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THE OHIO STATE UNIVERSITY, PH.D., 1979

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SELF AND PEER COGNITION
IN DELINQUENT AND NONDELINQUENT MALES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Robert Michael Bernstein, B.S., M.A.

* * * * *

The Ohio State University
1979

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The purposes of this study are to investigate the relationships of three dimensions of delinquency which have emerged consistently in the literature, i.e., psychopathy, neuroticism, and subcultural delinquency, to self and peer cognition. Despite the theoretical emphasis upon the delinquent's self conceptions and peer relations, these domains have not been explored previously from a cognitive-developmental perspective.

Although it has been common practice to conduct research in delinquency using an undifferentiated sample of delinquents, there is considerable evidence to indicate that delinquents are not a homogeneous group and that there are substantial differences in familial background, personality attributes and levels of cognitive development among delinquents who vary along certain dimensions (e.g., Quay, 1965). Factor analysis has yielded three factors of delinquency: psychopathy, neuroticism, and subcultural delinquency (Peterson, Quay, and Cameron, 1959; Peterson, Quay, and Tiffany, 1961; Quay, 1964, 1966; Quay, Peterson, and Consalvi, 1960). Research investigating differences among delinquents has tended to consider subgroups of delinquents as if these constituted distinct types of persons (e.g., Hewitt and Jenkins, 1946; Peterson et al., 1959; Reiss, 1952). However, there is evidence to suggest that it is inaccurate to discuss types of persons (Quay, 1966; Tiffany, Peterson, and Quay, 1961). Differentiating factors have emerged when test items are grouped, rather than when subjects are grouped. It is more appropriate to consider dimensions...
which are associated with attributes rather than types of people. However, the term "type" has been used to refer to polar characteristics representing extreme reference points along a continuum (Ferdinand, 1966). Dis-social behavior is not considered to differ qualitatively from normal behavior; rather, it differs quantitatively. In order to add theoretical clarity, this definition of the term "type" will be employed interchangeably with the term "dimension" in this paper.

In addition to obtaining a better understanding of delinquency, the study of empirically derived types of delinquency may contribute, potentially, to the construction of an effective differential treatment strategy for delinquents. The often cited conclusion that intervention with delinquents is ineffectual (e.g., Jeffery, 1977; Robins, 1972), may be related to the fact that the overwhelming majority of intervention studies employ a particular strategy indiscriminately, rather than employing different strategies for delinquents with different areas of weakness. Studies contrasting various intervention approaches have found relatively consistent differences in the outcomes of delinquents with diverse histories participating in different treatment programs (e.g., Palmer, 1971; Stephenson and Scarpitti, 1974). At the present time, the goal of employing types of delinquency to develop effective intervention strategies appears to be a distant dream. The empirical evidence associating these types with personality, cognitive, and social variables is generally sparse. Hopefully, this study will contribute to a better understanding of delinquency.

The following literature review integrates major theoretical perspectives of delinquency with the types of delinquents emerging from factor analytic research. Research relating social, personality, and
cognitive-developmental variables to delinquency dimensions will be presented. The cognitive-developmental literature concerning self and impression formation will conclude this review, providing the developmental foundation for this study's hypotheses.

**Psychoanalytic Theory**

Psychoanalytic theory has contended that socialization is based upon ego and superego developments which foster the adoption of the reality principle and the capacity to delay gratification, to tolerate frustration and to accept substitute forms of gratification (Freud, 1965). Dissocial development occurs at various points during growth and is derived from diverse sources, although family relations are usually stressed.

Aichhorn (1963) has postulated two primary groups of delinquents. One type is predominantly neurotic with dissocial symptoms. The dissocial behavior is derived from inner conflicts among the id, ego, and superego. The second type is a dissocial delinquent without neurotic symptoms. In this case, dissocial behavior arises from an open conflict between the person and the environment. A third type of delinquent, implicitly suggested by Aichhorn, is one whose personality is well-developed and is not experiencing unusual inner turmoil and who is not in conflict with his immediate environment. This delinquent has been reared in a dissocial environment which has led to the formation of a superego with deviant values. Conflicts arise with the dominant cultural norms. The neglect of this last type of delinquent in the psychoanalytic literature may be attributed to the belief that a normal developmental
course is followed in this case.

The delinquent with a neurotic personality is usually reared in a middle class home. He is not prepared adequately for coping with the demands of reality. This can occur in two primary ways. First, his parents have bestowed upon him an excess of love. The love is excessive because it is a compensation for an unsatisfactory marital relationship. The child's needs and urgencies are gratified immediately. He does not experience frustration or discomfort. Second, the parents are inconsistent. One parent is overly indulgent, while the other parent is very severe. The child escapes punishment by fleeing to the indulgent parent. This situation maintains the attitude in the child that he is impervious to external controls. At some point, the indulgent parent can not meet the child's demands, which leads to dissocial behavior.

Anna Freud (1949) has discussed the developmental disruptions which contribute to the neurotic manifesting delinquent behavior. This person persists in infantile modes of thought, rather than relinquishing his misconceptions. It is normal for the young child, who is beginning to develop a concept of objective reality, to have a distorted conception of the external world. He confuses external reality with his subjective experiences. The young child thinks in accordance with his wishes, not with reality. He believes that he is omnipotent and is unwilling to accept restrictions. While the normally developing child gradually relinquishes these misconceptions, the dissocial child fails to adopt the reality principle. The difference between the neurotic and the neurotic delinquent is that the former can employ fantasy as a means of gratification, while the latter must act out his inner conflicts (Friedlander, 1947). Johnson (1949) has suggested that in some cases a
parent may gain vicarious gratification through the child's antisocial behaviors. Parental permissiveness or inconsistency in circumscribed areas encourages the child to act out impulses which the parent, as a child, had been forbidden to express.

A different path by which a neurotic child may develop delinquent tendencies is by forming a severe superego (Lampl-De Groot, 1949). A distinction was made between the superego and the ego-ideal. (Other theorists have not made this distinction, e.g., Aichhorn, 1963; Redl and Wineman, 1951.) Both the superego and the ego-ideal have roots in the identification process. The superego represents the internalization of parental prohibitions and serves a punishing role. The ego-ideal incorporates norms and ideals derived initially from the child's desire to emulate his parents. The ego-ideal functions to support the child's self-esteem when he feels denigrated. The balance between the ego-ideal and the superego may be disturbed by strong aggressive impulses. The degree of severity of the superego corresponds to the amount of aggression that is turned against the self during its formation more than to parental attitudes and practices. When too much aggression is directed toward self, the superego drive for self-punishment will impede the development of the ego and the ego-ideal. The threatened ego receives no support from the weak ego-ideal.

The difference between a neurotic and a neurotic delinquent outcome when faced with a severe superego depends upon the ego-ideal. The neurotic has a strong ego-ideal, a weak ego and a severe superego. The weak ego is unable to promote the sublimation of aggression and the strong ego-ideal prevents the expression of aggression against the external world. Therefore, the neurotic directs aggressive impulses
against the self. In contrast, the neurotic delinquent has a strong superego opposed by a weak ego and ego-ideal. The ego-ideal can not prevent the expression of aggression against the environment.

The dissocial, i.e., psychopathic, delinquent does not adopt the reality principle because he has experienced an absence of love. The psychopathic delinquent, due to maternal absence, neglect, ambivalence, or emotional instability, does not receive gratification from the external world and consequently, fails to form an attachment to a love object. Instead, he turns inward to gain narcissistic gratification of his impulses (Freud, 1949). This is consistent with Bowlby's (1947) theory of the "affectionless character". The process of identification with a gratifying parent is disturbed. In normal development, this process crystallizes during the oedipal crisis. The superego is formed because of parental love and fear of parental demands and power. The affectionless character's impaired capacity to form an attachment leads to the development of an inadequate superego. This child seeks revenge for his deprivation and suffering. The resistance of authority and revenge is considered to be a source of pleasure. According to Bowlby, affection is swamped by rage in the deprived infant. He feels unworthy and perceives his mother as untrustworthy. Woolf (1949) has suggested that a child will defy parental socialization efforts if the parents, through indifference, intimidation, brutality, or rejection, have promoted hate and fear in the child.

Several theorists have contended that, to some degree, all anti-social children have developed some superego (Johnson, 1949; Redl and Wineman, 1951). The stereotype of the psychopath, without a conscience or guilt, is a myth. Even children who have experienced rejection
repeatedly acquire some values. The superego is adequate in some areas and deficient in others. Therefore, the ego must cope with guilt feelings in some manner. Certain defense mechanisms are employed by all children, but are used more consistently by delinquents to avoid guilt feelings. For example, a child may repress his own intentions by emphasizing the other person's role in the incident, e.g., "he deserved it". Often, the guilt persists unconsciously, resulting in an unconscious need for punishment (Aichhorn, 1963).

Independent of personality and etiological differences, most delinquents have impaired ego functioning. Redl and Wineman (1951) have contended that the ego possesses the power function to accomplish goals and the synthetic function of balancing the parts of the personality. As previously discussed, the delinquent ego can employ defenses which attenuate the influence of guilt feelings. There are additional ways in which the delinquent ego may malfunction. The delinquent has difficulty resisting temptation and is particularly susceptible to group "contagion". The excitement of a group has an intoxicating effect, intensifying impulsive urges and reducing ego control. In addition, the delinquent experiences "sublimation deafness". The inherent uses of objects and the implicit rules of situations are overwhelmed by the child's impulses and are not differentiated adequately. The delinquent also has difficulty in assessing social reality. He has limited empathic and perspective taking skills and is unable to profit from other people's experiences. This is not to say that the delinquent's egocentrism is pervasive. Often, in certain "battle relevant" areas, the delinquent ego functions effectively in the service of the "wrong master". Another phenomenon characteristic of delinquents as a whole is the rapid
"evaporation of self-contributed links in the causal chain". Distinct from the purposeful denial of reality, the delinquent either does not perceive or rapidly forgets the feelings and intentions motivating his behavior. He is unaware of his own catalytic role in an event. Related to this is the nondifferentiation of unavoidable, reality-bound frustrations from personally directed abuses. The delinquent feels that he is unduly discriminated against by authority-figures.

Sociological Theories

Generally, sociological theories have considered the social environment to be the primary source of delinquent behavior and have underplayed the significance of intrapsychic and interpersonal factors. While maintaining this broad position, sociological theories diverge considerably. The Differential Association Theory of Sutherland and Cressey (1966) has contended that criminality is determined by the relative proportion of exposure to antisocial and to conventional behavior. Those who become criminally-oriented have been relatively isolated from conventional behavioral patterns, preventing them from learning a prosocial lifestyle.

Cloward and Ohlin (1960) have extended Merton's (1938) position that delinquent behavior, which is one form of anomie, is a result of a rejection of conventional means to achieve success while still retaining the culturally defined criteria of success. According to Cloward and Ohlin, everybody occupies a position along a continuum of legitimate and illegitimate opportunities to learn and to perform both conventional and antisocial behaviors. Engaging in antisocial behavioral patterns
results from the unavailability of legitimate routes to success. The actual pattern of deviance that results from blocked legitimate opportunities is dependent upon the degree of community organization. Socially disorganized communities having weak social controls are likely to spawn "conflict subcultures", i.e., gangs. In this social context, violence is the means of obtaining status. This conceptualization is consistent with Hirschi's Control Theory (1969). The delinquent has no attachments to people nor commitments to society, i.e., he is alienated. Therefore, there are no controls to curtail behavior. In contrast, some criminal communities are well-organized and exercise strong social controls. Illegal opportunities emerge because conventional standards accommodate deviant values. This occurs when conventional institutions are inadequate to meet the needs of the community. The citizens of the community welcome illegal activities that meet their needs. Children reared in this community learn relatively sophisticated criminal behaviors.

Cohen (1958) has suggested that frustration in attempting to meet cultural standards will result in a reaction-formation defense mechanism. The lower or working class delinquent adopts a value system which is antithetical to middle class standards in order to maintain his self-esteem. The support and the respect of a delinquent peer group is crucial in maintaining such a response. Kitsuse and Dietrick (1959) have proposed a revision of Cohen's theory. They have contended that delinquents become involved in a delinquent subculture for a variety of reasons. The antisocial behaviors of the delinquent gang results in sanctions against the group by the middle class, limiting accessibility to conventional means of status. The delinquent's rejection of middle class standards occurs at this point.
In contrast to the thesis that lower class delinquency is a response to alienation from the middle class, Miller's (1958) theory has asserted that the lower and middle classes have different "focal concerns". The lower class focal concerns are getting in trouble, being tough and cunning, experiencing risk and danger, having autonomy from external constraints and from authority, and fate. In effect, to achieve status within the lower class, one may violate middle class standards without specific intentions to do so.

Sykes and Matza (1957) have diverged completely from the prevalent direction of sociological thought and, in effect, have integrated psychoanalytic and sociological positions. This theory appears to rest upon psychoanalytic ego defense mechanisms as described by Redl and Wineman (1951). According to Sykes and Matza, delinquents internalize conventional values to some extent. They have argued that it is impossible for a child to be oblivious to the values of the dominant culture since they are engaged constantly in interactions with people who accept societal norms. The fact that laws are not categorical, but are subject to interpretation, enables the actor to rationalize his behavior. Even murder is justifiable in certain circumstances, e.g., war; self-defense. The delinquent will employ "techniques of neutralization" to justify unconsciously his deviant behavior, avoiding guilt feelings while maintaining his commitment to conventional values. Responsibility for one's actions can be denied by asserting that the offense was unintentional or by attributing one's deviance to peers, parents, or fate. Other neutralization techniques are the denial of the victim (e.g., no one was hurt; justified retaliation), denigration of one's critics, and appealing to peer loyalties which supersede societal commitments. While the
majority of delinquents employ neutralization techniques, some youths are so alienated from society that these methods are unnecessary.

**Social Learning Theory**

Social learning theory (Bandura and Walters, 1959), employs learning principles to explain delinquent behavior. Two fundamental premises are involved in learning any behavior. One, behaviors are learned by modeling the behavior of others. Two, learned behaviors which are performed and then reinforced are more likely to be repeated in the future. Effective socialization, i.e., the motivation to behave in a socially desirable way, has two further requirements. First, the child must develop a dependency relationship with a parent-figure. This relationship fosters the dependency motive, i.e., social approval and attention is deemed to be reinforcing. Second, the environment must impose demands upon the child to conform. The child's need for approval and attention is used as a reinforcer for compliance.

Disrupts in socialization occur if the child's dependency behaviors are punished or discouraged by rejecting or inconsistent parental behavior. The absence of the dependency motive produces a person who is impulsive, aggressive, and guilt-free. In addition, socialization to societal standards may be disturbed if the parents have deviant values and model and reinforce deviant behavior.
Cognitive-Developmental Theory

Cognitive-developmental theory has provided the rationale for a substantial body of research in delinquency. Gough (1948) has presented a theory of psychopathy which relies heavily upon Mead's (1934) model of social and self cognition. Role taking is considered to be the basis for self-understanding and self control. Self-awareness depends upon the capacity to view self as an object, i.e., as others perceive you. Self has its origins in communication and role taking. In addition, role playing enables one to predict and to anticipate others' reactions. The psychopath is deficient in the capacity to view self as an object, to identify others' perspectives, and to anticipate the consequences of his acts.

A more recent theorist, Selman (1976; Selman, Jaquette, and Lavin, 1977), has developed a theory of social cognition integrating the positions of Piaget (1968), Mead (1934), and Redl and Wineman (1951). Cognitive structures underlie social cognition. These structures evolve developmentally in an invariant, hierarchical sequence of stages. One's mode of thought in diverse realms of experience is coordinated by the stage of thought one has attained. Logico-physical cognition, as described by Piaget, is necessary but not sufficient for perspective taking (i.e., role taking), which in turn is necessary but not sufficient for reasoning in diverse areas of interpersonal relations, such as friendship and moral judgment. For example, a child at Piaget's stage of pre-operational thought can not consider two reference points simultaneously. This child may be aware of the fact that another's perception of an event may differ from his own. However, he is unable to identify the
other's perspective. When the child advances to the concrete operational stage, he is able to consider two distinct points simultaneously. Therefore, he is able to determine another's perspective and to view self-as-object.

Normal development is marked by relative synchrony in reasoning across diverse realms. Asynchronous development may occur when an individual experiences difficulty in certain areas of experience. For example, a child may be delayed in his thought in regard to peer relations, but performing at a developmentally appropriate level in the physical realm and in other areas of social cognition. Synchronous development does not confirm emotional adjustment. A child may think in a developmentally appropriate manner, while behaving immaturity.

However, the converse of that is not possible. Theoretically, delinquents may be developmentally delayed in social cognition in the areas of moral judgment, self perceptions, family and peer relations.

Synthesis: A Typology of Delinquency

Psychoanalytic, sociological, social learning, and cognitive-developmental theories are frequently contrasted as being incompatible. A close inspection suggests that these diverse theories may be focusing upon different variables related to delinquency. Rather than being incompatible, these theories may be complementary. The construction of a typology of delinquency enables a synthesis of the aforementioned theories of delinquency.
The psychoanalytic literature has presented two primary types of delinquents, the psychopathic and neurotic delinquents. The sociological theories have contrasted this view of delinquency by focusing upon one type of delinquent, a socialized, psychologically healthy person who is adjusted to a delinquent subculture, i.e., the subcultural delinquent. Rather than presenting different viewpoints of the same phenomenon, psychoanalytic and sociological theories appear to be considering different phenomena. In fact, as indicated previously (p. 3), the psychoanalytic literature has acknowledged the subcultural delinquent, but essentially has ignored that form of delinquency.

The other two psychological theories discussed have conceptualized the delinquent in ways which are consistent with this typology. Social learning theory has posited three etiologically distinct ways in which delinquent behavior may originate. Overlooking the obvious conceptual differences between social learning and psychoanalytic theories, the former's construct of the dependency relationship is comparable with the latter's attachment relationship. In effect, both theories have suggested that an emotional bond is a prerequisite for socialization. In either theory, the absence of a parent-child bond produces an impulsive, aggressive, and guilt-free individual, i.e., the psychopathic delinquent. The second path to delinquent behavior, in either theory, results when a parent-child attachment relationship exists but the environment has not imposed demands upon the child to conform to societal expectations. Social learning theory has not elaborated on the outcome of this child-rearing pattern, but it is reasonable to consider this as comparable to psychoanalytic's neurotic delinquent. Social learning theory has posited that a third manner in which one may become dissocial is by
identifying with a deviant parent. This conceptualization of the antecedents of delinquency is compatible with the subcultural delinquent depicted in the sociological literature, although the sociological perspective appears to be more inclusive.

Similarly, cognitive-developmental theory can be integrated with psychoanalytic and sociological models of delinquency. The two types of delinquents described in the psychoanalytic literature are developmentally delayed in ego functioning. A limitation in social acuity (Redl and Wineman, 1951) is comparable to a deficiency in social perspectivism. Persistence in the pleasure principle may be comparable to the cognitive-developmental construct of egocentrism (Elkind, 1967). The delinquent's limited awareness of his own role as a catalyst in certain situations is readily comparable to his inability to see self-as-object. Thus, cognitive-developmentalists have elaborated the general cognitive sequela of disrupted socialization, rather than having made distinctions between those persons developmentally delayed. The subcultural delinquent depicted in the sociological literature appears to be functioning in a developmentally appropriate fashion in many areas and is more difficult to integrate into developmental theory than either the psychopathic or neurotic delinquents, who more clearly manifest developmental delays. However, developmentalists suggest that age-appropriate cognition is necessary, but not sufficient for normative behavior. The subcultural delinquent, by definition, conforms to a deviant subculture. Thus, social cognitive development is not delayed in regard to the delinquent's reference group, but is deviant in regard to the normative social structure.
Empirical Evidence for a Typology of Delinquents

A synthesis of these theories into three distinct types of delinquents is supported by empirical evidence. Hewitt and Jenkins (1946) conducted a landmark study employing cluster analysis of case history data. Three primary subgroups emerged: unsocialized aggressive, over-inhibited, and socialized delinquents. The unsocialized aggressive child was characterized as self-centered, defiant, cruel, exploitative, destructive, relatively guilt-free, distrustful, and having poor peer relations. The overinhibited child was extremely introverted, sensitive, submissive, fearful, anxious, had a negative self-image, and may have a physical defect. The socialized delinquent was similar to the unsocialized aggressive delinquent by being defiant and relatively guilt-free. Unlike the latter, the socialized delinquent had good peer relations. The socialized delinquent was aggressive, but not to the extent of the unsocialized aggressive child. The validity of Hewitt and Jenkins' study has been questioned on several grounds. The subjects were preadolescents, almost all were Caucasians and less than 10% were court-referred. In addition, only 40% of the subjects could be classified into these three categories.

Reiss (1952) conducted a study in delinquency which was based upon psychoanalytic theory. Three categories, which were posited on an a priori basis, successfully differentiated subgroups of delinquents: the relatively integrated delinquent, the delinquent with markedly weak ego controls, and the delinquent with relatively defective superego controls. The integrated delinquent was considered to be well-adjusted. The weak ego delinquent was more likely to be a solitary delinquent who experienced considerable guilt and anxiety and was either insecure and
withdrawn or destructive and hostile. The defective superego delinquent was likely to be a gang member and relatively guilt-free. Reiss's classification differs somewhat from the subgroups which appear in the theoretical literature. The integrated delinquent resides in an intact, conflict-free home and is likely to become an adequate adult. This subgroup is not elucidated in the literature. The affectionless character as described by Bowlby (1947), is not evident. The subjective derivation of this classification system attenuates the significance of their research.

Subsequent research, employing more refined factor analytic techniques, yielded subgroups of delinquents consistent with the conclusions of the previous review of theories (Peterson et al., 1959; Peterson et al., 1961; Quay, 1964, 1966; Quay et al., 1960). Four delinquency factors have emerged in several studies: psychopathy, neuroticism, subcultural delinquency, and inadequacy-immaturity. Studies employing normal and emotionally maladjusted populations have found similar factor structures as those found with delinquents (Quay, Morse, and Cutler, 1966a; Quay and Quay, 1965; Quay, Sprague, Schulman, and Miller, 1966b). The predominant difference between delinquents and other populations is that the former score higher on these factors, supporting the position that there are quantitative differences among people along various dimensions, rather than qualitatively distinct types of people (Quay, 1965; Tiffany et al., 1961). The psychopathy factor has been associated with overt aggression, hostility, impulsivity, irritability, defiance, amorality, a lack of affective bonds, distrustfulness, and callousness. This factor is very similar to Hewitt and Jenkins' (1946) unsocialized aggressive subgroup and to the subgroup sharing the same name in the
preceding review of theories. The neurotic factor has been associated with being overinhibited, anxious, timid, withdrawn, guilt-ridden, depressed, discouraged, and having inferiority feelings. A corresponding subgroup is found in Hewitt and Jenkins' study and in the preceding section. Several studies have found that psychopathic delinquents were more likely to be poorly adjusted and to recidivate than neurotic delinquents (Mack, 1969; Quay et al., 1960; Schuck, Dubek, and Green, 1972). The subcultural factor has appeared to reflect psychological adjustment and adaptation to a peer delinquent subculture. A corresponding subgroup was labelled the socialized delinquent by Hewitt and Jenkins (1946).

The fourth factor, inadequacy-immaturity, represents developmentally inappropriate behavioral patterns. This factor has not appeared consistently. When it has emerged, it has often been strongly correlated with psychopathy and neuroticism (Mack, 1969; Quay, 1977) and appears to be indicative of broad emotional maladjustment rather than of delinquency in particular (Quay et al., 1966a; Quay et al., 1966b). The first two factors, psychopathy and neuroticism, have appeared consistently. The third factor, subcultural delinquency, has emerged with less consistency than psychopathy and neuroticism (Quay, 1964; Quay, 1966). This inconsistency appears to be a function of two variables. First, the most frequently used measure, The Behavior Problem Checklist (Quay and Peterson, 1975) contains only a limited number of items pertaining to this dimension. Second, the raters of delinquents' behavior are often group workers in an institution or teachers who may be unfamiliar with the child's peer relations in his neighborhood (Becker, 1960; Quay, 1964; Quay, 1966). Case history and questionnaire data have found the subcultural factor more consistently (Quay, 1964; Quay, 1966).
Research employing the MMPI has yielded three similar profiles (Gregory, 1974). Solitary delinquency was found to be associated with neuroticism (Randolph, Richardson, and Johnson, 1961). Shinohara and Jenkins (1967) found the socialized delinquent, who is comparable to the subcultural one, to be well-adjusted psychologically. The unsocialized aggressive delinquent was associated with impulsivity, unhappiness, anxiety, and inadequacy. This last subgroup appears to represent aspects of both psychopathy and neuroticism as defined by Quay and Peterson's research.

Social and Familial Variables

Research has indicated that the more serious delinquent is from the urban, lower class (Clark and Wenninger, 1962; Fannin and Clinard, 1965; Gold, 1970; West and Farrington, 1973). Very little research has been conducted employing differentiated subgroups of delinquents. Caucasian delinquents were found to be high in neuroticism while black delinquents were high in psychopathic and subcultural delinquency (Schuck et al., 1972). Data have shown the solitary delinquent to be more disturbed psychologically and more likely to be from the middle class than the social delinquent, who is more likely to be from the lower class (Randolph et al., 1961; Wattenberg and Balistrieri, 1950). These sparse data support the assumption that there are distinctions among delinquents.

Despite finding a relationship between social factors and delinquency, longitudinal research has indicated that social class is unpredictable of adult criminality (Robins, 1966; West, Farrington, Gundry, Knight, and Osborn, 1977). McCord, McCord, and Zola (1959) concluded
that social factors are influential only if familial variables leave
one vulnerable to delinquency. Research employing undifferentiated
samples of delinquents have found parental rejection, inadequate
parental supervision, lax and inconsistent discipline, and an uncohesive
family associated with delinquency (Andry, 1960; Bandura and Walters,
1959; Glueck and Glueck, 1950; McGord et al., 1959; Peterson and Becker,
1965; Reckless, Dinitz, and Kay, 1957; Robins, 1966; Robins, 1972; Roff,
1975; West and Farrington, 1973).

Studies differentiating among delinquent subgroups have found fam-
ilial variables associated with different delinquent types. The first
study employing subgroups of delinquents (Hewitt and Jenkins, 1946)
found the unsocialized aggressive delinquent to be abused and rejected
as a child. The overinhibited delinquent was reared in a home which
lacked warmth and was repressive. The socialized delinquent had parents
who were abusive and provided inadequate supervision. While the child-
rearing antecedents of the unsocialized aggressive and socialized delin-
quent are supported by other research and are consistent with theory,
the overinhibited child's history is not easily integrated into the
literature. Lewis (1954) did provide support for Hewitt and Jenkins'
data.

Research employing Peterson and Quay's subtypes have been consist-
tent with theoretical positions. Hezel (1969) found that subcultural
delinquents were associated with lax discipline, while psychopathic
delinquents were related to parental rejection. Imperio (1976) found
subcultural delinquents to have more accepting parents than both neurotic
and psychopathic delinquents. Hetherington, Stouwie, and Ridberg (1971)
compared the family interaction patterns of psychopathic, neurotic, and
The subcultural delinquents had the most stable family. While the father dominated the subcultural delinquent's family, the mother dominated the neurotic delinquent's family. Relative to the other two types, psychopathic delinquents had the least involved father and the most permissive mother. Normal families exhibited greater flexibility in interactions. The families of female delinquents followed the above patterns less closely than those of male delinquents. Research distinguishing between solitary and social delinquents was supportive of the hypothesis that subcultural delinquents have better family relations than other delinquents (Brigham, Ricketts, and Johnson, 1967; Wattenberg and Balistrieri, 1950). Familial distinctions between neurotic and psychopathic delinquents have not been clearly demonstrated empirically.

**Psychological and Developmental Variables**

Research has supported Quay's (1965) hypothesis that the psychopath is unable to tolerate routine and boredom and is motivated by a need for thrills and excitement. Skrzypek (1969) found that psychopathic delinquents were more likely to choose novel and complex stimuli than were neurotic delinquents. Skrzypek suggested that the psychopath exists in a state of stimulus deprivation and must seek arousal. Other evidence is not inconsistent with this hypothesis. Borkovec (1970) found that psychopaths were less aroused by novel stimuli than were either neurotic or subcultural delinquents. Orris' (1969) data indicated that psychopathic delinquents were less attentive to stimuli more rapidly than either neurotic or subcultural delinquents. Siegman (1961)
has suggested that the delinquent's inability to tolerate boredom and his need for stimulation occur because time passes more slowly for the delinquent than for the nondelinquent. Evidence has indicated consistently that a more immediate time perspective is characteristic of nondifferentiated delinquent samples (Barndt and Johnson, 1955; Davids, Kidder, and Reich, 1962; Siegman, 1961).

These data suggest the hypothesis that delinquents, in particular psychopaths, are less able or less inclined to learn. A substantial body of research has investigated differences among Peterson and Quay's delinquent subtypes and conditionability. The evidence concerning social conditionability is equivocal. Some studies indicated that psychopaths are inferior learners in social conditioning situations (Johns and Quay, 1962; Quay and Hunt, 1965; Stewart, 1972). Stewart found neurotic delinquents to be most conditionable to social reinforcement. In other research, there has been no difference between psychopaths and normal controls in verbal conditionability (Bryan and Kapche, 1967; Gutierrez and Eisenman, 1971). The reason for this discrepancy is unclear. The data are more consistent in regard to learning reinforced by punishment. Lykken (1957) found a group of delinquents resembling the psychopathic delinquent to be less responsive physiologically to shock and less avoidant of punishment than a normal control group. Schmauk (1970) obtained evidence indicating that psychopathic delinquents learn to avoid tangible punishment, i.e., loss of money, but do not learn well when shock or social punishment is applied. Neurotic delinquents also learned to avoid tangible punishment and performed at a level midway between psychopaths and nondelinquents under shock or social punishment. Although both physiological and motivational variables may be
involved, the data suggest that delinquents are conditionable and that motivation is the critical factor.

The relationship between social cognition and delinquency has been explored. Several studies have obtained data indicating that a nondifferentiated sample of delinquents is deficient in perspective taking (Baker and Sarbin, 1956; Chandler, 1973; Chandler, Greenspan, and Barenboim, 1974; Gough and Peterson, 1952; McColgan, 1976; Rotenberg, 1974). However, discrepancies in the results suggest that conclusions are premature. Rotenberg (1974) found that delinquents were deficient in affective role taking, i.e., sympathy, relative to nondelinquents, but did not find differences in cognitive role taking, i.e., empathy. In contrast, other studies obtained evidence that delinquents are deficient in cognitive role taking (Chandler, 1973; Chandler et al., 1974).

While Baker and Sarbin (1956) found that delinquents differentiated less between social roles than nondelinquents, the former were more accurate in anticipating the activity preferences of a delinquent social object. Nondelinquents, in addition to being better judges when the object was a nondelinquent, benefited more by feedback than did delinquents. Extending research in this direction, Kahn (1971) distinguished between more serious delinquents with character disorders and neurotic delinquents and found the former less able to employ feedback to readjust their goals than either neurotic delinquents or nondelinquents. The latter two groups did not differ, suggesting that only the seriously disturbed delinquent was more egocentric than normal. This hypothesis is consistent with data from other studies. Jurkovic and Prentice (1974) did not find differences in role taking between delinquents on
probation for committing at least one detected offense against property, and nondelinquents. McColgan (1976) obtained evidence that delinquents were deficient in role taking in comparison to nondelinquents, but a predelinquent sample, selected by teachers, was not different from a control group.

Research employing Peterson and Quay's typology support the hypothesis that role taking ability is correlated negatively with the degree to which the delinquent is maladjusted. McDonald (1976) found that psychopathic delinquents were most deficient in role taking, neurotic delinquents were inferior to subcultural delinquents, who, in turn, were outperformed by nondelinquents. Jurkovic and Prentice (1977) found both psychopathic and neurotic delinquents to be deficient in role taking relative to both subcultural delinquents and nondelinquents.

Research in the area of moral development has also yielded equivocal data. While several studies have reported that delinquents are less mature in moral judgment relative to nondelinquents (Campagna and Harter, 1975; Fodor, 1972; Hudgins and Prentice, 1973; Kohlberg, 1958; McColgan, 1976), a simple relationship does not appear to exist. Jurkovic and Prentice (1974) did not find a difference in moral judgment scores between delinquents and nondelinquents. Hudgins and Prentice (1973) found a sample of nondelinquents to have higher moral judgment than a delinquent group, but also found considerable overlap in scores between the samples.

A subsequent study (Jurkovic and Prentice, 1977) found that psychopathic delinquents were significantly lower in moral judgment scores than subcultural delinquents and nondelinquents. There was a tendency for psychopaths to be lower in moral judgment than neurotic delinquents.
There were no differences among the nondelinquents, the subcultural delinquents, and the neurotic delinquents. Ruma and Mosher (1967) presented data which were somewhat inconsistent with the preceding study. Guilt was correlated positively with moral judgment in a nondifferentiated delinquent sample. Theoretically, neurotic delinquents should outperform subcultural delinquents, as well as psychopaths, on moral judgment. It has been assumed that neurotic delinquents are relatively guilt-ridden, while the other two types of delinquents are relatively guilt-free. Therefore, the lack of difference found between neurotic and subcultural delinquents in moral judgment (Jurkovic and Prentice, 1974) is not consistent with theory. Other evidence indicated that Peterson and Quay's neuroticism factor is unrelated to guilt (Schuck et al., 1972). Schuck and associates inspected the items comprising this factor and suggested that it may assess emotional maladjustment, anxiety about self-worth, and poor peer relations, rather than conflicts between one's values and behavior.

It has been suggested that a positive self-image serves as an insulator against delinquency (Reckless et al., 1957). A considerable amount of evidence has indicated that nondifferentiated samples of delinquents have a more negative self-image than do nondelinquents (Atkins, 1974; Deitz, 1969; Fox, 1974; Gold and Kann, 1972; Gough and Peterson, 1952; Hamner, 1968; Masters and Tong, 1968; McDavid and Schroeder, 1957; Patterson, 1976; Reckless et al., 1957; Scarpitti, 1965). Evidence that predelinquents had low self esteem (Pearlman, 1975), suggests that perceiving self as inadequate antedates delinquency. Deitz (1969) did not find a difference in self concept between delinquents and nondelinquents, but delinquents did show a greater discrepancy
between self concept and ideal-self, indicating that delinquents are less self-accepting than nondelinquents. More serious delinquents have manifested a more negative self image than first offenders, nonrecidivists, and nondelinquents (Atkins, 1974; Hamner, 1968; Masters and Tong, 1968).

There is some evidence which suggests that delinquents have a positive self-image in certain circumscribed areas, as Redl and Wineman (1951) hypothesized. Fannin and Clinard (1965) found that lower class delinquents perceived themselves as tough, fearless, powerful, and dangerous, while middle class delinquents saw themselves as smart, smooth, "bad" and loyal. Gold and Mann (1972) obtained data indicating that a masculine self concept was positively associated with delinquency and negatively with school grades. The variability of self-image across domains can not be assessed by standardized self concept measures which yield global scores. This asynchrony self-image is consistent with the finding that delinquents have greater difficulty integrating self concepts than do nondelinquents (Hamner, 1968). Despite a nondevelopmental view, these data have developmental implications. These results are supportive of the hypothesis that developments in the organization of the delinquent's self have been impeded. Developmental research has indicated that adolescence is marked by the enhanced capacity for integration (Bernstein, 1977; Livesley and Bromley, 1973).

Three studies employing Peterson and Quay's typology have yielded equivocal data. Hezel (1969) found psychopaths to be lower in ego development, while subcultural delinquents were higher in ego development. Imperio (1976) found subcultural delinquents higher in ego development, but there was no difference between psychopathic and neurotic delinquents.
In contrast, Fox (1974) obtained data which did not show differences in self concept among the three subtypes. The fact that subjects in the last study were incarcerated for the first time may have had an overriding effect. Other research has indicated that institutionalization depresses the self-image of delinquents incarcerated for the first time, but does not lower the self-image of other inmates (Culbertson, 1975; Hamner, 1968). In fact, Culbertson found that youths who maintained a delinquent orientation while incarcerated, exhibited an enhancement of their self-images.

Summary and Conclusions

There are two major conclusions concerning the state of research in delinquency which can be drawn from this literature review. First, delinquents can not be considered a homogeneous population; rather, there appear to be certain factors, i.e., psychopathy, neuroticism, and subcultural delinquency which distinguish among delinquents who differ in various faculties and attributes. Unfortunately, the majority of the research in delinquency has employed nondifferentiated samples of delinquents, obscuring differences among delinquents. The second conclusion is that developmental perspectives have contributed to a limited range of research in delinquency. Role taking and moral development have been the only two areas in social cognition that have been studied to any extent by developmentalists.

Briefly summarizing the developmental literature, the theoretical postulate that delinquents are deficient in perspectivism (Gough, 1948, Redl and Wineman, 1951; Selman et al., 1977) has been supported by the
bulk of research, although issues remain to be resolved (e.g., Chandler, 1973; Rosenberg, 1974). Differences among delinquents in role taking have been demonstrated (McDonald, 1976; Jurkovic and Prentice, 1977). Generally, the theoretical position that the delinquent's moral development is delayed (e.g., Kohlberg, 1964; Selman et al., 1977), has received support (e.g., Campagna and Harter, 1975; Fodor, 1972). However, preliminary evidence has indicated that only the more serious delinquents manifest this deficiency (Jurkovic and Prentice, 1977).

The development of self and of impressions of others has received virtually no attention, despite an emphasis in the delinquency literature upon self and social cognition. Research in the area of self has been primarily restricted to studying self-esteem (e.g., Hamner, 1968, Reckless et al., 1957). Sparse developmental research has indicated that delinquents are deficient in ego development to varying extents (Hezel, 1969; Imperio, 1976). The postulate that the delinquent has a limited capacity to view self objectively and lacks self-insight (e.g., Gough, 1948; Redl and Wineman, 1951) has not been assessed empirically. Similarly, research involving delinquents' impressions of others has been evaluative and nondevelopmental (e.g., Brigham et al., 1967; Masters and Tong, 1968). Delinquency research concerning peer relations has also been restricted to essentially nondevelopmental, affective variables (e.g., Austrin and Bover, 1977; Roff and Sells, 1968).

In light of these conclusions, this study has been devised for the purpose of extending the purview of developmental psychology in the area of delinquency. The self system and the impressions of a peer are investigated from a developmental perspective. Delinquent and nondelinquent samples are differentiated along empirically defined dimensions
in the study of these developmental phenomena.

The Self and Impression Formation: Developmental Theory and Research

Postulating specific hypotheses concerning the manner in which delinquents are delayed in the development of self and of impression formation necessitates a review of the developmental literature. Werner (1957) has asserted the Orthogenetic Principle that whenever development occurs "it proceeds from a state of relative globality and lack of differentiation to a state of increasing differentiation, articulation and hierarchic integration" (p. 126). Cognitive structures have been postulated to explain this developmental pattern (Piaget, 1968). The manner in which one organizes one's perceptions and experiences is determined by one's neurological maturity. Developmental stages are hierarchically integrated. Each higher stage is a reorganization of one's perspective. The result is a more coherent and efficient approach to processing, storing, and retrieving information (Neimark, 1975).

The structural limitations of the child curtail his understanding of himself and of his world. Harvey, Hunt, and Schroder (1961) suggest that more primitive cognitive processing produces concrete, bifurcated thought (i.e., the world is black or white; there are no gray areas), intolerance for ambiguity, difficulty interrelating perspectives, and inflexibility. Unlike the child before him, the adolescent is capable of abstraction (Harvey et al., 1961; Inhelder and Piaget, 1958). The adolescent has the capacity to reflect upon propositions and thoughts, to control variables systematically in order to determine the underlying causal structure, to introspect, i.e., to view self-as-object, and to construct systems and theories (Inhelder and Piaget, 1958).
The emergence of these cognitive capacities during adolescence has a tremendous impact upon one's view of self. Some theorists consider the major task of adolescence to be the establishment of self identity (Erikson, 1968; Horrocks, 1976). The ability to introspect and to build systems converge in the adolescent's efforts to construct a self system. The self system is defined as the hierarchical organization of differentiated self concepts into a coherent theory guiding one's behavior in the present and providing future directions and goals (Epstein, 1973; Horrocks and Jackson, 1972). A superordinate system of attitudes, beliefs, and values enables the adolescent to maintain mediational consistency when overt behaviors appear to be inconsistent. Therefore, the adolescent manifests greater adaptiveness and flexibility in behavior and in selecting different roles (Horrocks and Jackson, 1972).

These same cognitive-developmental processes are implicated in impression formation. The egocentric child is less aware of attributes of others and, therefore, forms less differentiated, complex, and integrated impressions of others (Rosenbach, Crockett, and Wapner, 1973). The inability to tolerate ambiguity results in the formation of oversimplified, univalent (i.e., the denial of inconsistent information) impressions (Kaplan and Crockett, 1968). The more mature person employs superordinate constructs to integrate the existence of inconsistent qualities (Crockett, 1965). In addition, the more mature person is cognizant of abstract, psychological (i.e., feelings, intentions, and thought), and dispositional attributes.

Piaget (1962) contends that peer relations are crucial to developments in social cognition. Equality among children allows reciprocity in interactions. This situation fosters the acquisition of interpersonal
competencies, such as the control of aggression (Hartup, 1976). Behavioral experimentation enables one to learn to anticipate the reactions of others to one's actions. Thus, perspective taking is fostered through peer interactions. This suggests that poor peer relations, which have been related to delinquency (e.g., Roff and Sells, 1968), will impede development in the awareness of both self and others (Gough, 1948).

Research investigating self from a developmental perspective has been supportive of theory. Developments of the self have been found to conform to the Orthogenetic Principle (Werner, 1957). Abstraction, differentiation, and integration of self have been correlated positively with age through adolescence (Bernstein, 1977; Dixon and Street, 1975; Livesley and Bromley, 1973; Montemayer and Eisen, 1977; Mullener and Laird, 1971; Protinsky, 1975). The evidence has also indicated that younger children utilize perceptual and behavioral qualities in defining self, while adolescents rely more heavily upon personality consistencies and personal beliefs, attitudes, and values (Bernstein, 1977; Guardo and Bohan, 1971; Livesley and Bromley, 1973). Major developments in the self system have been found to occur after age 15 (Bernstein, 1977; Livesley and Bromley, 1973).

Impression formation of others has also been found to obey the Orthogenetic Principle (Werner, 1957). Descriptions of various others, including peers, have shown greater abstraction, differentiation, and integration with increasing age through early adulthood (Bigner, 1974; Flapan, 1968; Gollin, 1958; Kohn and Fiedler, 1961; Middleburg, 1976; Rosenbach et al., 1973; Scarlett, Press, and Crockett, 1971; Supnick, 1967; Wolfe, 1963). Descriptions by more mature persons have been comprised of greater references to dispositions and psychological
variables, i.e., feelings, thoughts, and intentions, than those of less mature persons (Flapan, 1968; Gollin, 1958; Middleburg, 1976; Signell, 1966). Livesley and Bromley's (1973) data have indicated that the egocentric child does not view others independently from himself. His concern for others is primarily restricted to their effect on him. Evidence has been reported which indicates that delinquents view others in a similar, egocentric manner (Kohlberg, 1964).

Only one developmental study has compared conceptualizations of self and other. Livesley and Bromley (1973) have obtained comparable data in the two realms, leading them to conclude that "the child's understanding of himself and his understanding of others are reciprocal processes in development; they facilitate each other" (p. 237). Nondevelopmental research is supportive of this assessment. Wylie's (1961) review has concluded that acceptance of self and of others are correlated strongly. Suinn (1961) has obtained data indicating that this relationship grows stronger the closer and more similar the other is to self.

Hypotheses

Integrating the delinquency and the developmental literature, several hypotheses concerning the systems of self and of a best friend can be postulated. The primary hypotheses are developmentally-based. The hypotheses based on esteem are of secondary concern.
I. Delinquents vs. Nondelinquents.

A. Self and best friend systems are more mature (i.e., show greater differentiation, abstraction, integration, clarity of goals, and decentration) in nondelinquents than in delinquents.

B. Nondelinquents have more positive conceptions of self and of best friends than have delinquents.

II. Three Dimensions of Delinquency.

A. 1. The psychopathic delinquency dimension is associated with the least mature systems of self and of best friends.

2. The neurotic delinquency dimension is associated with self and best friend systems which are more mature than those associated with the psychopathy dimension but less mature than those associated with subcultural delinquency.

3. The subcultural delinquency dimension is associated with self and best friend systems which are more mature than the other two dimensions of delinquency.

B. 1. The psychopathic delinquency dimension is associated with the most negative conceptions of self and of best friends.

2. The neurotic delinquency dimension is associated with conceptions of self and of best friends which are more positive than those associated with the psychopathy dimensions, but less positive than those associated with subcultural delinquency.

3. The subcultural delinquency dimension is associated with more positive conceptions of self and of best friends than the other two dimensions of delinquency.
III. Self vs. Friend Impressions.

A. 1. Descriptions of self show greater maturity than descriptions of best friends.

2. The levels of maturity of the systems of self and of best friends are correlated strongly.

B. The evaluative component of self concepts is correlated positively with the evaluative component of impressions of best friends.
Chapter II

METHOD

Subjects

Forty delinquent and 40 nondelinquent males served as subjects in this study. Since the administrator was male, the use of a male sample was employed to decrease the defensiveness found often in cross-sex interviews with adolescents. In addition, the use of subjects from one sex enhances sample homogeneity.

The delinquent sample was obtained from two institutions within the Ohio Youth Commission in Columbus, Ohio: the Child Study Center (CSC) and the Training Institution of Central Ohio (TICO). All of the delinquents had been arrested at least twice for serious index offenses. At least one of the offenses happened to be theft of some nature. CSC detains youths temporarily for psychological evaluation. The average length of detention is approximately six weeks. TICO is a maximum security institution for serious offenders ages 15 through 18. The youths employed in this study had been institutionalized for approximately three months at the time of the interview. There were 22 subjects obtained from CSC and 18 subjects obtained from TICO. Since all the subjects were serious offenders and this study was not concerned with institutionalization effects, the delinquents were combined into one sample.

The nondelinquent sample was obtained from the Columbus Public High School System. The schools were selected because of their geographic locations. Students from the lower and working classes were sought.
to control for socio-economic status (SES). No better than a loose assessment of social class was possible because of the incompleteness of the delinquents' case histories. Family income or parental occupation was not always available and the records sometimes conflicted with the subject's reports. For the most part, the delinquent sample's families could be characterized as either working class or Welfare recipients. The demographic variable of race was controlled. There were 24 caucasians and 16 noncaucasians in each group. It would have been desirable to control for family intactness. Unfortunately, it was extremely difficult to obtain delinquents meeting the age and intelligence criteria from intact families. There were 9 delinquents from intact families and 31 from broken homes. In contrast, there were 22 nondelinquents from intact families and 18 from broken homes. In addition to the SES variables, control subjects were included if they met the other criteria of self-report nondelinquency, age, and verbal intelligence. None of the control sample reported any police contacts or extensive anti-social behavior. (Appendix B contains the self-report delinquency measure employed.)

There was no significant difference between the mean ages of the two samples ($T (67) = 0.95, N.S.$). The delinquent sample had a mean age of 16 years, 11 months, and a range of 15 years, 1 month, to 18 years, 1 month. The nondelinquent sample had a mean age of 16 years, 9 months, and a range of 15 years, 7 months, to 18 years. The vocabulary subscale of the Wechsler intelligence scales was used to control for verbal intelligence. The Wechsler Adult Intelligence Scale (WAIS) was used for subjects age 16 and older, while the Wechsler Intelligence Scale for Children - Revised (WISC-R) was used for 15 year olds. There was no significant difference
between the samples in their verbal intelligence score ($T(78) = 0.43$, N.S.). The mean Wechsler vocabulary subscale score was 7.45 for the delinquent sample and 7.60 for the nondelinquent sample. The range of vocabulary subscale scores was 5 to 10 for both samples. Extrapolating from the vocabulary subscale scores, the mean I.Q. score was 75 for the delinquent sample and 76 for the nondelinquent sample.

**Design**

The measures employed in this study were administered to the incarcerated delinquent and the nondelinquent samples during school hours. The administration times varied between one and two hours. The statement to the subjects and their legal guardians explaining the research and requesting voluntary participation in this study appears in Appendix A.

A free response interview was conducted in order to obtain impressions of self and of best friend. This method enables the subject to select material that he deems appropriate and to present it in a manner which exposes cognitive processes more clearly than would a more standardized instrument (Gordon, 1968; Livesley and Bromley, 1973; Pervin, 1977; Yarrow, 1960). This study's methodology was a modification and an extension of the design developed by Bernstein (1977) to explore the self system. The method was refined to enhance its reliability. The present study employed five tasks focusing upon self and the same five tasks focusing upon a best friend. The focus upon self and upon friend was counterbalanced to control for any possible order of presentation effects. Task A elicited a list of behavioral characteristics of self or friend which were then rank ordered by the subject according to their importance.
The five highest ranking characteristics were elaborated in Task B by repeating each separately and asking respondents to relate situational and social determinants of these behaviors. Task C was designed to obtain a measure of the abstractness of impressions; the corresponding responses to Tasks A and B were repeated together and the subjects were asked to relate what these statements indicate about self or friend. An addition to Bernstein's (1977) design was Task D, which was introduced on an exploratory basis. Task D asked each respondent to relate three aspects of self or friend that would be desirable to change. Finally, Task E requested a statement integrating one's concepts of self or friend. Appendix C contains the tasks recited to the subjects.

Standardizing the number of characteristics to five in Task A, eliminated the confounding of data due to differential responsiveness. A split-half reliability analysis of Bernstein's (1977) original data indicated that this was an acceptable control procedure that did not alter the results significantly. The split-half reliability correlation was .93 for the number of behavioral determinants and .85 for the level of abstraction ($p < .0001$).

In addition to the self- and friend-referent tasks, subjects were administered Quay and Peterson's (1968) questionnaire to obtain scores on the dimensions of psychopathy, neuroticism, and subcultural delinquency. Although this instrument has been less widely used than the Behavior Problem Checklist (BPC; 1975), it was deemed to be more appropriate for this study's purpose. The BPC has produced weak correlations among different groups of raters, such as parents and teachers (Quay et al., 1966b). Since current situational differences between the delinquent and nondelinquent samples are large, it seemed more appropriate to employ the
questionnaire than the BPC. The questionnaire was read to those subjects who had difficulty reading. Appendix D contains the questionnaire.

Data Classification

This section of the methodology discusses the rationale for the classification systems employed in this study to code self and friend responses. The importance of these classification systems behooves that they be presented in the text, despite their length. To enhance the clarity and continuity of this discussion, the classification systems and their coding rules will be presented separately following this section.

The rationale for the classification system of behavioral determinants was that a more differentiated person has a greater awareness of the determinants of behavior than a less differentiated person. The former considers more sources of information when forming impressions of self and of others. The behavioral determinants of each of the five elaborated characteristics were obtained from data related to Tasks A, B, and C. Two measures of differentiation derived from this classification were the absolute number of the fifteen behavioral determinant categories employed and the number of behavioral determinants related for the five core characteristics. Two additional measures of differentiation unrelated to this coding system were the number of characteristics cited in response to Task A and the number of self (friend) concepts cited while responding to the elaborations of the five characteristics on Tasks A, B, and C. Restricting the latter measure to these three tasks was a means of controlling for differential responsivity on Tasks A and D.
Two other measures of self-friend differentiation may more appropriately be labelled measures of egocentrism. One is the proportion of concepts which were related for both self and friend. The other egocentrism measure is the proportion of friend-referent responses which were based exclusively on the friend-self relationship, without reference to the friend's interactions with others.

Kaplan and Crockett's (1968) system for coding resolutions of inconsistent information about others was the basis for Bernstein's (1977) classification systems of abstraction and of integration. Kaplan and Crockett proposed a developmentally-based system in which impressions of others are coded into three major modes of resolution. The most primitive mode is a superficial impression which ignores features of the person to form a univalent description. The intermediate level is a recognition of disparate qualities without adequate integration. The advanced mode of resolving inconsistency is the use of superordinate constructs to interrelate disparate characteristics of another. This system has been employed by Middleburg (1976), Rosenbach et al. (1973), and Scarlett et al. (1971).

Differences between Bernstein's methodology and the design for which Kaplan and Crockett's coding system was constructed, required the modification of their instrument.

The primary distinction between Bernstein's (1977) systems of abstraction and of integration was the respondent's frame of reference. Abstraction, as used in this study, involves a circumscribed range of data which encompasses only a portion of the person's experience of self or friend. The response is being made to a particular behavioral characteristic and its determinants. Abstraction, the ability to become removed cognitively from
concrete stimuli, is operationally defined as the awareness of behavioral polarity. In other words, abstraction involves the capacity to recognize that in addition to acting in a given way, one may also manifest behavior that is representative of the other end of the continuum.

Integration involves a broader stimulus field, encompassing a variety of behaviors, their determinants, and their conceptualizations. Operationally defined, integrative reasoning is the capacity to synthesize diverse material about a stimulus object into a unified system. The capacity to acknowledge and to resolve overt inconsistencies are evident in both abstract and integrative reasoning. Integration involves an awareness of the total person, while abstraction focuses on a limited aspect of that individual. Synthetic qualities beyond the capacity to abstract are required in integration because the stimulus is larger and more complex. Therefore, abstract reasoning is considered to be necessary, but not sufficient, for the ability to integrate.

Two newly devised classification systems have been constructed for the purpose of analyzing the evaluative nature of the respondent's self and friend conceptions. The first method involves an evaluative rating of responses to Tasks A, B, and C for each of the five core characteristics. Secondly, each self and friend concept that is emitted is rated on ten variables which represent five polar dimensions. These five dimensions are favorable-unfavorable, socialized-immature, confident-inferior, emotionally stable-emotionally unstable, and socially competent-socially incompetent. These five dimensions were based upon the scales used with Gough and Heilbrun's Adjective Checklist (1965). This classification system was developed with the intention of employing a differentiated assessment of
evaluation. This is consistent with the theoretical position of this study, that people develop differentiated impressions of self and of others. A global evaluative index may overlook differences among people, as well as oversimplifying behavior.

Analysis of Task D, desired change responses, involved two classification systems. The first was devised for the purpose of determining the focus of dissatisfaction of self or friend. Each change response was coded into one of four content categories, which were based upon Livesley and Bromley's (1973) classification system. The four content categories were objective characteristics, specific interpersonal behaviors, aptitudes and achievements, and covert processes. The second system involved a three-point scale, comprised of two cognitive dimensions, differentiation and generalization. The focus of this system was to obtain a measure of the clarity and the breadth of self- and friend-dissatisfaction.

Interrater reliability correlations for the classification of self and friend responses were obtained on ten randomly selected protocols. A graduate student in psychology was employed as a second rater.
Classification Systems for Self and Friend Tasks

Classification of Behavioral Determinants

(1) General, global (i.e., relatively undifferentiated) environmental context or attribute. There is no clear reference to the particular people within the situation. Situational norms are not expressed, although implicitly these may determine behavior.

e.g., If somebody needs help, I'll help 'em out.
e.g., I fool around in school.
e.g., I avoid situations I dislike.

(2) Institutional or societal rules and regulations. Included are references to authority figures.

e.g., I don't fool around because of detention.
e.g., You have to get along with the staff, so I do what I'm told.

(3) Overt behaviors or activities of other(s). Behavior of other(s) results in respondent's actions. This includes shared activities where the respondent infers that he was going along with other(s).

e.g., When my friends want to steal something, I just go along with them.
e.g., Tom hit me, so I hit him.

(4) Internal processes, emotional states and affects of other(s). Included are references made to thought processes.

e.g., When someone is upset, I stay away from him.
e.g., I'll tell someone to leave me alone when I'm thinking.
(5) Objective attributes of other(s). References to physical and intellectual qualities and abilities, maturity, age, sex, achievements, and material possessions of other(s) are included.
  e.g., I am respectful to people older than me.
  e.g., When a good friend has no money, I'll lend him some.

(6) Personality, disposition, behavioral consistencies, and traits of other(s).
  e.g., Dan is a perfectionist, which makes me tense.
  e.g., Jim is always getting into fights.

(7) Rules, beliefs, attitudes, and values of other(s) which are not directed exclusively at the respondent. These are general tenets of other(s) which may influence the respondent.
  e.g., My father believes that you have to work for what you get in this world. I guess that's why I'm such a hard worker.

(8) Evaluation or judgment of, interest in, or attitudes toward the respondent by other(s).
  e.g., Tom doesn't like me, so I stay away from him.
  e.g., Someone gives me respect, I'll respect them.

(9) Respondent's (friend's) own overt specific behavior or concrete activities.
  e.g., I get mad easily playing basketball.

(10) Respondent's (friend's) internal processes, emotional states, and affects. Included are references made to thought processes.
  e.g., I snap at people when I'm nervous.
  e.g., When I've got a problem bothering me, I become real quiet.
(11) Respondent's (friend's) objective attributes. References to physical and intellectual qualities and abilities, maturity, age, sex, achievements, and material possessions are included. 
   e.g., I'm smaller than anyone else my age, so I have to act tough.
   e.g., I'm stingy when I have money.

(12) Respondent's (friend's) personality, disposition, behavioral consistencies, and traits.  
   e.g., I'm easy-going, so I never get in fights.

(13) Respondent's (friend's) own rules, beliefs, attitudes, and values. These refer to generalizable personal codes. Included are evaluations of other(s).
   e.g., I think that everyone should do the best that he can, so I always work my hardest.
   e.g., If I don't like someone, I won't give him the time of day.

(14) Respondent's (friend's) life circumstances and childhood experiences.
   e.g., We were always poor. That's why I work so hard to make it.
   e.g., My parents never cared, so I was always on my own. That's why I'm my own boss. I make my own decisions.

(15) Significance of an interpersonal relationship. References to family members and friends are included.
   e.g., I can do whatever I want with my friends.
The following rules and qualifications were formulated to clarify the coding procedures.

(1) A coded response must be a relevant factor determining the behavior. Information that is irrelevant or is a repetition of previous statements in regard to the behavioral stimulus is not coded.

(2) Responses related on Tasks A, B, and C may add determinants for the behavior. These factors should be coded, distinguishing between determinants related at Tasks A, B, or C.

(3) A single determinant may be coded into only one category, the most appropriate one, even if applicable to several.

  e.g., If I'm doing something hard, like math, I'll fool around because it's more fun.

The underlined response can be coded into either category 10, 11, or 12. In this instance, it is difficult to distinguish if this behavior is determined by the enjoyable affect, the academic limitations, or the subject's personality. Since "math" is only an example, category 11 is least applicable. It seems that the subject's personality is more important than having fun. He seems to avoid difficult tasks. Therefore, category 12 is most applicable.

(4) A determinant category may be represented more than once for a given behavior if the determinants are distinctly separate and not merely reformulations.

  e.g., I don't like anyone pushing me around. I like to fight.
(5) When the respondent does not indicate any specific determinants, but relates the behavior in a general way, the appropriate classification is category 12, a dispositional, personality trait, e.g., I'm always nice to people.

(6) When the respondent is listing different situations, the coder must determine whether or not these contexts represent distinctly different determinants or are merely examples of one common determinant. For example, "I'm relaxed when I wake up alone in the morning and late at night when I watch T.V. and do whatever I like." The principal determinant is "being alone".

The same principle is applied when the respondent lists different people, such as parents and friends, as determinants for a given behavior. Category 15 would be applied once since the determinant is people one feels close to. When it is indicated that behavior differs with different people, then more than one determinant can be scored. An example of the latter principle follows. "I tell my girlfriend everything. There are some things I can't speak to my parents about."

(7) A later determinant may nullify an earlier one. If an attitude is later contradicted by the subject's uncertainty about its truth, the attitude is not considered a determinant of behavior. That is, a person may say that what he formerly said was not what he meant to say. Only what the person thinks is valid is coded. If subsequent statements elaborate on the initial ones, the coding of the earlier determinant is dependent on those following statements. A later emerging determinant may actually be more
inclusive than an earlier one. For instance, "I'm shy with people I don't know ... (and subsequently) I'm shy with just about anyone, whether I know them or not." The second statement indicates that a personality trait, rather than a relationship, determines the behavior.
Classification of Levels of Abstraction (Task C)

(1) An inappropriate response not referring to self (friend) or not expressing a self (friend) concept. The statement refers to other persons, the situation or the behavior without focusing on the respondent (friend).
   e.g., He is a mean person.

(2) The self (friend) concept is tied to the overt behavior (a concrete concept) or no insight into the behavior is shown.
   e.g., I like to fool around.

(3) The self (friend) concept labels the respondent in a largely absolute manner. The concept is expressed as a personality or dispositional trait. Polarity is not expressed. Defined operationally, polarity is the awareness that the respondent (friend) may behave in different ways representing different points on a continuum.
   e.g., I am shy.

(4) The self (friend) concept acknowledges polarity. This behavior is related to other allied, but different, behaviors. The person is unable to resolve a contradiction in behavior. A rationale may be given, but it represents a superficial, weak effort to interrelate the disparity and does not indicate self-understanding or insight.
   e.g., Sometimes I'm talkative, other times I can be reticent. I guess that's normal.
In addition to recognizing polarity in one's behavior, a resolution of the apparent behavioral inconsistency is provided which allows consistency at the mediational level. References to attitudes, beliefs, and values, which are attempts to account for this overt discrepancy, serve as a resolution of polarity in behavior. Self-understanding is evident.

e.g., I'll go along and agree with someone I think differently from if I don't think that I can alter that person's opinion.
The rules clarifying the coding procedure for abstraction are as follows.

1. In determining the level of abstraction, the coder can not form the bridges of the respondent's incomplete constructs.
   e.g., Task A: I'm domineering.
   Task B: A combination of everything else I said.

2. If the Task B response is a higher level of abstraction than the Task C statement, the level of abstraction assigned will reflect the Task B statement.

3. To determine whether or not polarity is recognized, it may be necessary to refer to the language used in Tasks B and C. For example, if one characteristic a respondent states in response to Task A is "I'm kind of crazy sometimes," the language implies a recognition that other times he is not acting that way. A response to Task B or C that "I'm a crazy guy," would nullify the initial assessment, i.e., polarity is not being acknowledged. However, if the respondent had said, "Sometimes I can be a crazy guy," then the language indicates that polarity is being recognized. Responses to other characteristics are not considered when determining the level of abstraction of a particular characteristic. The rationale is that the ability to consider contrasting behaviors simultaneously is the essence of polarity.
Evaluative Components of Self (Friend) Concepts

(1) Positive self concept. The respondent expresses that a behavior is situationally appropriate, adaptive, acceptable, or desirable.

(2) Neutral self (friend) concept. The respondent states a behavior which can not be rated positively or negatively. Either a non-judgmental stance is presented or not enough information is provided to determine the evaluative direction.

(3) Negative self concept. The respondent expresses that the behavior is situationally inappropriate, maladaptive, unacceptable, or undesirable. The desire to change the behavior under consideration (response to Task D), indicates a negative evaluation of that characteristic.

The following coding rules were formulated to clarify evaluative components of self (friend) concepts.

(1) Tasks A, B, C, and D are combined to form a rating for each of the 5 characteristics mentioned in response to Task A.

(2) In determining whether the concept is positive or negative, one places the respondent's evaluation above societal norms. If the respondent is not explicitly evaluative, then societal norms are used to determine the evaluative direction of the concept. The rationale is that all adolescents have had sufficient exposure to cultural standards to be aware of socially condoned behavior. Therefore, the failure to explicitly contradict societal expectations is considered to be indicative of agreement with cultural values.
Content Classification (Task D)

(1) Objective characteristics. Activities, physical attributes and appearance, material possessions, the environment or life circumstances are elicited.
   e.g., Change my height. Grow a few inches.
   e.g., Change my bad reputation.

(2) Specific interpersonal behaviors. The behaviors elicited are concrete or specific to a situation. They are peripheral to the person's core personality or have a limited future time perspective.
   e.g., Talking more in class.

(3) Aptitudes and achievements. Intellectual, academic, or vocational capabilities or goals are elicited.
   e.g., Working harder in school so I can get a scholarship to college.

(4) Covert processes. Personality characteristics, traits, dispositions, behavioral consistencies, attitudes, beliefs, and values are elicited.
   e.g., Thinking before I act, so I don't get in trouble.
The Degree of Differentiation and of Generalization of Change Responses (Task D)

(1) Nondifferentiated, generalized. The objective is vague, global, and diffuse. The issue is not conceptualized constructively or operationally. The problem appears somewhat amorphous and unmanageable.

  e.g., Change my personality.

(2) Differentiated, nongeneralized. The objective is defined clearly and has a relatively circumscribed focus. The implications of the change are restricted to a small area of functioning.

  e.g., Not being able to get up in the morning.

(3) Differentiated, generalized. The objective is clearly defined and has a relatively broad focus. The change would effect a major realm of functioning.

  e.g., Not to boss other people around.
Classification of Levels of Integration (Task E)

(1) Inappropriate response. The person can not respond or responds relating irrelevant aspects of self.
   e.g., My favorite sports are ...

(2) Some of all of the self (friend) concepts expressed in Tasks A, B, and C are listed or repeated. There is no attempt to integrate.
   e.g., I said that I am shy, a hard worker, and helpful.

(3) Global or superficial integration. The complexity of the individual is not acknowledged adequately. The statement is overly simplistic. The rationale offered is superficial and does not express adequate self-insight or understanding, or important aspects of self which have been mentioned previously have not been included in this summary.
   e.g., I try to be "me".
   e.g., I'm nice and I'm mean.

(4) Polarity is recognized but is not resolved. There is an inability to adequately provide attitudes, beliefs, and values interrelating diverse aspects of self.
   e.g., I can be a very caring person, but sometimes I'm very self-centered. I'll fool around, but sometimes I'll work hard. I don't know what this means. It seems like I'm always contradicting myself.
(5) Attitudes, beliefs, and values are expressed which interrelate disparate aspects of self. A superordinate self system is formed in the effort to synthesize aspects of self. The rater gains a sense of why this person behaves as he does. e.g., I can't always be the way I ideally would like to be. When I get frustrated, I'm really irritable. I try not to be that way. Most of the time I'm very tolerant and understanding. I'm more understanding with people I'm friends with or want to impress than with close friends. I guess I take people for granted and I want people to like me.

The rules clarifying the coding procedure for integration are as follows.

(1) Responses to Task E will be coded into the predominant level of integration which is expressed. Minor features of a higher or lower level which are out-of-kilter with the central emphasis of the statement will be disregarded in coding the response.

(2) An integration statement which avoids discussing present behavior, focusing instead upon future goals of how one should behave, is considered to be a level 3 response.
Classification of Self (Friend) Concepts

(1) Favorable concept. Self (friend) possesses a positive attribute.
The concept is desirable or appropriate.

(2) Unfavorable concept. Self (friend) possesses a negative attribute.
The concept is undesirable or inappropriate.

(3) Socialized. The concept expresses acceptance of social conventions and norms, or mature and responsible behavior.

(4) e.g., Even if I don't like what the teacher says, I'll listen and not talk back.

(4) Immature. Impulsive, thoughtless, or irresponsible behavior is conveyed.

  e.g., I get rowdy and into fights when I drink.

(5) Confident. The concept expresses competence, confidence, or determination.

  e.g., When I get my mind to do something, nothing can get in my way.

(6) Inferior. A sense of incompetence or inadequacy is conveyed.

  e.g., I can't seem to think for myself. I always do what my friends tell me to do and I'm the one that gets in trouble.

(7) Stable. The concept conveys a state of emotional equilibrium. The person is portrayed as being calm, even-tempered, or self-composed.

  e.g., I don't let little hassles ruin my day.
(8) Unstable. A state of emotional disequilibrium is conveyed. The person is portrayed as being moody, unpredictable, hot-tempered, irritable, nervous, or anxious.
  e.g., If someone calls me a name or something, I just fly off the handle.

(9) Socially competent. The concept conveys affiliative and nurturant behaviors. The person is portrayed as being considerate, cooperative, and sociable.
  e.g., I like to help people when they need help.

(10) Socially incompetent. The concept conveys socially abrasive behaviors. The person is portrayed as being socially inept, aggressive, combative, callous, indifferent, or withdrawn.
  e.g., I get real uncomfortable in large crowds. I usually don't say anything.

Rules for determining and classifying self (friend) concepts follow:

(1) Different words expressing the same concept should be rated as one concept, even if appearing at different points in the protocol. For example, the respondent uses the terms "quiet" and "shy" interchangeably.

(2) A respondent's vocabulary limitations may obscure a distinction being made between two concepts. In the following example, two concepts are expressed: "I'm usually quiet. I don't talk much. In big crowds, I'm quieter than usual."
(3) The classification of concepts into categories 1 and 2 is based upon the respondent's evaluation of the concept. If the respondent does not present an evaluative stance, then societal expectations are the basis for the categorization of a concept. The rationale is that all adolescents have had sufficient exposure to cultural standards to be aware of socially condoned behavior. Therefore, the failure to explicitly contradict societal expectations is considered to be indicative of agreement with cultural values.

(4) In classifying concepts, check off all categories which apply for a given concept. In the following example, categories 2, 4, 8, and 10 are scored. "If someone calls me a name or something, I just fly off the handle."

(5) If a concept does not fit any of the categories' criteria or if the meaning of the response is ambiguous, do not check any category.

E.g., I'm your average jock.
Chapter III

RESULTS

Factor Analysis of the Delinquency Dimension

Factor analysis was conducted to determine the factor validity of Quay and Peterson's three dimensions of delinquency as derived from their questionnaire measure. In addition to the study's 80 subjects, questionnaire data obtained from 10 delinquents and 8 nondelinquents, who were ineligible for inclusion in the self and friend interviews because of the age or intelligence criteria, were included in the factor analysis to enhance its stability. Packet (or parcel) factor analysis was employed. This technique is based upon the rationale that packets of items are more reliable than single items. The items comprising each of the three delinquency dimensions were placed randomly into one of three packets, forming 9 packets. (See Appendix D.) The factor analysis method of principal axes, using the maximum communality estimate, was employed to extract factors. A promax rotation of the factors, with a normal varimax prerotation and a power (K) of 3, was employed to obtain the oblique factor structure.

The intercorrelation matrix for the 9 packets is presented in Table 1. These data indicate that psychopathy and neuroticism were relatively independent. However, the subcultural delinquency packets did not coalesce and actually correlated more strongly with the neuroticism packets. These results were corroborated by the Scree Test (Cattell, 1966), which shows two factors emerging. (See Figure 1.) Rather than add the items in the
Table 1

Intercorrelation Matrix of Packets$^{ab}$

<table>
<thead>
<tr>
<th>Packets</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>N1</th>
<th>N2</th>
<th>N3</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
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<tbody>
<tr>
<td>P1</td>
<td>1.00</td>
<td>.44</td>
<td>.48</td>
<td>.34</td>
<td>.38</td>
<td>.37</td>
<td>.19</td>
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<td>.10</td>
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<td>P2</td>
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<td>1.00</td>
<td>.54</td>
<td>.18</td>
<td>.42</td>
<td>.20</td>
<td>.19</td>
<td>.16</td>
<td>.19</td>
</tr>
<tr>
<td>P3</td>
<td>.48</td>
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<td>1.00</td>
<td>.19</td>
<td>.33</td>
<td>.17</td>
<td>.14</td>
<td>.10</td>
<td>.15</td>
</tr>
<tr>
<td>N1</td>
<td>.34</td>
<td>.18</td>
<td>.19</td>
<td>1.00</td>
<td>.53</td>
<td>.53</td>
<td>.35</td>
<td>.41</td>
<td>.21</td>
</tr>
<tr>
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<td>.42</td>
<td>.33</td>
<td>.53</td>
<td>1.00</td>
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<tr>
<td>S3</td>
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<td>.19</td>
<td>.15</td>
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<td>.22</td>
<td>.21</td>
<td>.23</td>
<td>.25</td>
<td>1.00</td>
</tr>
</tbody>
</table>

$^a$ Packets P1-P3 were formed from psychopathy items on the Quay and Peterson questionnaire.
Packets N1-N3 were formed from neuroticism items on the Quay and Peterson questionnaire.
Packets S1-S3 were formed from subcultural delinquency items on the Quay and Peterson questionnaire.

$^b$ N = 98.
Figure 1

Scree Test on Factors Emerging from Promax Rotation
subcultural delinquency dimension to neuroticism, the subcultural delinquency items were excluded from subsequent analyses in order to allow comparisons of neuroticism data with other research. Table 2 indicates that neuroticism and psychopathy accounted for 99% of the factor variance with the former having the stronger factor loadings. The two factors were correlated ($\varphi = .457$).

The factor structures of the delinquent and nondelinquent samples were similar. The coefficients of congruence were .95 for psychopathy and .97 for neuroticism. Psychopathy emerged as the first factor of the delinquent sample (Table 3), while neuroticism emerged as the first factor of the nondelinquent sample (Table 4). The delinquent and nondelinquent psychopathy and neuroticism scores were not significantly different ($T (78) = .81$ and .31, respectively). The mean psychopathy scores were 10.05 (S.D. = 4.85) for the delinquents and 10.93 (S.D. = 4.82) for the nondelinquents. The mean neuroticism scores were 13.28 (S.D. = 5.11) for the delinquents and 13.65 (S.D. = 5.82) for the nondelinquents.

**Interrater Reliability for Coding Self and Friend Impressions**

The interrater reliability correlations for coding self and friend impressions appear in Table 5. Overall, the classification systems appear to be reliable. The two raters obtained significant correlations on 66 of the 78 dependent variables. The median correlation coefficient was .84 for the self variables and .89 for the friend variables. The 12 variables which did not yield significant interrater correlations were emitted infrequently. Since it is feasible that these variables would show stronger reliability if more than 10 protocols were sampled, data bearing on these
### Table 2

**Primary Factor Pattern and Factor Intercorrelation Matrices for Promax Rotation\(^a\) of Two Principal Axes\(^b\)**

<table>
<thead>
<tr>
<th>Packets(^c)</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>(h^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
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<td>-0.038</td>
<td>0.501</td>
</tr>
<tr>
<td>N2</td>
<td>0.671</td>
<td>0.195</td>
<td>0.608</td>
</tr>
<tr>
<td>N3</td>
<td>0.810</td>
<td>-0.064</td>
<td>0.613</td>
</tr>
<tr>
<td>P1</td>
<td>0.229</td>
<td>0.537</td>
<td>0.453</td>
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<tr>
<td>P2</td>
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</tr>
<tr>
<td>P3</td>
<td>-0.072</td>
<td>0.773</td>
<td>0.552</td>
</tr>
</tbody>
</table>

**Cumulative Portion:**

Portion accounted for: 0.746, 0.241, 0.987

**Factor Intercorrelations:**

- Factor 1: 1.000
- Factor 2: 0.457, 1.000

---

\(a\) Power (\(K\)) = 3.

\(b\) \(N = 98\).

\(c\) Packets N1–N3 were formed from neuroticism items on the Quay and Peterson questionnaire.

Packets P1–P3 were formed from psychopathy items on the Quay and Peterson questionnaire.
Table 3

Primary Factor Pattern and Factor Intercorrelation Matrices for Promax Rotation\(^a\) of Two Principal Axes - Delinquent Sample\(^b\)

<table>
<thead>
<tr>
<th>Packets(^c)</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>(h^2)</th>
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<tbody>
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</tr>
<tr>
<td>P3</td>
<td>.711</td>
<td>.053</td>
<td>.551</td>
</tr>
</tbody>
</table>

Cumulative Portion:

Portion accounted for: .175 .797 .973

Factor Intercorrelations:

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.000</td>
<td>.565</td>
</tr>
<tr>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>

\(^a\) \(K = 3\).

\(^b\) \(N = 50\).

\(^c\) Packets N1-N3 were formed from neuroticism items on the Quay and Peterson questionnaire.

Packets P1-P3 were formed from psychopathy items on the Quay and Peterson questionnaire.
Table 4
Primary Factor Pattern and Factor Intercorrelation Matrices for Promax Rotation\(^a\) of Two Principal Axes - Nondelinquent Sample\(^b\)

<table>
<thead>
<tr>
<th>Packets(^c)</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>(h^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>.730</td>
<td>.003</td>
<td>.534</td>
</tr>
<tr>
<td>N2</td>
<td>.709</td>
<td>.145</td>
<td>.580</td>
</tr>
<tr>
<td>N3</td>
<td>.837</td>
<td>-.128</td>
<td>.659</td>
</tr>
<tr>
<td>P1</td>
<td>.321</td>
<td>.420</td>
<td>.353</td>
</tr>
<tr>
<td>P2</td>
<td>.002</td>
<td>.640</td>
<td>.411</td>
</tr>
<tr>
<td>P3</td>
<td>.066</td>
<td>.736</td>
<td>.520</td>
</tr>
</tbody>
</table>

Cumulative Portion:

Portion accounted for: .664 .293 .956

Factor Intercorrelations:

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>1.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 2</td>
<td></td>
<td>.272</td>
</tr>
</tbody>
</table>

\(a\) \(K = 3\).

\(b\) \(N = 48\).

\(c\) Packets N1-N3 were formed from neuroticism items on the Quay and Peterson questionnaire.
Packets P1-P3 were formed from psychopathy items on the Quay and Peterson questionnaire.
Table 5
Interrater Reliability Correlations

| Variable                                              | Self          |  | Friend       |  |
|-------------------------------------------------------|---------------|----------------|----------------|
|                                                        | \( z \)       | \( p < \)      | \( z \)       | \( p < \)      |
| \# of determinants                                    | 0.99          | 0.001          | 0.71          | 0.05          |
| \# of determinant categories used                    | 0.78          | 0.01           | 0.98          | 0.001         |
| Determinant category 1                                | 0.45          | NS             | 0.45          | NS            |
| Determinant category 2                                | 1.00          | 0.001          | 1.00          | 0.001         |
| Determinant category 3                                | 0.84          | 0.005          | 0.96          | 0.001         |
| Determinant category 4                                | 0.30          | NS             | 0.68          | 0.05          |
| Determinant category 5                                | 0.87          | 0.001          | 0.93          | 0.001         |
| Determinant category 6                                | 0.93          | 0.001          | 1.0           | 0.001         |
| Determinant category 7                                | 0.38          | NS             | 0             | NS            |
| Determinant category 8                                | 0.73          | 0.025          | 0.80          | 0.01          |
| Determinant category 9                                | 0.81          | 0.01           | 0.67          | 0.05          |
| Determinant category 10                               | 0.79          | 0.01           | 0.78          | 0.01          |
| Determinant category 11                               | 0.50          | NS             | 0.76          | 0.025         |
| Determinant category 12                               | 0.77          | 0.01           | 0.94          | 0.001         |
| Determinant category 13                               | 0.96          | 0.001          | 0.89          | 0.001         |
| Determinant category 14                               | 1.00          | 0.001          | 1.00          | 0.001         |
| Determinant category 15                               | 0.80          | 0.01           | 0.92          | 0.001         |
| \# of concepts                                        | 0.91          | 0.001          | 0.78          | 0.01          |
| Level of abstraction                                   | 0.75          | 0.025          | 0.65          | 0.05          |
| Level of integration                                   | 0.75          | 0.025          | 0.94          | 0.001         |
| Content category 1                                     | 0.97          | 0.001          | 0.97          | 0.001         |
| Content category 2                                     | 1.00          | 0.001          | 1.00          | 0.001         |
| Content category 3                                     | 0             | NS             | 1.00          | 0.001         |
| Content category 4                                     | 0.97          | 0.001          | 0.92          | 0.001         |
| Differentiation-generalization category 1              | 0.82          | 0.005          | 0.65          | 0.10          |
| Differentiation-generalization category 2              | 0.55          | NS             | 0.96          | 0.001         |
| Differentiation-generalization category 3              | 0             | NS             | 0.43          | NS            |
| \# of repeated concepts                                | 0.90          | 0.001          | 0.43          | NS            |
| \# of friend concepts based only on self-friend       | 0.86          | 0.005          | 0.99          | 0.001         |
| relationship                                           |               |                |               |               |
| Composite esteem                                       | 0.96          | 0.001          | 0.99          | 0.001         |
| Favorable concepts                                     | 0.93          | 0.001          | 0.88          | 0.001         |
| Unfavorable concepts                                   | 0.92          | 0.001          | 0.89          | 0.001         |

(continued)

1 The infrequent use of some categories may have resulted in spuriously low or high correlations.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Self</th>
<th>Friend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(z)</td>
<td>(p&lt;)</td>
</tr>
<tr>
<td>Socialized concepts</td>
<td>0.76</td>
<td>0.025</td>
</tr>
<tr>
<td>Immature concepts</td>
<td>0.78</td>
<td>0.01</td>
</tr>
<tr>
<td>Confident concepts</td>
<td>0.85</td>
<td>0.005</td>
</tr>
<tr>
<td>Inferior concepts</td>
<td>0.78</td>
<td>0.01</td>
</tr>
<tr>
<td>Stable concepts</td>
<td>0.04</td>
<td>NS</td>
</tr>
<tr>
<td>Unstable concepts</td>
<td>0.91</td>
<td>0.001</td>
</tr>
<tr>
<td>Socially competent concepts</td>
<td>0.90</td>
<td>0.001</td>
</tr>
<tr>
<td>Socially incompetent concepts</td>
<td>0.97</td>
<td>0.001</td>
</tr>
</tbody>
</table>
variables will be presented.

**Statistical Methods of Data Analysis**

Data were analyzed by two statistical methods, the Pearson product-moment correlation coefficient and the multiple stepwise regression analysis, using the forward selection technique. There were eleven predictor variables in the regression model: delinquency (delinquents were coded as the number 1 and nondelinquents as the number -1 to enhance the interpretability of the results), psychopathy, neuroticism, age, vocabulary intelligence score, race (caucasians were coded as the number 1 and noncaucasians as -1 to enhance the interpretability of the results), and interactions of these variables with delinquency. Predictor variables, which attained a significance probability level of less than .10 when entered for a given criterion variable, will be presented.

**Testing of Hypotheses**

Hypothesis I-A: Self and best friend systems are more mature (i.e., show greater differentiation, abstraction, integration, clarity of goals, and decentration) in nondelinquents than in delinquents.

Hypothesis I-A was not supported. Delinquent status did not predict outcome on any of the cognitive-developmental variables. In addition, delinquency was unrelated to the use of the 15 determinant categories. Therefore, delinquency was not entered as a predictor in Table 6.
Table 6

Multiple Stepwise Regression Analyses, Using the Forward Selection, on Cognitive-Developmental Variables

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
<th>df</th>
<th>MS error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self Level of Abstraction

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
<th>df</th>
<th>MS error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psy</td>
<td>1.78 0.278 8.18&lt;sup&gt;c&lt;/sup&gt; 0.095</td>
<td>Psy -.035 2.27 8.18&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2</td>
<td>2.77 0.268 6.13&lt;sup&gt;b&lt;/sup&gt; 0.137</td>
</tr>
<tr>
<td>2</td>
<td>VIQ</td>
<td>2.77 0.268 6.13&lt;sup&gt;b&lt;/sup&gt; 0.137</td>
<td>VIQ .076 1.014 3.78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self Content Category 2

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
<th>df</th>
<th>MS error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>1.73 0.062 4.55&lt;sup&gt;d&lt;/sup&gt; 0.059</td>
<td>Age .006 0.282 4.55&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3</td>
<td>3.76 0.762 5.72&lt;sup&gt;c&lt;/sup&gt; 0.184</td>
</tr>
</tbody>
</table>

Self Differentiation-Generalization Category 2

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
<th>df</th>
<th>MS error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Del*Neur</td>
<td>1.73 0.092 8.18&lt;sup&gt;c&lt;/sup&gt; 0.101</td>
<td>Del*Neur -.007 0.755 8.18&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2</td>
<td>2.77 0.268 6.13&lt;sup&gt;b&lt;/sup&gt; 0.137</td>
</tr>
</tbody>
</table>

Self Differentiation-Generalization Category 3

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
<th>df</th>
<th>MS error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Del*Psy</td>
<td>1.73 0.040 5.99&lt;sup&gt;d&lt;/sup&gt; 0.076</td>
<td>Del*Psy .005 0.237 5.99&lt;sup&gt;d&lt;/sup&gt;</td>
<td>2</td>
<td>2.77 0.268 6.13&lt;sup&gt;b&lt;/sup&gt; 0.137</td>
</tr>
</tbody>
</table>

Friend Number of Determinants

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
<th>df</th>
<th>MS error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neur</td>
<td>1.78 0.841 6.42&lt;sup&gt;d&lt;/sup&gt; 0.076</td>
<td>Neur .048 5.393 6.42&lt;sup&gt;d&lt;/sup&gt;</td>
<td>2</td>
<td>2.77 0.8055 5.55&lt;sup&gt;c&lt;/sup&gt; 0.126</td>
</tr>
<tr>
<td>2</td>
<td>Psy</td>
<td>2.77 0.8055 5.55&lt;sup&gt;c&lt;/sup&gt; 0.126</td>
<td>Psy -.050 3.540 4.39&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Age</td>
<td>3.76 0.762 5.72&lt;sup&gt;c&lt;/sup&gt; 0.184</td>
<td>Age .023 4.139 5.43&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>b</sup> p < .005.
<sup>c</sup> p < .01.
<sup>d</sup> p < .05.

<sup>1</sup> Asterisk indicates interaction effect of two variables. (continued)
Table 6 (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>$\mathbf{M}$</td>
<td>F</td>
</tr>
<tr>
<td>------</td>
<td>----</td>
<td>--------------</td>
<td>---</td>
</tr>
</tbody>
</table>

**Friend Level of Integration**

1  Psy $1.78$ $0.429$ $4.14^d$ $0.050$ Psy $-.031$ $1.77^d$ $4.14^d$

**Friend Differentiation-Generalization Category 1**

1  VIQ $1.64$ $0.841$ $4.90^d$ $0.071$ VIQ $0.159$ $4.121$ $4.90^d$

**Repeated Concepts**

1  Neur $1.78$ $0.035$ $9.85^c$ $0.112$ Neur $-.012$ $0.354$ $9.85^c$

2  Psy $2.77$ $0.035$ $7.05^c$ $0.154$ Neur $-.009$ $0.165$ $4.77^d$

3  Del*Race $3.76$ $0.035$ $5.95^c$ $0.190$ Psy $-.010$ $0.155$ $4.61^d$

Neur $-.009$ $0.150$ $4.45^d$

Del*Race $0.033$ $0.113$ $3.37$

$^c p < .01$.

$^d p < .05$.

**KEY:**

Del = Delinquency.

Psy = Psychopathy.

Neur = Neuroticism.

VIQ = Verbal Intelligence.
Table 7
Multiple Stepwise Regression Analyses, Using the Forward Selection, on Determinant Categories

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>df</td>
<td>MS error</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>1.78</td>
</tr>
<tr>
<td>Self Determinant Category 2</td>
<td></td>
<td>1</td>
<td>Del*VIQ</td>
</tr>
<tr>
<td></td>
<td>Psy</td>
<td>2</td>
<td>2.77</td>
</tr>
<tr>
<td></td>
<td>Psy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Determinant Category 3</td>
<td></td>
<td>1</td>
<td>Race</td>
</tr>
<tr>
<td>Self Determinant Category 4</td>
<td></td>
<td>1</td>
<td>Psy</td>
</tr>
<tr>
<td></td>
<td>Neur</td>
<td>2</td>
<td>2.77</td>
</tr>
<tr>
<td></td>
<td>Neur</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Determinant Category 7</td>
<td></td>
<td>1</td>
<td>Neur</td>
</tr>
</tbody>
</table>

<sup>b</sup> p < .005.
<sup>c</sup> p < .01.
<sup>d</sup> p < .05.

1 Asterisk indicates interaction effect of two variables.
Table 7 (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>MS</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Self Determinant Category 8

1 | Del*Neur 1.78 | 0.573 | 5.63<sup>d</sup> | 0.067 | Del*Neur | 0.014 | 3.227 | 5.63<sup>d</sup> |

Self Determinant Category 15

1 | Race 1.78 | 2.184 | 9.54<sup>b</sup> | 0.109 | Race | 0.521 | 20.833 | 9.54<sup>b</sup> |

2 | Del*Neur 2.77 | 2.091 | 7.23<sup>b</sup> | 0.158 | Del*Neur | 0.024 | 9.384 | 4.49 |

Friend Determinant Category 2

1 | Del 1.78 | 0.087 | 5.20<sup>d</sup> | 0.063 | Del | 0.075 | 0.450 | 5.20<sup>d</sup> |

2 | Del*Psy 2.77 | 0.084 | 4.16<sup>d</sup> | 0.097 | Del*Psy | 0.012 | 0.252 | 2.98 |

3 | Psy 3.76 | 0.082 | 3.83<sup>d</sup> | 0.131 | Del*Psy | 0.012 | 0.248 | 3.02 |

Friend Determinant Category 3

1 | Neur 1.78 | 1.267 | 4.06<sup>d</sup> | 0.049 | Neur | 0.047 | 5.147 | 4.06<sup>d</sup> |

Friend Determinant Category 4

1 | Neur 1.78 | 0.209 | 5.35<sup>d</sup> | 0.064 | Neur | 0.022 | 1.116 | 5.35<sup>d</sup> |

<sup>b</sup> p < .05.
<sup>d</sup> F < .05.

(continued)
Table 7 (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>df</td>
<td>MS error</td>
</tr>
<tr>
<td>1</td>
<td>Age</td>
<td>1.78</td>
<td>0.715</td>
</tr>
<tr>
<td>1</td>
<td>Psy</td>
<td>1.78</td>
<td>0.024</td>
</tr>
<tr>
<td>1</td>
<td>VIQ</td>
<td>1.78</td>
<td>0.605</td>
</tr>
<tr>
<td>1</td>
<td>Del*Race</td>
<td>1.78</td>
<td>0.236</td>
</tr>
<tr>
<td>1</td>
<td>VIQ</td>
<td>1.78</td>
<td>5.263</td>
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<tr>
<td>2</td>
<td>Age</td>
<td>2.77</td>
<td>5.136</td>
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<tr>
<td>1</td>
<td>Del*Neur</td>
<td>1.78</td>
<td>11.616</td>
</tr>
<tr>
<td>2</td>
<td>Del*Psy</td>
<td>2.77</td>
<td>11.183</td>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>

KEY:
- Del = Delinquency.
- Psy = Psychopathy.
- Neur = Neuroticism.
- VIQ = Verbal Intelligence.

\( c \ p < .01 \)
\( d \ p < .05 \)
Hypothesis II-A

1: The psychopathic delinquency dimension is associated with the least mature systems of self and of best friends.

2: The neurotic delinquency dimension is associated with self and best friend systems which are more mature than those associated with the psychopathy dimension but less mature than those associated with subcultural delinquency (i.e., neuroticism is related to immaturity but less strongly than is psychopathy).

Part 1 of Hypothesis II-A received support, but part 2 was not supported. (See Table 6.) Psychopathy was found to be associated with less mature self and friend impressions than was neuroticism. Psychopathy was related negatively to the self level of abstraction ($p < .01$), the friend level of integration ($p < .05$), the friend number of determinants ($p < .05$), and the number of repeated concepts ($p < .10$).

Unexpectedly, neuroticism was unpredictable of developmental immaturity. In fact, neuroticism was related to two cognitive-developmental variables, i.e., the number of friend determinants ($p < .05$) and the number of repeated concepts ($p < .01$), in a direction indicative of greater maturity. While it had been hypothesized that neuroticism would show greater maturity than psychopathy, it was implied that neuroticism would still be associated with developmental delays. Significant relationships between neuroticism and the use of determinant categories did suggest that adolescents with high neuroticism scores were attentive to concrete, time-bound behavioral cues. Neuroticism was related positively to self determinant category 4 (other's internal processes and affects) and to friend determinant categories 3 (other's behavior) and 4 ($p < .05$). (See Table 7.)
Hypothesis III-A

1: Descriptions of self show greater maturity than descriptions of best friends.

Part 1 of Hypothesis III-A was supported by the data. (See Table 8.) Generally, impressions of self were more mature than those of friends. Self means were significantly greater than friend means on the number of determinants ($p<.001$), the number of determinant categories ($p<.001$), and the level of abstraction ($p<.01$). There were no significant differences between self and friend impressions on the level of integration and the number of concepts. Differential responsibility to Task D (i.e., desired changes) precluded the analysis of within-subject differences in the classification of the change responses.

The determinant profiles of self and friend impressions were supportive of the hypothesis that the former would show greater maturity than the latter. Self impressions were related to covert and psychological and situational cues influencing behavior. (See Table 9.) Self impressions had a greater number of determinant category 1 (general context; $p<.10$), 2 (institutional rules; $p<.005$), 6 (other's personality; $p<.005$), 7 (other's rules; $p<.001$), 8 (other's evaluation of respondent; $p<.005$), 10 (respondent's internal processes and affects; $p<.005$), and 13 (respondent's beliefs; $p<.001$) responses. While friend impressions did have more references to determinant categories 4 ($p<.005$), 12 (respondent's personality; $p<.005$), and 15 (significant relationship; $p<.05$), these results do not alter the aforementioned interpretation. Although determinant category 12 is indicative of covert awareness, this category entails global personality concepts rather than the differentiation of contextual cues of the behavior. Consistent with these results is the finding that verbal
Table 8
Within-Subject Differences Between the Means of Self and Friend Cognitive-Developmental Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Self</th>
<th>Friend</th>
<th>Z</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>SD</td>
<td>$\bar{X}$</td>
<td>SD</td>
</tr>
<tr>
<td>Task A characteristics</td>
<td>5.86</td>
<td>1.75</td>
<td>5.74</td>
<td>1.39</td>
</tr>
<tr>
<td># of determinants</td>
<td>3.33</td>
<td>1.47</td>
<td>2.75</td>
<td>0.95</td>
</tr>
<tr>
<td># of determinant categories</td>
<td>6.85</td>
<td>1.96</td>
<td>6.04</td>
<td>2.07</td>
</tr>
<tr>
<td># of concepts</td>
<td>8.55</td>
<td>5.73</td>
<td>8.28</td>
<td>2.40</td>
</tr>
<tr>
<td>Level of abstraction</td>
<td>3.11</td>
<td>0.55</td>
<td>2.94</td>
<td>0.44</td>
</tr>
<tr>
<td>Level of integration</td>
<td>2.96</td>
<td>0.54</td>
<td>2.90</td>
<td>0.67</td>
</tr>
<tr>
<td># of change responses</td>
<td>2.65</td>
<td>0.83</td>
<td>2.00</td>
<td>1.19</td>
</tr>
<tr>
<td>Content category 1</td>
<td>0.27</td>
<td>0.33</td>
<td>0.25</td>
<td>0.36</td>
</tr>
<tr>
<td>Content category 2</td>
<td>0.15</td>
<td>0.25</td>
<td>0.23</td>
<td>0.34</td>
</tr>
<tr>
<td>Content category 3</td>
<td>0.04</td>
<td>0.12</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td>Content category 4</td>
<td>0.54</td>
<td>0.38</td>
<td>0.48</td>
<td>0.40</td>
</tr>
<tr>
<td>Differentiation-generalization 1</td>
<td>0.50</td>
<td>0.30</td>
<td>0.40</td>
<td>0.36</td>
</tr>
<tr>
<td>Differentiation-generalization 2</td>
<td>0.40</td>
<td>0.32</td>
<td>0.53</td>
<td>0.39</td>
</tr>
<tr>
<td>Differentiation-generalization 3</td>
<td>0.11</td>
<td>0.21</td>
<td>0.08</td>
<td>0.21</td>
</tr>
</tbody>
</table>

$p < .001$, $p < .01$, $p < .05$, $p < .10$. 
Table 9
Within-Subject Differences Between the Means of Self and Friend Determinant Categories

<table>
<thead>
<tr>
<th>Variable</th>
<th>Self</th>
<th>Friend</th>
<th>Z</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>SD</td>
<td>$\bar{X}$</td>
<td>SD</td>
</tr>
<tr>
<td>Determinant category 1</td>
<td>1.08</td>
<td>1.12</td>
<td>0.83</td>
<td>0.94</td>
</tr>
<tr>
<td>Determinant category 2</td>
<td>0.30</td>
<td>0.69</td>
<td>0.10</td>
<td>0.30</td>
</tr>
<tr>
<td>Determinant category 3</td>
<td>1.35</td>
<td>1.31</td>
<td>1.11</td>
<td>1.15</td>
</tr>
<tr>
<td>Determinant category 4</td>
<td>0.09</td>
<td>0.40</td>
<td>0.21</td>
<td>0.47</td>
</tr>
<tr>
<td>Determinant category 5</td>
<td>0.74</td>
<td>0.99</td>
<td>0.59</td>
<td>0.87</td>
</tr>
<tr>
<td>Determinant category 6</td>
<td>0.48</td>
<td>1.01</td>
<td>0.19</td>
<td>0.73</td>
</tr>
<tr>
<td>Determinant category 7</td>
<td>0.25</td>
<td>0.56</td>
<td>0.03</td>
<td>0.16</td>
</tr>
<tr>
<td>Determinant category 8</td>
<td>0.48</td>
<td>0.78</td>
<td>0.25</td>
<td>0.52</td>
</tr>
<tr>
<td>Determinant category 9</td>
<td>0.61</td>
<td>0.86</td>
<td>0.63</td>
<td>0.88</td>
</tr>
<tr>
<td>Determinant category 10</td>
<td>0.95</td>
<td>1.34</td>
<td>0.44</td>
<td>0.79</td>
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<tr>
<td>Determinant category 11</td>
<td>0.30</td>
<td>0.51</td>
<td>0.21</td>
<td>0.50</td>
</tr>
</tbody>
</table>

$^a p < .001.$  
$^b p < .005.$  
$^e p < .10.$  
(continued)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Self</th>
<th></th>
<th>Friend</th>
<th></th>
<th>Difference</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>$SD$</td>
<td>$\bar{x}$</td>
<td>$SD$</td>
<td>$\tau$</td>
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<tr>
<td>Determinant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>category 12</td>
<td>3.20</td>
<td>1.89</td>
<td>3.95</td>
<td>1.81</td>
<td>.06</td>
<td>-0.53</td>
</tr>
<tr>
<td>Determinant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>category 13</td>
<td>4.91</td>
<td>4.22</td>
<td>2.81</td>
<td>2.34</td>
<td>.32$^b$</td>
<td>1.48</td>
</tr>
<tr>
<td>Determinant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>category 14</td>
<td>0.21</td>
<td>0.52</td>
<td>0.16</td>
<td>0.40</td>
<td>.44$^a$</td>
<td>0.04</td>
</tr>
<tr>
<td>Determinant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>category 15</td>
<td>1.69</td>
<td>1.56</td>
<td>2.59</td>
<td>3.50</td>
<td>.07</td>
<td>-0.64</td>
</tr>
</tbody>
</table>

$^a p < .001$.  
$^b p < .005$.  
$^c p < .05$.  
$^d p < .01$.  

Table 9 (continued)
intelligence scores were associated positively with determinant categories 10 and 13 ($p < .05$).

Hypothesis III-A

2: The levels of maturity of the systems of self and of best friends are correlated strongly.

Part 2 of Hypothesis III-A was supported, as well. In general, the correlations between self and friend cognitive-developmental variables were significant. The median correlation was .42.

Hypothesis I-B: Nondelinquents have more positive conceptions of self and of best friends than have delinquents.

Hypothesis I-B was not supported. Delinquency was unpredictable of the evaluative components of self and friend.

Hypothesis II-B

1: The psychopathic delinquency dimension is associated with the most negative conceptions of self and of best friend.

2: The neurotic delinquency dimension is associated with conceptions of self and of best friends which are more positive than those associated with the psychopathy dimensions, but less positive than those associated with subcultural delinquency (i.e., neuroticism is related to negative conceptions, but less strongly than is psychopathy).

Hypothesis II-B was not supported. While both psychopathy and neuroticism were related to several evaluative variables in the expected directions, i.e., negatively, the data did not suggest that psychopathy was
related to more negative evaluations than was neuroticism. (See Table 10.)

Both dimensions were related strongly and negatively to self favorable concepts ($p < .001$). Although both related negatively, neuroticism was associated more strongly with the self evaluative composite ($p < .001$) than was psychopathy ($p < .10$). These were the only significant results found for both dimensions on the same evaluative variable. Additionally, neuroticism was related positively to self and to friend social incompetence concepts ($p < .05$) and self unfavorable concepts ($p < .05$), while psychopathy was related negatively to self socialized concepts ($p < .01$) and positively to self immature concepts ($p < .05$).

Delinquency did not interact with neuroticism and psychopathy in regard to the evaluative variables, with one exception. There was a tendency for delinquents high in psychopathy to express more self unfavorable concepts than low psychopathic delinquents. This relationship was not found with nondelinquents ($p < .10$). (See Tables 10 and 11.)

Several interactional effects are related indirectly to this hypothesis. Delinquents with high psychopathy scores emitted more self differentiation-generalization category 3 (differentiated-generalized) responses than did delinquents with low psychopathy scores. Nondelinquents did not show this pattern ($p < .05$). Delinquents high in neuroticism emitted self differentiation-generalization category 2 (differentiated-nongeneralized) responses less frequently than did delinquents low in neuroticism. Nondelinquents did not display this pattern ($p < .01$). (See Tables 6 and 11.)

These interactions suggest that psychopathic delinquents were likely to see their problems as generalized. Neurotic delinquents were likely to perceive their problems as nonspecific. These relationships appear to be expressing similar issues. Additionally, the delinquents showed a positive
Table 10
Multiple Stepwise Regression Analyses, Using the Forward Selection, on Evaluative Variables

<table>
<thead>
<tr>
<th>Step Entered</th>
<th>Predictor</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>df</td>
<td>MS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Self Evaluative Composite**

<table>
<thead>
<tr>
<th>Step Entered</th>
<th>Predictor</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neur</td>
<td>1,78 8.545 7.72_b 0.09</td>
<td>Neur -.168 65.966 7.72_c</td>
</tr>
<tr>
<td>2</td>
<td>Race</td>
<td>2,77 8.119 6.61 0.15</td>
<td>Neur .158 58.574 7.21_d</td>
</tr>
<tr>
<td>3</td>
<td>Del*VIQ</td>
<td>3,76 7.893 5.60_b 0.18</td>
<td>Neur .162 61.200 7.75_d</td>
</tr>
<tr>
<td>4</td>
<td>Psy</td>
<td>4.75 7.631 5.25_a 0.22</td>
<td>Neur .114 25.035 3.28</td>
</tr>
</tbody>
</table>

**Self Favorable Concepts**

<table>
<thead>
<tr>
<th>Step Entered</th>
<th>Predictor</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neur</td>
<td>1,78 0.069 14.22_a 0.154</td>
<td>Neur .020 0.982 14.22_a</td>
</tr>
<tr>
<td>2</td>
<td>Del*VIQ</td>
<td>2,77 0.066 9.86_a 0.204</td>
<td>Neur .021 1.019 15.48_a</td>
</tr>
</tbody>
</table>

**Self Unfavorable Concepts**

<table>
<thead>
<tr>
<th>Step Entered</th>
<th>Predictor</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neur</td>
<td>1,78 0.055 4.49_d 0.054</td>
<td>Neur .010 0.248 4.49_d</td>
</tr>
<tr>
<td>2</td>
<td>Del*Psy</td>
<td>2,77 0.054 4.00 0.094</td>
<td>Neur .010 0.241 4.50_d</td>
</tr>
</tbody>
</table>

a p < .001.
b p < .005.
c p < .01.
d p < .05.

1 Asterisk indicates interaction effect of two variables.
**Table 10 (continued)**

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>MS</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>error</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Self Socialized Concepts**

1. Race | 1.78 | 0.044 | 6.85<sup>d</sup> | 0.081 | Race | -0.062 | 0.300 | 6.85<sup>d</sup> |
2. Psy | 2.77 | 0.041 | 6.36<sup>c</sup> | 0.142 | Race | -0.073 | 0.393 | 9.51<sup>b</sup> |
3. Del*Race | 3.76 | 0.039 | 6.00<sup>b</sup> | 0.191 | Del*VIQ | 0.008 | 0.270 | 8.00<sup>c</sup> |
|       |     |     |     |    | Psy | -0.011 | 0.226 | 5.47<sup>d</sup> |
|       |     |     |     |    | Race | -0.072 | 0.386 | 9.78<sup>b</sup> |
|       |     |     |     |    | Psy | -0.011 | 0.197 | 4.99<sup>d</sup> |
|       |     |     |     |    | Del*Race | -0.048 | 0.185 | 4.68<sup>d</sup> |

**Self Immature Concepts**

1. Del*VIQ | 1.78 | 0.034 | 8.00<sup>c</sup> | 0.093 | Del*VIQ | 0.008 | 0.271 | 8.33<sup>c</sup> |
2. Race | 2.77 | 0.033 | 6.19<sup>b</sup> | 0.139 | Del*VIQ | 0.008 | 0.132 | 4.07<sup>d</sup> |
3. Psy | 3.76 | 0.031 | 6.15<sup>a</sup> | 0.195 | Del*VIQ | 0.008 | 0.294 | 9.56<sup>b</sup> |
|       |     |     |     |    | Race | 0.042 | 0.188 | 6.12<sup>d</sup> |
|       |     |     |     |    | Psy | 0.010 | 0.165 | 5.36<sup>d</sup> |

**Self Inferior Concepts**

1. VIQ | 1.78 | 0.011 | 4.05<sup>d</sup> | 0.049 | VIQ | 0.015 | 0.044 | 4.05<sup>d</sup> |

**Self Stable Concepts**

1. Race | 1.78 | 0.007 | 6.12<sup>d</sup> | 0.073 | Race | -0.023 | 0.041 | 6.12<sup>d</sup> |

<sup>a</sup> p < .001.
<sup>b</sup> p < .005.
<sup>c</sup> p < .01.
<sup>d</sup> p < .05.

(continued)
Table 10 (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation Predictors in Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>MS</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>error</td>
<td></td>
</tr>
</tbody>
</table>

**Self Socially Competent Concepts**

1. Psy 1.78 0.064 5.18<sup>d</sup> 0.062
2. VIQ 2.77 0.061 5.00<sup>c</sup> 0.115

**Self Socially Incompetent Concepts**

1. Neur 1.78 0.0360 6.28<sup>d</sup> 0.080

**Friend Favorable Concepts**

1. VIQ 1.78 0.071 6.80<sup>d</sup> 0.080
2. Del*Race 2.77 0.069 5.12<sup>c</sup> 0.117

**Friend Unfavorable Concepts**

1. VIQ 1.78 0.067 6.07<sup>d</sup> 0.072
2. Del*Race 2.77 0.065 4.87<sup>d</sup> 0.112

**Friend Stable Concepts**

1. Age 1.78 0.004 11.13<sup>b</sup> 0.125
2. Del*Age 2.77 0.004 7.51<sup>b</sup> 0.165

<sup>b</sup> p < .005.
<sup>c</sup> p < .01.
<sup>d</sup> p < .05.

(continued)
Table 10 (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Entered</th>
<th>Significance of Equation</th>
<th>Predictors in Equation</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>df MS F $R^2$</td>
<td>Predictor b Wt. SS F</td>
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<tr>
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</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Friend Socially Competent Concepts

1  VIQ  1.78  0.054  6.09d  0.072  VIQ  -.042  0.327  6.09d
2  Del*Race  2.77  0.052  4.61d  0.107  VIQ  -.041  0.320  6.11
    Del*Race  .044  0.155  2.97

Friend Socially Incompetent Concepts

1  Neur  1.78  0.042  5.32d  0.064  Neur  .010  0.221  5.32d

$^d_p<.05.$

**KEY:**
- Del = Delinquency.
- Psy = Psychopathy.
- Neur = Neuroticism.
- VIQ = Verbal Intelligence.
Table 11

The b Weights of Predictor Variables Interacting with Delinquency

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Predictor Interaction</th>
<th>Delinquent</th>
<th></th>
<th>Nondelinquent</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>b Wt.</td>
<td>Z</td>
<td>b Wt.</td>
<td>Z</td>
</tr>
<tr>
<td># of repeated concepts</td>
<td>Del*Race</td>
<td>.042</td>
<td>1.98</td>
<td>-.116</td>
<td>3.67&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Self differentiation-generalization category 2</td>
<td>Del*Neur</td>
<td>-.008</td>
<td>0.68</td>
<td>.001</td>
<td>0.03</td>
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<tr>
<td>Self differentiation-generalization category 3</td>
<td>Del*Psy</td>
<td>.016</td>
<td>6.81&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.005</td>
<td>0.37</td>
</tr>
<tr>
<td>Self determinant category 1</td>
<td>Del*Psy</td>
<td>.020</td>
<td>0.26</td>
<td>-.013</td>
<td>0.13</td>
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<tr>
<td>Self determinant category 2</td>
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<td>.078</td>
<td>0.90</td>
<td>-.069</td>
<td>3.10&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
<td>Self determinant category 8</td>
<td>Del*Neur</td>
<td>.037</td>
<td>1.69</td>
<td>-.005</td>
<td>0.11</td>
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<tr>
<td>Self determinant category 15</td>
<td>Del*Neur</td>
<td>-.006</td>
<td>0.01</td>
<td>-.067</td>
<td>2.22</td>
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<td>Del*Psy</td>
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<td>3.58&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.0002</td>
<td>0.00</td>
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<tr>
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<td>Del*Race</td>
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<td>2.28</td>
<td>-.104</td>
<td>0.93</td>
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<tr>
<td>Friend determinant category 15</td>
<td>Del*Neur</td>
<td>-.012</td>
<td>0.05</td>
<td>.211</td>
<td>2.88</td>
</tr>
<tr>
<td>Friend determinant category 15</td>
<td>Del*Psy</td>
<td>.122</td>
<td>5.81&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.184</td>
<td>1.28</td>
</tr>
</tbody>
</table>

<sup>a</sup> p < .005,
<sup>b</sup> p < .01,
<sup>c</sup> p < .05,
<sup>d</sup> p < .10.

The overall interactions are presented in Tables 6, 7, and 10.
Table 11 (continued)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Predictor Interaction</th>
<th>Delinquent</th>
<th></th>
<th></th>
<th>Nondelinquent</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>b Wt.</td>
<td>F</td>
<td></td>
<td>b Wt.</td>
<td>F</td>
</tr>
<tr>
<td>Self evaluative composite</td>
<td>Del*VIQ</td>
<td>-.313</td>
<td>1.28</td>
<td></td>
<td>-.083</td>
<td>2.13d</td>
</tr>
<tr>
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<td>Del*VIQ</td>
<td>-.006</td>
<td>0.07</td>
<td></td>
<td>-.030</td>
<td>3.10d</td>
</tr>
<tr>
<td>Self unfavorable concepts</td>
<td>Del*Psy</td>
<td>.017</td>
<td>5.00^c</td>
<td></td>
<td>-.001</td>
<td>1.10</td>
</tr>
<tr>
<td>Self socialized concepts</td>
<td>Del*Race</td>
<td>-.118</td>
<td>9.69^a</td>
<td></td>
<td>-.032</td>
<td>0.34</td>
</tr>
<tr>
<td>Self immature concepts</td>
<td>Del*VIQ</td>
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<td>-.014</td>
<td>0.65</td>
</tr>
<tr>
<td>Friend favorable concepts</td>
<td>Del*Race</td>
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<td>0.66</td>
<td></td>
<td>-.204</td>
<td>6.43^c</td>
</tr>
<tr>
<td>Friend unfavorable concepts</td>
<td>Del*Race</td>
<td>-.037</td>
<td>0.63</td>
<td></td>
<td>.199</td>
<td>7.05^c</td>
</tr>
<tr>
<td>Friend stable concepts</td>
<td>Del*Age</td>
<td>.003</td>
<td>7.64^b</td>
<td></td>
<td>.0003</td>
<td>0.13</td>
</tr>
<tr>
<td>Friend socially competent concepts</td>
<td>Del*Race</td>
<td>-.118</td>
<td>0.69</td>
<td></td>
<td>-.184</td>
<td>6.37^c</td>
</tr>
</tbody>
</table>

^a p < .005.
^b p < .01.
^c p < .05.
^d p < .10.

**KEY:**
- Del = Delinquency.
- Psy = Psychopathy.
- Neur = Neuroticism.
- VIQ = Verbal Intelligence.
relationship between neuroticism and self determinant category 8 (other's evaluation of respondent), while nondelinquents did not show this relationship ($p < .05$). (See Tables 7 and 11.) This indicates that neurotic delinquents were concerned more with how others perceived them than were delinquents with low neuroticism scores.

Hypothesis III-B: The evaluative component of self concepts is correlated positively with the evaluative component of impressions of best friends.

Hypothesis III-B was not supported. (See Table 12.) Contrary to the hypothesis, self evaluations were more negative than friend evaluations. Self impressions contained more unfavorable ($p < .05$), inferior ($p < .005$), and unstable ($p < .001$) concepts and fewer socially competent concepts ($p < .01$).

Intercorrelations Among Dependent Variables

The intercorrelation matrix for the cognitive-developmental variables appears in Table 13. There were significant intercorrelations among the variables assessing differentiation, i.e., the number of determinant categories used, the number of determinants, the number of concepts emitted, and the number of characteristics emitted on Task A. Since the number of determinant categories and the number of determinants are conceptually and operationally allied, it was not surprising to find these variables correlated strongly (self $r = .67$, friend $r = .70$, $p < .001$). The friend intercorrelations were stronger than those for the self between Task A characteristics and the number of determinant categories (self $r = .11$, N.S.; friend $r = .21$; $p < .10$), the number of determinant categories and of
Table 12
Within-Subject Differences Between the Means of Self and Friend Evaluative Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Self</th>
<th>Friend</th>
<th>z</th>
<th>Self</th>
<th>Friend</th>
<th>F(1,78)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(\bar{x})</td>
<td>SD</td>
<td></td>
<td>(\bar{x})</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Evaluate composite</td>
<td>0.76</td>
<td>3.04</td>
<td></td>
<td>1.24</td>
<td>3.18</td>
<td>0.19°</td>
</tr>
<tr>
<td>Favorable concepts</td>
<td>0.58</td>
<td>0.28</td>
<td></td>
<td>0.62</td>
<td>0.28</td>
<td>0.22d</td>
</tr>
<tr>
<td>Unfavorable concepts</td>
<td>0.42</td>
<td>0.24</td>
<td></td>
<td>0.35</td>
<td>0.27</td>
<td>0.23d</td>
</tr>
<tr>
<td>Socialized concepts</td>
<td>0.18</td>
<td>0.22</td>
<td></td>
<td>0.14</td>
<td>0.16</td>
<td>0.32b</td>
</tr>
<tr>
<td>Immature concepts</td>
<td>0.17</td>
<td>0.19</td>
<td></td>
<td>0.15</td>
<td>0.18</td>
<td>0.40a</td>
</tr>
<tr>
<td>Confident concepts</td>
<td>0.11</td>
<td>0.16</td>
<td></td>
<td>0.12</td>
<td>0.13</td>
<td>0.29c</td>
</tr>
<tr>
<td>Inferior concepts</td>
<td>0.06</td>
<td>0.11</td>
<td></td>
<td>0.02</td>
<td>0.05</td>
<td>0</td>
</tr>
<tr>
<td>Stable concepts</td>
<td>0.04</td>
<td>0.08</td>
<td></td>
<td>0.03</td>
<td>0.07</td>
<td>0.29c</td>
</tr>
<tr>
<td>Unstable concepts</td>
<td>0.13</td>
<td>0.13</td>
<td></td>
<td>0.08</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Socially competent</td>
<td>0.32</td>
<td>0.26</td>
<td></td>
<td>0.42</td>
<td>0.24</td>
<td>0.22e</td>
</tr>
<tr>
<td>Socially incompetent</td>
<td>0.23</td>
<td>0.20</td>
<td></td>
<td>0.22</td>
<td>0.21</td>
<td>0.26d</td>
</tr>
</tbody>
</table>

\[ a_{p<.001}. \]
\[ b_{p<.005}. \]
\[ c_{p<.01}. \]
\[ d_{p<.05}. \]
\[ e_{p<.10}. \]
Table 13

Intercorrelations Among Cognitive-Developmental Variables on Self and on Friend Impressions

<table>
<thead>
<tr>
<th>Variables</th>
<th># Task A Char.</th>
<th># Det. Cats.</th>
<th># Dets.</th>
<th># Concepts</th>
<th>Level Abstr.</th>
<th>Level Integ.</th>
<th># Change R.</th>
<th># Repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td># Task A Char.</td>
<td>-</td>
<td>.21&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.23&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.22&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.07</td>
<td>-.01</td>
<td>.02</td>
<td>-.07</td>
</tr>
<tr>
<td># Det. Cats.</td>
<td>.11</td>
<td>-</td>
<td>.70&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.30&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.38&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.20&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.23&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.32&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td># Dets.</td>
<td>.25&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.67&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-</td>
<td>.66&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.46&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.21&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.35&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.36&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td># Concepts</td>
<td>.24&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.13</td>
<td>.27&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-</td>
<td>.38&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.26&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.29&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-.33&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Level Abstr.</td>
<td>.17</td>
<td>.34&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.34&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.12</td>
<td>-</td>
<td>.22&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.22&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.11</td>
</tr>
<tr>
<td>Level Integ.</td>
<td>-.11</td>
<td>.04</td>
<td>.12</td>
<td>.09</td>
<td>.25&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-</td>
<td>.21&lt;sup&gt;e&lt;/sup&gt;</td>
<td>-.10</td>
</tr>
<tr>
<td># Change R.</td>
<td>.001</td>
<td>.12</td>
<td>.16</td>
<td>-.08</td>
<td>.24&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.08</td>
<td>-</td>
<td>-.29&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td># Repeated</td>
<td>-.13</td>
<td>-.19&lt;sup&gt;e&lt;/sup&gt;</td>
<td>-.28&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.05</td>
<td>-.04</td>
<td>-.08</td>
<td>-.19&lt;sup&gt;e&lt;/sup&gt;</td>
<td>-</td>
</tr>
</tbody>
</table>

Self Level Abstr. with friend variables

<table>
<thead>
<tr>
<th>Variables</th>
<th># Task A Char.</th>
<th># Det. Cats.</th>
<th># Dets.</th>
<th># Concepts</th>
<th>Level Abstr.</th>
<th>Level Integ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.18</td>
<td>.34&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.59&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.40&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-</td>
<td>.24&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.21&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> p < .001.
<sup>b</sup> p < .005.
<sup>c</sup> p < .01.
<sup>d</sup> p < .05.
<sup>e</sup> p < .10.

1 Intercorrelations among self variables appear on bottom left side of matrix, below the diagonal. Intercorrelations among friend variables appear on top right side of matrix, above the diagonal.

KEY:

# Task A Char. = Number of Task A Characteristics.
# Det. Cats. = Number of Determinant Categories.
# Dets. = Number of Determinants.
# Concepts = Number of Concepts.
Level Abstr. = Level of Abstraction.
Level Integ. = Level of Integration.
# Change R. = Number of Change Responses.
# Repeated = Number of Repeated Concepts.
concepts (self $r = .13$, N.S.; friend $r = .30$, $p < .01$), and the number of concepts and of determinants (self $r = .27$, $p < .05$; friend $r = .66$, $p < .001$). The other self and friend intercorrelations were comparable.

The level of abstraction was also correlated significantly with the measures of differentiation, with the exception of Task A characteristics (self $r = .17$; friend $r = .07$, N.S.) and the number of self concepts ($r = .12$, N.S.). Apart from these exceptions, the range of intercorrelations between abstraction and the differentiation variables was $r = .34$ ($p < .005$) to $r = .46$ ($p < .001$). Interestingly, self abstraction was correlated as strongly with the friend dependent variables as with the corresponding self variables. The self and friend levels of abstraction were correlated comparably with the friend dependent variables. No other variable showed a self-friend crossover effect. Abstraction correlated significantly with the level of integration (e.g., self $r = .25$, $p < .05$) and with the number of change responses (e.g., self $r = .24$, $p < .05$), but not with the number of repeated concepts (e.g., self $r = -.04$).

The friend level of integration was correlated marginally with the friend differentiation variables. There was one significant correlation with the number of concepts ($r = .26$, $p < .05$) and two correlations showing tendencies, i.e., with the number of determinant categories, $r = .21$, and with the number of determinants, $r = .21$. In contrast, the self level of integration was not correlated with any of the self differentiation variables. Similarly, friend integration showed a tendency to correlate with the friend number of change responses ($r = .21$), while this relationship did not appear for self ($r = .08$).

The number of repeated concepts ($X = .25$) showed significant negative intercorrelations with three of the four friend differentiation variables
(i.e., with the number of determinant categories, $r = -0.32$, $p < 0.005$, with the number of determinants, $r = -0.36$, $p < 0.001$, and with the number of concepts, $r = -0.33$, $p < 0.005$). The number of repeated concepts correlated less strongly with the corresponding self variables ($r = -0.19$, $p < 0.10$, $r = -0.28$, $p < 0.05$, and $r = -0.05$, N.S., respectively). Conversely, despite similar patterns, the self evaluative concepts were correlated more strongly with the number of repeated concepts than were the friend evaluative concepts. (See Table 14.) The direction of the correlations indicate that the more positive evaluative concepts tended to be repeated for both self and friend (e.g., self favorable concepts, $r = 0.37$, $p < 0.001$; self socially competent concepts, $r = 0.51$, $p < 0.001$; self unfavorable concepts, $r = -0.27$, $p < 0.05$). These data suggest that repeated concepts may have been influenced more by cognitive-developmental aspects of friend impressions than of self impressions, as well as being more influenced by self evaluations than by friend evaluations. However, it is clear that self cognitive-developmental variables and friend evaluative variables were influential, only less so than their counterparts.

The second measure of egocentrism, i.e., the number of concepts based solely on self-friend interactions, did not correlate with any of the other dependent variables, including the conceptually allied variable of repeated concepts. Apparently, the incidence of concepts based solely on self-friend interactions was too infrequent to be useful ($\bar{x} = 0.08$).

Intercorrelations among the categories classifying the nature of the change responses appear in Table 15. Results should be viewed cautiously because of the differential response rate to Task D. The self and friend intercorrelational patterns were similar. The patterns found suggest that, with the exception of category 3 (aptitudes), the use of one content
Table 14

Intercorrelation Matrices Between the Number of Repeated Concepts and the Evaluative Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Self</th>
<th>Friend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r$</td>
<td>Prob.&lt;</td>
</tr>
<tr>
<td>Evaluative composite</td>
<td>.33</td>
<td>.005</td>
</tr>
<tr>
<td>Favorable concepts</td>
<td>.37</td>
<td>.001</td>
</tr>
<tr>
<td>Unfavorable concepts</td>
<td>-.27</td>
<td>.05</td>
</tr>
<tr>
<td>Socialized concepts</td>
<td>.29</td>
<td>.01</td>
</tr>
<tr>
<td>Immature concepts</td>
<td>-.14</td>
<td>NS</td>
</tr>
<tr>
<td>Confident concepts</td>
<td>-.01</td>
<td>NS</td>
</tr>
<tr>
<td>Inferior concepts</td>
<td>-.08</td>
<td>NS</td>
</tr>
<tr>
<td>Stable concepts</td>
<td>.13</td>
<td>NS</td>
</tr>
<tr>
<td>Unstable concepts</td>
<td>-.28</td>
<td>.05</td>
</tr>
<tr>
<td>Socially competent concepts</td>
<td>.51</td>
<td>.001</td>
</tr>
<tr>
<td>Socially incompetent concepts</td>
<td>-.12</td>
<td>NS</td>
</tr>
</tbody>
</table>
Table 15

Intercorrelations Among Content Categories and Differentiation-Generalization Categories

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cont. Cat. 1</th>
<th>Cont. Cat. 2</th>
<th>Cont. Cat. 3</th>
<th>Cont. Cat. 4</th>
<th>Diff.-Gen. 1</th>
<th>Diff.-Gen. 2</th>
<th>Diff.-Gen. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Cont. Cat. 1</td>
<td>-</td>
<td>-.36&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.07</td>
<td>-.57&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.42&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.49&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.19</td>
</tr>
<tr>
<td>Cont. Cat. 2</td>
<td>-.26&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-</td>
<td>-.13</td>
<td>-.50&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.22&lt;sup&gt;e&lt;/sup&gt;</td>
<td>.27&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.13</td>
</tr>
<tr>
<td>Cont. Cat. 3</td>
<td>.07</td>
<td>-.10</td>
<td>-</td>
<td>-.18</td>
<td>-.09</td>
<td>.14</td>
<td>-.11</td>
</tr>
<tr>
<td>Cont. Cat. 4</td>
<td>-.72&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.41&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.31&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-</td>
<td>.60&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.72&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.32&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Differentiation-Generalization Category</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diff.-Gen. 1</td>
<td>-.20&lt;sup&gt;e&lt;/sup&gt;</td>
<td>-.17</td>
<td>-.03</td>
<td>.30&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-</td>
<td>-.85&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.16</td>
</tr>
<tr>
<td>Diff.-Gen. 2</td>
<td>.33&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.23&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.09</td>
<td>-.46&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.83&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-</td>
<td>-.39&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Diff.-Gen. 3</td>
<td>-.26&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-.06</td>
<td>-.12</td>
<td>.31&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-.18</td>
<td>-.29&lt;sup&gt;d&lt;/sup&gt;</td>
<td>-</td>
</tr>
</tbody>
</table>

<sup>a</sup> p < .001.<br>
<sup>b</sup> p < .005.<br>
<sup>c</sup> p < .01.<br>
<sup>d</sup> p < .05.<br>
<sup>e</sup> p < .10.

* Content Category.
** Differentiation-Generalization Category.

1 Self intercorrelations appear in bottom left side of matrix, below the diagonal.
Friend intercorrelations appear in top left side of matrix, above the diagonal.
category minimized the use of the others. It appears that a response set may have been established by the respondents, although this set did not carry over from self to friend or vica versa. Differentiation-generalization category 2 (differentiated-nongeneralized) was correlated negatively with both differentiation-generalization categories 1 (nondifferentiated-generalized; e.g., friend $r = -.85; p < .001$) and 3 (e.g., friend $r = -.39; p < .005$), while categories 1 and 3 (differentiated-generalized) were uncorrelated. Thus, change scores tended to be either generalized or specific, but it was unlikely for both types of responses to appear together.

The intercorrelational pattern between the differentiation-generalization categories and the content categories were similar for both self and friend. Major friend change responses seem to have been more diffuse than those for self. Content category 4 (covert processes) was correlated positively with differentiation-generalization categories 1 and 3 (self $r = .30$ and .31, $p < .01$, respectively; friend $r = .60$, $p < .001$, and .31, $p < .01$, respectively). This indicates that more generalized change responses were associated with changes in covert and psychological processes. The converse conclusion can be drawn from the relationships involving change of superficial, external features, i.e., content category 1. Content category 1 was correlated negatively with differentiation-generalization categories 1 (self $r = -.20$, $p < .10$; friend $r = -.42$, $p < .001$) and 3 (self $r = -.26$, $p < .05$; friend $r = -.19$, N.S.) and positively with category 2 (self $r = .33$, $p < .005$; friend $r = .49$, $p < .001$). In addition, differentiation-generalization category 2 was correlated negatively with content category 4 (self $r = -.46$, $p < .001$; friend $r = -.72$, $p < .001$).

The relationships between the differentiation-generalization categories and the major cognitive-developmental variables were supportive of
developmental assumptions for self, but not for friend, impressions. Self
differentiation-generalization category 3 was related positively to the
self number of determinants ($I^2 = .37, p < .001$), to the self number of
determinant categories ($I^2 = .21, p < .01$), and to the self level of abstraction ($I^2 = .41, p < .001$), while self differentiation-generalization category
1 was related negatively to the self number of determinant categories
($I^2 = -.30, p < .01$) and to the self level of abstraction ($I^2 = -.28, p < .05$).
The corresponding friend correlations were not significant. Among the
content categories, only self content category 4 showed even a tendency to
be related to the major cognitive developmental variables (with the self
level of abstraction, $I^2 = .20, p < .10$). This lack of correlations is not
that surprising since the content categories are conceptually weak develop-
mental variables.

While the evaluative variables were unrelated to the major cognitive-
developmental variables (i.e., differentiation, abstraction, and integra-
tion), these variables were related to the change responses, which are
linked conceptually to both cognitive development and evaluations. The
friend number of change responses was correlated with several of the
friend evaluative variables in the expected direction. (See Table 16.)
The friend number of change responses was correlated negatively with the
friend number of favorable ($I^2 = -.36, p < .001$) and socially competent
($I^2 = -.33, p < .005$) concepts, and positively with the friend unfavorable
($I^2 = .36, p < .005$), inferior ($I^2 = .26, p < .05$), and socially incompetent
($I^2 = .32, p < .005$) concepts. The corresponding self relationships showed
weaker tendencies in the same directions.

Significant intercorrelations existed between the evaluative concepts
and the classification of change responses. Similar patterns were found
Table 16

Intercorrelation Matrices Between the Number of Change Responses and the Evaluative Variables

<table>
<thead>
<tr>
<th>Evaluative Variables</th>
<th>Self # of Change Responses</th>
<th>Friend # of Change Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( r )</td>
<td>( r )</td>
</tr>
<tr>
<td>Composite evaluations</td>
<td>.18</td>
<td>NS</td>
</tr>
<tr>
<td>Favorable concepts</td>
<td>-.21</td>
<td>.10</td>
</tr>
<tr>
<td>Unfavorable concepts</td>
<td>.19</td>
<td>.10</td>
</tr>
<tr>
<td>Socialized concepts</td>
<td>.03</td>
<td>NS</td>
</tr>
<tr>
<td>Immature concepts</td>
<td>.19</td>
<td>.10</td>
</tr>
<tr>
<td>Confident concepts</td>
<td>-.01</td>
<td>NS</td>
</tr>
<tr>
<td>Inferior concepts</td>
<td>.19</td>
<td>.10</td>
</tr>
<tr>
<td>Stable concepts</td>
<td>.10</td>
<td>NS</td>
</tr>
<tr>
<td>Unstable concepts</td>
<td>.02</td>
<td>NS</td>
</tr>
<tr>
<td>Socially competent concepts</td>
<td>-.19</td>
<td>.10</td>
</tr>
<tr>
<td>Socially incompetent concepts</td>
<td>.17</td>
<td>NS</td>
</tr>
</tbody>
</table>
for both self and friend impressions. The evaluative composite was correlated negatively with content category 4 (self $r = -.26, p < .05$; friend $r = -.39, p < .005$) and positively with differentiation-generalization category 2 (self $r = .23, p < .05$; friend $r = .27, p < .05$). The self number of unfavorable concepts was correlated negatively with differentiation-generalization category 2 ($r = -.23, p < .05$) and positively with differentiation-generalization category 3 ($r = .24, p < .05$). Self inferior concepts was correlated negatively with differentiation-generalization category 2 ($r = -.22, p < .10$) and positively with differentiation-generalization category 3 ($r = .41, p < .001$). The friend evaluative composite was associated negatively with friend differentiation-generalization category 1 ($r = -.25, p < .05$) and positively with differentiation-generalization category 2 ($r = .27, p < .05$). Friend favorable concepts was correlated negatively with content category 4 ($r = -.42, p < .001$) and positively with differentiation-generalization category 2 ($r = .29, p < .05$). The opposite trends appear for friend unfavorable concepts ($r = .41, p < .001$; $r = -.27, p < .05$). The number of friend inferior concepts was correlated positively with friend differentiation-generalization category 1 ($r = .26, p < .05$) and negatively with differentiation-generalization category 2 ($r = -.29, p < .05$). Friend social competence was related negatively to differentiation-generalization category 3 ($r = -.26, p < .05$) and with content category 4 ($r = -.32, p < .01$). The number of friend socially incompetent concepts was correlated positively with content category 4 ($r = -.32, p < .01$). The number of friend socially incompetent concepts was correlated positively with content category 4 ($r = .34, p < .01$). In summary, negative conceptions of self and friend were related to a desire to change major personality features of the friend.
The Significance of Age, Race, and Verbal Intelligence

Statistically significant correlations were obtained between verbal intelligence scores and the two delinquency dimensions. Verbal intelligence was related negatively to psychopathy ($r = -0.25$, $p < 0.05$) and positively to neuroticism ($r = 0.23$, $p < 0.05$). In addition, there was a tendency for noncaucasians to be lower in psychopathy ($r = -0.19$, $p < 0.10$). Race was unassociated with neuroticism ($r = 0.07$) and age was unrelated to both neuroticism ($r = 0.01$) and psychopathy ($r = 0.09$). Although statistically significant relationships appeared, it is reasonable to assert that these relationships had very little influence on the study's investigations. First, the correlations obtained were relatively small. Second, the stepwise regression method of data analysis partials out covariance between predictor variables.

There were only isolated instances of significant relationships between the cognitive-developmental variables and age, race, and verbal intelligence scores. (See Table 6.) Age was related positively to the friend number of determinants ($p < 0.05$), while verbal intelligence scores were related positively to the self level of abstraction ($p < 0.10$). These results are consistent with theory. Age was related negatively to self content category 2 (specific behaviors; $p < 0.05$) and verbal intelligence was related positively to differentiation-generalization category 1 ($p < 0.05$). These results are confounded by the influence of evaluations on the change responses. (See Table 16.) There was an interactional effect ($p < 0.01$) indicating that nondelinquents with higher verbal intelligence scores emitted fewer self determinant category 2 responses than did nondelinquents with low scores. A less pronounced trend in the opposite direction was
found for delinquents. (See Tables 7 and 11.) A delinquent-by-race interaction \((p < .10)\) found that noncaucasian nondelinquents emitted more repeated concepts than did caucasian nondelinquents. The delinquent sample showed a less pronounced trend in the opposite direction.

Age was unrelated to evaluations with one exception (i.e., friend stability concepts, \(p < .005\)). In regard to evaluations, verbal intelligence scores were associated positively with self inferior and friend unfavorable concepts \((p < .05)\) and negatively with self socially competent and friend favorable concepts \((p < .05)\). (See Table 10.) While verbal intelligence scores were associated negatively with self favorable concepts, the relationship was more pronounced for nondelinquents than for delinquents \((p < .05)\). Self immature concepts showed a small negative relationship with verbal intelligence scores in the nondelinquent sample, but was unrelated in the delinquent sample \((p < .05)\). (See Tables 10 and 11.) These results suggest that adolescents with higher verbal intelligence scores, particularly within the nondelinquent sample, were more critical of self and friends than were those with lower scores.

Race showed several relationships with the evaluative concepts. (See Tables 10 and 11.) Caucasians emitted more self immature concepts \((p < .05)\). Noncaucasians were higher in self evaluative composite \((p < .05)\) and emitted more self stable and self socialized concepts \((p < .05)\). Noncaucasian delinquents emitted more self socialized concepts than did caucasian delinquents, while nondelinquents did not show this pattern \((p < .05)\). Noncaucasian nondelinquents emitted more friend favorable concepts, while caucasian nondelinquents emitted more friend unfavorable concepts. The opposite trends were not found for delinquents. Thus,
noncaucasians perceived themselves and their friends more positively than did caucasians.
Chapter IV

DISCUSSION

The primary purposes of this study were to assess three developmental hypotheses concerning the relationships of, one, developments in self and friend cognition to delinquent status, two, developments in self and friend cognition to three dimensions of delinquency, i.e., psychopathy, neuroticism, and subcultural delinquency, and three, self to friend cognitive developments. Delinquent status was found to be unrelated to developments in self and friend cognition. Psychopathy was related to deficits in these developments, although some discrepancies emerged. Neuroticism was unassociated with the developmental variables. The subcultural delinquency dimension was not extracted from a factor analysis and was excluded from subsequent analyses. The self responses were more mature than the friend responses. In addition to the above primary concerns, there were three hypotheses concerning the relationships of, one, self and friend evaluations to delinquent status, two, self and friend evaluations to psychopathy and neuroticism, and three, self to friend evaluations. The data did not support a relationship between delinquency and evaluations. Psychopathy and neuroticism were both related negatively to self, but not friend, evaluations, forming two distinct patterns. Subjects were more critical of self than of friends.

The following discussion attempts to integrate these results with other research and theory. The discussion is divided into five sections.
The first section discusses the relationship between the self and the friend data, presenting a developmental model of self and social cognition. The model is an extension of a previous conceptualization of the development of the self system (Bernstein, 1977). It is being presented in an effort to integrate the data with developmental theory. The second section investigates the failure to confirm the delinquency hypotheses. The third section presents data pertaining to Quay and Peterson's dimensions of delinquency. In light of the findings, the term, "deviance", replaces the term, "delinquency", i.e., dimensions of deviance. The psychopathy and neuroticism data are discussed in terms of the aforementioned developmental model and of personality characteristics associated with the dimensions. A synthesis of the developmental and personality positions is offered. The fourth section discusses the need for validity research on the developmental model presented in this discussion and extensions of the study's methodology for future research in self and social cognition. The fifth section is a summary of the results and conclusions.

Self and Peer Cognition

Consistent with expectations, self cognition was generally more mature than friend cognition. However, there were two central cognitive-developmental variables, i.e., the level of integration and the number of concepts, which did not show significant differences between self and friend impressions. While one may contend that these nonsignificant relationships indicate the empirical inadequacy of these variables, these findings can be incorporated into a developmental model.
The model suggests that developments in self and social cognition are sequenced temporally, such that self developments precede developments in conceptualizing others. Developments within a domain are also sequenced temporally, proceeding from abstraction to differentiation to integration. Developments in the capacity for abstraction are necessary, although not sufficient, for developments in differentiation and integration. Logically, developments in differentiation precede developments in integration, since the latter capacity involves the organization of diverse, i.e., differentiated, behaviors and concepts. During the phase of emergence, one concentrates on developing the new capacity, with negligible generalization effects occurring. After consolidation has been completed, a capacity can be applied consistently to adjoining capacities. Therefore, once abstraction is consolidated, it can encourage developments in differentiation and integration, as well as generalizing beyond the self to influence social cognition. Obviously, this process representation is static. There are extensive overlaps in development, as well as different rates of development, in diverse self and social regions. For example, as Selman (1976) suggests, a person having interactional difficulties with peers may be delayed in conceptualizing peers relative to his conceptualization of adults. This person may also employ delayed cognitive reasoning in the area of the self system pertaining to peers.

The central role of abstraction in development, particularly during adolescence, has been postulated by developmentalists (Harvey et al., 1961; Inhelder and Piaget, 1958). Research investigating the self system has supported this position, finding strong correlations between abstraction and both differentiation and integration (Bernstein, 1977). The
present study found a similar pattern of relationships among these variables. The correlations between abstraction and the measures of differentiation were as strong as the intercorrelations among the differentiation measures. In addition, the self level of abstraction was correlated as strongly with the friend cognitive-developmental variables as the friend level of abstraction was correlated with those variables.

In criticism of this model, the operational definitions of abstraction, differentiation, and integration, as defined previously in this study, serve a confounding role, creating spuriously high intercorrelations among the measures of these constructs. However, the conceptual interdependence of these three variables would appear to preclude the formulation of orthogonal definitions for these constructs. In actuality, the overlap in the operational definitions of abstraction, differentiation, and integration may represent their interrelationships validly.

The evidence pertaining to the number of concepts emitted is consistent with other research (Bernstein, 1977; Signell, 1976). Signell, employing subjects ages 9 through 16, found that developmental advances in social cognition were attained by constructing more complex concepts, rather than by the acquisition of new concepts. In addition, Bernstein (1977) found developmental changes in abstraction, differentiation, and integration to occur between late adolescence and early adulthood, i.e., between ages 15 and 20. A synthesis of these results is supportive indirectly of the hypothesis that developments in abstraction precede those in differentiation and integration. Developments in abstract reasoning may allow one to be cognizant of more determinants of behavior, which would generate more complex concepts, which would then be integrated
into an increasingly more complex system. Abstraction plays a mediating role at every step in this process.

A logical, although empirically unconfirmed, contention is that a strong correlational cluster among conceptually allied variables is indicative of cognitive activity during a consolidating phase. After consolidation has been completed, the cluster of variables would become less tightly allied. This hypothesis is suggested by this study's data. The friend intercorrelations among the central differentiation measures were stronger than the corresponding self intercorrelations. Similarly, the correlations of the differentiation variables with the level of integration were stronger for friend impressions than for self impressions. This suggests that the differentiation and the integration of peer impressions were in the process of being consolidated. Consistent with the model, self differentiation and integration appear to be in a less active phase. Supporting this contention, the psychopathy data, to be discussed in greater detail in a subsequent section of the discussion, indicate that the developmentally appropriate cognitive activity in the self system involves the emergence of abstraction, while the developmentally appropriate cognitive activity in peer impressions is focused upon differentiation and integration.

Despite a similar pattern of intercorrelations among the cognitive-developmental variables, the correlations obtained in the present study were weaker than those obtained by Bernstein (1977). Two sample variables, age and psychopathology, may have contributed to the weaker intercorrelations in the present study. The age range in the earlier study, approximately ages 10 to 20, is sufficiently broad to allow age differences to emerge. The shorter age span of the present study, approximately three
years, is more vulnerable to error variance, obscuring age differences. This is supported by the ineffectiveness of age as a predictor in this study.

Although the lack of empirical evidence precludes asserting conclusively that the present sample was more disturbed psychologically than the earlier one, sample differences suggest this strongly. The earlier sample contained middle class subjects with above average intelligence scores. The present sample contained lower and working class delinquents and nondelinquents who were performing below average intellectually and had psychopathy and neuroticism scores higher than the nondelinquent norms of Quay and Peterson (1968). If it is a valid assumption that the present sample was psychologically more disturbed than the earlier sample (Bernstein, 1977), then one may hypothesize that the weaker intercorrelations may be associated with the disorganizing influence of psychopathology on cognition (e.g., Selman, 1976). Psychopathology may make it difficult for a person to employ cognitive capabilities consistently, thereby weakening the intercorrelations among the cognitive-developmental variables. The psychopathy data, which indicate asynchronous developments in self and peer cognition, are consistent with this hypothesis. Thus, the hypothesized masking influence of a narrow age range and of psychopathology upon self and peer cognition has received some support from evidence obtained in this study.

The results indicate that evaluations of self were more negative than those of friends. In addition, there was a positive relationship between verbal intelligence scores and unfavorable self concepts. Within the present model, these data suggest that greater criticalness accompanies developmental advances. This may be attributable to the greater
awareness of polarity with development. The recognition of inconsistencies in behavior may lead to greater dissatisfaction. Although the subjects in this study were functioning predominantly at abstraction level 3 (absolute dispositional concepts), many expressed concepts indicative of abstraction level 4 (polarity recognized). Emergence into the polarity mode of abstract reasoning may create dissonance. Perhaps after consolidation in the subsequent mode of reasoning, abstraction level 5 (resolution of polarity), one can become more accepting of personal shortcomings, while appreciating one's assets and strengths. This model suggests that an inverted U-shaped curve may best represent the relationship between criticalness and normal development. Criticalness increases with development, peaks during adolescence, and declines during early adulthood.

The psychopathy and neuroticism data indicate the inadequacy of such a simple relationship. Although both psychopathy and neuroticism were associated with negative self evaluations, the former was related to developmentally inferior responses while the latter was not. Developmental studies concerning the disparity between self and ideal-self images suggest a resolution of these data. While developments in role taking ability have been related positively to a greater disparity between self and ideal-self images (Katz and Zigler, 1967; Katz, Zigler, and Zalk, 1975; Leahy and Huard, 1976; Zigler, Balla, and Watson, 1972), this increase in disparity has been associated with changes in the ideal-self image, rather than with changes in the self image (Leahy and Huard, 1976). Thus, the source of the negative self evaluations may be attributable to raising one's goals if one is developing normally, but to lowering one's self image if one is emotionally disturbed.
In conclusion, the developmental model of self and social cognition posited in this discussion appears to integrate this study's findings with other research and theory. Obviously, further longitudinal research is necessary to assess the validity of this model.

Delinquent Status as a Predictor

Contrary to the hypotheses, the evidence indicates clearly that delinquent status was an ineffective discriminator of responses to self- and friend-referent tasks. Stating the results differently, relative to a nondelinquent control group, delinquents were not found to be developmentally delayed in self and peer cognition or to have low self and peer evaluations. Interactions of delinquency with other predictors were inconsistent and had very little predictive value.

These unexpected results compel an inspection of potential sources of error variance. A review of the sample selection procedures indicates that the two samples were clearly distinct from one another in regard to delinquent status. A minimum criterion of two adult index offenses for inclusion in the delinquent sample would appear to assure that this sample was comprised of delinquents. Although it is impossible to cite exact statistics because the case histories were incomplete frequently, it was clear that the majority of the youths in the delinquent sample had been arrested more than twice. Reports indicate that the probability of recidivism increases disproportionately with each additional arrest (Jesness, 1977; Wolfgang, Figlio, and Sellin, 1972). The screening process for the nondelinquent sample also appears to have been adequate. A self-report delinquency measure was employed to screen individuals who
had been arrested previously or had engaged in excessive delinquent activities. While most of the nondelinquent subjects committed petty misdemeanors, their responses distinguished them clearly from the delinquent sample. Self-report delinquency measures have been employed extensively and have discriminated effectively between delinquents and nondelinquents (e.g., Empey and Erickson, 1966). In addition, age, verbal intelligence, and race were controlled. Therefore, sampling error does not appear to be evident. Since the construct validity of the dependent variables was supported by the adequate sensitivity of the measures, e.g., obtaining within-subject differences between the self and friend responses, the source of discrepancy between the data and the hypotheses does not appear to be methodologically-based. The literature, upon which the hypotheses were derived, remains as the most viable source of error.

There is a dearth of delinquency research in the development of self and person perception. Perspective taking is the most closely allied area of research in delinquency. Gough's (1948) theory, elaborated previously in the literature review, contends that self awareness is based upon the capacity of role taking. Conceptually, perspective taking is fundamental to the formation of impressions about others. As indicated in the previous literature review, despite the majority of studies reporting that delinquents were deficient in role taking relative to nondelinquents, there was a sufficient number of discrepancies to cast doubt upon the validity of this literature. Additionally, an inspection of the sampling procedures employed by these studies reveals that sampling errors abound, i.e., the neglect, or the inadequate control, of intelligence and SES factors (Baker and Sarbin, 1956; Chandler, 1973;
Chandler et al., 1974; Gough and Peterson, 1952; Rotenberg, 1974). The only remaining reasonably well-controlled study of a nondifferentiated delinquent sample obtained equivocal results (McColgan, 1976), attesting to the meagerness of the empirical foundation for the present study's hypothesis that delinquents would conceptualize self and friend immaturity.

In contrast, the evidence obtained in this study appears to conflict with a considerable body of delinquency research in the evaluative realm. While the overwhelming majority of research has found that delinquents have lower self evaluations, the present study found no differences between delinquents and nondelinquents in evaluations. Methodological differences between this study and the typical self evaluation study may be responsible for this discrepancy. Typically, self evaluations are assessed by standardized instruments. In the present study, subjects selected their own frame of reference and their own terminology in response to the self- and friend-referent tasks. Therefore, subjects filtered selectively the information to be shared. However, it is doubtful that deceptiveness contributed to the discrepancy. If a subject wanted to be deceptive, it would be easier to falsify a standardized instrument providing the response choices, than to falsify an instrument that provides few cues of normative behavior. It is more reasonable to assume that the free response instrument may be eliciting a different universe of data than the stimulus items on standardized instruments.

Redl and Wineman (1951) hypothesized that delinquents possess positive self concepts in some domains. There has been some empirical support for this hypothesis (Culbertson, 1976; Fannin and Clinard, 1965; Gold and Mann, 1972). In fact, Culbertson's data suggest that one institutional
effect may be to enhance the delinquent's self esteem. Many of the explicit and implicit norms which exist within an institution can actually encourage a delinquent to acquire positive self concepts, although these attitudes may be viewed disdainfully by the dominant society (Bartollas, Miller, and Dinitz, 1976). Incarcerated delinquents are well aware of the "game" the staff expects them to play. Those who play the game earn an early release, as well as positive reinforcement from the staff along the way. Others choose to earn status among their peers, rather than play the game, which is also reinforcing. There are some youths who can play the game while retaining status within the peer group. An incarcerated delinquent explained this system lucidly:

In here, I just fit into the program. All you gotta do is be on the man's side. You gotta suck it up. Once you get a bad name, all they see is the bad things. The man only sees you when you do wrong. You learn what they want to get out... I'm a leader. The guys try to set you up so you would fall down. If you let a guy hit you once, they'll do it again and again. If you win in fights in jail, then you get respect. I'm a man among men. If a guy sees you'll fight, you ain't got no trouble. If you don't fight, you roll to the bottom and people take advantage of you. You gotta keep doing it; and that's how I'll be 'til I get out. Everybody's trying to roll to the top. The wickedest guys will become leaders. You don't even have to fight if you use your head. There's this guy who'll argue about anything. His game to get respect is to see himself right and you lose. You lose the talk battle and he make you look dumb and the other guys say that he's tough.

There appears to be no valid reason to refute the results of this study in regard to delinquency and evaluations. The self concept literature may be neglecting a fertile area of research by employing only standardized instruments. Much insight can be gained by using a subject's own frame of reference to generate data. The two methods of data collection are complementary and should be utilized together.
In conclusion, delinquent status was an ineffective predictor of subjects' responses on self- and friend-referent tasks. In other words, delinquents and nondelinquents did not differ in self and peer cognitive developments and in self and peer evaluations. Therefore, it may be preferable to consider attributes of people, families and environments, rather than "types" of people, such as delinquents and nondelinquents. The following section of this discussion provides an opportunity to consider two intra-individual attributes, i.e., psychopathy and neuroticism.

Dimensions of Deviance as Predictors

The present study's sample selection procedures differ considerably from procedures employed in the past to obtain subjects in research assessing Quay and Peterson's dimensions of delinquency. Typically, researchers have isolated distinct samples of psychopathic, neurotic, and subcultural delinquents, by identifying those individuals who score high on one of these scales and low on the other scales. In addition, the dimensions usually have not been assessed in the nondelinquent sample. Research attempting to determine if these profiles represent mutually exclusive types of delinquents, has concluded that homogeneous groupings of subjects do not exist (Tiffany et al., 1961). Rather, individuals were found to be distributed normally in four dimensional space. Therefore, the procedure employed typically creates artificially distinct groups, while eliminating the majority of delinquents who do not fit one of the three profiles. The present study's procedure, i.e., obtaining scale scores for all subjects and correlating these scores with the dependent variables, appears to be a more accurate representation
of reality. On the one hand, there is a definite advantage to employing distinct sample subgroups. By isolating extreme samples, relationships between the dimensions and the dependent variables will emerge more clearly than if one employs a sample that is normally distributed along these dimensions. On the other hand, employing distinct samples may tend to exaggerate the significance of relationships. Conversely, employing a normally distributed sample may tend to cloud relationships. Thus, sample selection criteria must be considered in evaluating research concerning these psychological dimensions.

The factor analysis of Quay and Peterson's (1968) questionnaire yielded two factors, psychopathy and neuroticism. The method employed to extract factors, packet factor analysis, actually enhances the probability that the factors would emerge by deriving the packets from the items comprising each factor. Therefore, the failure to extract the subcultural delinquency factor suggests serious flaws in the construct. This assertion is supported by previous research, which has found the subcultural delinquency factor to emerge inconsistently (Quay, 1966; Quay and Peterson, 1968; Schuck et al., 1972). In addition, the correlations found between the subcultural delinquency and the neuroticism packets corroborate earlier questionnaire research (Schuck et al., 1972). Behavior ratings have been even less useful than questionnaire data (Quay, 1977). In contrast to the empirical inadequacy of this construct, the preceding literature review indicates that the subcultural delinquency dimension has a firm theoretical foundation. Therefore, it seems valid to conclude that the construct should be preserved and that efforts should be directed towards devising a more sensitive instrument than
those currently available.

The factor structures of the delinquent and nondelinquent samples were similar. These results are consistent with research employing behavior ratings, which found normal, emotionally disturbed, and delinquent samples to have similar factor structures (Quay et al., 1966a, 1966b; Quay and Quay, 1965). The delinquent and nondelinquent samples did not differ in psychopathy and neuroticism scores. These results are discrepant from other research evidence, which has suggested that delinquents have higher scores on these dimensions than have nondelinquents (Quay et al., 1966a, 1966b; Quay and Peterson, 1968; Quay and Quay, 1965). However, the data reported in the literature are attenuated by inadequate sample control procedures. The research pertaining to a nonclinical, nondelinquent sample employed middle class subjects (Quay and Peterson, 1968; Quay and Quay, 1965). A middle class sample does not appear to be an adequate control group for a comparison with either a delinquent sample or an urban lower class sample (Evans, 1975).

The importance of an adequate control group is underscored by questionnaire evidence. In the present study, verbal intelligence was related positively to neuroticism and negatively to psychopathy, and noncaucasians tended to have higher psychopathy scores. Other research has supported a negative relationship between nonverbal intelligence and psychopathy (Quay and Peterson, 1968) and a relationship between noncaucasians and higher psychopathy scores (Schuck et al., 1972). Therefore, it is possible that discrepancies in results across studies can be attributed to sampling differences.
The present study appears to be the only well-controlled comparison of delinquent and nondelinquent questionnaire scores. While psychopathy and neuroticism were introduced as dimensions of delinquency, that appears to be a misnomer. In addition to the findings that the delinquent and nondelinquent samples did not differ in psychopathy and neuroticism scores, these two dimensions were predictive of the dependent variables orthogonally of delinquency, with delinquent status adding negligible predictive power. The inability of Quay and Peterson's questionnaire measure to differentiate between delinquents and nondelinquents indicates a serious flaw in the construct validity of the instrument. The relationships of psychopathy and neuroticism with self and peer cognition, to be discussed shortly, indicate that these dimensions are indicative of non-specific psychological maladjustment, i.e., deviance, rather than delinquency. As discussed at the outset of this section, the common practice in research employing Quay and Peterson's dimensions, of isolating a nondelinquent sample without assessing scores on these dimensions, does not appear to be justified. Rather, if researchers prefer to employ distinct delinquent subgroups, nondelinquents should also be separated into similar subgroups for comparisons.

The evidence suggests that psychopathy and neuroticism were effective predictors, forming two unique patterns of relationships. As expected, psychopathy was associated with more developmentally immature responses than were the other predictor variables entered into the analyses. Psychopathy was related negatively to the self level of abstraction, the friend level of integration, the friend number of determinants, and the number of repeated concepts. This profile is consistent with the model presented earlier in the discussion. The
model suggests that high psychopathic scorers are delayed developmentally in self and social cognition. The negative relationship between psychopathy and the self level of abstraction suggest that the capacity of abstraction is entering a new phase of development in self cognition. The nonsignificant differences in the other cognitive-developmental variables suggest that these capacities have been consolidated in the previous phase of development and that a sufficient passage of time has occurred for high psychopathic scorers to attain these developmental advances. Since social cognition lags behind self cognition developmentally, the data indicating that psychopathy was associated negatively with immaturity in several areas of friend cognition, but not with the friend level of abstraction, is consistent with the model. The early emergence of the capacity for abstraction in peer cognition, relative to differentiation and integration, allowed a sufficient passage of time for high psychopathic scorers to acquire and consolidate abstract reasoning in this domain. However, an insufficient passage of time has transpired for the process of emergence and consolidation of the capacities of differentiation and integration to be completed in high psychopathic scorers.

A different explanation of these results, based upon dispositional attributes, can be offered, as well. Quay and Peterson (1968) suggest that psychopaths are not concerned with impressing others. Psychopathic delinquents have been unresponsive to conditioning by social reinforcement (Johns and Quay, 1962; Quay and Hunt, 1965; Stewart, 1972). In addition, psychopathy has been related to inattentiveness (Orris, 1969) and to a lack of arousal (Borkovec, 1970; Skrzypek, 1969). This is
supported by evidence obtained in the present study that psychopathy was associated positively with immature self concepts and negatively with the number of self socially competent concepts, but was unrelated to the number of self socially incompetent concepts, indicating that high psychopathic scorers de-emphasize social relationships. Therefore, one may hypothesize that the relationship between psychopathy and inferior performance on the self- and friend-referent tasks is attributable to being disinterested in the study's tasks, and not to cognitive deficiencies.

An alternative to viewing developmental and dispositional theories as mutually exclusive, is to view these theories as complementary and interrelated. Social concern appears to be fundamental to developments in self and social cognition. Therefore, the lack of social concern may be posited as a barrier to age appropriate developments in self and social cognition. Of course, future research is necessary to a better understanding of the influence of psychopathy upon development.

In contrast to psychopathy, neuroticism was unrelated to the major cognitive-developmental variables. A positive relationship between neuroticism and the friend number of determinants appears to be related to a greater awareness of situation-specific behavioral cues, i.e., determinant categories 3 (other's behaviors) and 4 (other's internal processes and affects). This concern for state variables, as opposed to trait variables, may be attributable to the high neuroticism scorer's greater interpersonal insecurity and wariness (Schuck et al., 1972). The positive relationships of neuroticism with self socially incompetent concepts and with self unfavorable concepts also indicate social anxiety. Integrating the evidence, neuroticism has been associated with social anxiety and with age appropriate self and social cognition. These data
are supportive of the preceding assertion that social concern is a
catalyst for age appropriate developments in self and social cognition.

In conclusion, the position stated at the outset, that subgroups
of delinquents exist, was not supported. While the results indicated
clearly that delinquent status is an inadequate predictor of self and
peer cognition, it was also clear that distinguishable subgroups of
delinquents did not emerge. Rather, a normal distribution along dimensions
of deviance exists. These dimensions did not distinguish clearly between
delinquents and nondelinquents, but did form distinctive patterns of
self and peer cognition. Modifying a previous conclusion, it may be
preferable to study intra-individual, familial, and social factors, rather
than "subtypes" of people.

In regard to differentiating between delinquents and nondelinquents,
it may be desirable to consider interactions among intra-individual,
familial, and social factors, rather than studying each in isolation.
Delinquency research supports this position (Brigham et al., 1967;
Hetherington et al., 1971; Hezel, 1969; Imperio, 1976; McCord et al.,
1959; Wirt and Briggs, 1959). The results of two studies illustrate the
predictive potency of interactions between these factors, despite the
predictive inadequacy of these variables independently. Wirt and Briggs
(1959) found that persons who are prone psychologically to delinquency
are able to resist becoming delinquent if their families are well-adjusted
and they have good family relations. Similarly, McCord et al. (1959)
found that social factors are predictive of delinquency if family factors
leave one vulnerable. Therefore, it is possible that delinquency would
be predicted by interactions of psychopathy and neuroticism with familial
and social variables which were not analyzed in the present study, such
as family intactness.

Future Research in Self and Social Cognition

The developmental model of self and social cognition presented in this study demands further research. Cross-sectional research is adequate for generating developmental hypotheses, but a cross-sequential design, employing cross-lag panel analysis, is needed to assess the model's validity.

The methodology employed to assess self and peer cognition appears to be reliable and valid. The potential of this methodology is vast. The design has the flexibility to obtain data on virtually any social domain of interest to developmentalists and clinicians. Utilization of this methodology would enable direct comparisons to be made across domains. Clinical populations with different areas of interpersonal difficulty can be studied to assess the validity of the assumption that developmental delays will occur in areas of difficulty. Ostensibly, ambitious future researchers have the means to construct a developmental and clinical profile of self and social cognition.

Summary

The relationships of three dimensions of delinquency, i.e., psychopathy, neuroticism, and subcultural delinquency, to the self system and to impressions of best friend were investigated. Theory and research suggested the following developmentally-based hypotheses: one, delinquents would show developmental delays in self and peer cognition, two, developmental delays would be related most strongly to psychopathy, less strongly
to neuroticism, and least strongly to subcultural delinquency, and three, self cognition would be more mature than peer cognition. In addition, three hypotheses involving self and friend evaluations were tested: one, delinquents would show more negative self and friend evaluations than would nondelinquents, two, self and friend evaluations would be related most negatively to psychopathy, less negatively to neuroticism, and least negatively to subcultural delinquency, and three, self evaluations would be more positive than friend evaluations.

Two samples, comprised of 40 delinquent and 40 nondelinquent males and controlled for age, intelligence, SES, and race, were employed. A structured interview was utilized to obtain self- and friend-referent responses. Each subject was administered Quay and Peterson's questionnaire measure to obtain scores on the psychopathy, neuroticism, and subcultural delinquency dimensions. Multiple stepwise regression and correlational methods of data analysis were used to test the study's hypotheses.

A factor analysis of Quay and Peterson's questionnaire extracted psychopathy and neuroticism, but not subcultural delinquency. Therefore, the subcultural delinquency dimension was excluded from subsequent analyses. The results indicate that the nondelinquent and delinquent samples were not different in the development of self and peer cognition or in self and peer evaluations. Psychopathy was related to developmental delays in self and peer cognition. Both psychopathy and neuroticism were related to negative self evaluations, forming different patterns. Generally, friend evaluations were unrelated to psychopathy and neuroticism. Self responses were more mature, but also more negative, than friend


responses.

The evidence suggests that it is more appropriate to consider psychopathy and neuroticism as dimensions of deviance, rather than of delinquency. Psychopathy and neuroticism did not differentiate between delinquents and nondelinquents. The two samples had similar scale scores and factor structures. In addition, it seems preferable to consider attributes of people and their environments, rather than subtypes of people. The inadequacy of delinquent status as a predictor, coupled with the psychopathy and neuroticism data, suggest that future delinquency research would profit by investigating interactions among intra-individual, familial, and social factors.

A developmental model of self and social cognition was presented in order to integrate the data. Briefly, the model suggests that developments in self cognition precede developments in social cognition. Within a particular domain, developments are sequenced temporally to proceed from abstraction to differentiation to integration. Abstraction plays a mediat- tional role throughout this developmental process. The psychopathy and neuroticism data suggested that social concern is the foundation for developments in self and social cognition. Finally, a discussion of future research explored the possibility of developing a profile of self and social cognition based upon the methodology employed in this study.
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Dear Parent or Guardian:

I am a graduate student at the Ohio State University conducting a research study. I am investigating how people think when asked to look at themselves and at friends. I would like your permission to allow your son to participate in this study. I would like to talk to your son for approximately 1½ hours. I am not trying to pry into your son's life. If he feels something is too personal to talk about, he may keep it to himself. Our talk will be confidential. Whatever is said will be just between your son and me. Your son's name will not be used in any way.

I will be happy to answer any questions you might have. If you are giving me permission to talk to your son, please sign and return the enclosed consent form.

Thank you for your consideration.

Sincerely,

Robert M. Bernstein
APPENDIX B: Self Report Delinquency Measure

Please Circle Your Answer

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Have you ever gone into a house or building when you weren’t supposed to be there?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>2.</td>
<td>Have you ever damaged or messed up something not belonging to you?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>3.</td>
<td>Have you ever started a fist fight?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>4.</td>
<td>Have you ever taken something not belonging to you worth less than $2.00?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>5.</td>
<td>Have you ever taken something not belonging to you worth between $2.00 and $50.00?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>6.</td>
<td>Have you ever taken something not belonging to you worth more than $50.00?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>7.</td>
<td>Have you ever carried a gun or knife (besides a pocket knife)?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>8.</td>
<td>Have you ever been in a fight in which a group of your friends were against another group?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>9.</td>
<td>Have you ever had a fight with a teacher?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>10.</td>
<td>Have you ever set fire to someone else’s property?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>11.</td>
<td>Have you ever used or threatened to use a weapon to get something from a person?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>12.</td>
<td>Have you ever taken something from a store without paying for it?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>13.</td>
<td>Have you ever taken a car without the permission of the owner?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>14.</td>
<td>Have you ever told someone that you would beat-up on them unless that person did what you wanted him to do?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>15.</td>
<td>Have you ever skipped school without permission?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>16.</td>
<td>Have you ever used drugs of some kind?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>17.</td>
<td>Have you ever sold drugs?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>18.</td>
<td>Have you ever drunk alcohol?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>19.</td>
<td>Have you ever broken into someone else’s car?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
<tr>
<td>20.</td>
<td>Have you ever been arrested?</td>
<td>(a) never (b) once or twice (c) more than twice</td>
</tr>
</tbody>
</table>
APPENDIX C: Tasks Focusing Upon the Self System and Upon Best Friend

Task A:

(1) List the different characteristics which describe your own (your best friend's) behavior, the way you (your best friend) act(s).

(2) Order these characteristics from most to least important about you (your best friend).

Task B: I will repeat some of these characteristics (the administrator used the first five characteristics in the rank order); tell me in what situations and with which people do you (does your best friend) act this way?

Task C: I will repeat what you have told me about these characteristics (the first five characteristics and the corresponding response to Task B). Tell me what each statement tells you about yourself (your best friend), the kind of person you are (your best friend is).

Task D: If you could change any three aspects of yourself (your best friend), what three things would you most like to change?

Task E: Put together everything you have told me about yourself (your best friend) into a summary, a paragraph.
APPENDIX D: Quay and Peterson's (1968) Questionnaire Measure of the Dimensions of Delinquency

THE PERSONAL OPINION STUDY

Herbert C. Quay, Ph.D. and Donald R. Peterson, Ph.D.
Children's Research Center
University of Illinois

Read each statement on the following pages, and decide whether it is true or false, as far as you are concerned. There are no right or wrong answers for any of the items; it is your own personal opinion that matters. If a statement seems true or mostly true, circle the T on the ANSWER SHEET. If a statement seems false or mostly false, as far as you are concerned, circle the F on the answer sheet. Please complete every item.

MAKE NO MARKS ON THIS BOOKLET.

Copyright, 1968. Herbert C. Quay and Donald R. Peterson
1. The best teachers are the ones who are very easy.

2. I would be a happier person if I could satisfy all my parent's wishes.

3. Sometimes I wonder if I'll ever grow up.

4. My folks usually blame bad company for the trouble I get into.

5. In this world you're a fool if you trust other people.

6. Before I do something, I try to consider how my friends will react to it.

7. We ought to pay our elected officials better than we do.

8. I never used to steal little things from the neighborhood stores.

9. My teachers have given me lower grades than I deserve just because they think I am a trouble-maker.

10. I don't worry about the future; there's nothing much I can do about it anyway.

11. I often say mean things to other people and then feel sorry for it afterwards.

12. When I think I am right nobody can change my mind.

13. I don't mind hurting people who get in my way.

14. Most people are squares.

15. I am always hurting the people I love the most.

16. I am so touchy on some subjects that I can't talk about them.

17. You have to get the other guy before he gets you.

18. Most boys stay in school because the law says they have to.

19. Policemen are friendly and try to help you.

20. You have to admire somebody who has enough guts to talk back to a cop.

21. One day I will get even with everybody who has done me dirty.

22. I have never seen a policeman yet who cared about anyone but himself.

23. I feel tired a good deal of the time.

24. People seem to like me at first, but I have trouble keeping friends.

25. When a group of boys get together they are bound to get in trouble sooner or later.
26. You gotta fight to get what’s coming to you.
27. I never wish that I were dead.
28. Only a fool would spend his life working a 40 hour week.
29. I never worry about a thing.
30. It seems as if people are always telling me what to do, or how to do things.
31. I do what I want to, whether anybody likes it or not.
32. At times I have a strong urge to do something harmful or shocking.
33. I think people like me as much as they do other people.
34. Even when things go right for a while I know it won’t last.
35. I can easily "shake it off" when I do something I know is wrong.
36. I never have the habit of jerking my head, neck, or shoulders.
37. A person is better off if he doesn’t trust anyone.
38. The best way to get ahead in the world is to be tough.
39. It is very important to have enough friends and social life.
40. All this talk about honesty and justice is a lot of nonsense.
41. There is something wrong with a person who can’t take orders without getting angry or resentful.
42. I am doing as much or as well as my parents expect me to.
43. When I see people laughing I often think they are laughing at me.
44. The only way to settle anything is to lick the guy.
45. It’s dumb to trust older people.
46. I just can’t stop doing things that I am sorry for later.
47. For all the things I have done I should have been punished more than I have.
48. I usually feel well and strong.
49. I sometimes feel that no one loves me.
50. When I was going to school I played hooky quite often.
51. My future looks bright.

GO ON TO PAGE 3
52. I find it hard to "drop" or "break with" a friend.
53. Sometimes I think I won't live very long.
54. It doesn't matter what you do as long as you get your kicks.
55. I wish I had not been such a disappointment to my family.
56. The most important thing is to win no matter how.
57. Everyone should be required to finish high school.
58. I owe my family nothing.
59. My feelings are never hurt so badly that I cry.
60. The only way to make big money is to steal it.
61. In school I was sometimes sent to the principal for cutting up.
62. I have never been in trouble with the law.
63. The worst thing a person can do is to get caught.
64. I don't think I'm quite as happy as others seem to be.
65. I sometimes wish I'd never been born.
66. A guy's only protection is his friends.
67. A person who steals from the rich isn't really a thief.
68. I have had a real fight.
69. My way of doing things is apt to be misunderstood by others.
70. If you're clever enough, you can steal anything and get away with it.
71. The average policeman is not strict enough about the law.
72. The only way to get what you want is to take it.
73. I must admit I find it very hard to work under strict rules and regulations.
74. Success in this world is a matter of luck.
75. I often get so nervous I have to get up and move around to calm myself down.
76. Nobody has ever called me "chicken" and gotten by with it.
77. I just don't seem to get the breaks other people do.
78. I get so angry that I "see red."

GO ON TO PAGE 4
79. It's hard to get others to like me.
80. I don't really care what happens to me.
81. No matter how hard I try I always get caught.
82. My eyes often pain me.
83. Women are only good for what you can get out of them.
84. My life is pretty boring and dull most of the time.
85. I have been expelled from school or nearly expelled.
86. The only way to make out is to be tough.
87. It is hard for me to just sit still and relax.
88. Once you've been in trouble, you haven't got a chance.
89. Hitting someone sometimes makes me feel good inside.
90. Being successful usually means having your name in the paper.
91. Even when things go right I know it won't last.
92. I'd like to start a new life somewhere else.
93. If you don't have enough to live on, it's OK to steal.
94. It is important to think about what you do.
95. I can outwit almost anybody.
96. On my report card I usually get some failure marks.
97. I feel that I have often been punished without cause.
98. Whenever I do something I shouldn't, it worries me.
99. It's all right to steal from the rich because they don't need it.
100. Sometimes I have stolen things I really didn't want.
Scoring for the Three Delinquency Factors and the Packet Factor Analysis

### Items in Psychopathy

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<tr>
<th>Packets</th>
<th>1, 10, 14, 20, 26, 31, 38, 45, 57, 63, 70, 76, 86, 90, 95</th>
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<td>P2:</td>
<td>5, 12, 17, 21, 28, 35, 40, 54, 58, 66, 72, 80, 88, 93, 98</td>
</tr>
<tr>
<td>P3:</td>
<td>9, 13, 19, 22, 29, 37, 44, 56, 60, 67, 74, 83, 89, 94, 99</td>
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### Items in Neuroticism

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<tr>
<td>N2:</td>
<td>23, 30, 34, 46, 51, 64, 73, 78, 84, 92</td>
</tr>
<tr>
<td>N3:</td>
<td>24, 32, 36, 48, 53, 65, 75, 79, 87, 97</td>
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</table>

### Items in Subcultural Delinquency

<table>
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</thead>
<tbody>
<tr>
<td>S2:</td>
<td>3, 7, 15, 39, 47, 55, 68, 85</td>
</tr>
<tr>
<td>S3:</td>
<td>4, 8, 18, 41, 50, 61, 71, 96</td>
</tr>
</tbody>
</table>