riley, Adams, & Nielsen, 1984). Additional inconsistencies in the research surround the findings regarding the relationship between gender (Adams & Jones, 1981; Anolik, 1981; Enright, Shukla, & Lapsley, 1980; Lechner & Rosenthal, 1984; Riley, et al., 1984) and age as represented by grade (Adams & Jones, 1981; Anolik, 1981; Hauck, Martens, & Wetzel, 1986; Hudson & Gray, 1986; Joseph, 1984) with the imaginary audience.

Seven points arise in a closer examination of Elkind's (1967) theory of adolescent egocentrism and the inconsistencies surrounding his theory. First, in their validation study of the imaginary audience construct, Elkind and Bowen(1979) failed to account for the fact that the ages at which people reach the cognitive stages may vary. Because of the use of age ranges, only assumptions were made of the subject's actual cognitive stage rather than an assessment of their cognitive levels. Second, age and grade level were equated as synonymously representing a particular age group as age and grade are considered highly correlated. Third, those studies following the same theoretical premises as Elkind and Bowen (1979) arrived at the same or similar results. Fourth, those studies that separately assessed and analyzed the relationship between imaginary audience, cognitive stage and age (represented by grade level) arrive at the conclusion that concrete operations is sufficient for the development of sensitivity to the imaginary audience. Fifth, all studies reviewed found that females experience more concern for the imaginary audience than males. Next, in a study which separated the variables of age and grade as opposed to a synonymous use of the variable, researchers found a linear

relationship between age and imaginary audience, whereas Elkind and Bowen (1979) had found that eighth graders (age 14) consistently show heightened concern for the imaginary audience as opposed to any other age group. Lastly, only one study considered the composite relationship of cognitive stage, gender, and grade level, with sensitivity to the imaginary audience construct (Pesce & Harding, 1986).

Based upon the inconsistencies and uncertainties that continue to surround theories of adolescent egocentrism, it would appear that continued exploration of the relationship between cognitive stage and sensitivity to the imaginary audience is warranted.

Rationale and Problem Statement

Elkind's (1967) theory regarding the development of adolescent egocentrism is considered one of the most unique theories in adolescent research to date. It is a theory that continues to raise debate because of inconsistencies in replication attempts.

These inconsistencies are found primarily in attempts to replicate the theory's foundational premise regarding the relationship between the development of formal operational thought and an increased sensitivity to the imaginary audience. Contributing to these inconsistencies are the questions regarding the relationship between the imaginary audience, age, gender, and grade level.

Two significant points are noted from these studies, the first is the consistent failure to assess the subjects' cognitive level. It would appear that most researchers are satisfied to not contest Piaget's age ranges, even though review of the literature yields some question regarding their accuracy (Ball & Sayre, 1972; Dale, 1970; Karplus & Peterson, 1970; Kinchloe, 1972; McKinnon, 1970; Tisher,

1971), and despite Piaget's (1970) acknowledgement that the ages at which children reach these stages may vary. Secondly, while the majority of studies reviewed have agreed with the premise of a relationship between cognitive stage and the imaginary audience construct and its components, few studies have considered the composite relationship between cognitive stage, gender, grade level, and an increased sensitivity to the imaginary audience. No study has examined the relationship between cognitive stage and the imaginary audience and its components, after controlling the variables gender and grade level.

The question that is raised then is that if the child's cognitive stage is determined, does a relationship exist between cognitive stage and sensitivity to the imaginary audience (comprised of the abiding self and transient self), if grade level and gender are controlled for? The problem addressed in this study was stated as follows: Is there a relationship among the variables, cognitive stage and sensitivity to the imaginary audience (comprised of the transient self and abiding self) after controlling grade level and gender?

Statement of the Hypotheses

The alpha level selected to test the following null hypotheses was set at .05.

1. There is no significant relationship between cognitive stage and the imaginary audience when grade level and gender are controlled.
2. There is no significant relationship between cognitive stage and the abiding self when grade level and gender are controlled.
3. There is no significant relationship between cognitive stage and the transient self when grade level and gender are controlled.

Limitations

The results of this study may not be representative of all populations of

fourth, sixth, eighth, tenth and twelfth grade students. The population was limited by the characteristics of the sample composed of students attending a small midwestern public school.

Summary

According to Piaget (1952), adolescent egocentrism occurs during the cognitive stage of formal operations (ages 11 and older). Elkind (1967) believed that adolescent egocentrism develops as a result of the teen's ability to recognize the thoughts of others while at the same time failing to differentiate between the objects toward which the thoughts of others are directed and those which are the focus of his or her own concern

One process that develops out of and is considered a consequence of the adolescent egocentrism is that of the imaginary audience. Elkind (1967) stated that teens construct the imaginary audience as a result of their anticipation of the reaction of others. This anticipation is based upon the premise that others are as admiring or as critical of them as they are of themselves. Elkind (1978a) also believed that teens are reluctant to reveal any of themselves to the imaginary audience. He believed that the self is comprised of two components, the abiding self and the transient self. Elkind (1978a) also considered the transient and abiding self as components of the imaginary audience.

Research addressing the main premise of Elkind's theory of adolescent egocentrism, the relationship between formal operations and the imaginary audience, has yielded inconsistent results. Contributing to these inconsistencies are the questions regarding the relationship between the imaginary audience, age, gender and grade level.

Few studies have considered the composite relationship between cognitive stage, gender, grade level and an increased sensitivity to the imaginary audience.

No study has examined the relationship between cognitive stage and the imaginary audience and its components, after controlling the variables gender and grade level.

This study examines the relationship between cognitive stage, the imaginary audience and its components (abiding self and transient self) after controlling grade level and gender.

CHAPTER II

REVIEW OF LITERATURE

Introduction

This chapter is a review of the literature in which the theoretical foundations for the constructs used in this study are discussed. Research based on these theories is examined. Elkind's (1967) theoretical construct, as it was used in this study, is described along with the theories from which this construct was derived.

Egocentrism

Egocentrism is typically referred to as the inability to take the perspective of another (Adams, 1976). Piaget (1952) defined it as a lack of differentiation in some aspect of subject-object interaction. Feffer (1959, 1970) described it as the inability to decenter. Decentration refers to one's ability to shift attention to consider more than one aspect of an event. Looft (1972) concluded that egocentrism does not pertain to selfishness or an overly keen regard of oneself, or even to the frequent use of I or me. The essential meaning of egocentrism is an embeddedness in one's own point of view (Looft, 1972). Shantz (1984) noted that egocentrism can be seen as falling into three categories: visual-spatial egocentrism, affective egocentrism and cognitive/communicative egocentrism. Visual-spatial egocentrism is the inability to see another's visual perspective. Affective egocentrism is the inability to infer the feeling's of others. Cognitive/communicative egocentrism is the inability to infer the thoughts, motives or intentions of another person. Ford (1979) however, questioned the validity of

the egocentrism construct. In a study of the construct validity and reliability of egocentrism the relationships among measures of egocentrism within and between the categories of visual/spatial, affective and cognitive/communicative egocentrism were examined. The reliability for each measure of egocentrism was adequate, however the overall construct validity of egocentrism was not supported.

Piagetian Egocentrism

The concept of egocentrism stems originally from Piaget's theory of cognitive development (Muus, 1982). According to Piaget (1952) egocentrism begins at birth and permeates virtually all spheres of functioning. The infant functions from birth as the subject in the subject-object differentiation. The failure of infants to differentiate or recognize anything beyond themselves is the first appearance of egocentrism. The beginning of cognitive development leads to recognition of the object's external world and initiates the process of decentering. This continuing process occurs through cognitive development and allows the person to shift their awareness from one limited aspect of reality or the self to several, thereby expanding cognition and moving from an egocentric to sociocentric view of the world (Piaget, 1954).

Cognitive Development

According to Piaget (1952), cognition develops through the coherent process of successive qualitative changes of cognitive structures with each structure and its concomittant changes deriving from a previous structure. Cognition according to Piaget (1952) is comprised of three components: content, function and structure. Content refers to observable behaviors which include sensori-motor and conceptual behaviors which reflect intellectual activity.

Function refers to the characteristics of intellectual activity, assimilation and accommodation, which are stable and continuous throughout cognitive development. Structure refers to inferred organizational properties (schemata) which explain the occurrence of particular behaviors. These three components are stable and continual throughout cognitive development.

The process of cognitive development occurs through various procedures. The following discussion is a brief explanation of the components of this process.

Piaget (1952) believed that the mind has structures much the same way the body does. These mental structures are called schemata and they help the person to intellectually adapt to and organize the environment. Development of schemata results from continual adaptation to and organization of the environment. This adaptation and organization occurs through assimilation and accommodation (Wadsworth, 1979; Piaget, 1952).

Assimilation is the cognitive process whereby the person integrates new perceptual matter or stimuli into existing schemata. When the child tries to assimilate the stimulus into existing schemata and no schema fits, the child can either create new schema or can modify existing schema. This modification and creation of schema is referred to as accommodation. An equilibrium is maintained between assimilation and accommodation. When disequilibrium occurs, the person seeks to reestablish equilibrium and does so by further accommodation or assimilation (Wadsworth, 1979; Piaget, 1952).

Piaget (1952) viewed cognitive development as a process. This process, he noted, was comprised of various periods or stages of development. The number of stages can be considered as arbitrary, but four stages are typically identified in the literature (Wadsworth, 1979).

The first stage identified is sensori-motor intelligence (0-2 years). During this period, behavior is primarily motor. The child does not yet "think"

conceptually, though "cognitive" development is seen. The second stage is preoperational thought (2-6 years). This period is characterized by the development of language and rapid conceptual development. The third stage is concrete operations (7-11 years). During these years the child develops the ability to apply logical thought to concrete problems. The fourth stage is formal operations (11 years and older). During this period the child's cognitive structures reach their greatest level of development and the child becomes able to apply logic to all classes of problems (Wadsworth, 1979; Piaget, 1952).

Permeation of Cognition and Egocentrism

According to Piaget (1952), egocentrism is the constant companion of cognitive development. At each new stage of mental growth, there is a new inability to differentiate. Inhelder and Piaget (1958) state that because undifferentiation is characteristic of structures in creation, egocentrism is usually manifested in the initial phase of any cognitive developmental stage. This undifferentiation occurs in the following areas: (1) transient and abiding facets of reality, (2) objective and subjective aspects of reality and (3) universal and particular facets of reality. Failure to make any of these differentiations results in a unique set of behaviors.

According to Elkind (1967), as cognitive development progresses through the stages identified by Piaget, the nature, quality and characteristics of egocentrism change correspondingly and each stage has its own unique egocentric characteristics. This transition between stages of egocentrism and cognitive development occurs in a dialectic fashion. Elkind (1967) and Piaget (1952) described this dialectic movement as the development of mental structures that free children from a lower form of egocentrism but at the same time ensnare them in the next higher form of egocentrism.

Elkind (1967) pointed out that the stage or form of egocentrism may be explained by treating each as if resolving a major cognitive task. Therefore, egocentrism can be discussed in relation to specific problems of cognition, evidence of egocentrism development and resolution of the stage.

During the sensori-motor egocentrism (0-2 years) stage, the major cognitive task is the conquest of the object. The object's existence must be present for immediate perception. Egocentrism is evidenced by the lack of differentiation between object and sense impressions occasioned by experience of object. Resolution in this state is a representation of objects or the emergence of preoperational thought.

In the preoperational egocentrism stage (2-6 years), the cognitive task is the conquest of symbols. Egocentrism is evidenced by a lack of differentiation between symbols and referents. Resolution in this stage is the mastering of differentiation between symbols and their referents or the emergence of concrete operational thought. During the concrete operational stage (7-11 years), the cognitive task is the mastering of classes, relations and quantities. Egocentrism is evidenced by the inability to differentiate between mental constructions and perceptual givens. Resolution in this stage is the mastery of classes, relations and quantities or emergence of formal operations. Finally, in the formal operational stage (11 years and older), the cognitive task is the conquest of thought, construction of all possibilities in a system, ability to construct contrary to fact propositions, conceptualization of one's own thought, the ability to recognize the thought of others, as well as take mental constructions as objects and reason about them. Egocentrism is evidenced by the teen's failure to differentiate between the objects toward which the thoughts of others are directed and those which are the focus of the teen's own concern. Resolution in this stage occurs on two planes: cognitively, which involves the gradual differentiation between the

teen's own preoccupations and the thoughts of others, and affectively, through the gradual integration of the feelings of others with the adolescent's own emotions. This occurs through increasing social experience (Elkind, 1967).

Formal Operational Egocentrism

It is during the period of adolescence that the unique behaviors manifested as a result of egocentrism draw the most public attention. Elkind (1967) explained these behaviors as a result of the failure to differentiate between the objective and subjective in the realm of thought during formal operations. This failure causes adolescents to begin to look at themselves from the outside. This in return causes teens to be concerned about the reactions of others. Based upon this external examination, adolescents now find existing discrepancies between what they are and what they wish to be.

The new ability to be introspective also causes teens to be more secretive, say things contrary to thoughts or beliefs, and create social disguises. These social disguises allow adolescents to create the ideal reality (i.e., ideal family, ideal friends and ideal self). A secondary characteristic of adolescent egocentrism is the lack of compassion for human failures. This lack of compassion applies both to themselves and others, and often results in a flailing of others or themselves for perceived imperfections or shortcomings (Elkind, 1967).

Elkind (1967) noted that another consequence of formal operational egocentrism is that adolescents anticipate the reaction of others to themselves. What teens anticipate is that others will be as admiring or as critical of them as they are of themselves. Therefore adolescents are constantly constructing and reacting to an imaginary audience.

Imaginary Audience

Elkind (1967) specified that the imaginary audience is an audience because an adolescent believes they will be the focus of attention for those present, and it is imaginary because in actual social situations, the teen is typically not the focus (unless the teenager strives to make it so). If the teenager does create this audience, then the peer group is often the audience for whom the teen is performing (Elkind, 1970).

Sherwood (1965) discussed the importance of the person's peer group in terms of self identity, self attributes and the effect of the group on these. He defined self attributes as a cognition which is used in perceiving oneself and others. Self identity is the totality of these attributes at a given moment in time. The more teens are involved in their peer group the more important their self attributes become and the more they change toward the direction valued by the group. Their identity becomes a function of others. The group becomes so important in meeting a need that persons feel that they must never lose sight of what they think, what they do and how that will affect them.

While the peer group plays such an important role in establishing a norm for behavior, dress, etc. the adolescent's egocentrism causes an inability to differentiate between what are their concerns and the object toward which the thoughts of others are directed, thus the creation of the imaginary audience (Elkind, 1967). Sherwood (1965) noted that

where the stimulus is ambiguous, its perception is determined more by the characteristics of the perceiver than by the characteristics of the stimulus. The degree of consensus in definition of reality is important in formation and modification of judgement. Self perceptions change more readily when there is low consensus to support perceptions (p. 30).

Consequences of the Imaginary Audience

Elkind (1970) believed that the imaginary audience plays a significant role in the development of certain consequences and experiences of adolescence. The most predominant consequence, according to Elkind (1978a), is the development of self-consciousness. Elkind and Bowen (1979) note that as a result of the imaginary audience the adolescent is more self-conscious than children and older adolescents. Self-consciousness occurs because the audience is the teen's own construction and is privilege to the teen's own knowledge of himself or herself. As a result of this knowledge, the audience knows just what to look for in the way of cosmetic and behavioral sensitivities. The reluctance the teen may feel about revealing themselves may be a reaction to the feeling of being under constant critical scrutiny by other people (Elkind, 1970).

Another area that appears to be a second consequence of the imaginary audience can be described as acting out behavior. Elkind (1978b) noted that groups of adolescents often contrive to create an audience by loud and provocative behavior. This is a result of the teen's failure to differentiate what is of interest to them and what is of interest to others.

A third consequence is that the imaginary audience can become a motive for a variety of behaviors and fantasies that can result in either positive or negative consequences. For example, the imaginary audience may have a positive consequence in that teens create fantasies in which they receive positive reinforcement from the audience. It may also have a negative consequence in that teens may fantasize about a more negative imagined reaction of the audience, i.e., a suicidal teenager taking pleasure imagining the grief and remorse of those they leave behind.

Support for the Imaginary Audience Construct

Elkind's construct of imaginary audience is based primarily upon Piaget's (1952) theory of cognitive development and views of egocentrism. Elkind and Bowen (1979) note that empirical evidence for the construct of imaginary audience has been provided by two studies. Simmons, Rosenberg and Rosenberg (1973) provided indirect evidence in their research that found, on a measure of self-consciousness, that early adolescents (12 to 14 years) exhibited heightened self-consciousness, greater instability of self image, slightly lower self esteem, and a less favorable view of opinions held of them by significant others. Kissel (1975) provided direct support for the imaginary audience construct in that his research suggested that adolescents (14 years) showed more interest in self and greater negative evaluation of self.

Elkind (1978a) specifically cited the work of Simmons et al. (1973) as providing support for the imaginary audience construct because of their use of the "Self-Consciousness Scale" which emphasized the reluctance to reveal oneself to an audience as a measure of self-consciousness, as well as their concurrence that 12 to 14 year olds exhibit more self-consciousness.

Elkind and Bowen (1979) specified, however that Simmons et al. (1973) used a self-consciousness instrument that only measured one aspect of the self, the abiding self. Elkind (1978a) believed that the self is comprised of two components, the abiding self and the transient self. He defined the abiding self as long lived permanent personality traits, such as mental ability, and the transient self as consisting of more momentary and transient appearances and behaviors, such as a bad haircut, a spot on an outfit or unguarded inappropriate comment. Elkind (1978b) theorized that the young adolescent is reluctant to reveal any of the self, abiding self or transient self, to their imaginary audience.

Development of the Imaginary Audience Scale

In an effort to provide more empirical support for the imaginary audience construct, Elkind and Bowen (1979) designed the Imaginary Audience Scale.

The Imaginary Audience Scale (IAS) is comprised of 12 questions reflecting potentially embarrassing social situations and self revealing situations. The scale is divided into two subscales, the transient self scale and the abiding self scale. The transient and abiding self scales are derived from cognitive tasks that involve the differentiation between transient and abiding facets of reality. The failure to make this differentiation is a result of limitations of the child's developing cognitive ability and an indication of egocentrism. The abiding self consists of long lived characteristics that the individual regards as permanent aspects of the self (i.e., mental ability, personality characteristics). The transient self consists of momentary appearances and behaviors which the individual does not regard as reflective of his or her true self (Elkind, 1978a).

Elkind and Bowen (1979) note that one implication of the imaginary audience is that young adolescents will be more self conscious than children and older adolescents. They point out that the abiding self, as has been shown by Simmons et al. (1973), to be related to an unwillingness to perform before an audience. This reluctance to perform before an audience represents self-consciousness.

By following the conclusions of Simmons et al. (1973) on the abiding self, Elkind and Bowen (1979) hypothesized that combining questions reflecting both the transient self and abiding self would allow determination of whether adolescents respond differentially to situations involving the abiding self and the transient self, and whether adolescents are as reluctant to reveal the transient self as they seem to have been to reveal the abiding self. The authors found that adolescents were not as reluctant to reveal the transient self as they were the

abiding self. Elkind and Bowen (1979) viewed these potential results as providing support for their hypotheses and for Elkind's (1967) theory of the development of the imaginary audience, manifested as heightened self-consciousness, occurring with the onset of formal operational thought.

The Imaginary Audience Construct and
its Relationship to Age,
Grade and Gender

In Elkind and Bowen's (1979) validation study of the Imaginary Audience Scale, results indicated a significant relationship between grade, gender and the imaginary audience. Specifically they found that eighth grade girls showed the greatest concern for the imaginary audience (heightened self-consciousness).

Hauck et al. (1986) found in their study of seventh, ninth and eleventh grade students that ninth grade students (12 to 14 years) and females were less willing to reveal themselves to an audience than were seventh and twelfth grade students and males. The authors noted that a curvilinear relationship between concern for the imaginary audience and age was found. Pesce and Harding (1986) found a significant relationship between gender, grade level, cognitive stage and school attendance with the imaginary audience. They found that concrete operational thinkers and females scored higher on the imaginary audience scale. In a replication of Elkind and Bowen's (1979) study, Gray and Hudson (1984) concurred with the authors' findings that females displayed greater concern than males for the imaginary audience. More specifically, the researchers found that concern for the imaginary audience peaked in the eighth grade for females and in the tenth/eleventh grade for males. Gray and Hudson's (1984) results however, did not support Elkind's (1967) theory of the relationship between the onset of formal operations and the development of the imaginary audience (heightened

self-consciousness).

Joseph's (1984) research into the imaginary audience also found that girls scored higher than boys on concern for the imaginary audience. Her research however, did not show a significant effect for grade level.

Riley et al. (1984) found, in their study of seventh grade students (13 years), that both females and males were unlikely to reveal themselves to an audience, with females being slightly higher in their concern than males. Riley et al. (1984) also concluded that cognitive development did appear to be partially associated with self-consciousness, but that other factors appear to contribute to its development as well.

In an effort to distinguish between self-consciousness and imaginary audience, Lechner and Rosenthal (1984) found that eighth and tenth grade students (13 to 15 years) expressed more concern for the imaginary audience. They found no relationship between gender and concern for the imaginary audience. Pesce (1983) in her research of the relationship between the imaginary audience, gender, cognitive development, grade level and school attendance, found that eighth and ninth grade students and females showed more egocentrism than sixth and twelfth grade students and males. Pesce (1983) found that subjects classified as concrete operations had a higher concern for the imaginary audience. In a study of the imaginary audience and perception of parent support among delinquents and nondelinquents, Anolik (1981) found that a heightened concern for the imaginary audience existed for both delinquent and nondelinquent males (all subjects were 15 years old), and that male nondelinquents were more concerned about the imaginary audience than female nondelinquents.

In a replication study of Elkind and Bowen's (1979) research, Adams and Jones (1981) found they were unable to replicate findings regarding the relationship between age, grade, gender and imaginary audience. They found, in

contrast, a linear relationship between age and imaginary audience. The authors failed to replicate any significant relationship between gender and imaginary audience. Age level rather than grade level was used as a variable in this replication study. In a study of the relationship between egocentrism and self-consciousness, Enright et al. (1980) found that imaginary audience declined with age. The results of the study suggested that females and sixth grade students showed greater concern for the imaginary audience. In their replication study of the Enright et al. (1979) study, Gray and Hudson's (1984) research suggested a negative relationship between age and imaginary audience. Results also suggested a significant positive relationship between imaginary audience and gender, with females showing more concern for the construct. The researchers also found a significant interaction between imaginary audience and grade level, with gradually decreasing concern for the construct across grade. The authors noted that their results provide partial support for Elkind's (1967) theory of adolescent egocentrism.

Review of the literature regarding the imaginary audience yielded agreement that the imaginary audience does appear to be a valid construct. Further, the literature suggests potential relationships between the imaginary audience and grade, gender and age. However, there are discrepancies in the literature suggesting uncertainty about the relationship between age, grade and gender and the imaginary audience as being linear or curvilinear, negative or positive. There is considerable question regarding Elkind's (1967) theory of adolescent egocentrism or the significance of formal operational thought in the development of sensitivity to the imaginary audience (heightened self-consciousness). Finally, there is paucity of research into the relationship between the imaginary audience and composite groupings of variables as opposed to a

singular relationship between one variable (i.e. cognitive stage) and the imaginary audience.

Summary

As previously noted in this chapter, a number of replication studies and other studies by researchers have tended to yield inconsistencies regarding Elkind's (1967) theory of adolescent egocentrism.

Most of these inconsistencies have centered around the contribution of gender and age (as represented by grade level). One reoccurrent point does arise: the inability of many studies to replicate the relationship between formal operational thought and an increased sensitivity to the imaginary audience. This point has continued to fuel debate as to the soundness of Elkind's cognitive view of adolescent egocentrism.

Further investigation of the literature yielded the disturbing points that most researchers paid strict adherence to the Piagetian age ranges and failed to assess the subjects' cognitive stage of development. These would appear to be serious shortcomings in these researchers' attempts to validate any relationship between formal operational thought and the imaginary audience.

Finally, in light of the inconsistencies noted in the research, the present study hypothesizes that there is a significant relationship between cognitive stage and sensitivity to the imaginary audience (transient self and abiding self) after controlling grade level and gender.

CHAPTER III

METHODOLOGY

Introduction

The specific manner in which this study was undertaken is described in this chapter. The subjects are described along with a description of the instruments used in the measurement of the variables. The procedures used in the selection of variables and the determination of sample size is discussed. The research design and statistical analysis used in determining relationships among variables is presented.

Subjects

A total sample of 240 fourth, sixth, eighth, tenth and twelfth grade students participated in this study. Selection of these grade levels was based upon Elkind and Bowen's (1979) view of these particular grades representing pre-adolescence or children (fourth and sixth grade), young adolescence (eighth grade) and older adolescence (twelfth grade) as well as the range of grades used in various replication studies (Adams & Jones, 1981; Anolik, 1981; Hauck, et al, 1986; Hudson & Gray, 1986; Joseph, 1984)

Subjects were selected from one midwestern public school system. Subjects were selected as intact classes from the fourth, sixth, eighth, tenth and twelfth grade. Forty eight subjects per grade participated. The sample included 123 males and 117 females. The ages of the subjects ranged from 9 to 19. The number of subjects chosen agreed with the recommendations of Kerlinger and

Pedhazer (1973) of a minimum of 100 subjects for a multiple regression analysis with a preference of 200 or more. This number of subjects was above the recommended number for a multiple regression analysis of data determined by Cohen and Cohen (1983). The sample chosen followed Cohen and Cohen's (1983) procedure for a multiple regression analysis with a small effect size ($R^2/1-R^2$) of .04. The power established was .80 for a significance criterion of $\alpha = .05$. The sample number is also adequate for the use of multiple regression, as determined by Tabachnik and Fidell (1983), who suggest 4 to 5 times more subjects than independent variables with 20 times the number of independent variables being preferred.

Instrumentation

Two instruments were used in measuring the variables of interest. The Imaginary Audience Scale (IAS) (see Appendix A) (Elkind & Bowen, 1979) was used to measure the willingness to reveal self to an audience (sensitivity to the imaginary audience). The Piagetian Objective Formal Instrument (POFI) (see Appendix B) (Burney, 1974) was used to assess each subject's current Piagetian stage of cognitive development.

The Imaginary Audience Scale

The Imaginary Audience Scale was devised by Elkind and Bowen (1979) to examine empirically the concept of adolescent egocentrism. The focus of their investigation was exploration of a young adolescent's willingness to reveal him/herself to an audience (i.e., sensitivity to the imaginary audience).

The authors developed the Imaginary Audience Scale based on the idea that there are two distinguishable components of self that the adolescent can refuse to reveal to an audience. These components are the abiding self (AS)

which consists of long lived characteristics (such as mental ability and personality traits) and the transient self (TS), which consists of momentary appearances and behaviors (a bad haircut, accidentally soiled clothing, inadvertent words or acts, etc.) which the individual does not regard as reflective of their true self (Elkind & Bowen, 1979).

For the IAS, the authors created the TS scale made up of six potentially embarrassing situations of a momentary sort. The AS scale is comprised of six items that were modified versions of items used by the Simmons et al. (1973) study of self-consciousness. Each AS item describes a potentially self revealing situation. For both the TS and AS scales, the subject can choose from three possible reactions to the depicted situations reflecting the following: (a) an unwillingness to participate (given a score of 2), (b) an indifference to participation (given a score of 1), and (c) a willingness to participate (given a score of 0).

For the IAS, the higher a subject's scores on both the TS and AS scales, the less willing the subject is to reveal the transient and/or abiding self to an audience. These scores are added together to form a composite score. Composite scores of 0-12 are considered low concern with 13-24 being considered a high concern. Elkind and Bowen (1979) note that this composite score reflects the individual's level of sensitivity to the imaginary audience.

Elkind and Bowen (1979) found that principal factor analysis with varimax rotation produced two factors accounting for 32% of the total variance. The TS items correlated highest with the first factor accounting for 73% of the common variance whereas, the AS items correlated highest with the second factor, accounting for 27% of the common variance. Adams and Jones (1981) found in their replication study, that factor analysis using varimax rotation produced three factors. The first factor accounted for 42.7% of the total variance and consisted of significant AS item scale loadings. The second and third factors which accounted

for 9.3% and 8.7% of the variance consisted of a mixture of AS and TS items. They concluded that no clear factor structure emerged for the TS scale. Gray and Hudson (1984) also found three factors: an AS factor, a TS factor and a combined TS and AS factor.

Reliability. Elkind and Bowen (1979) originally reported test-retest (four months) reliability coefficients for the TS, AS and IAS of .50 to .73 with a median r of .66 ($n=139$) on all three scales. In the same study internal consistency was examined. Alpha coefficients of the IAS, TS and AS scales ranged from .44 to .80 with a median r of .61 ($n=697$). Gray and Hudson (1984) in their study of formal operations and the imaginary audience also found similar alpha coefficients ranging from .44 to .80. In a replication of the Elkind and Bowen (1979) study, Adams and Jones (1981) found different alpha coefficients, ranging from .49 to .94 with a median r of .76 ($n=115$). Riley et al. (1984) found alpha coefficients similar to those reported by Elkind and Bowen (1979).

Validity. Content validity was assessed by administering the IAS, Piers-Harris Children's Self Concept Scale, the Coopersmith Self Esteem Inventory and the Nowicki-Strickland Locus of Control Scale for Children to randomly selected samples and comparing scores. Results showed that the TS scale correlated slightly with the Piers-Harris. The AS correlated moderately with the Piers-Harris and was also highly correlated with the Coopersmith. Neither of the subscales correlated with the Nowicki-Strickland. The overall IAS correlated moderately with both the Piers-Harris and Coopersmith (Elkind & Bowen, 1979).

Construct validity was assessed by item-total correlations and a factor analysis solution. Elkind and Bowen (1979) found item-total correlations for questions measuring TS ranging from .45 to .61, and for questions measuring AS, .47 to .69. Correlations between IAS and TS items ranged from .41 to .51 and with AS items, .37 to .57. Adams and Jones (1981) found item-total correlations for

questions measuring TS ranging from .47 to .65 and for AS, .43 to .79.

Elkind and Bowen (1979) found that correlations between the IAS and TS items ranged from .46 to .61. Correlations between the IAS and AS items ranged from .48 to .76. Gray and Hudson (1984) found item-correlations similar to Elkind and Bowen's (1979) with 75% of the scale defining entries on TS items with the TS scale, AS items with the AS scale and all items with the IAS scale.

Riley et al. (1984) attempted to show construct validity for the IAS by completing a small validity study. Based upon self awareness theory, two groups were contrasted using a t-test analysis. It was hypothesized that a classroom of adolescents who were videotaped during the completion of the IAS would score higher on egocentrism behavior than the remaining subjects who completed the instrument under nonsurveillance. Higher self-consciousness was found under the self awareness conditions than under the normative low self-consciousness raising condition [$t(283) = 1.91, p < .05$].

Face validity of the TS and AS items was supported by the consensual agreement of three professional psychologists and through pretesting. An initial version of the items was administered to 500 fourth, eighth and twelfth grade students who were also asked to give explanations for their responses. From this the items for the IAS were developed (Elkind & Bowen, 1979).

The Piagetian Objective Formal Instrument

The Piagetian Objective Formal Instrument (Burney, 1974) was used to determine whether subjects have reached Piaget's formal stage of cognitive development. It is a group administered paper and pencil instrument that assesses attainment of formal operational thought. The POFI is composed of 24 multiple choice questions taken from the literature regarding formal operational thought. All questions are similar to the Piagetian type tasks. According to Burney

(1974), subjects are classified as formal operational if they answer 17-24 items correctly, transitional if they answer 11-16 items correctly and concrete operational and below if they answer 0-10 items correctly.

The POFI was constructed by pooling those questions sighted in the literature as measuring formal operational thought, and comparing performance on those items to performance on a criterion test, the Piagetian Task Instrument (PTI) (Ball & Sayre, 1974).

Reliability. Internal consistency for the POFI was established using bi-serial correlation and yielded coefficients ranging from .17 to .96 (n=88). The Kuder-Richardson 20 was used to establish reliability for the POFI, with reliability being .82 (n=88).

Validity. Item validity was also established for the POFI using the bi-serial correlation coefficient. Item validity ranged from .32 to .87 with a median $r = .42$ (n=88). Pearson product moment correlation was used as a measure of concurrent validity between the POFI and the PTI. Concurrent validity was $r = .85$ (n=88).

Procedure

Subjects for the study were selected from one small midwestern public school system. Two hundred and forty subjects were selected as intact classes from the fourth, sixth, eighth, tenth and twelfth grades. Forty eight subjects per grade participated. A total of 123 males and 117 females participated in the study. Parent permission forms were sent to subjects' parents with a specific return date. Information regarding anonymity of results was detailed in the parent permission form (see Appendix C). Two assistants and the researcher administered the instruments. Each assistant received verbal instruction regarding the purpose of the study and the administration of the instruments.

Subjects received a packet containing the two instruments. Instructions for their completion was provided in the introduction of each instrument and was read by the administrator to each class. Each instrument was read by the researcher to each class to control for the reading ability of the subjects. Individual assistance to the subjects was provided upon request. Information regarding the subject's age, gender and grade level was also collected prior to the administration of the instruments. A 50 minute time period was allotted for completion of the instruments.

The IAS and the POFI were hand scored by the researcher. High composite scores on the IAS indicated less willingness to reveal self to an audience or sensitivity to the imaginary audience. Separately, high scores on the AS and TS scale were considered as indicating less willingness to reveal the abiding self and the transient self to an audience (Elkind & Bowen, 1979). On the POFI, scores of 0-10 indicated attainment of concrete operations and below, 11-16 indicated attainment of the transitional period, with 17-24 indicating attainment of formal operations (Burney, 1974).

Statistical Analysis

Three multiple regression analyses (Kerlinger & Pedhazur, 1973) were used to test the hypotheses of no relationship between cognitive stage and the imaginary audience, the abiding self and transient self. This procedure enabled the researcher to determine if cognitive stage was a statistically significant predictor of sensitivity to the imaginary audience, and an unwillingness to reveal the abiding self and transient self.

Variables controlled for in the study were grade level and gender. Although review of the literature also indicated a significant relationship between age and the imaginary audience, the present study elected to use gender and grade level

as the variables of interest due to the high correlation between grade level and age found in this study ($r = .979$, $p < .001$).

An examination of the three regression analyses was used to determine the relative importance of the relationship of the independent variable to the dependent variables. To test the hypotheses of no significant relationship between the independent variable and each of the dependent variables, three multiple regression analyses were calculated. F ratios derived from each of the multiple regression analyses were used to determine the statistical significance of the departure from zero of the obtained value of the independent variable's unique contribution to the dependent variables, sensitivity to the imaginary audience, and unwillingness to reveal the abiding self and transient self when grade level and gender are controlled.

Basic assumptions and limitations of the regression analyses were analyzed. Inspection of histograms indicated that the assumption of normality and homoscedasticity were met. No multivariate or univariate outliers were indicated. A Pearson r correlation matrix was also calculated in order to determine if multicollinearity or singularity was present. According to Tabachnik and Fidell (1983) multicollinearity or singularity occurs when two variables in a matrix are perfectly (or nearly perfectly) correlated and when they show a similar pattern of correlations with other variables. Examination of the correlation matrix indicated no presence of multicollinearity or singularity between the variables of interest. Inspection of scatterplots indicated that the assumption of linearity was violated. However, Tabachnik and Fidell (1983) state that multivariate statistics are rather robust to most violations of their assumptions.

The choice of hierarchical regression so that the order in which the variables were entered could be controlled, was based on the principle of assessing a major variable(s) after a prior set of control variables had been held

constant, thus giving nuisance variables the higher priority of entry. This allows the major variable to be evaluated for what it adds to the prediction (correlation) over and above the lesser set (Tabachnik & Fidell, 1983).

CHAPTER IV

RESULTS OF THE STUDY

Introduction

The purpose of this study was to examine the relationship between cognitive stage and sensitivity to the imaginary audience and an unwillingness to reveal the abiding self and the transient self. The results provided information regarding the unique contribution of the independent variable, cognitive stage in relationship to the dependent variables, sensitivity to the imaginary audience, and unwillingness to reveal the abiding and transient self, after controlling grade level and gender. The statistical analysis of the hypotheses tested are presented in this chapter.

Three multiple regression analyses were used to determine the relationship among the independent variable (cognitive stage) and the dependent variables. The unique contribution of the independent variable was tested by examining the three multiple regression analyses for statistical significance after the variance due to grade level and gender was controlled.

Examination of the data indicated that 135 subjects had obtained the cognitive stage of concrete operations and below, with 86 in the transitional period and 19 reaching formal operations. The largest percentage of students obtaining the stage of formal operations was noted as occurring in the twelfth grade, where 33% obtained formal operations. A sharp change in the cognitive stage attained is noted as occurring between the tenth and twelfth grades. In the tenth grade only 4% of the students sampled had achieved formal operations, with 56% of the tenth

grade students being at the transitional period. In the eighth grade 0% were found to be at the formal operations stage with 50% being observed at the stages of concrete operations and below and transitional period. Results from the fourth and sixth grade indicate that students at these grade levels were primarily at the concrete operations stage and below (see Table 1).

For the total sample 56% percent of both the males and females obtained the stage of concrete operations and below. Results indicated that 37% of the males and 35% of the females were at the transitional period and finally, 7% of the males and 9% of the females obtained formal operations (see Table 2).

Means and standard deviations for each dependent variable (transient self, abiding self and imaginary audience) are presented for subjects categorized separately by grade level, gender and cognitive stage in Tables 3, 4 and 5, respectively.

Three multiple regression analyses were used to determine the relationship among the independent variable (cognitive stage) and the dependent variables. The unique contribution of the independent variable was tested by examining the three multiple regression analyses for statistical significance.

Statistical Analysis of the Data

The Pearson r correlation matrix for the variables of cognitive stage, grade level, gender, transient self, abiding self and imaginary audience is reported in Table 6. Significantly related pairs of variables are identified in the correlation matrix.

Hypothesis 1

Hypothesis 1 states that there is no significant relationship between cognitive stage and the imaginary audience when grade level and gender are

Table 1**Percentage of Subjects Per Cognitive Stage by Grade**

<u>Grade Level</u>	<u>Concrete</u>	<u>Transitional</u>	<u>Formal</u>
4 (N=48)	85%	13%	2%
6 (N=48)	83%	17%	0%
8 (N=48)	50%	50%	0%
10 (N=48)	40%	56%	4%
12 (N=48)	21%	46%	33%

Table 2**Percentage of Males and Females per Cognitive Stage**

	<u>Concrete</u>	<u>Transitional</u>	<u>Formal</u>
Male (N=123)	56%	37%	7%
Female (N=117)	56%	35%	9%

Table 3

Means and Standard Deviations for Each Dependent Variable by Grade Level

Dependent Variable	Grade Level					
	4 ^a	6	8	10	12	
<u>Transient Self</u>	\bar{X}	4.72	6.18	4.68	5.33	4.68
	SD	2.74	2.48	2.45	2.93	2.75
<u>Abiding Self</u>	\bar{X}	5.35	6.04	5.77	5.41	5.20
	SD	2.42	2.20	2.15	2.62	2.52
<u>Imaginary Audience</u>	\bar{X}	10.12	12.22	10.45	10.75	9.79
	SD	3.96	3.77	3.69	4.91	4.29

Note. A mean score on the Imaginary Audience of 13-24 represents a high concern for the imaginary audience. A mean score on the Transient Self or Abiding Self of 7-12 represents an unwillingness to reveal that component of self.

^aN = 48 for each grade level.

Table 4

Means and Standard Deviations for Each Dependent Variable by Gender

	Gender	
	Male n= 123	Female n= 117
<u>Transient Self</u>	\bar{X} 4.76 SD 2.74	5.50 2.65
<u>Abiding Self</u>	\bar{X} 5.27 SD 2.48	5.85 2.27
<u>Imaginary Audience</u>	\bar{X} 10.03 SD 4.25	11.34 4.05

Note. A mean score on the Imaginary Audience of 13-24 represents a high concern for the imaginary audience. A mean score on the Transient Self or Abiding Self of 7-12 represents an unwillingness to reveal that component of self.

Table 5

Means and Standard Deviations for Each Dependent Variable by Each Level of Cognitive Stage

		Level of Cognitive Stage			
		<u>Concrete</u> (n=135)	<u>Transitional</u> (n=86)	<u>Formal</u> (n=19)	<u>Sample</u> (n=240)
<u>Transient Self</u>	\bar{X}	5.59	4.55	4.36	5.12
	SD	2.72	2.56	2.85	2.72
<u>Abiding Self</u>	\bar{X}	5.79	5.13	5.78	5.55
	SD	2.29	2.42	2.76	2.39
<u>Imaginary Audience</u>	\bar{X}	11.38	9.68	10.05	10.67
	SD	4.05	4.23	4.35	4.20

Note. A mean score on the Imaginary Audience of 13-24 represents a high concern for the imaginary audience. A mean score on the Transient Self or Abiding Self of 7-12 represents an unwillingness to reveal that component of self.

Table 6

Pearson r Correlation Matrix for Cognitive Stage, Imaginary Audience, Transient Self, Abiding Self, Grade Level and Gender

	Cognitive Stage	Imaginary Audience	Transient Self	Abiding Self	Grade Level	Gender
Cognitive Stage	1.0000	-.1646*	-.1723*	-.0853	.5456**	-.0384
Imaginary Audience		1.0000	.8473**	.7925**	-.0723	.1560*
Transient Self			1.0000	.3556**	-.0488	.1363*
Abiding Self				1.0000	-.0543	.1210
Grade Level					1.0000	-.0118
Gender						1.0000

N=240.

* $p < .05$.

** $p < .001$.

controlled. An inspection of the correlation coefficients reported in the Pearson r correlation matrix indicates a significant correlation between cognitive stage and sensitivity to the imaginary audience ($r = -.1646$, $p < .05$; see Table 6). Even though the correlation is significant, only 3% of the variance is common or shared variance.

The results of the regression analysis of cognitive stage on sensitivity to the imaginary audience after grade level and gender are controlled are presented in Table 7. The proportion of variance accounted for by the independent variable, cognitive stage, after controlling for grade level and gender is significant, ($F(3,236) = 4.13$, $p < .05$). Examination of R^2 indicates that cognitive stage accounts for 5% of the variance in the dependent variable, sensitivity to the imaginary audience, when grade level and gender are controlled. These results indicated that hypothesis 1 is rejected. Furthermore, controlling for grade level and gender allows 3% more of the variance in sensitivity to the imaginary audience to be accounted for.

Hypothesis 2

Hypothesis 2 states that there is no significant relationship between cognitive stage and the abiding self when grade level and gender are controlled. The Pearson r correlation coefficients reported in Table 6 indicates the correlation between cognitive stage and an unwillingness to reveal the abiding self ($r = -.0853$) is not significant ($p > .05$).

The results of the regression analysis of cognitive stage on an unwillingness to reveal the abiding self after grade level and gender are controlled are presented in Table 8. The proportion of variance accounted for by the independent variable after controlling for grade level and gender is not significant ($F(3,236) = 1.71$, $p > .05$). These results indicate that hypothesis 2 is not rejected.

Table 7

Multiple Regression Analysis of Cognitive Stage on the Imaginary Audience after Grade Level and Gender are Controlled

Dependent Variable: IAS	Multiple R	.22334		
	R-Square	.04988		
Analysis of Variance				
	DF	Sum of Squares	F	Sig. of F
Regression	3	210.74567	4.12995	.0070
Residual	236	4014.25017		

Table 8

**Multiple Regression Analysis of Cognitive Stage on the Abiding Self
after Grade Level and Gender are Controlled**

Dependent Variable: AS		Multiple R	.14583	
		R-Square	.02127	
Analysis of Variance				
	DF	Sum of Squares	F	Sig. of F
Regression	3	29.11663	1.70925	.1658
Residual	236	1340.006671		

Hypothesis 3

Hypothesis 3 states that there is no significant relationship between cognitive stage and the transient self when grade level and gender are controlled. Inspection of the Pearson r correlation coefficient reported in Table 6 indicates there is a significant correlation between cognitive stage and an unwillingness to reveal the transient self ($r = -.1723$, $p < .05$). Calculation of r^2 reveals 3% of the variance in unwillingness to reveal the transient self is accounted for by cognitive stage.

The results of the regression analysis on an unwillingness to reveal the transient self after grade level and gender are controlled are presented in Table 9. The proportion of variance accounted for by the independent variable after controlling for grade level and gender is significant ($F(3,236) = 4.08$, $p < .05$). Examination of R^2 indicates that cognitive stage accounts for 5% of the variance in the dependent variable, an unwillingness to reveal the transient self, when grade level and gender are controlled. These results indicate that hypothesis 3 is rejected. Furthermore, controlling for grade level and gender allows 3% more of the variance in an unwillingness to reveal the transient self to be accounted for.

Summary

The purpose of this study was to examine the relationship between cognitive stage, and each of the dependent variables, sensitivity to the imaginary audience and an unwillingness to reveal the abiding and transient selves, after controlling grade level and gender. Inspection of correlation coefficients in the Pearson r correlation matrix indicates a significant ($p < .05$) correlation exists between cognitive stage and each of the two variables, sensitivity to the imaginary audience and an unwillingness to reveal the transient self. The correlation

Table 9

**Multiple Regression Analysis of Cognitive Stage on the Transient Self
after Grade Level and Gender are Controlled**

Dependent Variable: TS		Multiple R	.22195	
		R-Square	.04926	
Analysis of Variance				
	DF	Sum of Squares	F	Sig. of F
Regression	3	87.10881	4.07614	.0076
Residual	236	1681.14119		

calculated between cognitive stage and an unwillingness to reveal the abiding self is not significant ($p > .05$). However, significant relationships ($p < .05$) were found between the variables gender and an unwillingness to reveal the transient self, abiding self and sensitivity to the imaginary audience. Further examination of the correlation coefficients indicate significant ($p < .05$) relationships were calculated between cognitive stage and each of the variables of grade level and an unwillingness to reveal the transient self, as well as between abiding self and sensitivity to the imaginary audience.

Three multiple regression analyses were utilized to test the hypotheses. Results indicate that after controlling grade level and gender, there are significant relationships between cognitive stage and sensitivity to the imaginary audience

Three multiple regression analyses were utilized to test the hypotheses. Results indicate that after controlling grade level and gender, there are significant relationships between cognitive stage and sensitivity to the imaginary audience and an unwillingness to reveal the transient self. However, no significant ($p > .05$) relationship was found between cognitive stage and an unwillingness to reveal the abiding self, after controlling grade level and gender.

Chapter V contains the summary, conclusions and recommendations of this study.

CHAPTER V
SUMMARY, CONCLUSIONS AND
RECOMMENDATIONS

Summary

The purpose of this study was to investigate the relationship between cognitive stage and sensitivity to the imaginary audience and unwillingness to reveal the abiding and transient self, after controlling grade level and gender. Subjects for this study were 240 students from one small midwestern public school. The sample was comprised of 123 males and 117 females. Grade levels included fourth, sixth, eighth, tenth and twelfth grades. Data used for analyses in this study consisted of scores from the Imaginary Audience Scale and the Piagetian Objective Formal Instrument. The Imaginary Audience Scale (Elkind & Bowen, 1979) was administered to evaluate each subject's sensitivity to the imaginary audience and their unwillingness to reveal the abiding and transient self. The Piagetian Objective Formal Instrument (Burney, 1974) was utilized to determine which cognitive stage each subject had attained.

Results indicate a significant ($p < .05$) relationship exists between the transient self and the abiding self. A significant ($p < .001$) correlation was also calculated between cognitive stage and grade level. Furthermore, significant ($p < .05$) correlations were calculated between cognitive stage and the imaginary audience and cognitive stage and an unwillingness to reveal the transient self. However, the relationship calculated between cognitive stage and an unwillingness to reveal the abiding self is not significant ($p > .05$).

The first hypothesis states that there is no significant relationship between cognitive stage and sensitivity to the imaginary audience when grade level and gender were controlled. The proportion of variance in sensitivity to the imaginary audience accounted for by cognitive stage was statistically significant at the .05 level. Examination of R^2 indicated that cognitive stage accounted for 5% of the variance in the dependent variable, sensitivity to the imaginary audience, when grade level and gender were controlled. Results indicated that hypothesis 1 should be rejected.

Hypothesis 2 states that there is no significant relationship between cognitive stage and an unwillingness to reveal the abiding self when grade level and gender were controlled. The proportion of variance in an unwillingness to reveal the abiding self accounted for by cognitive stage was not statistically significant at the .05 level. Therefore, hypothesis 2 was not rejected.

Hypothesis 3 states that there is no significant relationship between cognitive stage and an unwillingness to reveal the transient self when grade level and gender were controlled. The proportion of variance in an unwillingness to reveal the transient self accounted for by cognitive stage was statistically significant at the .05 level. An examination of R^2 indicated that cognitive stage accounted for 5% variance in the dependent variable, unwillingness to reveal the transient self, when grade level and gender are controlled. These results meant that hypothesis 3 was rejected.

Conclusions

The following conclusions are presented based upon the results of this study. The results of this study supported the premise of a relationship between cognitive stage and sensitivity to the imaginary audience and transient self. No relationship was found between cognitive stage and the abiding self. This result

did not support Elkind and Bowen's (1979) claim of the relationship between the imaginary audience construct, including the transient and abiding selves, and formal operations.

Elkind and Bowen (1979) also claimed that although the transient self and abiding self were moderately correlated, they represented two distinctly different components of self. Results from the present study failed to support this finding, in that results indicated a significant relationship between the transient self and abiding self. This finding appears to contradict Elkind and Bowen's premise of two separate components of self.

Elkind and Bowen (1979), as well as others (Gray and Hudson 1986; Pesce and Harding, 1986; Peterson, 1982; Riley, et al., 1984), found a significant relationship between gender and the imaginary audience construct, including the TS and AS. The present study's findings supports their findings. Pesce and Harding (1986) found that the combination of gender, grade, cognitive stage and attendance contributed significantly to the imaginary audience construct. They note that this combination contributed 4.7% to the variance in the transient self and 4.3% to the variance in the abiding self. The present study differed in its findings in that results indicated that cognitive stage contributed 5% of the variance in both the imaginary audience construct and its component, the transient self, when gender and grade were controlled. These results also appear to support Riley et al. (1984) findings, which concluded that cognitive development did appear to be partially associated with self-consciousness, but that other factors appear to contribute to its development as well.

Recommendations

The following recommendations for future research are proposed based on the results of this study:

1. There is a need for further examination of the underlying structure of the components comprising the imaginary audience construct, the abiding self and transient self. More specifically an examination should be made to determine if each measures the same type of behavior. A determination of whether transient self and the abiding self measured the same type of behavior could be established by examining the underlying factor structures of each. These findings then should be compared to the underlying factor structure of cognitive stage. This information could be used to investigate the differences found in the present study regarding the presence of a relationship between cognitive stage and the transient self, but not the abiding self.
2. There is a need for further examination of the underlying factor structures of the components comprising the imaginary audience construct, the abiding self and transient self, across various ages. This would aid in determining if the underlying factor structure was consistent across ages.
3. There is a need for further elaboration on the operational definition of the imaginary audience, and its components, the transient and abiding self. This would allow for more specific investigation of the relationship between cognitive stage and the factors underlying each of these constructs.
4. There is a need for further study involving the effects of covariates other than those extensively investigated, i.e. gender and grade level. Possible covariates might include other relevant demographic variables, i.e. socioeconomic level, ethnicity, handicapping conditions, or a rural versus urban environment.
5. Piagetian egocentrism is based upon the newly developed cognitive ability at each stage, yet Elkind (1967) discussed adolescent egocentrism and its consequences in terms of social perceptions and behaviors. Further empirical investigation should be directed toward determining if adolescent egocentrism is an affective egocentrism, or cognitive/communicative egocentrism. This would

allow for a determination of the relationship between Piagetian (1952) egocentrism and social perception and behavior.

6. In the literature, Elkind (1967) readily acknowledged the contribution of physiological changes along with cognitive development on the emergence of imaginary audience behavior. As the present study suggested only a small contribution of cognitive stage to the development of sensitivity to the imaginary audience, it would appear that further study of the relationship between various components of development and self-consciousness is warranted.

7. In examining those studies assessing cognitive stage, including the present study, all have used various pencil and paper tests to determine the Piagetian stage. Further research into Elkind's (1967) adolescent egocentrism now needs to be conducted using the Piagetian clinical interview. This would provide an opportunity to substantiate those studies findings which have used pencil and paper measures.

8. If the relationship between cognitive stage, all contributing covariates (other than gender and grade level) and sensitivity to the imaginary audience and its components can be established, further investigation using various populations of subjects should be conducted as recommended by Elkind (1967,1978b).

9. Further attention to the distinction between imaginary audience, self-consciousness and egocentrism would allow for better understanding of the constructs being measured.

10. Further investigation of the construct validity of the imaginary audience, transient and abiding self is warranted. Specifically, extend investigation of the validity by examining correlations of TS and AS scores to specific area scores on the Coopersmith and Piers-Harris rather than the global self-concept score. This could possibly provide information regarding the minimal contribution of cognitive stage to the imaginary audience and transient self found in the present study.

11. As results from studies have consistently supported the finding of heightened self-consciousness (sensitivity to the imaginary audience) in females, more study directed toward the socialization, parenting, etc. of females appears to be warranted.

12. As the current study 's findings replicated the uncertainty of previous studies' results, it is recommended that new directions be pursued in the study of self-consciousness/ imaginary audience behavior. Consideration of Sherwood's (1965) idea of frequency of involvement with the peer group and its effect on egocentrism and concern for the imaginary audience is an area in which investigation is warranted.

13. Based upon the current study's inconsistent findings regarding the transient and abiding self, further research into the two components appears warranted. Research into whether the TS and AS represent more of a failure to differentiate the universal versus particular aspect of reality rather than the transient and abiding aspects and subject-object aspect of reality is warranted. Secondly, investigation into whether a particular failure to differentiate any aspect of reality results in more quantifiable imaginary audience type behavior than others appears needed.

14. In the present study, inspection of mean scores for gender, grade level and cognitive stage suggest the possibility of differences in performance on the transient self scale, abiding self scale and the imaginary audience scale. Further investigation following the current studies statistical design is needed in order to determine the factors contributing to any differences.

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APPENDIXES

APPENDIX A

IMAGINARY AUDIENCE SCALE

1. You have looked forward to the most exciting dress up party of the year. You arrive after an hour's drive from home. Just as the party is beginning, you notice a grease spot on your trousers or skirt. (There is no way to borrow clothes from anyone.) Would you stay or go home?

 Go Home.
 Stay, even though I'd feel uncomfortable.
 Stay, because the grease spot wouldn't bother me.

2. Let's say some adult visitors came to your school and you were asked to tell them about yourself.

 I would like that.
 I would not like that.
 I wouldn't care.

3. It is Friday afternoon and you have just had your hair cut in preparation for the wedding of a relative that weekend. The barber or hairdresser did a terrible job and your hair looks awful. To make it worse, that night is the most important basketball game of the season and you really want to see it, but there is no way you can keep your head covered without people asking questions. Would you stay home or go to the game anyway?

 Go to the game and not worry about my hair.
 Go to the game and sit where people won't notice me very much.
 Stay home.

4. If you went to a party where you did not know most of the kids, would you wonder what they were thinking about you?

I wouldn't think about it.
 I would wonder about that a lot.
 I would wonder about that a little.

5. You are sitting in class and have discovered that your jeans have a small but noticeable split along the side seam. Your teacher has offered extra credit toward his/her course grade to anyone who can write the correct answer to a question on the blackboard. Would you get up in front of the class and go to the blackboard, or would you remain seated.

Go to the blackboard as though nothing had happened.
 Go to the blackboard and try to hide the split.
 Remain seated.

6. When someone watches me work . . .

I get very nervous.
 I don't mind at all.
 I get a little nervous.

7. Your class is supposed to have their picture taken, but you fell the day before and scraped your face. You would like to be in the picture but your cheek is red and swollen. Would you have your picture taken anyway or stay out of the picture?

Get your picture taken even though you'd be embarrassed.

Stay out of the picture.

Get your picture taken and not worry about it.

8. One young person said, "When I'm with people I get nervous because I worry about how much they like me."

I feel like this often.

I never feel like this.

I feel like this sometimes.

9. You have been looking forward to your friend's party for weeks, but just before you leave to go to the party your mother tells you that she accidentally washed all your good clothes with a red shirt. Now all your jeans are pink in spots. The only thing left to wear are your jeans that are too big and too baggy. Would you go to the party or would you stay home?

Go to the party, but buy a new pair of jeans to wear.

Stay home.

Go to the party in either the pink or baggy jeans.

10. Suppose you went to a party that you thought was a costume party but when you got there you were the only person wearing a costume. You'd like to stay and have fun with your friends but your costume is very noticeable. Would you stay or go home?

Go home.

Stay and have fun joking about your costume.

Stay, but try to borrow some clothes to wear.

11. Let's say you wrote a story for an assignment your teacher gave you, and she asked you to read it aloud to the rest of the class.

I would not like that at all.

I would like that but I would be nervous.

I would like that.

12. If you were asked to get up in front of the class and talk about your hobby...

I wouldn't be nervous at all.

I would be a little nervous.

I would be very nervous.

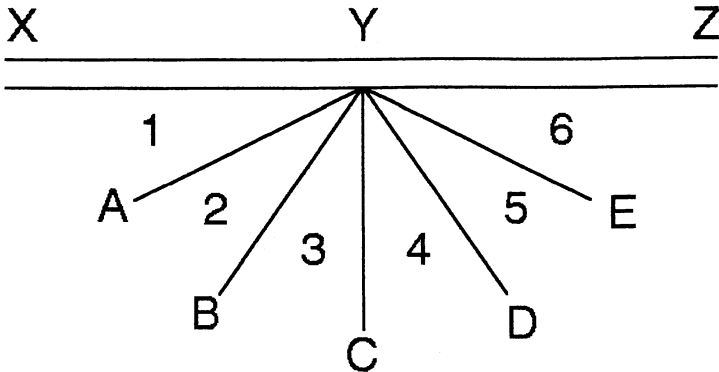
APPENDIX B

**PIAGETIAN OBJECTIVE
FORMAL INSTRUMENT**

Instructions

1. For all of the questions on this questionnaire you will need to circle your answers. For a few of the questions you will be asked to give two or three answers. Instructions for answering these questions will be given when they appear on the questionnaire.
2. Several questions refer to diagrams and you should examine these diagrams closely before answering these questions.
3. If you have to change an answer, erase it completely and circle the new choice.
4. Try to answer all questions, if you are not sure of an answer then choose the one that you think is most apt to be right.
5. Think carefully before you answer each question.

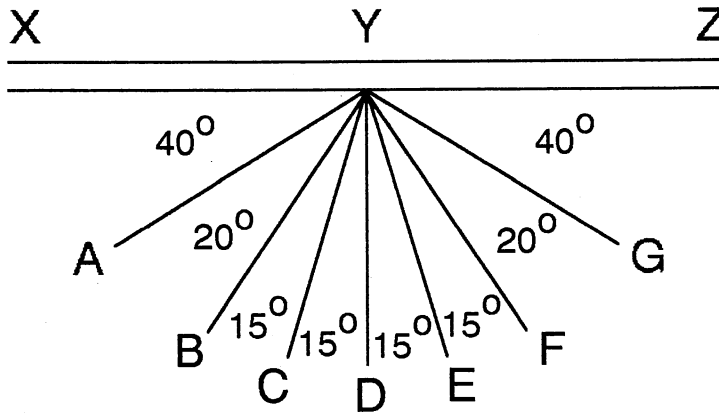
1. In the diagram below, the line XYZ represents a wall and a tennis ball is hit on to the wall so that it always hits at Y. Angle 1 equals angle 6, angle 2 equals angle 5, and angle 3 equals angle 4.



If a ball bounces from Y to B it must have been hit from:

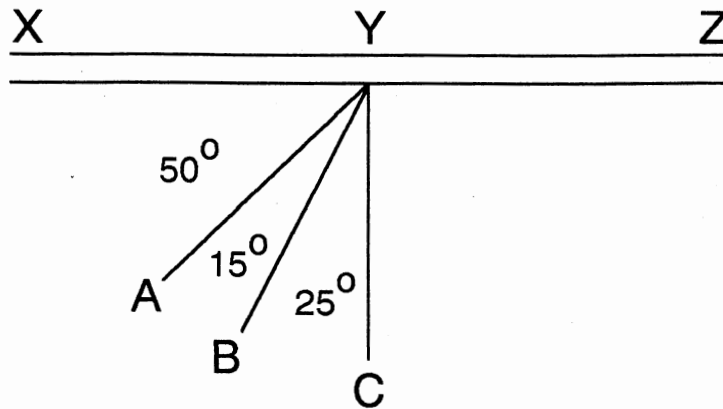
- (a) A (b) B (c) C (d) D (e) E

Here is a new diagram similar to the first one. Study it carefully and use it to answer questions 2 and 3.



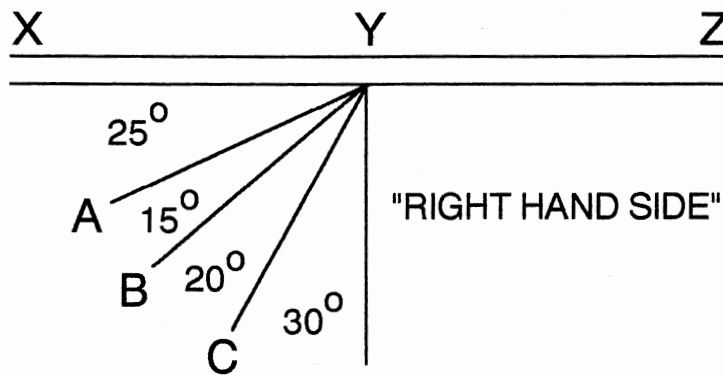
2. If a ball is hit accurately from B to Y on the wall, it will bounce to:
(a) A (b) E (c) C (d) F (e) G
3. If a ball bounces from Y to A it must have been hit from:
(a) A (b) E (c) C (d) F (e) G

4. In the diagram below, a ball is hit from A to a point Y on the wall.



The angle the new path of the ball makes with CY is:

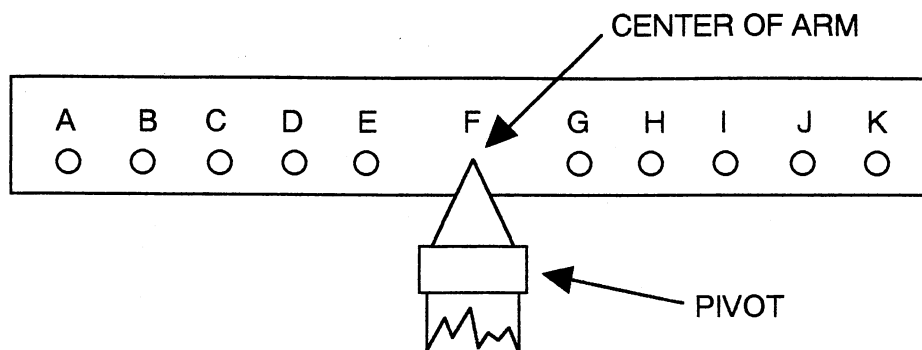
- (a) 50° (b) 75° (c) 65° (d) 40° (e) 25°
5. A tennis ball is hit from somewhere in the section marked "Right Hand Side" in the diagram below. The ball hits the wall at Y and bounces to C.



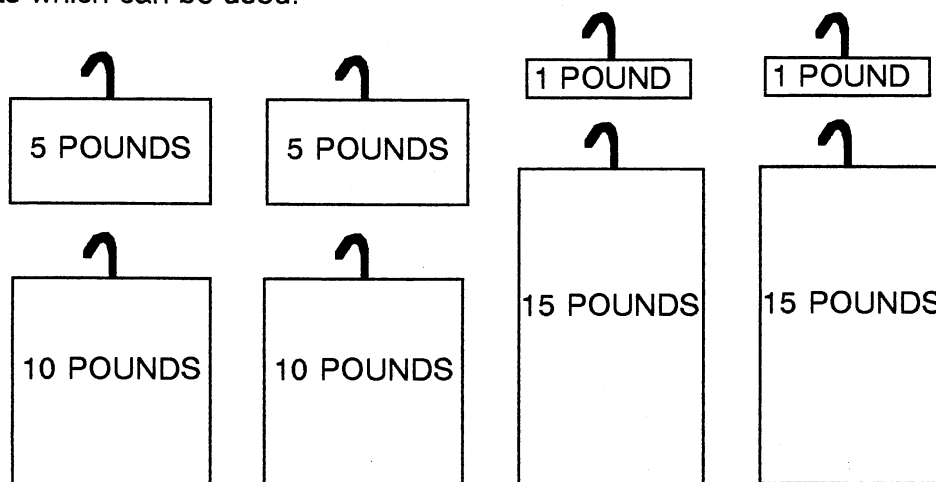
The size of the angle, from YZ, at which the ball must be hit is:

- (a) 25° (b) 40° (c) 65° (d) 60° (e) 50°

Suppose you have a balance scale similar to the one in the diagram below. Study the diagram carefully. Questions 6 - 9 refer to it.



Weights which can be used:



6. A ten pound weight is hung at C. To balance the arm again with another ten pound weight:
- the weight must be hung at H.
 - is impossible.
 - the weight must be hung at E.
 - the weight must be hung at J.
 - the weight must be hung at I.
 - the weight must be hung at K.

7. A five pound weight is hung at D. To balance the arm again:
- (a) a one pound weight must be hung at A.
 - (b) a ten pound weight must be hung at J.
 - (c) a five pound weight must be hung at H.
 - (d) a ten pound weight must be hung at E.
 - (e) a five pound weight must be hung at K.
 - (f) is impossible.
8. A five pound weight is hung at E and a ten pound weight at C. To balance the arm again:
- (a) a five pound weight must be hung at G and a ten pound weight at J.
 - (b) a ten pound weight must be hung at H and a one pound weight at K.
 - (c) a fifteen pound weight must be hung at I and a one pound weight at H.
 - (d) a ten pound weight must be hung at I and a five pound weight at G.
 - (e) is impossible.
 - (f) a five pound weight must be hung at I and a ten pound weight at G.
9. A ten pound weight is hung at C. To balance the arm again using a fifteen pound weight:
- (a) the weight must be hung at K.
 - (b) the weight must be hung at I.
 - (c) the weight must be hung at G.
 - (d) the weight must be hung at E.
 - (e) is impossible
 - (f) the weight must be hung at H.

Questions 10 - 12 are called syllogisms. Each syllogism consists of two premises and a conclusion. You are to determine whether each argument is valid or not.

Example:

F1: No one year old babies can walk.

F2: Paul is a one year old baby.

C: Paul cannot walk.

This is a valid argument. -----

10. F1: Not all R's are T's.

F2: All T's are M's.

C: Some R's may not be M's.

(a) Valid (b) Invalid

11. F1: All coal is white.

F2: All white coal produces red smoke when burning.

C: Therefore when coal burns, the smoke is grey.

(a) Valid (b) Invalid

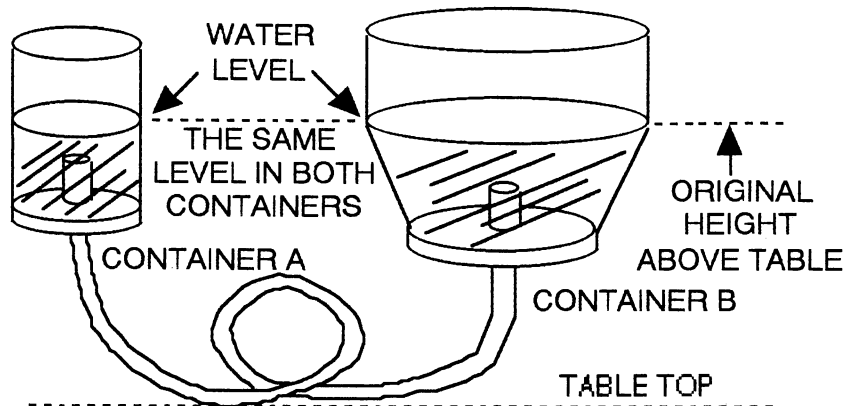
12. F1: When John gets angry at Mary he hits her.

F2: John is not angry at Mary.

C: Therefore John will not hit Mary.

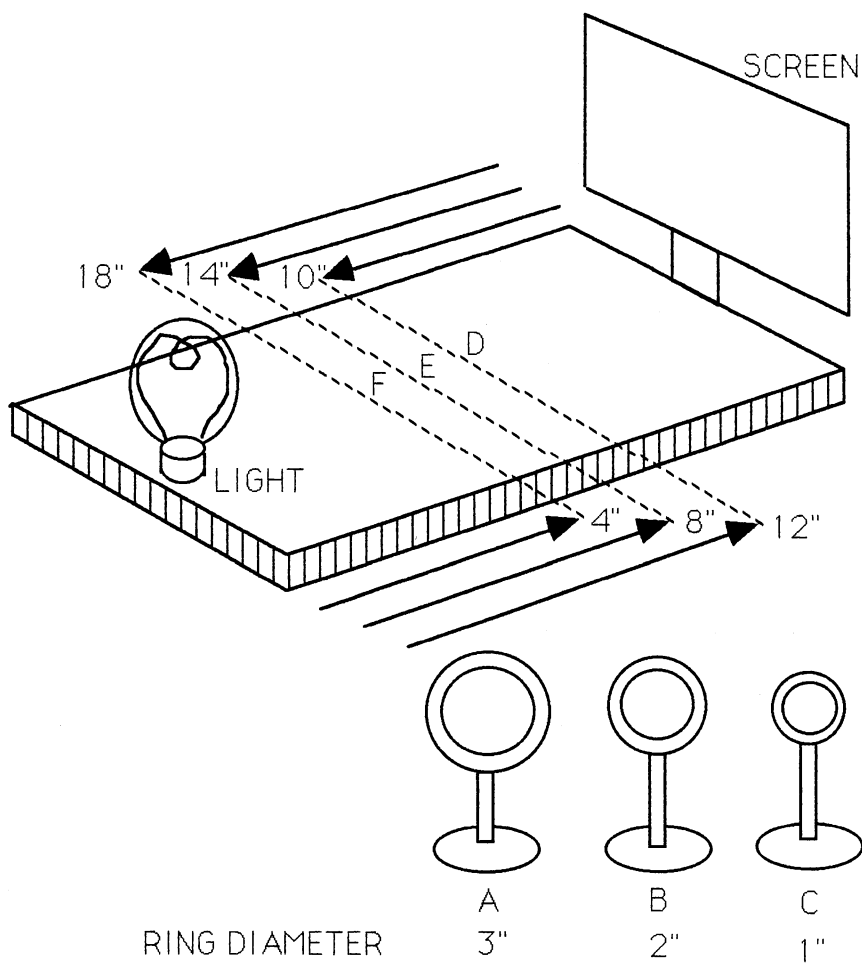
(a) Valid (b) Invalid

The diagram below represents two containers with water in them. There is a length of hose connecting them that will allow water to pass from one container to the other. Container B has a larger diameter than container A. Use the diagram to answer questions 13 and 14.



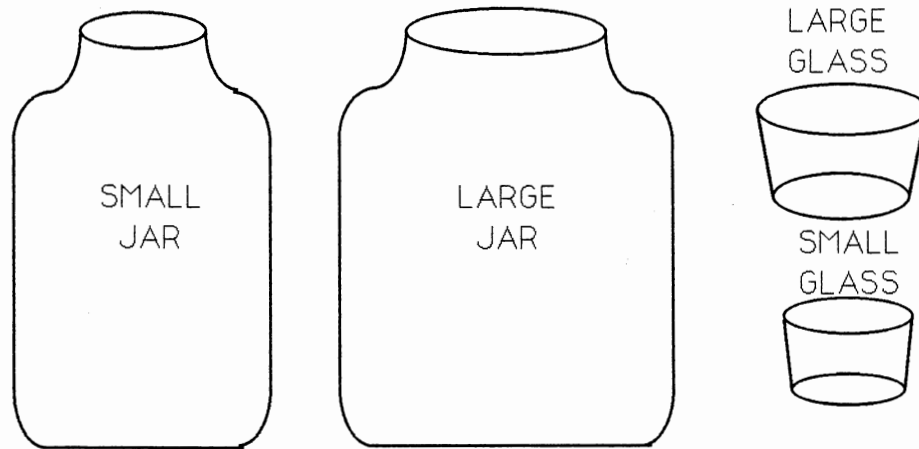
13. The container A and the container B are moved down the same distance. The water levels in the containers will:
- stay at the original height above the table.
 - change so that the level in A is above the original height above the table and the level in B is below.
 - change so that the level in B is above the original height above the table and the level in A is below.
 - change so that the levels in A and B are the same distance above the original height above the table.
 - change so that the levels in A and B are the same distance below the original height above the table.
14. Container A and container B are moved up the same distance. The water levels in the containers will:
- stay at the original height above the table.
 - change so that the levels in A and B are the same distance below the original height above the table.
 - change so that the level in A is above the original height above the table and the level in B is below.
 - change so that the levels in A and B are the same distance above the original height above the table.
 - change so that the level in B is above the original height above the table and the level in A is below.

The apparatus picture below can be used to throw shadows onto a screen. The rings pictured can be placed at points D, E, or F or anywhere along a line through D, E, and F between the light and the screen. The shadows that are referred to in the questions are the circular shadows of the rings only, not the ring stands. The distances of D, E, and F from the screen are indicated above and the distances of D, E, and F from the light are indicated below the apparatus. Study the diagram carefully and use it to answer questions 15 - 17.



15. The ring A is placed at D and its shadow allowed to fall on to the screen and the size of the shadow is measured. Ring A is removed and ring B is placed at D and the size of its shadow on the screen is measured. The two shadows formed:
- (a) will be of equal size.
 - (b) will be of unequal size, the shadow of A being larger than the shadow of B.
 - (c) will be of unequal size, the shadow of B being larger than the shadow of A.
 - (d) will be of unequal size, the shadow of A being smaller than the shadow of B.
16. The ring B is placed at D and its shadow allowed to fall on to the screen and the size of the shadow is measured. Ring B is removed and ring C is placed at D and the size of its shadow on the screen is measured. The two shadows formed:
- (a) will be of equal size.
 - (b) will be of unequal size, the shadow of B being larger than the shadow of C.
 - (c) will be of unequal size, the shadow of C being larger than the shadow of B.
 - (d) will be of unequal size, the shadow of B being smaller than the shadow of C.
17. The ring B is placed at E and its shadow allowed to fall on to the screen. To produce another shadow of equal size using ring C:
- (a) the ring C must be placed at D.
 - (b) the ring C must be placed at E.
 - (c) the ring C must be placed at F.
 - (d) is impossible.
 - (e) the ring C must be placed halfway between E and F.

The diagram below represents two glasses, a small one and a large one and two jars, a small one and a large one.
Use this diagram for problem 18.



18. If it takes six large glasses of water or nine small glasses of water to fill the small jar and it takes eight large glasses of water to fill the large jar, then how many small glasses of water does it take to fill the large jar?

(a) 10 (b) 15 (c) 11 (d) 16 (e) 12

Questions 19 - 24 are verbal analogies. Verbal analogies consist of two pairs of words with each pair having the same relationship. In is to out and up is to down is an example of an analogy. The common relationship between in - out and up - down is that they are opposites. Order of the pair of words is also important. Peel is to banana as paint is to house is correct while peel to banana as house is to paint is incorrect. In the following questions you are to choose two or three words that will best complete each analogy.

Example:

- | | | |
|-------------|-----------|-------------|
| (a) tire | | (e) anchor |
| (b) motor | is to car | as (f) deck |
| (c) highway | | is to ship |
| (d) map | | (g) captain |
| | | (h) ocean |

In this example, the best choices to complete the analogy are highway and ocean resulting in the analogy: Highway is to car as ocean is to ship. In this case "operates on" is the common relationship, a car operates on a highway and a ship operates on the ocean. On paper the above question would be answered with a mark on the c and a mark on the h.

Be careful to mark all required answers for each question on the page. Some questions require two answers and some require three.

19.

- | | | | |
|------------|----------------|----|----------------|
| | (a) attempt | | (e) problem |
| task is to | (b) completion | as | (f) chemical |
| | (c) work | | is to solution |
| | (d) question | | (g) man |
| | | | (h) answer |

20.

- | | | | | | |
|------------------|-----------------|----|------------|-------|-------------|
| | (a) switch | | (e) engine | | (i) boat |
| light bulb is to | (b) wire | as | (f) canoe | is to | (j) engine |
| | (c) socket | | (g) motor | | (k) tractor |
| | (d) electricity | | (h) steam | | (l) paddle |

21.

- | | | | | | | |
|----------|-------|------|----|-------|-------|-------------|
| (a) walk | | | | | | (e) roll |
| (b) toe | is to | body | as | wheel | is to | (f) machine |
| (c) knee | | | | | | (g) bicycle |
| (d) foot | | | | | | (h) spokes |

22.

- | | | | | | | |
|-----------|-------|-------|----|-------------|-------|--------------|
| (a) cow | | | | (e) soldier | | (i) bee |
| (b) horse | is to | flock | as | (f) swarm | is to | (j) pig |
| (c) sheep | | | | (g) pack | | (k) regiment |
| (d) foot | | | | (h) litter | | (l) wolf |

23.

- | | | | | | | |
|-----------|-------|------|----|-------------|-------|-------------|
| (a) brain | | | | (e) spring | | (i) bedpost |
| (b) eye | is to | head | as | (f) blanket | is to | (j) ticking |
| (c) hat | | | | (g) caster | | (k) bed |
| (d) ear | | | | (h) pillow | | (l) summer |

24.

- | | | | | | | |
|-----------|-------|-------|----|---------------|-------|-------|
| (a) music | | | | (e) chair | | |
| (b) house | is to | piano | as | (f) leg | is to | table |
| (c) bench | | | | (g) eat | | |
| (d) tuner | | | | (h) furniture | | |

APPENDIX C
PARENT PERMISSION FORM

Dear Parent,

The School Psychologist for the Blackwell Public Schools will be conducting research on self concept for students in grades 4, 6, 8, 10, and 12. This research has been reviewed and approved by the Blackwell School Administration.

This form is to request permission for your child's participation in that research. There will be complete anonymity of your child's results and identity in this research. There will be no penalty for those choosing not to participate in the study.

IF YOU DO NOT want your child to participate in this study, PLEASE SIGN this form and have your child return it to their teacher. If you grant permission for your child to participate, no further action is required. Thank you.

I DO NOT GIVE PERMISSION FOR MY CHILD TO PARTICIPATE

Child's Name

Parent Name and Signature

VITA 2

Pamelea Scruggs Cook

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP OF COGNITIVE STAGE TO THE
IMAGINARY AUDIENCE

Major Field: Applied Behavioral Studies

Biographical:

Personal Data: Born in Corpus Christi, Texas, the daughter of Mr. and
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Education: Graduated from Bixby High School, Bixby, Oklahoma;
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