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LEVELS OF OBJECT REPRESENTATION AND COGNITIVE STRUCTURES IN ADOLESCENT SUICIDE

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LEVELS OF OBJECT REPRESENTATION AND COGNITIVE STRUCTURES IN ADOLESCENT SUICIDE

by

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Abstract

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The current study explores the problem of adolescent suicidality from an object relations perspective. While the growing problem of teenage suicide can and must be viewed from a number of different interrelated perspectives, this dissertation focuses specifically on the role that internal object representations play in determining an adolescent's proclivity toward suicidal action.

In an attempt to further the understanding of the structural-cognitive factors mediating suicidal behavior, an analysis and comparison of both the levels of object representation and the cognitive capacities of suicidal and nonsuicidal depressed adolescents is undertaken. The major hypothesis states that adolescent depression is mediated by the cognitive organization of object representations and that suicidal depressed adolescents reveal lower levels of object

representation and a greater cognitive impairment than nonsuicidal depressed adolescents.

An extensive review of the literature focuses on normative adolescent development, adolescent depression and adolescent suicide. Specific hypotheses regarding levels of object representation, proclivity toward assuming an action modality, concretization of thought, cognitive rigidity, and temporal perspective are postulated.

A retrospective review of the records and psychological test protocols of 39 inpatient depressed adolescents, half of whom were suicidal, provided the data base for this study. The results provide preliminary support for the importance of understanding structural considerations in adolescent suicidality. In particular, structural dimensions in the development and maintenance of object representations, the specific cognitive ability to maintain a future time perspective, and a tendency to utilize an action modality play a significant role in distinguishing between depressed suicidal and nonsuicidal adolescents. Only modest confirmation was found for hypothesis regarding concretization of thought and cognitive rigidity. Implications for treatment and future research are discussed.

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INTRODUCTION

The current study represents an attempt to explore the problem of adolescent suicidality from an object relational perspective. While the growing problem of teenage suicide can and must be viewed from a number of different interrelated perspectives-- sociological, epidemiological, biological, familial, interpersonal and intrapsychic-- this dissertation will focus specifically on the role that internal object representations, and their corresponding cognitive structures, play in determining an adolescent's proclivity toward suicidal action.

In recent years, psychoanalytic theory has increasingly emphasized the centrality of object relations in human development, both normal and pathological. This approach is based on the assumption that one of the primary functions of the ego is the seeking of objects, and that the ego develops in a reciprocal and interdependent way with the internalization of object cathexis. Whereas initially, the concept of internalization had been discussed in relation to superego development (Freud, 1938), more recently the conceptualization of internalization has been extended to include "all processes in which interactions

with the environment are transformed into inner regulators and are taken on as characteristics of the self" (Blatt, 1975, pp. 236-237).

The study of object relations in psychoanalysis includes the study of internalization and its role in psychic development. "The nature of object relations, the processes of internalization and the level of organization of the intrapsychic structures are expressed in the quality of the mental representations of the self and object world (Novey, 1958), that are formed during the different levels of internalization" (Blatt, 1975, p. 237).

An analysis and comparison of the levels of object representation of suicidal and non-suicidal depressed adolescents will serve to further our understanding of the structural-cognitive factors mediating suicidal behavior. The study will argue that particular impairements in the internalization of object representations is correlated with adolescent suicidality. The major hypothesis states that adolescent depression is mediated by the cognitive organization of object representations and that suicidal depressed adolescents will reveal lower levels of object representations than non-suicidal, depressed adolescents. Following Stengel's criteria, a suicidal act will be

defined as "...any deliberate act of self-damage which the person committing the act cannot be sure to survive " (Stengel, 1974, pp. 82-83).

In order to provide a framework from which to understand the object relational dimension in adolescent suicidality, we will first review the literature on the normative "crisis" of adolescence, as seen from object relational and cognitive perspectives. Of particular interest will be issues involving object loss during this developmental stage. Following this review, we will turn specifically to the literature on depression and suicidality in adolescence.

CHAPTER I

REVIEW OF THF LITERATURE

The Normative Crisis of Adolescence

Given the tumultuous nature of the adolescent period, it is not suprising that statistics reveal a high incidence of suicidality occuring among teenagers. Within this age group, suicide is the third most frequent cause of death, following accidents and homocides (Jacobziner, 1965; Vital Statistics of the U.S., 1974; Wenz, 1979). Almost 5,000 adolescents and young adults committed suicide in 1977 (McKenry, Tishler and Christman, 1980) and an estimated ratio of 100 attempts for every completed suicide is reported (Jacobziner, 1965). A staggering 12% of all suicide attempts in the U.S. are made by adolescents (Corder, Shorr, and Corder, 1974; Seiden, 1969). Further underscoring the seriousness of this problem is the knowledge that statistics on suicide are woefully underestimated (Frederick, 1978; Mishara, 1975; Schrut, 1964; Toolan, 1975). According to Schrut (1964), nearly 50% of all adolescent suicides are "covered up", either intentionally (due to the stigma of killing oneself) or unintentionally (reported as an "accident"). These figures indicate the near-crisis status of the problem and call into play questions regarding sociological,

psychological and medical aspects of this phenomenon.

From a psychological vantage point, a look at the "normative crisis" of adolescence may provide some clues in the effort to construct a more comprehensive picture of the suicidal adolescent. Even under the best of cricumstances, the numerous cognitive, instinctual, physical and object-relational changes which characterize this stage of development require inordinate ego strength: these changes strain the adolescent's capacities to their limit. The continuous state of turmoil inherent in this stage had led Anna Freud (1966) to describe adolescence as a prototype of a "developmental disturbance". In fact, psychological reactions and behaviors considered to be "pathological" at any other period of life become normative during adolescence. Many theorists, as well as clinicians specializing in adolescence (Blos 1962, 1979; Erikson 1956; A. Freud 1958) have highlighted both the importance and difficulty of distinguishing a "normative" from a "pathological" crisis during adolescence. Neither the emergence and expression of id impulses (pregenital and genital; sexual and aggressive) nor the utilization of any specific defense mechanism provides clear cut criteria for differentiating the degree of adolescent psychopathology. Rather the

consensus supports the importance of examining the ego's coping abilities. Included here would be the capacity for maintaining synthetic abilities in the face of both internal and external pulls, as well as modulating action proclivities, especially in the extremes of aggressive and sexual behaviors (e.g. acting on suicidal or homocidal impulses).

Adolescence: A Second Separation-Individuation

The primary object-relational task of adolescence is a two-fold process which involves the psychological separation from the parents, on the one hand, and the finding of new love objects,[1] on the other (Blos, 1962; A. Freud, 1958). The task of separation from the parents is especially difficult in light of the resurgence and recapitulation of both oedipal and preoedipal configurations. This process of separation, described by Blos (1962) as a second separation-individuation, begins in early adolescence, with the advent of puberty, continues through adolescence proper, and subsides with the consolidation of an ego ideal in late adolescence. Before the adolescent can consolidate this formation, however, he/she must pass through stages of extreme "self-conscious-

1. Throughout this dissertation, unless otherwise stated, the term "object" is being used in the psychoanalytic sense of a human (animate) object.

ness" and "fragmented existence" (p. 12). These stages of inner turmoil occur as the adolescent struggles to disengage from parents in order to develop new identifications, to clarify and solidify boundaries, to modify superego injunctions, and to form a coherent self identity. These tasks reverberate in the ego to produce cathetic shifts which influence both the existing object and self representations (p. 74). Changes in adolescent object relations are inextricably intertwined with changes in the nature of self and object representations.

The cathetic shifts from self to object representations, and the reverse, account for the disturbed reality testing, mood swings and tenuous sense of self of the adolescent. Given the task of disengagement from the parents as the primary love objects, the major thrust of these changes involves a decathexis of existing object representations with a concomitant deflection of cathetic energy onto the self. This deflection onto the self results in the heightened narcisism seen in adolescence. In addition, withdrawal of object cathexis from the parents results in what Blos calls "object hunger", a phenomena which can be observed in the many superficial attachments and transient identifications seen in adolescence. These identifications are particularly important in

maintaining a balance between object libido and narcissism. Without such identifications, object libido would be totally deflected onto the self, resulting in a severe narcissistic regression. For Blos, then, "object hunger" and the availability of new objects are critical in promoting the internal separation from the parents and in preserving object relations at this time. In addition, new objects provide an opportunity for reworking old, "negative" introjects and for modifying the nature of existing object representations. To the extent to which the adolescent's search for new love objects meets with success, periods of adolescent narcissism will be modified, sexual and aggressive storms will be tempered, and the adolescent will begin to accept a durable self representation of him/herself as an autonomous adult. On the other hand, to the extent to which the search for new love objects fails, narcissistic regression, unstable self images and corresponding depressive states will continue (Jacobson, 1971). As we shall see later, the availability of new love objects plays an important role in the determination of adolescent suicidality.

The successful resolution of the adolescent crisis depends on numerous factors. As mentioned

above, the availability and influence of new "objects" are important in that they provide powerful progressive pulls to facilitate the internal separation; provide a balance to the threat/prospect of a total narcissistic regression, and, finally, provide identificatory figures to aid in the re-structuring of psychic structures and internal object representations.

A second critical factor which will determine the outcome of the adolescent period involves the adolescent's past history as reflected in the nature of object representations. The achievement of object constancy, the predominance of positive libidinal forces over aggressive forces, and a successful resolution of the oedipal situation are all critical tasks in the development of psychic integration and differentiation. The degree to which object representations are differentiated and stable determines, to a great extent, the adolescent's ability to withstand the cathetic shifts and regressive pulls inevitable during adolescence (Blos, 1962; Jacobson, 1973). Jacobson highlights this issue in her discussion of puberty and adolescence. She describes how early experiences of severe disappointment and abandonment prevent the development of unambivalent object relations and stable object representations

in childhood. Without such a foundation, the child's self-esteem remains shakey and excessively dependent upon external supports. In adolescence, the first disappointing attempts to turn to new love objects may have a profound effect upon the adolescent's tenuous self-esteem, developing sense of self, and upon object relations and ego identifications (Jacobson, 1973, p. 209). The inability to establish stable self and object representations in childhood will most likely impede the youngster's ability to withstand the turmoil of adolescence and may show up in a variety of pathological forms during this period: lowered self-esteem, the experience of discontinuity of personal identity, impulsive acting-out, and/or psychotic-depressive states of withdrawal from the object world (Jacobson, 1973, pp. 206-209).

Anna Freud (1958) likewise stresses the importance of having achieved a strong, positive bond with the parent in childhood (specifically the mother) in order for a successful psychological separation to occur in adolescence. Although this strong tie ("mother fixation") renders adolescence especially difficult, since it calls into play equally powerful defenses erected to sever the tie, the absence of such a "mother fixation" constitutes a "real danger

to the whole inner coherence of the personality during that period" (p. 266). Without strong ties to mother, the adolescent takes on a "frantic search for a mother image: the internal possession and cathexis of such an image seems to be essential for ensuring the normal process of detaching libido from it for transfer to new objects, i.e., sexual partners" (p. 266).

Thus, for Blos, Jacobson and Freud, the nature of object relations and their internal representations are central to the outcome of the adolescent period. The possibilities for re-structuring, in a positive direction, old "negative" representations are provided because of the extreme psychic fluidity of this period and occur as a result of positive interactions with new objects. On the other hand, the risks of psychological fragmentation, depression and/or the emergence of psychotic behaviors are ever-present dangers which hinge, to a great extent, upon the nature and quality of the adolescent's object relations-- both old (as represented by the stability of mental representations) and new (meeting with success in transferring positive feelings from the parents to new love objects). In short, the quality and nature of object representations will help to determine the eventual psychological outcome of the

adolescent period; at the same time, existing object representations will be influenced by the nature (success/failure) of object relations during the adolescent period.

Adolescence and Cognitive Development

Our second major focus in understanding the vicissitudes of the adolescent crisis is a cognitive perspective. Cognitive factors play a pivotal role in the adolescent period and go hand-in-hand with the development of object representations. A review of the cognitive changes during this period and their impact on adolescent object relations is therefore in order.

The Development of Formal Operations. A major shift in cognitive development occurs during adolescence with the advent of formal operations (Greenspan, 1979; Inhelder and Piaget, 1955). The move from concrete operations of latency to formal operations has far-reaching implications and affects the totality of the adolescent's psychological experience; in fact, some authors suggest that cognitive development is the mediating variable between drives and behavior (Erlich, 1968; Greenspan, 1979). The specific nature of this shift in adolescent thought and the complex interplay of forces between cognition, affect and

object relations will be included in our discussion below.

The development of formal reasoning provides the adolescent with new equipment with which to think about the world. From the standpoint of logical structure, formal operations allows for the utilization of propositional logic, the development of hypothetico-deductive reasoning and experimental proof (Inhelder and Piaget, 1958). These advances imply increased freedom from the immediate context (i.e., thinking in propositions rather than concrete events); a greater emphasis on the possible vs. the real; and the ability to see the multiple relationships among all variables within a system, even while simultaneously varying a number of properties.

The advances in logical structure which accompany formal operations account for the general modifications of thinking which typify adolescence (Inhelder and Piaget, 1958). For example, the ability to think abstractly (including thinking about thought; reversing the relations between what is real and what is possible) seems directly related to the capacities for formal thought. The adolescent, capable of reflective thinking, is now able to escape the concrete

present and head toward the realm of the abstract and possible. Increased mobility in the dimensions of time and space are part and parcel of the development of formal operations (Greenspan, 1979; Erikson, 1963; Inhelder and Piaget, 1958; Shapiro, 1963).

In addition to increased mobility of thought, the advance of formal operations also contributes to the ability to think in dialectical terms (Riegal, 1976) and to the development of theoretical synthesis (Sugarman, 1982). With the attainment of formal operations, the adolescent is able to utilize all possible combinations within a system in order to solve problems, to generate hypotheses and to integrate identifications. Similarly in regard to affect states, the formal operational adolescent is in a better position than the concrete operational youth to synthesize the inevitable onslaught of discrepant feelings that become so pronounced during this stage of development. Both greater flexibility of thought--including the ability to consider multiple, seemingly contradictory possibilities-- and greater ability to integrate those possibilities into a synthetic whole are achievements which accompany the attainment of formal operations.

Failure to traverse this progression to formal

thought leads to what has been called "concretization" (Blos, 1971; Sugarman, Bloom-Feshback, and Bloom-Feshback, 1980). Such adolescents are unable to take distance and reflect on their own perceptual-cognitive processes. Rather than thinking about thinking, as can be done with formal operations, these adolescents seem to regard thoughts only as further actions beyond their control. This failure can promote both severe thinking difficulties and behavioral problems for the adolescent. Lacking the cognitive tools of formal operations, the adolescent stuck at a concrete stage of thought seems to resort to action as a primary mode of regulating tension. While some tendency toward action is a normative occurance in adolescence (Blos, 1971), the predominance of an action mode over a verbal mode seems to indicate a cognitive deficiency, especially in symbol formation (Blos, 1971; Bellak, 1963; Blatt, 1974; Fenichel, 1945; Fibel, 1980; Greenacre, 1950). In her discussion of a particular kind of action sequence, acting out, Greenacre (1950) states that the "predisposing factor to acting out is a distortion in the relation of action to speech and verbalized thought" (p. 277). One consequence of this distortion is the continuance of an action language where words and thoughts ought

to be. In other words, motor action is not adequately replaced by speech but, instead, remains the primary mode of communication. The expression of impulse and emotion, rather than the organization of impulse and emotion, carries over into secondary process.

The relationship between cognitive development and action is particularly relevant to our interest in understanding the suicidal adolescent and will be elaborated further in our discussion of suicidality. For the time being, suffice it to say that the clinical and theoretical literature on adolescence points the way to an essential relationship between cognitive development and the reduction of an action mode as a vehicle of expression.

The cognitive achievements of formal operations have powerful consequences in regard to the affective and psychosocial aspects of adolescence. The ability for abstraction enables the adolescent to build his ideals in adapting to society, to formulate a life plan, to develop motivations for changes (Shapiro, 1963, p. 84). When applied to the major psychosocial task of identity formation, the new cognitive capacities of formal operations may enable the adolescent to integrate, into a cohesive organization, the representations of the past along with those of the

present and with those structures encompassing aspirations for the future. The higher level of equilibrium made possible by the advance to formal operations -- the increase in the field of application, permanence, mobility and stability-- allows the adolescent to conserve more discordant variables than ever before in an interrelated system (Greenspan, 1979).

From a slightly different yet related perspective, it is clear that the nature of affective states play a potent role in the development of cognition. For instance, when drive-affect structures become very intense or frightening, the ability to think hypothetically may be lost, and a regression to an earlier cognitive state (concrete or peroperational thinking) may occur. If a budding adolescent is overwhelmed, e.g., by an increase in libidinal drive and the accompanying incestuous fantasies, he may be hindered in his ability to view the situation in terms of multiple hypothetical possibilities. Instead, the concrete realities of the immediate stimuli will predominate.

Similarly, in regard to object relations, Greenspan (1979) discusses how the failure to internally separate from parental representations may effect cognitive development by impeding the attainment of

distance necessary for viewing internal stimuli with appropriate detachment. He states: "If the relationship to the parent is too intense and there can be no distancing, the internal world relating to the parents cannot be viewed in terms of multiple hypothetical possibilities. Thus, although the maturational capacity for hypothetical reasoning, or taking distance from the real, may be in ascendence, if this ability is overwhelmed by a psychological reality that maintains the parents and their earlier representations 'too closely', the capacity for hypothetical thinking in terms of internal issues may be compromised" (p. 220).

The ability to think abstractly is thus, influenced by the internal and external realities present for the adolescent and, in turn, influences the ways by which an adolescent manages this period of development. The relationship between object relations and cognitive development are inextricably linked and mutually interdependent.

The integration of cognitive development and object relations is most comprehensively discussed by Blatt (1974, 1976). Blatt's theoretical integration of the cognitive and developmental aspects of object relations, and his application of theory to research,

is particularly relevant to this dissertation and thus, deserves special attention.

Blatt (1974) places the development of object representations at the center of his theoretical framework. He views the construct of object representation as pivotal in understanding the ways by which an individual modulates drives, affects and impulses, and he provides a model of development which rests heavily upon cognitive-developmental (Piaget, 1954; Werner, 1948; Werner and Kaplan, 1963) and psychoanalytic (Jacobson, 1964; Mahler, 1968) theories. Blatt maintains that object representations initially grow out of repeated experiences of frustration and gratification with a consistent and need-gratifying object. Gradually, representations become increasingly more accurate, complex, differentiated, integrated and stable as the parent-child interaction becomes increasingly more differentiated, a result of increased cognitive and affective maturity. The development of object representations is an evolving process, established over several successive developmental sequences, each serving to "integrate prior sequences and to extend representations so they have greater generality and constancy" (1974, p. 131). Thus, Blatt (1974) states:

> The nature of the object relations determines the level of representations, and the establishment of more differentiated and stable representations provides a new organization for experiencing object relations. There is constant interaction between object relations and the development of representations. Representations emerge out of the affective relationship between mother and child and, in turn, serve to organize the future experiences of that relationship, leading to the next stage of representation. The level of representations indicates the level of ego development, the object differentiation that has been achieved, and the quality of the object that can be cathected (pp. 146-147).

Object representations and the progression through the developmental sequence depend upon the nature of the relationship and the cognitive organization of the individual.

Blatt demarcated four levels of representation: the sensorimotor, perceptual, iconic, and conceptual. At each of these levels, object representations become less literal and direct, and more abstract and symbolic. At the lower levels of representation, the object remains relatively undifferentiated and is libidinally invested in terms of its need-gratifying function (sensorimotor level) or is dependent upon concrete, perceptual components (perceptual level). At the iconic level, representations may show some appreciation for attributes which are internal, but are principally linked to particular manifest aspects

which become, however, progressively more subtle. Iconic representations, thus, remain concrete, fragmented, overstated, and contain contradiction and ambivalence.

It is not until the attainment of a conceptual level of object representation that part properties and ambiguities become reconciled and reintegrated into a representation of the whole object. In this final stage of object representation, stability and continuity of representations are achieved. Because the representation has attained stability and continuity, there is no longer a need for contact with the actual object in order to maintain the internal representation (p. 148). Normally, the ability to sustain conceptual-symbolic representations emerges at the end of adolescense, along with the development of formal operations (Blatt, 1974; Inhelder and Piaget, 1958; Jacobson, 1964; Werner and Kaplan, 1963).

Thus, according to Blatt, the quality of object relationships and the cognitive stage of development codetermine the nature of internal representation. Disturbances in important relationships can have a profound effect on the capacity to develop stable, coherent and enduring object representations which,

in turn, can affect the future development of the individual.

In adolescence, the quality of object representations may have a particular impact upon several important functions, including the regulation of self-esteem, the capacity to bear and manage object loss, and the developing sense of future. For example, impairments in self and object representations make the adolescent more vulnerable to momentary events which assume a disproportionate influence on their self-esteem. Frustration or gratification, success or failure, acceptance or rebuff, approval or criticism of the moment all have a major impact upon current feelings about the self because of a lack of a consolidated self-representation (Blatt, 1974, p. 150). Without an internal sense of continuity and constancy over time provided by the achievement of higher level representations, there is little sense of a differentiated past and little sense of a potential future -- the moment is often the extent of the temporal field (1974, p. 150). In regard to coping with object loss, Blatt states that "developmental disturbances in object representations may become apparant only later when the actual object is no longer readily available to provide the reality

support and structure which serve to compensate for and minimize the impaired representations. These developmental impairments may become apparant only when the object representations must assume a major role in directing and organizing behavior" (1974, p. 148). Given the central role of separation and loss in adolescence, it is no wonder that psychological disturbances so frequently appear during this period. The ability to adaptively cope with object loss, both real and/or fantasized, is linked to the development of object representations. It should be noted that the strictest definition of the term "loss" connotes a real and actual loss with no possibility for reunion (e.g. death) while "separation" does allow for the possibility of eventual reunion (e.g. divorce, leaving home). The differential impact of these two events on the development of object representations has yet to be explored.

We will now turn our attention to the problems which occur when object relational and cognitive sequences go awry. A selected review of the literature on adolescent depression and a review of adolescent suicidality will bring us to the major hypotheses of this study.

Adolescent Depression

The experience of depression in adolescence is ubiquitous, perhaps inevitable, given the necessary tasks of this period. In particular, the major psychosocial task of separation from primary love objects involves a profound sense of loss, which has been described in the literature as leading to adolescent grief reactions (Jacobson, 1966; Root, 1957), a mourning process (Blos, 1962; Root, 1957), and most commonly, adolescent depression (Blos, 1962;Fibel, 1979; Jacobson, 1966). Blos beautifully describes this experience of mourning in his comment on poet Sherwood Anderson's description of an adolescent leaving home:

> George's mourning is like a symbol for the deep losses which adolescence entails. Alone and surrounded by man's eternal fear of abandonment and panic, the familiar and life-old need for human closeness awakens; love and understanding are expected to rekindle the trust in life, to blow away the feat of isolation and death. The limitless future of childhood shrinks to realistic proportions, to one of limited chances and goals, but by the same token, the mastery of time and space and the conquest of helplessness afford to a hitherto unknown promise of self-realization. This is the human condition of adolescence which the poet has laid bare (1962, pp. 13-14).

While the experience of depression in adolescence is a normative occurance, the management and manifestation of depressive affect is variable. In-

deed, depressive affect in adolescence is often marked by the presence of what Toolan (1971) terms "depressive equivalents" -- and array of symptoms which mask depression. Denial, reaction formation, action equivalents, aggressive delinquency, drug abuse, anorexia nervosa and other psychosomatic preoccupations are chief among Toolan's hypothesized masking agents. The ways by which any particular adolescent will manage depression depends upon numerous interwoven factors. The adolescent's past history, including significant losses, the level of ego organization, the stability of self and object representations, the development of cognitive skills, and the availability of new objects in the adolescent's current environment combine to determine the available means of responding to and resolving loss. Various means of coping with depression and the determination of adolescent suicidality will be discussed in relations to these interwoven variables.

Adolescent Depression and Object Representation

The importance of the structural organization of object representations in regard to depression has been theoretically and clinically presented by Blatt (1974, 1976). His main argument centers around the mediating role of object representations in the cap-

acity to bear object loss. Reviewing the literature on depression, he demonstrates how the capacity to bear and manage loss is developmentally acquired; he then goes on to illustrate the relationship between an individual's attempts to manage such an experience and the individual's underlying, predominant level of object representation. According to Blatt, those who have achieved higher levels of representation -- i.e., representations which are well-articulated, differentiated, integrated and stable-- have the capacity to resolve loss without prolonged or severe depression. On the other hand, those who maintain lower levels of object representation -- which vary in their degree of articulation, differentiation, integration of discrepant/contradictory part properties and stability-- are less able to cope with loss and more prone to depression, especially action-oriented manifestations of depression.

Based on his schema, Blatt distinguishes two types of depression: anaclitic and introjective. Both types reveal some impairment in the development of object representations. Anaclitic depression-- a depression managed by an action sequence and characterized by feelings of helplessness, weakness and

depletion-- is the result of particularly severe impairments which leads to the organization of object representations at the sensorimotor level. At this level, the love object is cathected, and represented, primarily, if not exclusively, in its function of providing gratification. Although there is an awareness of the object, the object is still not fully separated from the context of the experience and the event. "At this level, the object is experienced in terms of its activities, its representation being an extrapolation of the action pattern. The object is recognized and valued only in the specific limited context of need gratification and it has little meaning or existence beyond providing comfort and alleviating pain" (p. 143). At this level, there is a need to maintain direct, physical, sensory need-gratifying contact with the object. The danger of loss at this level is related to a fear of loss of the object and its capacity to provide need gratification. There is often a desperate need to deny the loss and an attempt to seek an immediate and direct replacement. Because of the severe impairment in object representations, there is, in anaclitic depression, a vulnerability to profound feelings of loneliness.

By contrast, introjective depression, characterized by feelings of worthlessness, inferiority and guilt, involves the organization of object representations at a developmentally higher (perceptual or iconic) level. In this case, it is not the loss of the object, per se, that is feared, but rather the loss of love, acceptance and approval offered by the object. Strivings to attain perfection and outstanding achievement often represent introjective attempts to forestall the loss of love. Constant self-criticism and guilt become means of maintaining contact with the object.

Blatt's description of the anaclitically depressed individual is most interesting in regard to our study of suicidal adolescents. As will be shown in the next section, adolescents generally become suicidal in response to a perceived or actual loss, at which time they take on a frantic search for an immediate physical replacement (often, girlfriend/boyfriend). When such replacements fail, solace seems to be found in an act of suicide which can represent a desperate attempt to regain the lost object via magical thinking (death=reunion with parents), or identification (joining a suicidal or dead parent). The proclivity to manage loss by means of an action

sequence is a central element in description of both suicidal adolescents and anaclitic depression. Within Blatt's schema, then, it seems likely that depressed, adolescent suicide attempters, responding to loss via action, would manifest lower levels of object representation than depressed, adolescent non-attempters.

Providing further evidence for this hypothesis and building upon Blatt's model, Fibel (1979) conducted an empirical study to test the relationship between level of object representation and method of coping with loss and separation. Studying an adolescent and early adult psychiatric (inpatient) population, she proposed a model of depression based on an object relations perspective and, then, empirically tested aspects of this model. Briefly, her model identifies seven stages in the development of the capacity to bear object loss. Each stage is described along five dimensions: the subjective definition of that which is absent, as well as the behavioral, cognitive, affective and defensive components of handling the distress. While her model is complex and in many ways tangential to our study, her findings in regard to the behavioral dimension of object loss are noteworthy. She found that individuals who attempt to manage loss and separation via ideation (e.g.,

abstract, conceptual formulations about loss; guilt) show significantly higher levels of object representation (as defined by Blatt, 1974 and measured according to Blatt's 1976 Rorschach Object Representational Scale) than individuals who attempted to manage loss and separation via action (e.g., behaviorally, seeking immediate gratification, a substitute object, acting out). While she did not look specifically at suicidal action, her study suggests that suicidal attempts, in response to loss and separation, correspond with impairments in the development of object representations.

Before leaving the literature on depression and object relations, one final study will be mentioned. In a 1975 theoretical paper, Feinstein proposed a model of depression which helps clarify the relationship between disturbance in early object relations and suicidal reactions in adolescence.

Feinstein's five stage model pivots around the cognitive and affective achievements which occur during early developmental stages. According to this model, a child's ability to cope with loss depends upon his/her current developmental stage: object relational disturbances occuring at any one of these stages will affect the child's subsequent development,

particularly the ability to manage loss in later years. He discusses each stage separately, relating particular disturbances at each stage to particular pathological defenses against depression and loss in adolescence.

According to Feinstein, the prevalence of suicidal tendencies in adolescence is linked to disturbances in the handling of object loss during the period prior to the completion of the separation-individuation process. While disturbances during the earliest months of life ("presymbiotic" stage of development) may lead, in adolescence, to persistent denial of object loss (from delays in perceiving loss to a delusional repudiation of reality), disturbances during the "symbiotic" phase of development (prior to and during the early phases of separation-individuation) specifically foreshadow the prevalence of suicidal tendencies in adolescence. Loss at this stage initiates, what Feinstein refers to as "the most treacherous reaction the ego experiences since the inability to institute a rapid restitution of the symbiotic tie...leads to the fear of emotional surrender" (p. 230). Because the achievement of a stable self representation, as separate from object representations, has not yet been resolved,

the maintenance of an enduring self representation is dependent upon the continued presence of the libidinal (symbiotic) object and cannot survive object loss. Feelings of loneliness, fears of abandonment and a certainty of annihilation result in the absence of the object. When restitution (i.e., the rapid restoration of a mothering figure) fails to occur, pathological coping mechanisms develop in response to subsequent object loss. During adolescence, particular pathological defenses include acting out, aggression against the self and suicide attempts. Thus, the youngster whose ability to cope with loss has been disrupted at this level of development, prior to the separation-individuation process, is armed only with "symbiotic ego structures" (p. 320) and, as such, remains completely vulnerable to all subsequent loss experiences. Adolescence becomes a particularly difficult period, given its developmental demands and the necessity of relinquishing old love objects. The experience of fragmentation and annihilation in the face of loss, corresponds to the lack of reliable, positive, internalized images, necessitating the continued physical presence of the object.

Once the child has progressed through the separation-individuation phase of development and has

achieved a relatively stable self representation as separate from object representation, he/she is better prepared to handle loss. In fact, Feinstein states that movement through the separation-individuation phase is "the most crucial aspect of the mourning work", for the ego defenses developed during this period provide "a mechanism for the resolution of the normal regression effected by the perception of an object loss" (p. 321). Ego damage at this stage will lead to secondary symptoms of depression in adolescence (marked fluctuations in mood, intense dependency conflicts, confusion in identity), but will not threaten the continued existence/survival of the ego, as in the preceding stage.

In summary, the reviewed literature on object representations and depression highlights the centrality of object representations in determining the available means of coping with loss in adolescence. Object representations which are articulated, differentiated, integrated and stable have been positively correlated with more ideational modalities of coping with loss; object representations which are less articulated, differentiated, integrated and stable have been correlated with action modalities. It seems likely that disruptions in early object relations

impact upon the development of object representations and the individuals' subsequent ability to manage loss. Disruptions prior to the separation-individuation phase may leave a youngster dependent upon the continued presence of a love object, and vulnerable to feelings of fragmentation in its absence. Feelings of cohesion depend upon the maintenance of a symbiotic relationship; disruption of this relationship will result in frantic action-oriented attempts to regain the lost object, one's sense of self and self-esteem. A proclivity to cope with depression via action makes suicidality a high risk.

Adolescent Suicide

Suicidal behavior is an increasingly frequent sequel to the pain of depression in adolescence (Caper, 1981; Gould, 1965; Hendin, 1963; Petzel and Riddle, 1981; Toolan, 1971). While motivational and dynamic aspects of suicide remain complex, the contributing social factors (centering around the adolescent's object relations) emerge as dramatically straightforward: widespread disintegration of the nuclear family is consistently reported in studies of adolescent suicidality. Indeed, almost every paper on the topic of suicide has addressed this issue in one form or another (Holinger, 1977: McAnarney, 1979; Miller, 1975; Peck, 1970; Petzel and

Riddle, 1981; Schrut, 1968; Stanley and Barter, 1970; Toolan, 1971). Epidemiological studies (Crook and Raskin, 1975; Dorpat, Jackson and Ripley, 1965; Sabbath, 1971; Schrut, 1968; Seiden, 1969; Teicher and Jacobs, 1966) indicate that from 50-80% of all suicidal cases in adolescence emerge from unstable family constellations, particularly divorce, desertion or separation; parental loss (death) in and of itself does not differentiate the suicidal from other emotionally disturbed adolescents, but parental loss before age 12 does (Stanley and Barter, 1970).

In addition to the reported statistics correlating suicidal behavior with various forms of parental loss, there is a growing body of literature which highlights the impact of family conflict on adolescent suicidality. Petzel and Riddle have cogently summarized these findings in their recent (1981) review article. Children and adolescents attempting suicide tend to view their family conflict as extreme and longstanding (Sabbath, 1969, 1971; Teicher, 1970). Parents are seen as the major sources of anger and as unable to be depended upon for support (Cantor, 1976). The conflict-filled homes of adolescents who attempt suicide include frequent quarreling leading to distrust and resentment of parent(s)/stepparent(s)

(Jacobs, 1971) ; emotional disorganization (Haider, 1968); decreasing communication (Mattsson, Sesse, and Hawkins, 1969; Schrut, 1968), and a sense of rejection (Sabbath, 1969). Disturbed relations with parents have been described as the "most important extrinsic factor in the emotional disturbances" of adolescents who attempt suicide (Lukianowics, 1968).

Family conflict has been reported not only as part of the family background of suicidal adolescents, but also as one of the experiences occuring at the time of the adolescent's suicidal behavior. Mattsson et al. (1969) report that acute conflict between child and parental figures is the most common event triggering adolescent emergency psychiatric referrals, many of which involve suicidal attempts or threats. For adolescents, "poor" relationships with parents has been described as the most frequent reason for attempted suicide (Senseman, 1969).

These studies suggest the powerful role of environmental factors upon the youngster's capacity to manage the stress of the adolescent period. A stable external environment provides a necessary balance to the internal chaos inevitable during adolescence; when this balance is not provided, internal chaos is reinforced and suicidal behaviors emerge.

Given the reported data, we need to ask ourselves about the interplay of forces between familial disintegration (e.g. death; divorce; marital discord; teenage runaway) and adolescent suicidality. We will begin our discussion by looking at those studies which highlight the relationship between the external environment and the (internal) object world of the suicidal adolescent, including developing self and object representations and self-esteem. Psychodynamic formulations of adolescent suicide will be included in this discussion. Following this review, we will turn our attention to those studies which address the cognitive factors involved in the determination of adolescent suicidality. This section will close with a statement of the problem and elucidation of the hypotheses of this dissertation.

The Object World of the Suicidal Adolescent

The object world of the adolescent consists of those significant others (family/friends) in the adolescent's current environment, as well as the internal representations of significant others from past history. Our understanding of the suicidal adolescent's object world must, therefore, take into account the impact of loss, both past and present, upon the adolescent's developing object representations and sense of self.

The loss of a parent or loved one stimulates suicidal activity in adolescents in different ways. Freud's (1917) original formulation of suicide in melancholia stressed an identification of the ego with the abandonned (love) object so that "the shadow of the object fell upon the ego" (1917, p. 170). In this way, the loss of the object becomes transformed into a loss in the ego. While part of the erotic cathexis to the (lost) love object undergoes a regression to identification, the remaining part, under the conflict of ambivalence, is reduced to the stage of sadism. Hostility, originally felt toward the love object, is now turned upon the self (ego) in the form of sadistic self-reproaches: the mourner blames him/herself for the loss of the loved one, ie., desired it to happen (p. 172). In this way, a conflict initially waged between the love object and the ego becomes an internal conflict between the ego and a harsh superego. It is this sadism which, Freud states, "solves the riddle of the tendency to suicide" (p. 173).

Applying Freud's original psychodynamic theory of suicide to adolescence, the suicidal adolescent is depicted as having suffered loss of love, deprivation and/or rejection in relation to important per-

sons. As a result, intense feelings of anger and resentment toward these depriving persons develop. Aggressive impulses toward people who are also "love objects" are a troublesome matter, which induce feelings of guilt and thereby increase the adolescent's feelings of "badness". The need to assuage guilt feelings subsequently results in self-destructive attitudes and behaviors, and the final result may be suicide (McKenry, Tishler, and Christman, 1980; Gould, 1965; Toolan, 1962; Weiner, 1970).

The traditional formulations of suicide follow a perspective which is guided by the centrality of oedipal issues. Within this framework, the superego assumes particular importance in its attribution of guilt to the self for having feelings of anger directed toward the lost object. The act of suicide is the outcome of an internal struggle over the object of aggression.

In an attempt to empirically test the notion that suicide in adolescence is the outcome of an internal struggle over the object of aggression, Levenson and Neuringer (1970) looked specifically at the dimension of intropunitiveness. They administered the Rosenzweig Picture-Frustration Test to 13 suicidal, 13 non-suicidal but psychiatrically diagnosed, and 13

normal adolescents. Contrary to expectations, they did not find any significant differences among these three groups, and concluded only that this hypothesis needs to be retested.

Several questions are raised by the results of Levenson and Neuringer's study. To begin with, they tested a formulation of completed suicide by using subjects who were not completers, but attempters. It is by no means clear that similar dynamics exist for completers and attempters. Secondly, the role of aggression in adolescent suicidality may not take the same course as in adult suicide. Aggression, guilt and self-blame, dynamics cited in formulations of adult suicide presuppose a level of differentiation of self/object representations which may not hold for suicidal adolescents. Indeed, a major thesis of the current study posits that adolescent suicidality corresponds to a level of object representation which reveals little differentiation between self and object. Impairments in the development of object representations may leave the adolescent vulnerable, not so much to directed, internalized aggression, as to overwhelming feelings of dependency and fragmentation. In this regard, Litman (1968) seems to support a similar notion. He states that there has been a "relative

overemphasis on aggression and guilt as components of suicide with underemphasis on the helplessness, dependency and erotic elements. In other words, the suicidal drama often reproduces not so much guilt for the unconscious wish of the child to murder the parents, but rather a reaction of abandonment, on the part of the child, to the parents unconscious wish for the child's death. The mechanism of regression and ego splitting, and the themes in suicide of helplessness, constriction and paranoid distrust, have made the deepest impression on me". Clearly, the results obtained in Levenson and Neuringer's study suggest that alternate conceptualizations of adolescent suicidality need to be considered.

Some alternate conceptualizations of the dynamics of suicidal action include:

1) "retaliatory abandonment" (Hendin, 1964), i.e., leaving a loved one before being left as a way to gain an illusory sense of power and control; 2) "retroflexed murder" (Hendin, 1964), which represents an attempt to revenge or punish a loved one; 3) self-punishment (Hendin, 1964), usually a reaction to a perceived failure, involving feelings of guilt and unworthiness; 4) the assumption of a "negative identity" via identification with a degraded parental

image or negative parental attitude when no positive identifications are possible (Erikson, 1968); 5) "reunion" with a lost love object (Hendin, 1964; Erlich, 1968; Deutsch, 1930; Miller, 1981; Seiden, 1969), a frequently cited dynamic in adolescent suicide; and 6) identification with parental depression (Margolin and Teicher, 1968). In specific regard to adolescence, Toolan adds three additional dynamics: 1) attempts to manipulate another in order to gain love and affection, 2) a signal of distress; and 3) a reaction to inner feelings of disintegation.

The varying dynamics of adolescent suicide involve attempts to redress the external world as well as attempts to alter an unbearable internal situation. In all cases, the impact of family loss and conflict upon the nature of the adolescent's self and object world is profound and disruptive, leading to severe cognitive and affective regression. While structural and object relational considerations of adolescent suicidality have been relatively neglected in the literature, a few important papers lay the groundwork for future study. We will now turn our attention to the literature which highlights in particular, the disruption in development of stable

and integrated object representations.

The disruption in development of internal representations in suicidal youngsters has much to do with the dynamics of ambivalence. Intense parental ambivalence is so common in the history of suicidal adolescents that Sabbath (1969) proposed the "expendable child" concept, a concept which refers to the existence of a parental wish, conscious or unconscious, which is interpreted by the child as a desire to be rid of him or her. In response to this hostile wish, the adolescent may develop extreme feelings of unworthiness (Schrut, 1964); an inability to resolve ambivalent conflicts, which leads to a disruption of integrated self and object representations (Jacobson, 1973; Margolin and Teicher, 1968; Miller, 1981); and an ultimate identification with the destructive parental wish (Hendin, 1975; Rosenkrantz, 1978; Schrut, 1968).

In a study of 13 suicidal adolescent boys, Margolin and Teicher (1968) highlight the interaction between parental ambivalence, developing self and object representations, and suicidal behavior. They note that intense maternal ambilvalence, together with a lack of a masculine image in the experience of these boys disrupts the development of integrated

self and object representations in the child: "There appears to be splitting of the primary object with projection of the good object, in order to maintain a benevolent external world, and introjection of the bad object in the form of the frustrating, depriving mother; the purpose is to avoid feelings of helplessness. The young child would rather feel 'bad' and be taken care of by the 'good' mother than feel good and be taken care of by a 'bad' mother" (p. 312). Margolin and Teicher go on to postulate that the task of separation in adolescence arouses unbearable feelings of helplessness in these anaclitically dependent youngsters, who then defend against such feelings (and avoid separation) by identifying with the mother's depressive, often suicidal, state. Such an identification represents a "frantic attempt to hold onto the 'good object' since they have no other" (p. 312).

According to Margolin and Teicher, parental ambivalence leads to the maintenance of split representations, an extraordinary vulnerability to separation due to a lack of integrated representations, and an identification with the destructive, degraded aspects of the love object. Put somewhat differently, one might say that the communication of intense par-

ental ambivalence disrupts the adolescent's ability to master ambivalent conflict. This leads to severe splitting of self and object representations with a hypercathexis of the object representation -- in order to protect it from destructive impulses--along with an aggresive hypercathexis of self-representations. Such an internal state of affairs is bound to produce masochistic, self-destructive behaviors. The threat of suicidality becomes particularly great at times of loss and/or separation, when conflicts of ambivalence are heightened (Friedman et al., 1972). Such conflicts lead to increased splitting, an inability to relinquish the libidinal tie to the parent, and an identification with a destructive parental image. The real tragedy of this situation is that the adolescent succeeds in regaining the powerful love object but only "by a complete deflation or even destruction of the self" (Jacobson, 1973, p. 248).

The lack of integrated, internalized images, together with a lack of appropriate identificatory figures in the adolescent's present-day world make regressive yearning difficult to offset. The wish to return to a child-like state, to merge with a fantasized, all powerful symbiotic mother have repeatedly been cited as potent factors in the determination of

adolescent suicidality (Erlich, 1968; Deutsch, 1930; Litman, 1968; Kubie, 1967). Frequently, this wish involves the desire to reunite with a deceased parent (Schneer and Kay, 1962; Schrut, 1968), containing a romanticized view of death as the "all-powerful lover" and an illusion of a "blissful reunion" with a dead or absent parent. In such cases, the act of suicide may become a concrete representaiton of the intense regressive wish for symbiotic union.

Our focus, thus far, has been on the nature of the adolescent's object representations and on affective influences. We will now turn out attention to the interplay between adolescent suicidality and cognition, an area of study which has been only briefly explored.

Cognitive Factors in Adolescent Suicidality

Erlich's 1968 paper on adolescent suicide stands alone in its explicit attempt to integrate an understanding of the adolescent's cognitive development with psychoanalytic notions of emotional regression and yearnings for symbiosis. He postulates that the relationship between such powerful emotional longings and suicidal thought or action is mediated through an intervening variable-- namely, "the changes in ego functions of which the quality of structural-

cognitive development, characteristic of adolescence, is one important element" (p. 267). The confluence of powerful emotional and cognitive factors contribute to the adolescent's propensity for suicidal preoccupation and action: specifically, he states that suicidality in adolescence may result from the interaction of "highly intensified longings for maternal union and specific proneness to vacillation between the mixing of structural-cognitive levels of formal and concrete operations. This regressive-progressive interplay between the two areas may lead to the concrete and actual treatment of death as the symbolic expression for union with mother" (p. 268). When loss of the maternal object actually occurs in reality, as in the case of divorce, separation or death, then regressive longings become all the more powerful and "cognitive regression" all the more likely. A proclivity to respond in action, rather than ideation, is often the consequence.

The role of cognitive functioning in suicidality is further documented by recent studies. Neuringer (1976), summarizing the evidence, states that "there is a difference in the cognitive structures and activities of suicidal individuals as compared to those of individuals who are considered normal and

persons who are diagnosed as being psychiatrically disturbed but not self-destructive" (p. 246). These differences can be seen along several cognitive dimensions: greater difficulty in utilizing and relying on internal imaginative resources, (fantasy life); greater polarization of value systems; and impovished problem solving abilities due to rigid, inflexible and dicotomous thinking (Neuringer 1964, 1967). Specifically, related to our study is the one empirical study linking cognitive rigidity with adolescent suicidality. Using the WAIS Arithmetic Subtest and the Rokeach Map Reading Problems Tests as measures of problem-solving ability, Levenson and Neuringer (1971) tested 13 suicidal, 13 psychiatrically disturbed but non-suicidal and 13 normal adolescents matched for general intelligence level and age (age range 15-17). They found highly significant differences between the suicidal and non-suicidal groups on both tests, indicating that suicidal adolescents show greater cognitive rigidity. Similar findings of cognitive rigidity have been reported for suicidal adults (Levenson, 1972; Neuringer, 1961; Neuringer and Littieri, 1971).

These studies suggest that the suicidal person posseses some unique congitive characteristics which

diminish his/her ability to find viable solutions to life's problems and diminish his/her capacity to cope with the stresses of life. Indeed, descriptions of these cognitive characteristics depict individual's who seem to be operating at a concrete operational level. The ability to be cognitively flexible and abstract-- dimensions of formal operational thinking-- are not in evidence.

The cognitive dimension of time and the ability to understand the concept of death are dimensions which have been linked with adolescent suicidality. In his clinical work, Miller (1981) has found that suicidal adolescents, concrete in thinking and lacking in finite sense of time, may be attempting suicide but without a belief that death will occur. "Prisoners of the present", these youngsters seem to have little sense of future and/or of the irreversible nature of death. Peck (1970) relates the suicidal youngster's limited time orientation to a failure in developing a sense of optimism in infancy. He states that "when the sense of optimism fails to develop in infancy, frustration in adolescence is experienced as the end of all hope... While most adolescents have a tendency to attenuate time in that they tend to see the present and its accompanying pain somewhat out of proportion

to the relative weight of the past and the future, the suicidal youngster-- the youngster who has not developed an adequate sense of optimism-- tends to experience this in far greater degree and sees no hope for any change in his feelings or his state of frustration" (1970, p. 37).

Peck highlights how an early childhood disturbance in the mother-child relationship can become pronounced during the adolescent period, affecting not only the child's sense of hope, but also the developing sense of time. It is this collapse in the cognitive dimension of time which, by contributing to an overwhelming sense of urgency and despair, may ultimately lead the youngster to suicidal acts (Bemporad and Wilson, 1978; Peck, 1970).

Taken together, the literature on adolescent suicidality suggests that specific cognitive/structural factors may play a critical role in determining suicidal tendencies. The lack of stable, articulated, differentiated and integrated object representations leave the adolescent vulnerable in the face of object loss/separation. In addition, the cognitive dimensions of concreteness, rigidity and present-time orientation limit the adolescent's ability to find adequate coping strategies with which to manage the

inevitable loss and internal chaos of this period. These cognitive/structural considerations lead us directly to the major hypotheses of this dissertation.

The Hypotheses

The following object relational and cognitive hypotheses in regard to adolescent suicidality will be examined:

Hypothesis #1. Suicidal, depressed adolescents are predicted to demonstrate significantly lower levels of object representation than will non-suicidal, depressed adolescents. Levels of object representation include degree of differentiation, articulation, and integration of the concept of the object.

Hypothesis #2. Suicidal, depressed adolescents are predicted to indicate a greater tendency to assume an action modality than non-suicidal, depressed adolescents.

Hypothesis #3. Suicidal, depressed adolescents are predicted to demonstrate a significantly greater tendency toward concretization of thought than will non-suicidal, depressed adolescents.

Hypothesis #4. Suicidal, depressed adolescents are predicted to demonstrate significantly greater cognitive rigidity than will non-suicidal, depressed adolescents.

Hypothesis #5. Suicidal, depressed adolescents are predicted to demonstrate a greater cognitive distortion in the sense of time than non-suicidal, depressed adolescents. This includes an attenuated present-time orientation and a lack of future-time sense.

CHAPTER II

METHODOLOGY

Subjects

Subjects were drawn from a roster of all adolescent patients hospitalized between 1972 and 1981 in a long-term, university affiliated, psychoanalytically-oriented psychiatric hospital on the East Coast. The patient population is predominantly Caucasion, middle to upper class background and from diverse geographic areas. Criteria for inclusion in this study rested on age, with adolescent being defined as 13-18, and the availability of complete psychiatric charts, including initial interview and Mental Status Exam, W.A.I.S. records, and verbatim Rorschach and Thematic Apperception Test protocols. Based on these criteria, an initial hospitilized, adolescent sample of 104 was obtained.

These charts were then evaluated independently by two raters in order to narrow the sample to include only depressed adolescents. The experimental population was limited to those adolescents rated "depressed" by both raters. Since the chart data used in this study involved diagnostic assessments made by many different clinicians over a 10 year period, there was a need to compensate for both the relative utilization of favored classification schemes

across time and the varying degree of thoroughness with which patients were assessed. Thus, criteria for evaluating a patient as depressed include: a) psychiatric diagnosis, b) psychological testing diagnosis, and the Research Diagnostic Criteria (Spitzer, Endicott, and Robins, 1978). A subject was only included in the sample if he/she was rated depressed on two out of three criteria. Furthermore the R.D.C. has been shown to compensate for diagnostic instability across time and by varied raters, when applied to chart material (Coryell, Lowry and Wasek, 1980).

The charts of these depressed adolescents were then divided into two groups, those with a history of suicide attempts and those without such a history. Evaluation for inclusion into either of these groups was made independently by two raters using Stengel's (1974) criteria for defining suicide attempt. "A suicidal act is any deliberate act of self-damage which the person commiting the act cannot be sure to survive" (1974, pp. 82-83). This definition avoids the complicated issues of suicidal intent (to live or to die) and motivation. In regard to the issue of intent, Stengel says: "To divide suicidal acts into those aiming at self-destruction, and those meant to be cries for help is, in my opinion, mistaken. They

are not either one or the other, but both at the same time" (1974, P.XVII). Habitual behaviors which are injurious to life, such as a drug habit, alcohol abuse, or "accident proneness" are not, here, considered as qualifying for inclusion in our definition of "suicidal act". Where disagreement between raters occured, the case was discussed and the appropriate grouping agreed upon by both raters.

Raters

Two clinical psychologists served as raters for this study; one, a female Ph.D. with 6 years post-internship experience; the other, a male graduate student with 5 years of clinical experience beyond the internship. Both were chosen based on their extensive experience with an adolescent population, and specifically with the use of psychological and projective testing with this age group. In order to arrive at satisfactory levels of interrater reliability, three two-hour training sessions were conducted in order to review Mayman's Rorschach Scoring criteria and to instruct in the scoring of the Rorschach for levels of object representation, according to the scale devised by Blatt, Brennis, Schimek and Glick (1976). Scoring on sample Rorschach protocols have shown interrater reliability to

to exceed 87%. An additional two hour training session was conducted to achieve interrater reliability in evaluating charts according to the depression criteria and the suicide attempt criteria, as well as provide instructions governing the use of the Time Continuity Scale.

Throughout this study, raters were blind to the subjects identity, experimental grouping, and scores on the other measures.

Materials

The analysis of both objective and projective psychological testing data provided the basis of measurements used to explore the experimental hypotheses. For some variables, standardized test scores were utilized without additional ratings; WAIS Subtest scores and Rorschach formal determinant scores are two such examples. For other variables, psychological test data was scored using scales that specifically address the variables under consideration in this study. The following tests and rating scales were used:

1) A subject's level of object representation was ascertained by the Rorschach Ink Blot Test, Object Representation Scale (R-OR); 2) A proclivity to assume an action modality was assessed by the bal-

ance between the Performance and Verbal scores on the WAIS; 3) Concretization of thought was assessed by the Similarity Subtest on the WAIS, and by analysis of two Rorschach criteria (Location scores and manifestly concrete responses to the inkblot); 4) Cognitive Rigidity was assessed by the Arithmetic and the Block Design Subtests on the WAIS, and by the total number of responses on the Rorschach; 5) Time Perspective was measured by the Picture Arrangement Subtest on the WAIS, and by the rating of selected TAT cards utilizing the Time Continuity Scale (T.C.S.)

A Developmental Analysis of the Concept of the Object on the Rorschach

Blatt, Brennis, Schimek and Glick (1976) formulated a scoring system for studying the quality of human responses on the Rorschach. Grounded conceptually in a Wernerian theory of cognitive development (Werner, 1948; Werner and Kaplan, 1963) and following Blatt's (1974) cognitive-developmental approach to the study of object representations, the scoring system relies on the ratings of three primary dimensions -- differentiation, articulation and integration. Within each dimension, a continuum of subcategories from low to high developmental level determines the relative weight of the subcategory score

to the total score for that dimension. The scale is scored in the positive direction: the higher the score, the higher the level of development.

The dimension of "differentiation" is defined as the nature of the response. More specifically, responses are classified according to type and completeness of the human figure that the subject perceives. The subcategories, beginning with the lowest weighted, are: partial detail of quasihuman figures (Hd) (e.g., angel's face, witch's head, etc.); partial details of human figures, Hd, (e.g., man's face); full quasihuman figures (H), (e.g., witches, dwarfs); and full human figures, H, (e.g., people, woman).

"Articulation" is defined as the degree to which the response is elaborated and responses are rated on the basis of types of attributes ascribed to the figures. Seven specific attributes are scored, subdivided into perceptual details (size, posture, clothing) and functional details (age, sex, role, specific identity). Functional details are considered developmentally more advanced than perceptual and hence, are given more weight in determining the articulation score.

The final dimension, "integration", is defined as the way the concept of the object, if engaged in

human activity, is integrated into a context of action and interaction with other objects. The response is scored in four ways; 1) the degree of internality of the motivation of the action (unmotivated, reactive, intention); 2) the degree of integration of the object and the action (fused, incongruent, nonspecific and cogruent); 3) the nature of the interaction with another object (active/passive, active/reactive, active/active); and 4) the content of the interaction (malevolent, benevolent).

In Blatt's initial research utilizing the R-OR, interrater reliabilities of greater than 82% were achieved using a sample of 37 normal and 48 hospitalized subjects. The validity of this scale as a measure of increasing developmental levels of object representation was shown by Blatt et al. (1976) in a developmental analysis of 37 normal subjects tested at ages 11-12, 13-14, 17-18, and 30. Significant increases were observed for differentiation, articulation and integration of the concept of the object.

Rorschach Determinants

In addition to the R-OR Scoring system, several Rorschach determinants were used to assess the hypotheses of this study. Rorschach Location scores (W, D, d) are a reflection of the subject's percep-

tual and cognitive organization of the stimulus. As such, they provide useful information regarding the synthetic and associative abilities of the individual. The variable of "concretization of thought" was assessed by comparing location scores.

D and d have been shown to indicate a tendency to respond to the obvious and commonplace. Such responses, especially if greater than 50% of the total protocol, may reflect a mind that is constrained by cognitive limitations and cannot synthesize the various discrepant parts of the inkblot (Allison, Blatt and Zimet, 1968; Klopfer, Ainsworth, Klopfer and Holt, 1954; Rapaport, Gill and Schafer, 1968; Sugarman et al., 1980).

In addition to examining D and d location scores, W responses were tabulated. In contrast to the D or d score, the W response is generally thought to reflect integrative abilities and the capacity for generalization and abstraction (Allison et al., 1968; Klopfer et al., 1954; Rapaport et al., 1968).

A second indicator of concretization of thought is the expression of manifestly concrete responses. Such responses are indicative of an over adherence to <u>perceptual</u> realities, and a resulting cognitive mode which tends to be concrete (Allison et al., 1968;

Sugarman et al., 1980). Examples include: "inkblot", color naming, description of the blot.

The variable of cognitive rigidity was measured on the Rorschach by tallying the total number of responses which is indicative of general productivity. "This productivity depends upon the flexibility of the perceptual processes and the wealth and pliancy of the associative processes. If the perceptual organizing processes become rigid, the subject may be unable to look at the inkblot from different points of view, to shift the figure-background relationships of it, to shift from a greater to a lesser articulation of it" (Rapaport et al., 1968, p. 298).

Wechsler Adult Intelligence Scale

The Wechsler Adult Intelligence Scale (WAIS) has a long and distinguished record for providing useful information regarding intelligence and personality assessment. For our purposes, several select subtests, which have shown to relate to our cognitive hypotheses, were utilized.

The Similarities Subtest provides an indication of concrete vs. abstract thinking (Allison et al., 1968; Rapaport et al., 1968). It assesses the logical characteristics as well as the maturation of the subject's thinking processes. Conceptual abstraction

and judgement are required and may be carried out on one of three levels of cognitive development (Rapaport et al., 1968): a) concrete similarity, b) functional similarity, and c) abstract similarity.

The Arithmetic Subtest has been described by Rapaport et al., (1968) and Allison et al. (1968) as a measure of problem-solving ability and has empirically demonstrated cognitive differences between suicidal and nonsuicidal adolescents (Levenson and Neuringer, 1971). Arithmetic requires the ability to actively focus attention in order to acquire information about the problem and to manipulate its complex dimensions. In order to be successful, the subject must attend to the "specific numbers of the problem, maintain an overview so that the various elements are seen in their relative position in the problem matrix and the relationship between the various elements must be manipulated in order to arrive at a solution" (Allison et al., 1968, pp. 27-28). Arithmetic depends upon prior learning and memory, but also the "application of select skills to cope with a new and unique situation" (Allison et al., 1968, p. 28).

The Block Design Subtest provides a further measure of cognitive rigidity and problem-solving

ability. The test requires the subject to see meaningful spatial relationships and to synthesize abstract geometric designs. This problem-solving test is essentially a concept formation task requiring non-verbal reasoning and involving both analysis and synthesis (Allison et al., 1968).

The subtest of Picture Arrangement was used to measure the variable of future time. Recent evidence supports the notion that Picture Arrangement is related to anticipation, planning and future time perspective (Allison et al., 1968; Blatt and Quinlan, 1965; Dickstein and Blatt, 1966; Rapaport et al., 1968). According to Blatt (1965), Picture Arrangement assesses the ability to anticipate or understand a sequence which extends through time into the future (p. 246). If the capacity for anticipation is lacking, events are viewed in isolation, without any organization or continuity. Relative impairment on the Picture Arrangement Subtest indicates a proclivity toward action (and acting out) primarily because of a relative inability to anticipate and plan. This inefficiency in anticipation and planning is consistent with our hypothesis that suicidal adolescents may have a disturbance in their sense of future time.

Finally, the balance between Performance and

Verbal Scale IQ's was utilized as a measurement of action tendencies. There is research support for the observation that Performance Scale IQ's tend to be higher than Verbal Scale IQ's in acting out adolescents (Field, 1960; Wechsler, 1944). While this observation has been confirmed for adolescent psychopaths and adolescent delinquents, it has not yet been extended to suicidal adolescents.

Thematic Apperception Test (TAT)

The evaluation of suicidality as measured by the TAT has focused on the assessment of aggressive themes. The outcome of these studies (Fisher and Hinds, 1951; Levenson and Neuringer, 1971; Lester, 1970; McEnvoy, 1963) have, generally, been negative. Our use of the TAT is focused, not on the dynamic issue of aggression, but rather on the cognitive-structural consideration of time perspective. In order to test the hypothesis that suicidal adolescents reveal impairments in their sense of future time, a three point rating scale (Time Continuity Scale - TCS) was developed by the investigator. A low score on this scale reflects an exclusive orientation in present time; a high score reflects a sense of time which includes past, present and future -- in other words, continuity of time. TAT cards, chosen for their fre-

quent use in the evaluation of suicidality, were rated (3BM, 13MF, 14).

Research Diagnostic Criteria (RDC)

The RDC was developed by Spitzer, Endicott and Robins (1978) to "enable research investigators to apply a consistent set of criteria for the description of selection of samples of subjects with functional psychiatric illness" (p. 773). Symptoms and duration of illness, and overt behavioral attributes are the central factors in determining the diagnosis. Each diagnostic category has a checklist format of symptoms and the criteria for inclusion is outlined. Spitzer et al. have shown the RDC to be both a valid and reliable diagnostic measure. Indeed, many of the DSM III criteria derive from the initial RDC classification. This study focused specifically on the RDC criteria for Major Depressive Disorder (see appendix). Semistructured interviews, the method of choice for obtaining RDC data, were not feasible given the inherent limitations in a retrospective study. Rather, the RDC was applied to the information available in the hospital charts of the subjects. While not as complete as interview data, the validity and reliability of the measure applied to chart review have been demonstrated (Coryell et al., 1980).

Procedure

Following the approval from the hospital's Human Investigations Committee, all adolescent charts previously described were obtained, and then xeroxed in such a manner as to eliminate all identifying data and to insure total patient confidentiality. Each patient chart was then randomly assigned a code number, at which point psychiatric interviews and MSE, WAIS scores, Rorschach and TAT protocols were all separated and each given a random number. A master list was recorded to allow patient data to be appropriately collated following completion of all scoring.

Patients were then assigned to one of two groups as described in the subject section of this chapter. The Rorschach protocols were then given to the two raters in the same random order. All the protocols were scored for level of object representation and then for the remaining Rorschach variables: total #R, location scores (D,d, W). The same procedure was utilized to score the TAT protocols.

After all scoring was completed, data was keypunched and statistical analyses utilizing S.P.S.S. (Nie, Hull, Jenkins, and Steinbrenner, 1970) were performed.

CHAPTER III

RESULTS

The results confirmed several of the major hypotheses. A proclivity toward assuming an action modality and a greater cognitive distortion in the sense of time were shown to be significantly and positively correlated with adolescent suicidality. In general, levels of object representation were lower for suicidal adolescents than for non-suicidal adolescents. Results on the two cognitive dimensions, concretization of thought and cognitive rigidity, were equivocal.

Initial data analyses explored sample characteristics in order to describe its demographic nature and to insure that experimental and control groups were adequately matched for age, intelligence and degree of acting out. No significant differences were observed on these dimensions utilizing the Mann-Whitney U test. Subjects ranged in age from 13 - 18 years. The mean age was 16.07 years. Subjects in the suicidal group ranged in age from 14 to 18 years with a mean age of 16.00. Subjects in the non-suicidal group ranged in age from 13 to 18 years with a mean age of 16.10. Seventeen males and 22 females were included in this study. The attempter group

(n=20) consisted of eight males and 12 females; the non-attempter group (n=19) consisted of nine males and ten females. Several additional descriptive variables were explored including family intactness, age of loss, birth order, suicidality, lethality of suicidal action, severity of suicidal ideation, and precipitating event. These variables are presented in Tables 1 - 8.

Interrater reliability was computed for subjects' scores on the Rorschach Object Representation Scale (ROR) and on the Time Continuity Scale, utilizing Pearson correlation coefficients. High levels of interrater reliability were found for ratings on both measures. For the ROR, the interrater reliability coefficients were: a) differentiation, r=.97; b) articulation, r=.97; c) integration, r=.98; d) Total, r=.98. Interrater reliability for the Time Continuity Scale was r=.93.

Given the modest sample size and the skewed distribution of the sample, nonparametric tests were used in all data analyses. As proposed in the methodology section, the major hypotheses were explored comparing two groups, attempters and non-attempters. These two-group comparisons were computed utilizing the Mann Whitney U - Wilcoxon Rank

TABLE 1

Sample Description:

Means and Standard Deviations

for Both Groups on Age and Intelligence

	Attempters (n = 20)		Non Attempters (n = 19)	
Variable	M	SD	M	SD
Age	16.05	1.57	16.10	1.28
IQ	106.40	8.49	108.94	13.19

TABLE 2

Sample Description:

Nature of Family Intactness

	Attempters (n = 20)	Non Attempters (n = 19)
	N	N
Intact Family	11	11
Separation/ Divorce	7	5
Death of Parent	1	0
Combination (Death & Divorce)	1	3

TABLE 3

Sample Description:

Age at Time of Parental Loss

(Death or Divorce)

	Attempters (n = 9)	Non Attempters (n = 8)
	N	N
Birth - 5 years	2	3
5 - 12 years	6	3
12 - 16 years	1	2

TABLE 4

Sample Description: Birth Order

	Attempters (n = 20) N	Non Attempters (n = 19) N
Only Child	0	1
Eldest	4	7
Middle	7	7
Youngest	9	4

TABLE 5

Sample Description: Suicidality

	Attempters			Non Attempters		
	Female (n=12)	Male (n=8)	Total (n=20)	Female (n=10)	Male (n=9)	Total (n=19)
	N	N	N	N	N	N
More than One Attempt	8	5	13			
One Attempt	4	3	7			
Ideation Only				5	4	9
No Attempt No Ideation				5	5	10

TABLE 6

Sample Description:

Lethality of Suicide Attempt

	Attempters		
	Female (n = 12)	Male (n = 8)	Total (n = 20)
	N	N	N
Low	5	1	6
Medium	6	4	10
High	1	3	4

TABLE 7

Sample Description:

Severity of Ideation

	Non Attempters		
	Female (n = 10)	Male (n = 9)	Total (n = 19)
	N	N	N
None	5	5	10
Low	4	3	7
Medium	1	1	2
High	0	0	0

TABLE 8

Sample Description:

Precipitating Event for

Suicidal Ideation or Suicide Attempt

	Attempters (n=20) N	Non Attempters (n=19) N
Breakup, Boyfriend Girlfriend	3	0
Fight with Parents	6	4
Parental Discord	2	2
Separation/Divorce	1	1
School Problems	1	0
Peer Problems	1	0
Legal Difficulties	3	1
Other	3	1

Sum W Test. After reviewing the results obtained from these computations, further analyses were conducted based upon an eight point ordinal scale, suggested by Dr. Lou Gerstman (personal communication). Rather than conceptualizing the sample as representing two distinct and dichotomous groups, it was felt that a more exact and differentiated analysis based upon a continuum (ordinal rank scale) would serve to clarify any differences that might be obscured by the more global, two-group distinction. This ordinal scale was derived by using both frequency and lethality (severity) ratings. Eight groups emerged ranging from those who had never attempted nor contemplated suicide (zero frequency and zero lethality) to those with several attempts of a highly lethal nature. The lethality rating was given more weight than the frequency rating in determining a subject's rank. For example, a subject with several attempts of low lethality was ranked lower than a subject with one attempt of medium lethality. When a subject had made several attempts, his/her lethality rating reflected the most lethal attempt. See Table 9 for a breakdown of the number of subjects in each of the eight ranks. Spearman correlation coefficients were computed for

TABLE 9

Number of Subjects in the Eight

Ordinal Scale Rankings

Rank	N
Several Attempts High Lethality	4
Several Attempts Medium Lethality	5
One Attempt Medium Lethality	5
Several Attempts Low Lethality	4
One Attempt Low Lethality	2
Ideation Only Medium Severity	2
Ideation Only Low Severity	7
No Attempt No Ideation	10

these ranked comparisons.

For the sake of clarity, the results for each hypothesis will be discussed separately, using both two group and eight group data. This chapter will conclude with a comparison of the two groups by sex.

Hypothesis 1 predicted that suicidal depressed adolescents would demonstrate significantly lower levels of object representation than non-suicidal depressed adolescents. Levels of object representation were ascertained using the Rorschach Object Representation Scale, which is comprised of separately scored categories: differentiation, articulation and integration of the concept of the object. As will be recalled from the methodology section, the integration category is itself a composite score of several subscales: motivation (of the action); integration (of the object and the action): nature (of the interaction with another object); and content (of the interaction). Table 10 reports the results of the two-group comparisons. Results approach significance in the predicted direction for the differentiation category ($Z_u = 1.37$, $p < .10$, trend) and reached significance for the motivation subscale of the integration category ($Z_u = 2.37$, $p < .01$). No significant differences were found for the articu-

TABLE 10

Rorschach Object Representation Scale:

Means (and Standard Deviations)

for Both Groups with Contrasts

Variable	Attempters (n = 20)	Non Attempters (n = 19)	Z_u[1]
Differentiation	29.45(5.62)	32.01(4.62)	1.37 ~
Articulation	18.67(8.55)	20.42(8.65)	.44
Motivation	9.64(4.83)	13.71(6.08)	2.37**
Integration (subscale)	25.33(11.32)	28.71(7.50)	1.20
Content	15.65(6.96)	17.32(4.78)	.57
Nature	19.49(13.03)	19.45(7.80)	.99
Integration	70.12(32.20)	79.21(20.53)	.02
Total ROR	65.27(18.63)	72.03(11.32)	1.03

[1]Mann-Whitney U Tests corrected for tied ranks and expressed as normal deviates

~ $p < .10$(trend); *$p < .05$; **$p < .01$; one-tailed

lation and integration categories, or for the total ROR score.

Levels of object representation were explored for the eight rank ordinal suicide scale using Spearman correlation coefficients (see Table 11). A greater degree of suicidality was positively and significantly correlated with the differentiation category ($\underline{r}$=.310, $p < .05$), and with the motivation subscale of the integration category ($\underline{r}$=.305, $p < .05$). Results approached significance in the predicted direction for the total ROR score ($\underline{r}$=.221, $p < .10$, trend), and for the integration subscale of the integration category ($\underline{r}$=.214, $p < .10$, trend). Thus, the underlying level of object representation seems to play a role in distinguishing between suicidal and non-suicidal depressed adolescents.

Hypothesis 2 predicted that suicidal depressed adolescents would reveal a greater tendency to assume an action modality, as a means of problem solving, than non-suicidal, depressed adolescents. A tendency toward assuming an action modality was assessed by the balance between Verbal and Performance scores on the WAIS. Results are reported in Table 12 and Table 13. Suicidal adolescents show a significantly greater discrepancy between Verbal and Performance

TABLE 11

Rorschach Object Representation Scale:

Rank Difference Correlates with Suicide Scale

Variable	r
Differentiation	.310*
Articulation	.083
Motivation	.305*
Integration (subscale)	.214 ~
Content	-.028
Nature	-.155
Integration	-.011
Total ROR	.221 ~

~ $p < .10$(trend); *$p < .05$; **$p < .01$; one-tailed

TABLE 12

WAIS Subtest Means

(and Standard Deviations)

for Both Groups with Contrasts

Variable	Attempters (n=20)	Non Attempters (n=19)	Z_u[1]
Arithmetic	16.02(4.39)	16.82(2.57)	1.75*
Similarities	20.20(2.56)	18.87(3.16)	1.32
Picture Arrangement	20.01(2.83)	21.69(3.73)	1.75*
Block Design	21.36(3.02)	19.56(3.72)	2.03*
Performance-Verbal Discrepancy[2]	15.52	24.71	2.51**

[1]Mann-Whitney-U Tests corrected for tied ranks and expressed as normal deviates

[2]Mean rank reported

~ $p < .10$(trend); *$p < .05$; **$p < .01$; one-tailed

TABLE 13

WAIS Rank Difference Correlates with Suicide Scale

Variable	r
Arithmetic	.258 ~
Similarities	.114
Picture Arrangement	.304*
Block Design	-.411**
Performance-Verbal Discrepancy	.401**

~ $p < .10$(trend); *$p < .05$; **$p < .01$; one-tailed

scores in the predicted direction ($P > V$) for both the two group comparisons ($Z_u = 2.51$, $p < .01$) and the eight group rankings ($r = .401$, $p < .01$).

Hypothesis 3 stated that suicidal depressed adolescents would demonstrate a greater tendency toward concretization of thought than non-suicidal depressed adolescents. To test this hypothesis, three measures were used: the similarities subtest of the WAIS, the number of manifestly concrete responses on the Rorschach, and several location determinants on the Rorschach (W,D,d). No significant differences were observed on any of the variables for the two-group comparisons (see Table 14). When the eight ranked groups were compared, a significant and positive relationship was found for the number of d responses, Table 15, ($r = .344$, $p < .05$). No other significant differences were observed. So few manifestly concrete responses were present as to render this variable meaningless for purpose of our data analysis. In sum, only very modest evidence emerged which would offer any confirmation of this hypothesis.

Hypothesis 4 predicted that suicidal depressed adolescents would demonstrate significantly greater cognitive rigidity than non-suicidal depressed adolescents. Three measures of cognitive rigidity

TABLE 14

Rorschach Variables:

Means (and Standard Deviations)

for Both Groups with Contrasts

Variable	Attempters (n=20)	Non Attempters (n=19)	Z_u[1]
R	20.45(7.93)	20.68(6.6)	.35
W	6.60(2.30)	6.42(3.06)	.57
D	11.15(6.45)	11.89(5.33)	.87
d	1.05(1.82)	.68(1.66)	.68
Manifestly Concrete	.20(.52)	.15(.50)	.41
RF+	1.10(2.36)	2.36(1.64)	2.85**

[1]Mann-Whitney U Tests corrected for tied ranks and expressed as normal deviates

$\sim$ $p < .10$(trend); *$p < .05$; **$p < .01$; one-tailed

TABLE 15

Rorschach Variables:

Rank Difference Correlates

with Suicide Scale

Variable	r
R	.005
W	.067
D	.063
d	.344*
Manifestly Concrete	.086
RF+	.425**

$\sim$ $p < .10$(trend); *$p < .05$; **$p < .01$; one-tailed

were utilized: the Arithmetic and the Block Design subtests of the WAIS, and the total number of responses on the Rorschach. The overall results for this hypothesis were contradictory. On the two-group comparisons, the Arithmetic subtest yielded significant results in the predicted direction, Table 12 (Z_u=1.75, $p < .05$). That is, the non-suicidal subjects scored significantly higher on Arithmetic (indicating lower cognitive rigidity) than did the suicidal subjects. Contrary to expectations, the Block Design subtest yielded significant results in the reverse direction, with the non-suicidal subjects now scoring lower than the suicidal subjects (Z_u=2.03, $p < .05$). While no significant results were obtained for the total number of responses on the Rorschach, significant differences, Table 14 (Z_u=2.85, $p < .01$) were obtained when comparing total number of RF+ responses. In many ways the RF+ response is a more refined measure of cognitive flexibility, since it indicates a relatively high degree of appropriate creative and synthetic functioning. For the eight group rankings, the Arithmetic subtest yielded near significant results in the predicted direction, Table 13 ($\underline{r}$=.258, $p < .10$, trend). The Block Design subtest yielded significant results

in the reverse direction (r=-.411, $p < .01$). No differences were found for the total number of responses, while significant differences were found for RF+, Table 15, (r=.425, $p < .01$).

Hypothesis 5 predicted that suicidal, depressed adolescents would demonstrate a greater cognitive distortion in the sense of time than non-suicidal, depressed adolescents. Time measures include the Picture Arrangement subtest of the WAIS, and the Time Continuity Scale. The Picture Arrangement subtest was significant in the predicted direction for the two-group comparison, Table 12, (Z_u=1.75, $p < .05$) and also for the eight group rankings, Table 13, (r=.304, $p < .05$). Further support for this hypothesis was obtained by the T.C.S., which indicated a moderate relationship in the predicted direction for both the two-group comparison, Table 16, (Z_u=1.47, $p < .10$, trend), and the eight group rankings. Table 17, (r=.214, $p < .10$, trend). Thus, this hypothesis was confirmed.

Finally, although no predictions were made regarding the relative impact of sex on the underlying structural dimension of adolescent suicidality, some additional computations were conducted to explore the differential impact of sex upon the two groups.

TABLE 16

Time Continuity Scale:

Means (and Standard Deviations)

for Both Groups with Contrasts

Variable	Attempters (n=20)	Non Attempters (n=19)	Z_u [1]
Time Continuity	5.00(6.44)	7.89(7.11)	1.47 ~

[1] Mann-Whitney U Tests corrected for tied ranks and expressed as normal deviates

~ p .10(trend); one-tailed

TABLE 17

Time Continuity Scale:

Rank Difference Correlates

with Suicide Scale

Variable	r
Time Continuity Scale	.214 ~

~ p< .10(trend); one-tailed

Male suicidal and male non-suicidal groups were compared using the Mann-Whitney U test; female suicidal and female non-suicidal groups were likewise compared. It was found that the male comparisons revealed significant differences in the predicted direction on many of the variables. On the cognitive dimensions, the male group comparisons revealed significant differences on Arithmetic (Z_u=1.97, $p < .05$), Similarities (Z_u=1.96, $p < .05$), and Picture Arrangement (Z_u=1.83, $p < .05$). On the Rorschach Object Representation Scale, significant differences were found for the Motivation subscale of Integration (Z_u=2.51, $p < .01$). Trends were found for the Differentiation category (Z_u=1.35, $p < .10$, trend), and for two Integration subscales: Integration (Z_u=1.50, $p < .10$, trend), and Content (Z_u=1.45, $p < .10$, trend). Additionally, the Time Continuity Scale revealed significant differences for males in the predicted direction (Z_u=1.82, $p < .05$).

Results for females were somewhat surprising. While female comparisons revealed differences in the predicted direction for most variables, none were significant with the exception of RF+(Z_u=1.70, $p < .05$), and Block Design, which was significant in the reverse direction (Z_u=1.66, $p < .05$).

CHAPTER IV

DISCUSSION

The results generally provide evidence supporting the importance of understanding structural considerations in adolescent suicidality. In particular, structural dimensions in the development and maintenance of object representations and the specific cognitive ability to maintain a time perspective which extends into the future play a significant role in distinguishing between depressed adolescents who do not attempt suicide and depressed adolescents who resort to suicidal action. Furthermore, suicidal adolescents show a greater tendency to utilize action as a mode of prcblem-solving, while non-suicidal adolescents are better able to utilize more verbal-ideational modes of problem-solving. While impovished object representations, a constricted time perspective and a proclivity to assume an action modality as a means of problem-solving were demonstrated for suicidal youths, cognitive development in general, was not shown to be significantly more restricted when compared with non-suicidal counterparts. In this chapter, we will more fully delineate the implications of our results as concerns adolescent suicidality

from both an object relational and cognitive perspective, explore the ramifications for diagnosis and treatment and suggest areas for future research.

Before discussing the specific implications of the results, some general comments are in order. While significant differences between our groups were not as pronounced as the study had anticipated, it must be recognized that, in many, indeed most ways, these two groups are behaviorally and psychologically identical. In order to explicate the critical and unique variables underlying adolescent suicidality, two groups differing only in the act of suicide itself were chosen. One consequence of this design is the possible obfuscation of differences between a suicidal population and a more normative adolescent population. Indeed, much of the empirical suicide literature has been criticized for failing to use adequate and appropriate control groups. Most commonly, a suicidal population is contrasted with a normal (non-psychiatric) population, which, while often yielding significant differences, fails to distinguish the disturbed suicidal population from the equally disturbed non-suicidal population. On the other hand, those few studies which attempt to elucidate uniquely suicidal characteristics by comparing

a suicidal population with both a psychiatric non-suicidal and a normal population usually report significant differences only between the two disturbed populations and the normal population, and not between the two disturbed groups themselves. In this dissertation, the two groups were depressed and disturbed to such a degree as to require treatment in a tertiary long-term hospital. Therefore, the overwhelming similarities between the groups dictate that any differences that are observed regarding underlying cognitive structures and object representations must be given special credence as pertaining to the study of adolescent suicide.

One additional comment needs to be mentioned at this point. As reported in the results section, a surprising finding of this study was the relative absence of significant results when contrasting female attempters and female non-attempters. Therefore, the discussion which follows is particularly relevant for male adolescents and to a lesser degree for female adolescents. It seems that for female adolescents, suicidality is determined by additional factors above and beyond the structural; these factors will be addressed later on in this chapter.

Lower levels of object representation suggest

less stability and differentiation of one's inner world. On measures of object representation, suicidal adolescents show a greater impairment than non-suicidal adolescents in general, and especially on the dimensions of differentiation and motivation. A closer look at these dimensions may shed light on specific differences between the two groups.

The "differentiation" catgeory defines the type and completeness of the human response. Essentially, this measure rates whether a response reflects either a full (whole) human representation or a part object. Additionally, it rates whether or not the representation is of a human or of a quasi-human nature. In a sense, the differentiation measure stands as the most basic measure of object representation. The "articulation" category is an elaboration and extension of the differentiation category; it measures the degree to which the response (whether it be part object, whole object, human or quasi-human) is further defined and articulated. From a developmental perspective (Mahler, 1975; Werner and Kaplan, 1963), a fully articulated response is a higher achievement than a fully differentiated response. The capacity to articulate human attributes (which include the representation of external and

more complex internal qualities and attributes) continues to develop in significant ways throughout adolescence, while the capacity to evoke and maintain a full (whole) human representation reaches relative stability with the successful completion of the separation-individuation subphase. While both differentiation and articulation of representations begin early on and continue to develop throughout the life cycle, differentiation precedes articulation in reaching stability and relative completion.

The "integration" category measures an entirely separate aspect of object representations from differentiation and articulation, namely, the ways by which the object is integrated with its action. An appreciation of complex, internal properties of human interactions (e.g., motivation, intention) is reflected in this score. Thus, both articulation and integration, at their highest developmental levels, are late developmental achievements relative to full differentiation. It is the nature of the differentiation construct which likely contributes to its strength in deciphering critical differences in object representation. Given that it is an early developmental achievement, it is relatively more stable and refractory to psychological distress

(Fibel, 1979).

The finding that suicidal adolescents show a lower differentiation score than nonsuicidal adolescents supports notions which suggest that disruptions in early object relations contribute to adolescent suicidality. While the precipitating event for a suicidal action is embedded in the adolescent period, the critical factor determining suicidality may lie, not so much in the adolescent period per se as in early phases of development when self and object representations first begin to develop. This would support theoretical and clinical observations (Feinstein, 1975) which relate adolescent suicidality to early disruptions occuring prior to completion of the separation-individuation subphase, interfering with the consolidation of object constancy and the development of higher level defenses. The capacity for object constancy, which develops in the first three years of life and permits the young child to tolerate separations from the parent, may play a crucial role in allowing the adolescent to tolerate separation or loss via internal mechanisms and without taking drastic action. In regard to defensive structure, the greater degree of internal fragmentation evidenced by a lowered differentiation score

(i.e. more part objects) suggests a preponderence of splitting as a main defense mechanism. This supports the clinical illustrations of suicidal adolescents provided by Margolin and Teicher (1968) and Friedman et al. (1972) who emphasize the role of splitting and the subsequent lack of integrated representations evident in such youngsters. Separations are therefore difficult to cope with, and adolescence, a period of normative separation, becomes a particularly vulnerable time. The maintenance of splitting as the primary defense mechanism interferes with the modulation and differentiation of affects, leaving the individual less able to delay, and, thus, more prone to express primitive affect states directly and through action. Stable and consolidated internal representations are necessary in order for depressive affect to be experienced and tolerated internally. Such representations, which contain contradictory and ambivalent aspects, become possible when splitting is no longer maintained as a primary defense mechanism.

In addition to low object representations in the differentiation category, lowered levels of object representation were observed for the motivation dimension of the integration category. The moti-

vation score reflects the "degree of internality of motivation of the action" --whether an action is intentional in nature or merely reactive in nature. This dimension is particularly relevant to our discussion since it is the one measure of the ROR which reflects an orientation in time. Inherent in the concept of intentional action is a proactive or future sense of time (i.e., the subject chooses to do something); while reactive action reflects not choice, but an unmediated reaction to past events (Blatt, 1976b, p. 12). As such, suicidal adolescents show greater reactivity to momentary and past events, while depressed non-suicidal adolescents are better able to consider possibilities and choose the nature of their action.

In sum, then, impairments in the ability to recall and maintain whole human representations may play a crucial role in distinguishing suicidal adolescents from their non-suicidal counterparts. Specifically, it is postulated that these impairments reflect disruptions in the development of object representations prior to the completion of the separation-individuation stage. As a result, the depressed teenager who resorts to suicidal action is without the required internal object world and con-

comitant defensive structure to cope with both the normative and traumatic turmoil of adolescence.

The importance of the temporal dimension in the determination of adolescent suicidality emerges as a central finding of this study. An impairment in the cognitive capacity to anticipate future events is consistently seen for suicidal adolescents. This impairment is revealed whether the measurement is in the cognitive realm as in the Picture Arrangement subtest; the projective-thematic realm, as in the T.A.T. Time Continuity Scale; or within the object representational structural realm, as on the motivation subscale of the ROR. The loss of a temporal perspective, a "centration" upon the immediate present, seems related to a disturbed perspective of oneself vis-a-vis one's entire life situation. Indeed, this notion is suggested by Appelbaum and Holtzman (1962) who, utilizing the Rorschach score of color-shading, observed that suicidal adults show a "near-sighted clarity" in regard to present events, but lack a broader perspective of their historical and future continuity. Thus, the momentary situation becomes everything. The depressed adolescent who lacks a temporal perspective that is continuous in integrating past, present and most importantly,

future, is unable to foresee that their depression would ever cease or that there would ever be any hope of obtaining relief. The normative losses of adolescence seem permanent and all consuming. In the suicial adolescents' experience, these losses cannot be replaced since he/she is both unable to evoke comforting inner object representations, due to the deficits discussed earlier, or to anticipate substitute "real" relationships in the future. Additionally, an impaired temporal perspective leaves the adolescent especially vulnerable to suicidal intent and action. Lacking a future time sense, the adolescent fails to appreciate the irreversibility of his/her actions. The finality of death and a mature sense of one's mortality are not present in these youngsters. As the empirical evidence grows, it seems increasingly likely that a particular cognitive deficit in time orientation plays a crucial role in the determination of adolescent suicidality.

As will be recalled from the review of the literature, a major thesis of this dissertation stated that adolescents who resort to suicidal action manifest impairments in their level of cognitive functioning. These adolescents are thought to possess a

unique thinking style, and/or specific cognitive characteristics which limit their ability to find viable solutions to their problems and diminish their capacity to cope with the stresses of life (Neuringer, 1974). Suicide may become the only problem-solving behavior available. Much of the empirical literature to date, while focusing only on adults, has highlighted the following cognitive dimensions related to suicide: faulty logic (Schneidman and Farberow, 1957); rigid, inflexible and dichotomous thought (Neuringer, 1961 64, 67, 74, 75, 76); a narrowed range of conceptualization (Levenson, 1974); field dependence (Levenson, 1974; Patsiokas et al., 1979); diminished problem-solving ability (Levenson and Neuringer, 1971); and a limited capacity for divergent thinking (Patsiokas et al., 1979).

In an effort to advance and articulate a theoretical conceptualization which would encompass the various clinical, theoretical and empirical reports related to adolescent suicidality and cognition, a Piagetian perspective on cognitive development was found to be most useful in understanding and integrating seemingly unrelated findings. It was argued that the inability to advance from concrete to formal operations would render the depressed adolescent

vulnerable to suicidal action. Just as impaired object representations impedes the adolescent's ability to cope with interpersonal/affective situations internally and via an ideational mode, an impairment in cognitive capabilities, likewise, limits the adolescent's problem-solving abilities via an ideational mode. In both instances, the adolescent's capacity to cope with stress via internal representations, symbols, and operations upon them is diminished, forcing the adolescent to resort to developmentally earlier action modes of problem-solving.

Inherent in both Piaget's description of concrete operations as well as the aforementioned empirical descriptions of suicidal subjects, are the dimensions of cognitive rigidity and concrete thought. A problem-solving ability which utilizes flexibility, abstract reasoning and synthesis seems to be crucial in avoiding suicide. For the sake of clarity, this study examined these dimensions as if they were distinct; however, it must be noted that these dimensions merely address cognition from differing vantage points and are actually intertwined.

"Concretization of thought" focuses specifically on the use of concrete versus abstract thinking. Concrete as opposed to abstract thinking entails

little freedom from the immediate context, difficulty in symbolization, reliance on perceptual and concrete cues, and an impoverished ability to integrate contradictory possibilities into a synthetic whole. As reported in the results section, only very modest confirmation for this hypothesis was found. Contrary to expectations, the Similarities subtest of the WAIS did not significantly differentiate suicidal depressed adolescents from non-suicidal depressed adolescents. While this is the first experiment to specifically use Similarities as a measure of concretization with suicidal subjects, positive results were anticipated in light of the previously reported results with other measurements tapping this cognitive dimension. While Similarities is a well accepted measurement of the ability to abstract and form associative links, several attributes of the test may have contributed to our results. Similarities measures abstract abilities exclusively in the verbal mode, since it measures verbal concept formation. While concept formation is generally sensitive to maladjustment/ pathology, Rapaport et al. (1968) have found this test to be resistant to pathology, stating that the "Similarities subtest refers to verbal concepts and can be responded to merely by virtue to verbal con-

vention...thus, it is understandable that in general Similarities will keep up in spite of maladjustment even though other forms of concept formation may have already become impaired" (p. 103). Given the relatively small sample size and the close nature of our sample groupings, Similarities may not have been a sensitive enough measurement on which to have found significant results.

On the Rorschach, little "d" responses are considered to indicate a tendency to respond to the obvious and commonplace, to the perceptual cues themselves with little abstraction. Such responses may reflect cognitive limitations, specifically the inability to synthesize the various discrepant parts of the inkblot. As predicted, suicidal depressed adolescents had a significantly greater number of "d" responses. The finding that suicidal depressed adolescents focus perceptually on the part object properties of the inkblot percept, in addition to indicating a greater tendency toward concretization, also reinforces our earlier finding that suicidal depressed adolescents are less able to evoke "whole" representations and are more reliant on splitting as a defense mechanism. Taken together with the results on the Similarities subtest, only modest

confirmation for the hypothesis regarding increased levels of abstraction was obtained.

Cognitive rigidity refers to the lack of flexibility in problem-solving. Associative processes, general productivity, and degree of manipulation of ideas are included in this dimension. Results were rather surprising with confirmation on two of the measurements and significantly contradictory results on the third measurement. The Arithmetic subtest assesses the ability to "manipulate complex dimensions...inter-relationships between various elements must be maintained in order to arrive at a solution" (Allison et al., 1968, p.p. 27-28). It involves a problem-solving set requiring comprehension of the abstract concept of number. As anticipated, suicidal depressed adolescents showed an impaired problem-solving ability when compared with non-suicidal depressed adolescents, confirming earlier studies (Levenson, 1974; Levenson and Neuringer, 1971).

As discussed by Rapaport et al. (1968), a high number of RF+ responses on the Rorschach indicates a greater amount of appropriate, synthetic productivity and a greater degree of flexibility of perceptual processes, as well as a wealth and pliancy of associative processes. As predicted, non-suicidal

depressed adolescents revealed a significantly greater number of RF+ responses, indicating a greater degree of cognitive flexibility.

It was on the Block Design subtest that unexpected results were found. Block Design measures the ability to see meaningful spatial relationships, to analyze visually, and to synthesize abstract geometric designs. Visual motor organization and spatial orientation, as well as nonverbal reasoning, and speed of performance are all attributes measured. Contrary to our hypothesis, suicidal depressed adolescents scored significantly higher on this measure, not lower as had been anticipated. Previous research has indicated that depression is the most potent factor in hindering efficiency on Block Design (Rapaport et al., 1968). Block Design is an action task, with penalities for slow time and bonuses for speed. Typically, depressed subjects are slow on such WAIS performance tasks because depressive affect interferes with motoric action. Given that both our populations were equally depressed, the discrepant scores suggests a different means of handling depression between suicidal depressed adolescents and non-suicidal depressed adolescents. It is possible that suicidal subjects, having a pro-

clivity to use action as a mode of problem-solving, are better able to put this tendency to advantage on Block Design. Utilizing an action mode, it may be that suicidal adolescents "discharge" their depression motorically rather than "experience" depressive affect internally. Additionally, successful problem-solving on Block Design does not require evocative imagery or more advanced (interiorized) representational modes of problem-solving, but rather, relies heavily on an ability for perceptual replication. Thus, while a test of problem-solving ability, Block Design measures predominantly motoric-spatial-perceptual arenas, and not so much internalized-ideational modes.

As mentioned previously, significant differences were found on the Picture Arrangement subtest. In addition to being a measurement of the subject's temporal-cognitive understanding, since it requires the ability to anticipate and to see both the antecedence and the consequence of events, Picture Arrangement also reflects a subject's ability to synthesize and to plan in a logical manner the appropriate sequence in an interpersonal sphere. As such, it complements our other measures of problem-solving ability, since it reflects a subject's cognitive capabilities within the interpersonal realm.

It seems that suicidal adolescents are particularly impaired on cognitive tasks when interpersonal factors are prevalent. As Greenspan (1979) has detailed, there is a reciprocal relationship between cognition and affect, with cognitive capabilities being vulnerable to regression in the face of intense interpersonal affect-laden stimuli.

The final cognitive measurement entailed an assessment of a subject's proclivity toward assuming an action versus ideational mode. Using the Performance/Verbal ratio on the WAIS, suicidal depressed adolescents, as predicted, showed a significantly greater tendency toward action. This finding extends previous research which found higher P/V ratios in delinquent, acting-out, sociopathic subjects (Blatt, 1965; Field, 1960; Wechsler, 1944).

In sum, it seems that suicidal depressed adolescents remain at a lower level of cognitive development than nonsuicidal depressed adolescents, and therefore, utilize more concrete, rigid and action-oriented modes of cognition. This impairment renders these youngsters especially vulnerable to the trials and tribulations of adolescence, since they are unable to integrate, on an ideational level, the many discrepant forces that impinge upon them. It is this

constriction in their ability to develop solutions and alternative coping strategies that leave these adolescents more prone to use suicide as a problem-solving mechanism.

As mentioned earlier, the results, in general, were less convincing for the female subjects than for the males. This surprising finding suggests that the distinction between suicidal depressed females and nonsuicidal depressed females may not lie, predominantly, in the underlying object representational and cognitive structures. Further, it suggests that the suicidal psychology of females may be different from the suicidal psychology of males. The data indicates that suicidal females are more similar to other psychiatrically-disturbed females than is the case for males. Indeed, while most of the empirical literature to date has not examined the differences between male and female subjects, a study by Neuringer, McEvoy and Schlesinger (1965) failed to find significant differences when attempting to replicate for females an earlier finding of significant differences found for male subjects on the Martin Checklist and the Rorschach color-shading response. All demographic reports comparing suicidal behavior by sex consistently reveal three striking

differences: 1) males complete suicide three times as often as females; 2) females attempt suicide in far greater proportions, with estimates ranging from 3:1 (Jacobziner, 1968; Toolan, 1962) to as high as 10:1 (Seiden, 1969); 3) males utilize more violent and lethal methods (firearms, hanging), while females tend to favor less lethal methods (ingestion). While an analysis of sex differences in adolescent suicidality is beyond the scope of this dissertation, some speculations on these findings will be offered.

Structural dimensions alone seems unable to differentiate suicidal from nonsuicidal depressed female adolescents. This suggests that once a threshold of impairment is reached, suicidal action itself does not represent a greater degree of disturbance. This corresponds to demographic and epidemiological research which indicates that depressed females are more likely to attempt suicide than depressed males. It seems likely that socio-cultural factors play a role in explaining these differences. Society tolerates male and female behaviors by different standards. There is less cultural sanction for girls to release aggression and hostility on the environment and therefore, there is a greater tendency to turn those drives inward and, hence, a greater likelihood of suicide

attempts. Western socialization processes seem to make females more vulnerable to self-destructive acts than males. Perhaps most important, there is a much greater cultural taboo against suicide for males than for females. For males, suicide is viewed as a weak and cowardly act, something only a "chicken" or a "sissy" would attempt. While suicide is, of course, taboo for females as well, a sense of personal helplessness, together with a corresponding fantasy of being rescued, is more readily accepted by both the attempter and society. Therefore, it seems that suicidal females are more similar to other psychiatrically-disturbed females than they are to suicidal males. As Neuringer et al. (1965) suggest, suicide for females "may be more representative of manipulation, hostility and pleading communication (nonetheless, serious or lethal), and less representative of surcease and escape than it is for suicidal men" (p.132).

In regard to the diagnosis and treatment of suicidal adolescents, this study suggests several themes for the clinician to keep in mind. Special attention must be given to the cognitive impairments characteristic of these youngsters, specifically their concreteness, rigidity and proclivity toward

assuming an action modality. During the early stages of treatment, comments and interpretations should be specific, concrete and focused on the present here-and-now situation in order to be congruent with the patient's cognitive level. A main task of psychotherapy should be to help the patient explore and widen his/her problem-solving capacities. Initially, the therapist may need to do this in a directive manner, actively thinking through problems together in the session and suggesting alternative ways of both conceptualizing and dealing with events. Supportive, directive and interpretative modes of treatment should all be utilized. The therapist may find it useful to work across multiple modalities of representation, thereby stimulating the symbolic function. For example, rather than relying exclusively on the lexical mode, the therapist should encourage the patient's use of visual image representation. Within a hospital setting, adjunctive treatments such as art, dance, occupational and recreational therapy are useful in this regard. For the outpatient, the therapist should consider referrals to programs that offer such cognitive stimulation. Given the impaired temporal frame of reference described earlier, another task of treatment would be the

building of a historical sense of continuity which extends into the future. Consistently reminding the patient of the connections between past, present and future in a synthetic and integrative way is therefore useful. The proclivity to assume an action modality can best be addressed by consistent, firm but benevolent limit-setting and the encouragement of increased verbalization of impulse and affect.

The findings of lower levels of internal object representation for suicidal adolescents behooves the therapist to pay particular attention to the formation and development of the therapeutic alliance. Given the paucity of internal whole objects, these patients require an active, engaging therapist who can provide a real relationship in the face of this impoverishment. Gradually the patient will come to internalize the therapist and thereby begin to possess some of the requisite internal structures necessary to cope with the stresses of adolescence. Since these patients have been shown to have a particular vulnerability to issues of separation, the therapist must be sensitive to any such instances both within the treatment and within the patient's life. Intepretations geared toward reducing the reliance on splitting as a major defense should occur throughout

the treatment. This will lead to an increased ability to both maintain contradictory aspects of self and other and to tolerate depression. Female patients may benefit from the therapist legitimizing the outward verbal expression of anger.

From a diagnostic perspective, this study suggests the utility of psychological testing, specifically the examination of the human response on the Rorschach, the cognitive capabilities measured by the WAIS, and the temporal frame of reference demonstrated on the TAT. During an initial interview and a formal mental status exam, the clinician should likewise pay attention to both the patient's description of his/her inner world and to the degree of flexibility of cognition. When suspecting suicidal tendencies, the interviewer should be alert to a patient who simultaneously presents with depression, concrete and rigid thinking and impovished inner representations.

Conclusions supporting the role of cognitive and object representational factors in adolescent suicidality must be viewed with caution until additional research is conducted. The retrospective design utilized in this dissertation precludes any statement regarding the causality of adolescent suicide. As is often the case in preliminary studies, both the experimental design and the statistical analysis allow only for correlational exploration. The nature of the subjects used in this study mitigates against generalizing these results beyond impatient, Caucasian, middle to upper class adolescents.

Given these methodological limitations, several suggestions for future research are offered. Ideally, a prospective longitudinal study examining the child's early object relational and cognitive development, and especially his/her transition through the separation-individuation phase of development, followed up through adolescence would be required to adequately assess the theoretical notions put forth in this study. A larger sample size, with more diverse control groups (e.g., outpatient depressed adolescents and normal adolescents) would provide a broader base from which to articulate the unique variables pertaining to adolescent suicidality. Furthermore, given the equivocal findings for female subjects, future designs may benefit from examining the sexes seperately. This study utilized retrospective data collected over a period of nine years by numerous clinicians and diagnosticians. Improvements in this respect would include collecting data over a more circumscribed period of time and with fewer testers (experimenters). Perhaps the greatest improvement needs to be made in the use of more refined cognitive measures. Specifically, it is recommended that a Piagetian battery be substituted for the cognitive measures used in the current study. In sum, this study offers preliminary support for the utility of examining underlying structural dimensions, be they cognitive and/or object relational, in furthering the understanding of suicidal adolescents and awaits further replication.

APPENDICES

ADOLESCENT SUICIDE: DEMOGRAPHIC INFORMATION

1. Code Number ___ ___ ___ (1 2 3) 2. Sex(4) 1.M 2.F

3. Age (5-6) ___ ___ (5 6)

4. Religion (7) 1. Protestant 2. Catholic
   3. Jewish 4. Other 5. NA

5. Family Intact (8): 1. Yes 2. Separation/Divorce
   3. Death/mother
   4. Death/father 5. Combo

6. (If 2-5 above, subject's age at occurance)
   (9-10) ___ ___ (9 10)

7. Number of siblings (11-12): ___ ___ (11 12)

8. Birth Order (13): 1. oldest 2. middle
   3. youngest 4. only

9. Suicidality (14): 1. Action taken 1X
   2. Action taken > 1X
   3. Ideation only
   4. None

10. If Attempt Method Used (50) 1. Overdose
    2. Cut Self
    3. Run Vehicle
    4. Jump from Height
    5. Hanging
    6. Combination
    7. Other_____

DEMOGRAPHIC INFORMATION - page 2

11. Lethality, action (15) 1. low 2. medium 3. high

12. Lethality, ideation (15) 1. low 2. medium 3. high

13. Precipitating event, action (17):

1. BFGF break-up 2. fight with family
3. parental discord 4. sep/divorce
5. school problems 6. peer problems
7. legal difficulty 8. _____other

14. Precipitating event, ideation (18):

1. BFGF break-up 2. fight with family
3. sep/divorce 4. sep/divorce
5. school problems 6. peer problems
7. legal difficulty 8._____other

15. Substance abuse (19) 1. none 2. low 3. med 3. med 4. high

16. Sexual (20) 1. none 2. low 3. med 4. high

17. Truancy (21) 1. none 2. low 3. med 4. high

18. Runaway (22) 1. none 2. low 3. med 4. high

19. Sociopathic (23) 1. none 2. low 3. med 4. high

20. Other (24) 1. none 2. low 3. med 4. high

21. Clinical judgement-
Total A.O. (25) 1. none 2. low 3. med 4. high

DEMOGRAPHIC INFORMATION - page 3

WAIS SCORES

Total IQ ___ ___ ___ PIQ ___ ___ ___ VIQ ___ ___ ___
26 27 28 29 30 31 32 33 34

Total Scale ___ ___ ___ Perf. Scale ___ ___
35 36 37 38 29

Verb Scale ___ ___
40 41

Arith ___ ___ Simil ___ ___
42 43 44 45

P.A. ___ ___ B.D. ___ ___
46 47 48 49

Code No. __ __ __

ADOLESCENT SUICIDE: RORSCHACH VARIABLES CODING

1. Total R $\overline{51}$ $\overline{52}$
2. Total W $\overline{53}$ $\overline{54}$
3. Total D $\overline{55}$ $\overline{56}$
4. Total d $\overline{57}$ $\overline{58}$
5. # Anatomy R $\overline{59}$ $\overline{60}$
6. # Concrete R $\overline{61}$ $\overline{62}$
7. # Cards Rejected $\overline{63}$ $\overline{64}$
8. #F+ $\overline{65}$ $\overline{66}$
9. #Fo $\overline{67}$ $\overline{68}$
10. #F- $\overline{69}$ $\overline{70}$

SCORING CATEGORIES:

RORSCHACH OBJECT REPRESENTATION SCALE

I. Selection of Responses
   - A. Human and quasi-human responses
   - B. Animal responses explicit human qualities

II. Scoring Procedures
   - A. Accuracy of the response
   - B. Differentiation
     1. Human responses
     2. Quasi-human responses
     3. Human details
     4. Quasi-human details
   - C. Articulation
     1. Perceptual characteristics
        - a. Size or physical structure
        - b. Clothing or hairstyle
        - c. Posture
     2. Functional characteristics
        - a. Sex
        - b. Age
        - c. Role
        - d. Specific identity

D. Integration

1. Motivation of Action

   a. Unmotivated activity

   b. Reactive motivation

   c. Intentional motivation

2. Object-Action integration

   a. Fusion of object and action

   b. Incongruent integration of object and action

   c. Nonspecific integration of object and action

   d. Congruent integration of object and action

3. Integration of interaction with another object

   a. Nature of interaction

      1. Active - passive

      2. Active - reactive

      3. Active - active

   b. Content of interaction

      1. Malevolent

      2. Benevolent

RESEARCH DIAGNOSTIC CRITERIA

A through E are required for a diagnosis of schizoaffective disorder. A, B, and D with an absence of symptoms from C are required for a diagnosis of major depressive disorder.

A. One or more distinct periods with dysphoric mood or pervasive loss of interest or pleasure.

B. At least five of the following symptoms are required for definite and four for probable:

1) Poor appetitie or weight loss or increased appetite or weight gain (change of 1 lb a week over several weeks or 10 lbs a year when not dieting).

2) Sleep difficulty or sleeping too much.

3) Loss of energy, fatigability or tiredness.

4) Psychomotor retardation or agitation (but not mere subjective feeling of restlessness of being slowed down).

5) Loss of interest or pleasure in usual activities, including social contact or sex (not limited to a period when delusional or hallucinating). (The loss may or may not be pervasive.)

6) Feelings of self-reproach or excessive inappropriate guilt (either may be delusional).

7) Complaints or evidence of diminished ability to think or concentrate, such as slowed thinking, or indecisiveness (do not include if associated with obvious formal thought disorder or preoccupation with delusions or hallucinations).

8) Recurrent thoughts of death or suicide, or any suicidal behavior.

C. At least one of the following is present:

1) Delusions of being controlled (or influenced) or of thought broadcasting, insertion, or withdrawal.

2) Nonaffective hallucinations of any type throughout the day for several days or intermittently throughout a 1-week period.

3) Auditory hallucinations in which either a voice keeps up a running commentary on the subject's behavior or thoughts as they occur, or two or more voices converse with each other.

4) At some time during the period of illness the patient had more than 1 month when he or she exhibited no prominent depressive or manic symptoms but had nonaffective delusions or hallucinations.

5) Preoccupation with a nonaffective delusion or hallucination to the relative exclusion of other symptoms or concerns.

6) Definite instances of marked formal thought disorder accompanied by either blunted or inappropriate affect, delusions or hallucinations of any type, or grossly disorganized behavior.

D. Signs of the illness have lasted at least 1 week from the onset of a noticeable change in the patient's usual condition.

E. Affective symptoms overlap temporally to some degree with the active period of schizophrenic-like symptoms.

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