

UNIVERSITY OF MANITOBA

MORAL DEVELOPMENT, EGO DEVELOPMENT, AND
SEX ROLE DIFFERENCES IN ADOLESCENCE

A DISSERTATION

SUBMITTED TO THE DEPARTMENT OF PSYCHOLOGY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF DOCTOR OF PHILOSOPHY

BY



BARBARA M. GFELLNER

WINNIPEG

April, 1981



MORAL DEVELOPMENT, EGO DEVELOPMENT, AND
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A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

DOCTOR OF PHILOSOPHY

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ACKNOWLEDGMENTS

It is impossible to adequately acknowledge the many persons who were of assistance during the course of this research. First, I would like to express sincere appreciation to Dr. Shirin Schludermann, a very special teacher, who served as chairman, for her direction, patience and encouragement throughout this work. The committee members, Dr. Edward H. Schludermann and Dr. Terry Morrison provided valuable suggestions and discussion. Dr. James Rest was a most encouraging external examiner, who provided helpful comments concerning the manuscript.

So many individuals were incremental in various ways, to the successful completion of this research. Cindy Ackland and Gloria Jean Warkentin were enthusiastic and persevering raters of the sentence stems. I would like to thank my colleagues, friends and family for their encouragement, support and help in so many different ways. It is important to acknowledge the principals, teachers and the students who eagerly gave their time to participate as subjects and make the study possible. Finally, a special thanks to the typist for her typing of the manuscript.

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ABSTRACT

MORAL DEVELOPMENT, EGO DEVELOPMENT AND SEX DIFFERENCES IN ADOLESCENCE

The relationship between moral development, measured by the Defining Issues Test (Rest, 1974) and ego development assessed by Loevinger's (1970) Sentence Completion Test was examined in order to clarify the differential emphasis of cognitive developmental and social learning approaches to the role of cognitive symbolic processes as causal mechanisms in socialization. According to social learning theory, behaviour in one facet of socialization is considered to develop independently of other behaviours, and no fixed relationship was predicted between the pattern of moral development and ego functioning. Conversely, cognitive developmental theory assumes a parallel development in various facets of social-cognitive functioning, and a concurrent relationship was predicted between moral development and ego level.

In view of methodological difficulties inherent in research with Kohlberg's moral interview technique, this study examined the relationship between ego development and a cognitive measure of moral capacity, the DIT. In addition, two determinants of socialization, sex and socioeconomic status (SES), defined in terms of the expectations and role-taking opportunities generated as personal self-categorizations, were examined in moral and in ego development.

The subjects were 559 rural junior and senior high school and first year university students. The designs included: a one-way ANOVA with ego level the independent and moral P-score the dependent variables, and

a MANOVA with grade, sex and SES as predictors of ego level and moral P-score, to test the hypotheses.

A concurrent relationship between moral capacity and ego development was established in support of the cognitive developmental interpretation. At each successive ego level an increment in P-score was observed. Significant differences occurred between the preconformist, conformist, transitional I-3/4, conscientious and the post-conscientious ego levels. Chi square analysis performed on the frequency distribution of subjects' moral stage-type by ego level was significant.

Subsequent analyses evaluated grade, sex and SES in relation to moral and ego development. The developmental trend was supported in moral development. Sex differences were not found although females demonstrated higher moral scores at all grade levels except grade 11. There was directional support for high-SES students and moral capacity. An unexpected finding was that low-SES older adolescents evidenced the highest moral development. This was explained in terms of cognitive rendering engendered in upwardly mobile older adolescents.

In ego functioning, the developmental trend was confirmed. Females demonstrated precocious ego development in comparison with males. At each grade, girls were one ego level in advance of the boys. SES differences were not supported. However, during the high school years, high-SES students demonstrated higher ego functioning than medium-SES and low-SES students whereas at the university level low-SES students showed the most advanced ego development.

Regression equations computed for both ego level and moral development

with grade, sex and SES as predictors indicated that these variables operate differently in the moral and ego dimensions. In moral development the largest proportion of variance was accounted for by grade (4.91%, $p < .0001$), followed by sex (1.4%, $p < .006$) and SES (.64%, $p < .06$). Conversely, the most variability in ego development was due to sex (6.84%, $p < .0001$), followed by grade (.82%, $p < .03$) and SES (.37%, $p < .55$). Ego development was the most potent predictor of moral capacity during adolescence. It accounted for 19.98% of the moral variability.

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Chapter I

Introduction

This section is a review of the theoretical and empirical literature upon which the study is based. The main assumptions of cognitive developmental and social learning approaches to socialization are evaluated. Two aspects of social cognition, moral development and ego development are outlined as processes of socialization and the methodology for these constructs is reviewed in terms of theory and empirical research. According to theoretical assumptions, social perspective taking is evaluated as a necessary but not sufficient ability in both moral and ego constructs. The self-categorizations, expectations and role taking experiences provided by a person's sex role and socioeconomic status are considered as determinants of socialization in the processes of moral development and ego development. Finally, the rationale and the hypotheses for this study are presented.

Cognitive Developmental and Social Learning

Approaches to Socialization

"Cognitive developmental" is a label that refers to an approach rather than to a theory. It includes a set of assumptions and research strategies employed in a number of specific theories of cognitive and social development. These include the theories of: J. M. Baldwin (1906); J. Dewey (1930); G. H. Mead (1934); Piaget (1948); Loevinger (1966); Kohlberg (1966, 1968, 1969); and Selman (1976). The basic assumption of cognitive developmental theories apply for the development of ways of

thinking about both physical and social objects.

The cognitive developmental approach to socialization assumes a parallel development in logical thinking and in social cognition. The development of logical thought has been well articulated in the work of Piaget, his colleagues, and disciples. On the other hand, social cognition is elaborated in terms of its many facets, including moral development, ego development, social perspective taking, and the development of gender identity. Although the logical component in social cognition is recognized, the interrelationships between the facets of social cognition warrant attention. According to Kohlberg, "In addition to the level of social development due to general cognitive development (the g factor in mental maturity tests), there is a farther unity of development due to a common factor of ego maturity" (1969, p. 349). This study is addressed to the study of this "common social component" in social cognition and its function in the socialization process.

The cognitive developmental approach to socialization is concerned with consistency, balance or equilibrium, and dissonance reduction. It assumes that the individual's behaviour has an organizational pattern of its own. And it is this organizational pattern which regulates behaviour.

This involves the notion of cognitive structure which refers to rules for processing information or for connecting experienced events. Connections are formed by an active process which involves, in part, selective attention, information gathering strategies, and similar mechanisms. The process of relating particular events depends upon prior general modes of interpretation developed by the individual. The

most general modes of interpretation are "categories of experience". These categories are modes of relating applicable to any experienced events. They include relations of causality, substantiality, space, time, quantity, and logic as well as social constructs.

According to the cognitive developmental position, an individual's cognitive social structure or "categorization of experience" determines his/her attitudes, values, or basic perception of the elements of social reality. Thus, the cognitive developmental perspective places heavy emphasis on the causal role of cognition and categorization as the basic determinants of socialization phenomena.

The social learning approach to socialization is based on observational learning. This refers to any interpersonal modelling situation through which observers learn and adopt the attributes and actions of other people. Contemporary accounts of observational learning assign a prominent role to representational mediators that are assumed to be acquired on the basis of a contiguity learning process (Bandura, 1969).

In contrast to traditional associational theory (Gerwitz, 1969), the social learning perspective emphasizes observational and cognitive mediational processes. This is illustrated in an account of the complex behavioural repertoires that individuals acquire with little or no tuition. Individuals learn complex patterns of behaviour by combining and integrating responses observed in a variety of models. Frequently, this learning is accomplished in situations in which cues provided by others are the only reliable eliciting stimuli.

According to Bandura, the ability to observe and then to produce

or reproduce a sequence of behaviour requires selective attention, retention and rehearsal, adequate duplication of the model, and a motivational component to justify the imitative act in terms of external, internal, or vicarious rewards. An individual is able to observe a variety of models in numerous situations. Although the reinforcing consequences of a behaviour are important, these consequences may be associated with alternative behaviours through vicarious and symbolic reinforcement. In addition, the consequences of a behaviour depend on many moderating conditions. Some of these determinants of behavioural consequences include: the type of behaviour, the situation in which it occurs, the person's age, status, and other attributes as well as qualities of the social agents who evaluate him/her.

In early socialization, external contingent reinforcement may be important. Later, however, an individual's self-reactions and self-evaluations become prominent in behavioural acquisitions. In other words, individuals are able to regulate their own behaviour in terms of person-environmental interactions.

Contemporary social learning theory is similar to the cognitive developmental perspective in that it acknowledges the role of cognitive-representational processes in the acquisition of complex behaviour. Although social learning theory emphasizes reinforcement, it does not rely upon it exclusively.

In contrast, the basic difference between these two approaches to socialization involve the heavy emphasis that the cognitive developmental perspective places on the causal role of cognitions, categorizations, or

structure. The main question is not levied at the existence of cognitive structure but at how adequately these structures in themselves account for socialization phenomena.

According to the social learning theory, an individual's social cognitions, structure, or categorizations do not necessarily parallel his other behaviours, nor do they cause them. On the other hand, cognitive developmentalists assume that an individual's cognitive structure or categorizations are the primary causal agents which direct behaviour, generate behavioural change and thereby underlie or are reflected in all of the individual's behaviour in the person-environmental interaction.

Cognitive developmental and social learning explanations of social learning phenomena differ in terms of the emphasis placed upon cognitive processes as determinants of socialization. Cognitive developmentalists consider social cognitions or categorizations as primary causal agents whereas social learning proponents advocate the operation of cognitive processes in relation to social-environmental contingencies. In order to determine which explanation is more accurate, two facets of social cognition, ego development and moral reasoning, were examined in an adolescent sample.

According to cognitive developmental assumptions, an individual's level of ego functioning and moral reasoning capacity is expected to reflect the same basic level of cognitive competence or structural organization. According to social learning theory, an individual's social cognitions or categorizations do not necessarily parallel his other behaviours. From this perspective ego development and social moral

reasoning would be expected to develop independently. In other words, no fixed pattern of development is predicted between ego development and moral development.

Moral Development

The cognitive conceptualization of moral development (Kohlberg, 1963; 1969) has provided a powerful paradigm in the study of moralization. Following Piaget's (1932) dicotomous formulation of moral judgment development, which terminates at approximately twelve years of age, Kohlberg's model extends the scope of moral reasoning into the adult years in terms of his six stage model.

Moral judgment development refers to the reasoning utilized when solving a moral conflict situation. This is a specific domain of cognitive functioning which involves a justice structure or schema as well as logical and social-emotional components (to be discussed at the end of this section). According to Kohlberg (1975), each moral stage contains elements of the basic moral domains defined by moral philosophers. And all of these moral domains are structurally integrated in the moral stage sequence. Specifically, each stage of moral development defines the criteria (or categories) by which an individual evaluates a moral dilemma.

Kohlberg's model includes six stages of moral judgment, each characterized by a more integrated type of moral reasoning. Ideally, an individual progresses through each successive stage until stage six may

be achieved during adulthood. However, a person may stabilize at a particular level of moral development and thereby cease to progress along the continuum of moral reasoning. According to Kohlberg, most adults are functioning at the stage 4, conventional level of moral reasoning.

Kohlberg's Stages of Moral Development

Kohlberg's model presents a description of moral judgment development as well as a typology of individual differences in moral reasoning capacity. The moral schema and defining stage characteristics are presented in Table 1.

The six moral stages are grouped into three major levels: pre-conventional (Stages 1 and 2), conventional (Stages 3 and 4), and post-conventional (Stages 5 and 6). Each level may be viewed as a different relationship between the self and social rules and expectations. At the pre-conventional level social rules and expectations are totally external to the individual whereas at the conventional level they have been internalized and at the post-conventional level they are differentiated and defined according to self-chosen principles (Kohlberg, 1976, p.33). There are two stages within each of the three moral levels with the second stage more organized and advanced in terms of the level's orientation.

At the pre-conventional level the basis of moral judgment resides in external quasiphysical happenings. The individual applies cultural standards of right and wrong without analyzing their meaning. The first stage is oriented to punishment and obedience. Behaviour is evaluated

TABLE 1

KOHLEBERG'S SIX STAGES OF MORAL REASONING

LEVEL I: PREMORAL (AGES 4 TO 10 YEARS)

Emphasis in this level is on external control. The standards are those of others, and they are observed either to avoid punishment or to reap rewards.

- Stage 1. Punishment and obedience orientation. "What will happen to me?" Children obey rules of others to avoid punishment.
- Stage 2. Instrumental purpose and exchange. "You scratch my back, I'll scratch yours". They conform to rules out of self-interest and consideration for what others can do for them in return.

LEVEL II: MORALITY OF CONVENTIONAL ROLE CONFORMITY (AGES 10 TO 13)

Children now want to please other people. They still observe the standards of others, but they have internalized these standards to some extent. Now they want to be considered "good" by those persons whose opinions count. They are now able to take the roles of authority figures well enough to decide whether some action is "good" by their standards.

- Stage 3. Maintaining mutual relations, approval of others, the golden rule. "Am I a good girl (boy)?" Children want to please and help others, can judge the intentions of others, and develop their own ideas of what a good person is.
- Stage 4. Social system and conscience. "What if everybody did it?" People are concerned with doing their duty, showing respect for higher authority, and maintaining the social order.

LEVEL III: MORALITY OF SELF-ACCEPTED MORAL PRINCIPLES (AGE 13, OR NOT UNTIL YOUNG ADULTHOOD, OR NEVER)

This level marks the attainment of true morality. For the first time, the individual acknowledges the possibility of conflict between two socially accepted standards, and tries to decide between them. The control of conduct is now internal, both in the standards observed and in the reasoning about right and wrong. Types 5 and 6 may be alternate methods of the highest level of reasoning.

- Stage 5. Morality of contract, of individual rights, and of democratically accepted law. People think in rational terms, valuing the will of the majority and the welfare of society. They generally see these values best supported by adherence to the law. While they recognize that there are times when there is a conflict between human need and the law, they believe that it is better for society in the long run if they obey the law.
- Stage 6. Morality of universal ethical principles. People do what they as individuals think right, regardless of legal restrictions or the opinions of others. They act in accordance with internalized standards, knowing that they would condemn themselves

if they did not.

Source: Papalia & Olds. A Child's World. New York:McGraw-Hill, 1979,
p. 364.

in terms of physical consequences, that is, reward and punishment. Avoidance of punishment and unquestioning deference to power are valued in their own right.

The second stage is oriented to instrumental relativism. Right action consists of satisfying one's own needs and occasionally those of others. There are elements of fairness, reciprocity and equal sharing, but these are always interpreted pragmatically, for example, "You scratch my back and I'll scratch yours".

At the conventional level maintaining the expectations and standards of one's family, group, or nation is the ideal, regardless of immediate consequences. This attitude involves not only conformity to personal expectations and social order but, loyalty to it, actively maintaining, supporting, and justifying the order, and identifying with the persons or groups involved in it.

The third stage is interpersonal concordance or the "good boy - nice girl" orientation. Behaviour is evaluated in terms of what pleases, helps, or is approved by others and intentionality is deemed critical. There is considerable conformity to stereotyped images of the majority or "natural" behaviour.

In the fourth stage, the law and order orientation, authority, fixed laws, and the maintenance of social stability are idealized. Appropriate behaviour involves doing one's duty, showing respect for authority, and maintaining the given social order for its own sake.

At the principled level, the group is no longer paramount. There is an effort to define values and principles that have validity and

application apart from one's identification with or membership in socially defined groups. One's conscience becomes the basis of action.

Stage five is the social-contract, legalistic or utilitarian orientation. Appropriate behaviour is defined in terms of individual rights and standards which have been agreed upon by the whole society. There is awareness of the relativism of personal values and opinions. Thus, consensual agreement is based upon procedural rules. The law is viewed as a changeable set of principles that should yield to what people perceive as the common good. Outside the legal realm, free agreement and contract are binding elements of obligation.

Stage six is the universal ethical principle orientation. Appropriate behaviour is arrived at through an appeal to logical comprehensiveness, universality, and consistency. These principles are abstract and ethical, pertaining to a wide variety of circumstances. These are universal principles of justice or reciprocity, equality of human rights, and respect for the dignity of human beings as individual persons.

Moral development, logical development and social perspective taking

As indicated above, a moral judgment stage refers to the reasoning capacities an individual employs when solving a moral conflict dilemma. Each person passes through the moral stages in a fixed sequential fashion. Also, in the process of development an individual passes through the more basic stages of logical reasoning described by Piaget (1967). Research indicates that moral reasoning capacities develop only after logical capacities at corresponding levels of complexity have been

integrated (Arbuthot, 1975; Kohlberg, 1973; Kuhn, 1971, Kuhn, Langer, Kohlberg & Haan, 1977; Langford & George, 1975; Tomlinson-Keasey & Keasey, 1974). Hence the logical capacities which an individual develops seem to be related to the specific domain of moral reasoning and there is a parallel between a person's logical stage and his moral stage. However, advanced logical development does not guarantee advanced moral reasoning. According to Kohlberg, "...formal operational thinking is necessary but not sufficient for principled moral reasoning" (1973, p.302).

In addition to logical development, investigators (Selman, 1971; 1973; 1976; Moir, 1974) have examined the development of social cognitive schema in terms of social perspective taking or social role-taking capacities. According to Selman (1971), perceptual role-taking, the ability to take another's visual perspective, precedes conceptual role-taking, the ability to take another's mental perspective. Hollos and Cowan (1973) reported results suggesting that logical reasoning and role-taking are two separate dimensions of development. Others have employed reciprocal role-taking as a training procedure to accelerate moral stage advancement (Blasi, 1972; Scharf, 1978).

A number of authors have reported substantial correlations between social role-taking and moral reasoning (Selman, 1971; Selman et al., 1973; Moir, 1974). Social role-taking is considered essential to the development of stage 3, conventional "good boy - nice girl" moral reasoning. These studies, with the exception of some of the training studies, have been restricted to children eleven years of age and

younger. Smith (1978) examined social role-taking, logical thinking, and moral reasoning in children up to the age of fourteen years. She reported that in the order of development, logical thinking precedes role-taking and role-taking precedes moral reasoning at corresponding levels of conceptual complexity.

Thus, in the process of development there is a hierarchical progression in logical functioning, social role-taking, and moral reasoning. Clearly, moral development depends upon stimulation defined in cognitive-structural terms. At the same time social-emotional factors are important in moral reasoning. A number of studies indicate the potential of social experience or role taking opportunities in moral development (Blasi, 1972; Scharf, 1978). Kohlberg (1976) emphasizes that role-taking precedes moral reasoning in a stage-specific manner. Further, the social system provides selective opportunities for role taking through many of its institutions such as the family, school, socioeconomic, and political structures.

Holstein (1972) reported that in families where parents encouraged open discussion of values, children evidenced higher moral development than children in families characterized by more restrictive communicative styles. A free exchange of attitude positions appears to provide role-taking experience for the developing child. According to Kohlberg (1976), socioeconomic status operates in a similar fashion. He comments that "...middle class children have more opportunity to take the point of view of the more distant, impersonal, and influential roles in society's basic institutions (law, economy, government, economics) than do lower

class children" (p.50). However, merely belonging to a particular group is not enough to insure moral growth, the individual must take advantage of the role taking experiences that the situation makes available.

The contention that social environments regulate opportunities for role-taking experiences is clearly indicated by an evaluation of moral reasoning exhibited by individuals in a number of different institutions. Thrower (in Kohlberg, 1976) found that children in American orphanages had very low moral development (stages 1 and 2) even through adolescence. In contrast, children on an Israeli kibbutz had the highest moral development in comparison with other samples (Bar-Yam, Reimer & Kohlberg, in Kohlberg, 1976). These settings differed dramatically in terms of quality of social participation. For example, orphanage children had little interaction with staff or peers; they performed poorly on a role taking task considered normative for their chronological and mental age. Conversely, kibbutz children engaged in intense supervised peer interaction as part of their preparation for community living.

According to cognitive developmental theory, moral development is stimulated when a cognitive-moral conflict is experienced which leads the individual to question the adequacy of his current mode (stage) of functioning. Stage transition results from reflective reorganization of these inadequacies or perceived contradictions (Turiel, 1966; 1974). Moral training programs have promoted cognitive-moral conflict by means of discussing moral dilemmas and presenting higher stage reasoning (Blatt & Kohlberg, 1975; Colby, 1972; Hayden & Pickar 1981). These studies have successfully accelerated persons up to but not beyond the

stage 4, conventional level. On the other hand, participation in a personal real-life moral conflict situation has been related to advanced moral reasoning on that issue (Gulligan, 1977). However, it is difficult to assess the impact of life experiences as perceived by the individual. Therefore, the extent to which moral-conflict is aroused in a specific case is uncertain.

Kohlberg's Methodology in Assessing Moral Judgment Development.

Moral judgment development is assessed by an interview in which a series of hypothetical stories that entail a moral conflict situation are read to the subject. The subject's task is to solve the moral dilemma. His spontaneous responses are clarified by means of appropriate probe questions in order to determine the moral judgment criteria used in the moral solution.

Kohlberg's scoring techniques for interview protocol have undergone a series of revisions. Initially, moral stages were assessed in terms of twenty-five aspects grouped in a number of sets. There were two methods of aspect scoring: sentence scoring and story rating. Sentence scoring used a manual listing prototypical examples of each aspect in each moral dilemma. Each statement a subject made was scored by aspect and stage. Then, the statements were converted into numerical values and a moral profile of stage use was computed, the moral judgment scale. Story rating, the second method of aspect scoring, assigned a stage to the subject's entire response to a story in terms of each aspect.

Although interrater reliability was high ($r = .89$) for aspect scoring, other difficulties surfaced in the empirical use of the measure.

To alleviate these concerns a structural scoring method was developed, intuitive issue scoring.

Intuitive issue scoring assesses the types of content (issues or values) which depict what the person is valuing, judging or appealing to rather than his mode of moral reasoning about that issue. Eleven content issues or values were isolated each containing several different moral aspects and the respective stage characterizations were generated. According to Kohlberg, intuitive issue scoring is the most theoretically valid method of scoring. Standardized issue scoring involves an interview situation which probes only two issues on each of three stories. Subsequent scoring is based on comparison with criterion concepts defining each stage on each issue for each story. The manual is in the process of standardization.

To date most research with Kohlberg's methodology has utilized some form of aspect scoring. Apart from the concerns mentioned above, a number of serious methodological problems have been levied at the use of the moral interview in research. Repeatedly, problems of nonstandard format are found in the moral interview presentation by the use of written as well as verbal form and by the nonconsistent or varied use of dilemmas per study. In addition to format variations, the different scoring systems have been used to compute a moral judgment index for each subject. Such allegations question the comparability of results between researchers. According to Kurtines and Grief (1974), these factors pose the most serious reliability problem in the Kohlbergian instrumentation.

Rest's Assessment of Moral Judgment Development

Based on Kohlberg's interview method, Rest (1974) developed an objective measure of moral judgment, the Defining Issues Test (DIT). The DIT not only overcomes some of the methodological criticisms levied at the use of moral interview methods in research, but it assesses a different facet of the moral judgment process.

In comparison with the moral interview technique which utilizes spontaneously produced moral reasoning, the DIT examines an individual's ability to comprehend moral reasoning and his evaluation and preference for moral reasoning characteristics of the different moral stages. Clearly, these facets of moral judgment represent different levels in the acquisition of a moral concept. Rest (1973) found that individuals comprehend moral statements at stages higher than the predominant stage which they spontaneously produce in the interview situation. In addition, individuals tended to prefer statements at stages above those they produced or comprehended.

Thus, the hierarchical order in which the moral judgment process proceeds appears to involve a preference for higher moral stages followed by comprehension of them which may occur well before the specific stage can be spontaneously articulated. The DIT is concerned with the way in which individuals perceive the crucial issues in a moral conflict situation where their own spontaneous reasoning is not involved. In terms of difficulty, the DIT assesses moral development at the preference and evaluative level. This precedes comprehension which requires a

paraphrasing or recapitulating a moral statement to demonstrate one's understanding of it. Thus, an individual would be expected to score higher on the DIT than on the Kohlbergian measure of moral competence.

The DIT consists of a series of six hypothetical stories each depicting a moral dilemma. The subject is required to read each story and to endorse an action alternative for the protagonist in the situation. The subject is then asked to evaluate a set of twelve statements which reflect moral stage-specific issue characterizations and to rate the importance of each, on a five point scale, in deciding the moral action choice. Subsequently, the four most important issues are selected and ranked by the subject.

There are several scoring methods used with the DIT. In the first, ranked items are assigned a weighted score and tabulated according to principled level items over the dilemmas. The P-score is computed in terms of the subject's rankings of stage 5 and stage 6 items. Although it is possible to compute scores for every moral stage, the P-score or principled level index, has been consistently used in research. An advantage of the P-score is that it is a continuous index based on a single response type which is acquired gradually.

In addition to the P-score, the DIT enables subjects to be stage-typed in terms of exceptional use of a particular moral stage. This involves computing average per cent of endorsement and standard deviations for each stage of the entire sample. Then each subject's item rating scores are converted to standardized scores so that every subject has a set of standardized scores. A standardized score of +1.0 is set as the

cut off point and a subject with a score at or in excess of this value demonstrates exceptional use of that stage and is stage-typed accordingly. If more than one score meets the criterion, the highest score is used to classify the subject. Alternatively, a subject is classified "mixed type" when none of the standardized scores meet the criterion.

The final scoring technique suggested by Rest is an index of the proportion of "substantial usage" or the highest stage of substantial (at least twenty percent) use. This is determined by calculating the per cent endorsement of each subject's item ratings as well as the sum of principled level item ratings.

The reliability and validity information on these scoring methods is presented in the instrumentation section of the methods chapter.

Ego Development

The cognitive developmental model of ego development formulated by Loevinger (1966; 1970) was drawn from theories of cognitive (Harvey, Hunt, Schroeder, 1961), character (Peck & Havighurst, 1960), self (Sullivan, 1953), interpersonal (Sullivan, Grant & Grant, 1957), and moral development (Piaget, 1932; Kohlberg, 1964). Ego development depicts the schematic way in which a person construes reality. Specifically, it refers to the individualistic "frame of reference" through which a person perceives one's self, social relations and the relationship between one's self and social reality.

Loevinger's conceptualization of ego development provides a totally new approach to ego functioning. It differs radically from traditional

psychoanalytic conceptualizations of the ego which construe ego as part of a myriad of processes including psychic and/or instinctual forces or drives which determine personality and adjustment. Traditional ego psychologists tend to rely on a variety of "third ear" approaches to evaluate the ego as inferred in personal adjustment or some other aspect of personal functioning. Hence, there is neither an operational definition of what the ego is, nor agreed upon methods of assessment.

In contrast, Loevinger's conceptualization of ego development refers to the personal integrative capacities through which an individual interprets (aspects of) the social world in relation to the self. The specific characteristics of the ego construct are operationalized in terms of the levels of ego development. Loevinger's formulation provides a social-cognitive approach to ego functioning as well as a viable technique for assessment.

Loevinger's Model of Ego Development

Ego development is operationally defined in the sequential description of the seven stages and three transitional phases arrived at through empirical work (Table 2). The first stage (I-1) has two phases: presocial and symbiotic. In the presocial phase, the child's perception of his environment and self are undifferentiated, need fulfillment is the sole concern. The child attaches to a primary figure (caretaker) in the symbiotic phase but remains undifferentiated from this figure. The first stage terminates with language acquisition. It is inaccessible to study according to this formulation of ego functioning assessment.

TABLE 2
Milestones of Ego Development^a

Stage	Impulse control "moral" style	Interpersonal style	Conscious Preoccupations	Cognitive Style
Presocial (I-1) Symbiotic (I-1)		Autistic Symbiotic	Self vs. nonself Self vs. nonself	
Impulsive (I-2)	Impulsive, fear	Receiving, dependent, exploitive	Bodily feelings, especially sexual and aggressive	Stereotypy, conceptual confusion
Self-protective (Delta)	Fear of being caught, externalizing blame, opportunistic	Wary, manipulative, exploitive	Self-protection, wishes things, advantages, control	
Transition from self-protective to conformist (Delta/3)	Obedience and conformity to social norms are simple and absolute rules	Manipulative, obedient	Concrete aspects of traditional sex roles, physical causation as opposed to psychological causation	Conceptual simplicity, stereotypes
Conformist (I-3)	Conformity to external rules, shame, guilt, for breaking rules	Belonging, helping, superficial niceness	Appearance, social accept- ability, banal feelings, behaviour	Conceptual simplicity, stereotypes, cliches
Transition from conformist to conscientious; self-consciousness (I-3/4)	Dawning realization of standards, contingencies, self-criticism	Being helpful, deepened interest in interpersonal relations	Consciousness of the self as separate from the group, recognition of psychological causation	Awareness of individual differences in attitudes, interests and abilities; mentioned in global and broad terms
Conscientious (I-4)	Self-evaluated standards, self- criticism	Intensive, responsible mutual, concern for communication	Differentiated feelings, motives for behaviour, self-respect, achievements, traits, expression	Conceptual complexity, idea of patterning
Transition from conscientious to autonomous	Individuality, coping with inner conflict	Cherishing of interpersonal relations	Communicating, expressing ideas and feelings, process and change	Tolerance for paradox and contradiction
Autonomous (I-5)	Add: Coping with conflicting inner needs ^b	Add: Respect for autonomy	Vividly conveyed feelings, inte- gration of physiological and psychological causation of behaviour development, role conception, self-fulfillment, self in social context	Increased conceptual complexity; complex patterns, toleration for ambiguity, broad scope, objectivity
Integrated (I-6)	Add: Reconciling inner conflicts, renunciation of unattainable	Add: Cherishing of individuality	Add: Identity	

^aFrom Loevinger and Messler, 1970; Hoppe, 1972; Hauser, 1976.

^b"Add" means in addition to the description applying to the previous level.

In the "impulsive" second stage (I-2), impulses are predominant and their control is defective or undependable. Rules are not recognized. Actions are deemed bad or good by their consequences (punishment or reward). The individual's perception is egocentric and concrete. Conscious preoccupations involve physical need satisfaction including the aggressive and sexual.

The third stage (Delta) is self-protective. Rules are acknowledged, but obeyed in terms of self-interest or immediate advantage. Morality is expedient, interpersonal relations exploitive and manipulative. There is less emphasis on dependency than at the impulsive level. Conscious preoccupations involve control, "getting into trouble", domination, and deception.

Delta/3 is a transitional level between the self-protective and conformist stages. It was arrived at through empirical work. Delta/3 responses are not complex enough to receive a higher stage rating nor impulsive enough to warrant the Delta rating.

The Conformist stage four (I-3) views adherence to rules for their own sake. Disapproval and shame for transgressions of rules are important functional considerations. Interpersonal relations are seen in terms of actions and concrete events rather than feelings and motives. Conscious concerns involve material possessions, status, reputation and appearance. If inner states are expressed, they are in terms of stereotypes, cliches, and moralistic judgments.

The transition between conformist and conscientious stages (I-3/4) marks a growing awareness that "right ways" may be relative to the

context in which a person finds himself. Introspective capacities including an understanding of psychological causation, self-awareness and self-criticism begin to emerge. There is a burgeoning self-awareness that one's social group does not provide absolute behavioural directives. Thus, behavioural contingencies are more global and banal. Investigators have reported more individuals are classified I-3/4 than any other ego level.

At the fifth stage (I-4), the conscientious, morality has become internalized. Inner rules take precedence over those generated and enforced by peer or authority pressures; guilt is the sanction for transgression; interpersonal relations are seen in terms of feelings and motives rather than actions; social interaction is experienced as more vivid and meaningful than in the earlier stages; and individual differences are perceived in contrast to the previous broad stereotypes. Conscious thoughts focus on obligations, ideals, traits, and achievements as gauged by inner standards rather than through external recognition. In general, the conscientious stage is characterized by a capacity for self-criticism lacking in the previous stage.

The third transitional level (I-4/5), is depicted by the beginning of the ability to tolerate paradoxical relationships, in contrast to the earlier stages where paradoxes were reduced by eliminating them to polar opposites. There is a greater complexity in conceptualizing interpersonal interactions and interpersonal relations are highly valued, contrasting with the cherishing of ideals and achievements at I-4.

The autonomous stage six (I-5) focuses upon the awareness and

coping with inner conflicts. Although conflicting needs, conflicts between needs and ideals, and conflicting perceptions are present in earlier stages, they were not direct. Concomitant with greater awareness of inner conflict is an increased tolerance for others' choices and solutions versus the moral condemnation of earlier stages. Interpersonal relations involve recognition of mutual interdependence plus the other person's autonomy needs. The autonomous person sees the need for others to learn from their own mistakes. Conscious thoughts often involve role differentiation, individuality, self-fulfillment, and opinion complexity.

In the highest stage (I-6), the "Integrated" person is "proceeding beyond coping with conflicts to reconciliation of conflicting demands and, where necessary, renunciation of the unattainable" (Loevinger, 1966, p.200). This involves a cherishing rather than toleration of individual differences. The Integrated is the highest theoretical stage but it lacks empirical description because approximately 1% of the population fall into this category (Loevinger and Wessler, 1970, p. 4). Due to its rarity and the tendency for raters to idealize it, the Integrated stage is combined with the Autonomous stage in research (Loevinger, 1973).

To summarize, ego development conceptualizes an invariant order of seven sequential stages and three intermediate levels derived through empirical data. According to Loevinger, this sequence may be interrupted during development. When this occurs, the individual adopts a personal style characteristic of the particular stage at which the progression ceased.

Assessment of Ego Development

On the basis of empirical data, Loevinger and her colleagues (Loevinger & Wessler, 1970; Loevinger, Wessler & Redmore, 1970) developed the Sentence Completion Test (SCT) to assess ego development. The SCT consists of 36 sentence stems which subjects are instructed to complete in any way they wish. Responses to the stems are assigned to one of nine levels (including the transitional) by matching them with response categories provided in the scoring manual. This method is based on the assumption that each person has a core level of ego functioning and the scoring system was designed to determine this level by assessing the individual's responses to the 36 sentence stems.

The subjects' responses to each stem are removed from the content of the protocol and pooled for the sample. The pooled responses are scored and then the 36 stem scores are reassembled for each protocol.

Level of ego functioning for each protocol may be indexed by one of three scoring algorithms. The automatic total protocol rating (TPR) is most widely used. This procedure involves matching the cumulative frequency of scores for a protocol with automatic ogive rules provided by Loevinger and Wessler (1970). Ego level development is calculated from this table of values.

The borderline method utilizes frequency configurations but provides for protocols with frequencies falling between the two levels. This technique requires consideration of the information in the raw protocols such as themes and response patterns. It is recommended for experienced raters due to the intuitive requirement.

Item sum rating involves assigning a numerical value to each sentence stem and tallying the sum of the values for each protocol. This procedure is problematic because it correlates with verbal fluency in comparison with the other two techniques.

The reliability and validity information on the three scoring techniques for measuring ego development is described in the instrumentation section of the methods chapter.

Ego Development, Social Perspective Taking and Moral Development

Ego development is a global construct which represents the structural base through which an individual interprets the self in relation to the social environment over a wide range of content areas. However, it would be erroneous to assume that ego development embodies all of the theoretical constructs from which it was derived. For example, moral development is evident in the ego-level descriptions and response protocols yet, a moral factor failed to emerge in factor analysis of ego protocol responses (Lambert, 1972).

According to Kohlberg (1976), ego development is better conceived as levels rather than structural stages since the requirements for consistency in logic and moral development are much tighter than for ego development. Also, there are relatively clearer criteria in the logical and moral hierarchies than in ego levels.

The relationship between ego development and logical functioning has not been examined in research. However, ego development has been

related to intelligence in several studies (Blasi, 1972; Hoppe, 1972). On the basis of longitudinal data, Redmore and Loevinger (1979) found that intelligence and ego development correlated higher, .6, during the elementary and junior high school years than during high school ($r = .4$). This is consistent with cognitive developmental research which indicates that intellectual abilities are a prerequisite for functioning in other cognitive areas but do not insure competence in these respective domains. Such variability is most evident in the higher stages of development.

Ego development has not been formally related to Selman's (1976) conception of social role-taking (interpersonal awareness). However, social role-taking or the development of a child's understanding of him/herself in relation to others is the basic foundation of ego development. By definition ego development involves the global "frame of reference" through which an individual interprets him/herself in relation to others and to the social environment. By extrapolation Loevinger's model of ego development is an extension of social role-taking which is encompassed in the first four stages of ego development. According to Kohlberg, ego development "...represents possible extensions of cognitive developmental theory as it moves into the study of individual lives and life histories" (1976, p. 52).

The relationship between logical abilities, social perspective taking and moral development indicates that an individual must acquire certain broad structural capacities before they can develop in more specific content areas. Tamashiro (1979) reported that adolescents' ego levels were in advance of their developmental stage in marriage concepts. This

suggests that Piaget's notion of decalage, the acquisition of an operation in different domains at different ages, functions in the social as well as the cognitive dimension. In terms of cognitive rendering, adolescents probably have had less experience thinking about and formulating ideas on marriage which is still beyond their range of experience.

Similarly, moral development refers to a specific domain of functioning in which a justice structure operates in a moral conflict situation. In comparison with ego development, moral reasoning assumes social role-taking capacities in a more specialized area, that is, social moral problem situations. According to cognitive-developmental theory, ego development would be expected to precede moral development.

Review of Moral and Ego Development Research

A number of studies have examined the relationship between moral development and ego development. In a sample of 120 middle class Canadian children, 12 to 17 years of age, Sullivan, McCullough and Stager (1970) reported a correlation of .66 between moral reasoning and ego development. With age partialled out the correlation dropped to .40. In addition, these investigators found an age trend in the correlations between the moral and ego scales. At 12 years of age the correlation of .19 was significantly different from the 14 and 17 year old groups, .48 and .54 respectively. Lambert (1972) extended the age range with 107 subjects in 6 subsamples 11 to 60 years of age. He reported a correlation of .80 between moral capacity and ego development, .60 with age-controlled. Although Lambert's study included a wide age

range with various socio-economic and educational levels represented, none of these variables were assessed. However, in a subsequent analysis, Lambert failed to isolate a moral factor in the ego development scale.

In another study, Liberman and Gaa (1978) reported a correlation of .73 between ego development and moral development in a sample of 21 (15 females; 6 males) college students. Finally, in a group of 58 "hippie" volunteers, 19 to 35 years of age, Haan, Strough, and Holstein (1973) reported higher ego than moral levels. Correlational coefficients were not computed but, according to the authors, ninety per cent of their samples were at ego level I-3/4 or higher and ninety per cent were at moral stage 3 or lower.

Overall, these studies suggest a relationship between moral reasoning and ego development which may differentially align with age. In the Sullivan et al. study, developmental trends were illustrated for ego development and moral development. On both scales, non-overlapping S-shaped curves were indicated for the developmental dimensions as a function of age. These data suggested that the ego levels exceeded the moral stages at each age. The difference between ego level and moral stage was more clearly demonstrated in the Haan et al. study. However, the latter study employed subjects 19 to 35 years of age, whereas the former dealt with adolescent age groups. Although correlations between moral and ego development were not computed in the Haan et al. study, considering the large discrepancy between the moral stage and ego level scores, it may be inferred that the correlation between them was small. However, Turiel (1977) reported that these subjects were erroneously

rated at a lower moral stage than indicated in subsequent evaluation in terms of his articulation of a transitional phase between the conventional and principled moral levels.

In conclusion, re-analysis of the Haan et al. findings concerning their subjects' moral stage support the notion of a relationship between moral reasoning and ego development. Taken together, these studies warrant consideration of this relationship as a function of age.

The purpose of this study was to examine the relationship between ego development, measured by the SCT and moral development, measured by the DIT. As the DIT is a recognition measure of moral development, higher moral scores are expected in comparison with the spontaneous reasoning method. However, each of the above studies is confounded by inconsistent use of the moral interview technique. Hence, the aim of this study was to determine the relationship between ego development and a recognition measure of moral development, the DIT. In addition, the relationships between ego development and moral development were examined at various grade (developmental) levels within an adolescent sample. Stage-specific predictions between ego level and moral stage could not be made due to the nature of the moral measure.

Sex Role Socialization

All cultures define certain behaviours, activities, and personal qualities as appropriate for either males or females. In most cultures achievement and self-reliance are masculine while nurturance responsibility, and obedience are feminine qualities (Barry, Bacon & Child, 1957).

Despite considerable consistency across cultures, variations have been observed in the depiction of sex-appropriate behaviours. This was indicated dramatically in Mead's (1934) descriptions of three neighbouring New Guinea tribes. In the Tchambuli, women were self-reliant and aggressive and men were nurturant and obedient. The Arapesh men and women were passive and gentle whereas both sexes of the cannibalistic Mundugamor displayed violence, aggression, and hostility.

Conceptions of sex-appropriate behaviour are subject to change over time. Nevertheless, there are certain documented sex differences regarding activities, interests, and orientations in our own and other cultures. Boys display more physical aggression than girls. After preadolescence they excel in visual and mathematical abilities. On the other hand, girls tend to be more advanced in language development and school achievement during the early years. They score higher on suggestibility, anxiety level, number of expressed fears, social and affiliative interests and fear of failure (Maccoby & Jacklin, 1974).

In the process of socialization, children acquire the sex-appropriate behaviours and attributes socially sanctioned within their culture. This process is called sex-typing and may be differentiated into three components (Lynn, 1974). Sex role adoption refers to the actual sex-appropriate behavioural elements incorporated into an individual's repertoire. Sex role preference entails sex role characteristics endorsed as desirable although they may not be part of the person's repertoire. Finally, sex role (gender) identity refers to the degree to which an individual regards him/herself as masculine or feminine. These three sex role components

do not have to be in harmony with one another. For example, girls with a feminine identity who display sex-appropriate behaviours consistently prefer the male sex role (Papalia and Tennent, 1975).

Sex role differences are established very early in the process of socialization. For example, children as young as three years of age make sex-appropriate choices in preference for toys as well as the assignment of occupational roles to pictures of adults, children, and to themselves (Greenberg & Peck, 1974; Hewitt, 1975; Looft, 1971; Scherfsky 1976). More succinctly, Money (1965) in his work with aberrant physically-sexed individuals reported that sex role typing appears to crystallize at approximately three years of age. If an individual's sex role orientation was reassigned after that age, severe sex role adjustment problems ensued. Money contended that regardless of biological sex, if a child's sex role identity was consistent with the sex role in which he/she had been socialized, a stable sex role identity was maintained throughout life.

Sex role socialization involves the way in which individuals categorize and generate expectancies about themselves and others with regard to sex-appropriate information (Mischel, 1969). Once sex role categories are formed, people consistently generate inferences about them which are applied to themselves and others. Children and adults alike adhere to conventional sex role stereotypes when asked to describe the typical man or woman as well as when describing themselves (Broverman, Vogel, Broverman, Clarkson & Rosenbrantz, 1972; Bennett & Cohen, 1959; Elman, Press & Rosenkrantz, 1970; Garai & Scheinfeld, 1968). Apart from the

sex role polarization indicated in individuals conceptualization of males, females and themselves, these researchers found that all subjects judged the traits assigned to men as positive and desirable in contrast to the traits assigned to women.

The pervasiveness of these sex role stereotypes is noted in another study. Broverman, Broverman, Clarkson, Rosenkrantz, and Vogel (1970) compared male and female therapists descriptions of the "healthy adult male", "the healthy adult female", and "the healthy adult person". They found that the profiles of the "healthy person" and the "healthy male" resembled each other whereas the profile of the "healthy female" adhered to the feminine sex role stereotype.

The research on sex role categorization indicates that males and females infer certain different attributes about themselves and about others as a function of one's sex. These sex role stereotypes are considered to reflect the normative standards for sex-appropriate behaviour sanctioned in the society or culture.

According to Kohlberg's (1966) cognitive model of sex role development, a child develops a sex role schema or self-categorization with the realization that he/she possesses critical attributes exhibited by others of the same sex. Hence, he is a boy or she is a girl. In this way, one's sex is viewed as a mental deduction based on the child's knowledge of certain regularities perceived between males and females. Once this sex role cognition or self-categorization develops, the boy, for example, perceives his physical and behavioural similarities to other males and subsequently begins to model his behaviour after his

father and other males.

In this way, an individual's self-categorizations about his/her gender motivate the sex-appropriate attitudes and values which underlie behaviour. Cognitive developmental theory assumes a link between knowledge of the world as evidenced in sex role stereotypes and one's sex role identity. Subsequent sex-appropriate behaviour is motivated by this cognitive awareness.

Another process related to sex-typing is identification with the same-sex parent. Research on father-absence indicates that boys separated from their fathers at or prior to four years of age, fail to identify with the father and subsequently show uncertainty or conflict about their sex role (Biller, 1976; Hetherington, 1972). Preschool boys separated from their fathers tend to act in a feminine way that is, they are less aggressive and score higher on verbal than mathematical ability in comparison with father-present boys. During middle childhood these father-absent boys frequently become "hypermasculine" that is overaggressive, bullying, and actively avoid "sissy" activities. It is as if they are compensating for an inadequate masculine sex role identity.

Though less dramatic than for boys, father-absent preschool girls often fail to develop a clear sense of what it means to be female. This is often not noticed during childhood but, as adolescents these girls have difficulty relating to boys because they feel uncertain and insecure in a feminine role (Hetherington, 1976).

According to the literature, boys rated high in masculinity tend to perceive their fathers as both more punitive and more rewarding in

comparison with boys rated low in masculinity. Similarly, girls rated high in femininity tended to describe interaction with their mothers as warm and nurturant. For boys, a punitive and nurturant father displays the qualities which would enhance imitation and modelling behaviour.

According to social learning theory (Bandura, 1965; 1969) sex role differences are the result of observational and cognitive symbolic processes. Sex typing commences at birth, when children receive differential treatment commensurate with their sex. As a result of these different social histories, children differ in the value and meaning of stimuli and in their choices and preferences.

Children acquire the attributes and behaviours of a variety of sex-appropriate models by observation of consequences obtained directly and vicariously. Also, an individual's sex influences the consequences of many of his/her behaviours. However, these behavioural consequences also depend on other moderating factors that interact with sex.

In early socialization, sex-contingent reinforcement is important, but later, individuals learn to regulate their own behaviour. In this respect, sex role stereotypes may provide direction in the self-evaluative processes.

Females consider themselves, and other females, to be and they are socialized toward an "interpersonal-expressive" mode (Broverman et al., 1972) which emphasizes nurturance, obedience, and responsibility (Barry, Bacon & Child, 1957; Kagan & Moss, 1962). Males consider themselves and other males to be and are socialized toward an "instrumental-aggressive" mode which emphasizes logic competence, independence, and achievement

(Maccoby & Jacklin, 1974). In terms of socialization, boys seem to be under greater pressure than girls to comply with the sex role norm (Hartley, 1959; Block, 1965). Boys are encouraged to exhibit "masculine" behaviours and discouraged to show "feminine" behaviours. In addition, in young females the sanctions are not as great as males to conform to the sex role norm (Biller, 1973). However, at adolescence girls, too, are expected to discard "tomboyish" interests and become feminine. Parents tend to worry more about daughters, are more reluctant to punish them, and report more restriction and supervision of their activities (Mussen, Conger & Kagan, 1980).

In addition to sex differences in sex role enforcement, pressure to conform to sex-role expectations shows some variability as a function of socioeconomic background. This is most evident among lower socioeconomic children. For example, lower class boys at four and five years of age show a strong preference for "boys" toys; lower class girls and middle class boys prefer sex-appropriate toys at approximately 7 years of age; and middle class girls prefer sex-appropriate toys at nine years (Rabban, 1950).

Such differences in sex-typing are reflected in the children's parental role models. In the lower class, parents adhere to more rigidly stereotyped roles, for example, fathers tend to engage in more traditionally masculine occupations and mothers, more traditionally feminine service-oriented occupations. In terms of domestic duties, lower class fathers rarely help around the house or care for children in comparison with middle class fathers who participate more equitably

in domestic and child care duties. Furthermore, middle class mothers in comparison with lower class mothers, tend to be more assertive, and participate in a variety of activities or a profession not generally regarded as feminine.

In summary, the literature on sex role socialization indicates that in every culture sex-appropriate behaviours are encouraged, sanctioned, and integrated into a person's self-categorization (identity). There is a bifurcation of sex role attributes denoted in the male "instrumental" role and the female "expressive" role which individuals consistently apply to themselves and others from preschool years onward. The role of parents as agents of sex role socialization is clearly indicated in terms of identification, modelling, and behavioural expectations.

Sex Differences in Ego and Moral Development

In the ego development literature, investigators have not consistently examined sex differences. However, in the research available, including a longitudinal study of students from grade 6 through grade 12 (Martin & Redmore, 1978), there is a trend in that females are always ahead of or at least equal with males in terms of ego development.

Following Rest (1976), investigators do not seem to be favourably disposed to the study of sex differences in the moral development literature. However, the lack of significant results appears to be due to the reliance on homogeneous samples in particular, college students. Rest indicated that only two out of twenty-three studies found significant sex differences in moral reasoning. These involved inner-city junior

high school students (Rest, 1974) and freshmen representative of very diverse faculties (Schomberg, 1976).

Using the moral interview, in a sample of grade 6, 9, and 12 males and females attending progressive, traditional, and parochial schools, Turiel (1976) found that overall, girls had higher moral maturity scores than boys. At 10 and 13 years of age, girls had higher scores than boys, conversely at 16 years, boys scored higher than girls. In the parochial school younger girls exceeded younger boys in moral maturity but, both sexes had equivalent moral scores at grade 12. In the traditional school, grade 9 girls scored higher than the boys; the converse was found in the twelfth grade. There were no sex differences in moral scores in the progressive school. In another study using the DIT, Gfellner (1977) found that in industrial arts classes, junior high girls scored higher in moral capacity than the boys.

In college populations, sex differences are infrequently reported (Arbuthnot, 1974; Weisbrodt, 1976). However, Haan, Smith, and Block (1968) found that more men attained moral stages 4, 5, and 6 while women were predominantly stage 3. In another study, Holstein (1972) reported that stage 3 was modal for middle class housewives, while men were more advanced.

To summarize, the ego development literature, although meager in extent, shows a tendency for females to score higher than males during adolescence. In moral development, sex differences are rarely reported in older samples. However, among younger adolescents, there is a tendency for females to exceed males.

In order to provide some clarity to this issue, this study examined sex differences in moral development and ego development, respectively, during the adolescent years. In order to maximize the effect of sex differences, a rural rather than an urban sample, where sex differences are expected to be more marked, was employed.

Socioeconomic Status and Socialization

Socioeconomic status (SES) is considered one of the most potent predictors of behaviour, values, and attitudes in socialization research. SES is a broad term that refers to the social and physical circumstances in which individuals live. In general, this refers to the social group to which one belongs, hence, the terms social class, occupational level, social status, or socioeconomic status have been used interchangeably. Most social scientists will agree that North American society has a social stratification that carries with it connotations of social inequality (Bendix & Lipset, 1966). In general, members of a society differ with respect to the prestige of their occupations, power to influence community institutions, economic resources, and educational and occupational opportunity. Furthermore, the different levels of socialization offer individuals experiences that are both different and unequal with respect to the rewards and resources of the society.

Overall, SES differences reflect differential expectancies concerning the conditions in one's environment. SES has been considered an index for participation in the social structures of government and of work or economy. From this position, expectations concerning one's participation

in the social structures of government and of work or economy. From this position, expectations concerning one's participation in the social system are assumed to vary as a function of one's level in the strata. According to Kohlberg (1969) "...the law and government are perceived quite differently by the child if he feels a sense of potential participation in the social order than if he does not" (p. 401). As indicated in a previous section, the SES-level to which one belongs determines the role-taking opportunities made available to the individual. Thus, lower-SES children have few opportunities to take the perspective of society's basic institutions from which they are farther removed in terms of eventual participation than middle-class children (Kohlberg, 1976).

The literature suggests that individual's acquire different expectancies and/or self-categorizations (values, attitudes, meaning to stimuli and to events) as a result of one's social class. This is conveyed for example, in terms of child-rearing practices and values (Bronfenbrenner, 1958; Kagan & Moss, 1962; Bayley & Schaefer, 1960), observed parental behaviour (Bayley & Schaefer, 1964) and it is reflected in self-concept (Coleman et al., 1966; Rosenberg, 1965; 1970; Simmons et al., 1973). For an extensive review refer to Hess (1969) and Zigler and Child (1968).

SES and Sex Role Differences

Investigators have studied SES in relation to sex differences. In research with children as young as 3 years of age, the findings are consistent. Lower SES children adopt sex typed behaviour earlier and with greater consistency than middle SES children. The differences

between the two classes are more pronounced for girls than for boys (Rabban, 1950; Simmons, Rosenberg & Rosenberg, 1970). However, in all of the studies which examined SES in relation to sex, the effects of sex are always prominent.

Other research is congruent with this finding of sharper sex role differentiation in lower than in middle SES. Kohn (1959) reported that lower SES mothers made a greater distinction between girls and boys in their views of what is desirable for children of each sex. Kagan and Moss (1962) found that girls involvement in masculine activities related to the family's level of education. Also, children's and adolescents' peer cultures confer prestige in a manner suggestive of the relationship between SES and different sex role standards. Although both lower and middle SES boys reject the effeminate boy with nonmasculine interests, the academically oriented boy is more accepted by middle than lower SES boys (Pope, 1953). Hall and Keith (1964) reported that masculine preference is demonstrated more clearly by lower-SES than upper-SES boys whereas the feminine sex role preference was greater among upper-SES than lower-SES girls (the SES difference was smaller among girls than boys). Simmons et al. (1973) reported similar findings with adolescents.

As indicated previously, parents present different perspectives of sex role behaviour for their children to model in lower and middle-SES families. Lower-SES parents are more "traditional", conventional, and stable in their occupational, household, and child-rearing roles whereas middle-SES parents tend to be more "equalitarian" in home activities and to be engaged in more abstract occupations.



Differential child rearing practices permit girls more freedom in sex role behaviour as younger children but not when they are older. It is not difficult for lower-SES girls to accept the prescribed traditional female role which is familiar to them. Conversely, middle and upper-SES girls tend to continue longer in the educational system, attend university or engage in a career which encourages leadership roles. All of these experiences serve to exemplify the value and desirability of the masculine role. Hence, middle-SES girls may experience more sex role conflict than lower-SES girls in the process of sex typing.

During the adolescent years sex-typing becomes a focal concern as individuals are maturing and incorporating new aspects of sex roles into their identity. Sex role stereotypes may be utilized to provide behavioural directives at this age. According to Urberg (1979) twelfth grade students were found to be most stereotyped in comparison with seventh grade students and adults. Furthermore, since girls mature on the average of two years in advance of boys, their sex role conflict may be intensified as they assume appropriate sex role behaviour in dating situations.

In comparison with girls, middle-SES boys occupy the more prestigious sex role. However, notable differences in sex-typing tend to occur between the adolescent and adult years. In contrast to adolescents who achieve security from the "instrumental" masculine role, the middle-SES adult male has learned to incorporate aspects of the "expressive" feminine role into his repertoire in order to function satisfactorily in an equalitarian fashion.

In summary, SES is an indicant of socialization that provides a person with a set of expectations and behavioural directives. These are clearly indicated in sex role categorizations. Lower-SES children tend to be more conventional and stable in their sex roles than middle and upper-SES children. Middle and upper-SES girls tend to experience the most sex role conflict due to the opportunities provided for them and the contradictory sex role pressures they experience. Middle and upper-SES males tend to experience a refinement of their sex role in the adult years in comparison with adolescence.

SES and Moral and Ego Development

In the moral reasoning and ego development literature, most researchers have controlled for the effects of socioenvironmental variation. This is especially noteworthy in the paucity of research examining SES, the most potent of demographic variables, in relation to moral reasoning. According to Rest (1976), "...there is less information on SES than for other variables..." on the DIT (p. 15). In the studies reviewed, higher SES adolescent groups tended to score higher than lower SES adolescent groups in moral reasoning capacity. Among older sample groups, educational level (a potent influence in the DIT) was confounded with occupation by the use of the Hollingshead index.

In contrast to the lack of clear findings in the relationship between moral development and SES, SES appears to stand out in predictive power in the ego development literature (Hauser, 1976). Suzman (1973; 1974) reported a substantial relationship between the "modernity syndrome" and

ego development in five different countries with intelligence controlled. On the basis of cross-study comparison and a longitudinal study which followed students from grade six to the twelfth grade, Martin and Redmore (1978) found higher ego levels in higher SES groups. In spite of impressive correlations, further study is required to clarify and to extend this relationship between SES and ego development.

Rationale and Hypothesis

The primary purpose of this study was to determine whether cognitive developmental or social learning approaches to the causal mechanisms in socialization provide the more accurate account of these phenomena. In order to test this, predictions concerning the socialization of ego development, measured by the Sentence Completion Test (SCT), and moral development, measured by the Defining Issues Test (DIT), in terms of social learning theory and in terms of the cognitive developmental approach were evaluated. Hypotheses were generated to predict a relationship between ego development and the DIT, a recognition index of moral development. Finally, predictions based on the self categorizations, expectations and differential experiences provided by sex and SES were generated in terms of moral development and ego development.

Cognitive Developmental and Social Learning Predictions

According to social learning theory behaviour in one facet of socialization is considered to develop independently of other behaviours. In this way no fixed relationship is predicted between the pattern of

ego and moral development. The relationship between ego functioning and moral development is expected to be random as both areas of socialization develop independent of one another.

Hypothesis 1. Ego functioning and moral reasoning were predicted to develop independently with no fixed relationship in the development of the two socialization phenomena.

Cognitive developmental theory assumes a parallel development in various facets of cognitive functioning. Therefore, a concurrent relationship was predicted between ego level and moral development.

Hypothesis 2. A fixed relationship was predicted between ego level and moral development so that moral development was expected to increase in relation to ego level.

Hypothesis 3. An overall relationship was predicted between ego development and moral development (zero order correlation).

Due to the developmental nature of ego functioning and moral competence, the relationship between ego development and moral development was examined with the variance due to age removed. On this basis, the correlation was expected to attenuate with the developmental (grade) component partialled out.

Hypothesis 4. It was predicted that with age (grade) partialled out, the relationship between ego development and moral development would attenuate (partial correlation).

As cognitive functioning tends to stabilize during the adolescent years (Elkind, 1965; Turiel, 1977; McGeorge, 1976), the relationship between ego development and moral development was expected to increase as a function of age during adolescence. Specifically, a greater relationship was expected for older adolescents than for younger adolescents.

Hypothesis 5. It was predicted that the relationship between ego development and moral development would be significantly greater for older adolescents than for younger adolescents (zero order correlations and test of significant differences).

Age Effects

On the basis of the developmental component in social moral reasoning, adolescents moral scores were expected to increase as a function of age.

Hypothesis 6. Moral development would be significantly greater in older adolescents than in younger adolescents (grade main effect).

On the basis of the developmental component in ego development,

adolescents' level of ego functioning is expected to increase as a function of age.

Hypothesis 7. Level of ego development would be significantly higher in older adolescents than in younger adolescents (grade main effect).

Sex Differences

Ego development emphasizes self-categorizations in the broad interpersonal domain which involves self-perceptions in relation to others in the social system. As the "feminine" sex role is interpersonally-oriented and yet somewhat more flexible than the "masculine" sex role, it would be expected that in general, females would be stronger in ego development than males.

Hypothesis 8. Ego development was predicted on an average to be significantly greater in female than in male adolescents (sex main effects).

As a result of the sex role differences in behaviour, self-categorizations and early socialization practices, by later adolescence males have been "well-socialized" into the competitive, achievement-oriented, expansive male sex role. Female adolescents, too, have been socialized into the "opposite" feminine sex role.

The lower, stage 3, conceptualizations of moral development emphasize conformity and adherence to stereotypes. At stage 4, deference

to authority is emphasized whereas at the higher moral stages, personal capability and responsibility in social legal sanctions is recognized.

In terms of sex role self-categorizations and behaviour, younger adolescents are expected to be high in stage 3 conventional moral reasoning. However, as some flexibility or less pressure is placed upon younger females to adhere to their sex role norms, younger females would be expected to be higher than younger males in moral reasoning capacity.

Conversely, the masculine sex norm emphasizes an instrumental role in one's social system whereas the feminine sex role incorporates intersocietal ineffectiveness. During later adolescence these self-categorizations and subsequent expectations become integral in personality development. Furthermore, the "masculine" sex role is emphasized in higher stage (conventional level) moral reasoning. On the basis of this rationale, older adolescent males in comparison with older adolescent females would be expected to show higher social moral reasoning.

Hypothesis 9. Moral development would be significantly greater on an average in younger female than in younger male adolescents and conversely, in older male than in older female adolescents (sex x age interaction).

Socioeconomic Influences

SES refers to general values, attitudes, and expectations concerning behavioural contingencies including the expectancy for participation in the institutions of the social system. From this perspective SES reflects

particular role-taking expectancies. These self-expectations are integral to higher stage moral reasoning. Relationships are reported between moral reasoning and political ideology (Fiskin et al., 1972) participation in political demonstrations (Haan et al., 1975) and the interpretation of political events (Candee, 1975). On the basis of this rationale, higher SES adolescents would be expected to show higher moral reasoning capacity than lower SES adolescents.

Hypothesis 10. Moral reasoning capacity was predicted to be significantly greater on an average in adolescents from higher socioeconomic backgrounds in comparison with adolescents from lower socioeconomic backgrounds (SES main effect).

Ego development requires diversified role taking experiences in one's self-perception in relation to others and to the social system. Since SES may be defined in terms of an expectancy to participate in social institutions, it was expected that ego functioning is higher in adolescents from higher SES backgrounds in comparison to adolescents from lower SES backgrounds.

Hypothesis 11. Ego development was predicted on an overall basis to be significantly greater in adolescents from higher socioeconomic backgrounds in comparison with adolescents from lower socioeconomic backgrounds (SES main effects).

On the basis that young adolescent lower-SES females maintain relatively flexible sex role norms whereas low-SES males adhere to a stringent masculine sex role, low-SES females may have greater role-taking experiences than males despite the pervasive confining pan-cultural expectations. Since role-taking experience is a factor which facilitates moral development, moral development is expected to be greater in young females from low-SES backgrounds in comparison with young males from low-SES backgrounds.

At higher-SES levels females adhere more stringently to the feminine sex norms which are contraindicated in higher stage (conventional level) moral development. In contrast, the masculine sex role which emphasizes instrumentality is consistent with higher-SES expectations and high stage moral development. Thus, moral reasoning capacity is expected to be greater in older higher-SES males in comparison with older higher-SES females.

Hypothesis 12. In general, moral development would be significantly greater in young adolescent females rather than young adolescent males from low socioeconomic backgrounds and conversely, older male than older female adolescents from higher socioeconomic backgrounds (grade x sex x SES interaction).

CHAPTER II

METHOD

Subjects:

The adolescent sample consisted of 512 adolescents over the age range of 12 to 25 years. Of the original 559 individuals administered the test forms, forty-seven were eliminated due to failure to complete the information required. The grade by sex distribution of the adolescents was as follows: 114 grade 7 students, 62 females and 52 males; 111 grade 8 students, 52 females and 59 males; 95 grade 9 students, 47 females and 48 males; 56 grade 11 students, 32 females and 24 males; 24 grade 12 students, 14 females and 10 males; 112 first year university students, 71 females and 41 males.

The adolescent sample was drawn from three rural communities in southern Manitoba and the university students attended Brandon University. Thus, the sample is representative of rural adolescents.

The developmental index of this study was grade rather than chronological age. Classification was based on grade rather than age because during the secondary school years grade and age are highly correlated. In fact, very few students tend to fail in the school system. Also, social interaction via the peer group is generally maintained through one's class or school grade rather than age, per se.

The following sections of this chapter contain an extensive review

of the moral and ego indices; a description of the testing situation; scoring techniques employed; and the designs of the study.

Instruments:

Each subject completed the short form of Defining Issues Test (DIT) and the Sentence Completion Test (SCT). Information was collected concerning sex, age, and socioeconomic status (SES). SES was derived from father's occupation according to the Blishen Index. A description of the instruments will follow.

Moral Development

The Defining Issues Test (DIT) is an objective measure of moral judgment capacity based on Kohlberg's six stages of moral development. The DIT consists of 6 short stories which present a social-moral dilemma situation. After reading each story, subjects endorse an action choice then rate 12 statements in terms of importance in making the moral decision. The statements, derived from moral interview protocols, represent issues critical to the stages in the moral continuum. Subsequently, these items are ranked to determine the most critical issues of consideration in solving the moral problem.

The first four ranks for each story are scored in terms of the stage the items exemplify. Individual protocols are assigned a score according to stage type (in terms of a standard score conversion procedure) and principled stage usage (P-score) is computed (Rest, 1974). Recently, Davidson, Robbins, and Swanson (1978) formulated a composite

score, D, based on a scaling technique which utilizes all the stage items rather than merely the principled ones endorsed. To date, most analyses have utilized the P score.

Internal reliability of each protocol is ensured by the consistency check between a subject's ratings and rankings. For example, if an item is ranked as first then the ratings for that story should have no other items higher, etc. Individual story as well as total protocol reliability may be assessed (Panowitsch, 1974). As an internal reliability check, protocols are discarded if there are inconsistencies on more than 1(2) stories, or if the number of inconsistencies on any story exceeds 8 instances.

A short version of the DIT comprised of 3 stories (that is, Heinz, Escaped Convict and Newspaper), correlated .93 with the P score based on 6 stories. This version correlated in the .60's with the other three stories. Therefore, split half reliability was not found for the DIT.

Martin, Shafton, and Vandeinse (1977) have criticized the design of the DIT in terms of inconsistency in the number of items associated with each stage and inconsistent stage assessment per dilemma. They reported an order artifact for stage 3 and stage 4 items which interacted with age. In addition, these authors reported that subjects' decision was correlated with stage of reasoning in three of the six dilemmas (that is, Escaped Convict, Doctor, and Newspaper).

In secondary analysis of 1541 subjects in 136 different samples, Rest, Davison and Robbins (1978) reported an order of increasing advancement in moral stage usage from junior high school, senior high school,

college undergraduates to graduate students. This involves an increase in higher stage endorsement and a concomittant decrease in lower stage endorsement as a function of age and education. According to the authors, age-education accounted for 38% of the variance in moral development. In adults, moral stage usage is related to attained education rather than age, per se (Dortzbach, in Rest et al., 1978). Longitudinal and time-sequential studies are consistent with cross-sectional findings of increased moral stage endorsement as a function of age-education.

On their original sample, Rest, Cooper, Coder, Masanz and Anderson (1974) correlated written responses to four moral dilemmas on the moral interview and the DIT. The group of 47 high school, college, and graduate students were ranked by stage type which was correlated with their DIT P scores. The correlation coefficient was .68.

The reliability of the DIT has been examined in a number of studies. Rest et al. (1974) reported a correlation of .81 in 28 grade nine students administered the DIT two weeks apart. McGeorge (1974) reported a correlation of .65 for 47 first year university students tested 18 days apart. According to Rest (1981), the 3 story version of the DIT has somewhat lower internal and re-test reliability than the 6 story form.

Panowitsch (1974) reported a greater change in DIT scores for students after taking an ethics course (which emphasized thinking in the moral domain) as opposed to a logic course (which emphasized general clear thinking). Five months after the course had ended, the ethics students maintained their gain and the logic students showed no change.

McGeorge (1973) compared subjects in conditions with instructions

either to "fake good" or "fake bad" on the DIT with their seriously endorsed DIT protocols. He found that subjects were able to fake downward but not upward on the DIT.

The DIT has been correlated with other cognitive capacity measures including an independent measure of social-moral comprehension, measures of intelligence, political and moral attitudes and values, and religion (see Rest, 1974, 1975, 1976).

In summary, the DIT, an objective measure of moral capacity, correlated .68 with Kohlberg's MJS. The three-story short form correlated .93 with the complete version. However, the six individual stories are not equivalent in form. The DIT has three scoring procedures and an individual protocol reliability check. Overall reliability is sound in terms of normative data.

Ego Development

The Sentence Completion Test (SCT) was designed by Loevinger and her colleagues as an index of ego development. It consists of 36 sentence stems which subjects are required to complete. Responses to the 36 sentence stems are individually assigned to one of nine levels (including the transitional) by matching them with response categories provided in the scoring manual. The response categories are based on the specific characteristics of the levels of ego development derived through empirical work. The assumption of the model is that each person has a core level of ego functioning, hence the scoring system is to determine this level by assigning an ego development level to a person based on his scores

on the 36 sentence stems.

Subjects' responses to each item are removed from the content of the protocol and pooled for the entire sample. The pooled responses are scored and then the 36 item scores are reassembled for individual subjects.

Three scoring algorithms are provided to determine subjects' overall level of ego functioning. The "automatic" total protocol rating (TPR) is most widely used. This procedure involves matching the cumulative frequency of scores for a given protocol with "automatic ogive rules" provided by Loevinger and Wessler (1970). Level of ego development is calculated from this table of values.

The borderline method, utilizes frequency configuration but provides for protocols with frequencies falling between the two levels. This technique requires consideration of the information in the raw protocol such as themes, response patterning and so on. Thus, it is recommended for experienced raters and has potential problems with inter-rater reliability.

In the item sum rating values at each level are assigned an ascending numerical value. The sum of these values are tallied for the final score. This procedure has the disadvantage of yielding values which are more highly correlated with verbal fluency than the other two techniques (Loevinger & Wessler, 1970).

The reliability of the ego assessment technique has been well established. Initially, raters were personally trained by Loevinger but, to avoid the restrictions this places on subsequent research and

evaluation, a series of self-training exercises were developed (Loevinger & Wessler, 1970). The inter- and intra-training group reliability was examined on 543 protocols from females 12 to 70 years of age from diverse backgrounds. For five personally trained raters the median TPRs was 61%, inter-rater correlation was .86. When five personally trained and two self-trained raters were compared on TPRs for 100 protocols, median inter-rater correlations ranged between .89 and .92. Median inter-rater correlations for various pairs of trained and self-trained raters on item ratings was .78. Median percentage agreement on item ratings for personally trained and self-trained raters was 78% (Loevinger & Wessler, 1970).

The reliability of the SCT has been reported in terms of test-retest, split half, and internal consistency in two studies by Redmore and Waldman (1975). In the first study, 51 grade nine students were randomly divided into three groups. One group was administered the entire SCT twice and the other two groups took one-half of the test on one occasion, the other half one week later. The second study involved 81 undergraduate college students given the SCT then, two weeks later, a random half of those present at the second testing session (26 subjects) were asked to retake the test so "that the reliability of the scores could be assessed".

In the first study, the test-retest correlation for TPRs one week apart was .79. This increased to .91 when item sum scores were compared. However, in both procedures a significant decrease in the score(s) was noted from the first to the second testing. Test-retest reliability,

using item sum scores was evaluated for the half of the SCT administered in the first session with the other half administered one week later. Again, scores for the second session were significantly lower than those from the first.

Neither TPRs nor item sum scores differed over two weeks in the college students. Although significant, test-retest correlations were lower than in the first study (.44 for TPRs; .64 for item sum scores), change in TPRs was minimal.

Split-half reliability correlations for the two groups with no time interval between test halves were .90 and .85. This value was lower for the group with a week interval between ($r = .85$). Internal consistency coefficients ranged between .80 and .89 for both studies. This is consistent with coefficients reported by Loevinger and Wessler (1970) in their earlier studies.

Redmore and Waldman caution awareness to the sensitivity of SCT scores to demand characteristics as well as tedium. They reported a systematic change in subjects' responses over testing sessions in the two studies. In the first study in which a significant decrease in scores was found, subjects responded briefly with "popular responses". These subjects were not provided with a rationale for repeated testing and the tester was unknown to the group. In the college group a rationale was provided and the tester was familiar.

In summary, reliability concerning the rating system and the three different indices of ego level are significant and impressive. However, caution is necessary with regard to situational characteristics under

which the test is administered.

Loevinger and Wessler (1970) reported data supporting a progressive increase in ego level as a function of age. Consideration of cross sectional findings from different studies support this trend. In a longitudinal study with subjects originally tested in grade six and followed up in the twelfth grade, Redmore and Martin (1978) reported an increase in ego functioning with age-grade. Redmore and Loevinger (1979) reported the results of a series of longitudinal studies of ego development which included eight adolescent samples tested two or three times at intervals which ranged from one and a half to six years. At original testing the adolescents were at grades 6, 8 or 10 and final testing was at twelfth grade or university. Every sample showed a mean increase in ego level at each retest. Only with the sample tested at one and a half year intervals from eleventh to twelfth grades and from eleventh to first year university did the increase fail to achieve significance. However, developmental gradients are expected to stabilize in rate of gain with maturity and it is not known precisely when people achieve maturity in ego development.

Only two studies have examined the intelligence component in ego development. In a sample of 109 grade six working-class Black boys and girls, Blasi (1972) reported correlations between ego level and IQ of .46 for boys and .50 for girls. Thus, IQ accounted for between 16% and 25% of the variance in ego development. Also, Blasi reported that children at the impulsive level (I-2) had IQ scores ranging from 68 to 109, whereas those at the self-conscious level (I-3/4) had IQ scores

ranging from 87 to 119.

In the other study, Hoppe (1972) reported a correlation of .14 between IQ and ego level in 108 middle-class adolescent boys. For this group IQ scores ranged from 99 to 149 ($x = 122.5$). Unfortunately, IQ ranges for the various ego levels were not reported so that the relationship between ego development and intelligence is unclear. On the basis of longitudinal data from these studies, Redmore & Loevinger (1979) found that intelligence and ego level correlated .6 at elementary and junior high grades and .4 at high school. These findings suggest that the relation between intelligence and ego level is highest in younger adolescents and at lower levels of intelligence. Another interpretation may be that certain levels of ability are necessary but not sufficient for corresponding ego levels. However, this hypothesis has not been tested.

One aspect of intelligence, verbal fluency, has been examined in relation to ego development. Loevinger et al. (1970) correlated number of words in subjects' responses with their TPRs. In a sample of 204 single women, the correlations ranged from .14 to .40 with a median of .31. In another sample of 543 females of multiple ages and backgrounds, the correlation ranged from .23 to .51, with a median of .35. Verbal fluency is important to ego development because it is necessary to use more words to combine several ideas. However, counting words does not give as accurate a measure of ego level as taking all aspects of the response into account. According to Loevinger, verbosity as a distraction factor may be considered a systematic error.

Loevinger reported that word count has a higher correlation (.65) with item sum ratings than other scoring methods. Thus, ego level scores obtained by summing item ratings are more distorted by verbal fluency than scores derived by TPRs.

The relationship between ego development and intelligence is unclear due to the paucity of research and the neglect of examining IQ in relation to specific ego stages.

In conclusion, the SCT is a reliable assessment technique in the study of ego development. Research points to the TPR computational procedure as the most reliable index of ego functioning considering stability over time and verbal fluency distraction. In addition, this technique is warranted in view of the need to study ego level as a dichotomous rather than a continuous variable.

The Blishen Index based on the 1971 Canadian census statistics was used as the measure of socioeconomic status (Blishen and Robertson, 1976).

Procedure:

The DIT and SCT were administered to all subjects during a regular classroom period. At the start of each session the same female experimenter was introduced to the class and the following instructions were communicated.

"You are asked to participate in some research that is being done to find out how junior and senior high school students think about different kinds of situations. In this survey you will be asked to complete two different questionnaire forms which focus on different kinds of situations. In the first you will be asked to read several short stories and answer some questions about them. This is different from the kind of tests you do in school because there are no right

or wrong answers to either of the forms.

Your answers on the forms are completely anonymous. In other words, no one will know what you write on either of the forms or how you answer the questions. After the surveys are completed, your answers on the forms will be put into a computer to analyze the information.

Your participation in this project is totally voluntary. You do not have to fill out the forms if you do not want to. However, we would appreciate your cooperation in collecting this information. Are there any questions?"

The DIT and SCT forms were distributed by the experimenter with the assistance of the classroom teacher. Subjects were instructed to fill in the demographic and identifying information. They were then asked to complete the DIT first. Specific instructions were given. This involved reading aloud the instructions as printed on the first page of the DIT with the students and carefully going through the illustrated example of the DIT format. See Appendix A. Completion of the 3 story DIT required approximately 20 to 30 minutes.

Subsequent to completion of the DIT, the SCT was administered. The students were instructed to finish writing the sentence stems in any way they wished. Also, it was suggested that they leave to the end items with which they were having difficulty. Subjects were able to complete the SCT within 30 to 45 minutes.

The test-order was indicated during pilot work in order to insure completion of the two forms during the class period. Students tended to be more variable in time required to complete the SCT. Thus, by answering this form last they were able to spend more time on it. Fatigue effects

were minimal as the participants appeared enthusiastic and eager to comply with the testing procedures. Subjects said they enjoyed participating in the study and time was devoted to a discussion at the end of each session.

Subjects' P-score was computed as the measure of moral development. Modal moral stage type was determined by significant endorsement of a particular stage that is, one standard deviation or above the sample distribution. Thirty-seven per cent of the subjects were "mixed stage".

In order to determine subjects' ego level two self-trained raters scored the female and subsequently, the male protocols in a sentence by sentence manner. Disagreements in scoring a particular sentence stem were discussed by the raters and a final I-score agreed upon. After scoring had been completed, each protocol was reassembled and TPR's were assigned according to the ogive rules given in Loevinger and Wessler (1970).

Two designs were utilized in this study. The major hypothesis of the study was tested by a series of one way analysis of variance. The independent variable was ego level and the dependent variable was moral P-score. A multivariate design was employed to test all subsequent hypotheses. The predictor or independent variables were grade, sex, and SES. Ego level and P score were the criterion or dependent variables.

CHAPTER III

RESULTS

The results of the analyses as purported in the hypotheses are presented in this chapter. This includes an account of inter-rater reliability for the SCT followed by presentation of the results of the study. A series of analyses were conducted in order to clarify the cognitive developmental theory and social learning theory predictions concerning the socialization of moral development and ego development. Multivariate techniques were utilized to assess the effect of sex and SES in relation to ego development and moral P score. Finally, multiple regression equations were generated with grade, sex and SES as predictors of both moral and ego functioning, and with ego level, grade, sex and SES as predictors of moral P score.

Inter-rater Reliability:

Each SCT sentence stem was scored by two self-trained raters and automatic total protocol ratings were generated. Inter-rater reliabilities were computed for each sentence stem between the two raters, and between each rater and the final score assigned to the protocol stem for males and females (see Appendices C and D). The overall correlation was .83 between the two raters for the 20,124 sentence stems. The correlation was .78 between rater 1 and rater 2 for the female sentence stems and .86 for the male sentence stems. This is consistent with

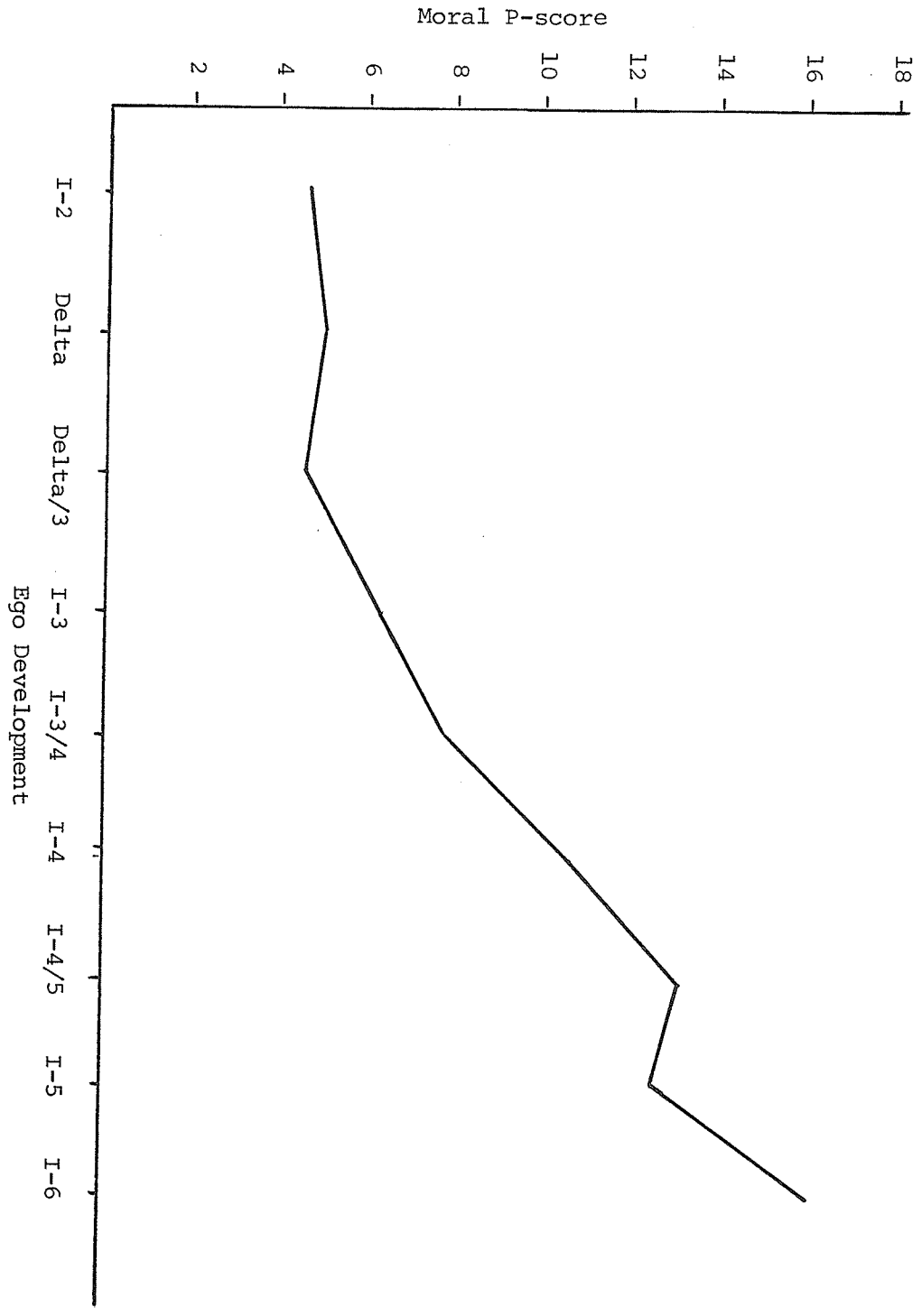
inter-rater reliabilities reported by Loevinger and Wessler (1970,p.46) and Redmore and Waldman (1975).

Cognitive Developmental and Social Learning Perspectives of Ego and Moral Development

The primary aim of this study was to determine which theoretical perspective, the social learning approach or the cognitive developmental approach, provided the more accurate account of the causal mechanisms in ego and moral development. In order to examine the respective theoretical predictions a series of analyses were performed.

A correlation between ego level and moral P score was significant, $r = .48, p < .0001$. When the grade component was partialled out, minimal attenuation ensued, $r = .47, p < .0001$. This lack of attenuation in the correlation between moral and ego development with age partialled out may be due to the significantly greater correlation between age and P score ($r = .22$) than age and ego level ($r = .1$). A one-way analysis of variance for P score as a function of ego level achieved significance, $F = 25.35, p < .0000$. Figure 1 depicts the moral gradient as a function of ego level. Multiple t-tests were computed between each pair of groups to test the equality of group means. These simple effect analyses showed a significant increase in P score from the Preconformist levels (I-2, Delta, and Delta/3) to the Conformist (I-3) and then from the transitional Conformist to Conscientious level (I-3/4), followed by the Conscientious and subsequent levels (I-4, I-4/5, I-5 and I-6). Clearly, four significant increases in moral P score are indicated over the

Figure 1. Moral P-score as a function of ego level.



levels of ego development.

Subjects were moral stage-typed according to "exceptional stage use" on DIT item ratings. Assignment to a moral stage group was determined by subjects' scoring one standard deviation or above at a specific moral stage. If more than one stage met this criterion, the higher score was selected for the stage type. Approximately 37% of the subjects were "mixed stage" and showed no exceptional stage use.

A frequency distribution of moral stage by level of ego development is summarized in Table 3. A chi square analysis performed on these data was significant, $\chi^2 = 61.37$, $p < .0001$. As indicated in the frequency table, at both moral stages 5 and 6, approximately 65% of the students were at the I-3/4 (transition to Conscientious) ego level or higher with 34% and 38%, respectively, falling at and beyond the I-4 (Conscientious) ego level. In contrast, at moral stage 2, 61% of the students were below I-3 (Conformist) ego development. Moral stage 4 tends to be counterbalanced. Forty-two per cent of the students were at I-3/4 (transition to Conscientious) ego level or higher but, only 15% scored beyond this level. Alternatively, 56% of the moral stage 4 students fell below I-3 (Conformist) ego level. The reason that only six subjects were typed moral stage 3 is unclear. Perhaps the "good boy - nice girl", approval of others, moral rationales were not appealing. Since the DIT over-estimates moral competence, the subjects may have rejected these moral rationales which are normative in the spontaneous production of moral reasoning during the early adolescent years. Nevertheless, these findings indicate that higher moral stage-typed subjects tend to occur

TABLE 3

Ego level as a function of modal moral stage in terms of frequency, cumulative frequency, and percent of ego level at moral stage.

Moral Stage

Ego Level	2	3	4	5	6
	Freq Cum Freq				
I-2	11 (11) 17.46%	1 (1) 16.6%	6 (6) 8%	11 (11) 8.4%	6 (6) 8.9%
D	23 (34) 36.5%	3 (4) 18.8%	27 (33) 36%	24 (35) 18.3%	9 (15) 13.4%
D/3	5 (39) 7.9%	1 (5) 16.6%	9 (42) 12%	6 (41) 4.6%	3 (18) 4.5%
I-3	1 (40) 1.6%	0 (5)	1 (43) 1.3%	6 (47) 4.6%	0 (18)
I-3/4	15 (55) 23.8%	1 (6) 16.6%	21 (64) 28%	35 (82) 26.7%	21 (39) 31.3%
I-4	6 (65) 9.5%	-	9 (73) 12%	34 (116) 26%	13 (52) 19.4%
I-4/5	2 (67) 3.2%	-	2 (75) 2.7%	9 (125) 6.9%	10 (62) 14.9%
I-5	-	-	-	6 (131) 4.6%	4 (66)
I-6	-	-	-	-	1 (67) 1.5%

n = 346

at higher ego levels.

An ego level by grade frequency distribution for the total sample is summarized in Table 4. The significant chi square, $\chi^2 = 399.75$, $p < .0000$, indicated that ego level varied disproportionately as a function of grade. According to the frequency distribution, the I-3/4 (transitional from Conformist to Conscientious) ego level is the highest level achieved by most junior high students. In contrast, senior high and university students in particular, tend to score at and beyond the I-3/4 ego level.

These findings favour the cognitive developmental approach which predicted a relationship between ego development and moral development.

The relationship between ego development and moral P score as a function of grade was examined by the computation of multiple correlations. The correlations between ego level and P score were significant for young adolescents at grade 7, $r = 0.16$, $p < .04$; grade 8 $r = 0.23$, $p < .009$; and grade 9 $r = 0.28$, $p < .004$; and for university students, $r = .18$, $p < .03$. Nonsignificant correlations were found for grade 11, $r = -0.14$, $p < .15$ and grade 12, $r = 0.08$, students (see appendix E). These results partially support the prediction that the relationship between moral development and ego development would increase as a function of age.

All further results are based on the analyses provided by a series of MANOVAS in which grade, sex and SES were predictors of ego development and moral development (P score), the dependent variables. Appendix F contains a summary of the MANOVAS and the subsequent ANOVAS performed on the dependent variables, respectively.

TABLE 4

Frequency Distribution of Ego Development Level by Grade.

Ego Level	Grade					
	7	8	9	11	12	University
I-2	33	34	19	3	0	0
Delta	39	48	25	12	0	1
Delta/3	24	8	14	5	1	2
I-3	5	3	5	4	1	1
I-3/4	13	24	33	28	10	40
I-4	2	2	3	9	11	53
I-4/5	0	0	0	1	0	26
I-5	0	0	0	0	0	14
I-6	0	0	0	0	0	1
	116	119	99	62	23	138

Moral Development

Age:

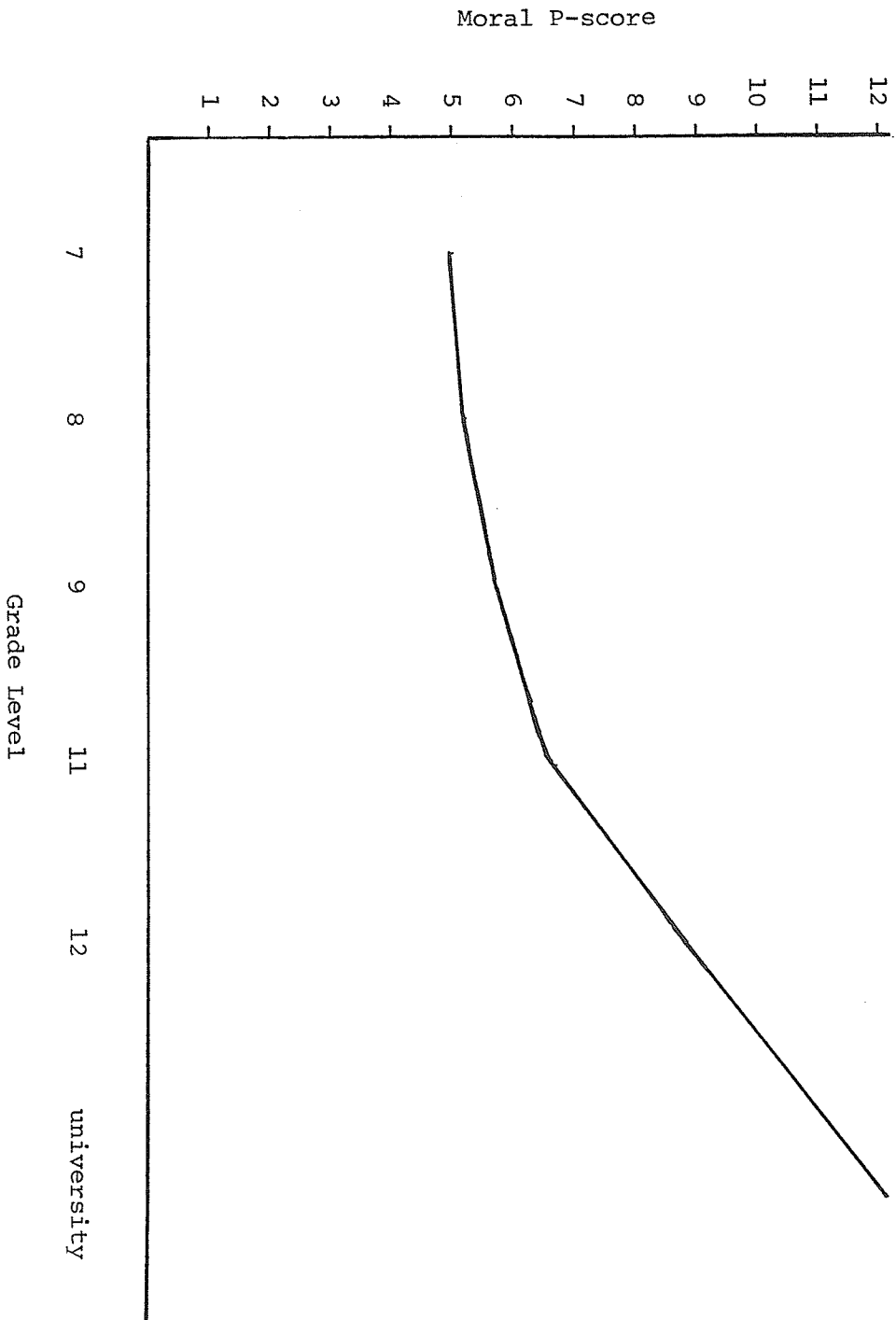
In the first MANOVA the developmental factor, grade, was examined. The overall grade effect was significant ($F = 59.5811, p < .0001$). This reflected the significant ANOVA for moral development ($F = 46.3867, p < .0001$).

Moral P score in relation to grade level is illustrated in Figure 2. In order to provide an accurate description of this gradient orthogonal polynomial analyses were conducted. All contrasts in the analyses were significant due to the large number of within-subject degrees of freedom. However, relative effect sizes are informative in such a situation, and eta was calculated as follows:

$$n = \sqrt{\frac{SS \text{ effect}}{SS \text{ effect} + SS \text{ error}}}$$

The quintic contrast clearly explained the greatest variance in moral development ($F = 70.9991, p < .0001, n = .99$). Multiple comparison tests indicated that university students showed significantly higher moral scores than all other age groups ($p < .001$). Students at grade 12 significantly differed from grade 7 to grade 11 students ($p < .001$) and grade 11 students showed higher moral scores than grade 7 students

Figure 2: Moral P-score as a function of grade.



($p < .05$) but not students at grade 8 and grade 9. No significant differences were found between students in grade 7, grade 8, and grade 9. (See Appendix G).

As expected, these results indicate that moral reasoning capacity is significantly higher in older adolescents as compared with younger adolescents. The quintic contrast implies relative differences in the moral gradient slope between grades 9 and 11, grades 11 and 12, and grade 12 and university.

Sex Differences:

A sex effect was not predicted for moral development. However, due to controversy in the literature (Rest, 1977), it is of interest to report this analysis. Although the moral ANOVA for the sex effect was not significant ($F = 1.1423$, $p < .28$), the females tended to score higher than the males on this dimension.

Grade and Sex Differences:

It was predicted that younger girls would be ahead of their male peers and older males would be in advance of older girls in moral development. However, the grade by sex interaction was not significant ($F = .58$, $p < .55$). Figure 3 illustrates social-moral scores for the females and the males as a function of grade. The females tended to have higher P scores than the males at grade 7, grade 8, and grade 9. At grade 11 the males evidenced higher P scores than their female

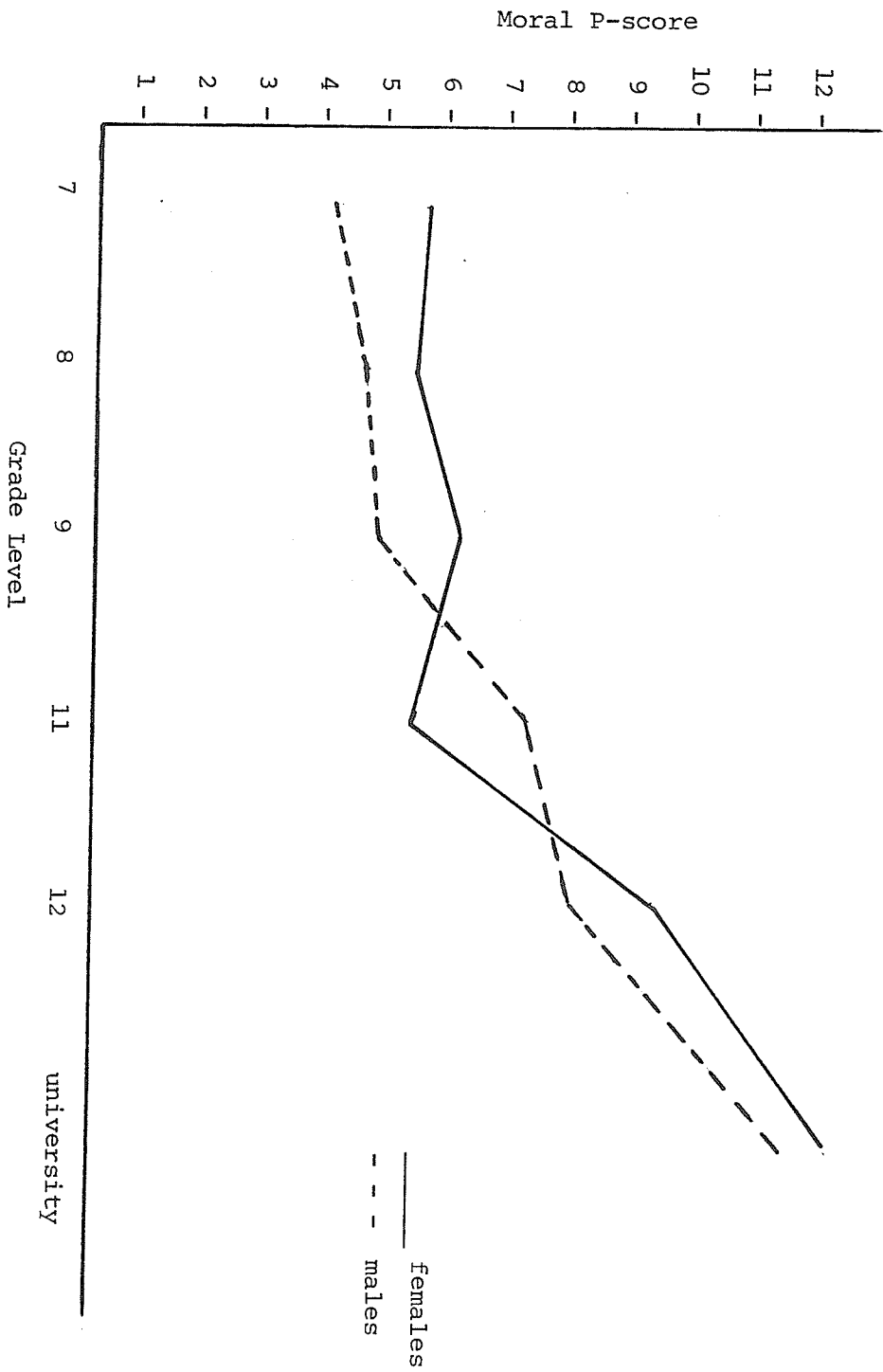


Figure 3. Moral P-score as a function of grade and sex.

contemporaries. So far, these findings, while not reaching significance, are in the expected direction. However, contrary to expectation, grade 12 and university girls scored slightly above the boys in moral development. The findings suggest that females tend to score higher on the moral dimension than their male contemporaries at every grade level except grade 11.

SES Differences:

In addition to the sex component, the third main effect socio-economic background (SES) was examined as a predictor of social-moral and ego development. According to the MANOVA, the SES effect approached significance ($F = 2.1$ $p < .07$). This reflected the moral ANOVA which approached significance ($F = 2.45$, $p < .08$). Hence, the ordering of moral scores was in the direction predicted. High SES adolescents tended to have higher moral scores ($X = 7.23$, $SD = 4.5$) than medium SES adolescents ($X = 6.9$, $SD = 3.85$) who scored slightly above the low SES adolescents ($X = 6.821$, $SD = 3.95$).

Grade and SES

Although predictions were not made concerning moral development as a function of grade and SES, the findings warrant consideration. The results of the grade by sex interaction was significant in the MANOVA ($F = 2.1146$, $p < .003$). The subsequent ANOVA for moral development attained significance, ($F = 2.2$, $p < .003$).

In terms of social-moral development, Figure 4 illustrates high-SES, medium-SES and low-SES as a function of grade. Some overlap is noted across the SES levels. According to multiple comparison tests, moral scores were significantly higher for university students from high-SES and low-SES backgrounds and for low-SES grade 12 students in comparison with all other SES-grade groups ($p < .001$). Also, university students at each SES level are comparable with both the low-SES and high-SES grade 12 students (See Appendix J).

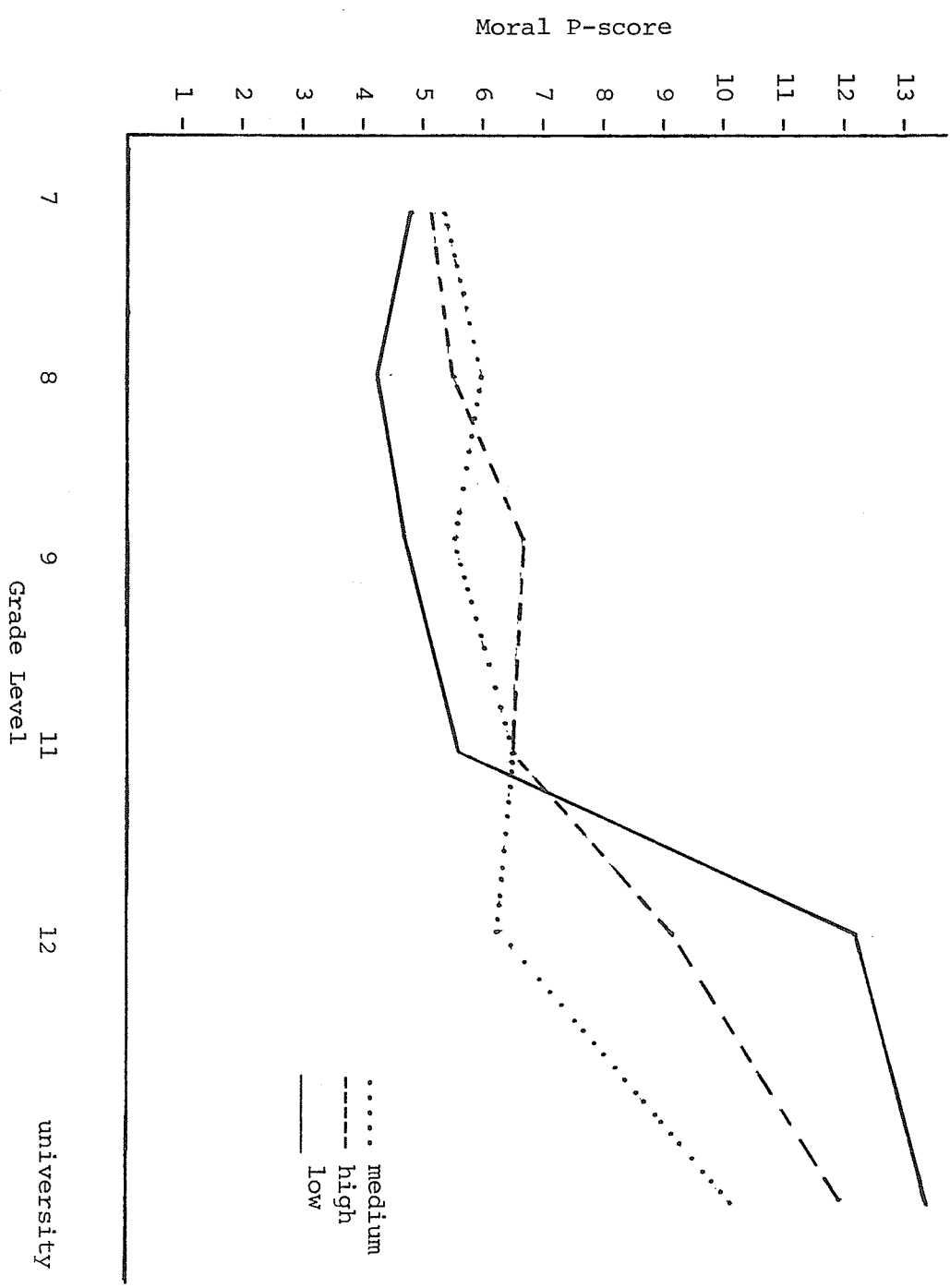
The only significant within grade difference occurred at the twelfth grade. Here, low-SES students demonstrated significantly higher moral scores than medium-SES students ($p < .01$) and high-SES students scored approximately midway between these two extremes. Inspection of the SES-moral gradients in Figure 5 suggests that low-SES students tend to advance beyond their higher SES age-mates from grade 12 onward.

In order to provide a precise account of social moral development in relation to SES and grade, orthogonal analyses were performed for each SES group. The results indicated that at each SES level the moral gradient was linear form. The ANOVAS are as follows: high-SES, $F = 18.63$, $p < .0001$; medium-SES, $F = 9.859$, $p < .0022$; and low-SES, $F = 67.03$, $p < .001$.

Grade and Sex and SES

Finally, the prediction that moral development would be more

Figure 4. Moral P-score as a function of grade and SES.



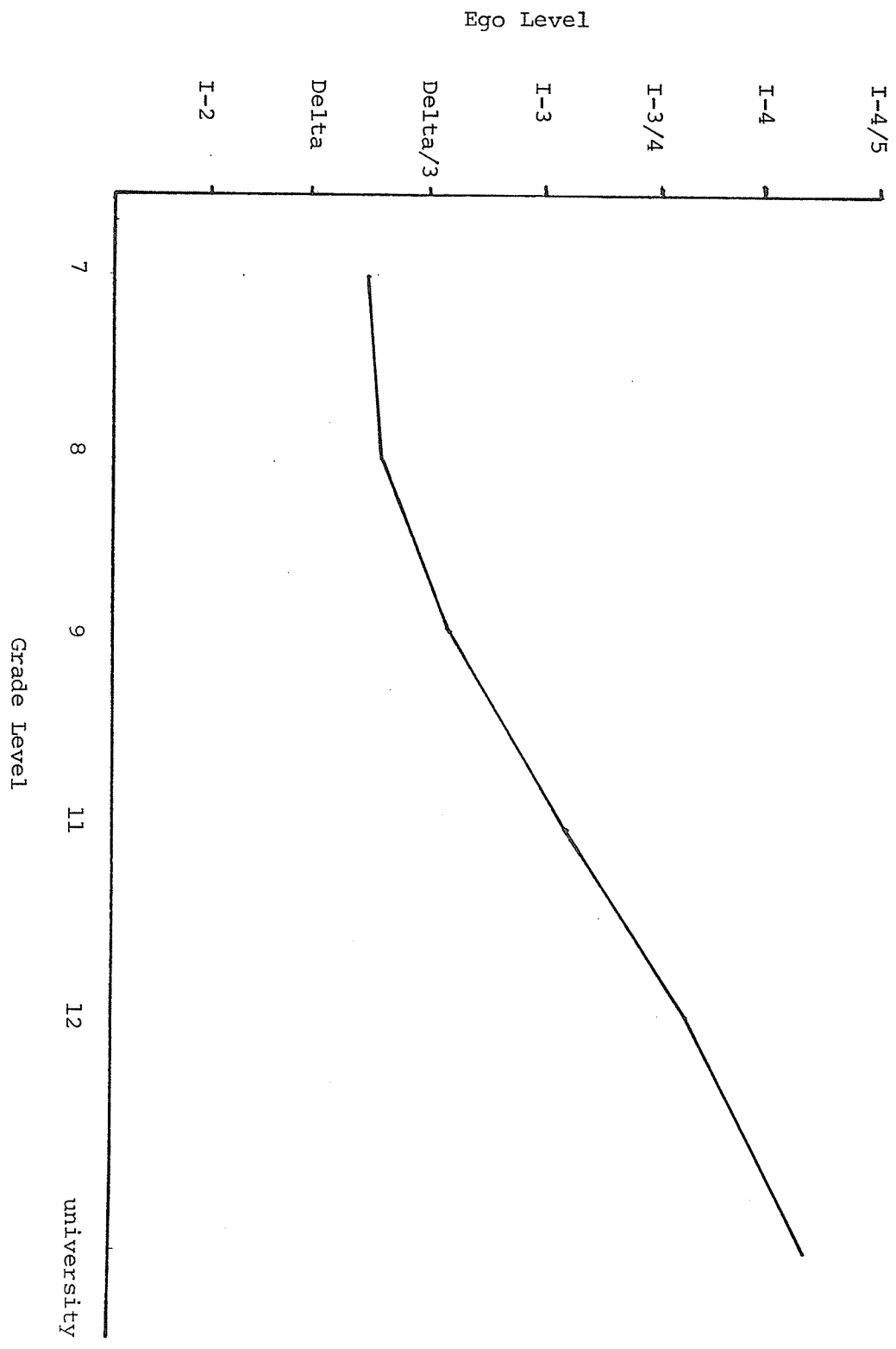


Figure 5. Ego development as a function of grade.

advanced in young adolescent girls in comparison with young boys from low SES backgrounds and conversely, older male in comparison with older female adolescents from higher SES backgrounds was not confirmed ($F = 1.26, p < .25$).

Ego Development

Grade:

As indicated in the first MANOVA, the ANOVA for ego development showed a significant grade effect ($F = 122.14, p < .001$). Orthogonal analyses indicated that the linear contrast accounted for the greatest proportion of variance ($F = 137.94, p < .0001, n = .99$).

Ego development as a function of grade is depicted in Figure 5. Multiple comparison tests showed no significant difference between students in grade 7 and grade 8. However, at every other grade level, that is, students in grade 9, grade 11, grade 12 and university, had significantly higher ego scores than their younger counterparts ($p < .001$) (See Appendix H). These results confirm the prediction of significantly higher ego development in older adolescents than in younger adolescents.

Sex Differences:

In addition to the developmental trend found in the ego dimension, the overall sex effect was significant in the MANOVA ($F = 16.5, p < .0001$). This reflected significance in the ANOVA for ego development ($F = 59.03, p < .0001, n = 98$). The girls demonstrated higher ego development scores than the boys.

Grade and Sex:

The significant grade by sex interaction MANOVA ($F = 2.07, p < .02$) reflected the ANOVA for ego development ($F = 5.09; p < .01$). It was predicted that females would on an average exceed males in terms of ego development. These findings show that at every grade females demonstrated higher ego development than males.

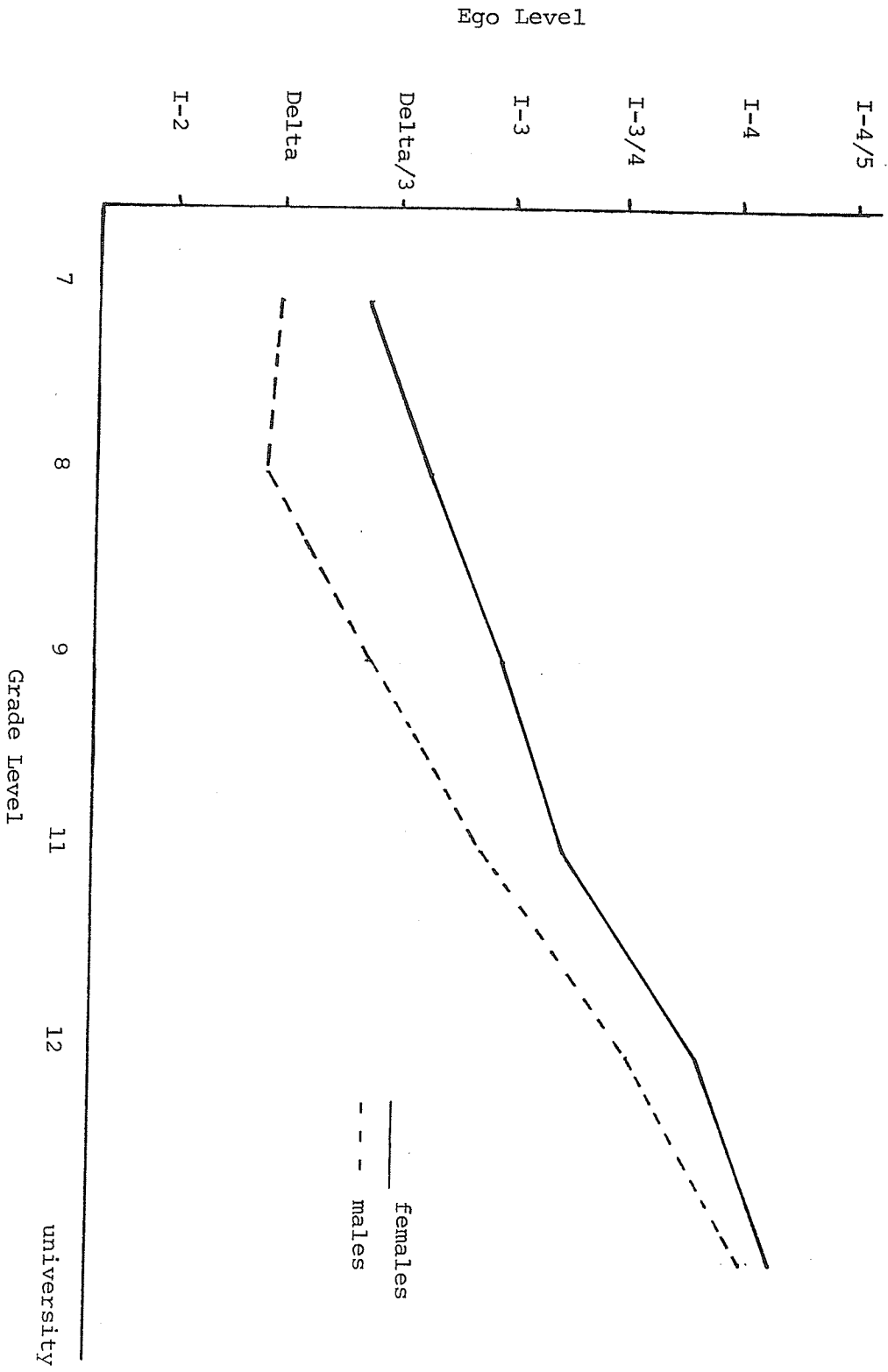
Figure 6 depicts ego development as a function of sex and grade. Significant sex differences were found at grade 8 ($p < .001$) and grade 11 ($p < .001$). Among the younger adolescents, grade 9 girls demonstrated significantly higher ego functioning than boys at grade 7 and grade 8 ($p < .001$), but, not grade 9 boys or girls at the seventh or eighth grade. Grade 8 girls scored significantly higher than boys at grade 7 ($p < .05$) and grade 8 ($p < .001$).

For the older adolescents, grade 11 girls had significantly higher ego scores than grade 11 boys ($p < .05$) and grade 9 girls ($p < .05$). In contrast, grade 11 boys differed only from boys at grade 7 ($p < .001$) and grade 8 ($p < .001$).

Girls at grade 12 were significantly higher in ego development than grade 11 boys ($p < .01$). Conversely, boys at grade 12 had significantly higher ego scores than grade 11 boys ($p < .001$). The university students scored significantly higher than grade 11 students ($p < .001$) (See Appendix I).

In order to compare the present results with the norms reported by Loevinger & Wessler (1970) ego development is presented in cumulative frequency per cent as a function of grade and sex in Figure 7. The

Figure 6. Ego development as a function of grade and sex.



Cumulative Frequency in Per Cent

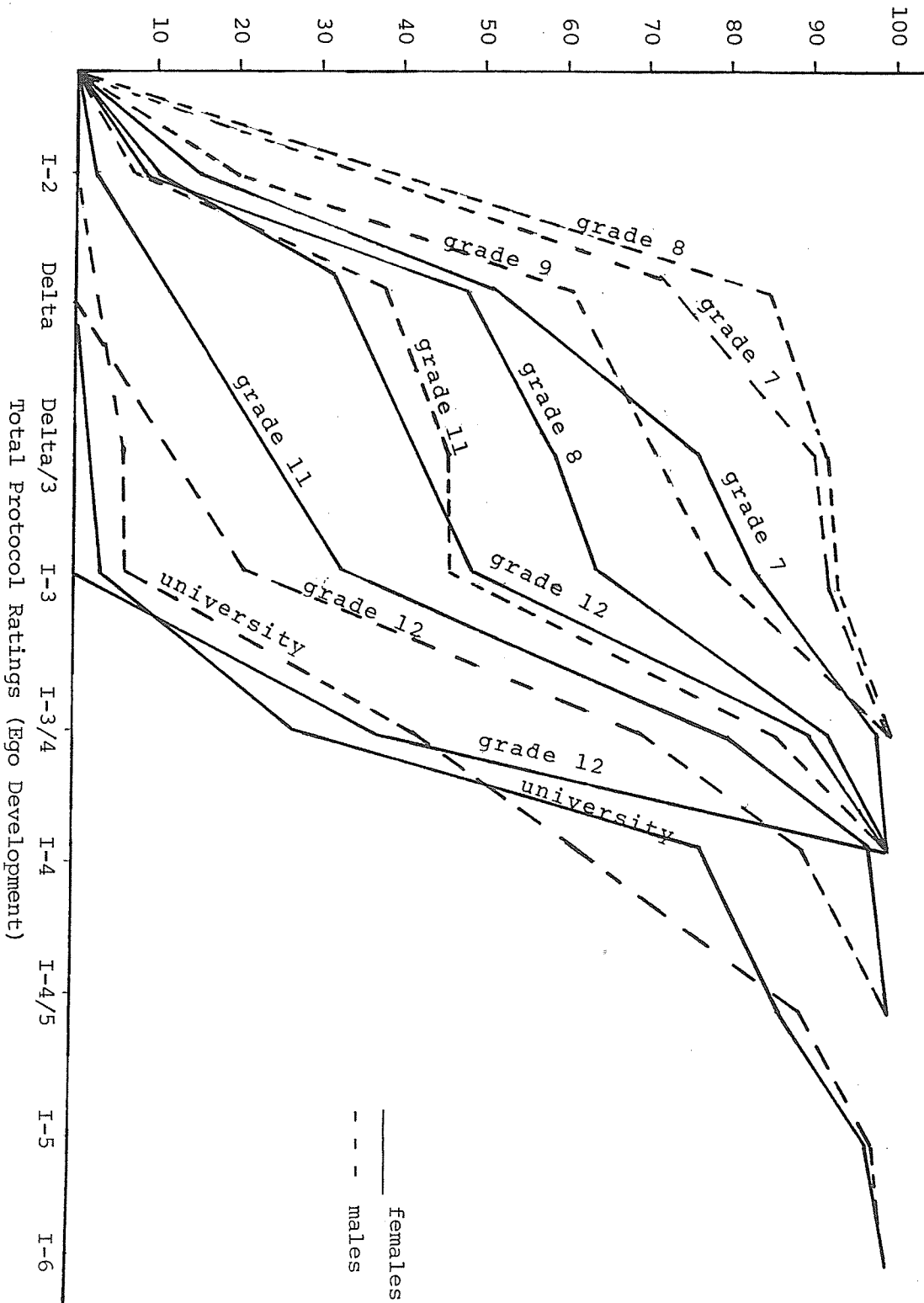


Figure 7. Distribution of Total Protocol Ratings of Ego Development Level by Grade and sex.

The gradients illustrate the t-tests described.

Finally, Table 5 shows the mean level of ego development as a function of grade and sex. As indicated in the prior analysis, females are approximately an ego level ahead of males throughout the junior high and senior high years. These results clearly indicate that females tend to show accelerated ego development in relation to males throughout the period of secondary schooling.

SES Differences:

The SES main effect in the ego ANOVA did not attain significance ($F = 1.87, p < .15$). Thus, the predicted overall higher ego development in adolescents from higher SES backgrounds in comparison with adolescents from lower SES backgrounds was not supported.

Grade and SES:

As indicated in the significant grade by SES MANOVA, the subsequent ego ANOVA achieved significance ($F = 2.12, p < .02$). This was not predicted.

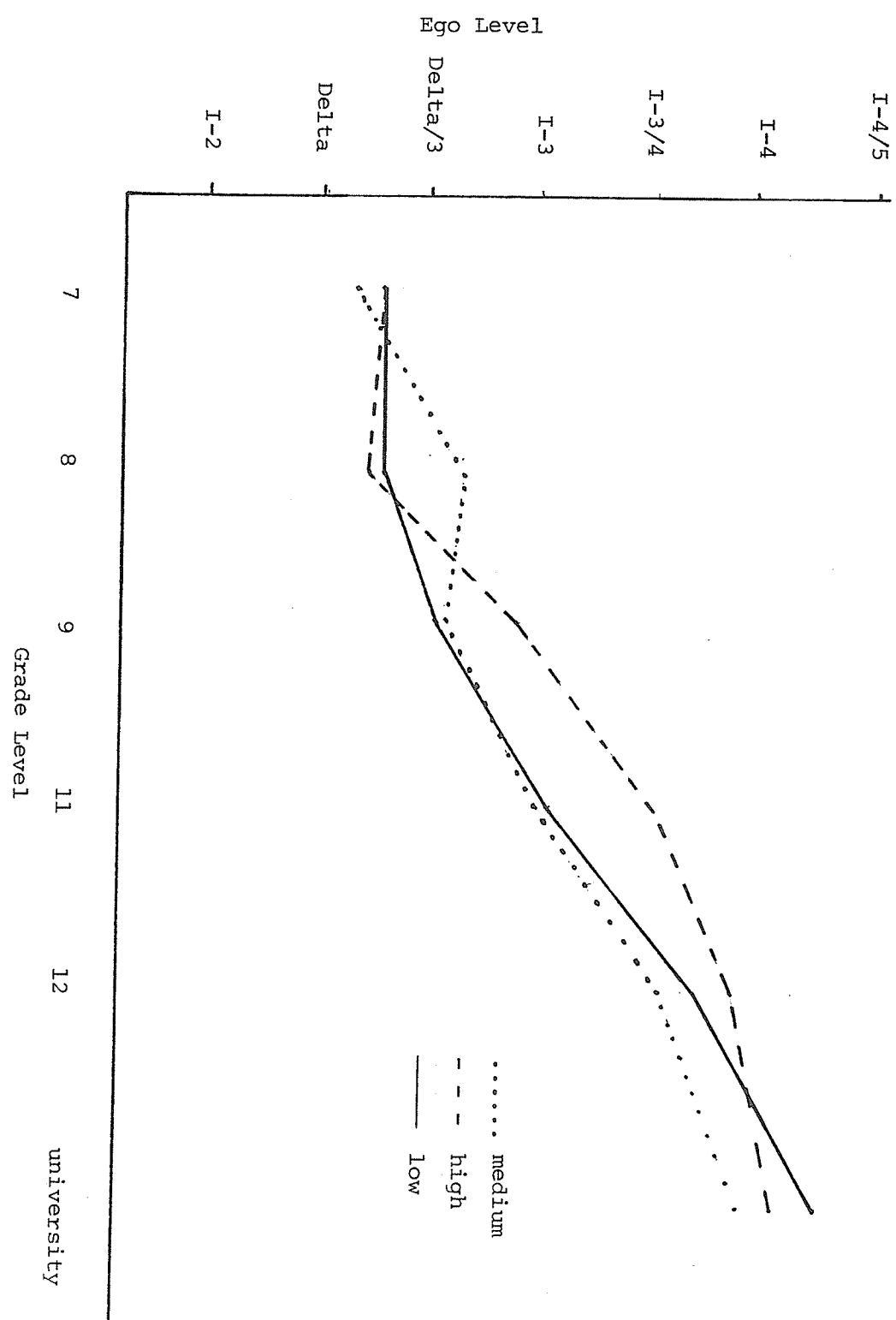
Figure 8 depicts ego development as a function of grade and SES. Older adolescents at all SES levels had significantly higher ego scores than the younger adolescents (See Appendix K). Although SES differences in ego development were not found at any particular grade, high-SES grade 11 students were similar to the older adolescents. Conversely medium-SES and low-SES grade 11 students approximated all of the grade 9 students, but scored significantly higher in ego develop-

TABLE 5

Ego development level as a function of grade and sex.

Grade	Female		Male		Overall Ego Level
	Ego Level	S.D.	Ego Level	S.D.	
University	I-4 (88)	1.02	I-4 (50)	1.37	I-4
Grade 12	I-4 (14)	0.5	I-3/4 (10)	1.10	I-3/4
Grade 11	I-3/4 (37)	1.39	I-3 (25)	1.73	I-3
Grade 9	I-3 (48)	1.58	D/3 (47)	1.45	D/3
Grade 8	D/3 (54)	1.55	D (64)	1.22	D/3
Grade 7	D/3 (64)	1.39	D (53)	1.14	D

Figure 8. Ego development as a function of grade and SES.



ment than grade 8 students of low-SES and high-SES ($p < .05$) and all of the grade 7 students ($p < .05$).

Orthogonal analyses indicated that each of the SES gradients were linear in form. The ANOVAS were as follows: high-SES, $F = 137.998$, $p < .0001$; medium-SES, $F = 74.0773$, $p < .0001$; and low-SES, $F = 177.7947$, $p < .0001$.

Multiple Regression Analyses

To summarize the relative contribution of grade, sex, and SES regression equations were computed for social-moral functioning and ego development with the above factors as predictor variables.

The regression equation for moral development is:

$$\text{MORAL} = 4.38 + .6413 (\text{grade}) + -1.1913 (\text{Sex}) + .0244 (\text{SES}).$$

Together these variables accounted for 6.82% of the variance in moral development. Grade contributed greatest, 4.91% ($p < .0001$), to this variability followed by sex, 1.41% ($p < .006$), and SES, .64% ($p < .06$).

The regression equation for ego development is:

$$\text{EGO} = 4.432 + .1064 (\text{Grade}) + -1.063 (\text{sex}) + .0075 (\text{SES}).$$

Approximately 8.11% of the variance in ego development was due to grade, sex, and SES. The sex component was the best predictor of ego development. Sex contributed 6.84% ($p < .0001$) to the variance. Grade accounted for .82% ($p < .034$) and SES accounted for .37% ($p < .55$) of the variability in ego development, respectively.

In conclusion, multiple regression analysis was performed with ego development, grade, sex, and SES as predictors of social moral

functioning, the criterion variable. The regression equation is as follows:

$$\begin{aligned} \text{moral} = & -0.610155 + 1.12594 (\text{ego}) + 0.521571 (\text{grade}) \\ & + 0.0054922 (\text{sex}) + 1.12594 (\text{SES}). \end{aligned}$$

The predictor variables accounted for a total of 25.98% of the variance in social moral development. The largest proportion of the variance, 19.16% ($p < .000$) was due to ego development. The next best predictor was grade which contributed 3.22% ($p < .000$) of the variance. The SES component accounted for .27% ($p < .173$) of the variability. The contribution of the sex component was negligible (.0000%, $p < .9289$). Thus, ego level was the most potent predictor of moral P score.

CHAPTER IV

DISCUSSION

In this chapter the results of the study are discussed. The cognitive developmental approach concerning the causal mechanisms of socialization was confirmed in the relationship between moral development and ego development. The findings support a concurrent relationship between ego development and moral capacity. Sex and SES are discussed in relation to moral development and ego development in terms of respective expectations and role-taking experiences. These variables relate differentially to the moral and ego constructs. Finally, unexpected findings and directions for further research are considered.

The primary aim of this research was to clarify whether the cognitive development or social learning perspective concerning the socialization of moral development and ego development provided the more accurate account of these phenomena. The results tended to favour the cognitive developmental interpretation.

The relationship between ego level and moral P score was confirmed. The data suggest a parallel in the developmental progression of ego development and moral capacity. At each successive ego level an increment in P score was observed. Significant differences in P score occurred between the Preconformist (I-2, Delta, Delta/3), Conformist, transitional I-3/4, the Conscientious (I-4) and the Post-Conscientious

(I-4/5, I-5, I-6) ego levels.

Due to the recognition preference measure of moral development used in this research, predictions were not made between subjects' ego level and moral-stage type. Subjects' moral stage-type on the DIT is expected to be inflated. According to Rest (1976) moral stage-type is the least reliable of the DIT scoring procedures. Nonetheless, the patterning of ego level and moral stage-type was as predicted.

The frequency distribution of ego level in relation to moral stage-type, as indicated in Table 3, showed that higher ego levels tended to occur in individuals grouped at the higher moral stage-types. The transition from Conformist to Conscientious (I-3/4) ego level is a focal level beyond which only higher moral stage-typed individuals tend to place. According to Hauser (1978) this is the most frequently occurring ego level. It marks the beginning of introspective capacities in which an understanding of psychological causation, self-awareness and self-criticism begin to emerge but become internalized at the conscientious I-4 ego level.

Since the DIT biases moral stage-typing in the direction of higher moral development, the findings suggest concurrent development in ego and moral capacity rather than ego functioning preceding moral development. These findings favour the cognitive developmental account of socialization in terms of a similar patterning in the relationship between ego development and moral development.

This study has extended and confirmed the relationship between ego

development and moral development with the Defining Issues Test (DIT), an objective index of social moral problem solving. As expected a strong positive correlation was found between the two measures. A lack of attenuation evidenced with age partialled out was unexpected in view of prior research. This correlation is impressive in view of the fact that the 3-story short form of the DIT has lower reliability and validity than the six-story version.

However, the lack of attenuation evidenced with age partialled out was unexpected in comparison with prior research. This may be explained by the differential relationships between age and moral development and ego development.

In contrast to the present findings, Sullivan, McCullough, and Stager (1970) reported a drop in correlation from .66 to .40 with comparable aged adolescents. However, the former study used a sample of 102 students 12 to 17 years of age from a homogeneous middle class suburban community. In contrast, the sample in the present study was heterogeneous in nature, representative of diverse socioeconomic backgrounds, residing in four rural communities with differential economic base. In this way, the findings are representative of a heterogeneous rural adolescent population at large.

The relationship between ego score and P score was significantly greater for junior high in comparison with senior high and university students. These findings are in direct opposition to Sullivan, McCullough and Stager (1970) who reported a significant increase in the relationship between ego development and spontaneous moral reasoning in adolescents.

This discrepancy may be explained in terms of the respective samples under consideration. The Sullivan et al. study utilized a homogenous group of middle class urban adolescents who would be expected to endorse an ideology in favour of academic advancement. In contrast, the heterogeneous rural adolescents samples are assumed to represent a diverse orientation to educational advancement and job opportunities. It is not uncommon for a large percentage of these students to drop out of school early to seek employment in local industry rather than to continue in the academic realm. Those who choose to continue their formal education may have evaluated their future in terms of more complex social perspective taking in comparison with those who seek to join the job market immediately.

According to Rest (1978), the age-educational factor is confounded in age -DIT correlations. In a diverse adult sample moral score was related to educational level attained and not age per se. That is, whether 30 or 60 years of age, adults who had completed junior high school showed moral scores similar to current junior high school students in comparison to any other age group. In other words, the cognitive restructuring necessary for moral acceleration is related to years of formal schooling rather than to age.

In terms of the present research the adolescents at the high school level (in particular grade 11), are representative of a heterogeneous social-economic group which are in close temporal proximity to streaming into a variety of careers, the minority of which will involve further education. This may in part explain the lack of correlation at grades 11

and 12. Accordingly, university students represent a self-selected population. The ego-moral correlation though significant is of less magnitude than the correlation for junior high students. Greater variability in social cognitive functioning is expected among older adolescents. Redmore and Loevinger (1979) reported higher correlations between ego level and grade for junior high students than for senior high students and the correlation was greater for young adolescents at lower levels of intelligence.

In addition, at grade 12 the sample consisted of 24 individuals. This was considerably less than the sample size at other grade levels. The relatively small number of subjects reduces the heterogeneity, hence variance of the group, which may result in a larger fluctuation in the correlation. This was indicated in the standard deviation for ego development at grade 12 (Appendix E).

Moral Development

Grade

The developmental trend in moral capacity was defined clearly. P scores are consistent with Rest's (1978) norms for junior high, senior high, and university students. As seen in Figure 1, social moral development showed a progressive increase as a function of grade. A quintic contrast accounted for the most variability in the gradient. This higher-order effect suggests that between grades 9 and 11, grades 11 and 12, and grade 12 and university, there is a differential increment in P score. According to Turiel (1974) spontaneous moral reasoning

advances from conventional to the post-conventional level during the transition from grade 12 to university. This acceleration may be reflected on the DIT.

In addition, the quintic form of the moral gradient may be explained in terms of DIT normative characteristics. For example, grade 9 and grade 11 differentiate between junior and senior high school years which are normative limits on the DIT. Concerning the high school students, there are fewer grade 12 students in comparison with the other grade levels. This may reflect some form of selective sampling.

Sex Differences

The question of sex differences in moral development has become a controversial issue in the literature (Haan, Smith & Block, 1968; Holstein, 1967; Rest, 1977). For this reason it is of interest to report the lack of sex differences in this research. However, on an average, females demonstrated slightly higher P scores than the males.

Sex role socialization predicted a grade by sex interaction for moral development. This was not supported. However, junior high girls in comparison with the boys tended to have higher P scores. This tendency was reversed at grade 11 where the boys scored higher than the girls. So far, these observations are in the predicted direction. But, contrary to prediction, subsequent to grade 11 moral development proceeded with the females slightly in advance of the males.

According to Rest (1979), only two out of 21 studies which examined sex differences in the DIT reported a significant sex effect. It is

typical for investigators to maximize homogeneity in their samples. This tends to depress sex differences. In contrast to this general tendency in research, studies that have utilized heterogeneous samples tend to report a sex effect.

Despite the lack of significance attained, the present results provide directional support for this proposition. This is consistent with Turiel's (1976) study using spontaneous moral reasoning in a sample of adolescents attending progressive, traditional, and parochial schools. Similarly, using the DIT, Gfellner (1977) found that in industrial arts classes, junior high girls scored higher in moral capacity than the boys. Perhaps specific aspects of the environment are necessary to operate in conjunction with sex role in order to stimulate the appropriate conditions required for moral growth. Furthermore, this effect may be more apparent for younger than for older adolescent girls.

SES Differences

According to the literature, SES is one of the most potent behavioural predictors. However, SES has not been adequately studied in relation to the DIT. The present study classified adolescents by father's occupation coded in terms of the Blisshen Index. The correlation was .052 between SES and P score. This is consistent with other investigators (Rest, 1976) using a variety of SES indices.

When adolescents were divided into high, medium, and low SES groups, SES approached significance in the main effect ANOVA. Consistent with expectation, adolescents from high-SES backgrounds tended to score

higher on the DIT than medium-SES adolescents who scored slightly above low-SES adolescents.

An unexpected grade by SES interaction was found for moral capacity. As seen in Figure 5, each SES gradient is linear in form. However, the low-SES students in comparison with high-SES and medium-SES groups are disparate. During junior high and at grade 11 low-SES students evidenced the lowest moral scores. However, at grade 12 and university, low-SES students scored higher than their high-SES and medium-SES contemporaries. The only significant within grade difference occurred at grade 12 between low-SES and medium-SES adolescents.

This elevation in moral development among low-SES older adolescents may be explained by the selective attrition of low-SES older adolescents from the educational system. Thus, low-SES students found in the twelfth grade and at university represent a self-selected group in terms of educational achievement or motivation in comparison to their non-visible contemporaries who have dropped out of school in favour of immediate employment. In this way, the low-SES grade 12 and university students are more similar in value ideology to the high-SES and medium-SES students and thereby reflect an educational factor rather than appropriate SES self-categorization. In addition, these low-SES students may be overcompensating in this direction as suggested by the fact that they achieved the highest moral scores.

These results suggest that the educational component in terms of value ideology may be important in determining the relationship between moral capacity and SES. Hence, career aspirations and goals may be a

better predictor of moral functioning during the high school years. Clearly, an upwardly mobile individual is expected to experience more cognitive rendering in the socioeconomic sphere. According to Adams and Shea (1980) and Podd (1972), university students categorized as identity achievers that is, those who have gone through a period of crisis and commitment in terms of occupation, politics, and religion, demonstrated higher ego levels and higher moral development than those who foreclosed and unquestioningly accepted these respective domains.

In this sample, the students in grades 11 and 12 were disproportionately represented from the more economically secure communities where the likelihood of upward mobility would be enhanced via the education system. Although the drop out rate in this sample is not known, fewer high school students were in attendance in the poorer rural community than in the company (pulp and paper) and nuclear plant based town.

The grade by sex by SES interaction was not supported. This may be due to the large number of empty cells over the high school years. Also, at grade 11, the proportion of males exceeded that of females by a third.

Ego Development

Grade

The developmental trend in ego development was supported. As seen in Figure 2, the ego gradient was linear in form which indicated that ego development increased progressively as a function of grade. These findings are consistent with the results reported by other

investigators (Loevinger and Wessler, 1970; Hoppe, 1972; Martin and Redmore, 1978; Redmore and Loevinger, 1979). For comparative purposes ego scores were graphed in the manner presented by Loevinger and Wessler (1970, p. 50). Cumulative frequency distributions of per cent ego TPR scores are illustrated in Figure 4 for females and males as a function of grade. At each grade there is a progressive increase of higher ego level functioning. Sex differences are discussed in the following section.

Sex differences

Female ego scores exceeded male ego scores at each grade level. Although significant sex differences occurred only among students at grade 8 and grade 11, the results are clear. Girls are precocious in ego development.

These findings are consistent with the Martin and Redmore (1978) longitudinal study which reported that female ego development tended to exceed or at least was equal with that of males during the adolescent years. The current results are unequivocal on this sex difference in ego development. As indicated in Table 4, throughout junior high and senior high school females are at least half an ego level ahead of their male contemporaries.

From grade 7 until first year university, females ego scores tend to approximate those of males at a more advanced grade, ultimately levelling off during university. This was indicated in the cumulative frequency distribution of ego scores for males and females in relation to

grade presented in Figure 4. The gradients show some overlap between the sexes at various grades. Specifically, among the younger adolescents, girls demonstrated higher ego development than boys, one and two grades their senior. Loevinger and Wessler (1970) reported no overlap in the gradients between the sexes.

In addition, lack of differentiation in ego development during early adolescence as demonstrated in males at grades 7, 8, and 9 and females at grade 7 may be related to the fact that girls mature 2 years ahead of boys (Tanner, 1965). This two-year maturational lag is most evident during the puberty age-span which coincides with the junior high period.

Girls at grades 8 and 9 are expanding their interpersonal sphere in a variety of ways which may include dating and more adult-like issues in comparison with male peers who are only beginning to move away from the traditional sex cleavage patterns of childhood (Newman and Newman, 1975). Thus, in addition to differential sex role expectations, the social content for young adolescent girls tends to provide opportunities for social perspective taking and social-cognitive rendering which are indicated for ego level advancement.

SES Differences:

The relationship between ego development and SES was not supported. These results are surprising in view of the literature (Hauser, 1977; Martin & Redmore, 1978). However, until this time, SES has not been directly examined in relation to ego development.

A serendipitous finding was the significant grade by SES interaction.

This provides some clarification to the role of SES in ego development. As illustrated in Figure 7, the ego gradient at each SES level is of similar linear form. The most dramatic effect of SES in relation to ego development occurred at high school. High-SES students align with the older adolescents in comparison with medium-SES and low-SES students who resemble the grade 9 groups in ego scores. This difference reflects a split in subjects scoring above (high-SES grade 11) or at and below the Conformist (I-3) level. These results provide partial support for Martin and Redmore's (1978) contention of higher correlations between ego development and SES in older as compared with younger adolescents.

The lack of relationship between SES and ego development in this study may be due to the rural nature of the sample. In the Martin and Redmore (1978) study SES group extremes were compared in terms of upper middle class students and students residing in the core area of a metropolitan city. In the present study, many of the students' fathers were farmers and there were no welfare recipients. None of the low-SES students' father's occupations were rated below the bottom 25% on the Blishen Index. In fact, the cutting point between low-SES and medium-SES was within the national average SES range. It was one-half a standard deviation above and below the SES sample mean.

Clearly, different expectations and role-taking experiences are involved in rural and urban low-SES groups. Rural adolescents may have a "naivety" with regard to "big city ways" but this may be compensated in terms of social perspective taking afforded in the proximity engendered by a small community setting.

Regression Analysis

The proportion of variance accounted for by grade, sex and SES differed in terms of moral P score and ego development. In combination these factors accounted for 6.8% and 8.11% of the variance in moral and ego development, respectively.

Although both constructs demonstrated significant developmental trends, grade accounted for 4.9% of the moral variance and a meager .8% of ego variability. Rest, Davison and Robbins (1978) reported that 38% of the variance in the DIT was due to the age-educational component in a very large sample including junior high school to college graduate students. Further, when subjects were grouped by classroom (sample) rather than by educational level, the variance increased to 49%. In comparison with these findings, the heterogeneity of the present sample has dramatically depressed the proportion of variance due to grade.

Sex differences were illuminating for ego development, in terms of female precocity during the adolescent years. The sex component accounted for 6.8% of the ego variance. Conversely, in moral development 1.4% of the variance was due to sex. Thus, role-taking opportunities and categorizations fostered by one's sex do not appear to provide an appropriate set for the type of cognitive restructuring necessary for moral growth as assessed on the DIT. On the other hand, it functions to enhance ego development in girls.

With regard to SES, .6% of the moral variance and .3% of the ego variance was determined respectively. These findings support the contention that SES may operate as a mediating variable in both moral

and ego development.

The total variance in moral P score accounted for by ego level, grade, sex, and SES was 25.98%. The greatest proportion of variability, 19.98% was due to ego development. Grade accounted for 3.22% of the moral variability and the effects of sex and SES were negligible.

These findings indicate that ego level is a more potent predictor of moral development than grade. This is unclear in view of previous research with the DIT. However, this study examined the relationship between moral and ego development during the adolescent years and may entail ceiling effects in ego development which confound the grade effect. Unfortunately, no studies have assessed stability and change in ego development during the latter adolescent years so that little is known concerning the developmental parameters involved.

The results of this study clearly establish the relationship between ego development and moral development. However, they provide only indirect support for the prediction that ego development precedes moral development. The cross-sectional design enables only the evaluation of age differences in the moral and ego constructs. Longitudinal study is necessary in order to assess age changes in development. Further research of a longitudinal variety is needed in order to directly examine the proposed hierarchical relationship between moral and ego development.

Conclusions and Implications

The purpose of this research was not to pit one theoretical approach against another, but to clarify the cognitive developmental and social learning theory assumptions concerning the causal mechanisms of socialization in moral development and ego development. The findings favour the cognitive developmental interpretation in terms of concurrent development in the progression of ego development and moral competence.

However, in a recent discussion of social learning theory and moral development, Mischel and Mischel (1976) contended that moral reasoning predicts no more than 10% of the variance in moral behaviour. People tend to vary their behaviour across situations relative to their "discriminative facility" whereby the expectancies which direct performance are specific rather than broadly generalized.

The cognitive developmental approach is criticized because of its poor ability to predict actual behaviour. This, however, is not a contention of the position. Instead, a person's social cognitive capacities involve the criteria used to evaluate information in a social conflict situation. The use of discussion exercises and role playing training techniques in moral development programs have indicated that social cognitive processes are applied to the self in relation to the dilemma to facilitate cognitive restructuring hence moral stage advancement. In this regard Selman states that "...although the correspondence between judgment and action is not simple, better judgment may lead to more consistent social behaviour and more realistic feelings about the self" (1976, p.308). According to Selman, a certain social perspective taking

awareness is crucial in order to comprehend and to reflect upon the meaning and reason for one's behaviour. This does not preclude certain behaviours, it precludes an affective awareness of them. In addition, at more advanced levels of social cognitive capacity, a person may select the criteria he considers appropriate to guide performance. However, at less mature levels, the individual is restricted in social cognitive competence. In this way, one's social cognitive capacities would be expected to interact with the "discriminative facility" loosely described by social learning theorists. Thus, although the cognitive developmental approach does not attempt to predict behaviour, knowledge of an individual's social cognitive capacities would provide an indication of the person's understanding of the aspects deemed salient within a given situation.

This aspect of social cognitive competence is embodied in ego development which is an extension of social cognitive functioning into a person's life history via experience. The relationship between ego development and other facets of social cognition such as moral development, is critical to an understanding of the social cognitive capacities available to an individual in various social contexts.

As indicated previously, Tamashiro (1979) found that adolescents' ego levels exceeded their comprehension of marriage concepts, an area in which they lacked experience. However, experience alone does not insure social cognitive development. For example, Edwards (1980) found that teachers utilized less mature reasoning in the resolution of moral conflicts within school settings in comparison with other situations.

Clearly, social cognitive advancement involves deliberate cognitive

restructuring, such as in marital counseling, when an emotionally-laden conflict warrants consideration. From this perspective ego development might be examined among individuals' experiencing a turning point in their lives which precipitates significant cognitive rendering such as evidenced in clinical therapy or educational intervention. Furthermore, an awareness of the person's social cognitive capacities may be essential in providing appropriate treatment or intervention.

A related area of enquiry concerns the role of social perspective taking, for example, as operationalized by Selman (1976), in relation to ego development. A strong relationship is indicated due to the conceptual nature of these constructs. Furthermore, in order of development, social perspective taking precedes moral development (Moir, 1974; Selman et al., 1976; Smith, 1979). Since social perspective taking adheres to a more rigidly defined stage criteria than ego development, such research would contribute not only to the validity of the ego construct, but also to an understanding of some of the parameters of ego development.

This research indicated that sex and SES relates differentially to moral and ego development. These findings have implications for the role of situational variables in relation to social cognitive capacities.

Sex differences were not found in moral development. However, consideration of the educational milieu, in particular with young adolescent females, is suggested by the Turiel (1976) and Gfellner (1977) studies. Another avenue would be to examine a more direct index of sex role identity in relation to moral development. This may be pertinent

during adolescence when sex role stereotyping is most stringently endorsed (Urberg, 1979) and identity issues are paramount.

There was directional support for the relationship between moral development and SES. However, older adolescents from low SES backgrounds evidenced the most advanced moral capacity. This suggests that academic/occupational aspirations may be a better predictor of moral capacity during the senior high school years than SES per se. This may reflect more specific cognitive rendering by the upwardly mobile individual in comparison with higher SES peers. The findings suggest the potential of individually-oriented career counseling during adolescence as a vehicle of social cognitive advancement among students from lower SES groups.

In terms of ego development, female adolescents were precocious in comparison with male contemporaries. SES differences were not supported, but the findings suggest a relationship between SES and ego development in older as compared with younger adolescents.

In view of prior research the lack of relationship between SES and ego development warrants consideration of the rural nature of the sample. Clearly, different expectations and role taking experiences operate in rural and urban low-SES groups. A small community provides greater interpersonal proximity which may facilitate social perspective taking hence ego development.

Accordingly, these findings suggest that other theoretically relevant aspects of the social environment warrant investigation, for example, school size, participation in voluntary community programs such as visiting senior citizens, big brother or sister and the like. However,

such personal and situational factors require elaboration in terms of the cognitive structuring they may engender, for example, as indicated in the study of parental styles of interaction and moral development (Haan, Smith and Block, 1968; Hoffman, 1975; Santrock, 1975).

A consideration of the relationship between personal-environmental factors and social cognitive capacities is the area in which a merger between cognitive developmental and social learning theories may be most fruitful. Ideally, further research of a longitudinal nature should be directed toward this aim.

APPENDIX A

OPTIONS ABOUT SOCIAL PROBLEMS

This questionnaire is aimed at understanding how people think about social problems. Different people often have different opinions about questions of right and wrong. There are no "right" answers in the way that there are right answers to math problems. We would like you to tell us what you think about several problem stories. The papers will be fed to a computer to find the average for the whole group, and no one will see your individual answers.

Please give us the following information:

Name (student number): _____ Sex: M ___ or F ___

Age: _____ Class: _____

* * * * *

In this questionnaire you will be asked to give your opinions about several stories. Here is a story as an example. Read it, then turn to the next page.

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family's only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy Frank Jones realized that there were a lot of questions

to consider. On the next page there is a list of some of these questions.

If you were Frank Jones, how important would each of these questions be in deciding what car to buy?

PART A: (Sample)

On the left hand side of the page, check one of the spaces by each question that could be considered.

- (a) GREAT importance
- (b) MUCH importance
- (c) SOME importance
- (d) LITTLE importance
- (e) NO importance

(a)	(b)	(c)	(d)	(e)	
_____	_____	_____	_____	<u> X </u>	1. Whether the car dealer was in the same block as where Frank lives.
<u> X </u>	_____	_____	_____	_____	2. Would a <u>used</u> car be more economical in the long run than a new car.
_____	_____	<u> X </u>	_____	_____	3. Whether the colour was green, Frank's favorite colour.
_____	_____	_____	_____	<u> X </u>	4. Whether the cubic inch displacement was at least 200.
<u> X </u>	_____	_____	_____	_____	5. Would a large, roomy car be better than a compact car.
_____	_____	_____	_____	<u> X </u>	6. Whether the front connibilities were differential.

PART B: (Sample)

From the list of questions above, select the most important one of the whole group. Put the number of the most important question on the top line below. Do likewise for your 2nd, 3rd, and 4th most important choices.

Most important 5

Second most important 2

Third most important 3

Fourth most important 1

HEINZ AND THE DRUG

In Europe a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid \$200.00 for the radium and charged \$2000.00 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1000.00, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it". So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife.

Should Heinz steal the drug? (check one)

- Should steal it
 Can't decide
 Should not steal it

- (a) GREAT importance
- (b) MUCH importance
- (c) SOME importance
- (d) LITTLE importance
- (e) NO importance

HEINZ STORY

On the left hand side of the page check one of the spaces by each question to indicate its importance.

- | (a) | (b) | (c) | (d) | (e) | |
|-----|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | ___ | 1. Whether a community's laws are going to be upheld. |
| ___ | ___ | ___ | ___ | ___ | 2. Isn't it only natural for a loving husband to care so much for his wife that he'd steal? |
| ___ | ___ | ___ | ___ | ___ | 3. Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help? |
| ___ | ___ | ___ | ___ | ___ | 4. Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers. |
| ___ | ___ | ___ | ___ | ___ | 5. Whether Heinz is stealing for himself or doing this solely to help someone else. |
| ___ | ___ | ___ | ___ | ___ | 6. Whether the druggist's rights to his invention have to be respected. |
| ___ | ___ | ___ | ___ | ___ | 7. Whether the essence of living is more encompassing than the termination of dying, socially and individually. |
| ___ | ___ | ___ | ___ | ___ | 8. What values are going to be the basis for governing how people act towards each other. |
| ___ | ___ | ___ | ___ | ___ | 9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow. |
| ___ | ___ | ___ | ___ | ___ | 10. Whether the law in this case is getting in |

the way of the most basic claim of any
member of society.

___ ___ ___ ___ ___ 11. Whether the druggist deserves to be robbed
for being so greedy and cruel.

___ ___ ___ ___ ___ 12. Would stealing in such a case bring about
more total good for the whole society or not.

From the list of questions above, select the four most important:

Most important _____
Second most important _____
Third most important _____
Fourth most important _____

ESCAPED PRISONER

A man had been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For 8 years he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day Mrs. Jones, an old neighbour, recognized him as the man who had escaped from prison 8 years before, and whom the police had been looking for.

Should Mrs. Jones report Mr. Thompson to the police and have him sent back to prison? (Check one)

Should report him

Can't decide

Should not report him

- (a) GREAT importance
- (b) MUCH importance
- (c) SOME importance
- (d) LITTLE importance
- (e) NO importance

ESCAPED PRISONER

(a) (b) (c) (d) (e)

- | | | | | | |
|-----|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | ___ | 1. Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person? |
| ___ | ___ | ___ | ___ | ___ | 2. Everytime someone escapes punishment for a crime, doesn't that just encourage more crime? |
| ___ | ___ | ___ | ___ | ___ | 3. Wouldn't we be better off without prisons and the oppression of our legal system? |
| ___ | ___ | ___ | ___ | ___ | 4. Has Mr. Thompson really paid his debt to society? |
| ___ | ___ | ___ | ___ | ___ | 5. Would society be failing what Mr. Thompson should fairly expect? |
| ___ | ___ | ___ | ___ | ___ | 6. What benefits would prisons be apart from society, especially for a charitable man? |
| ___ | ___ | ___ | ___ | ___ | 7. How could anyone be so cruel and heartless as to send Mr. Thompson to prison? |
| ___ | ___ | ___ | ___ | ___ | 8. Would it be fair to all the prisoners who had to serve out their full sentences if |

Mr. Thompson was let off?

- ___ ___ ___ ___ ___ 9. Was Mrs. Jones a good friend of Mr. Thompson?
- ___ ___ ___ ___ ___ 10. Wouldn't it be a citizen's duty to report
an escaped criminal, regardless of the
circumstances?
- ___ ___ ___ ___ ___ 11. How would the will of the people and the
public good best be served?
- ___ ___ ___ ___ ___ 12. Would going to prison do any good for
Mr. Thompson or protect anybody?

From the list of questions above, select the four most important:

Most important _____

Second most important _____

Third most important _____

Fourth most important _____

NEWSPAPER

Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so that he could express many of his opinions. He wanted to speak out against the war in Viet Nam and to speak out against some of the school's rules, like the rule forbidding boys to wear long hair.

When Fred started his newspaper, he asked his principal for permission. The principal said it would be all right if before every publication Fred would turn in all his articles for the principal's approval. Fred agreed and turned in several articles for approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks.

But the principal had not expected that Fred's newspaper would receive so much attention. Students were so excited by the paper that they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned the principal telling him that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, the principal ordered Fred to stop publishing. He gave as a reason that Fred's activities were disruptive to the operation of the school.

Should the principal stop the newspaper? (Check one)

Should stop it.

Can't decide.

Should not stop it.

- (a) GREAT importance
- (b) MUCH importance
- (c) SOME importance
- (d) LITTLE importance
- (e) NO importance

NEWSPAPER

- | (a) | (b) | (c) | (d) | (e) | |
|-----|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | ___ | 1. Is the principal more responsible to students or to parents? |
| ___ | ___ | ___ | ___ | ___ | 2. Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time? |
| ___ | ___ | ___ | ___ | ___ | 3. Would the students start protesting even more if the principal stopped the newspaper? |
| ___ | ___ | ___ | ___ | ___ | 4. When the welfare of the school is threatened does the principal have the right to give orders to students? |
| ___ | ___ | ___ | ___ | ___ | 5. Does the principal have the freedom of speech to say "no" in this case? |
| ___ | ___ | ___ | ___ | ___ | 6. If the principal stopped the newspaper would he be preventing full discussion of important problems? |
| ___ | ___ | ___ | ___ | ___ | 7. Whether the principal's order would make Fred lose faith in the principal. |
| ___ | ___ | ___ | ___ | ___ | 8. Whether Fred was really loyal to his school |

and patriotic to his country.

- ___ ___ ___ ___ ___ 9. What effect would stopping the paper have on the student's education in critical thinking and judgment?
- ___ ___ ___ ___ ___ 10. Whether Fred was in any way violating the rights of others in publishing his own opinions.
- ___ ___ ___ ___ ___ 11. Whether the principal should be influenced by some angry parents when it is the principal that knows best what is going on in the school.
- ___ ___ ___ ___ ___ 12. Whether Fred was using the newspaper to stir up hatred and discontent.

From the list of questions above, select the four most important:

Most important _____

Second most important _____

Third most important _____

Fourth most important _____

APPENDIX B

SENTENCE COMPLETION FORM FOR MALES

Instructions: Complete the following sentences in any way that you wish.

1. Raising a family
2. When a child will not join in group activities
3. When they avoided me
4. A man's job
5. Being with other people
6. The thing I like about myself is
7. If my mother
8. I can't get what I want
9. When I was younger
10. Education
11. When people are helpless
12. Women are lucky because
13. What gets me into trouble is
14. A good father
15. If I were king
16. A wife should
17. I feel sorry
18. A man should always
19. Rules are
20. He felt proud that he
21. Men are lucky because
22. My father and I
23. A man feels good when
24. When I get mad
25. At times he worried about
26. When his wife asked him to help with the housework
27. My main problem is
28. When I am criticized
29. Sometimes he wished that
30. A husband has a right to
31. When he thought of his mother, he
32. The worst thing about being a man
33. If I had more money
34. I just can't stand people who
35. My conscience bothers me if
36. Crime and delinquency could be halted if

SENTENCE COMPLETION FORM FOR FEMALES

Instructions: Complete the following sentences in any way that you wish.

1. Raising a family
2. Most men think that women
3. When they avoided me
4. If my mother
5. Being with other people
6. The thing I like about myself is
7. A girl has a right to
8. When I get mad
9. My mother and I
10. What gets me into trouble is
11. Education
12. When people are helpless
13. Women are lucky because
14. When I am criticized
15. My father
16. Rules are
17. If I had more money
18. When my mother spanked me, I
19. A wife should
20. I feel sorry
21. When I am nervous, I
22. When a child will not join in group activities
23. Men are lucky because
24. At times she worried about
25. I am
26. A woman feels good when
27. My main problem is
28. Whenever she was with her mother, she
29. Sometimes she wished that
30. A good mother
31. The worst thing about being a woman
32. When she thought of her mother she
33. If I can't get what I want
34. For a woman a career is
35. My conscience bothers me if
36. A woman should always

APPENDIX C

Inter-rater reliability coefficients between the two raters and between each rater's score and the final assigned ego score for the female sentence stems (n=305 items per sentence stem).

Sentence Stems	Rater 1 and Rater 2	Rater 1 and Ego score	Rater 2 and Ego score
1	.90	.96	.93
2	.80	.94	.86
3	.91	.96	.96
4	.79	.86	.92
5	.85	.92	.89
6	.80	.88	.90
7	.73	.82	.85
8	.54	.75	.73
9	.82	.90	.91
10	.87	.91	.95
11	.83	.93	.90
12	.72	.85	.88
13	.83	.92	.90
14	.68	.82	.86
15	.76	.87	.88
16	.73	.92	.80
17	.82	.89	.92
18	.70	.82	.89
19	.69	.82	.84
20	.83	.91	.91
21	.84	.91	.91
22	.73	.83	.88
23	.84	.91	.93
24	.77	.91	.86
25	.68	.81	.85
26	.83	.95	.87
27	.89	.97	.92
28	.75	.90	.86
29	.88	.93	.94
30	.69	.86	.83
31	.67	.99	.73
32	.94	.96	.94
33	.94	.97	.97
34	.80	.91	.83
35	.81	.91	.88
36	.86	.93	.93

APPENDIX D

Inter-rater reliability coefficients between the two raters and between each rater's score and the final assigned ego score for the male sentence stems (n=254 items per sentence stem).

Sentence Stems	Rater 1 and Rater 2	Rater 1 and Ego score	Rater 2 and Ego score
1	.75	.91	.84
2	.86	.95	.91
3	.79	.94	.86
4	.85	.95	.91
5	.68	.91	.78
6	.82	.87	.93
7	.86	.91	.93
8	.93	.94	.99
9	1.00	1.00	1.00
10	.76	.92	.85
11	.84	.95	.87
12	.86	.91	.94
13	.95	.93	.98
14	.87	.95	.90
15	.70	.89	.83
16	.91	.96	.96
17	.80	.88	.91
18	.98	.99	.99
19	.80	.88	.93
20	.84	.91	.93
21	.77	.86	.91
22	.86	.96	.90
23	1.00	1.00	1.00
24	.80	.92	.88
25	.80	.91	.91
26	.93	.95	.99
27	.94	.99	.95
28	.84	.92	.92
29	.90	.95	.95
30	1.00	1.00	1.00
31	1.00	1.00	1.00
32	1.00	1.00	1.00
33	.82	.90	.90
34	.89	.95	.95
35	.83	.91	.93
36	.95	.98	.99

APPENDIX E

Summary table of the correlations between moral development and ego development as a function of grade.

	r moral, ego	Moral Development		Ego Development	
		Mean	S.D.	Mean	S.D.
University	0.1763 p<.031 n=112	11.946	5.134	6.107	1.181
Grade 12	0.0755 p<.363 n=24	8.333	5.322	5.417	0.8297
Grade 11	- 0.139 p<.153 n=56	6.268	3.975	4.339	1.517
Grade 9	0.2749 p<.004 n=95	5.505	4.172	3.2	1.61
Grade 8	0.2248 p<.009 n=111	5.144	3.66	2.557	1.547
Grade 7	0.1585 p<.046 n=114	5.00	3.342	2.4298	1.337

APPENDIX F

Summary Table for Multivariate Analyses of Variance and Subsequent Analyses of Variance for Moral Development and Ego Development as Dependent Variables

	Manova		Moral Manova		Ego Manova	
	Overall F		MS	F	MS	F
	A	59.5811	p<.0001	780.172	46.3867	218.6766
Grade Main Effect						p<.0001
B	16.4965	p<.0001	19.2125	1.1423	59.0314	32.9705
Sex Main Effect						p<.0001
C	2.1461	p<.0733	41.2399	2.4520	3.3556	1.8742
SES Main Effect						p<.1546
AB	2.0684	p<.0245	19.6279	1.167	5.0892	2.8425
Grade x Sex Interaction						p<.0153
AC	2.1146	p<.003	37.3694	2.2219	3.8028	2.1240
Grade x SES Interaction						p<.0215
BC	0.3965	p<.8113	10.0895	0.599	0.5121	0.286
Sex x SES Interaction						p<.7514
ABC	.8137	p<.6985	21.1307	1.2564	0.7258	0.4054
Grade x SES x Sex Interaction						p<.9442

APPENDIX G

MULTIPLE COMPARISON (t-tests) for the Grade Main effect of Moral development (P-scores).

	College	12	11	9	8	7
College		3.12**	5.68**	6.9**	6.81**	6.95**
12			2.57**	3.78**	3.89**	3.83**
11				.76	1.12	1.27*
9					.36	.51
8						.14
7						

** Significance at or beyond .01 level

* Significance at or beyond .05 level

APPENDIX H

MULTIPLE COMPARISONS (t-tests) for the Grade Main effect of Ego level.

	College	12	11	9	8	7
College		.69**	1.77**	2.91**	3.55**	3.68**
12			1.08**	2.12**	2.86**	2.99**
11				1.14**	1.78**	1.91**
9					.64	.77**
8						.13
7						

** Significance at or beyond .01 level

APPENDIX I

Summary table of multiple comparisons (t-tests) for the grade by sex interaction of ego development

College (C) Females (F)	CM	12F	12M	11F	11M	9F	8F	7F	9M	7M	8M
CF	.05	.48	1.03**	1.32**	2.42**	2.47**	2.86**	3.37**	3.38**	4.12**	4.2**
CM		.43	.97	1.27*	2.37**	2.41**	2.8**	3.32**	3.32**	4.04**	4.14**
12F			.54	.83	1.94**	1.98**	2.37**	2.89**	2.89**	3.61**	3.71**
12M				.29	1.39**	1.44**	1.83**	2.34**	2.35**	3.06**	3.17**
11F					1.1*	1.52**	1.54**	2.05**	2.06**	2.77**	2.88**
11M								.95	.96	1.67**	1.78**
9F									.91	1.62**	1.73**
8F										1.23*	1.34*
7F											.83

** Significance at or beyond the .01 level

* Significance at or beyond the .05 level

APPENDIX J

Summary table of multiple comparisons (t-tests) for the grade by SES

interaction of moral p-score

	9H	11H	11M	12M	8M	11L	8H	9M	7M	7H	7L	9L	8L
College (C)	6.32**	6.67**	6.68**	6.84**	7.3**	7.56**	7.8**	7.9**	8.1**	8.2**	8.4**	8.6**	8.8**
Low-SES													
12L	5.33*	5.64*	5.7*	5.8*	6.3**	6.5**	6.8**	6.9**	7.1**	7.2**	7.4**	7.5**	7.7**
CH	5.12*	5.4*	5.5*	5.6*	6.04**	6.4**	6.6**	6.7**	6.9**	7.0**	7.2**	7.3**	7.5**
CM								4.7*	4.9*	5.0*	5.2*	5.4*	5.6*
12H													4.5
9H													
11H													
11M													
12M													
8M													
11L													
8H													
9M													
7M													
7H													
7L													
9L													
8L													

** Significance at or beyond the .01 level

* Significance at or beyond the .05 level

APPENDIX K

Summary Table for Multivariate Analyses of Variance and Subsequent Analyses of Variance for Moral Development and Ego Development for High-SES, Medium-SES, and Low-SES Groups

	Manova		Moral Anova		Ego Anova	
	Overall F		MS	F	MS	F
High-SES						
Grade Effect (Linear)	72.831	p<.0001	378.2807	18.6281	249.3097	37.998
Sex Effect	11.6447	p<.0001	40.2009	2.0009	41.0454	22.7194
Grade x Sex	1.0109	p<.4339				
Medium-SES						
Grade (Linear)	37.0095	p<.0001	146.4409	9.849	144.4206	74.0773
Sex	4.5044	p<.013	0.74	0.005	16.5146	8.4708
Grade x Sex	0.7472	p<.6795				
Low-SES						
Grade (Linear)	116.0888	p<.0001	1046.2231	67.2231	299.8969	177.795
Sex	8.0512	p<.0005	9.8749	0.6329	26.7372	15.8512
Grade x Sex	2.3575	p<.0102	24.4646	1.5674	5.3537	3.174

APPENDIX L

Summary table of multiple comparisons (t-tests) for the grade by SES interaction of ego development

	11H	11L	11M	9H	9M	8M	9L	7H	8L	7L	8H	7M
CL-SES	1.4	2.1**	2.3**	3.1**	3.1**	3.1**	3.3**	3.8**	3.8**	3.8**	3.9**	4.0**
CH	1.2	1.9**	2.1**	2.9**	2.9**	2.9**	3.1**	3.6**	3.6**	3.6**	3.7**	3.8**
CM		1.8*	1.9**	2.8**	2.7**	2.8**	2.9**	3.4**	3.4**	3.5**	3.5**	3.6**
12H		1.5	1.6*	2.5**	2.4**	2.5**	2.7**	3.1**	3.1**	3.1**	3.2**	3.2**
12L				2.1**	2.1**	2.1**	2.3**	3.8**	2.8**	2.8**	2.9**	2.9**
12M				2.1**	2.0**	2.0**	2.2**	3.6**	2.7**	2.7**	2.7**	2.9**
11H				1.7*	1.7*	1.7*	1.9**	2.4**	2.4**	2.4**	2.5**	2.6**
11L					.9	.9	1.2	1.6*	1.7*	1.7*	1.8*	1.9*
11M								1.5*	1.5*	1.5*	1.6*	1.7*
9H									2.1	1.2	1.3	1.4
9M												
8M												
9L												
7H												
8L												
7L												
8H												
7M												

** Significance at or beyond the .01 level

* Significance at or beyond the .05 level

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