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VODVARKA, JANET

COGNITION AND AFFECT: HOW PRESCHOOL CHILDREN INTERNALIZE THEIR DREAMS

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COGNITION AND AFFECT:

HOW PRESCHOOL CHILDREN INTERNALIZE THEIR DREAMS

by

JANET VODVARKA

A dissertation submitted to the Graduate Faculty in Psychology in partial fullfillment of the requirements for the degree of Doctor of Philosophy, the City University of New York.

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date

Gilbert Vargas PhD
Chairman of Examining Committee

September 26, 1979
date

Martin L. Hoffman
Executive Officer

Gilbert Vargas PhD

Supervisory Committee

ABSTRACT

Cognition and Affect:
How Preschool Children Internalize Their Dreams

by
Janet Vodvarka, Ph.D.

Chairman: Gilbert Voyat

This study investigated the interaction of affect and cognition on the developing dream concept of preschool children. The preschool child initially considers the dream to be a real, concrete event. As he comes to recognize that it is an internal subjective phenomena, he must accept that he is the source of an affectively negative experience; the bad dream. In the realm of affective development, one of the major developments of the first three years is the ability to integrate positive and negative aspects of experience towards a single object (the mothering figure, or the self). Prior to the development of this ability to modulate ambivalence, children tend to split the positive and negative aspects of experience and externalize the negative. This study hypothesizes that the structural similarity of the need to "internalize" an experience associated with negative feelings, may lead children in the process of developing the dream concept to use some of the mechanisms previously used to deal with ambivalence, i.e., splitting and externalization of the bad. It specifically examines whether the preschool child selectively internalizes the good dream, considering it to be within his body while still considering the bad dream to be external.

Method: A special dream concept interview and scoring manual were developed. They emphasized use of concrete materials, management of anxiety, and use of language understood by this age group. It included a bi-polar connotative questionnaire to establish the qualities associated with good vs. bad dreams. Using this interview, children did not respond with the overly emotional reaction or lack of comrehension previously reported. Inter-rater reliability was .955.

Subjects were 41 children: 38 aged 3 to 5 years, 3 aged 6 years. All attended local schools from upper-middle class families.

Results: The connotative questionnaire indicated that the good dream was associated with positive affects, positive evaluation, and physical proximity. The bad dream was associated with negative affects and negative evaluation. No significant variations related to age, sex, or stage of conceptual development were found.

Of the forty-one children, six selectively internalized the good dream. These children ranged in cognitive development from just beginning to recognize the internal elements in dreams to merely vascillating toward externalization. Three children selectively internalized the bad dream. These children were all just beginning to consider that the dream might be internal. The initial hypothesis was not confirmed; selective internalization of the good dream is not a transitory stage in dream concept development for all children.

The possible role of ambivalence in differentiating children selectively internalizing the good vs. bad dream was explored.

Children selectively internalizing the good dream seem less advanced in differentiating the symbol, thing being symbolized, and affect aroused than the children selectively internalizing the bad dream. This corresponds to the difficulty in separation and differentiation from the mother which is present with ambivalence. Other parallels indicating ambivalence in the children selectively internalizing the good dream were noted. The source of the ambivalence (general life, dream experience, or interview) was questioned. Although conclusive evidence was not available, four children manifesting selective internalization of the good dream displayed indications of high levels of ambivalence in their everyday behavior as well as in the interviews.

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On a basic level, I would like to give my thanks to the people who helped me learn to inquire and do. To my father, who taught me to ask questions by answering a multitude. To my mother, who deeply believed all human actions have a cause. Both of them believed in me, and encouraged me to reach this goal. I would also like to thank K. Wm. Fried, who gave me access to the rich world of affect and a new level of experiencing life. To Natalie Low, who taught me to use these impressions to gain perspective and reach my goals. These people all led me to enjoy both thinking and feeling, and wonder about how they interact.

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CHAPTER 1

REVIEW OF THE LITERATURE

Introduction

In recent years there has been a growing interest in investigating the relationship between Piaget's theory of cognitive development and the neo-Fredian theories of emotional development. Areas of interaction between affect and cognition involve such aspects of functioning as the selection of specific defensive patterns and learning styles. These areas are not adequately explained by either current theory but contribute to the variety and complexity of human behavior. Progress in investigating such complicated topics may await the development of an integrated theory of affect and cognition, which provides a paradigm for exploring them. This study seeks to contribute to the data base upon which such an integrated theory will be built by examining the interplay between affect and cognition in the preschool child's development of the dream concept.

Piaget believes that affective factors may change the rate of cognitive development but can not effect the nature of the cognitive structures formed. This position has been supported by a large body of research, which indicates that affective features may produce variations in the order of development of related cognitive concepts. This study seeks to examine the impact of affect on the process of development of a single cognitive concept, the dream, which is associated with both positive and negative affects arising from the

experiencing of good and bad dreams.

Since Piaget's theory states that the nature of the structures formed cannot vary with affective influences, these influences can be expressed in the formation of a single cognitive concept only while that concept is still in the process of developing. The dream concept is suitable for study in this regard, as well defined stages of dream concept development have been established (Laurendeau and Pinard, 1962). These stages chart the child's progression as he goes from considering the dream to be a real, concrete, external event to conceiving of it as an internal, subjective phenomenon. This study specifically asks whether there are differences in the rate at which the child comes to consider the good dream as internal in comparison to the bad dream.

Although there are several different aspects of the dream concept which could be examined for variations due to affective factors, the question of the internalization of the dream is especially interesting as it relates to an important concept in affective development. Affective theorists discuss the child's "internalization" of aspects of experience. They note that the child often has difficulty simultaneously integrating the positively and negatively toned aspects of his experience with a single object. This is one of the central themes of the first three years of emotional development.

Psychoanalytic theorists such as Klein (1932/1975), Mahler (1968), and Kernberg (1975), for example, hypothesize that the young infant comes to experience a dichotomous world, in which "good", pleasurable experiences are considered part of a global, diffuse self, and "bad" unpleasurable experiences are seen as external to the self. In normal develop-

ment, the infant becomes attached to a mothering figure, and through her influence and maturation abandons this view of the world, accepting one containing both pleasant and unpleasant experiences. Distortions from this process of developing and resolving a dichotomous view of the world are linked with psychotic and borderline pathologies.

Ego-psychologists (Mahler, Pine, and Bergman, 1975) investigating the later separation and individuation of the infant from the mother note the normal use of the processes of splitting and projection. Their observations indicate that long after the infant has integrated many aspects of his relationship to his mother, under the stress of separation he tends to split the internal representation of the mother. Remembering the good aspects of the mother as a source of comfort, the infant acts as if frustrations generated by her came from the outside world. Only around the age of three does the child develop a fairly constant emotional stance towards the mother, integrating positive and negative aspects of the experience with her.

Anna Freud (1937/1966) notes a parallel in the use young children make of splitting and projection to maintain self-esteem and avoid the unpleasant experience of admitting to a disapproved of impulse or action:

> use of the mechanism of projection is quite natural to the ego of little children throughout the earliest period of development. They employ it as a means of repudiating their own own activities and wishes when these become dangerous and of laying the responsibility for them at the door of some external agent. A "strange child", an animal, even inanimate objects are all equally useful to the infantile ego for the purpose of disposing of its own

> faults. It is normal for it constantly to get rid of prohibited impulses and wishes in this way, handing them over in full measure to other people. (p. 123)

Thus in several different emotional situations the child has a tendency to consider as separate, those aspects of a single relationship (to himself, another person, or an object) which are characterized by positive and negative emotions. He tends to internalize the good experiences, identifying them with himself, while considering the bad experiences as foreign to the self. During the first three years, one of the hallmarks of healthy emotional development is the ability to overcome the tendencies and integrate the positive and negative aspects of exeprience towards a single object, i.e., the moderation of ambivalence.

Thus in the affective realm the "internalization" of good and bad aspects of experience is a prolonged task, and the child initially resists internalizing the negative aspects of the relationship while accepting the positive ones. In developing the dream concept, the child must come to consider both the good and bad dreams as internal and subjective phenomena. Thus, here too, he must come to recognize that he is the source of a negatively charged emotional experience. This study seeks to determine whether this structural similarity between the affective and cognitive realms leads the child to recapitulate in the cognitive realm the affective pattern of internalizing the good experience while externalizing the bad experience. It specifically hypothesizes that the preschool child will consider the good dream to be inside him while still

considering the bad dream to be an external phenomenon, occuring outside himself in the room.

This last hypothesis may seem to be a radical extension of Piaget's theory, but in fact it has a basis in his writings. In Play, Dreams, and Imitation (1962), Piaget discusses the presence of affective as well as cognitive schema. He illustrates how assimilation to affective schema could explain such diverse phenomena as the symbolism of dreams and the presence of transference phenomena. Adopting his model, this dissertation proposes that affective schema exist. Piaget does not delineate the principles governing the interaction of affective and cognitive schema. This dissertation proposes that schema from the two realms may become mutually assimilated to each other, and that this is more likely to occur when the schema share common elements. In the area of the dream, it is clear that there are several common elements. First, the child might dream of areas of emotional conflict. In addition, there is the structural similarity between the transition made in internalizing the bad dream and the affective resolution of ambivalence. In such a situation, some characteristics of schema which were previously used in the affective realm might reappear in a cognitive context. Thus the schema involving the internalization of affectively pleasant experiences and the externalization of affectively negative experiences may be applied in the cognitive development of the dream concept.

Before presenting the current study, it seems appropriate to make the theoretical basis clearer. The Literature Review will present:

1) the relevant basic principles of Piaget's theory of cognition; 2) his view of the role of affect in cognitive development; 3) metatheoretical considerations in the formation of an integrated theory of affect and cognition; 4) previous studies of the interaction of affect and cognition; and 5) the role of the dream as an interface between affect and cognition.

A Review of Relevant Aspects of Piaget's Theory of Cognition

Piaget originally wished to study how children come to know and interact with their environment in the hopes that this study would shed light on the processes by which human knowledge has developed through the centuries. Since his previous studies of biology had shown him how physical interaction with the environment brought about the adaptation of biological species to their surroundings, Piaget reasoned that the same interaction must bring about cognitive adaptation to the environment. Piaget consequently began his investigation by adopting several concepts from biology as the basis of his paradigm of cognitive development. Thus the principles of organization, structure, equilibrium and adaptation found their way into Piaget's theory. The next several sections will introduce these concepts to the reader in order to provide a context for the discussion of the role Piaget assigns to affect in his model of cognition.

Before making this review of Piaget's theory, however, it is important to emphasize the artificiality of any attempt to do justice to Piaget's system by describing first one element of it and then another. Piaget's theory forms an organic whole, with each structure and process relating to every other structure and process, amplifying and extending each other's meaning. A brief discussion of the role of organization, structure, adaptation, and equilibration will provide an example of the interwoven nature of this theory and serve as an introduction to the following review.

Piaget believes that the child has an innate tendency to organize his experience with the environment, enabling him to learn from experience and act in more adaptive ways, avoiding unnecessary repetitions of fruitless behavior patterns. This tendency to organize his experience results in the formation of internal cognitive structures, called schema . Schema represent the cumulative effect of the child's previous experience with the world and mediate his future actions. As the child attempts to use his schema in diverse ways, some of his actions are ineffective. Piaget believes that these ineffective actions, the instances in which the child's schema fail to help him interact successfully with the world, produce a disequilibrium in the cognitive structures. Equilibrium is restored only when the child forms new cognitive structures which are adapted to his environment. Thus the concepts of organization, structure, adaptation, and equilibrium are complexly interrelated. The following review will clarify these relationships by discussing first Piaget's concept of structure and then the factors leading to continued cognitive development and the process of equilibrium.

Structure: Schema and Operations

Schema. The basic structural element in Piaget's theory is the schema. The schema is the individual's unit of "knowing", of organizing his previous experience with the world. The initial schema are the reflexes - not just the focal activity for which the reflex is named, but also the extended preparations for the act, the sequelae to it, and the minute involvements of other parts of the body. Thus the sucking reflex includes the instinctive orientation of the infant's mouth toward a

touch on the cheek, the posture of other parts of the body, the coordination of swallowing and breathing movements, and the rhythmic swaying of the infant's arms or feet. In the days following birth these become organized into stable patterns and then become extended to include other components such as the search for the nipple. As the child matures, the extension of the sucking schema comes to include other objects, the infant's fist, and then almost any object he can grasp and fit in his mouth. At this point the sucking schema displays mobility, the innate tendency for a schema to be exercised in response to a wide range of objects or other appropriate environmental cues. Schema are not, however, indiscriminately evoked by any object. The appropriate range of objects and environmental cues is part of the "knowledge" contained in the schema.

The initial schema are internalized "forms" of sensory-motor actions. They contain the "knowledge" of the coordinations and adaptations which have been necessary for the performance of the action on many specific past occasions. The schema is not, however, a scheme. A scheme is a premeditated, consciously conceived plan for the purpose of obtaining a specific goal. A schema, on the other hand, is generally not consciously formulated. The "schema", as Piaget uses the word, must also be differentiated from the use of the word schema to mean a figurative mental representation. The schema as Piaget uses the word is not a "mental picture" of the action the child is about to perform. Instead, it is a set of sensory-motor responses which become sequentially activated by the environment, and permit the child to perform an action in the specific manner required by that environmental context. The sensory-motor schema,

then, is not a preconceived mental plan for action, nor is it the specific external act. It is the general form or structure of the external act.

At about eighteen months the child develops an entirely new type of schema, when he becomes capable of mental representation. The child now begins to represent objects with signs or symbols and can cognitively consider an action before performing it. Piaget believes both of these capabilities can best be conceptualized as internalized actions; thus he sees a continuity between physical and mental schema. Both the object and the action of the new schema are entirely internal. The "object" of the schema is no longer the physical box, for example, but a mental representation or image of the box. Similarly, the child can now "think through" the action of emptying the box without having to perform the physical act. Thus schema become, for the first time, relatively independent of the environment and dissociated from perceptual cues. The child can now think of performing an act, such as emptying the box, irrespective of whether a box is within view. Schema using mental representation soon subsume and reorganize purely sensory-motor schema. When the child can mentally represent the box, for example, this internal representation integrates the previously separate sensory-motor schema of emptying the box, hiding in it, and climbing upon it. All of these separate physical experiences become unified in relation to the single mental concept "box".

Although the child can now think of emptying a box, this in no way ensures that he can reverse this process to remember the image of

the filled box. The internal representations of such closely related actions as filling the box and emptying it often remain isolated aspects of the child's cognitive schema. When the child develops the capacity to integrate such mental acts and consider them at will, he is said to have developed reversibility.

Operations. When several internalized action schema become conceptually linked together and meet the additional criterion of being internally reversible, they are considered to be operations. Reversibility implies that the mental act can be undone, permitting the consideration of alternatives. It thus implies a greater flexibility in the thinking process and the ability to compare two states internally, as the child can now mentally move from "part" to "whole",or from "before" to "after". Piaget stresses two general forms of reversibility: negation, which is also called inversion; and reciprocity, which is also called compensation or symmetry. The operation combined with its inverse cancels the original operation out, or negates it (-A+A=0). The original combined with its reciprocal operation results in an equivalence, as the inequality introduced by the original operation is compensated for by introducing a symmetrical inequality ($A \leq B$ and $A \geq B$ implies $A=B$) (Piaget, 1970, p.22).

Both types of reversibility can be illustrated by considering the operation of conservation of mass. To test for the presence of conservation of mass in the child's mental structures, the child is first asked to establish that two balls of clay contain the same amount. The child watches the experimenter roll one ball into a sausage shape and is

then asked if the ball and the sausage are the same amount. If the child states that the ball and sausage contain the same amount because the sausage could be rolled back into a ball, he has achieved conservation by using the inverse operation to undo the original action. If the child states that the ball and sausage contain the same amount because "the sausage is longer, but it's thinner, too", he has achieved conservation by using the reciprocal operation to compensate length with diameter.

Operations are thus a specific subclass of schema which refer to internal, reversible actions. They imply the coordination of several internal schema, as the presence of one operation implies the existence of its inverse.

The stages of cognitive development. The three major periods of cognitive development are distinguished from each other by the degree of operational thinking available to the child. In the sensory-motor period of development a child can only "know" the world through external actions, using sensory-motor schema. He develops competency in sitting, walking, grasping and many other physical actions. These permit him to develop a "logic of the actions", knowing that physical displacements are reversible, commutative and associative. He realizes, for example, that he can walk through the rooms of the house and return to his starting point by retracing his path. The child develops a physical understanding of means-ends relationships, time, and intentionality. Towards the end of the sensory-motor period, the child learns that objects and people continue to exist even when they are not perceptually available to him. The child thus establishes the first invariants - permanence of

person and permanence of objects. Knowledge of external objects now persists beyond the time and place of physical contact with them. The child then learns to represent these objects symbolically, and to think of potential interactions with them.

The appearance of such internal thought, at 18 months of age, marks the beginning of the preoperational stage. Piaget often uses the term "operation" in a general sense to refer to any internal thought with internal action and object. During the preoperational stage of intelligence, the child uses internal thought, which is functioning in the wider sense of the term, to develop the capacity for reversible mental operations. The preoperational stage is thus considered a preparatory phase of the period of concrete operations. During this stage the child learns not only to represent objects through signs and to think through actions, but to defer imitation, to represent objects through drawings, to participate in symbolic play, and to have an intuitive notion of such concepts as length and weight.

The lack of reversibility during the preoperational stage is the result of the incomplete internalization of the actions. As Furth has stated:

> Since preoperational logic, like all natural logic, derives from the actions, and since external actions are sequentially ordered in one direction, pre-operational functions lack reversibility by being limited to a specific direction. The reason for this is that preoperational knowledge in general is still tied to external action, not exclusively in a sensory-motor sense, but mainly through too great a dependence on symbol representation. (1969, p.97)

Piaget (1968a) has clearly demonstrated this aspect of preoperational intelligence in a series of experiments with G. Voyat:

> 3 to 5 year-olds who took apart a necklace and spread out the beads in a box, said that the beads were "still the same necklace," calling on a notion of identity by assimilation to their own action; but if they started from the separate beads, without having made the necklace, they naturally did not say the beads were the same as the necklace: identity here thus depends on the chronological order of the actions, and is not reversible. (p.22)

Thus, although these children possessed sensory-motor reversibility and could string or unstring beads, they could not represent both of these transformations internally. The children still needed to construct on the internal plane those relationships, such as reversibility and the "logic of the actions", that they had already mastered on the external plane.

When the child develops the ability to reverse mental operations, he enters the period of concrete operations, usually at age six or seven. Concrete operations are distinguished not only by the presence of internal reversibility but also by the manner in which one operation implies the presence of other operations. Thus,with the case of conservation of mass, the operation of conservation implies the existence of the inverse and the reciprocal operations. This set of interrelated operations forms a grouping . The structure of the grouping is weak, and permits only step-by-step reasoning. The child lacks the integrating abstractions which would permit the mutual interaction of all of the operations. This lack of integration is evidenced by the fact that in only one of the three realms of concrete operations (the realm of conservation) are both

forms of reversibility available. In the realm of logic (classification) only negation is used, while in the realm of infralogic (spatial relationships) only reciprocity is used.

The stage of formal operations, the third major period of cognitive development, begins around 11 or 12 and continues to be developed through adolescence and adulthood. The individual now develops the ability to reflect upon the operations of the concrete period, taking them as "objects" of thought and developing abstractions relating them. The major achievements of this period are inter-propositional logic and combinatorial thinking. The adolescent can now consider several possible hypotheses and evaluate the merits of each in comparison with the others. He can also generate all the possible combinations of a set of elements rather than combining them unsystematically as he did during the period of concrete operations. The formal operations form groups in contrast to the groupings of the concrete period: "the grouping is an integrated structure with limited arrangements...related to the group but without complete associativity" (Piaget, 1969, p.101). In the true group the individual can deduce the result of performing any subset of operations belonging to the group in any order. The formal operations are also distinguished from concrete operations in that the individual uses both forms of reversibility simultaneously (Furth, 1969, p. 26).

The Four Factors in Development

Piaget believes that there are four factors which contribute to cognitive development: maturation; experience with objects; social transmission; and the process of equilibration. The first three factors are considered to be necessary for cognitive development but none of them is in itself sufficient. The fourth factor, the process of equilibration, makes use of the other three factors as components in the workings of its mechanism . Consequently, the first three factors will be briefly reviewed and then the detailed mechanism of the process of equilibration will be examined. Study of the mechanism of equilibration will illustrate the contributions of the factors of maturation, experience and social transmission, but will focus upon how equilibration implies the existence of a necessary order in development. The last section will then consider Piaget's conception of the role of affect in cognitive development in greater detail, making use of this understanding of the process of equilibration.

Maturation. Piaget feels that maturation, especially neurological maturation, plays a definite role in cognitive development. Maturation provides the basic potentialities which then become integrated into the developing schema. This is clearly seen in the case of the reflexes which form the initial substrate from which the schema are developed. Physiological potentialities also mature at a later date, and require functional exercise and a limited amount of extension through experience to become actualized and active in cognitive development. The biologically determined

timetable, according to which maturation occurs effects the course of ordered development, but Piaget does not consider its effect sufficiently strong to explain the directed nature of development.

Experience with objects. The second factor in cognitive development is the role of experience and exercise with objects. This experience is of two types: 1) physical experience, which is for the purpose of learning about the properties of objects; and 2) logico-mathematical experience, which is experimentation to learn the results of actions upon the objects. Both of these types of experience imply the utilization of previous schema derived from action. As more advanced schema become available there is a progressive opening up of potentials for interaction with the environment. At the preoperational level, for example, as more objects are "known" as objects, the effects of actions upon them can be differentiated from the properties of the objects themselves. The child can discover that the heavier the object, the harder one must push to make it move. Similarly, the more schema a child has the more he can discover about the properties of an object. Although there is a progression implied in the learning a child can do from experience, it is not clear why such learning would not result in a chaotic expansion, thus this factor does not explain direct development.

Social transmission. The third factor in cognitive development is social transmission of knowledge. Piaget recognizes the critical importance of affective contact for development in general. He refers, for example, to Spitz's (1945) studies of hospitalized infants and Bowlby's (1973) studies of children who have been separated from their parents. Deprived

of the social stimuli of a "mothering" person these children show arrests or even regressions in cognitive development.

When he discusses the social transmission of knowledge, however, Piaget (1936) is generally referring to the child's realization that other people have different opinions and explanations for phenomena than he does. This is seen as producing a disequilibrium in cognitive structures which the child seeks to resolve. Piaget thinks that children do not simply adopt the knowledge of others, accumulating pieces of information until they have "learned" a concept. Instead he believes that the child actively constructs new cognitive structures. Thus, in the preoperational stage the values and concepts of respected persons become integrated into cognitive conflicts children attempt to resolve. The child may know, for example, that his parents believe a dream is "pretend", but he initially has difficulty reconciling this information with the illusory experience which seems so real. After the establishment of concrete operations children "test out" the concepts of their elders through concrete manipulation. In the period of formal operations, questioning goes further as the child accepts as "objects" for intellectual examination the transmitted knowledge of preceding generations. Social transmission of knowledge, then, is important in facilitating the advance of knowledge from generation to generation, but the child's need to actively synthesize this knowledge into his cognitive framework precludes it as the sole answer for how children learn.

Equilibration. The fourth factor in cognitive development is the process of equilibration. This is the factor which Piaget feels is primarily responsible for the fact that cognitive development is oriented and proceeds toward a system of internalized, reversible operations rather than towards chaos. According to Piaget, a perception which can not be comprehended; an unsuccessful attempt to manipulate an object according to a previous schema; an unsuccessful attempt to comprehend a situation in terms of well-known operations; or contradictions between schema - all of these create a source of disequilibrium in the cognitive system. The thrust of development is to resolve these disequilibria and establish a state with a "continuously changing balancing of cognitive compensations" (Furth, 1969, p.261). Such a state requires a system of cognitive structures which allows the child to interact with external objects (things and perceptions) and internal objects (concepts and ideas) while resulting in a minimum of disequilibria. Piaget maintains that this system is precisely the system of reversible formal operations which we observe being formed. It is clear that if equilibration is the goal of cognitive development, then any cognitive structures formed must be adapted to the environment. Any unadapted structures would generate an increase in disequilibria, as the action of the individual would not bring about the desired result in the environment.

In the preceding sections it has been stated that the stages have a fixed order of development and that each incorporates the structures of the prior stage, becoming the origin of further development. It has also been stated that there is a continuing thrust toward further development.

The mechanism of equilibration must therefore indicate how these logical prerequisites of Piaget's system arise from the processes underlying development.

The Mechanism of Equilibration

The mechanism of equilibration, and hence of development and adaptation, is the simultaneous functioning of the processes of assimilation and accommodation. Assimilation is the individual's attempt to relate to stimuli in terms of his existing schema. Accomodation is the process of modifying or extending schemas. It is the result of the inappropriateness of the stimuli for incorporation into the pre-existing schema. The child who has just learned to grasp objects can prcvide an example of both assimilation and accommodation. If the child sees a large ball and attempts to grasp it with his hand only slightly open, as it was with his previously grasped rattle, then the child is attempting to assimilate the ball to his grasping schema. When this attempt fails, and the child opens his hand wider to fit the ball, the child has modified his previous schema; this is accommodation.

Cognitive development proceeds from encounters with those stimuli which the child can partially,but not totally,assimilate to his cognitive schema. In such a situation, a disequilibrium of cognitive structure exists. If accommodation does not immediately occur, the disequilibrium persists beyond immediate contact with the stimuli. In the earlier stages of infancy, Piaget postulates that the disequilibrium itself creates a need for the schema to be repeated, until repetitive assimilation and accommodation create a new schema which restores cognitive equilibrium. In the fourth stage of sensory-motor development, the infant develops the ability to delay gratification and to seek alternate means to a goal.

At this point, the affective factor of interest becomes critical for the continued development of schema. Children of this age constantly strive to reproduce interesting events in the environment. The stimulus which cannot be assimilated into a pre-existing schema must now be sufficiently interesting to hold the child's interest in competition with other stimuli.

The restoration of equilibrium is indicated by the appearance of "recognitory assimilation." The once novel stimulus now triggers an abbreviated form of the schema (Piaget, 1936, p.189). This is a sign that the stimulus is no longer novel in this context, and it will not foster further cognitive development on the part of the child.

Continuing development thus depends upon the presence of "optimally novel" stimuli. In normal development these are generated, in part, by the system itself. If in seeking to resolve one disequilibrium through repetitive assimilation and accomodation the child by chance produces a novel result in the environment, he will seek to find the means to reproduce <u>that</u> novel happening. In addition, the very development of a new schema using an object, often means that some other aspect of the object now becomes noteworthy.

> It is therefore the very tendency to restore equilibrium or to maintain the status quo which exposes the subject to novelty, creates new motivations, and adapts the organism to an expanding sector of reality. (Wolff, 1960, p.86)

Piaget thus postulates a cyclic process of accommodation and assimilation generated by and generating novel stimuli, which ensures a continuing impetus toward further development.

It is this cycle, focused upon the optimally novel stimulus, which also implies the necessity of a definite order in development. As Flavell explains:

> In Piaget's terms, the organism cannot accomodate potentialities which it is unable to assimilate to something in its present system of meanings. The hiatus between old and new cannot be too great. This fact, that new structures must arise almost imperceptibly from the foundations provided by the present ones, is what always insures the gradualness of cognitive development. (1963, p.48)

In other words, each stage builds upon the achievements of the preceding stage; each cognitive schema must grow out of schema which prepare component parts for it. Until the schema constituting the substrate exist, the individual is unable to comprehend the salient features in the environment which the new schema comes to accommodate.

The development of coordinated visual prehension is one illustration of the progressive, integrative nature of development. Until the child can "look to see", he is unable to learn to "look to see and grasp". The component schema of "looking" and"grasping" must be developed before they can be coordinated; there is an "inherent logic" to the integration. The schema must develop in a fixed order. As can be seen in the example, the new schema integrates the preceding structures and in so doing elaborates them,creating a qualitatively new experience. The infant who has just

developed visual prehension can, for the first time, act with intention upon the world. Yet the new schema, while it resolves the cognitive conflict of the preceding level, simultaneously creates the potentialities which generate new disequilibria leading to further development. In the example, the child now wishes to grasp almost everything he sees, and cannot accomplish this feat. Just as in this example, the necessity for gradual development implies a fixed order throughout cognitive development. Similarly, the same mechanism implies that the stages of cognitive development must appear in an invariant order. Consequently, in Piaget's theory each child must pass through every stage of development, and no later stage may be evidenced until every preceding stage has been manifested.

Horizontal and vertical decalages. Horizontal and vertical decalages are both specific forms of the logical necessity for order in development. A vertical decalage exists when a schema of one stage of development is a necessary antecedent for the development of a schema of a later stage. The earlier schema becomes incorporated into the mental operation of the later stage. The sensory-motor achievement of permanence of person, for example, deals with the invarience and identity of a physical constant, which continues to exist independent of its perceptual availability to the child. The concrete operational concept of conservation could not be developed without an understanding of identity, but it is not a mere extension of that principle. For conservation deals not with the qualitative invarience of a physical constant, but with the quantitive invarience of substance which varies simultaneously along several dimensions. Thus the child first develops the concept of the invarience of a constant (A=A, identity), and then develops the concept of the invarience of a non-constant under a certain restricted set of condition. Piaget (1968a, 1970), in fact, has conducted a series of experiments with G. Voyat which have demonstrated the continuity of the concepts of identity and conservation. These experiments have shown that identity eventually becomes one of the system of operations which permits the concept of conservation to exist. Vertical decalages thus involve the necessary logical integration of a schema from one stage of development into the formation of a cognitive structure at the next stage of conceptual development.

A horizontal decalage involves the application of the same schema in

different subject areas. A horizontal decalage may thus involve nothing more than asking the child to perform the same operation with different objects. In 1:1 correspondence, for example, the child may be asked to maintain the equivalence of rows of checkers after one row has been spread out, or he may be asked to maintain the equivalence of rows of male and female figures before and after the transformation.

A horizontal decalage may also, however, involve the transposition of a concept from one operation to another operation in which the physical context makes application of the concept more difficult. One such horizontal decalage exists in the following set of operations: 1:1 correspondence; conservation of mass; seriation; and class inclusion. It is an experimental fact that these operations form a horizontal decalage. One-to-one correspondence is achieved by 75% of children at age 5 to 6, while this criteria of success is reached with conservation of mass at age 7 to 8, seriation soon thereafter, and class inclusion at age 9. The existence of this order can also be supported on logical grounds. One-to-one correspondence is essentially the conservation of discrete quantities, and as such precedes the more difficult application of conservation to continuous quantities as in the conservation of mass. Seriation requires that the child place a group of sticks in ascending order, from smallest to largest. It demands that the child coordinate the "conservation" of the overall continuous trend of the sticks in the series to become longer, with the discrete act of establishing the inequality of each stick with its neighbors, one being smaller and one being larger.

Since seriation demands the simultaneous use of discrete and continuous variables, it appears after the ability to conserve continuous quantities has been achieved with the conservation of mass. Class inclusion requires the child to know that ducks are birds, and birds are animals, and that the class of animals must have more members than either subset. It is thus a task demanding the seriation of labels, and as such can be mastered only after the seriation of physical objects has been achieved. This specific horizontal decalage is particularly important since it has been used to investigate the thinking patterns of psychotic children (Voyat, 1979a, 1979b) which will be discussed later.

Thus, horizontal decalages deal with the manifestation of a single concept in different contexts. The inherent logic of a horizontal decalage is often not as clear as the necessity underlying the order of development in a vertical decalage. This is due, in part, to the necessity of determining the common concept being manifested in the different contexts, which may superficially appear totally divergent. Thus in the example, it was necessary to recognize the presence of ideas of conservation in the operation of seriation and class inclusion despite the fact that they belong to the realm of logic rather than to the realm of conservation. Both horizontal and vertical decalages, however, are basically manifestations of the orderly nature of development in Piaget's system.

Piaget's Conception of The Role of Affect in Cognitive Development

Following in the readition of such European psychologists as Claparede, Janet, and Lewin, Piaget conceives of affect as having an intrinsic role in cognitive development. Affect is the regulator of motivation, and as such is inseparable from cognition:

> There is never a purely intellectual action, and numerous emotions, interests, values....intervene--for example in the solving of a mathematical problem. Likewise, there is never a purely affective ace, e.g., love presupposes comprehension. (Piaget, 1967, p.87)

Thus, although one may predominate, affective and intellectual factors play a role in every schema, and the processes of assimilation and accommodation act upon both of them.

Affect, however, has a delimited role in the formation of the schema:

> Affect explains the accelaration or retardation of formation of structures-acceleration in the case of interest and need, retardation when affective states are obstacles to intellectual development, as in the excellent studies by Spitz on hospitalism. (Piaget, 1962, p. 167)

Affect is a necessary condition for the development of cognition, but Piaget maintains that it is not a sufficient condition; affect is not the cause of the formation of cognitive structures. Nor does affect determine the nature of the structures formed. For example, as regards the formation of the concept that objects are permanent in space, regardless of their immediate perceptual accessibility to the subject,

Piaget states:

> It is impossible to explain affect by intelligence, that is, we cannot say intelligence is the cause of affectivity; and on the other hand it seems impossible to explain the construction of the permanent object by the feelings as such. Feelings explain the interest for the object, but the structure of the object is related to space, time, and causality. (Ibid , p.172)

Thus it is an integral part of Piaget's theory that affect can affect rate of development of cognitive structures, but that it can not change the nature of the cognitive operations developed. Since the very structure of the cognitive operations formed implies a necessary order in their development, Piagetian theory also implies that despite variations in the rate at which structures are formed due to affective influences, the cognitive operations must appear in a fixed order. Horizontal and vertical decalages must therefore remain invariants in cognitive development and be independent of the affective state of the individual. In addition, since each successive stage of development incorporates the preceding one, and is linked with other schema, Piaget hypothesizes that once a given stage of development has been attained, regression to an earlier stage of cognitive functioning is impossible. Emotional factors may, however, interfere in the individual's interest in interacting with certain materials and manifesting his true level of development.

Meta-theoretical and Structural Considerations in the Construction of a Unified Theory of Affect and Cognition

Piaget's cognitive theory of development and the psychoanalytic neo-Freudian school of emotional development share a common set of underlying assumptions. Both theories assume that there is reason for development, that the individual seeks to adapt to his environment in order to obtain an internal state of equilibrium and stability. Both theories consequently postulate the presence of internal processes which result in the formation of inner structures. Thus, Piaget hypothesizes that assimilation and accommodation result in the development of schema. Psychoanalytic theory hypothesizes that the instinctual drives under pressure from the reality principle become moderated in their expression through the development of the defense mechanisms, the ego, and the superego. The two theories postulate the development of very different structures. This results in the development of different hypotheses about the role of such functions as memory, logical thinking, and avoidance. Each theory also includes some areas of development which are not covered by the other. An integrated theory of affect and cognition would have to subsume both of the existing theories. The development of a superordinate theory of affect and cognition would demand the creation of a new paradigm integrating the functions of the preceding theories. The necessity for the development

of such distinctly innovative paradigms in the development of science has been documented by Kuhn (1975). In physics, for example, it was noted that most objects obeyed the laws of Newtonian Mechanics but that very small particles formed diffraction patterns and displayed other properties of light. These theories were unified with the development of relativity, which hypothesized the revolutionary concept of the conservation of energy and matter. The development of an integrated theory of cognition and affect will probably also require the development of a new paradigm, with structures and processes not included in either of the current theories.

It is ironic to note that Piaget's theory of cognition itself depends upon the successive integration of one structure into the succeeding one. Yet, in his discussion of the relationship of cognition and affective or social development, Piaget does not seek to derive a unified theory in which the isolated theories would be subsumed in a qualitatively new structure.

Instead, Piaget seeks to form analogies between cognitive and social settings, and to transfer the theoretical structure he developed for cognition to the affective and social realms (Piaget, 1966; Voyat, 1968). Morality, for example, is seen as an affective operation which is analogous to conservation. Piaget supports this analogy with the observation that both "operations" appear at the same time in the course of the development of the child, around age 7 or 8. As additional "proof" of the validity of these analogies, Piaget asserts that affective develop-

ment involves the same four factors of development as cognition: maturation, experience, social learning and equilibration (in the form of conflict and resolution). All play a role in affective development. From bases such as these Piaget and his colleagues have implied that other characteristics of the cognitive theory, such as the properties of the group of transitive, reversible, identical and associative operations, may be applied to the areas of affective and social development.

There seem to be several difficulties with this approach. First of all, it does not seem that the bases of the analogies are always valid. The "necessity" of maintaining a moral value, for example, seems to be distinctly different from the necessity of maintaining conservation of volume. Second, similarity between several structures in the affective and cognitive realms at a very abstract level does not imply a true parallelism between the structures; at most it defines certain properties the structures share in common. Third, even if the two realms of development were shown to share some structures in common, it is questionable that they would share all structures or one theory would have been shown to be fundamental. The application of theoretical structures such as the four-group to affective and social realms must therefore be questioned. Some other mathematical model such as one containing the concepts of probability, redundancy, and signal detection may be far more applicable in these realms. In addition it should be noted that the integrated theory could well be

described by one mathematical model while the sub-systems of affect and of cognition could evidence a different mathematics due to the reduction of variables in the subsystem.

Thus it is important in discussing the interaction between affect and cognition to bear in mind the theoretical level at which comparisons are being made. Is a study comparing the predictions of the theories with respect to processes (memory, perception, etc.) they claim to explain, or is the study attempting to compare cognitive and affective structures? It is hoped that this discussion will help to clarify the following review of the literature of studies of the interaction between affect and cognition.

A Review of the Literature on the Interaction of Affect and Cognition

The following review will focus upon those studies of the interaction between affect and cognition which have sought to integrate the Piagetian school of cognitive development with affective development as described by the neo-Freudian analytic school. There have been several major areas of investigation which have generated conclusions relevant to this study. Although investigations in several of these areas have supported the same conclusions, repetition will be risked in order to present the research from each of these areas separately. This will permit the reader to examine the development of each of these lines of research as they relate to the present study. This review will focus upon the following topic areas: 1) research relating Piaget's theory of sensory-motor development with the psychoanalytic theory of the development of object relations in infancy; 2) longitudinal and cross-cultural studies; 3) studies of the cognition of individuals with severely pathological personalities; and 4) observational studies of complex behaviors in which affect and cognition contribute to the formation of behavior patterns.

Throughout this review the term "decalage" will be used to indicate that the child either performed the same task at different levels depending upon the objects used, or performed variably on related schema which are generally achieved in a fixed order. When Piaget uses the term, he implies that the pattern demonstrated must logically appear. Since this review is examining variable performance

in the context of emotional factors this aspect of the use of the term is not applicable. Use of the term decalage in this review specifically seeks to avoid specifying whether: 1) the child is not performing a task he is capable of due to lack of motivation or a wish to avoid emotionally charged material; 2) the child had achieved the ability to perform a schema but has regressed due to emotional factors and would now be incapable of performing it even if highly motivated; and 3) the child has never been able to master the schema partially due to emotional factors.

Studies Relating the Piagetian and Neo-Freudian Theories of Infancy

The studies to be covered in this section of the review deal with investigations which can be said to attempt to integrate the Piagetian and neo-Freudian views of development during the period of infancy. Except for the last group of studies to be mentioned, the investigations generally involve the concept of object permanence and thus relate to the question of the infant's level of mental representation. The studies have been divided into subject groups, however, on the basis of their emphasis on other aspects of affective-cognitive interaction when these were present. The areas to be covered are: 1) studies attempting to relate Piagetian and neo-Freudian perspectives of development over the entire period of infancy; 2) studies focusing upon the question of mental representation; 3) studies attempting to establish a causal relationship between a cognitive ability and

affective manifestation; 4) studies of the effect of variations in the social and affective environment on the rate of cognitive development; and 5) a study investigating the effect of drive state on the level of object permanence.

Studies of the theories covering the entire period of infancy. The first conceptual comparison of Piaget's work with psychoanalytic theory was made by Peter Wolff in his 1960 monograph. Wolff reviewed sensory-motor theory stressing both Piaget's observations and the implied cognitive abilities, structures, and processes available to the infant in each stage. He then made a comparison of Piaget's theory with the theory of classical psychoanalysis and ego psychology. Since he focused upon structural and functional similarities and differences, Wolff discussed issues such as the roles of internal vs. external stimuli, equilibration, and motor activity. Wolff also dealt with differences between the theories as to the origins of motivation, reality adaptive behavior, and autonomy. This emphasis led to a consideration of the differences between the theories as to the origins of mental representation. While Piagetian theory assumes representation develops out of the internalization of action, "Psychoanalytic theory assumes that when the organism cannot keep drive tension at a minimum by diffuse discharge into the interior of the body (affective discharge), it acts on real objects in the environment in order to achieve drive discharge. The absence of real objects evokes the memory of previous drive-gratifying situations as hallucinatory gratifications, and it is these ideations from which

higher-order thought processes arise." (Wolff, 1960, p. 78) Thus the Piagetian and neo-Freudian theories of development assume that the capacity for mental representation arises at different times and from different sources.

DeCarie (1965) made the first experimental attempt to correlate Piagetian and neo-Freudian theory. After reviewing the psychoanalytic literature, she developed a series of ten items which analysts postulated would sequentially follow the growth of object relations and termed this the Objectal Scale. DeCarie administered it to 90 infants, ages 3 to 20 months. Over half of the infants tested had heterogeneous Objectal protocols, passing more advanced items in the series while failing earlier items. The Objectal "scale" thus seemed to be inadequate in that it did not allow for the complexity of development. Two of the factors which may have contributed to this complexity are: 1) the overlapping nature of the stages of emotional development; and 2) the behavioral diversity with which the same emotional relationship may be manifested (see for example Escalona, 1959, p. 7). DeCarie was able to establish a general correspondence between the stages of the two theories by analyzing only the homogeneous protocols, but this correspondence was not one which held for all infants. Even some infants with homogeneous Objectal protocols did not follow the established general correspondence. Furthermore, DeCarie was unable to show that a certain cognitive ability was necessarily attained before a specific affective criterion was manifested, nor that a particular affective behavior always

preceded the attainment of a cognitive stage. Thus the data did not seem to imply a causative relationship between affect and cognition, which is congruent with Piaget's position that affect motivates cognitive development but is not an element in the structures formed.

In her discussion, DeCarie specifically addressed the question of mental representation, as this seemed to be one source of the disparity between the two scales. She noted that the diffuse, multisensorial "hallucinated" image which analysts postulate to appear within weeks of birth was in direct contradiction to Piaget's statements that even rudimentary recognitory representation does not become possible until 8-10 months. Later writers have offered clearer conceptualizations of the psychoanalytic position on mental representation in their attempts to clarify its role in the formation of "libidinal object constancy."

The question of mental representation. For psychoanalysts, the ability of the infant to form an image of the mother is an essential part of the development of "libidinal object constancy," i.e., an enduring emotional attachment to the mother. Fraiberg (1969) was able to clarify the issues involved by pointing out that the term "object constancy" had been used in two distinct ways.

The first group of analytic writers used the term to indicate that the infant had developed the ability to maintain an affective attachment to the mother irrespective of the presence of a need state.

Anna Freud (1960: Panel Discussion, 1968) and Rene Spitz were prominent members of this group. On the basis of the appearance of the specific smile, "8 month" stranger anxiety, and separation protest, these writers placed libidinal object constancy at the end of the first year (6 to 10 months). They assumed that these behaviors were evidence that the child could evoke a mental representation of the mother. Fraiberg showed that all of these behaviors could be explained as the recognition of a stimulus (the mother) associated with pleasure. Separation protest could be seen as a recognition that this stimulus was not available, and an expression of displeasure at its disappearance. Stranger anxiety could be explained by hypothesizing that the stranger evoked some schema associated with the mother (such as being held). The stranger, presenting a different face, etc., failed to produce the schema expected by the child. Thus Fraiberg was able to resolve this source of contradiction between the assumptions made by the analytic writers and the implications of Piaget's research observations of infants.

The second group of analytic writers linked "libidinal object constancy" with the ability of the infant to evoke the image of the mother independent of external cues and use it as a source of comfort in her absence. Nagera (1966) and Frosch (1966) were cited as belonging to this group. They postulated that the infant becomes capable of evoking this image in the second year, which is in rough agreement with Piaget's assertion that mental representation is achieved at

approximately 18 months with inanimate objects and earlier with people. Mahler (1965, 1968), who also belongs in this second group of analytic writers, places the development of object constancy still later, at the end of the third year. She requires that the evoked image not be split into "good" and "bad" components, even when the child is alone, angry, or under stress. This implies that the child is able to use the image in a "full-functional" way (Pine, 1975) to moderate rage at and longing for the mother. The capacity to avoid splitting is also seen as helping the child resolve his conflicts over autonomy and dependence, as he can use the image as an internal source of support.[1]

Fraiberg's article led analytic writers to abandon the attempt to support the notion that a diffuse hallucinatory image of the need-gratifying object becomes available to the infant in the first few weeks after birth. Fraiberg produced evidence that an internal state could serve as a signal producing the momentary ability of the child to recall the mother's image as part of an anticipated antecedent. She sees this as similar to the ability of the infant to associate an environmental cue, such as a door shutting, with the image of the departed mother (McDevitt, 1975, p.720). Fraiberg also points out that the image existing after the mother's departure should become available to the

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1) Kaplan (1972) has extended the "developmental line" of object constancy still further to consider how the development of concrete and formal operations permit the restructuring of self and object representations. These result in still greater protection of the libidinal image from fluctations in feelings.

infant prior to the hallucinated image, since it exists as the extension of visual perception. She states:

> If all these observations have been fairly made, the hallucinatory experience of need is organized on the same level of sensory-motor intelligence as the image of the real object withdrawn from perception. Both images are stimulus bound; i.e., the image of exteroceptive experience cannot be sustained for more than a few seconds after the real object has left the perceptual field; the hallucinatory image on this level of cognition cannot be produced without a need stimulus and it can be sustained only for the duration of that stimulus raised to a certain intensity.... the level of the mental operations for the hallucinated image is also stage IV. (1968, p. 42-43)

In addition, Fraiberg has postulated that mental representation of people could not be more than a single stage advanced beyond the ability to represent the inanimate object. A greater gap, she maintained, would violate all observations on cognitive coherence. Thus even primitive "hallucination" of the image of the mother under the influence of a need state would seem to be limited to the age of 6-8 months. Following this statement of the problem, analysts seem to have largely abandoned the attempt to defend the hallucinatory image.

The clarification of the conceptual issues concerning the development of libidinal object constancy and its relation to Piagetian theory has resulted in a series of experimental studies. These studies have resolved the question of whether the infant is cognitively capable of the level of mental imagery hypothesized by the neo-Freudian school of object relations.

Several investigators have shown that the infant does, indeed, develop the ability to evoke the image of the mother towards the end of the first year. This was first determined by Bell (1970) who found that many of her infants had formed stage VI permanence of person as early as 8 1/2 months. Paradise and Curcio (1974) have offered confirmation of this, finding that 60% of the 9 and 10 month old infants in their study were at stage VI in terms of permanence of person independent of external cues. Object permanence also develops somewhat earlier than reported by Piaget, often reaching stage VI by 16 to 18 months. Thus is is clear that by the time the infant is beginning to display those signs (stranger anxiety and separation protest) of a need-independent attachment to the mother which require a sophisticated recognition memory, that mode of thinking is well within the capacities of the child. By about a year, evocative memory of the mother begins to develop, and at some time thereafter the child can conceivably evoke her image as a source of comfort, a sign that the child is developing the second level of object constancy.

Most studies report average differences between permanence of person and object of slightly less than one cognitive stage, with permanence of person generally preceding permanence of objects. The two theories differ in their explanations of the reason for this disparity in time of achievement, but both agree permanence of person would precede permanence of objects. If the affective significance of the mother is responsible for motivating the child to endow her with continuing existance

in terms of greater permanence than an object, then the decalage could be said to be affectively determined, setting a precedent for this study. It must be noted, however, that Piaget believes permanence of person would precede object permanence on purely cognitive grounds. He reasoned that those "objects" at the juncture of the greatest number of interacting schema would be the first to be concretized in space and given existence independent of their role in the schema. The mother, as an "object" who interacts with most sensory modes and who comes and goes relatively independently of the child's actions, would thus be the first "permanent object" for most children. It is, therefore, unclear what causes permanence of person to be acheived before object permanence.

Attempts to establish a causal relationship. A second set of experimental studies with infants has attempted to show that a given level of object permanence was necessary before a specific behavior linked to affective development could appear. Scarr and Salaputek (1970), Paradise and Curcio (1974) have been unable to show that fear of strangers demands a prerequisite level of object or person permanence. Schaffer (1963, 1971) and Schaffer and Emerson (1973) have hypothesized that separation protest arose in Stage IV of object permanence. They felt that it might be the result of frustration generated when the infant used the newly developed ability to find an object behind a screen in the attempt to recover the mother and failed. Lester, Kotelchuck, Spelke, Seller, and Klein (1974) have shown that infants beyond stage III in object permanence do evidence more separation protest than infants the same age or older at stage III.

This was, however, only a quantitative difference, not the appearance of a new behavior. This finding would seen to require confirmation for two reasons. First of all, Schaffer based his hypothesis on the contiguity in time of stranger protest and achievement of stage IV. Since then, revisions of the age at which infants achieve the stages of object and person permanence have been made. In addition, it is now known that in countries such as Uganda, where the infant is carried on the mother's back for most of the day, separation protest begins as early as 6 months (Ainsworth, 1967). Thus the grounds for Schaffer's hypothesis do not seem to be sound in the light of later research. Second of all, Fraiberg's (1969) observations of blind babies have shown that they develop indications of libidinal attachment at the end of the first year, but remain in stage III of object permanence. To date, then, there has been no firm experimental evidence that a given level of cognitive development is causally related to the appearance of maifestations of affective development.

The effect of social and affective environment on cognitive development. Another group of studies has shown that the presence of an optimal level of atimulation and the social and interactional quality of the stimulation play an important role in the speed of cognitive development. These studies are based on Spitz' (1945) observations of "hospitalism," or failure to develop, in infants deprived of social attachments in "custodial" hospital settings.[2] Paraskevopoulos and Hunt (1971) have

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2) Caster (1958) has made a review of related studies.

confirmed that infants in caretaking institutions are delayed on Piagetian tasks of sensory-motor development as well as on standard infant IQ tests when compare to children from a similar socio-economic level who lived at home but attended daycare.[3] Additional support for the importance of quantity and quality of interaction for the cognitive development of children has come from studies relating performance on Piagetian tasks to social class (Golden and Birns, 1968, 1971; Wachs, Uzgiris, and Hunt, 1971). The last study, for example, has shown that slum children who are cognitively delayed compared to a control group lived in homes with a constant high level of stimulation unrelated to the infant and with less verbal labeling directed towards the child. Piagetian level has also been related to methods of caretaking (Hunt, et al., 1975).

Studies by DeCarie (1965) and Bell (1970) have attempted to deal more directly with the quality of social interaction. DeCarie included infants in their natural homes, in adoptive homes, and in institutions in her sample. The mixed sample was designed to allow the effects of assumed parental ambivalence on the part of adoptive parents and the absence of a specific maternal figure for the hospitalized infants to appear in the attempted correlation of affective and cognitive stages. DeCarie found that adoptive and hospitalized infants displayed more heter-

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3) They noted, however, that the variation in the age in which stage IV of object permanence was achieved was greater for the infants reared at home than for infants in a "model institution" where supervised students brought the ratio of caretakers to children to 1:3. The implication made was that the home environment is more variable than is commonly recognized even for infants of the same socioeconomic level.

ogeneous, uneven development on the Objectal scale and were cognigively delayed when compared to infants raised by their natural parents. Bell (1970) operationalized the evaluation of the attachment between mother and infant by assessing the infant's respons to mother-initiated separations. Infants who ceased play or cried upon the mother's departure and greeted her happily upon return were found to have a "positive decalage", with a more advanced score on permanence of person than on permanence of objects. Children who showed little cessation of play and did not seek contact with the mother or avoided her upon reunion, were found to have a "negative decalage" and be more advanced in object permanence than in permanence of person. In addition, the "positive decalage" infants were more advanced in over-all permanence than the infants with a "negative decalage." These studies lend support to the notion that quantity and quality of social stimulation affect the rate at which cognitive development proceeds.

Drive state and other permanence. One additional study of infants is worthy of detailed examination as it makes several points relevant to the proposed investigation. Moskowitz (1978) examined the effect of infants' need states and the need-gratifying properties of the object permanence attributed to the object. She presented a stranger, the mother, a new toy (the neutral object), the infant's bottle, and the infant's transitional object or favorite toy to 8-9 months old infants. This was done when the infants were in a hungry state and also when they were in a quiet, alert state. The infants achieved a lower level of object permanence with all objects in the hungry state than in the alert state, indicating that the psycho-

analytic assumption that need states stimulate the evocation of mental images must be questioned.[4]

Several other results of her study are of special interest with respect to the proposed investigation. Moskowitz found that when the neutral object was used as a basis for assigning the infant to a stage of object permanance, performance with the other objects tended to fall into a different, distinct pattern for infants in each stage of object permanence (as determined with the neutral object).[5] Furthermore, these patterns corresponded to the hierarchies of interests expected of infants in the different stages of separation-individuation as described by Mahler (1965) and Mahler, Pine, and Bergman (1975). Thus it seemed that there was a correspondance between the following stages:

1. Stage III of object permanence and the beginning of differentiation. The infant is still in the symbiotic substage and is just beginning to interact with the environment with a few repetitive schema. Moskowitz suggests this accounts for the infant's lack of differentiation of objects, as the stage III infant produces the same degree of object permanence for all objects.

2. Stage IV of object permanence and the differentiation subphase in which there is an increase in exploration of the mother, and "customs inspection" of strangers. The infant's interest in people is

4) Moskowitz notes, however, that the presense of need states may still be important in helping the infant develop the capacity for mental representation. Such an interpretation, for example, might help explain why permanence of person develops before permanence of objects.
5) As with DeCarie's study, this was a general correspondence based upon the average permanence assigned each object for infants in a given stage. Individual infants varied in how well they conformed to the general pattern.

indicated by the tendency of these babies to score highest on permanence with the mother, followed by the stranger, and then inanimate objects.

3. Stage V of object permanence and the early practicing period, in which there is elated exploration of objects and the infant's own abilities, at times to the exclusion of the mother. These infants score highest with the novel object, permanence of person having shown little advance over the preceding stage.

Thus Moskowitz raises the possibility that a correspondence between the stages of affective and cognitive development exists but is evident only when the mechanisms of cognitive development are examined. When the mechanisms of the attainment of a given mental schema are examined, the effect of affect may be manifested in the patterns of horizontal decalages which exist. It should be noted, however, that these patterns may be transient in nature.

In addition, Moskowitz found evidence that the individual psychological characteristics of a child might produce differences in the decalages found. Although the predominant pattern of stage V infants is to score highest in permanence with the new toy, the one stage V infant who never evidenced stranger anxiety scored highest with the stranger and then the novel object. Moskowitz speculates that the stranger, a person, would normally be more interesting to the infants than the new toy, but that anxiety associated with the stranger interferes

with performance for those infants with a fear of strangers. In addition, of the ten infants with transitional objects, seven of them scored lower with this object than with any other. Moskowitz suggests that this indicates that mental representations of the transitional objects are less differentiated from self-representations than are representations of other objects. This is consistent with Winnicott's (1953) description of the transitional object as one which bridges the gap between the self and the non-self. Thus Moskowitz is indicating that individual differences in emotional responses toward objects can influence the pattern of performance produced by a particular child.

In summary, the relevant studies of the interaction of sensory-motor intelligence and affective development in infancy support the following conclusions:

1. There is no firm evidence that a specific cognitive ability is a prerequisite which must be achieved by an infant before a specific behavioral indicator of affective development is manifested.

2. There is no evidence that a particular stage of cognitive development always corresponds to a specific stage of emotional development. There is a general trend for certain cognitive stages to be present when certain affective stages are being manifested, but this may simply reflect general maturation and not a more specific relationship.

3. The quality and quantity of affective and social stimulation seems to influence the rate of cognitive development in infancy, but there is no evidence that it affects the nature of the structures formed.

4. The interaction between an affective stage and a cognitive stage may be manifested in the tendency for the characteristic interests associated with the affective periods to cause specific patterns of decalages. Preliminary evidence indicates that emotional factors may speed the attainment of a schema (as with the achievement of permanence of person before permanence of objects) or show the attainment of a schema with an object (as with the transitional object).

5. The individual emotional reactions of an infant to an object may also influence the patterns of competencies manifested by a child on a cognitive task using different objects.

Longitudinal and Cross-Cultural Studies

For the purpose of this investigation, longitudinal studies have had one important result. These studies with infants have made it clear that development does not proceed as smoothly as cross-sectional studies seem to imply. Corman and Escalona (1969); Kopp, Sigman, and Parmelee (1974) and Kramer, Kennedy, and Cohen (1975) have all found that many infants at some point suffer a temporary cognitive "regression", in which they fail to score as highly as they did previously. To date, however, these studies have not investigated the probable causes of such fluctuations.

Cross-cultural studies were initially aimed at determining whether the stages of cognitive development were replicable and invariant in different cultures. A review by Dasen (1972) indicates that differences in the age of succession were found in various cultures. All of the stages were found in invariant order in each culture with the exception that the formal operational level was not universal. The percentage of people in a given culture who reach the formal level of intelligence varies, and seems to be higher in cultures which provide exposure to formal thinking and value its products.

Kohlberg (1966a) has produced evidence that some regressions from advanced levels of development can be induced by societal pressure and the concomitant affective forces. Among the Atayal tribe of Formosa, most adults believe in the reality of the dream which is conceived of as neither a thought nor a thing. Dreams are caused by ghosts, and during the dream, the soul is thought to leave the body and experience things in distant places. Atayal boys develop through the same stages as American boys in the development of the dream concept, though more slowly, despite the absence of adult confirmation of this learning. After the age of eleven, however, as they enter adult society, the Atayal boys evidence a "regression" to concepts held by the younger preoperational children, presumably as a result of the specific training of their culture. It seems that this "regression" was not merely passive learning; the boys seemed to actively believe the adult teachings and

struggled with the implications they had for the rest of their beliefs. One indication of this struggle was the boys' cognitive regression in the unrelated area of conservation. Although the boys had previously mastered the task, they now returned to a transitional level. Kohlberg felt that they seemed aware of the correct answer, but doubted their convictions sufficiently that they were unable to respond appropriately. Kahana (1970) found a similar regression in the level of dream concept formation among the Hasidic Jews of New York. He noted that the regression extended to areas of belief about the dream which were not in conflict with cultural beliefs. The culture believes that dreams are sent by God to serve a particular end, and that the individual can play a role in the origin of the dream since nightly prayers are aimed at counteracting bad dreams. The boys in this culture, however, not only adopt these beliefs from adults, but also question the interiority and immateriality of the dream.

Longitudinal and cross-cultural studies have thus supported the following conclusions:

1. Fluctuations and "temporary regressions" in cognitive functioning seem to be a part of the normal course of development, at least on the sensory-motor level of cognition.

2. Even after a concept has been attained, a regression can be induced if the spontaneous beliefs of the child come in conflict with those of society. Such regressions seem to effect the child's overall cognitive

equilibrium. Other cognitive achievements are also questioned and may be performed at a lower level than previously.

3. The dream concept, as an area of cultural beliefs and strong emotional reactions, is susceptible to cognitive regression.

Studies of the Cognition of Individuals with Pathological Personality Structures

Anthony (1956) wrote the original paper applying Piagetian concepts to cognitive tendencies in children with pathological personality structures. In it, Anthony adopted Piaget's view that emotional difficulties could influence the rate of the acquisition of cognitive abilities but not their structure.

Since that time such delays have been anecdotally verified by Bettelheim (1967), Zelan (1970), and others in their accounts of severely disturbed children and their cognitive and emotional development. Early experimental investigations were aimed at systematically documenting these delays. Anthony (1958) has shown that psychotic children are delayed in the development of object permanence. Linden (1969) has shown that Piagetian tasks are passed at markedly lower levels by schizophrenic children. Rappaport (1944a, 1944b) showed that they scored poorly on tests of conceptual thinking and sorting which were similar to Piaget's tests. In addition, he noted an unusual degree of rigidity, inertia, and the use of excuses in their responses. These tendencies were so marked that he considered them to be diagnostic in-

dicators of emotional disturbance. Zelan (in preparation) experimentally verified the connection between the disturbed child's emotional conflicts and his cognitive performance. She gave a number of Piagetian tasks to youngsters before and after therapy. As the children's emotional conflicts were resolved, they showed unusually rapid cognitive development. From severely delayed performances initially, most of the children advanced to almost an age appropriate cognitive level by the time of termination of therapy.

Gilbert Voyat (1979a, 1979b) and his students have been actively studying the cognition of psychotic children since 1970. They have been examining:

1. The children's ability to perform a series of Piagetian tasks which are hierarchically related to one another - 1:1 correspondence, conservation of matter, seriation, and classification - forming a horizontal decalage normally achieved over the age span of 5 to 9 years.

2. The children's ability to perform the same cognitive task - 1:1 correspondence - with materials of varying emotional significance to the child (McLaughlin, 1976).

3. The types of justifications for their answers given by psychotic children as compared to normal children (Shackleford, 1976).

4. The sensory-motor, cognitive, and emotional progress of psychotic children attending a special therapeutic school with programming which utilizes a psychoanalytic and Piagetian approach.

One major result of these studies has been the finding that psychotic children manifest different types of decalages from normal children, and that the specific pattern of decalages found with a psychotic child depends on the nature of his emotional conflicts. The range in patterns of decalages can be indicated by comparing the two extremes. Some psychotic children function best with abstractions: when materials become more personalized, the child's individual associations and fantasies interfere with his cognitive performance. This type of child may manifest a vertical decalage spanning several different cognitive stages, performing abstract tasks well at an early formal level and being unable to perform tasks with materials related to his individual fantasies at a level beyond that achieved by a preoperational child. Such children have also shown variable performances on the same task, depending on whether or not the materials are related to their specific areas of conflict. One boy, for example, whose Rorschach contained a reference to a gorilla (card IV) was unable to perform 1:1 correspondence when the materials included gorillas although he had been able to perform it with more emotionally neutral materials.

Psychotic children at the other end of the spectrum perform well only when the materials <u>do</u> relate to them directly. When the task permits them to use themselves as an egocentric referent, or permits the experimenter to provide massive validation of their work they are able to achieve the task. One such child, who manifested a symbiotic psychosis

as described by Mahler (1968), was unable to perform the conservation of matter task when the experimenter rolled the clay into a sausage, and gave the preoperational answer that the sausage was more. When she herself rolled the clay into a sausage, she was able to state the equivalence of the ball and sausage, citing the transformation as the reason. Thus she was able to perform at an operational level of intelligence only when she was able to use her own action as a referent.

A second observation of the psychotic children's responses was that they did not display the sense that there was a logical necessity for their operational answers to be correct. The sense of logical conviction in their answers is one of the distinguishing features of concrete operational intelligence, and yet it was rarely cited in the protocols of the psychotic children. With conservation of matter, for example, a normal child at the operational level of intelligence will state that there is the same amount of clay when the ball is rolled into a sausage and justify it using negation ("You could put it back to where it was."), compensation ("It's longer now, but thinner, too. It's the same."), or identity ("You added nothing and took nothing away."). The psychotic child, however, is rarely able to use such cues from the transformation: instead he focuses upon the change. Consequently the justifications given by psychotic children fall into the following groups:

1. Statements of their intelligence ("Because I'm smart").

2. Indications that they thought the examiner was trying to trick them ("You cheated")

3. Concrete justifications in which the child confused the metaphor with the real task. (For example, with 1:1 correspondence: "How do you know?", "Even though they fought the elephants would win.", "Why?", "Cause they're stronger.").

4. Statements of the child's emotional response to the task. Thus the responses of these children are egocentric, and their egocentrism has a more emotional, and at times defensive, quality than the egocentrism of normal preoperational children.

A third characteristic of the protocols of psychotic children is the lack of vacillation in their thinking. These children find an answer and rigidly maintain it; they do not "play" with alternative possibilities. Similarly, they rarely display learning either within a task or between tasks. They tend not to generalize from one situation to another.

These observations lead to several interesting conclusions. the lack of a sense of the necessity for reversibility among psychotic children implies that the states before and after the transformation are cognitively isolated from each other; the child cannot mentally compare the two and does not see them as necessarily related. To the degree that

the psychotic child cannot perform conservation or use reversibility, this implies a weakened sense of identity. The inherent nature of objects, either qualitatively or quantitatively, comes into question for these children where it would not for most children.[6] The lack of a sense of the necessity for reversibility thus relates to what is often considered the core conflict in psychosis, the question of the precariousness of identity.[7] Confirmation for this interpretation seems to be found in the children's consequent need to justify their answers in an emotional, defensive manner and to refuse to consider alternate possibilities.

It is also important to note that the lack of reversibility, learning and generalization implies that the schema of psychotic children do not function in inter-related groupings or groups. The existence of psychotic children who do function at advanced, early formal levels of intelligence and simultaneously at a preoperational level, depending upon the task, raises the question of how the children were able to form such advanced structures. If the process of reversibility is innately related to the attainment of equilibrium at the concrete operational level, then how is the child capable of forming advanced,

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6) Some psychotic or schizophrenic children confuse quantity with degree of goodness, thus making lack of conservation extremely threatening to them.

7) It is interesting to note that Anthony's (1958) finding that psychotic children have a lower performance on object constancy implies that the constancy of other people and objects is questioned as well as their own identity.

equilibrated structures while the process of reversibility functions in such an impaired manner? Does the child use reversibility to form the capacity for concrete and formal operations and then suffer selective regressions? Is the child simply unmotivated? Or is some other mechanism at work in the formation of cognitive structures in psychotic children? These questions continue to be investigated, and are, in part, the focus of the present longitudinal studies of the development of psychotic children being made by Voyat's group.

One additional study with emotionally disturbed children is important since it relates directly to the formation of the dream concept. Evans (1973) has shown that psychotic and borderline children fail to form an age-adequate concept of dreaming in contrast with a control group of children hospitalized for acting-out disturbances. The failure to develop an age-appropriate level of conceptualization was particularly evident in the children's concepts of the origin and location of the dream. Evans speculated that this was related to their deficient ability to reality test. This deficiency could also be considered primarily a manifestation of inadequate self-boundaries (and the resultant difficulty in differentiating internal and external phenomena) rather than a more general deficiency in reality testing.

For the purpose of this investigation, the study of the cognition of individuals with pathological personality structures has resulted in support for three conclusions:

1. The mode in which a child interacts with a task or the specific affective significance of the materials can produce an affectively based decalage in the child's ability to perform a task.

2. The affective conflicts and affectively-based premises of an individual can affect the particular decalages found in his development.

3. The course of the formation of the dream concept is susceptible to the influence of emotional factors.

Studies of the Formation of
Stable Patterns of Experience

Escalona (1959, 1963, 1968) has proposed a new model of research for the study of behaviors involving affective, constitutional and environmental factors. She (1963) adopts the method of detailed observations of infants derived from Piaget and seeks to use it to investigate the development of aspects of behavior relevant to ego psychology as described by Hartman. Escalona hypothesizes that it is not purely the constitutional factors nor the environmental factors which are responsible for the development of cognitive styles and personality traits. Therefore research which seeks to correlate a constitutional or environmental factor directly with an outcome variable is, in her opinion, not allowing for the complexity of human development. Instead, Escalona hypothesizes that constitutional factors combine with environmental factors to produce "stable patterns of experience." These stable patterns of experience are then taken as the basis for prediction of later behavior and personality tendencies. This multi-factorial approach implies, for example, that a relatively inactive child with an optimally stimulating mother may have approximately the same number of periods of optimal activity as an active baby with a relatively unstimulating mother. As Escalona herself is keenly aware, the success of this model depends upon the correct choice of: 1) the categories of observation of the child and environment which constitutes the data for the derivation of the patterns; 2) the specific

experience patterns investigated; and 3) relevant outcome measures with suitable instruments of assessment. Escalona has thus far conducted an initial set of studies developing this method.

Escalona's research can be considered as the beginning stages of an attempt to form an integrated theory of affect and cognition which is based upon direct and detailed observations of children's development. As this approach is further developed, it is hoped that it would lead to the specification of internal mechanisms and processes linking the stages of observation, the stable patterns of experience, and the predicted behaviors.

In the meantime, there are a growing number of studies involving the detailed observation of infants and young children which are providing a fund of information to be integrated into such a theory. These studies are empirically based and are not specifically derived from either the Piagetian or the neo-Freudian perspective. Since they do not have any direct implications for the present study, only a few of them will be mentioned. Binet (Voyat, 1976) studied infant intelligence by examining the proficiencies of young children. The tasks he selected for his "intelligence test" demanded both cognitive and affective competency in the children. In one portion of the test, for example, children are shown a picture of two women and asked to indicate which is prettier. Uzgiris and Hunt (1975) have developed empirical scales of infant behavior modeled after Piaget's observations. They include scales which assess object permanence, exploration of objects and

social interaction. Brazzelton initially studied neonatal differences, documenting the presence of constitutional variations within the first few days of birth. Since then, his research group has been studying social interaction patterns of the infant with his mother, father, and strangers. They have systematically investigated the rhythmic patterns of and non-verbal communication between the partners in the interaction. Amsterdam (1972) and Bertenthal and Fisher (1978) have been studying the development of self-recognition, one of the components of a self-concept. Thus the infant has begun to be a subject of intensive study, with investigations focusing not just on his perceptual abilities but also on complex behavior patterns relating to both cognitive and affective development.

Summary of Implications for this Study

This review of the literature has focused on studies of the interaction of affect and cognition which integrate the Piagetian and neo-Freudian perspectives. It has resulted in several conclusions relevant to the proposed study:

1. Emotional conflict can produce affectively based decalages in individual with pathological personality structures. The decalages can depend upon the emotional meaning of the materials to the individual and also upon the mode of interaction with materials.

2. Fluctuations in the level of cognitive functioning are a normal part of cognitive development.

3. Initial evidence indicates that decalages due to affectively based interest patterns may appear in normal development. These decalages may be the result of interests associated with a general affective stage, or may be the result of more specific affective characteristics of an individual. They may be most evident when the development of a schema still being formed is investigated.

4. Experimental results may be interpreted as indicating that affective factors may accelerate the formation of a cognitive schema (as in the development of permanence of person before permanence of objects) or slow cognitive development of a schema (as in the development of object permanence with the transitional object).

5. The development of the dream concept is susceptible to affective influences. The development of the dream concept is delayed in psychotic and borderline children. Once formed, cognitive regression can occur when the subjective nature of the dream is in conflict with societal beliefs.

These conclusions raise the possibility that the course of development of the dream concept may be susceptible to the influence of emotional conflicts in normal children. This study will seek to investigate whether a specific decalage exists in the development of the dream concept for the good dream and the bad dream. First, however, the role of the dream as an interface between affect and cognition will be examined.

The Role of the Dream as an Interface Between Affect and Cognition

The dream has been studied from many different perspectives, each investigating a separate, distinct aspect of the phenomenon. These aspects have included: the physical function of the dream; the psychological function of the dream; the origin/meaning of the dream's content and symbolism; and the cognitive conception of the dream. This study is primarily concerned with examining the developmental course of the conception of the dream, for the purpose of investigating to see whether the affect associated with the dream effects this process. This review will focus upon the development of the dream concept.

Several other aspects of the literature on the dream will be briefly mentioned, however, to provide support for assumptions underlying the proposed study. These assumptions are: 1) that the dream is a universal experience in childhood; 2) that negative affect is associated with "bad" dreams and that such dreams are a fairly common experience in childhood; and 3) that the content of some dreams may relate to issues of ambivalence and/or self-esteem. These assumptions will be supported by briefly considering studies on the frequency of dreams in childhood, the content of children's dreams, and Piaget's theory of the origin of symbols in dreams.

1) The Development of a Concept of the Dream

The first systematic investigation of children's thoughts on the dream was made by Piaget in The Child's Conception of the World (1929), as part of a larger study on types of causality in childhood thinking. Piaget established guidelines for interviewing children on the nature of their dreams, carefully minimizing the possibility of suggestion due to the questioning process. He established a succession of three stages in the development of the dream concept. In the first stage, the dream is seen as coming from outside the dreamer and remaining external. In the second stage, Piaget reported that the child felt that the dream originated within himself but took place outside his body. In the third stage, the dream had an internal origin and location. Since this initial determination of conceptual stages, Laurendeau and Pinard (1962) have developed a more systematic method of classifying children according to their level of conceptualization. This system will be reviewed later.

Piaget's initial study emphasized the importance of social and emotional factors in the development of three aspects of the child's conception of the dream. The first area in which social influence was considered relevant was in helping the child learn that the dream was not real. Piaget quotes a study by Mlle. Feigin indicating that other people's opinion that the dream was imaginary was the first factor causing the child to question the dream's reality. One of Piaget's informants, for example, remembered having believed that when he slept he was in another world. Piaget states:

> This belief in the land of dreams disappeared all at once when he first went to school and mixed with other boys. Indeed, he remembers having wondered whether his school-fellows also went to the land of dreams, and having decided it could not be so, his own conviction suffered definitely. (1976, p.105)

The second area in which social concepts seemed to have influenced the children's ideas was in their view of the dream as a purposive event rather than an accidental or random event. Piaget reported that many children assumed dreams were sent to punish them, possibly as a result of associating the negative affect of some dreams with their emotional state when they were punished.

The third way in which Piaget felt that emotional and social factors contributed to the child's conception of the dream, was in strengthening the child's belief in participation. This participation took two forms. One form of participation was the tendency of the youngest children to believe that the dream actually took place at the location of the persons or objects being dreamt about, as if the image resided in those objects. As they became more sophisticated:

> Children place the dream beside them because they are at the same time too advanced to believe any longer in the reality of the dream but also not yet advanced enough to regard images as subjective and internal representations. (Piaget, 1976, p. 97)

At this point in cognitive development, Piaget felt that a second form of participation arose. This was the tendency of children who believe that the dream image is localized in the room near them

to consider the image and the object being dreamt about as linked through participation. As Piaget interpreted the meaning of the children's interviews:

> The immediate source of this image is regarded as in the person...since the emotional and moral aspect of the dream makes the child regard the image as pursuing him not by chance but in order to punish him. (1976, p. 103)

and:

> For him the illusion consists in our being deceived by material images, which exist objectively in front of us, but which we take not for images but for persons. He does not doubt the existence of those external images....For us there is no participation between the image and the person being presented, since the image is nothing but an internal representation, but for a realist mind which regards the image as in the room, the image retains something of the person. (1976, p. 112 and p. 113)

Both of these forms of participation have been questioned by Laurendeau and Pinard (1962). They consider Piaget's interpretations to be based upon "pseudo-confusions" in the interviews. Laurendeau and Pinard claim that confusion between the scene of the action of the dream and the location of the dream accounts for the first type of participation, while the child's inability to clearly state that the memory of a previous event "causes" the dream accounts for the second type of participation. Even if these forms of participation do not exist, it is clear that social and emotional factors are relevant in the child's conception of the reality and purpose of dreaming.

As can be seen from this brief exposition, Piaget considers development a continuous process. He cites numerous protocols of children transitional between the stages. He considers their initial susceptibility to the misconceptions characteristic of younger children, and their explanations as they abandon these ideas, to be a valuable source of support for his interpretations of the meaning of statements made by children at the earlier stages of development.

Laurendeau and Pinard (1962) systematized Piaget's work on the child's conception of the dream. They used the semi-structured interviews of 500 Canadian school children, ages 4 to 12 as a basis for developing a more comprehensive and inclusive classification system. This system will be reviewed more thoroughly in the Methods Section and in the Scoring Manual (Appendix C), but the broad outlines of the stages will be given here.

Like Piaget, Laurendeau and Pinard found that children in Stage 1 considered the dream to be of external origin and location. This was the stage of integral realism. In Piaget's Stage 2, the stage of mitigated realism, the child considers the dream to have some subjective elements and some of the elements of a real event. Laurendeau and Pinard have expanded and divided this stage into three substages. In Substage 2A, the child only briefly considers the dream to have an internal origin or location and then quickly abandons or denies this possibility. In Substage 2B, there is a steady balance of external, realistic elements

and internal, subjective elements in the child's conception of the dream. The tendency reported by Piaget for children to consider the dream to have an internal origin but take place external to their bodies was found by Laurendeau and Pinard to be only one of several conceptional patterns found in children belonging to Stage 2B. Some children, for example, believed that the dream came from the outside but took place inside their bodies, while others believed that it was both places simultaneously. In Substage 2C the child considers the dream to have an internal origin and location, but ascribes a residual materiality to the dream. Before this stage, Larurendeau and Pinard felt that all children consider the dream to be a material phenomenon even though they might know that it is invisible to others. In Stage 3, the child considers the dream to have an internal origin, internal location, and immaterial nature. If any traces of precausal thinking exist, such as artificialism, finalism, or moralism, the child is classified as belonging to Substage 3A. When there are no longer any residual elements of precausal thinking, the child is classified in Substage 3B and has reached the mature conception of the dream.

The semi-standardized interview procedure adopted by Laurendeau and Pinard was used with preschool children but was only moderately successful. Over half of the one hundred 4 to 5 year old children interviewed by Laurendeau and Pinard (1962) were considered to have no comprehension of what a dream was, or reacted with such intense emotion to the topic that the interview could not be continued. These children were classified

as belonging to Stage 0. A substantial number of children belonged to this group through age 6. By age 5, however, Laurendeau and Pinard found that eight out of 50 children had internalized the dream, reaching Stage 2C or above. Thus a preschool sample of children should contain children who consider the dream to be external, children who consider it to be internal, and those who consider it to have both internal and external aspects.

Foulkes (1969, p.633) reports having used Laurendeau and Pinard's interview technique with 4 to 6 year old subjects but did not report the specific questions or procedure used. He found that only one of three Stage 1 children reported dreams when wakened from the stage of sleep usually associated with dreaming, and considered that child a confabulator. Seven of nine children with more advanced concepts gave dream reports. Foulkes thought that attainment of the level of mitigated realism might be a necessary prerequisite for laboratory dream recall.

Kohlberg (1966, 1968) further detailed the process of conceptual development of the dream. He confirmed the previous findings that the child first learns that the dream is unreal, then that it is internal, and finally that it is immaterial. He states the logic requiring this order:

> It is apparent that the differentiation of the immaterial from the material presupposes the inside-outside distinction, since all immaterial events are inside the body (but not vice versa). It is also apparent that internality (location of the dream experience inside the body) presupposes unreality (recognition that the dream is not a real object), since a real object could hardly be inside

> the body. The observed sequence, then, is one which corresponds to an inner logic of the concept of reality itself. (1968, p.1027)

Kohlberg also claimed that a more detailed sequence of development could be established. Seventy-two of the 100 children in his sample (ages 4 to 8) conformed to a Guttman Scalogram supporting the following order of conceptual development: 1) recognition that the objects or actions in the dream are not real or are not really there in the room (average age of children at this level was 4 years, 6 months); 2) recognition that other people cannot see his dream (age 4,10); 3) recognition that the dream comes from inside him (age 5,0); 4) recognition that the dream goes on inside him (age 5,4); 5) recognition that the dream is not a material substance but is a thought (age 6,4); 6) recognition that dreams are not caused by God or other agencies but are caused by the self's thought processes (age 7,10). Kohlberg thus supports Piaget's initial finding that most children consider the dream first to have an internal origin and then an internal location.

Piaget, Laurendeau and Pinard, and Kohlberg have thus established the developmental course of dream concept development. The clinical interview has been used with some success with preschool children although it has never been specifically adapted for use with that population. Dream concept interviews have also been used in cross-cultural studies (Kohlberg, 1968; Kahana, 1970) and in the study of the cognition of psychotic and borderline children (Evans, 1973) as has been previously reviewed.

Studies on Dream Content and Frequency of Dreams. Kleitman (1960) reports that the recent development of techniques for monitoring brain-waves and the resulting surge in dream research has determined that everyone dreams. All subjects display the periods of rapid-eye-movement (REM) sleep associated with dream reports, whether or not the subjects are able to recall dreams upon being awakened. Kleitman felt that "dreamers" and "nondreamers" could more accurately be called "recallers" and "nonrecallers." Ramsey (1953) found that a review of the literature indicated that approximately 5 to 15% of school age children could not recall dreaming when questioned on the subject.

Foster and Anderson (1936) investigated the frequency of unpleasant dreams in 519 children, ages 1 to 12. The parents of the children kept records for a week of instances of: 1) the child crying or moaning in his sleep during the night; 2) the child coming to an adult during the night in fear; and 3) the number of children reporting to have had a bad dream during the night when asked by their parents in the morning. On the basis of this data the authors reported that 35% of all the children and 43% of children under 5 had at least one bad dream during the week. Similarly, Ames (1964) reports that nearly half of her 5 year old subjects were troubled with nightmares. At times the severity of the nightmares frightened not only the children but their parents as well. Dreams in general, and bad dreams in particular, thus seem to be a common experience in early childhood.

Content of the dream. Freud (1958) stated that the dream was essentially a form of wish-fulfillment and that the dreams of young children were prime examples of this principle. Unfortunately this hypothesis is not readily accessible to proof or disproof, for according to Freud's own statements:

> In cases where the wishfulfillment is unrecognizable, where it has been disguised, there must have existed some inclination to put up a defense against the wish; and owing to this defense the wish was unable to express itself except in distorted shape. (p. 175)

and again:

> The non-fulfillment of one wish meant the fulfillment of anotner. (p. 184)

Thus the inability to specify the wish underlying a dream may always be attributed in Freud's framework to a lack of sufficient associations or a lack of insight. Furthermore, as Piaget (1962) states:

> We fail to see why desires should not be found in everything, and even if a nightmare were the result of the involuntary reappearance of anxieties, these anxieties would obviously be accompanied by the desire for liquidation of them. (p. 180)

Ramsey (1953) reports that many investigators have been more impressed by the continuity of dream contents with everyday life, than with wish-fulfillment in dreams. This continuity of dreams with everyday life does not imply that dreams are totally faithful recreations of

actual events. As Foster and Anderson (1936) state:

> Although the dream is occasionally an approximate repetition of an experience of the previous day, usually one character or event is taken from the day's experience and appears in the dream in a different setting or with an altered character. A dog who was friendly when seen in the afternoon may become an angry dog in the dream. (p. 81)

Many studies have been made classifying the contents of the dream as to subject matter (Blanchard, 1926, Jersild, et al, 1933, Witty and Kopel, 1939) which tend to support the continuity of spontaneously reported dreams with the child's daytime experience. Dreams collected from REM period awakenings (Foulkes, et al, 1967a, Foulkes, 1969), when categorized according to subject matter, also support the notion that children's dreams are not bizarre but tend to relate to everyday experiences.

This does not mean, however, that children's dreams do not deal with intrapsychic conflicts from their waking life. Ames (1964) reported that fears from waking life were often represented in dreams approximately a year after they appeared during the day. Freud (1958) and Offenkrantz and Rechtschaffen (1963) have pointed out that sequences of dreams from a single night often give a clearer indication of the underlying conflicts than the manifest content of a single dream. Using this strategy, Foulkes (1967b) investigated series of dreams from four boys (ages 8-12) who had been included in the R.E.M. categorization study. Thematic analysis of the dream series supported the statement that:

> The results of the present study do not rule out the possibility that the dreams of pre-adolescent boys are also fulfillments of dynamically unconscious, earlier, pregenital wishes.....It is apparent, however, that the dreams of the pre-adolescent may also profitably be viewed in terms of attempts at anticipating and mastering contemporary problems which arise in the social world. In this respect, there appears to be a considerable continuity between the child's play and his dreams both as to content and as to function. (p. 97)

The problem-solving nature of dreams has also been receiving increasing attention from theorists attempting to expand upon Freud's theory of dream development in order to include some of the more recent findings (French, 1954; Jones, 1962). Foulkes noted that the younger boys were especially concerned with skill, achievement and production in the world of things as well as male competency. The oldest boy was becoming less concerned with stereotyped male activities and more involved in a heterosexual and genital view of masculinity. It thus seems plausible that some of the dreams of preschool children could deal with: 1) the mastery of bodily processes, of aggressive impulses, and of the negative self opinion generated by loss of self control; and 2) the maintenance of self-esteem despite periodic transgressions of prohibitions. Preschool children naturally employ the defense mechanism of splitting of the "good" and the "bad" self-representations and projection of blame upon the outside world to deal with such situations (A. Freud, 1937/1966, p. 123). The same phenomenon of splitting and projection has often been linked to the "monster" dreams common in four and five year old children (Klein, 1932/1975; Mack, 1970).

Piaget's Conception of Symbol Formation in the Dream

Piaget's theory of cognition assumes that assimilation and accommodation simultaneously operate in the functioning of schema. In the formation of a dream, however, external stimuli are at a minimum, resulting in the predominance of assimilation over accommodation and the absence of equilibration with everyday reality. Piaget reasons that:

> When this equilibrium is not achieved, assimilation of present to past continues to be a vital necessity, and it is this primacy of assimilation over accommodation which is expressed by unconscious symbolism, in complete continuity with conscious symbolism. (1962, p. 206)

Piaget goes on to state that the lack of external reality influences in the formation of dreams means that the ailment of dreams tends to be the individual's personal reactions, leading to a predominance of affective schema in the symbolism of dreams. Intellectual schema do at times appear, however, and since all affective schema contain cognitive components the effect of cognition is never entirely absent from dreams. Based on these foundations, Piaget argues that there is no necessity to hypothesize the presence of a censorship operating between consciousness and the unconscious. He sees the unconscious origin of the symbols in dreams as a normal part of the process of assimilation, and condensation and displacement as the result of the attempt to symbolically represent similarities in the visual mode. While discussing condensation, Piaget further explains:

> condensation, like generalization, involves giving a common meaning to a number of distinct objects, thus making it possible to give expression to a nest of affective schemas assimilating to one another various situations which are often widely separated in time. (1962, p. 210)

Piaget thus raises the possibility that dreams dealing with the presence of "good" and "bad" elements may also on some level re-awaken the struggles with ambivalence which characterize the development of libidinal object constancy.

Summary. Piaget concieves of the nesting of affective schema in the formation of dream symbolization. One may also speculate that the presence of common elements in affective and cognitive schema increases their tendency to become associated. Some support for this was found in the review of the literature of studies of cognition with psychotic children. There it was found that the nature of the decalages were related to the emotional conflicts of the child. If it is true that content and structural similarities tend to favor the mutual assimilation of schema, then the process of the interiorization of the dream may become associated with the affective schema of splitting and projection for two reasons. First, there is a structural similarity between the task required for the resolution of ambivalence and the development of the mature dream concept: a nagatively-toned emotional experience must be internalized. Second, if the contents of the dream deal with everyday conflicts involving ambivalence, self-esteem, or the projection of reputiated impulses, then the concept of the "dream" has become

associated with a nest of affective schema which involve the mechanism of splitting and projection. It should be noted, however, that since the dream is initially considered external, the child may achieve the goal of "splitting and projection" by splitting the experience of the good dream from the experience of the bad dream and selectively internalizing the good dream.

Hypotheses:

This study has adopted a Piagetian and neo-Freudian ego psychological viewpoint to study the interaction of affect and cognition. It seeks to show that the affect associated with the dream effects the detailed process of the formation of the dream concept. The specific hypotheses of this study are:

1. Preschool children can tolerate the anxiety associated with being interviewed on the dream concept if the interview is specifically adapted to that age-group. The resulting protocols can be reliably assigned to a stage of dream development.

2. That the "good" dream is associated with positive emotions and the "bad" dream is associated with negative emotions in the preschool child.

3. Children who have not yet achieved the mature concept of the dream (the stage of integral subjectivism, Stage 3AB) experience the good dream as different from the bad dream. This "split" will be manifested in preoperational children by a tendency to perceive the good dream and the bad dream as having different origins or locations.

4. Some children who consider the dream to have both internal and external elements will have a tendency to internalize the good dream while continuing to consider the bad dream as external to themselves. This may be only a transitory phenomena and may therefore not be characteristic of all the children in the transitional stage (Stages 2A and 2B).

CHAPTER II

EXPERIMENTAL METHOD

Subjects

The subjects of this study were 41 children 3 to 6 years of age. Thirty-eight of the children were 3 to 5 years old with a mean age of 4 years, 1 month. An additional three children ranged in age from 6 years, 0 months to 6 years, 2 months with a mean age of 6 years, 1 month. The thirty eight younger children attended a suburban nursery school while the three older children attended a daycare center. All of the children were considered by their teachers to be of at least normal intelligence and verbal ability. All of them were also considered to be free of any serious emotional problems. The nursery school selected for the study drew its children from middle to upperclass neighborhoods in which the parents tended to be white-collar workers, businessmen or professionals. The three children from the daycare center were selected to be of similar socio-economic background as the nursery school children.

The children included in the study were willing to be interviewed when approached by the examiner or a teacher. The subjects were classified according to their level of conceptualization of dreams on the basis of their interview, and as the study proceeded, children were further selected according to their likelihood of falling within the

needed classification. For example, if children with developmentally earlier levels of dream concept development were needed, younger children were selected to be subjects, following the age of accession guidelines determined by Laurendeau and Pinard (1962). The six year old children were included in an attempt to obtain a larger group of children in dream concept Stage 3AB. Subjects were interviewed until at least nine children had been classified into each of the three developmental levels under investigation. These developmental levels were distinguished by whether the children believed the dream to have: a) an external origin and location (Stage 1); b) a transitional nature, with both external and internal aspects of origin and location (Stages 2A and 2B); c) an internal origin and location (Stages 2C and 3AB).

Materials

Tape Recorder

In order to allow the examiner to interact freely with the children, and to ensure a verbatim record of the interviews (including voice-tone), all of the experimental interviews were recorded. A battery-operated tape recorder with a hand-held microphone was used. The microphone was either held by the child or placed on the floor near him.

Drawings

Two cartoon-like drawings were used, one of a boy, one of a girl, showing a child sleeping in bed. The drawings were 8½"x11", in black and white. The children in the drawings had closed eyes, slightly upturned mouths and the covers tucked under their chins. A part of the floor appeared in front of the bed and on the far right-hand side of the picture there was a window partially covered by curtains. (See Appendix A for copies of the cartoons.) The subjects were shown the cartoon portraying the child of their own sex.

Procedure

Pre-Interview

The nursery school and daycare center were initially approached through personal contacts, and the purpose of the study was explained to the director and interested teachers. After permission for the study was obtained, the examiner visited each class for a morning to allow the children to become informally acquainted with her and to become familiar with the classroom schedule. The teachers were requested not to make any formal introduction, but to explain to children who asked, that the examiner was a visitor who would be talking with some of them later. The casual interest of the examiner in their activities, her participation in the classroom schedule (going out to the playground, etc.) and the friendly interaction she had with the teachers seemed to help the children accept her presence with little apprehension.

The children selected to be interviewed were generally approached during a lull in their activities and asked if they would answer a few questions for the examiner. They were promised a chance to hear themselves on the tape recorder. If they asked, they were told that the examiner was writing a paper for school about what children thought about dreams, and that she would like to know what they thought. Only a few of the children needed the encouragement of their teachers, and many children began to volunteer for the project after their friends had participated.

The children were taken to the hallway around the corner from their classroom. They sat on the floor with the examiner. A few children were interviewed on the playground. The child was asked to hold the microphone, and the purpose of the tape recorder was explained. When other children approached during the interview, it was temporarily interrupted as the subjects in pilot studies had become very guarded in the presence of other children. Casual conversation unrelated to the interview was permitted and briefly participated in by the examiner, in order to maintain the interest of the children in the proceedings.

The examiner was a graduate student in clinical psychology who had been working with children, including pre-schoolers, for several years. In preparation for the research, she had familiarized herself with the relevant literature and had interviewed approximately twenty-five children in pilot studies.

Interview

The interview consisted of four parts: the request for a description of a dream; a clinical interview to determine the stage of dream concept development and degree of interiorization; a questionnaire designed to examine the connotative differences between good dream and bad dreams; and a concrete localization task. These will be described in the order in which they were presented to the subjects.

1. Dream Description

General orientation. The first part of the interview began with several general questions about dreams, designed to lead the child into the description of a specific dream. The child was asked: "Do you know what a dream is?", and "Did you ever have one?". If the child replied "no" to these questions he was encouraged by the examiner stating in a gentle, joking manner that everyone had dreams, and the child probably did too. If the child still maintained that he had no knowledge of what a dream was, the child was not included in the experimental sample. Two children were excluded from the sample at this point in the interview. They were aged 38 and 52 months.

Dream content. The child was then asked to tell about a specific dream he had had. This question served to help determine whether the child had any comprehension of what a dream was. If the child stated that he didn't want to tell a dream, or that he couldn't remember his dreams, the examiner went on to the clinical interview and asked the child at

the end of the entire interview if he had remembered a dream. If at that point no dream was obtained, the child was still included in the sample, but with no dream content. From the sample of 41 children, 8 did not produce the content of a dream.

Once the child began to tell a dream, he was encouraged to give as full a report of the dream as possible. Several specific comments proved to be especially useful in this regard, and were almost universally used, since children at this age tended to stop their spontaneous narrative after a few sentences. During a pause in the account, a repetition of the last phrase often stimulated the child to continue. If this was ineffective, the child was asked "and then?". When it seemed that the child might have reached the end of the dream sequence he was asked: "Is that it (the whole dream), or is there more?". This inquiry led the child to complete the dream if it was unfinished, or served as a transition to the next portion of the interview.

Inquiry. This portion of the interview sought to establish the child's view of the dream he had recounted. The child was asked: "Was that a good dream or a bad dream?", and "Why was it a good/bad dream?". If a supernatural being was involved, the child was specifically asked "What did you think of the monster (or whatever type of being was mentioned)?". The child was asked how he felt in the dream if this was still in question, and questioned about any confusions in the main story-line of the dream. These questions were for the purpose of indicating the experimenter's interest in the child's experience.

2. Dream Conceptualization Interview

This portion of the interview was designed to determine the stage of development of the child's conception of a dream, and to investigate whether the child conceived of a good dream and a bad dream as having the same location. The questions sought to determine the child's view of: the reality of the dream; the origin of the dream; the spatial location of dreams ("good" dreams and "bad" dreams); the visibility (internal or external) of dreams; and the immateriality of dreams. The format has been adapted from the work of Laurendeau and Pinard (1962) and Evens (1973) with the aim of making the questions as clear as possible for the preschool population. In addition, some topics were more briefly investigated so that the question of location could be examined in more detail without exceeding the attention span of the children.

This phase of the interview was begun by telling the child: "All right. You did quite a job of telling me your dream. Now I have some other questions for you." This statement served to maintain the interest of the child and establish a boundary between the discussion of the child's dream and the questions used to determine the level of dream conceptualization. The exact wording used and some of the questions asked varied from child to child, although the order of the topics covered remained constant. Scoring criteria are given later.

Reality. The child was asked: "When you have your dream, is it real or is it make-believe?".

Origin. The child was asked some of the following questions: "Where do dreams come from?", "Who sends dreams?", "Is it you or somebody else?", "Who makes a dream up?". Pilot studies indicated that children in this age group often responded "I don't know" to questions on the origin of dreams. This topic was not belabored, as the pilot study children had rarely verbalized an origin after an initial indication that the origin of the dream was unknown to them.

Location. The child was first asked about his location while he was dreaming and then about the location of the dream. This seemed to partially counteract the tendency to respond to this question as if it asked for the scene of the action of the dream, which Laurendeau and Pinard found to be a "pseudo-confusion" (1962, p. 123) existing at all levels of dream concept development and unrelated to the child's actual stage of concept formation.

The child was asked: "When you have your dreams, where are you?", then "And where is your dream (while you have it)?". If the child responded by talking about the scene of a specific dream, allowing him to recount the dream often enabled the child to respond appropriately later. If, on the other hand, the child responded to the initial questions by talking about the scene of the action in many different dreams, the pilot study indicated that it was best to proceed with the interview and return to these questions at the end of the interview. If the child responded "in my room" or "in me" he was asked to state a specific location.

The child was then questioned about the location of good and bad dreams. The child was asked: "If you have a good dream, a dream about playing, where is that dream?", and "If you have a bad dream, a dream about a monster, where is that dream?".

Visibility. This section was designed to determine: 1) whether the child thought that another person coming into the room could see his dream, since this would indicate a residual confusion between the internal and external nature of the dream (ibid, p. 119); and 2) whether, if the child thought the dream was internal, there was the possibility of others viewing it if they could look inside his body, since this would indicate a residual tendency to consider the dream as material.

The children were asked: "Let's pretend. Pretend it is nighttime and you are asleep in your bed. You have a dream. Now Mommy comes into the room. Does Mommy see your dream?". A child who thought his mother could not see the dream was asked "umhum, now, tell me the reason." If the child gave a concrete reason why his mother could not see his dream he was asked to pretend that the obstacle had been overcome, and then asked "Now can Mommy see your dream?". Children who thought the dream was external were also asked "What about me, could I see your dream?". This question was often considered to be a joke by the children and was omitted if the child was impatient at this point in the interview.

If the child had indicated that the dream was inside his body he

was asked "Now pretend that your mother could open your (location), and look inside. Just for pretend, she couldn't really, right? But pretend she can look inside. Now can she see your dream?". If the child gave a concrete reason why the dream could not be seen, he was again asked if his mother could see the dream if the objection could be overcome. For example, "What if your mother could open your head without hurting you, then could she see your dream?".

Materiality. This segment of the questionnaire was generally asked only if the child had reported that the dream was internal and invisible in the preceding sections, since it was primarily useful in determining whether the child had reached Stage 3AB,and since it had frustrated many children at earlier stages of development in the pilot studies. If this segment of the interview was to be given, the child was asked: "What is a dream made out of? Can you touch a dream?". These children were also questioned further on the origin of dreams, and asked: "Why do we dream?".

3. Connotation Questionnaire

This section of the interview consisted of a structured forced-choice questionnaire designed to determine what connotative factors differentiated a "good" dream from a "bad" dream. Since children at this age were unable to use the normal semantic differential test, in which a concept is rated on a seven point scale defined by polar opposite adjectives, the procedure was reversed and the child was given a number of choices of the type: "Which is stronger, a good dream or a bad dream?".

The adjectives defining the items on the questionnaire were selected to relate to one of the following dimensions: evaluation, potency, activity, emotional tone, and visual clarity. Adjectives were selected which represented both the positive and negative poles of each dimension. For example, "nice" and "pretty" represented the positive pole of evaluation while the negative pole was represented by "dirty" and "mean". Several pairs of clear opposites ("big", "little", "happy", " sad") were included to provide a measure of the internal consistency of the children. In addition, the adjectives used were words familiar to preschool children. Several phrases had to be included as "adjectives" for this reason, since the children did not understand the adjectives used by adults. The children were asked, for example: "Which one is far away from you?", since they did not understand the adjective "distant."

Appendix B includes a list of items used in the order given. This section of the study was introduced to the child as "something new to do," and the list was then begun: "Which is stronger, a good dream or a bad dream?". For most children, after four or five items it was possible to merely state "Which is _____er",omitting the phrase "a good dream or a bad dream." If the child responded "both" to a particular item, he was asked to state "Which is more _____, a good dream or a bad dream?" and his response to this request was considered to be his answer.

4. Concrete Localization Task

The last section of the interview consisted of two parts. First, the child was asked to mark the location of a good dream on a cartoon drawing of a child of his sex. He was then asked to mark the location of a bad dream on another copy of the cartoon. This was followed by a discussion of the drawing in those instances where: a) the mark on the drawing had a different location than the child had indicated in the preceding parts of the interview; or b) the preceding interview had been ambiguous about some aspect of the dream's location.

Marking of the drawings. The child was presented with a drawing of a child of the same sex (Appendix A) which was introduced as follows: "See this picture? It is a drawing of a child asleep in bed." He was then asked: "If he was having a good dream, like a dream of playing, can you show me where his dream would be?". He was then given another copy of the picture and asked to indicate the position of a "bad dream, like a dream of a monster." The examples given for the good and bad dreams were chosen to be ambiguous, in that either could give rise to a fantasized dream in which the action would be near or far from the figure of the child sleeping in bed.

Discussion. Marking of the drawings offered an opportunity to re-examine the children on location, and attempt to clarify any ambiguity as to the nature of the child's beliefs. In addition, pilot studies had shown that the pressure of the concrete materials, at times, contributed a perceptual pull for the child to externalize the dream. If a

child who had previously said that the dream was internal marked the dream as being external or at a different location in the figure of the child, this discrepancy was gently pointed out. He was told: "But wait a minute, I'm confused. Before, you told me a dream was inside, but now you put a mark outside, over here. Which way is it, or both?". The child was then given additional encouragement to explain what he meant, including repeating the discrepency by listing alternatives.

The interview was then closed by thanking the child, asking if he had any questions, and allowing him to listen to himself on the tape recorder.

Scoring

Dream Concept Level

A scoring manual for the determination of the level of dream concept development is presented in Appendix C. It has been developed from Laurendeau and Pinard (1962) for administration to preschool children. The manual contains a detailed description of typical responses to the questions for children in each stage, and special considerations in the evaluation of the protocols of children belonging to each stage. In addition, it contains a specific procedure to be followed in listening to the taped interviews and assigning each child to a stage of dream conceptualization. Each child was classified as belonging to one and only one stage of dream concept development. In addition, the scorer was allowed to indicate that the child was either moving into or out of a stage. This resulted in the development of a scale with 13 levels which will be called the Continuity Scale. The Continuity Scale consisted of levels containing children who were: 1) firmly in Stage 1; 2) beginning to move out of Stage 1; 3) moving into Stage 2A; 4) firmly in Stage 2A; 5) moving out of Stage 2A, etc.

A brief description of the stages is given below. They are characterized by the child's increasing awareness of the subjectivity of the dream, i.e., the child's increasing recognition that the dream is an internal phenomenon generated by the dreamer.

Stage 1: Integral Realism. The dream is viewed by children at this stage of development as a concrete, material event originating and taking place outside themselves. Often the dream is considered to be visible to others in the room and touchable, being made out of material objects. When a child in this stage believes that his dream is not visible or touchable, it is due to prohibitions or external factors of one sort or another which do not diminish the concrete realism of the dream. He might say, for example, that his dream came from the night and took place in the room near the window. Asked if he could touch his dream, he might reply "No, it is not allowed. When you touch it, there are prickles and they stick to your hands" (Laurendeau and Pinard, 1962, p. 110). No degree of subjectivity exists, although the "reality" of the dream may be seen as different from everyday reality:

> the dream is assimilated to that privileged universe of the child which contains, among other things, fairies and ghosts. The child knows that the dream is illusive; he does not confuse it with real objects and persons. But he nevertheless remains essentially realistic, since he does not yet recognize any subjective element. (Laurendeau and Pinard, 1962, p. 112).

Stage 2: Mitigated Realism. Children belonging to this level of concept development are transitional between the stages of integral realism and integral subjectivism, displaying progressively increasing awareness that the dream is personal, internal and generated by the dreamer.

Substage 2A: Children in this stage of development display only the faintest glimmer of awareness that the dream is a subjective phenomenon. The subjective element may momentarily appear during questioning on any aspect of the dream, and is often denied or ignored the moment after it is mentioned. For example:

> Tell me, where does a dream come from? -From the kitchen....-Do dreams come from inside of you, or from outside of you? - From outside- Who makes the dreams come? - It's ourselves: we sleep, then we dream. - While you are dreaming, where is your dream, where does it go on, in what place is it?- Outside. - Is it inside of you or in your room? - In my room, ... (ibid, p. 116)

Substage 2B: Laurendeau and Pinard define substage 2B:

> as soon as subjective elements play a definite role in the child's explanation, and as long as this explanation still indicates a confusion between the interiority and the exteriority of the dream, the protocol is classified in substage 2B. (ibid, p. 117)

In this substage there is a greater balance between subjective and realistic elements which is often presented in one of four characteristic patterns. Some children simultaneously admit the possibility of an internal and an external location without excluding either possibility. Some children see the dream as originating in the mind of the dreamer but being projected into the room. Others claim that it comes from outside but takes place within them. The fourth group of children considers the dream to be internal in origin and location, yet asserts

that another person in the room could see the dream, thus indicating "a residual confusion bewteen the interiority and the exteriority of the phenomenon" (ibid, p. 119). Children in this substage might maintain that the dream was "in my eyes or in my pillow": or state that when we make a dream come "we think...it comes into our head" and yet reply that the dream takes place "by our side."

Substage 2C: With children in this substage the only remaining trace of realism consists of granting a certain materiality to the dream, assuming that others could see or touch it if they could open the head of the dreamer, or assuming that it occupies a particular location in the head, as if it were an object. This confusion between material and immaterial is developmentally more advanced than the confusion between external and internal which is displayed by the children in substage 2B. A child in substage 2C might state that a dream is in his head, but also:

> If we could open your head while you are dreaming, if we could look into your head, could we see your dream? - No - Why do you say that we could not see your dream? - If Jesus sees you opening my head, He removes my dream; a dream belongs to us. - Then, where is it in your head, your dream? - Near the ears, because I must hear it. - (...) - What is a dream made of? - With earth, and all that... (ibid, p. 120)

Stage 3: Integral Subjectivism. Children in this stage display no traces of realism in any areas of their protocols. Dreams are now

immaterial, being made of "thought", or "imagination".

Substage 3A: Some traces of finalism or other precausal beliefs may appear in the protocols of children in substage 3A. They are especially prevalent when the origin of dreams is questioned. For example, when asked why one dreams, children in substage 3A may respond: "It's God who allows it", "To make us laugh", or "Because we have some" (ibid, p. 125), displaying artificialistic, finalistic, or moralistic factors in their thinking.

Substage 3B: Children in this substage display the "mature" conception of the dream, with no traces of precausal thinking. The reason given for dreams occurring is objective, such as: "It's because we thought about it during the day, and it comes back to our mind at night" or "it's because we've overeaten" (ibid, p.122). For the purpose of this study, children belonging to stage 3A and 3B were grouped together.

Concrete Localization Task

The child's marking of the cartoons provided a concrete measure of the tendency to distance the good dream from the bad dream. Since the mature concept of the dream is that the dream is located in the head, a point near the center of the child's head on the cartoon was taken as an origin (see Appendix A). Distance from the origin to the mark of the good dream and the bad dream was measured in millimeters. This

yielded two measures: 1) "MMGOOD", the distance to the good dream; and 2) "MMBAD", the distance to the bad dream. Each dream was also assigned a score indicating its locus as being: 1) the child's head; 2) the child's body; or 3) the room.

Splitting of the Good and Bad Dreams

The children were also given scores indicating whether they perceived the good and bad dreams as being in different places. For the purposes of this scoring, if the child indicated that the good dream and the bad dream had different external origins, this was taken as an indication that at some time in the genesis or act of dreaming the good and bad dream differed in location. A child who stated that the good dream came from the ground and the bad dream came from the sky, for example, was scored as considering the good and the bad dream as having different locations even if the dream were perceived as then entering the body and "taking place" internally. Throughout the assignment of a score for the splitting of good and bad dreams, the verbal interview was considered the primary source. Since children in stages 2A and 2B often vacillated in where they stated a dream to be, they were considered to have split the dreams if at any point in the interview they indicated the good and the bad dream had different locations. In addition, the most prominent pattern of splitting was scored if the child varied in the type of splitting manifested.

Scores for the Split Variable were as follows:

0 = external locations for the good and bad dream which are within 10 mm. on the cartoon, with no indication of different external locations in the verbal interview.

1 = external locations for the good and bad dream which are over 100 mm. apart, with no indication of different external locations in the verbal interview.

2 = split external locations for good and bad dreams with the good dream being closer to the child's head.

3 = split external locations for good and bad dreams with the bad dream being closer to the child's head.

4 = split external locations, but it is unclear whether the good or the bad dream was closer to the child's head.

5 = the good dream was considered internal, the bad dream was considered external at some time in the verbal interview.

6 = the bad dream was considered external, the good dream was considered internal at some point in the verbal interview.

7 = the good dream is perceived as internal and the bad dream is perceived as external only in the concrete localization task. (The concrete localization task never influenced a child to externalize the good dream while considering the bad dream to be internal.)

8 = split internal locations for the dream. The child might state, for example, that the good dream is on one side of his forehead while the bad dream is on the other side.

9 = no indication of split location for the good and the bad dream in the verbal interview or on the concrete localization task.

Reliability

The interviews were independently scored by the interviewer and a clinical nursery school teacher familiar with preschool children and the experimental procedure. The scorers had been trained as described in Appendix C. Both scorers listened to the taped interviews and assigned each child to one of the five stages of dream concept development. This formed a five point scale. If the scorers felt a child was not a pure example of a stage, they were permitted to indicate that they felt he was still moving into the stage or was beginning to move out of the stage. This resulted in a placement of the child on the 13 level Continuity Scale. The reliability of these measures is further discussed in the Results Chapter.

RESULTS

The results will be reported in two main sections. The first section will deal with those findings which lent themselves to quantitative analysis and statistical tests. The second section will summarize qualitative findings which were gleaned from detailed examination of the children's protocols.

Quantitative Results

The data base for all quantitative analyses consisted of 43 variables, which formed six groups as follows:

1. Five demographic items, which consisted of: sex; age in months; nursery school grade; birth order; and the number of siblings in the family at the beginning of the school year.

2. Six measures from the interview, which consisted of: the duration of the total interview; the duration of the dream report (if there was one); the number of probes required to get a complete dream report; the time at which the dream report was made (at the time of initial request or later in the interview); the label (good or bad) given to his dream by the child; and whether or not the child spontaneously reported additional dreams in the course of the interview.

3. Twenty-one items which consisted of the children's responses to the Connotation Questionaire, associating each adjective with either the good dream or the bad dream.

4. Five measures from the Concrete Localization Task, which consisted of: the distance from the origin (in the head of the child in the cartoon) to the mark representing location of the bad dream (MMBad) and the mark representing the location of the good dream (MMGood); the locus of the good dream and the locus of the bad dream (in the room, in the child's body, or in the child's head); and the distance between the mark for the good dream and the mark for the bad dream.

5. Two measures of the child's ability to conceptualize the dream, which consisted of his stage of dream concept development (henceforth called Stage) and his level on the Continuity Scale (henceforth called Level). Stage and Level were reported by two scorers for each child. In cases where the two scorers disagreed on the stage of the child, a third scorer assigned the final stage used in the analyses.

6. One measure of the child's tendency to conceive of the good and the bad dream as occurring in different locations, which was based on the information from both the Dream Concept and the Concrete Localization portions of the interviews. This was the Split variable which is defined in the methods section.

The entire data base was coded on computer cards and thereafter processed by the Statistical Package for the Social Sciences (S.P.S.S.) Library Programs (N.I.E. et al, 1975).

The results involving the stage and level of dream concept development will be described first, followed by those involving the Split variable. Results involving the Connotation Questionaire will be considered next, and finally those involving the interview measures.

Stage and Level of Dream Conceptualization

Reliability of Stage. For 36 subjects there was agreement between the two scorers on the stage of dream conceptualization from among the 5 possible steps of the scale. For the remaining seven subjects, there was a difference of one substage in the stage assigned to the child by the two scorers. The rank difference correlation coefficient was .955. Differences were resolved by having a third scorer independently listen to the tapes and make the final assignment of the child to a stage. In addition to the ususal training, the third scorer had listened to representative tapes of children from the sample who had been unambiguously assigned to a stage by the two initial scorers.

Reliability of Level. For 30 of the subjects there was complete agreement between the scorers on the level of the Continuity Scale to which a child belonged, from among the 13 possible levels. For the remaining 11 subjects the levels assigned by the two scorers differed by: one level for six subjects (for example, one scorer felt the child was firmly centered in a stage, while the other felt he was still moving into it); two levels for four subjects (for example, one scorer felt

the child was in Stage 1 while the other scorer felt he was beginning to move into Stage 2A) and three levels for one subject (for example, one scorer felt the child was in Stage 2B and the other felt he was in Stage 2C). The rank difference correlation coefficient was .972. Since the child's Stage was used in subsequent analyses, the third scorer was not asked to resolve differences on the assignment of Level to the subjects.

Relationship between Stage and Level. The frequency distribution of children by Stage and Level determined by each of the two scorers is indicated in Table 1. As can be seen, the levels of the Continuity Scale indicating that a child was not firmly representative of a particular stage were particularly heavily populated in those levels indicating that a child was entering or leaving Stage 2B. Since the Continuity Scale represented such a fine degree of discrimination that only a few levels could be expected to have an appreciable number of subjects in them, Stage was used to investigate the relationship between dream concept development and other variables.

Stage and Age. The distribution of subjects according to Stage and age is indicated in Table 2. The relationship between Stage and age was examined by computing the Spearman Correlation Coefficient. The correlation was 0.859, which is significant at the .001 level.

Stage and Sex. The relationship between Stage and sex was examined by computing the Spearman Correlation Coefficient and proved to be insignificant.

Table 1

Distribution of Subjects according to the two Scorers on the Continuity Scale

Scorer 1: Dream Concept Stage		Scorer 2: Stage 1	Stage 2A	Stage 2B	Stage 2C	Stage 3AB
	Continuity Scale Level	1 . 2	3 . 4 . 5	6 . 7 . 8	9 . 10 . 11	12 . 13
STAGE 1	1 firmly Stage 1 2 leaving Stage 1	9 1				
STAGE 2A	3 entering Stage 2A 4 firmly Stage 2A 5 leaving Stage 2A	2	2	1		
Stage 2B	6 entering Stage 2B 7 firmly Stage 2B 8 leaving Stage 2B		1 1	2 1 6 1 1	1	
Stage 2C	9 entering Stage 2C 10 firmly Stage 2C 11 leaving Stage 2C				5	
	12 entering Stage 3AB 13 firmly Stage 3AB				1	3

Assignment of Dream Concept Stage to children whose levels fell outside of the dark blocks was resolved by the opinion of a third scorer.

Table 2

Number of Children in

Each Stage of Dream Concept Development

Stage		Number of Subjects	Mean age in months
1	the child considers the dream to have an external origin and location	11	43
2A	the child momentarily considers the dream to have an external origin and location, but generally considers them external.	4	47
2B	the child exhibits a stable mixture of internal and external elements in the origin and location of the dream	14	49
2C	the child considers the origin and location of the dream internal but continues to attribute material qualities to the dream	7	53
3AB	the child considers the dream immaterial with an internal origin and location	5	56

*Data on ages excludes the three six-year-old subjects

Split Variable

The definition of the Split variable and the distribution of children in the various categories of the Split variable is indicated in Table 3. The Split variable can be arranged into a developmental progression according to the degree to which the dreams (good and bad) are considered to have an internal or external location. These groupings are: 1) good and bad dreams are both external (Split = 0,1,2,3,4); 2) good and bad dreams differ in interiority in Dream Concept portion of interview (Split = 5,6); 3) good and bad dreams differ in interiority only in the presence of the concrete stimulus of the Concrete Localization Task (Split = 7); 4) the good and the bad dream are considered to be in different internal locations (Split = 8); and 5) the good and the bad dream are both considered to be internal with no evidence of split locations (Split = 9).

Split and Stage. The distribution of subjects according to the levels of groupings of the Split variable and Stage is indicated in Table 4. It should be noted that some values of the Split variable are incompatible with particular stages by virtue of the definition of the stages. These have been indicated by X's in Table 4. It would be impossible, for example, for a child to state that the good and the bad dream had different internal locations and be classified in Stage 3AB, since a difference in location would be evidence that the dreams retained a residual materiality. The relationship of these groupings to Stage was determined by computing the Spearman Correlation

Table 3

Frequency of Children Evidencing
Various Types of Splitting

Location Relative to Body	Split Variable	Description of Splitting	Number of Subjects
External	External Location of Good and Bad Dreams:		
	0	Cartoon markings at same spot	1
	1	Cartoon markings far apart (100mm)	5
	2	Good Dream Closer form verbal interview	5
	3	Bad Dream Closer from Verbal interview	4
	4	Unclear if Bad or Good Closer from Verbal Interview	2
External and Internal	5	Good Dream Internal - Bad Dream External in Verbal Interview	3
	6	Bad Dream Internal - Good Dream External in Verbal Interview	3
	7	Internal - External Split in Location of Dreams Appears only on Concrete Localization Task	3
Internal	8	Split Internal Locations	4
	9	Internal Location - no splitting	11

Table 4

Relationship between Split and Stage

DREAM STAGE

SPLIT	1	2A	2B	2C	3AB
External Location 0 - 1 - 2 - 3 - 4	11	3	3	x	x
1 Type of Dream Internal 1 Type of Dream External 5 - 6	x	1	5	x	x
Internal-External Split in location of dreams appears only on concrete localization task 7	x	x	3	x	x
Split Internal locations 8	x	x	0	4	x
Internal Location with no splitting 9	x	x	3	3	5

Coefficient, which was 0.856 (p=.001). This highly significant correlation indicates that although Split is determined using only a subset of the data used to determine Stage, it is highly redundant on Stage.

Tendency to consider the good and the bad dream to have different physical locations. One of the hypotheses of this study was that preschool children would have a tendency to perceive good and bad dreams as taking place at different physical locations. The split variable was defined such as to permit examination of this hypothesis. As was previously explained, children belonging to Stage 3AB by definition cannot consider the good and the bad dream to have different spatial locations. Omitting the children belonging to Stage 3AB, 8 of the 36 children evidenced no tendency to consider the good and the bad dream as having different locations (Split = 0,2 or 9), while the remaining 24 children indicated, at least for a moment at some point in the interview, that the good and the bad dream have different locations. Thus 27% of the children below Stage 3AB evidenced at least a temporary tendency to consider the good and the bad dream as having separate locations. Adopting the assumption that children are equally likely to split or not to split the locations, a Chi-Square analysis indicates that a significantly greater number of children do manifest split locations than could be expected by chance ($x^2 = 4.0$, $p = .05$).

Since it is unclear whether Stage 1 children, who consider the dream external, would be evidencing splitting by marking the drawings

far apart, another analysis was made with just the 78 children in Stages 2A and 2B. Fourteen of these children evidenced a tendency to consider the good and the bad dream as having separate locations. This tendency was significant ($x^2 = 5.56$, $p = .02$).

Connotation Questionaire

This section of the analysis sought to determine whether particular adjectives were selectively associated with the good or the bad dream. The frequency with which each adjective was associated with the good dream and with the bad dream was computed and a Chi-Square analysis was conducted. The results of this analysis are indicated in Table 5. Four adjectives were associated with the good dream with a probability exceeding the .001 level. These adjectives were: nice, pretty, happy, and sunny. Four more adjectives were associated with the good dream at the .05 level of probability. These adjectives were: silly, closer to you, near your house, and strong. Four adjectives were highly associated with the bad dream at the .001 level. These adjectives were: dirty, mean, scary, and sad.

Connotation Questionaire Items and Age. The possibility that the items associated with the good and the bad dream varied with age was investigated by calculating the Spearman Correlation Coefficient for each item on the Questionaire with respect to variation in age. Only a few items were significantly correlated with age. Older children were significantly more likely to say that a good dream was pretty ($r = 0.307$, $p = .05$) and that a bad dream was cloudy ($r = 0.369$, $p = .05$) than younger children. There was also a trend for older children to report that the bad dream was mean ($r = .307$, $p = .06$) more often than younger children.

Table 5

Frequencies with which the Connotation Questionaire Items are Associated with the Good dream and the Bad dream and Chi-Square Analysis

Item		Frequency Associated with Good Dream; Bad Dream	x^2
VERY GOOD	Nice	39:1	36.10***
	Pretty	37:2	31.41***
	Happy	37:2	31.41***
	Sunny	36:4	25.60***
GOOD	Silly	28:9	9.76**
	Closer to You	26:11	6.08*
	Near Your House	25:12	4.57*
	Strong	27:14	4.12*
Trend toward good	Fast	24:15	2.08
NEUTRAL	Tired	22:18	0.40
	Bigger	21:18	0.23
	Little	18:20	0.10
	Far Away From You.	19:21	0.10
	Cold	18:21	0.23
Trend toward bad	Cloudy	14:23	2.19
	Foggy	14:24	2.63
	Hot	13:25	3.79
VERY BAD	Dirty	9:31	12.10***
	Mean	6:33	18.69***
	Scary	5:34	21.56***
	Sad	5:34	21.56***

1) Numbers do not necessarily sum to 41 because some children did not answer all of the questions. * p = .05 ** p = .01 *** p = .001

Connotation Questionaire Items and Stage. The Mann-Whitney U-Test was used to determine whether association of the items on the Connotation Questionaire with the good dream or the bad dream varied with the stage of dream concept development. For the purposes of this analysis, the 11 children in Stage 1 were contrasted with the 12 children in Stage 2C and 3AB, (all of whom consider the dream to have an internal origin and location). None of the resulting tests were significant.

Attempt to eliminate aberrant responders. In an attempt to determine whether the association of items on the Connotation Questionaire would vary if children with aberrant response patterns were eliminated from the Chi-Square analysis, a Misfit score was defined. The Misfit score calculated the number of times a child differed from the group in his labeling of the eight adjectives most consistently associated with one type of dream (nice, pretty, sunny, happy, sad, scary, mean, and dirty). Deletion of the three children with Misfit scores of 3 or 4 from the Chi-Square analysis of the Connotation Questionaire did not significantly alter the results.

Misfit and the Data Base. An attempt was made to determine whether children with a tendency to respond to the Connotation Questionaire in an unusual manner were significantly different from the children who conformed to the group norms in labeling the eight adjectives. The Spearman Correlation Coefficient was calculated for the Misfit score in combination with all of the items in the data base. The Misfit score did not significantly correlate with age, grade, sex or stage of dream

conceptualization. The Misfit score significantly correlated with only one adjective from the Connotation Questionaire outside the set defining the Misfit score: Children with a high Misfit score were significantly more likely to report that the bad dream was "closer to them" than the other children ($r = 0.504$, $p = .002$). There was a tendency for Misfit to correlate with the length of the interview and the presence of fewer siblings in the home, but these correlations were not significant.

Nature of the Interviews

Length of the Interviews. The interviews with the children ranged in length from 8 to 24 minutes with an average length of 14 minutes.

Frequency of Dream Report. From the sample of 41 children, 10 were unable to recount a dream. Of the 31 children who did report a dream, 27 told one when first asked to by the examiner, and four volunteered a dream later in the interview.

Frequency of Dream Report and Age. Calculation of the Spearman Correlation Coefficient indicated that there was not a significant variation in the ability of children to report a dream as they grew older.

Frequency of Dream Report and Stage. The distribution of children reporting dreams by Stage is given in Table 6. It is interesting to note that only one of the four children in Stage 2A was able to report a dream.

Label of Reported Dreams as "Good" or "Bad" Dreams. Of the 31 children who reported a dream during the interview, 17 of them labeled the dream a "good" dream and 12 labeled the dream a "bad" dream.

Table 6

Relationship Between Frequency of Dream Report

and Stage of Dream Concept Development

	Stage of Dream Concept Development				
	1	2A	2B	2C	3AB
Dream Reported at Initial Request	7	1	10	5	4
Dream Reported During Interview	1	0	2	0	1
No Dream Reported	3	3	2	2	0
Percent of Children in the Stage Reporting a Dream	72%	25%	85%	71%	100%

Spearman Correlation Coefficients relating the label of the dream to the entire data base all proved to be insignificant.

Supplemental Dream Reports. Eight children spontaneously reported a second dream in the course of the interview, and one child told three dreams. Although the children were not asked to label these dreams, most of them (7 to 1) resembled dreams which had been labeled as "bad" by most children. The most frequent pattern was for a child who had initially told a "good" dream to later report an additional "bad" dream (5 cases). The presence of a supplemental dream was not significantly related to any other item in the data base.

Qualitative Analysis of Interview Protocols

This section of the dissertation will report those results which did not lend themselves to quantification and statistical analysis. The results of this section are based upon the detailed examination of the interview protocols of the children, particularly the Dream Concept and Spatial Localization portions of the interview. The results relate to three major topics:

1. The presence of patterns in cognitive development involving the selective internalization of either the good or the bad dream while the other type of dream continues to be considered as an external phenomenon.

2. Variations in the level of arguments used as justifications within and between stages.

3. Indications that the concepts of immateriality and reality are not unitary phenomena in the three to five year old child.

Patterns Involving the Preferential Internalization of the Good Dream or the Bad Dream

One of the hypotheses of this study was that children would tend to internalize the good dream while still considering the bad dream to be external. Examination of the protocols indicates that some children did indeed exhibit this pattern, but that other children exhibited the oposite pattern, i.e., internalized the bad dream while still considering the good dream to be external.

The other two hypotheses of this study sought to examine one possible motivation for the expected externalization of the bad dream and internalization of the good dream. It was expected that the children would seek to consider the good and the bad dream as occurring in different locations as a result of emotions associated with the dreams, and the implications of these emotions for the child. The following presentation of qualitative analyses of the children's interviews, consequently focuses upon the children's statements concerning their emotional reactions to the dream and their possible motivation in internalizing or externalizing the good and the bad dream.

An additional topic which will be discussed for each of the following case studies will be the progress, stagnation, or regression in the level of cognitive performance displayed by the children in the course of the interview. Although this does not relate to a specific hypotheses of the study, it is important in terms of its implications for the role of affective factors in cognitive development. This will be considered in detail in the discussion section.

The presentation of each case exhibiting the preferential internalization of the good or the bad dream will consequently include: 1) evidence that the child internalized one type of dream while considering the other type of dream to be external; 2) analysis of the child's statements concerning the affect he associates with the good and the bad dream and his motivation in selectively internalizing one type of dream; 3) indications of progress, stagnation, or regression in the level of cognitive development displayed by the child in the course of the interview. All of these aspects will be considered in the analysis of each case in the following sections. This will enable the reader to understand the complex and evolving nature of the interviews with the children, and the manner in which these aspects of the interviews interact in specific children. At times, the interview excerpts may be somewhat longer than would be necessary to include the focal statements of the child. Elimination of the context in which the children made these remarks, however, would result in a simplistic, although "cleaner" impression of the manner in which children struggle to relate to the various features of the dream. Excerpts from the interviews are given verbatim.

The Discussion Chapter will then seek to analyse these qualitative results in terms of their implications for the role of affect in cognitive development, and the meaning of the specific patterns of selective internalization which have been observed.

Children Internalizing the Bad Dream Before the Good Dream

Three children gave evidence of internalizing the bad dream while still considering the good dream to be external. Two of these children gave indications that their attempts to internalize the bad dream were probably associated with their desire to assure themselves that the bad dream was not real. Their protocols will be considered in detail. The third child, Sam (aged 53 months), gave only brief indications of attempting to internalize the bad dream, as he was in Stage 2A of dream conceptualization. As is characteristic of children in that level of conceptual development, he was unable to expand upon the comments indicating the dream to be of an internal nature. His protocol will not be considered here, but is given in Appendix D.

Chris (aged 45 months) was the first child interviewed to indicate that he was attempting to internalize the bad dream while still considering the good dream to be external. Since she was not familiar with this pattern, the interviewer failed to frame specific questions which might have made his conception of the dream and his motivations clearer. His protocol, however, permitted the more detailed questioning of the other child who seemed to be internalizing the bad dream before the good dream. Discussing the dream was difficult for Chris, and he needed several minutes of talking about the movie Star Wars and of running around the hall before he felt comfortable enough to focus on the task. He remained anxious thoughout the beginning of the interview, as was evidenced by his repeated

diversions. This type of behavior seemed to be more frequent in children who were unsure of their view of the dream, and Chris was in a transitional stage of development with both scorers considering him to be entering Stage 2B. Chris was interviewed again four months later in the hopes of obtaining a protocol which was clearly characteristic of Stage 2B for the purposes of comparison. At that time he was in Stage 2C, and approached the interview calmly, making few diversions from the interview format.

Chris initially stated that dreams were real, and that he did not know where they came from. When asked about location and visibility he responded:

General Dream: (When you have your dream..are you asleep in your bed?) yeah..(Yeah, and where's your dream?) I don't know.. (Like, your're in your bed, and where's your dream?) Um,--sounding agitated--I don't know..(You don't know? Well, give me a guess.) I can't guess--NO..(You can't know..oh..you think it's inside you or in the room?)

Bad Dream: Outside in my room. (In you room. When you have a bad dream, a dream about a monster, where would it be?) That could be Kiss [a popular music group in which the members paint their faces and wear bizarre costumes] (that could be...) Kiss (Kiss?) yeah (uh-huh...and where would it be?) um, at a show. (at a show? And if you had a bad dream, would it be inside you or would it be in the room?) --softly--Inside me (Inside you?) Yeah.

Good Dream: (What about if you had a good dream? Like a dream about playing. Where would that be?) Luke is a good guy..etc ...(If you had a dream, a really good dream, where would that be-inside you or in the room?) Inside the room. (Inside the room?) Um..it was..it was..it was near my bed. (near your bed, Okay.)

Visibility: (Tell me something.If your mother came into the room and you were having a good dream..Okay, pretend you're having a good dream and your mother comes into the room, could

> she see your dream?) Yeah. (Yeah? Tell me the reason she could see your dream) Because it's a little real. (Because it's a little real? What about if you're having a bad dream? And your mother comes inside your room, could she see your dream then?) Yeah. (Yeah...) It's a little pretend. (It's a little pretend?) Uh-huh. (What's the pretend part?) The real part.

Thus Chris has linked the bad dream with being inside himself and a "little bit pretend." The bad dream was also partially external as his mother could see it if she were in the room. The good dream, however, was considered to be only in the room and was a "little bit real." It thus seemed possible that although Chris still basically believed the dream to be a real, external phenomenon, he was attempting to reassure himself that bad dreams were only pretend. He seemed to have accepted the fact that if dreams were inside you, then they could not be real people or real events.

The illusory quality of the dream, and the need to reconcile the internal nature of the dream with the apparent reality of the events still troubled Chris. On the Concrete Localization Task, Chris indicated that both the good dream and the bad dream would be in the room. He was then questioned:

> (I'm confused..before, you told me that a dream about a monster would be in your head, but this boy's dream is over here. Which one is it? Is it inside, or outside? Or both? Can you tell me?) It's...outside and inside (Outside and inside? Which part is outside?) Uh-huh..(which part is that?) part of the house.... (part of the house. And which part of the dream is inside?) um..(Huh?) right in here--points to head-- (in the head, uh-huh. Well, how is it inside and

> outside?) inside...outside and outside (tell me more.. about how it is inside and outside) inside is outside (inside is outside?) Yeah--mumbles--um..something is inside..outside..yeah..that's what your hands are dirty. (That's what? Tell me louder, 'cause your're lying down I have trouble to hear) When you're outside, playing.. come in..(uh-huh) you wash your hands (uh-huh) and they not be dirty. (And then you're not dirty, right. And the dream, is it inside first and then outside, or is it both places at once. or how does it work?) It's both inside and outside. (Both inside and outside? Is that the good dream is inside and outside or the bad dream is inside and outside?) The bad guys are outside and the good guys are outside too. (they're both outside) yeah, they're fighting (Uh-huh) and they've both got guns and are fighting. (that's right. And what part is inside?) Um..I don't know. (You don't know? It's hard to explain isn't it?) Yeah.

Thus Chris seems to be having trouble coming to grips with the illusory nature of the dream that what appears external may be internal. Although at points he may be following the examiner's lead, it was also clear that he was actively thinking about the problem. For example, he tries to find a metaphor for things which are outside and inside, and discusses the concrete experience of having dirty hands and coming in to clean them. Chris's protocol thus gave the impression that while he still basically considered the dream to be external, he was attempting to internalize the bad dream. His efforts to do so, however, have involved him in examining the illusory quality of the dream and the nature of "real".

Karen's protocol also gave the impression that the internalization of the bad dream before the good dream was linked to an attempt to differentiate "real" from "pretend". In the initial section of the

interview Karen (aged 56 months) had given answers characteristic of a child in Stage 1. She had stated that the dream was make-believe, that it was sent by Mr. Sandman, and that dreams were located in her pillow. She also indicated that the dreams would be in the room on the Concrete Localization Task. The interviewer then posed a counter-suggestion, however, and it became clear that Karen could properly be classified as belonging to Stage 2B:

> (Karen? I have one last question for you. One little girl told me that dreams weren't in her head at all, she said they were inside her head. If she had a dream it was inside her head.) I had a dream inside my head too. (You had a dream inside your head too?) Uh-huh. (Where does that happen?)...When..I don't know...(You don't know? So is the dream inside your head sometimes and outside your head sometimes?)..Yeah. (Yeah?) Yup. (When is it inside?) I don't know--impatient--(Oh. I'm confused about whether it's inside or outside) 'Know (Is it one way or are you confused too?) I'm confused too. (You're confused too?) But I can think of my pillow...I see, I see monsters in my pillow and I see them splashing in the water--laughs--(splashing in the water?)--she mumbles on softly to herself--in my pillow when I see some dreams in my pillow, sometimes I splash, sometimes, and then I see it in my head. (And then you see it in your head?) Uh-hum (Are your eyes open when you see it?) No--impatient--they're closed when Mr. Sandman, he puts me to sleep. (I see. If your eyes are closed, how come you see it?) I don't know. (You don't know. Well which part is in your pillow and which part is in your head?) Um..the bad one's in my head and the nice one's on the pillow. (The bad one's in your head? And the nice one's on the pillow?) Um-humm (Why do you put the bad one in your head?) I don't know. (But the bad ones are in your head.) Uh-huh. (Which ones are the scary ones?) The monsters, the pirates and the one I'm playing on the playground. (And those ones are in your head?) No--involved--the bad ones are in my head. (The bad ones are in your head. Do you like it that way?)--nods yes--(Yeah?) (Are any of them real? Are any of them make-believe?)--nods yes to both--(Which ones are real?) Um, the nice ones. (The nice ones are real?) Uh-huh. (And which ones

> are make-believe?) Bad. (The bad? And tell me the reason you know they're make-believe.) I don't know. (You just know?) um-hum (You do, don't you?) Yup. (If you had real dreams, could they be in your head?) Nope. (Could make-believe dreams be in your head?) Yes (Yes?) Um-hum. (Could make-believe dreams be in the room?) Noooo--playful--(No?) Make-believe dreams..I'm not sure..I don't know. (It gets all confusing) This down here is outside too. (Is that a way outside?) Yea.

In Karen's protocol, the relationship between make-believe, internal, and the bad dream is clearly spelled out. She indicated twice that she was still puzzled by some aspect of "make-believe" and wanted a "way out" of discussing it. But her interview also displays a degree of internal coherence, and she displayed enough distance from the subject to be able to joke with the interviewer. Thus it seems that Karen is probably sharing a previously held view of dreams with the examiner rather than struggling with a transition as Chris was.

Sam, Chris and Karen all seem to be internalizing the bad dream while continuing to consider the good dream as an external and real event. The protocols indicate that the desire to internalize the bad dream is linked with the wish to assure themselves that the bad dream is not real. It seems apparent that these children have therefore formed the assumption that internal events are not real. It is also interesting to note that all three children were scored as being more advanced in dream concept development than they would have been otherwise as a result of their attempt to internalize the bad dream.

Children Internalizing the Good Dream Before the Bad Dream

Children whose interviews indicated that they had a tendency to internalize the good dream while considering the bad dream to be external did not fall into one set pattern. Instead, their interviews seemed to indicate a continuum in terms of the difficulty they had in dealing with the internalization of the bad dream, and in terms of the cognitive progression or regression evidenced in the course of the interview. These children fell into three groups, each of which will be discussed. Children in the first group internalized the good dream while considering the bad dream to be externalized, and then proceeded to internalize the bad dream as well as the good dream. Children in the second group seemed to be experiencing sufficient difficulty in considering the bad dream to be internal that this difficulty might be interfering with their continuing cognitive development. One of these children evidenced an excessive degree of fluidity in his thinking, while the other child wished to maintain a non-committal stance concerning the internal or external nature of the dream. Children in the third group seemed to be susceptable to fluctuations from the more mature view that both the good and the bad dream were internal to selectively externalizing the bad dream. In all three of these groups the children were able to verbalize the wish to maintain the bad dream as external, and linked this wish to the negative feelings associated with the bad dream.

Group 1: Internalization of the good dream followed by internalization of the bad dream. Both girls belonging to this group initially gave answers characteristic of Stage 1 children who consider the dream

to be an external phenomenon. Each was then able to utilize a cue provided by the interviewer to internalize the good dream. They then proceeded to internalize the bad dream as well, although it was clear that they encountered some hesitancy in making this transition.

Jean (aged 60 months) had given answers characteristic of a very sophisticated Stage 1 child in the Dream Concept section of the interview. She had told several dreams and reported that dreams were make-believe and made of shadows. She stated that her mother was unable to see her dreams because her mother was not sleeping, although if her mother were to go to sleep she would be able to see Jean's dreams. When presented with the Concrete Localization Task, however, Jean marked the good dream as being in the child's head while the bad dream was marked as being on the window. Sections of the rest of the interview follow:

> (Jean) What? (Can you explain to me--how does it happen that the good dream is in her head and her bad dream is out the window?) Because bad dreams are outside. (Well, I thought that before you told me that a good dream would be in her room and now it's inside her head.) Because I wanted to change. (You wanted to change? OK, that's OK. You can change...You can change. Where's the good dream in her head?)--points to eye--(Is it in her eye?)--nods yes--(So is a good dream inside you sometimes?)--nods no--(No?) That was the same. (I'm confused..can you say it again, cause I know you know what you mean, but I'm not sure.) I don't remember. (You don't remember. Well do you think that a good dream, a good dream is inside your head or that it is in your room.)--she thinks and says very precisely--in-your-head. (in your head, un-hum. What about a bad dream, could a bad dream be in your head?) It could be right here--points to window on cartoon. (It could

> be outside in the room.) Yea. (Which kind of dream is make-believe, the good dream or the bad dream?) Any kind of dream. (Um-hum. But a monster dream--could a monster dream ever be inside the head?) When you're sleeping. (Is it also outside in the room?) Sometimes. --diversion and changing of the tape--

Jean thus began by considering that the good dream might be internal and then progressed (after some initial hesitation) to considering whether the bad dream might not also be internal. The interview continued:

> (I'm asking how come, how does it work that the monster dream is inside sometimes and how does it work that it is outside sometimes?) I don't know. It's very delicate. (It's very delicate. Can I ask you a question?) A question.. what? (Do you think it is both at once?) Yea. (Or do you think it starts one place and goes the other place?) starts one place..um it..it's both the monster dream in your head and the good dream in your head.

Thus, although the examiner was attempting to determine whether Jean considered the dream to move from one location to another, Jean herself was still preoccupied with the question of whether both types of dreams (the good and the bad) were internal. This seemed to indicate that she was not simply responding to pressure but attempting to confront the question. After an attempt to discuss visibility inside the head, location was again addressed and her transition seemed to be confirmed:

> (Well, do you think the monster dream..Those monsters.. I don't understand. I'm..Is part of the dream inside and part of the dream outside or does it go from one place to the other.) Just the same place. (Just the same place.) Yeah. (Where is it?)--points to head--(Inside.

> Is it ever in the room or did you change your mind?) Changed me mind. Never in the room. Just in head. [Note: talking in "baby talk" was a fad in her particular classroom at that time.] (If you could choose, why would you have the monster dream stay outside. If you have one dream inside and one dream)--she interrupts--because um..he could sneak in. (He could sneak inside?) No. (echoing--no) Cause he'll wake me up and get me scared. (Cause he'd wake you up and get you scared. So that it would be better to keep him outside?) Yeah. (Yea. But what about a good dream, could a good dream come inside?)--she shakes her head yes--(Yes? How come?) Cause...(echoing--cause..) Good dream is yum-yum dream. (Good dream is yum-yum dream.) When are you going to tape it.

Thus Jean has apparently reached the point of conceptually considering both the good and the bad dream to be internal. She still, however, expresses the wish to keep the monster dream external, because it scares her and possibly because it is unpredictable ("sneaky"). Once she has expressed this wish she is ready to terminate the interview. The stable nature of Jean's transition must be questioned and for this reason both scorers considered her to be leaving Stage 2B rather than entering Stage 2C. Several weeks later, however, her parents informally reported to one of the nursery school teachers that Jean had been talking of the "dream lady", and had stated that dreams were "when you saw things in your head."

The other child belonging to this group, Linda (aged 50 months), was resistant to being interviewed, repeatedly emphasizing that <u>she</u> did not have dreams. Like Chris, she proved to be transitional between stages, just entering Stage 2B. She did say that <u>if</u> she did dream, the good dream would be under the covers of her bed and a bad dream would be "in the playroom, I hope." On the verge of abandoning the

interview due to Linda's resistance, the examiner tried a counter-suggestion: "One kid told me that the dream was inside him, what do you think about that?" Linda then stated that when she had a good dream about wearing a red dress it was inside her. She actively used the internal nature of the dream as a justification for the fact that her mother would be unable to see her dream, and that she was unable to touch her dream. On the Concrete Localization Task, however, she marked both the good and the bad dream as <u>on</u> the child's stomach, "under the covers." When asked about the contradiction with her previous statements, she again stated that dreams were internal, including the bad dream. While being questioned about the bad dream, she stated:

> (Is it in her stomach or under her covers?) Um, it's <u>in</u> her stomach. (Does it ever come outside?) No. She's dreaming about monsters outside. (Oh, she's dreaming about monsters outside.) Um-hum. (Is the monster outside for real?) Um-hum she'll be scared when the monster comes in--discussion of monster dreams-- ..She feels like she's crying when the monster comes... (How does she start to feel better?) When the monster runs away....<u>without her</u>.

The stability of Linda's transition was questioned by both scorers, one of whom considered it so unstable that she classified Linda as leaving Stage 2A rather than entering Stage 2B (the case was resolved by the third scorer).

Both Jean and Linda were considered by the scorers as evidencing some cognitive progression during the interview. Both children began this progression by recognizing that the good dream could be partially

internal. They were then able to tolerate the negative feelings which they associated with the bad dream and question whether it, too, was internal. Both children were, at least temporarily, able to consider both the good and the bad dream as internal.

Group II: Children who evidenced serious difficulty in internalizing the bad dream. The second group of two children seemed to be having serious difficulty in confronting the question of internalization of the bad dream. Both of these children seemed to be experiencing a high degree of ambivalence as evidenced in their everyday behavior and/or their interviews. These two cases were in some ways very different, however, and will be discussed separately.

Hannah (aged 57 months) was one of the children in the pilot study, but her protocol was sufficiently interesting that it will be considered here. At the time of the interview, Hannah had a new sister, who was only three weeks old. Hannah was in the midst of adjusting to this change in her life. She carried a picture of herself holding the baby on a cord around her neck, but used it mainly to claim attention from adults. She toted a "baby" doll around with her, protecting it from other children, but then abandoning it or losing it. Several weeks after the initial interview, Hannah sought out the interviewer in order to tell her a dream. In her dream, Hannah's mother and father had come home from the hospital and had nothing in their hands. Hannah looked again, however, and discovered the baby in her father's pocket. Hannah was obviously

dealing with a great deal of ambivalence in her everyday life. She was attempting to cope with it partially through denial of her jealousy and partially through reaction-formation, as evidenced in her preoccupation with protecting both the picture and the doll.

Cognitively, Hannah was clearly in Stage 2B. Throughout her interview she stated that dreams in general, good dreams and bad dreams, would all be "in my eyes or on my pillow." Her conception of some elements of the dream was quite sophisticated, however. When asked what a dream was made out of, she replied "air and color and picture," giving a beautiful description of both the immaterial and illusory qualities of the dream. Hannah also felt that she, with her eyes, played a role in causing the dream. When asked how a dream got to her, she answered: "Well, I looked at it, I opened my eyes in the dream." Thus, Hannah felt that she <u>helped</u> cause a dream, using her eyes, and that dreams involved color. When pressed on the internal or external nature of the dream, she responded in the following fashion:

> (OK, remember that you said the dream was either in your eyes or on the pillow?) Mmm (How did it come to be on the pillow?) Mm..when I closed my eyes. (OK.. Is it inside you or outside you then?) WELL--in a tone asking "do I have to choose?"--after I close my eyes I sometimes do it but if I don't get my eyes colored up then it doesn't matter if the dream's not funny.. (It doesn't matter if the dream's not funny?) ... right, or scary.

Hannah avoided the issue of the internal nature of the dream by remaining non-committal and stating that the dream was either "in her eyes or on her pillow." This was echoed in her denial of concern about scary dreams and her role in creating them. Thus Hannah's method of dealing with the internalization of the bad dream is similar to the method she was using in her everyday life to deal with the ambivalence about the arrival of her new sister.

The other child in this group, Billy, seemed to be dealing with even more intense feelings of ambivalence than Hannah. Billy had also been part of the pilot study in May 1978 (at age 44 months). He was interviewed twice as part of the current study, in December 1978 (at age 51 months) and in March 1979 (at age 55 months). Only the December 1978 interview was included in the quantitative analysis of the data, and it will be focused upon here. This interview is given in its entirety in Appendix E.

The intensity of Billy's ambivalence was made clear in the third interview in the dream he told. Billy dreamt of building a gun out of bristle blocks, loading it with real bullets and bombs, and shooting it at his mother. But nothing came out, much to his amazement. Billy tried shooting his father and brother and himself with the same result. He then opened the gun and discovered that he had put the bullets in the wrong place. While this was the clearest statement of Billy's ambivalence, ambivalence was also manifested in the interviews and in

his general behavior. It was clear that Billy was an intense and anxious child in general. He was unable to tolerate more than a morning program at the nursery school without "going to pieces," being unable to focus on an activity, and becoming aggressive with the other children. It was noted that he calmed down if a teacher held him on her lap.

In the interviews, Billy made many fluid transitions from one subject to another without always giving the cues indicating that he was making a digression or giving a concrete metaphor. The examiner was often unsure whether Billy was relating a dream or a real event. In the first interview, Billy himself had indicated a difficulty making this distinction. After stating that a dream was make-believe in the beginning of the interview, he then asked at the end:

> --very concerned--do you know that when an alligator eats you it's just pretend.....
>
> How can you have bad dreams? (How can you have bad dreams?) yea..HOW..(Do you want me to tell you the answer to that?) yea..do you-about how do you have bad dreams, how does a bad dream eat you and frighten you and how doesn't your mommy tell you bad dreams are just pretend.

Some residuals of this confusion were evident in the second interview.

In the second interview, Billy's position on the internal or external nature of dreams constantly shifted. He initially stated that the good dream was inside while the bad dream was outside. He explained

this, stating (verbatim) "The..the things that I think about are that I be happy are inside and the things that I be mad are outside". The motivation for externalizing the bad dream was clear.

Later when the visibility of the dream was being questioned, Billy admitted that the bad dream must also be internal, -but soon thereafter he externalized the good dream:

> (Pretend you're having your dream, OK? Your Mommy comes into your room. Can she see your dream?) No. (No? Tell me the reason.) Because... cause..it was..all the things I dreamed was in my body--his voice is shaking--
>
> (What about the dreams of the monsters?) Yeah, yeah, inside me too. (They're inside you too? But a couple of minutes ago you said the monsters were outside, which way?)--he interrupts--well I was just joking.. was really inside.
>
> --After discussing internal visibility--(...If you were having a good dream, would she see it there? In your head?) No. (No? Where would she see a good dream?) Right in my room. (In your room? And what about a bad dream? Where would she see a bad dream?) Ummm..in my head. (In your head? OK...and, mm so where's the good dream? I'm confused?)--he points--(In your head. Where's the bad dream?)--he points--(In your stomach? Are you kidding me or are you telling me for real?) I'm telling you for real.

Billy was thus finally able to internalize both the good and the bad dream. At the end of the interview he explained that he thought that both good and bad dreams were physical entities which came from outside and popped into his head. At this point, however, he began to question the reality of dreams. It seemed that Billy's difficulties with ambivalence were so great that when he internalized both the good and

the bad dream, the impact of unifying the conflicting emotions they represented weakened his ability to reality test.

Thus both Hannah and Billy seemed to be experiencing a great deal of ambivalence in their lives. For Hannah, it seemed to be due to a normal life crisis involving heightened levels of ambivalence--the birth of a sibling. With Billy, the ambivalence seemed to be more chronic in nature, and the sources seemed less clear. Both children displayed a difficulty in confronting the question of the internal nature of the dream. In Hannah's case, she wished to remain non-committal as to the location of the dream and this seemed to be related to her partial awareness that she played a role in causing the dream, including bad dreams. The avoidance of the question of the internal nature of the dream echoed the mechanisms she was using in dealing with the birth of her sister--denial and reaction formation, both of which involve avoidance of the negative feelings she was presumably experiencing. With Billy, his avoidance of the question of the internal nature of the dream was associated with excessive fluidity in his thoughts, difficulty in consistently maintaining a position on the internal/external nature of the good and bad dream and difficulty dealing with integration of the feelings associated with these dreams. In his case especially, one wonders about the long-term possibility of this emotional difficulty interfering with his ability to form age-adequate cognitive concepts. It must be noted, however, that despite his difficulties, Billy was

considered to be within the normal range of emotional adjustment by his nursery school teacher, who did feel free to express serious concern about other children in the school to the examiner.

Group III: Children who displayed a temporary fluctuation from considering both the good and the bad dream as internal to selectively externalizing the bad dream. Two children belonged to this group, Barbara (aged 49 months) and Sally (aged 74 months). Both girls would have been classified as belonging to Stage 2B on the basis of other aspects of their protocols, as both reported that other people sent them their dreams. The fluctuations occurred on the Concrete Localization Task, where they marked the bad dream outside the child's body while the good dream was inside the child's body. When asked about their vascillation, both girls were able to re-internalize the bad dream. Sally was able to give clear statment of her motivation in externalizing the bad dream: She did not want something which made her feel bad to be inside her.

Barbara, was clear about the internal nature of the dream in the Dream Concept portion of the interview, but was confused about the location of the brain:

> (If you have a really good dream, like a dream about playing, where is that?) Oooh! In my brain. The dream is in back of it. (In back of you?) In the back. (And where's the brain part of you, do you know?)--she points to her stomach--(In your stomach. uh-huh) But for real it goes up in back, here,--points to throat--(Is it your teeth in there?) There're there too, but it's really my dreams.

Barbara seemed to have "learned" from adults that the dream was in her brain, but she was unclear on it's location. In addition, she herself, seemed to consider the good dream to be in her throat as confirmed at another point in the interview. Barbara placed the bad dream in her knees and her toes. Several children who had internalized the good and the bad dream none-the-less distanced the bad dream from their head and the good dream. On the Concrete Localization Task, Barbara marked the good dream as being in the girl's throat and the bad dream as being on the girl's pillow. She was then asked:

> (I'm confused--before you told me a dream about a monster would be down inside you, in your knee and now you drew me a spot on the picture for where the dream would be and it's on the pillow. I'm confused. Is it inside her or outside?) inside. (Is the monster dream inside?)--sounds wistful, confused--no--(Or is it outside or both?) It <u>really</u> is in the inside--she gestures with her hand--(Right in there--point with your finger cause I can't see.)--she points to the girl's eyes.

Sally had a more sophisticated view of the location of the dream in the initial interview than Barbara had:

> (...Where do you think your dream is?)--pause--it's with my imagination. (OK, do you think it's inside you or in the room?) Inside me. (Where inside you?) my head.(What about a good dream, like a dream about playing, where would that dream be?) um, In my mind. (In your mind,... And what about a bad dream like a dream about a monster, where would that dream be?) In my mind! (All dreams are in your mind?)--she nods yes--

On the Concrete Localization Task, however, Sally marked the good dream as being in the child's head and the bad dream as being on the floor near the child's bed. She was then questioned:

> (Now Sally, I'm confused..before you told me, you said that..if you had a bad dream it would be in your mind and now there's an X over here)--she laughs an embarrassed or nervous laugh--(Can you explain it, how it works out that way?) Cause bad dreams are far away from you. (Bad dreams are far away from you...) And right here--she points to the head--is near you. (That's right, it is isn't it. Are dreams in your mind?) --nods yes--(Are bad dreams in your mind?)...no answer.. (would a, would a, would a bad dream really be here on the floor or where would it be for real?)--she points to the forehead--(Right here on the forehead? Inside the head for real?) Yea. (For real) Um-hum. (But where would you want to put it if you could put it where you wanted it?)--points to floor--(I see.. I see..But you wouldn't want to--you'd put it here on the floor but what about a good dream, where would you put a good dream if you could put it anywhere you wanted it?)--she points to the head--(You'd still have that in your head, huh?)--nods yes--(Tell me the reason) I don't know. (Well, think for a minute. See if you think of a reason.) Because I would <u>want</u> a good dream in my head, <u>and I would want the bad dream on my floor</u>. (Um-hum, what's the reason you would want the good dream inside?) <u>Because the good dream is what makes me feel happy</u>. (Um-hum...And what's the reason you'd want the bad dream outside?) <u>Because bad dreams make me feel sad</u>. (Ah-ha.. well that makes sense to me. Does it make sense to you?) Yea.

Thus Sally makes very clear her wish to externalize the bad dream, and her hesitation when confronted with a concrete representation of a child to consider the bad dream as internal. She is able to state that she wants the things which make her feel good to be internal while she wishes to keep the things which make her have negative feelings external. Although Barbara does not state her motivation, her desire to externalize the bad dream is readily apparent. It should also be noted that although both girls evidenced their fluctuations toward more "primitive" thinking on the Concrete Localization Task, Jean (in Group I) was able to use the same stimulus as an aid toward a progression in cognitive development.

Variations in the Types of Arguements Used as Justifications Within and Between Stages.

It was apparent from the interview protocols that children in different stages of dream concept development used the same level of argument to defend entirely different positions with respect to the nature of the dream. In addition, the children in any one stage of dream concept development manifested a wide range of levels of cognitive sophistication in their defense of the beliefs of that stage.

The manifestation of the same level of thought by children in different stages of dream concept development. In his study of the development of the dream concept, Piaget (1929/1976, p. 98) noted that two children used the same level of thought in justifying their views despite the fact that one of the children considered the dream to be a completely external phenomenon and the other considered the dream to have both internal and external elements. There were several examples of a form of thought or expression transcending the level of concept development. One of these was the concrete metaphor.

Preschool children often have difficulty expressing a metaphor in abstract terms. When they wish to express the idea that "X is like Y" in a particular way, they often simply respond to the interviewer's question about X by talking about Y. The interviewer must then infer the dimension of similarity the child was seeking to express. Examples of the concrete metaphor can be given for children ranging from Stage 1 to Stage 2C in development of the dream concept:

1. Stage 1: Dean (aged 41 months)
   (can you touch a dream?) yes. (What does it feel like?) here's my shadow, here's your shadow!
   A possible meaning: a dream is like a shadow; you touch it but it is insubstantial.

2. Stage 2A: Alfred (aged 54 months)
   (What is a dream made out of?) I don't know. I know how they make T.V. pictures. With projectors.
   A possible meaning: Dreams are not "made" like physical objects, images are made differently than physical objects.

3. Stage 2B: Chris (aged 45 months)
   (inside is outside?) Yeah--mumbles--um something is inside.. outside..yeah..that's what your hands are dirty. (That's what? Tell me louder, cause you're lying down and I have trouble to hear) When you're outside playing...come in.. (uh-huh) you wash your hands (uh-huh) and they not be dirty.
   A possible meaning: How can something be inside and outside? as the dream appears to be? I go from outside the house to inside the house to wash my hands, so a dream can be outside and inside too.

4. Stage 2C: Owen (aged 42 months)
   (asked whether his mother could see his dream if she opened his eyes and looked inside) no (Now tell me the reason) when I eat my raisins and they go thru my belly button I guess that my Mommy can't see my dream..and I eat my oatmeal it gets all sticky and yeucky.
   A possible meaning: if his mother can't see the raisins from his oatmeal once they are inside him, then she can't see his dream since it is inside him.

Thus even children at a very young age can use the same type of thought pattern to justify the conceptions of different stages of dream concept development.

Use of different levels of thought by children in the same stage of dream concept development. Children in the same stage of dream concept development often display widely varying levels of thought.

Children in Stage 2C for example, could be very egocentric, by very concrete, or attempt to use more logical forms of thought (even when these were not entirely successful).

Examples of egocentric thought were given by Owen (aged 41 months). When asked where he was when he had his dream, he replied: "I go where I want to." Similarly, Wendy (aged 57 months) was asked why we dream and responded: "cause if you didn't dream and you wanted to dream, then you couldn't."

Concrete thought was evidenced by Owen, in the oatmeal example reported in the previous section, and also by Tom (aged 59 months). Tom was presented with a counter-suggestion:

> (Another boy told me that his dream was in his room.. could that be?) A bee could be in his room (Yea, but could a dream be in his room?) no..but a little tiny bee could be.

Tom also believed that the dream couldn't be touched "cause it's bad." He believed that the dream would move in your blood to different parts of your body if someone else tried to see it.

The oldest child in the group, Jim (73 months), gave quite different answers:

> (...Can you touch a dream?) no (and tell me the reason.) Cause um you couldn't put your finger inside of your eye. (No, you couldn't could you. Um..Let's pretend your Mother left your eye open--from the preceeding internal visibility question--Then could you reach in and touch your dream?) yea.

Thus it is apparent that just as children can be in different stages of dream concept development and use the same level of arguement, children within the same stage vary in the level of thought displayed in the justifications of their answers.

Evidence that Immateriality and Reality are not Unitary Concepts for Preschool Children

Kohlberg (1966) developed a Gutman Scalogram and asserted that children from the ages of 4 to 8 years of age which indicated that children develop an understanding of the various aspects of the dream in a fixed order. The order he found was understanding that the dream was: 1) not real; 2) invisible to others; 3) from an internal origin; 4) at an internal location; 5) immaterial; and 6) self-caused. While this order may hold with the other children who comprised the majority of Kohlberg's sample, this study indicates that in preschool children the development of the dream concept is not so straightforward. First of all, only the most advanced children seemed to be able to relate to questions concerning the origin of the dream, which will be considered in more detail in the Discussion Chapter. In addition, there was clear evidence that most of the children learn early in the development of a concept of the dream that it is not real in the same way as everyday events, but the meaning of "not real" was very different for these children than for older children or adults. In addition, it was apparent that preschool children developed a comprehension of the immateriality of the dream gradually, in stages, rather than at a single point in the development of the dream concept. These two findings will be discussed in greater detail in the following section.

Evidence that the Meaning of "Not Real"
Develops Gradually in the Preschool Child

Although some children state that a dream is pretend as early as Stage 1, some of the Stage 2C children in the sample still stated that the dream was real. Children attributed various contexts to this question, such as the little boy who spontaneously stated that when he drew his dream it was a "really good drawing". Many preschool children had learned from their parents or siblings that the dream is pretend, but that they were far from sure of this fact themselves (the protocol of Karen, p. 128, is an example). Early in the development of the dream concept children did begin to understand that the dream was not real in the same sense that concrete objects surrounding them during the day were real. Due to the illusion of the dream, however, they were unable to resolve their experience of the dream as a real, often intense event, and the fact that others judged it not real, and did not see it. Therefore, even when the children knew that the dream was make-believe, they attributed many qualities of a real object to it, such as concrete location.

That the meaning of "not real" is not fully developed for most children in the early stages of dream concept development is indicated by the fact that only a few of them were able to use it as a justification for invisibility to others or inability to touch the dream. There was an abrubt shift in this respect with the children in Stage 3 AB, most of whom used the pretend status of the dream to fill an explanatory

function. Thus, although the fact that the dream is "not real" is usually one of the first things a child learns about the dream, this concept does not become fully meaningful or integrated into his overall concept of the dream until he reaches Stage 3AB.

Evidence that Immateriality may not be a Unitary Concept for Children between the Ages of 3 and 5

Some of the children in this study evidenced a partial awareness of the immateriality of the dream long before they reached Stage 2C. This raised the possibility that immateriality was not a unitary quality for these children. It is clear that immateriality could be considered to have several component parts: insubstantiality; invisibility, and the lack of a concrete, finite location.

Some children seemed to be aware of the insubstantiality of the dream while still in Stage 1. As was already quoted, when asked what a dream felt like, Dean (Stage 1) replied: "Here's my shadow, here's your shadow." He obviously knew that the dream was insubstantial, but as other parts of his protocol revealed, he still thaought that it had a concrete location in the room, as a shadow dies. Sam (Stage 2A, aged 53 months) also thought that a dream was external and yet reported that it was made of light and could not be touched because it was imaginary.

All of the children through Stage 2C, however, who were sufficiently questioned on the subject evidenced traces of materiality. Especially

with children in Stage 2C, a child might indicate that the dream was attributed a degree of materiality in only one of the several questions pertaining to the subject.

It was also interesting to note that many of the children knew at an early age that the dream was invisible to their parents but were unable to give a justification for this invisibility, or gave a justification relating to their parents (for example, their eyes weren't shut). As they grew older, many of the children began to state that the dream shifted locations in order to avoid being seen (Tom was an example). Thus, they seemed to be associating two aspects of the immaterial nature of thought together, using a lack of maturity in one aspect of immateriality to justify the other aspect.

DISCUSSION

The Discussion Chapter will be divided into three sections. The first section will deal with the findings and implications of the Quantitative Results. The second section will discuss several topics relevant to an understanding of the major finding in the Qualitative Results, the presence of children exhibiting the selective internalization of either the good or the bad dream. The third section will deal with additional findings related to: 1) the need to consider reality and immateriality as concepts which gradually develop meaning with respect to the dream; and 2) the continuity of development.

Discussion of the Quantitative Results

The topics which will be considered in the discussion of the Quantitative results are:

1. The feasibility of interviewing preschool children on the emotionally charged topic of the dream.

2. The characteristics which distinguish the good dream from the bad dream for the preschool child.

3. The presence and meaning of the tendency of preschool children to conceive of good and bad dreams as having different concrete locations.

The Interviewing of Preschool Children on the Dream Concept

The feasibility of this study depended upon the possibility of interviewing three to five year old children on their conception of the dream. Laurendeau and Pinard (1962) had developed a standardized procedure for determining the stage of dream concept development, but reported difficulty in using their technique with children younger than five years of age. Fully half of the one hundred four to five year old children they interviewed with their method displayed no understanding of the dream concept, or had such an emotional reaction to the topic that the interview had to be terminated. Other researchers (Kohlberg, 1966/1968; Foulkes, 1969) reported interviewing small groups of preschool children on the dream concept, but were not explicit in their discussion of the method used or of difficulties encountered.

The first task for this investigation was consequently the development of a Dream Concept Interview for preschool children and the demonstration that children of this age could tolerate such a semi-structured procedure and did have a concept of the dream. The next step was to demonstrate that the resulting interviews could be reliably assigned to stages of dream concept development.

The interview designed for administration to preschool children differed from Laurendeau and Pinard's in three major respects. First of all, a special effort was made to use linguistic forms comprehensible

to children in this age group. Second, the topic of the location of the dream was approached using several different modalities. This permitted the repeated discussion of this aspect of the dream while minimizing the child's tendencies to consider his previous view wrong, to become frustrated because he felt misunderstood, or to become bored with the proceedings. Using this method, a more complete understanding of the child's conception of the dream was possible than if this topic had been discussed only once. Third, careful attention was given to helping the child manage his anxiety. Some of the measures which proved useful in this respect were: the use of a familiar, non-threatening adult to administer the interview; permission to use some digressions and physical movement to discharge tension; and emotional support and recognition of the difficulty of the task. With modifications in these areas, 41 of the 43 children who consented to be interviewed were able to tolerate the anxiety associated with discussing the affectively-charged topic of the dream. All of these children manifested some comprehension of what a dream was, although not all of the children were able to discuss every aspect of the dream concept covered in the interview.

A Scoring Manual was developed which included a discussion of the special considerations involved in interviewing preschool children and in interpreting their protocols. The particular manifestations of preoperational thought which could produce ambiguity in the classification

of the interviews were discussed with regard to each specific stage of the dream concept development. The adaptation of the interview and the development of a specific scoring manual for the classification of the protocols of preschool children resulted in a high degree of reliability in the assignment of children to a particular stage of dream concept development.

The development of the interview procedure and the Scoring Manual also permitted preschool children to be reliably assigned to a specific level of the Continuity Scale. The Continuity Scale partitioned each stage into three levels so that a child could be classified as entering a stage, fully characteristic of a stage, or beginning to leave a stage. The ability to make such fine discriminations opens the possibility of longitudinal studies charting the fluctuations in conceptualization which Piaget considers a normal part of development before the equilibrated form of a cognitive structure has been attained. In this study the Continuity Scale permitted the examination of the protocols of children in the transitional stage for individual patterns of fluctuation in the course of the interview. This added an entirely new dimension to the study than had been anticipated in the formulation of the hypotheses, since we could now examine how stable the selective internalizations appeared to be and also whether they were syntonic with further cognitive development or seemed to exert a regressive influence on conceptual development.

Characteristics which distinguish the good dream from the bad dream in the preschool child. One of the major premises serving as a basis of this study was that the child associated the good dream and the bad dream with different emotional experiences. Although many anecdotes substantiate this fact, this study sought to experimentally investigate how ubiquitous the characteristics defining each type of dream were for preschool children and whether the children's conceptions of the defining characteristics varied with age.

As was indicated in the results section, the adjectives which were clearly associated with the good dream were: nice, pretty, happy, sunny ($p = .001$) and to a lesser entent silly, closer to you, near your house, and strong ($p = .05$). The adjectives associated with the bad dream were sad, scary, mean to you, and dirty ($p = .001$).

Thus it is apparent that the good dream is associated with positive emotions while the bad dream is associated with negative emotions. A factor analysis could not be run on the Connotation Questionaire as there were only two degrees of freedom (good or bad). However, if we assume that the Connotative Questionaire would have the same underlying factors as the Semantic Differential test from which it was derived (Osgood, Suci, and Tannenbaum, 1957), and that the factors would be described by the same adjectives, then we can state that the good dream is associated with positive evaluation (pretty, sunny, nice) while the bad dream is associated with negative evaluation (dirty, mean to you).

In addition, the good dream seems to be associated with physical proximity, as it is significantly more likely to be judged as "closer to you" and "near your house" than the bad dream. In considering the meaning of this finding, one must remember that in the Connotation Questionaire children were placed in the position of making a forced choice. They were not asked: "is one type of dream closer to you?" Instead, the implicit assumption was made that the good and the bad dream had different locations, and the child was asked: "Which is closer to you, the good dream, or the bad dream?" The question is thus similar in some respects to a projective test in which the child is asked "Which would you _like_ to have closer to you?" A significantly greater number of children responded that the good dream was closer to them than would be expected by chance. This may consequently be interpreted as an indication that the _wish_ to distance the bad dream, which is associated with negative affects is fairly common when the child is given this option.

It is interesting to notice that while there is a range in the level of significance with which adjectives associate with the good dream, this is not true of the bad dream. With the bad dream, adjectives were either highly significantly associated with it, or did not reach significance. In other words, no adjectives were only moderately associated with the concept"bad dream" (at the $p = .05$ level). One can speculate whether this, too, is an indication that children this age are still struggling with the integration of bad and good. This

could be indicated by the fact that there are degrees of goodness, but adjectives are either very highly associated with the concept of the bad dream or are unrelated. In other words this may be a reflection of the failure of children this age to consider "bad" to be a matter of degree, and their tendency to isolate it from other concepts.

It is also important to note that the characteristics associated with the good and the bad dream were independent of age, sex and stage of dream concept development.

The Presence and Meaning of the Tendency of Preschool Children to Consider the Good Dream and the Bad Dream to Have Different Locations

One hypothesis of this study was that preschool children would tend to consider good and bad dreams as having different concrete locations. This hypothesis was confirmed in that 72% of the children in this study who were below Stage 3AB considered the good and the bad dream to have different locations in at least one point in the interview.

The generation of this hypothesis was based upon the speculation that the need to internalize the good and the bad dream would activate the schema that the child had used in attempts to deal with emotional conflicts requiring the integration of positive and negative affects toward the same object. Such situations exist, for example, in the development of a tolerance for ambivalence toward loved ones and in the development of a sense of positive self-esteem despite periodic

transgressions. In both of these situations, neo-Freudian psychoanalytic theory assumes that the child initially attempts to isolate the positive and the negative emotional experiences, integrating the "good" as part of the self and projecting "bad" experiences upon the environment, by using the mechanisms of splitting and projection. Assuming that the need to integrate the good and the bad dream as internal to the body activates the same mechanisms would, indeed, account for the tendency of preschool children to conceive of the good and the bad dream as having different concrete locations.

It must be noted, however, that this tendency could be independent of the activation of ambivalence in the child. It could be, for example, an indication that the child had not yet developed the idea that good and bad dreams are both forms of the same phenomenon. If the child still views the good dream as a totally separate phenomenon from the bad dream, then there would be no logical constraint to consider them as occurring in the same physical location.

An Explanation of the Selective Internalization of the Good Dream or the Bad Dream

This study confirmed the existence of the stages in dream concept development which were found by Piaget. Some of the children in the current sample considered the dream to be internal, some considered it to be external, and some children were transitional, attributing both internal and external elements to the location and origin of the dream in the course of the interview. This section of the discussion examines the possible role of ambivalence in explaining the individual patterns of internalization found in the transitional period, in which the children selectively internalized the good or the bad dream while considering the other to be external. Examining the role of ambivalence in explaining these patterns of individual variation, however, requires an appreciation of the meaning of the dream experience for preschool children and the role of symbol formation in preoperational thought. These topics will be briefly covered, followed by a consideration of the role of ambivalence in explaining the patterns of selective internalization observed and a discussion of the possible origins of the ambivalence.

The meaning of the dream experience for preschool children. Before discussing the meaning of the patterns of selective internalization, it is appropriate to say a few words about the children's reactions to the interview and their apparent relationship to the dream experience itself. Many of the children seemed to find the opportunity to discuss a particular dream and the phenomenon in general a meaningful experience. It

is doubtful that any of them had ever considered the dream as comprehensively as they did in the interview, since one of the characteristics of preoperational thought is a difficulty in systematically considering all of the different aspects of a phenomenon. Most of the children were anxious at some point in the interview, as new aspects of the dream were brought into focus for them, or disturbing aspects of the dream were considered. Piaget (1974) has noted the effort involved in the act of making conscious one's beliefs, and this effort was apparent in many of the interviews with the children. Both the anxiety and the effort involved were especially clear with transitional children(Stage 2A or entering or leaving Stage 2B), who were aware on some level that they were confused by the dream, and were troubled by this confusion. Once the children had been helped to overcome their anxiety, and encouraged to make the effort to become conscious of and express their beliefs about the dream, they seemed to find the experience significant. Many of them repeatedly sought the interviewer out, asking to be interviewed again. They did not seem to be bored at the prospect of being interviewed on the dream a second or even a third time. The dream was obviously of some importance to them.

The relationship the children had with the dream seemed quite complex, and some aspects of it clearly varied from child to child. Most of the children took the dream phenomenon as an unquestioned "given" in their lives. For this reason, most of the children considered the

questions on where a dream came from and who sent them to be irrelevant. Similarly, only a few of the older children had reached the point of wondering "why" we dream and were able to answer that question. For most children from three to five years of age, dreams simply happen. They are not concerned with the cause of the dream, but with the nature of the dream, i.e., the presence of good dreams and bad dreams.

The dreams told to the examiner varied greatly in terms of both the good/bad nature of the dream, and the degree to which the dream was commonplace, or contained unrealistic elements. A few of the condensed themes of the dreams are given in Table 7. The feelings associated with the dreams also varied, ranging from confusion and fear, to sadness, to excitement or pleasure. Some of the children obviously had positive attitudes towards dreams in general, while others were apprehensive. Several children commented that they dreamed every night, or "all the time" while a few initially claimed that they never dreamed although they had a concept of the dream.

Thus, there was a wide range in the children's attitudes toward the dream. They varied in the amount of anxiety displayed during the interview, the frequency with which dreams are remembered, the types of dreams reported, and the intensity and nature of the affect associated with the dream. For many of the children, however, discussion of the dream concept with a supportive adult who tried to understand their viewpoint seemed to be a significant experience.

Table 7

Examples of the Contents of Dreams Reported

Themes Have Been Condensed.

1. Eyes, open eyes which get chased away by a bird.

2. Playing with a friend on the swings at the friend's house.

3. Getting thrown off a train into the ocean. Being swallowed by a whale and squirted out his hole. Being swallowed by a giant clam, and hitting your way out.

4. Visiting Grandparents in Florida.

5. Having the same Holly Hobbit towels as a strange man at the swimming pool.

6. Getting taken by a monster, and tied to a train track. The train runs over you. Then your mother comes and takes you to her bed. You stay there all night. (Unclear where dream ends for the child in telling of it).

7. Bad guys are keeping your mother in the kitchen and you in your bedroom. You want to go to the kitchen. The bad guys won't let you.

8. A clown's birthday party. The clown gets kicked by a sheep. The clown cries, and the clown's mother puts on a bandaide.

9. Sliding on the slides of the game "Chutes and Ladders".

10. A man comes into the nursery school and shoots out of red fingers and scares everyone. And the teachers are scared too.

The role of symbol formation in preoperational thought. The literature review stressed the need for the preoperational child to re-establish on the symbolic plane many of the accomplishments he had achieved on the physical plane during the sensory-motor period. When the child develops symbolic functioning, he must again learn to distinguish real from fantasy. Having just learned the dimensions of physical reality, the child must now learn the dimensions of symbolic reality - a complicated task.

Piaget believes the child initially conceives of the world as an extension of his actions. There is a fusion of self-object-world. This is in concordance with the initial phase of undifferentiation postulated by psychoanalytic writers. When the child first develops the ability to use symbols, a similar fusion exists. The child is initially unable to differentiate the elements of the Symbolic Complex, i.e., the thing being symbolized, the symbol, and its effect on himself. Kohlberg (1966), for example, tells of a 2 1/2 year old child who half joked but was fearful of the picture of a bee in a book. The little girl was afraid that the sign of the bee had all of the properties of the real bee and could sting her. Although children quickly learn that pictures do not have the attributes of the real object, this lack of differentiation persists much longer in other situations. Kohlberg also reported that a 4 year old became confused over the identity of a cat she had been playing with when the mask of a ferocious

dog was placed on its face. She was now afraid to pet it, and verbalized her confusion over whether it was a cat or a dog. Thus the child felt that the sign of a dog, if applied to a cat, could actually change the nature of the animal. Although the child had established identity of self and objects on a concrete level in the sensory-motor period, in the preoperational period she must learn the possible effects of symbols on the object being symbolized and the person using the symbol. The dream provides a similar situation in which the child must learn to distinguish symbol and reality.

In developing a concept of the dream, the child is thus forced to confront the nature of the symbol, with both its integrating and differentiating properties. As was discussed in the review of Piaget's theory, the symbol unifies different sensory-motor schema dealing with the same object. This unification often involves the integration of schema with disparate affective components. The free excitement of rolling a ball, for example, becomes unified with the strain of reaching for it under a sofa. But the symbol itself must become somewhat dissociated from the affect it evokes in a particular context. This dissociation is accomplished in part through the child's increasing differentiation of the object and the symbol, and in part through the integration of the different affects associated with the symbol. The dream, however, represents a situation in which these distinctions are particularly difficult to make. By virtue of the nature of the dream the child is unable to compare the symbol and the "object" it represents.

In addition, one of the objects being represented in the dream is often the child himself, who simultaneously experiences real and often intense affects. The apparent illusion of the dream thus provides a situation in which distinguishing the symbol, the object being symbolized and the affect it provokes, is especially problematic.

Formation of a mature dream concept thus involves development along several interrelated dimensions. These dimensions include: the differentiation of symbol, signified, and the affect evoked in the person using the symbol; the distinction between fantasy and reality; and the recognition that good and bad dreams are different forms of the same phenomenon.

The role of ambivalence in explaining the selective internalization of the good or bad dream. This study initially hypothesized that in the course of developing a conception of the dream children would pass through a transitional stage in which they selectively internalized the good dream, i.e., considered it to be internal while the bad dream was considered to be external. The results of this study indicate that this is not the case. Six children, at some point in the interview, considered the good dream to be internal, while the bad dream was external, but three of the children also displayed the opposite pattern, considering the bad dream to be internal while the good dream was external. Thus the internalization of the good dream and externalization of the bad dream is not one of the normal developmental stages of dream concept development.

The question then arises; what distinguishes children who selectively internalize the good dream from those who selectively internalize the bad dream? This section will investigate whether the degree of ambivalance expressed in the formation of the dream concept distinguishes the two groups of children. It will focus on whether there is evidence in the qualitative analysis of the protocols to indicate that children selectively internalizing the good dream display a greater degree of ambivalence. If this is the case, we may look for indications of ambivalence toward the dream in the interviews which parallel the expressions of ambivalence toward a libidinal object which appears in the relationship with that person.

In psychoanalytic theory, the presence of high levels of ambivalence is commonly associated with difficulty in separation and differentiation from the libidinal object of the ambivalence. This has been clearly demonstrated in the difficulty of ambivalent children in separating from their mothers and becoming autonomous. Here, then, we ask whether there is evidence of a similar difficulty in separation with respect to the dream concept in children manifesting either of the two patterns of selective internalization.

In the preceeding section we spoke about the need for preoperational children to learn to differentiate the symbol, the object being symbolized and the affective state evoked in the person using the symbol. The children who selectively internalize the bad dream seem to be cognitively more advanced than those children selectively internalizing the good dream in making precisely that distinction. The children who selectively internalize the bad dream while continuing to consider the good dream to be external do so in order to confirm for themselves that the bad dream is not real. Their differentiation of the symbolic complex seems to have proceeded in two areas. First of all, they have begun to differentiate themselves from the experience of the dream. Their sense of self is sufficiently secure and unambivalent that they can tolerate the idea of internalizing a source of negative affect (the bad dream) without a severe threat to their self esteem. This permits them to establish the cognitive permise that <u>if</u> the dream is internal <u>then</u> it must be pretend. Second, they are beginning to differentiate the symbol from the thing being symbolized. With this differentiation, they are able to use the "pretend" status of the dream to decrease the dream's emotional potency.

They are able to imbue the concept of "pretend" with the ability to neutralize the emotional impact of the dream upon themselves. Thus, these children use the internal nature of the dream to support the lack of reality of the dream and emotionally distance themselves from it. Despite moving the location of the dream within their physical boundary, they are able to use this shift in order to create a psychological boundary between themselves and the dream. Although the bad dream still evokes a negative affect in them, they are developing the capacity to differentiate themselves from the dream experience and distance themselves from their emotional reaction to it.

Children who internalize the good dream first, however, display a lack of differentiation bwtween the symbol, the object it symbolizes, and their affective reaction to it. In their protocols they evidence the belief that the closer the dream comes to them, the greater its emotional impact on them. This effect is particularly pronounced as the dream enters their body. For these children, physical distance and the ability to maintain psychological distance are correlated. They become "fused" with the experience of the dream, almost as if the crossing of the body boundary created a sort of symbiosis between themselves and the dream. It must be recognized, however, that the structure of the dream contributes to this fusion or symbiosis. For simultaneously, in the dream experience, the child is in the dream and the dream is in the child.

The illusion of the dream thus favors the dissolution of a differentiated sense of self and symbol.

The parallel between the effect of ambivalence upon the child's ability to separate and differentiate from the mother and his ability to separate and differentiate from the dream concept can be further clarified. As ambivalence toward the libidinal object decreases, the child is able to maintain an inner representation of the object which is associated with a relatively invarient affect. In other words, the child is able to achieve "libidinal object constancy" as Mahler uses the term. This achievement is linked with three primary developments (Pine, 1974): 1) the ability to use the internal representation as a source of comfort in times of separation; 2) an increased ability to be an autonomous and differentiated individual; and 3) neutralization of the affects associated with the object, as both rage at the mother and longing for her become moderated in intensity. In the symbolic realm, as ambivalence decreases, the child may selectively internalize the bad dream. The resulting conception of the dream is linked with the following achievements: 1) ability to use the concept that the dream is pretend to comfort himself; 2) increased ability to separate and differentiate the elements of the sumbolic complex (symbol, the event being symbolized, and the affect aroused); and 3) neutralization of the intense affect associated with the bad dream, as the child develops the ability to distance himself from apparent participation in the events of the dream. Thus there is a similarity between the effects of reduced ambivalence with respect to libidinal objects and reduced ambivalence with respect to the dream concept. Differentiation of the symbolic

complex is associated with internalization of the bad dream, which would support the assumption that they are related to the presence of a relatively low level of ambivalence.

The other characteristic often associated with ambivalence which is displayed in the protocols of the children internalizing the good dream is a tendency toward vascillation. In the area of object relations, ambivalence is related to one of two stances. Some children display rapid shifts, identifying the person first with "good object" and then with the "bad object". Other children react to high levels of ambivalence with excessive rigidity and denial. Each of these characteristic patterns was displayed by one of the children differentially internalizing the good dream for whom there was clear evidence of ambivalence in their dreams and in their everyday behavior. Hannah was rigid in her aviodance of confronting the question of whether the bad dream was internal or external. Billy, on the other hand, vascillated from one position to another. First he considered the good dream to be internal and the bad dream to be external. Then, while being questioned on visibility of the bad dream in the room, he seemed to recognize a contradiction and internalized the bad dream. Almost immediately thereafter, he attempted to externalize the good dream, as if unable to tolerate the physical proximity of the two types of dreams. When Billy was able to internalize both dreams, he began to wonder whether the bad dream could be real.

Although Billy's case was the most extreme, vascillation was noted in the protocols of all of the children who selectively internalized the good dream. If they started with both dreams internal and then externalized the bad dream (Group III), they then re-internalized the bad dream. If they started with both types of dreams external, and internalized the good dream, they then would proceed to internalize the bad dream also (Group I). This was in direct contrast to the children internalizing the bad dream, who never considered whether the good dream could also be internal. Thus the presence of vascillation seemed to be specifically associated with children who selectively internalized the good dream.

It should be noted that the vascillation of these children also indicated a partial awareness that the good and bad dream are different manifestations of the same phenomenon. This, too, is consistent with the nature of ambivalence. The infant, for example, has no difficulty hating the bad mother and loving the good mother. It is only when he begins to suspect that the two are in fact the same person that ambivalence appears. Similarly with the dream, the vascillation exhibited by the children who selectively internalize the good dream could be interpreted as an indication that they recognize on some level, that the good and the bad dream relate to the same underlying concept.

The presence of vascillation raises the question of the long term effects of high levels of ambivalence upon cognitive development. In cases such as Billy's, for example, ambivalence produces not only

vascillation, but when he finally internalizes both dreams, his ability to know that the dream is in some sense "pretend" becomes weakened. Since this is the earliest accomplishment in the development of the dream concept, one begins to seriously worry about Billy's capacity to develop an integrated dream concept. Even with the other children, however, the vascillation produced by ambivalence seems to intoduce a factor which could slow development. Ambivalence seems to exert a continuing pressure for the child to externalize the dream, and thus exerts a regressive force upon the child's attempts to form a mature concept of the dream. One may speculate that this force may result in a slower rate of dream concept development in children who are ambivalent and internalize the good dream before the bad dream.

Possible Sources of the ambivalence displayed in the formation of the dream concept. If we accept the proposition that the selective internalization of the good dream or the bad dream is the result of differing levels of ambivalence, the source of the ambivalence becomes a question. There seem to be three possible origins of the ambivalence. The first is that the children in this study could be responding to the questions about the good and bad dreams in terms of their overall conceptions of good and bad. In this case, one would expect them to exhibit ambivalence if this was a difficult issue for them in their life. The second possiblity is that the children are responding in a more specific manner to the concepts of "good dream" and "bad dream." In this case the differing levels of

ambivalence might be related to the specific dream experience they have had, and the support their parents were able to give them in dealing with dreams. The third possible origin of the ambivalence is the thinking and talking about the good and bad dream initiates a regression in some children, and disrupts their tenuous integration of the concepts.

Although the current study is unable to definitively analyze this question, there is evidence in the current study that several of these mechanisms may contribute to the ambivalence displayed toward the dream concept in the course of the interviews. It seemed likely that some children had such difficulty with integrating "good" and "bad" in their lives in general, that they were unable or unwilling to do so with respect to the dream. This was clearly the case with Hannah and Billy, the children in Group II. The same mechanism may also be exerting a more subtle effect in other children whose ambivalence was not so massively displayed. Barbara, one of the children in Group III, for example, displayed a great deal of separation anxiety with her mother and Jean, in Group I, was a quiet child whose brother and parents were clearly involved in an ambivalent relationship. One may speculate that other children also had sources of ambivalence from their general lives influencing their development of the dream concept. The experience of the dream itself, however, is also a powerful source of potential ambivalence. Some of the children were obviously very frightened by their experiences with the dream, to the point where several were slightly apprehensive about the possibility of dreaming. In addition,

one may wonder whether the children who initially internalized both the good and the bad dream, but externalized the bad dream on the Concrete Localization Task (Group III) were not experiencing the disruption of their integration of the good and bad dreams due to the interview. It may well be that the discussion of the location of the dreams and particularly responding to the item on the Connotation Questionaire which asks "Which is closer to you," and "Which is far away", may have awakened the desire to externalize the bad dream. This desire may then have disrupted their previous integration of the concepts.

The question of the origin of the ambivalence toward the dream was not determined in this study. It seems clear, however, that there are several potential sources of ambivalence, and that more then one of them may be operational in the interviewing of a particular child.

Additional Findings

There are two major additional findings of this study. These will be considered in the following order:

1. The need to consider immateriality and reality as developing concepts rather than unitary factors in preschool children.

2. The confirmation of the continuous nature of development on the basis of the Continuity Scale.

The Development of the Concepts of Reality and Immateriality in Preschool Children

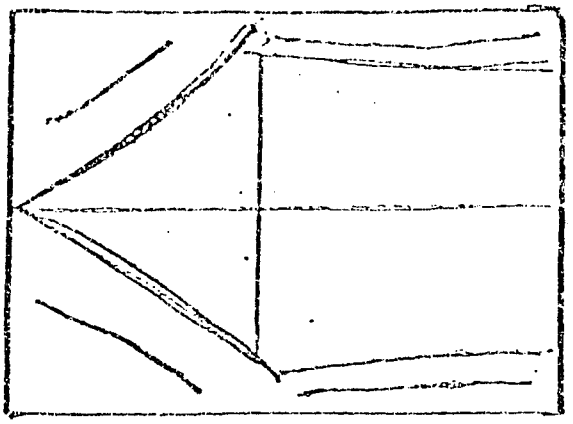
This study has presented evidence that the concepts of reality and immateriality only gradually develop meaning for preschool children. As a result they should not be considered as unitary factors, in children this age, but may better be conceptualized as developmental lines.

The concept of reality begins to develop in most children early in their formation of the dream concept as they learn that other people do not consider the dream real, and find that the dream does not have all the properties of everyday reality. They are unable to comprehend the full meaning of the illusion of the dream before Stage 3AB, however, Until that time they continue to attribute to the dream many of characteristics of the real object or event: a specific location, and a partially material nature. Thus, reality vis-a-vis the dream is a concept which only gradually assumes a functional meaning for the child.

Immateriality is also a concept which only develops in preschool children. There seems to be considerable variation in the age at which the child begins to develop a recognition that the dream is immaterial in some respects, with some children evidencing partial awarness as early as Stage 1. None of the children, however, seem to fully master the concept until Stage 3C, after the dream has become securely internalized. The concept of immateriality seems to have several components, whose relationship could be further investigated. These components are: insubstantiality, invisibility, and lack of a specific, circumscribed location.

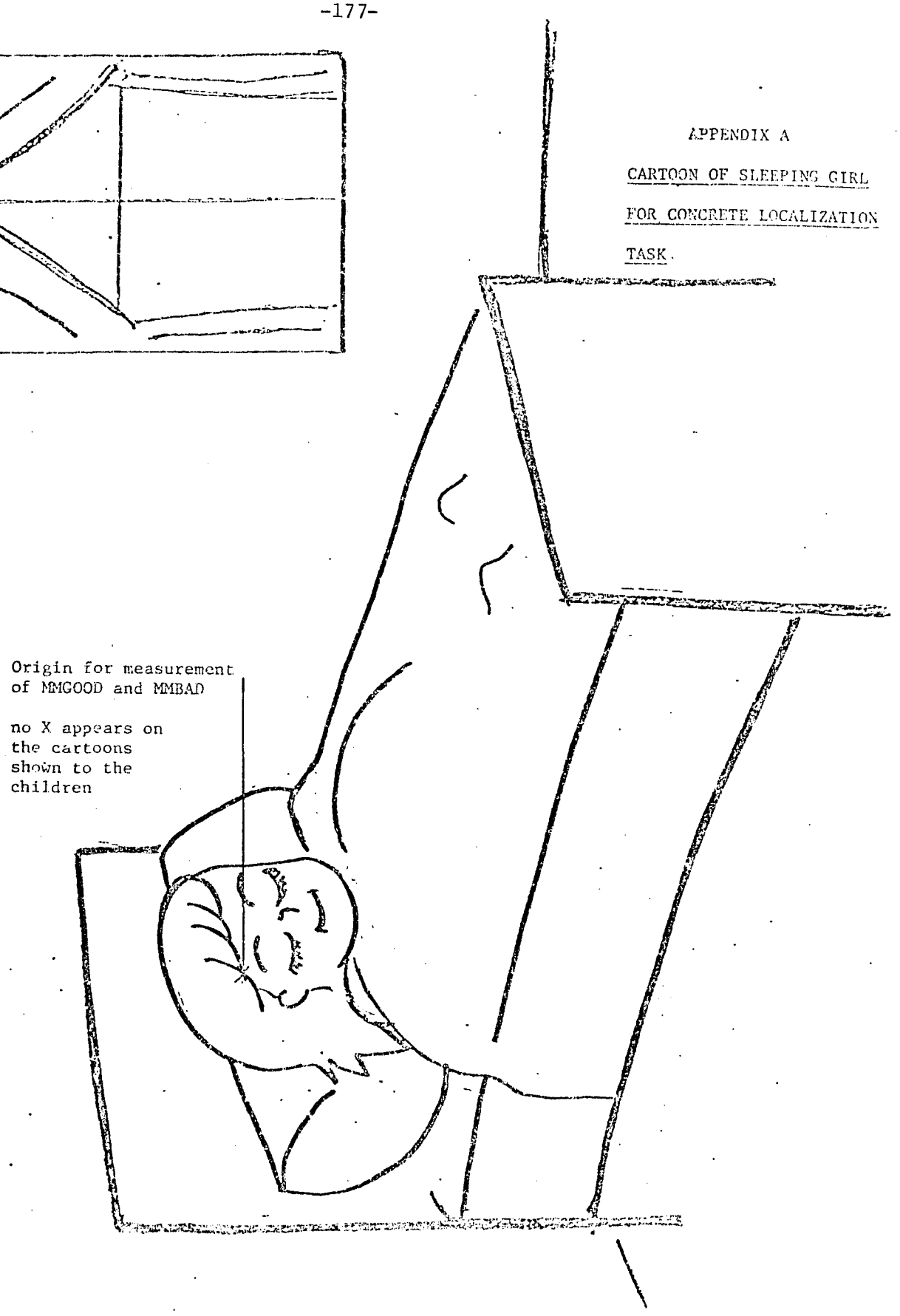
The Continuity of Development

The current study offers additional confirmation of the continuous nature of cognitive development. Age and Stage evidence a high correlation. But, in addition, the high reliability with which children could be placed on the Continuity Scale indicated that until Stage 3AB, the development of the dream concept is a gradual, continuous process. The development of Stage 3AB differs from the development of the other stages. Achievement of this stage builds upon the acheivements of the other stages, but the development of an equilibrated structure with respect to the dream concept makes this stage discontinuous from the other stages. Only at this point is there evidence that all of the various aspects of the dream have become interrelated, so that the child understands, for example, that lack of materiality is one manifestation of the unreal nature of the dream.



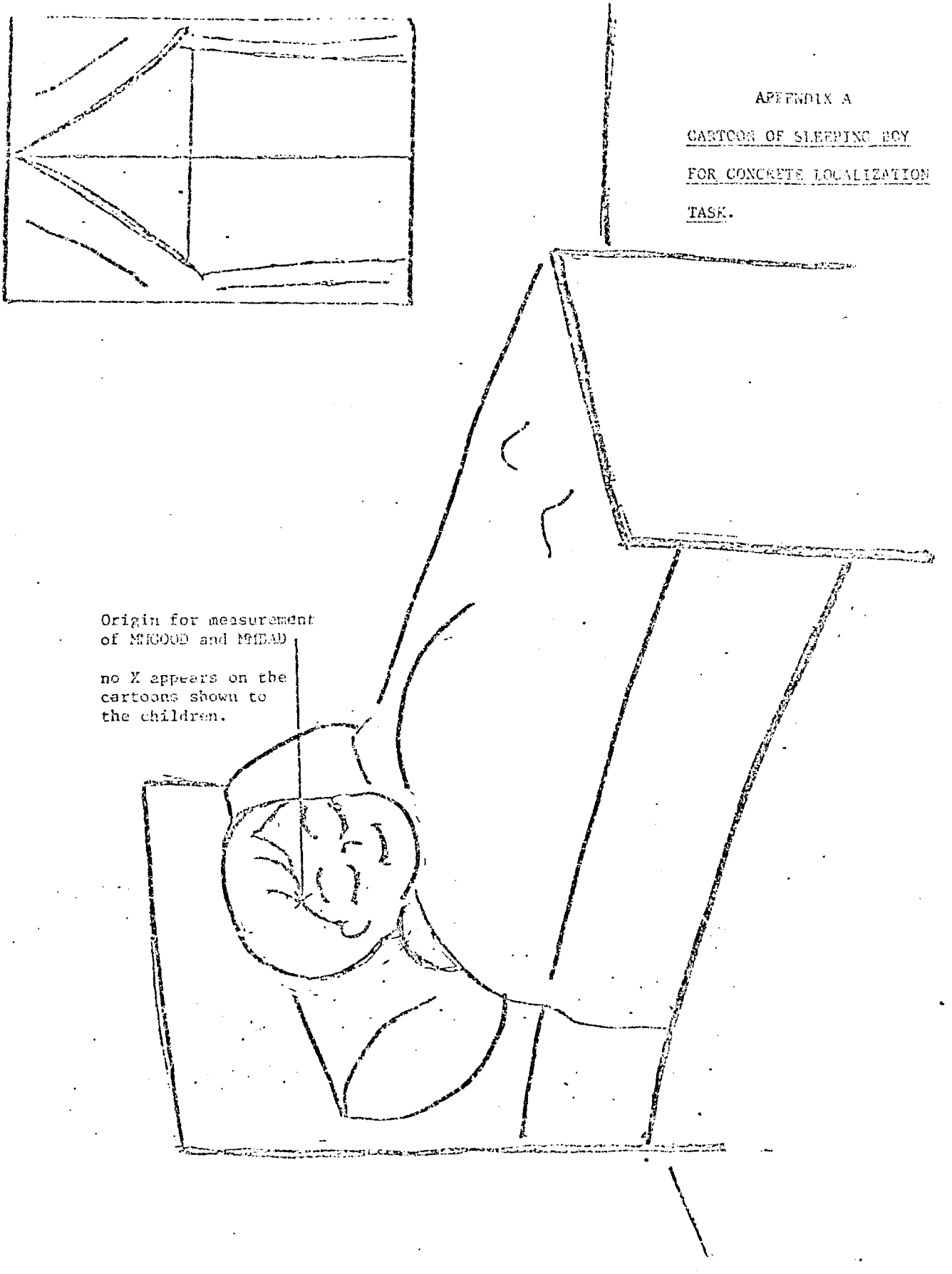
APPENDIX A

CARTOON OF SLEEPING GIRL FOR CONCRETE LOCALIZATION TASK.



APPENDIX A

CARTOON OF SLEEPING BOY FOR CONCRETE LOCALIZATION TASK.



APPENDIX B

OUTLINE OF INTERVIEW:

I. DREAM DESCRIPTION:

1. "Do you know what a dream is?"
   IF NO: "Did you ever have one?"
   "Everybody dreams sometimes; I bet you have sometimes too."

2. "Can you tell me a dream you've had?"
   If child is young and says he can't tell a dream, ask, "Who was in your dream: what did he do?"
   ENCOURAGE FULL REPORT: "and then?", "go on," "more..."
   For 5's, "what else?"

3. INQUIRY:

   A. Ask about unclear story lines using:
      for 3 year olds: "Who," "what," "where," questions
      for 5 year olds: "when," "how," questions
      AVOID "why" and "because" and "if" questions with all but the most advanced linguistically.

   B. "Was that a good dream or a bad dream?"

II. DREAM CONCEPTUALIZATION:

"Okay, you did quite a job, telling me your dream. Now I have some other questions for you."

1. REALITY: "When you have your dream...Is it real or make-believe?"

2. ORIGIN: "Where do dreams come from?" "Who sends dreams - is it you or somebody else?" "Who makes it up?"

3. LOCATION:

   A. General: "When you have your dream, are you in bed?"
      "When you have it, where is your dream?"
      ASK FOR SPECIFIC LOCATION

      1. If the child gives the site of action of a specific dream, let him tell the dream and then ask, "are you still in your bed when you have your dream? Where is the dream? -Is it in the room or in you?"

2. If the child responds by talking about the site of dreams in general, ask, "are you still in bed while you have a dream? Where is the dream; is it inside of you or in your room?" If necessary, question more at the end.

B. Good dreams versus bad dreams:

"When you have a good dream, where is it?"
"And what about a bad dream, where would a bad dream be?"
If the child is young include an example of a dream; for example, a good dream is of "playing," and a bad dream is of a "monster."

4. VISIBILITY:

A. ALL children: "Let's pretend. Pretend it's night time and you're asleep in your bed. You're having a dream. Now your Mommy comes in. Does she see your dream?"

1. If child says mother does NOT see the dream: "Now tell me the reason."

2. If a concrete reason is given that the mother can't see the dream, ask what would happen if the objection is overcome.
Use the present tense: EX: "Let's have her shut her eyes. NOW can she see it?"

B. If child thinks dream is internal: "Now let's pretend your mother can open up your(internal location) and look inside. While you're dreaming, just for pretend, she can't really, right? Pretend your Mommy did look inside your (internal location); Now can she see your dream?"

Again ask questions 1 and 2 from Section IV A.

5. TOUCH: ASK ONLY IF CHILD CONSIDERED THE DREAM TO BE INTERNAL AND INVISIBLE:

"What is a dream made out of?"
"Can you touch a dream?"

6. FOLLOW-UP: ASK ONLY TO CHILDREN WHO CONSIDER THE DREAM TO BE INTERNAL AND INVISIBLE:

"Why do we dream?"

III. CONNOTATIVE QUESTIONAIRE:

"Now I have something new for you to do. Tell me, which is (adjective), a good dream or a bad dream?"

1. If child responds "both," ask "which is more ____?"

2. If child responds "neither" ask "which is just a little_____?"

3. Adjectives: stronger...dirty...sunny...little...closer to you... feel sad...tired...near your house...mean to you...pretty... hot...foggy...silly...bigger...fast...cold...scary...far away from you...happy...cloudy...nice...

IV. CONCRETE LOCALIZATION TASK:

1. MARKING OF THE DRAWINGS

   A. Present drawings of a child of the same sex.
   Say: "See this picture? It is a drawing of a child sleeping in bed. If he was having a good dream, like a dream of playing, can you put a mark here on the paper, to show where the dream would be?"

   B. Present another picture of a child of the same sex as interviewee.
   Ask: "And on this paper, can you show me where a bad dream, like a dream of a monster, would be?"

2. DISCUSSION

   A. If the child in marking the picture, indicated that the dream would be in a different location than he had reported in the verbal interview, ask, for example: "But wait a minute, I'm confused. Before you told me a dream was inside, but now you put the mark outside, over here. Which way is it, or both?"

   Encourage the child to explain fully, if necessary, by giving alternatives.

   B. Clarification: Clarify any question about the origin or location from the initial interview, using the drawing as a basis.

APPENDIX C

SCORING MANUAL FOR LEVEL OF DREAM CONCEPT DEVELOPMENT

INTRODUCTION

The purpose of the scoring of the interviews is to determine which of several stages of dream concept development the child has reached. The young preschool child initially conceives of the dream as a real concrete event occuring in the external world and originating from sources external to himself. Over a period of time, the child passes through several intermediary stages until he arrives at the adult conception of the dream as a subjective phenomenon, immaterial in nature, originating and occurring within the dreamer himself. The precise level of dream concept development is determined by the pattern of the child's beliefs concerning the dream's origin, location, and materiality. The actual determination of a child's level of dream concept development from the tape of his interview is a complex task, however, due to the inherent limitations of interviewing with the preschool child. Some general considerations on the nature of interviews with preschool children will therefore be discussed, and then these factors will be considered in detail as they most commonly relate to each specific level of dream concept development. A specific procedure for the process of evaluating the interviews will then be proposed, in an attempt to simplify the process by reducing the number of specific factors which must be simultaneously considered.

GENERAL CONSIDERATIONS IN THE INTERVIEWS OF PRESCHOOL CHILDREN

Throughout the scoring of the taped interviews, it is important to attempt to determine what the child believes about the nature of the dream rather than taking every detail of what the child says literally at face value. This is not always an easy task with three to five year old children due to three primary factors: the child's limited linguistic ability; the child's manner of handling stress in an interview situation; and the divergence between the way a child conceptualizes the world and the way an adult conceptualizes the world. Each of these will be considered in detail.

Linguistic Limitations

Linguistic difficulties with the preschool child can often be substantial. It is necessary to determine whether there has been a true exchange of ideas between the child and the adult, for the child has difficulty not only understanding the adult's questions but also verbalizing his own ideas.

The clinical interview depends upon the child's ability to respond to the interviewer's questions by expressing his own beliefs. And yet, research shows that the question poses a substantial difficulty for the preschool child, since he must respond to one specific aspect of the adult's sentence, rather than elaborate on any of several dimensions as one can with a general statement. In response to the question: "What color dress do you like?" for example, the child must respond in terms of color. In contrast, with a general statement such as: "I bought a dress today", the child may appropriately respond by asking what color, at what store, could she have one too, where would it be worn, etc. This question requires

the child to respond to one specific aspect of the adult's statement, making it a demanding linguistic task. With the preschool child, this task is further complicated by the complex linguistic forms, such as the conditional and subjunctive, which adults often use to ask questions. When faced with a complex question which he cannot understand, the child typically reacts by treating it as a general statement and commenting on something which interests him and is related to some aspect of what the adult has said. The preschooler thus responds in a tangential, associonistic manner when he has failed to understand a question. The magnitude of the difficulty that preschool children have in responding to adult questions is supported by recent research. Franklin (1978) found that while mothers responded appropriately to their children's statements and questions 77% of the time, three year old children responded appropriately to their mothers only 50% of the time, and five year old children responded appropriately only 66% of the time. The success rate for the appropriate responding to questions was even lower.

The probability of a child misunderstanding questions could not be completely eliminated but was minimized in the clinical interview on dream conceptualization by asking questions in special forms which the child was most likely to understand. The question word was always placed first in the sentence, cueing the child to the aspect to which he had to respond. "Who", "what" and "where" questions were used as most three year olds understand these concepts. "Why", "because" and "how" questions were avoided as these are often misunderstood. Instead, the child was asked to "tell the reason" for his previous answer. Previous researchers had explored the

question of visibility using a conditional question: "If your mother were to come into the room while you were having your dream, could she see it?" With the preschool children this topic was explored as a make-believe situation. The child was asked: "Lets pretend. Pretend you're at home in bed and it's nighttime. You're asleep, having a dream. Now Mommy comes into the room. Does Mommy see your dream?". In addition, with the youngest children, concrete examples were given to "anchor" the child to the specific questions being asked. Thus, for example, the child was asked not just where a good dream would be, but, "When you have a good dream, like a dream of playing, where is that dream?". (For a detailed outline of the interview see Appendix A). Pilot studies indicated that by using these methods of asking questions most children were able to understand what was being discussed and demonstrated some comprehension of the dream concept.

Once the child understood the questions, linguistic difficulties still existed since the children often had problems finding a means of expressing their answers. This difficulty was compounded by the children's egocentric lack of awareness that the examiner was not always able to understand their reply. Children this age tend to assume that if they know what they mean, then the adult must also know what they mean. They are frustrated or even affronted when this proves not to be the case. Children this age tolerated requests to repeat information better when the examiner explained that the noise in the hall, or a problem with her ear made it difficult to hear, and that's why she needed to ask them to repeat an answer. The children also responded well to a statement that the examiner was confused

and a request that they "tell me more. I want to know it just the way you do".

The children's difficulty in expressing their ideas was especially clear in their inability to express a metaphor. None but the most advanced children possessed the linguistic means of saying that "X is like Y in these ways but not in others." Lacking these conventions, the metaphor was often expressed by the child simply stating what X reminded him of. Danny, for example, said that he could touch a dream and was then asked what it felt like. "Here's my shadow, here's your shadow", he replied, indicating his belief that a dream is partially immaterial "like" a shadow. This type of "tangential metaphor" was fairly common and had to be distinguished from the type of tangential response which indicated that the child had not understood the question.

The last source of linguistic difficulties was the examiner's periodic failure to understand what a child was saying. Every attempt was made to select children for interviewing whose speech was reasonably clear, but especially with the youngest age group there were often statements in which the child's pronunciation was not understood. This was especially frequent when the child made unusual or idiosyncratic statement, such as a three year old who claimed he would "grow up big, big as daddy, big as dinosaur." Occasionally this would lead to the interviewer asking the child a confusing question, based on her erroneous hearing of the child's statements. It is important to consider this as one possible source of confusion in the evaluation of an interview.

All three of these linguistic factors: the child's possible difficulty

in understanding the question; the child's possible difficulty in expressing his ideas in a discriminating, clear way; and the examiner's possible difficulty in understanding the child and consequent misleading of the child must be considered in the scoring of the taped interviews.

The Children's Reactions to Stress

The second source of difficulty in the scoring of preschool children's interviews stems from their characteristic methods of dealing with stress. Almost all the children interviewed seemed to experience some degree of stress in the course of the interview, although most of them also enjoyed the experience. One major source of stress was the conflict between the children's desire to please the examiner by answering correctly and their realization that they were unsure of the answers to many of the questions. The strength of the desire to please the examiner was evidenced by the fact that even the youngest children would plug through the list of questions such as "Which is stronger, a good dream or a bad dream?", even though it was clear that many of the questions made no sense to them. Only three children asked to leave the interview, and even these consented to stay when the examiner asked them to finish the interview. The children were helped to deal with this anxiety by having the interviewer take their responses seriously, as indicated by repeating them and paying attention.

While the desire to please the examiner and answer correctly helped maintain the children's cooperation through the interview, it also created two response tendencies in the children which made their protocols more difficult to evaluate. One of these was the tendency of some children,

apparently feeling compelled to answer the question, to semi-automatically repeat one of a list of alternatives which had been proposed by the examiner. Such responses did not indicate true conviction on the part of the child, and had to be discounted in the evaluation of the interviews. Often the semi-automatic nature of these replies was indicated by an inability of the child to elaborate upon his answer, and the child would often switch his statement if the same or a related question were offered with the alternatives in another order. A re-wording of one of the alternatives, however, was taken as a sign that the child had some degree of conviction in his answer as he was no longer simply repeating the examiner's words.

A second tendency existed, however, which made evaluation of the first tendency more difficult. When the interviewer sought elaboration of one of the child's answers, some children seemed to interpret this as an indication that the interviewer thought they had given the wrong answer, and would then change their response. This tendency seemed to be based on the child's insecurity and the fact that many adults habitually correct children by using a series of "educating" questions. Attempts were made to minimize this tendency by accepting the child's answers matter of factly, assuring him in a non-specific way that he was doing well, and asking in a supportive manner for further information (Uhum, and now tell me the reason). Inevitably, however, situations arose in which the child may have changed his answer in order to please the examiner.

The presence of these two tendencies, then, made evaluation of situations in which the child changed his answer complicated. Did he really change his mind? Was the first answer simply a semi-automatic repeating of one of the examiner's alternatives? Or was the child changing his answer because continued questioning made him feel the examiner thought he was giving the wrong answer. All of these possibilities must be carefully considered, and evaluation of these alternatives often rests upon interpretation of the child's voice tone evaluated in the context of his style in the entire interview.

Two additional sources of stress existed in the interview situation. One was the occasional realization on the part of the child that his answer did not make sense, and that he was confused. This seemed to intrinsically bother some children, and to go beyond the stress involved in being unable to give the "right" answer to an adult. It seemed to genuinely bother these children that they did not know. Another source of stress was the emotional reaction caused by talking about the dream. This was clearly evident; for example, one little girl kept insisting that <u>she</u> did not have dreams although she knew what dreams were. Other children repetitively returned to discussing the content of a troubling dream. The children tended to handle these sources of stress in several characteristic ways. Younger children would need to physically move. They often used a portion of the interview to physically discharge some of their tension, acting out "this is sad" by making a face or running down the hall to show the interviewer what "fast" was. Many children attempted to change the subject, asking a question of the interviewer. Others answered the question

but then continued talking, non-stop, about vaguely related topics which interested them. These diversions were permitted for a brief period of time to allow the children to discharge tension. They were refocused on the interview and encouraged to proceed with the task. This procedure helped to maintain the cooperation of the subjects, but it also contributed to the fragmentary nature of the interviews which at times made evaluation of them difficult.

The Conceptual Framework of the Child

The third factor which complicates the evaluation of the interviews is the fact that preschool children conceive of the world using a different set of logical premises than adults do. The characteristics of their thought patterns which are most relevant in these interviews are: 1) their failure to perceive logical contradictions where adults would see them; 2) their tendency to perceive causality through participation.

The failure of preschool children to see contradictions where an adult can see them is manifested both simultaneously and sequentially in time. Thus a child can believe that a dream exists simultaneously within and outside of himself, without questioning the physical possibility of such an arrangement. With his egocentric perspective, such a child may not explicitly state such a belief unless directly questioned and asked to elaborate upon his initial response, as he "assumes" that the interviewer correctly understands his meaning. Or a child may state at one point in the interview that the dream is inside him, and state at a later time

that it is outside him. Although the child may not believe that the dream is simultaneously both places, he may not see the contradiction in his statements which is so apparent to adults. This is a normal manifestation in this age group, and until one becomes comfortable with this type of thinking it leads to confusion over the possibility of determining what the child does, in fact, believe. It is, however, unnecessary for the purposes of this study to determine the details of this type of interaction, as allowances for this type of thinking have been built into the scoring system.

The preoperational child's tendency to believe in causality through participation is more problematic in the scoring of the protocols. Participation means that the child conceives of two things as being causally related if they share some physical property or have some fixed relationship in time. Thus a child might believe that shadows "come from" the night because they are both black, or that eating breakfast "makes" a favorite program appear on the television because he usually watches it at that time. Both of these are examples of participation, and they point to the fact that participation, by definition, is not an exclusive type of causality. That is,the element of participation is usually present when the resultant event appears, but acts in combination with other contributing factors. In other words, the element of participation is usually necessary, but in isolation may not be sufficient,to cause the resultant event. One little girl in the pilot study, for example, felt that she only got bad dreams when her father forgot to kiss her good night. Although she might not get a bad dream every time her father forgot to kiss

her, when she did get a bad dream, the missed kiss was a contributing factor. Another child insisted that dreams "came from" trucks down the street, but could not elaborate how this happened. The difficulty in detecting participation rests in the necessity of determining whether the child believes the element is actually participating in causing the dream or whether he simply lacks the linguistic skills to adequately express a more sophisticated idea. It is essential to distinguish participation from an attempt to express mature concepts. Two examples of mature concepts expressed in child-like contexts are a child's belief that 1) when his sleep is disturbed by an external source (such as a truck), this starts his mind thinking, resulting in a dream; or 2) that if the child sees something during the day (such as a scary T.V. program) and he then dreams of this at night. Difficulty in determining the degree of participation present is, in fact, one of the major causes of scoring disparities, so that this issue must be examined with special care.

Summary

All three of these factors: 1) the child's linguistic limitations; 2) the child's reaction to the stresses of the interview; and 3) the logical premises of the child; must be considered in any attempt to determine what the child truly believes about the dream. The following section will review the stages of dream concept development, summarizing the nature of the child's beliefs concerning the origin, location, and materiality of the dream in each substage. Some of the specific manifestations of preschool interviewing which are especially relevant to each stage will also

be discussed. It is important, however, that the consideration of these specific manifestations not replace the consideration of the general factors which have been discussed in the evaluation of the interviews. In addition, it is important to note that since the evaluation of the quality and manner of the child's response patterns are critical to the successful scoring of the protocols, it is essential that the scorers using this system be well qualified. Qualifications should include first-hand experience in talking to children, and familiarity with Piaget's method of research and the major features of his theory. Clinical experience with children is helpful, and specific training with pilot protocols is essential.

SUMMARY OF THE STAGES OF DREAM CONCEPT DEVELOPMENT

The stages of dream concept development are summarized in this section. The classification of a child as belonging to one or another of the stages depends upon the determination of the extent to which the child considers the origin and location of the dream to be internal rather than external. For the purposes of this scoring, an external origin or location is outside the boundaries of the child's body. With respect to origin, any indication of causality through participation indicates that the origin is at least partially external. References to a divine or supernatural being (but not superheroes such as spiderman, superman or wonderwoman) are not considered as indicative of an external location as they occur at all stages and reflect the difficulty in determining the actual cause of an event such as the dream. An internal origin or location is one which exists anywhere within the boundaries of the child's body.

The summary of the stages indicates that children below substage 3AB consider the dream to be a concrete physical event. One result of this study, however, has been to show that some children begin to develop a recognition of the immateriality of the dream as early as stage 1, although the dream is not considered totally insubstantial and unlocalized until the completion of stage 2C. The nature of the "concreteness" of the dream until that point varies from child to child, and is often difficult to determine as the children tend to avoid explaining answers dealing with this aspect of the dream. Consequently, the child's assign-

ment to a stage of dream concept development is made solely on the basis of his concepts of the origin and location of the dream, until entrance into stage 3AB is in question, at which point the total lack of materiality is taken to be the defining factor distinguishing stage 2C from stage 3AB.

Stage 0: Origin: No comprehension
Location: No comprehension
Materiality: No comprehension

The Stage 0 child shows no comprehension of what a dream is. Many children at all levels are unable to answer the question "Do you know what a dream is?", but then are able to report a dream and/or their beliefs about the phenomenon. The Stage 0 child exhibits a lack of comprehension throughout the interview, although he may answer questions by choosing one of the alternatives (usually the last) proposed by the interviewer. The child does not elaborate upon any of the alternatives, and thus displays no spontaneous conviction in his answers. In the literature, where a child was not first asked to describe a dream, some children reportedly confused the dream with sleep or night, leading to interviews which required close examination to determine that the child did not, in fact, seem to know what a dream was. This possibility must be considered.

Stage 1: Origin: External
Location: External
Materiality: Concrete physical presence

For the Stage 1 child the dream is a material event originating and taking place outside of himself. The child may state that the dream is

"make-believe", but he also believes that it has a physical presence, at times in a separate out-of-the-ordinary reality reserved for fairies, elves, and superheroes. Many Stage 1 children, for example, believe that another person in the room could see their dream. Those who believe that another person could not see their dream justify this belief by giving a concrete reason, such as: "No, it's dark in my room"; "No, it's in my pillow"; or "No, Jesus takes the dream away, it's just mine." When he is able to respond to the question, the Stage 1 child usually states that he could touch a dream, or again gives a finalistic, moralistic or concrete reason why he would not be able to, such as: "No, I wouldn't WANT to"; "No, it isn't allowed"; or "No, they have prickles." Stage 1 children are often unable to respond or give only a vague answer when asked about the origin of the dream, why we dream, or what a dream is made out of.

*Again, it is important to note that the Stage 1 child may state that he "made up" the dream, but this seems to be an artifact of his recent recounting of a dream to the interviewer, and <u>not</u> an indication that he momentarily considered the dream to have an internal or subjective origin.

<u>Stage 2A</u>: Origin: External-
Location: External- > With some momentary consideration that the dream may be INTERNAL
Materiality: Concrete physical presence

The Stage 2A child gives responses that are identical to those of the Stage 1 child <u>EXCEPT</u> for the fact that at some point in the interview there is a glimmer of the possibility that the child believes that

he participates in the dream's formation (i.e., it is a subjective phenomenon), that the dream has an internal origin, or that the dream takes place within him. Often, the child immediately denies this possibility or ignores it throughout the rest of the interview. A person listening to the child consequently is often left with the impression that the child momentarily "made a mistake" in how he tried to express his real beliefs about the dream. The child is given the benefit of the doubt, however, and is scored 2A if there is any possibility that he even momentarily considered the dream to have an internal, subjective nature. Care must be taken in making this judgement, because of the following three apparent exceptions which could lead to the erroneous classification of the child as Stage 2A rather than Stage 1:

*(1) At times a child, if unsure of himself and feeling a need to answer, will semi-automatically seize upon "inside" from the list of alternatives proposed by the interviewer. This is especially common if the word "inside" was used several times ("It is inside you or inside the room"), or if "inside" was the last alternative. When asked for specifics, however, the child cannot elaborate or reverses his statement. In such a case, the child is considered to be merely responding to the adult's implicit demand for an answer instead of expressing a true view, and is scored as belonging to Stage 1.

*(2) A child may also respond with the word "inside" meaning "inside the house" or "inside my room" as becomes clear from later responses in the interview. This child is also Stage 1.

*(3) When asked "Who makes a dream up, is it you or somebody else?", a child will at times reply that he made it up. If NO OTHER indication exists that he considers the dream to be internal or subjective, this child is scored Stage 1. His statement that he "made the dream up" is considered an artifact of the interviewer's recent request that the child tell her a dream.

Stage 2B: Origin: Internal and External elements are clearly present
Location: In a stable pattern of belief
Materiality: Concrete physical presence

The transition to Stage 2B takes place when the child begins to exhibit a more stable and steady balance between internal, subjective elements and concrete, external elements in his beliefs about the origin and location of the dream. The child in Stage 2B makes stronger-sounding statements about the source and location of the dream than the child in Stage 2A, even though his convictions may be equally contrary to the truth. The confusion or duality of internal and external in the child's beliefs is clearly apparent whenever the child correctly belongs to Stage 2B. This confusion between internal and external elements often leads to doubts in the listener as to what the child does, indeed, believe. A familiarity with the predominant conceptual patterns found in children in this stage,

and consideration of the possibility in the child's mind of causality through participation, are especially important in resolving the listener's confusion. The more prevalent patterns of external and internal elements in the child's beliefs will be discussed below, but it is important to note that:

*(1) The child is considered to be in Stage 2B <u>even</u> if he considers the dream to originate and take place within him <u>but</u> believes that someone else in the room could see the dream. This belief indicates that the child has a residual confusion about the interior and exterior nature of the dream since, if it were uniquely within him (in the sense meant by adults), it would be physically inaccessible to the view of others.

*(2) Sometimes a child begins the interview by giving answers characteristic of Stage 2B, but during the interview seems to become convinced that the dream is internal. Such a child uses the internal nature of the dream as a justification of the fact that the dream is not visible to others in the room nor accessible to touch, and does not introduce external elements once they seem to have made the transition. Such a child is usually quiet or resorts to silliness later in the interview when confronted with his earlier statements about the external nature of the dream. If asked, he may state that he was joking earlier. Few

children at this age can say that they have made a mistake, so the scorer must try to determine from the inflection of the child's voice and the subsequent material in the interview when such a transition in conceptual development has occured. The child is then given credit for being at the higher level of development (2C or 3AB).

*(3) As long as there is <u>any</u> element of participation in the child's answer, he is scored at Stage 2B. The presence of participation indicates that some internal source is seen as being partially responsible for causing the dream, and that the subjective nature of the origin of the dream has not been fully established.

Typical patterns of realistic and subjective elements in the beliefs of children in Stage 2B include:

(1) The child may believe that the dream comes from an external place, force, animal or person but TAKES PLACE within his body. At times the child implies that the external agent intentionally sends the dream to him. But often the external agent causes the dream through participation.

(2) The child may conceive of the dream as originating within himself but taking place in the room. Piaget has compared this belief to the projection of a movie from a projector.

(3) The child may believe that the dream takes place both inside himself and outside himself. At times, such children recognize both possibilities but refuse to commit themselves to either possibility, such as a child who said the dream was "in my eyes or in my pillow" throughout the interview. Other children, while they may initially alternate from stating the dream is external to stating that it is internal eventually give the impression that they consider the dream to be simultaneously both inside and outside. Their initial alternation seems to be due to their ability to speak about whichever component the examiner seemed to be referring to at that moment, and not consider the dual nature of the dream as necessary of explanation. In addition, the language required of the children in explaining this perception was quite difficult for the younger children, and this must be considered in listening to their responses. These children may believe the dream to have an external or an internal origin.

(4) The child may believe that some dreams are internal and some dreams are external in location. Some children know that clearly fanciful dreams are internal, but believe that more realistic dreams have an external location. Thus, a child reported that a dream of himself sliding and climbing on the gameboard of "Chutes and Ladders",

a popular game, was in his head, but believed that a dream of playing with his friends would be outside. Other divisions are theoretically possible, such as the hypothesized internalization of good dreams and externalization of bad dreams.

(5) The child may state that the dream has an internal origin and location, but state that another person in the room could see the dream. This indicates that when these children say that the dream is "inside" they have not formed as exclusive and clear a boundary between the concepts of internal and external as an adult has. Due to this residual confusion, such children are classified in Stage 2B.

*(Note: The question on whether the dream would be visible to another person in the room is meant to test the child's conception of internality. It must be distinguished from the question on whether the dream would be visible if another person could look inside the body of the dreamer, which is meant to determine whether the child considers the dream to be material and is used in differentiating Stage 2C from 3AB).

With respect to other areas of the interview, those children who believe that the dream is partially external in location may state that another person in the room could see the dream or give a concrete reason why this would be impossible. All of these children may believe

that it changes locations within them. They may believe that you can touch a dream or give a concrete reason why this is impossible. The defining characteristic of ALL children in Stage 2B, however, is the presence of a definite and often stable mixture of concrete, external elements and subjective, internal elements in their conception of the dream.

Stage 2C: Origin: Internal
Location: Internal
Materiality: Concrete physical presence

The child in Stage 2C clearly thinks that the dream is internal in origin and location. The only remaining trace of realism comes from granting the dream a certain degree of materiality. There is no longer any residual indication of participation with an external cause of the dream, and there is no residual confusion over the interiority of the dream. The confusion over materiality exists even though the dream is clearly internal. It is most often exhibited in the following manner:

(1) The child believes that if her mother or the interviewer could look inside her head they would be able to see her dream, as if it were an object which the mother could not normally see because it was hidden from view by the child's head as it would be by a scarf.

(2) The child grants the dream a specific concrete location, as if it were an object with mass. This is often difficult to determine, but is clearly indicated when:

(a) The dream changes location within the body. For example, some children think the dream moves from their hands or stomach to their head, apparently due to certain physical sensations associated with the emotions of the dream.

(b) Different internal locations are given for good dreams and bad dreams, as if they were objects which could be sorted into bins.

(c) There is an indication that the child assigns the dream a specific location on the basis of a physical property. One child, for example, claimed the dream had to float against her forehead as she wouldn't be able to sleep if it were lying heavily on the back of her head.

(d) Assigning the dream a particular location due to function. For example, "It's near my ears because I must hear it." Note: Following Laurendeau and Pinard, the child is permitted to state that the dream is in his eyes without this being considered an indication of materiality. That is, if there are NO other indications of materiality such a child would be classified in Stage 3AB.

(3) The child may state that the dream is made of some concrete substance such as paper, etc.

(4) The child may state that he could touch a dream, or may give some concrete reason why he couldn't touch the dream. For example: "No, I couldn't see where to touch it." (question) "Because it's in my head."

Most children in Stage 2C give answers which indicate a materialistic view of the dream in only one or two of the above areas, while the rest of their interview implies that the dream is immaterial. Thus a child may say that her dream is made of "thinking" and yet think it floats against her forehead. Any trace of materialism requires that the child be classified in Stage 2C.

Stage 3AB: Origin: Internal
Location: Internal
Materiality: Immaterial

The Stage 3 child considers the dream to have an internal origin and location. He gives no indication of materiality throughout the dream interview. For example, he states that the dream is made of "imagination", "thought", "air", "light" or any other description which expresses the dream's insubstantial nature. Children of this age, however, are often unable to find justifications, or ways to explain things they "know" are true, and may be considered to be in Stage 3AB even if they cannot specifically state the dream's immateriality or give reasons why they would not be able to touch the dream.

PROCEDURE FOR THE SCORING OF THE INTERVIEW TAPES

The procedure for scoring the level of dream concept development from the taped interviews consists of two parts: an initial partitioning of the interviews and a final assignment and verification of a level of dream concept development. First, the scorer is asked to listen to the tapes seeking only to determine what the child believes the origin and location of the dream to be. The scorer then classifies origin according to four categories and location according to four categories. This initial screening results in the partitioning of the interviews into groups each corresponding to one or more stages of dream concept development. Second, the scorer listens to the tape again, attempting to classify the tapes from the group into a unique stage of dream concept development and to verify that placement with all of the interviews. In both scans of the interviews, scorers are allowed to review the entire tape or portions of it as often as they deem necessary.

Initial Partitioning

As stated above, the scorer is initially asked to listen to the tape attempting to determine what the child believes the origin and location of the dream to be. The entire tape must be considered, since information on the child's belief about origin and location frequently appears as he attempts to talk about other aspects of the dream. Especially important are the sections in which the child is interviewed on the origin and location and the section in which the child is shown

a picture of a child sleeping in a room and asked to indicate where that child's dream would be, and then to justify it.

For the purposes of this screening, an external origin or location indicates that the child believes it to be outside his body. With respect to origin, it is important to consider the possibility of causality through participation and to remember that references to a divine or supernatural being sending the dream are made at all stages of development and that these references are not taken as indicating belief in an external origin. An internal origin or location is one which exists anywhere within the boundaries of the child's body.

After listening to the tape, the scorer considers the following categories of classification. With respect to origin, the child is classified as: 1) considering the dream as having an external origin; 2) considering the dream to have an internal origin; 3) considering the dream to have BOTH internal and external origins usually through participation; and 4) the child stating that he doesn't know what the origin of the dream is.

With respect to location, the child is classified as: 1) believing the dream to have a clearly external location with NO consideration of an internal location; 2) believing the dream to have a clearly internal location with NO indication of an external location; 3) believing that the dream has both internal and external elements in its location; and 4) the child unable to give location. With respect to origin and location, the child is in Group 3 even if he only briefly states that the dream <u>might</u> be internal.

Once the child's beliefs as to origin and location have each been determined, the child is placed according to CHART 1

CHART 1 INITIAL PARTITIONING CHART

Origin:	LOCATION: EXTERNAL	INTERNAL	UNCLEAR OR BOTH INTERNAL & EXTERNAL	DO NOT KNOW
EXTERNAL	1	2B	2B	OMIT
INTERNAL	2B	2C, 3AB	2B, 2C, 3AB	OMIT
DON'T KNOW	1	2C, 3AB	2A, 2B, 2C, 3AB	OMIT
BOTH INTERNAL AND EXTERNAL	2B	2B	2B	OMIT

Final Assignment of Level of Dream Concept Development

The second screening of the interviews is aimed at the final assignment and verification of a unique stage of dream concept development to each tape.

In cases where the initial partitioning resulted in the assignment of a single stage of development, the scorer is asked to briefly review the outline of that and neighboring stages of dream conceptualization. He is then asked to review the tape focusing upon the exceptions contained in

the outline to verify that the child has been assigned to the correct level of dream conceptualization.

In cases where the initial partitioning resulted in the determination that the interview should be classified in Stage 2C or 3AB, the scorer is asked to review the tape focusing on the question of materiality. If there is any indication that the child considers the dream to be material, he is classified in Stage 2C, otherwise the child is classified in Stage 3AB. Verification of the determination that the child considers the dream to be of internal origin and location should also be made, with special consideration of the possibility of causality through participation.

In cases where the initial partitioning resulted in the decision that the child considered the dream to have both internal and external elements in its location, or that no clear decision as to the child's belief could be made, the scorer is requested to listen to the tape and again focus on the question of location, this time with the following questions in mind. Does the child make a quick reference to the internal nature of the dream only in response to a series of alternatives posed by the examiner or under pressure? If so, special attention must be paid in an attempt to determine the child's true belief. Does the child make a quick reference to the internal nature of the dream's location but then deny or ignore this statement for the remainder of the interview? Does the child consider the possibility that the dream is internal but

then convince himself that it must be external? Does he consider the possibility that the dream is external but then convince himself that it must be internal (including it being invisible to another person in the dreamer's room)? Does the child offer both an internal and an external possibility and refuse to exclude either? Does the child think that the dream is simultaneously inside himself and outside himself? Does the child think that some dreams are outside himself and some dreams are inside him?

Once one of these alternatives is decided upon, the child is placed in a unique stage of dream concept development according to the criteria of the stages given in this manual.

APPENDIX D

A Sample Protocol from Each Stage of Dream Concept Development

Lucy.....Stage 1.....Age 42 months

Sam.....Stage 2A.....Age 53 months

Nora.....Stage 2B.....Age 53 months

Jill.....Stage 2C.....Age 56 months

Todd.....Stage 3AB.....Age 60 months

Lucy Stage 1

Age 42 months

Initial talk about her last name and her age, 3.

Dream report: (Do you know what a dream is?) Yes. (Yes!) Last night I--had a dream--(You did?) When I was sleeping I saw a clown. (You saw a clown?) yeah. His eyes I saw. (His eyes you saw?) And he was at a birthday party. (And he was at a birthday party? What else happened in the dream? Is there more in the dream?) A sheep (A sheep?.....And what did he do?) He kicked the clown. (He kicked the clown?) Yup...(And then what?) He cried. (The clown cried?) Yeah. (And then?) He gotted the mother put a bandaide on him (The clown..) Mother. (The mother put a bandaid on the clown. And then what happened?) The mother went...the clown's mother.. ..the mother was a clown TOO! (The mother was a clown too? Was that the whole dream or was there more?) That was the whole dream. (That was the whole dream...wow... What a dream. Was that a good dream or a bad dream?) Good one. (What were the good parts of the dream?) The clown of the good dream. (The clown of the good dream...okay...)

Reality: (When you had that dream, was it real or was it make believe?) Make believe. (It was make believe? Who made the dream up?) Just I did. (You did?)

Origin: (Where did it come from?) From the clown's birthday party...from the clown's birthday party when they're all done having their cake they go home and wash their hands and they didn't want to get all DIRTY...(No, you don't want them to get all dirty, do you?) No, that would be really yukky...(That would be really yukky..)

Location: (Tell me something. When you had the dream, were you in bed?) Yeah. (Yeah? Where is your dream?) It went away (It went away? Was it inside you or was it in the room?) In the room. (Where in the room?) In my room..(It was in your room? Where was he, somewhere special in the room? Where was he?) I think he was far away next to me. (Far away next to you) Umhum. (If you had a good dream, where's the good dream?) Must be something like... birthday party again (uh-huh..where would that be? would it be inside you or in the room?) Outside. (outside? What about a bad dream, like a dream about a monster?....)

--loud--Once I dreamed about a monster and it was so bad...crying (Where was the monster dream? Was it inside you or in the room?) In the room. Walking on my mother and me. (He was walking on you and your mother?) Yes. (And then what happened?) He got away! (He got away.) And his mother too.. His mother was a monster too--laughs. (And his mother was a monster too?) Yeah. (Was there more to the dream?...How did he start to walk on you?) He just goed on something and he walked on me. (And then he WALKED on you...What made him go back home?) --giggles--something about a bandaid--(A bandaid!) --giggle--Yeah (Ohhh...I see.)

Visibility: Now, Lucy, if you're having a dream and it's the night time and your mommy comes into the room, can she see your dream?) No. (No? Tell me the reason.) Maybe it's right next to me. (Maybe it'll be right next to you, the dream? Uh-hum, What's the reason she won't see the dream?) Cause...I...not real to me.. she can see it...and if she comes in my room she'll look at it and if she doesn't she can't come in cause that means she doesn't look at it...(Oh..I see...)

Touch: (Can you touch a dream?) No...not when I'm in bed. (Not when you're in bed?) No. (Tell me the reason you can't touch a dream.) Cause when I'm in bed I can't touch it and when I'm out of bed I can touch it. (You can touch it when you're out of bed?) Yup. (Uh-huh.. Lucy, why do we dream?) Cause sometimes we dream that bad things and sometimes we dream about...somebody... good...um...some dreams that we like and some dreams we don't like (you're doing such a good job telling me about all this...)

Concrete Localization Task: Good dream marked on wall near window.
Bad dream marked above left side of bed.

(Now see this girl? She's asleep in bed. Pretend she's having a good dream...okay...show me where her dream is...now, Lucy, here's another picture. This girl is having a dream. She's dreaming a bad dream. She's dreaming about a monster...Oh, I don't know what kind of monster?....Where is her dream? Right here...? Okay. Thank you.)

Sam Stage 2A

Age 53 months

Dream Report (Sam, do you know what a dream is?) no. (No? Did you ever have a dream?) No. (No??? Oh, everybody has some dreams.) Well, I don't. (Can you remember just one dream you had?) No. (No? Well, let me ask you some questions about dreams, okay?) --He interrupts to ask about the sounds on the tape recorder and wants to hear himself-- (We'll do it all and then we'll play it at the end.)

Reality: (Let me ask you a question. Are dreams real or are they make-believe?) Make-believe.

Origin: (And...where do dreams come from?) I don't know. (Well, do you think they come from...who sends them?) I don't know. God. (God? Okay.)

Location: (And when you have your dream, where are you?) In my bed. (And where is your dream?) I don't know. (Well, do you think that it's inside you or your bed or in your room? And what if you have a really good dream, a nice dream; where would that dream be?) I don't know. (Well, do you think it would be inside you, or in your room, or in your bed...?) In my bed. (In your bed?) Yeah. (What if you had a very bad dream, where would that be?) I don't know. (Well, you know what I'm going to ask you, don't you? Would it be inside you or would it be in your room, in your bed...where would the bad dream be?) What did you say before? (Well, do you think it would be inside you, or in your room, or would it be in your bed...) Inside me. (Inside you, the bad dream would be?) Yes. (Where inside you?) I don't know.... (You pointed to your head - you think it would be in your head? Or would it be some place else?) I don't know.

External Visibility: (Okay...can we do a make believe?...Yes? Okay. Let's make believe. Let's make believe that you're asleep, you're in bed and let's pretend you're having a dream. And now your Mommy comes into the room. Can she see your dream?) What? (Can she see your dream?) Yes. (YES? And tell me the reason she sees your dream.) Cause...cause...I'm asleep. (Because you're

sleeping, uh-huh. If I came into your room could I see your dream?) Noo...(couldn't see your dream?) Yes. (Yes? Tell me the reason...) Cause...cause I was sleeping in my bed. (You were, weren't you.) Yes.

Touch: (Now I have another question. Can you touch a dream?) No. (No?) No. (Tell me the reason.) Cause it's just imaginary. (It's just imaginary?) Yup, that's why. (Well, is it in your room for real?) Yes. (Yes?) Yup!! (If I was in your room for real could I touch your dream?...I could?) Well, it's imag- imag.. (yeah...But can you touch it if it's imaginary or can't you ?) I can't...(You cna't, but can I touch it, or not?) No...(No?) No...(Cause it's imaginaty?) -- hears children coming-- (Yeah, I heard the sound of the feet in the hallway. I have another question.) What? (If it's in your room...) Yeah? (If it's in your room, how is it that I can't touch it? Why can't I touch it? This is hard to explain, I know...but I'd like to know what you could say.) I don't know... (It's hard to put in words, right?) Yeah --like a sigh-- (But I wonder if you could tell me.) No, I can't. (You can't? I have trouble understanding it too. I have another question. What's a dream made out of?) OH! No...that's a hard one...(That's a hard one -- laughing--I ask hard questions, don't I? You think it's made out of light, or...) LIGHT! (Yeah? Or paper?...or paint?) PAINT! (or shadow...or) No.... don't tell me any more...(Don't tell you any more? What do you think it's made out of?) Light. (Light? Okay, good.)

Concrete Localization Task: Good dream marked on wall under window. Bad dream marked initially on window, later on his head.

(Okay, good! Now, I have another thing for you here. This one's a little different again.) About a dream? (But it's different. Look here. See this little boy? Let's pretend that he's having a very good dream about playing...) Yeah...(Where would his dream be?) Here. (Right here? Sam, I put your name on there. Good...Okay, now, here's a boy with a bad dream. He's having a dream about a monster.) Yeah.... (Where do you think his dream would be?..Right here..?) Yeah...

(Sam?) What? (Can you help me? I'm a little confused. Remember how you told me that if you had a bad dream it would be in your head, and now the mark over here - outside of the boy's head. The mark for the bad dream is over here. Which way is it, or how does it work, or is it both?) Um, both, I think. (Both?) Yeah, I think so. (The dream's inside his head and outside his head?) No...(No? How does it work?) I don't KNOW...Let's do a different....(Well.. but I want to understand this because I think you're really trying to tell me what you think and I want to knwo what it is, I want to try to understand.) I got to think...(Huh?) I got.. think...(You've got to think?) Yeah. (Okay... I know, it's a hard thing to figure out...well, where do you think a bad dream would be?) In his head...yeah...in his head...(In his head?)... Draw it...(Draw it in his head? Okay, what about over her, do you think the monster would be outside?) Yeah. (Is the monster outside for real or does it just look like it's outside?) He's outside for real. (And his bad dreams would kind of be in his head.) Yeah...it's real...--laughs--.

(Okay, I have a silly question.) What? (Do you think that the dream of the monster starts one place and goes another place, does it start outside and go inside or is it both places at once?) Um, both places at once, one place first. (One place first? Where is it first?)--interruption of other children--(Loud, huh? ... And then what happens?) The MONSTER comes. (The monster comes? And then what happens?) And then he scares the boy...(Yeah, and then what happened?) And then the monster goes away. (He goes away?) Yes, he goes to another place. (Another place?) Yeah. (What makes the monster decide to go away?) Um...cause the boy said, go out! (The boy said 'go out'?) Yeah. (When the monster was there where was the dream?) In the middle (--unclear--) Let's do a different one. (You want to do a different one. Okay. Sam, can you tell me about a dream you had?) No.

Nora Stage 2B

Age 53 months

Dream Report

(Do you know what a dream is?) Yes. (Have you ever had a dream?) A long time ago. (Yea?) My mommy came into my room (Did she, what happened then?) I was fast asleep and she done something to me but I don't know what she done. (Why did she do something?) Um because I was crying outloud in the dream (Oh) Thats. (Do you think she wanted to make it so you stopped crying?)--nods yes-- (I bet you're right.) (Could you tell me a dream you had?) Um, I don't know of the dream what I had. (Do you remember another dream, a different dream?) I dreamed about my - it is coming out in a rush - um Laura's keys I think and scarf of my Mom - but Maggie Laura's Mother Maggie gave the keys and the scarf to my Mommy in the bracelet. That's what I dreamed about last night! Laura is Nora's best friend, whom she plays with in the afternoons. (You did!)--laugh--(Maggie gave the keys and the scarf to your mother?) No - I had a dream about that. (How did the dream go?) fro...(Tell me more.) Through my stomache. (Through your stomache?)--nods yes-- (Well, when you had your dream, where was that? Where did the scarf come from?)--(Who did she give the scarf to?) Noone! (Whose scarf was it?) Laura's! (It was Laura's scarf.) I was dreaming about it. (Umhum-and then what happened?) I don't know what happened--What's that go on? (That lets me know the tape recorder is going. Was that a good dream or a bad dream?) A good dream. (And what were the good things in the dream?) I don't know! (You don't know, okay.)

Reality:

(Okay, when you had that dream, was it real or was it make-believe?) Real. (Real?) No-but-make-ta-believe. (Make-believe?) No-I mean real in the night. (Real in the night.) Yea. (Was it real in the daytime?) In the night. (In the night. Is the night time different than in the daytime?) Yes. (How's it different?) Cause. Because one's darker and one's lighter a little.

Origin:

(Yea - tell me something, where did your dream come from?) I don't know. (Who made it up?) Me. (And why do we dream?) I don't know.

Location: (Where were you when you had your dream?) In my bed. (Right. And where was your dream?) In my mouth. (In your mouth - umhum - and what if you had a bad dream, where would the bad dream be?) In my mouth, too. (And what about a good dream, where would a good dream be?) In the mouth. (Tell me. Tell me the reason the dream would be in your mouth.) Because I wnat it to be and cause it tickles. (Cause it tickles! Huh!) SEVERAL CHILDREN REPORTED THAT THEIR DREAMS TICKLED THEM, WHICH MAY BE THEIR WAY OF LABELING AN EXCITED, AROUSED FFELING ASSOCIATED WITH THE DREAM. --interrupted from other kids--

External Visibility: (You're, if you're ....Lets pretend that you're in bed at night - you're having a dream, Okay? Now your Mommy comes into the room. Can she see your dream?) --nods yes--(What about me if I came into your room. Could I see your dream?) --nods yes--

Touch: (Okay, can you touch a dream?) --she touches her nose-- (You're touching your nose, can you touch a dream?) What's a dream? (What's a dream? Well, you were just telling me about a dream you had, --remember the dream about the scarf?) (Could you touch the dream about the scarf?) Well, I don't know where it is. (Well, I'm confused because I thought you said it was in your mouth.) It is. (Well, could you touch the dream when it was in your mouth?)--she touches her mouth-- --interruption from other kids--

Clarification: (Tell me something, where does the dream come from?) From my mouth. (Does the dream stay in your mouth?) Yea. (Uhuh) Why are you holding it--the microphone-- that way? (So I can hear you later - the sound goes in here.) (Can you touch a dream?) --she touches her mouth--(Can you touch a dream then?)--she thinks--nods yes, tentatively--(Uhuh) (Tell me something else..) Um-if,if, if we're having a dream it doesn't matter because mommies come in and they might and put us in <u>their</u> bed. (They put you in their bed, umhum, so you're not scared.) No-not cause we're scared--cause, because we were having a dream and that means something hurts us-hurt us. (Oh, I see. Tell me the reason your Mommy can see your dream if it's in your mouth.) Cause, cause I sleep like this--mouth opens and she folds her hands and tilts her head--(With your mouth open?) No-I mean my mouth closed, but she can see it through the batteries.

(Through batteries?) Yea-through batteries outside. (Through the batteries outside) Yea, cause the batteries make it look through my forehead. (Can she really look through your forehead?)--nods yes--(So she can see inside your head.)--nods yes--Can you turn the people on again? (I'll turn it--tape recorder--on again at the end, okay?)

Concrete Localization Task:

Good dream marked on the child's mouth.
Bad dream marked on the child's eye.

(Now, here's something new...See this girl? She's asleep, and she's having a good dream, a dream about playing. Can you show me where her dream would be?) --she points--(Good, very good. Now this girl is having a dream too, she's dreaming about a monster. Could you show me where her dream would be?)--she points--(Up here in her eye. Tell me, what's the reason her bad dream is in her eye?) Um-cause she sees it. (And what's the reason her bad dream is in her mouth?) Um, cause she sees it in her mouth and her lips are in her mouth, through the batteries so that could be there. (Okay, could you tell me the good dream again?) Cause the good dream goes through the batteries. (The good dream goes through the batteries--where are the batteries?) In the mouth. (In the mouth, Okay. Where do the batteries come from?) Um the batteries come through my mouth from the outside, too. (From the outside too.) --nods yes--(Who puts the batteries there?) The policemans. (And what do the batteries do?) They tickle. (The batteries tickle--Oh, I see.)

Jill Stage 2C

Age 56 months

Dream Report: (Jill, what I want to do is ask you some questions about dreams, because I want to find out what kids know about dreams, Okay? I want you to tell me your answers.) I had a dream--unclear--about monsters and scary creatures..(And they were scary? And what did they do?) I don't know. (Did they do anything in your dream?) They scared my mother. (They scared your mother? And then what happened?) They scared ME--laughs-- (They scared you? And then what happened?) They scared my FATHER. (They scared your father, too? And then what happened?) They all got dead! (How'd they get dead?) By shooting...(They shot them...What did you shoot them with?) With my fingers...(With your fingers? You shot them with your fingers?) Yes...our fingers have real bullets in them. (Oh...in the dream, huh? And did the monsters all die?)--nods yes--(The creatures all died, huh-huh. Good! Was that a good dream or a bad dream?) A bad dream. (What made it a bad dream?) The monsters. Cause they were scary (They were scary, huh? You did a good job telling me a dream.)

Reality: (When you have a dream, is it real? Or is it make-believe?) Make-believe.

Origin: (Where does it come from?) Oh..it comes from my head. (From your head?...Who sends your dreams?)--sounds frustrated, like she had already said--MY HEAD! (Well, I don't know...that's why I had to ask you)--teasing-- Yeah.

Location: (Oh...tell me, when you have your dream, where are you?) Um..asleep. (Are you in your bed when you're having your dream?) Uhhm...all the time when I'm sleeping, you know. (Tell me, when you're in your bed, where's your dream?) In my head. (In your head. Where in your head?)--points to forehead--right here. (Right on your forehead. And..what if you had a bad dream, about a monster, where would that dream be?) Um..where the other dream is. (And what about a good dream, where would a good dream be?) <u>On the other side</u>. (On the other side?) <u>One side is for bad and the other side is for good</u>. (Oh, I see. They don't get mixed up about which side they go on?) --she nods no--.

External Visibility: (I have a hard question for you. Pretend you're asleep in your bed. Pretend your mother comes into your room. Can she see your dream?) --nods no-- (No?) No...(Tell me the reason.) That's because it's inside, not outside.

Internal Visibility: (Oh...Pretend your mother can look inside your head.) Okay. (Now can she see your dream?)--nods yes--(Yeah? ..Tell me the reason.) Because she can see through. (Because she can see through.)

Touch: (Okay...Now, what's a dream made out of?) I don't know! (Can you touch a dream?) No. (What's the reason you can't touch a dream?)--giggles and frustration--You keep telling me REASONS. (I know--giggle--they're VERY IMPORTANT..) --giggle--(cause I know more about what you think. What's the reason we can't touch a dream?) Because...cause it's hard. (Because it's really hard)..it's hard to take off your new shoes like THIS--she pulls them off without unbuckling them--(Yes, it IS. Can your mother touch a dream? She knows how to do lots of things; can your mother touch a dream?)--nods yes--(Yeah?) But not that much... (But not that much?) You can put your finger in the end.. -she puts her finger in the heel of her shoe--(You can can't you) (Why do we dream?) Because you just have to think about some things and the dream comes through. (And the dream comes through. Okay. You're really doing a good job on this, do you know that? You really know a lot of the answers, don't you? Even all of the reasons. I ask you all of the reasons and you tell me)

Concrete Localization Task: Good dream marked on forehead.
Bad dream marked on forehead.

(I have one more thing for you to do. See this girl? She's asleep in bed, and she's having a dream. She's having a good dream, about playing. Can you show me where her dream would be?)--points to forehead--(Right there..okay, now this girl, she's having a dream too. But she's having a bad dream, a dream about a monster. Can you show me where her dream would be?)--points to forehead--(Okay, Jill, remember before you told me a good dream was on one side of your forehead, and the bad dream was on the other. These look like they are on the same side. Can they be on the same side sometimes?) No..they can't be. One is here and one is here. I want to hear now.

Todd Stage 3AB

Age 60 months

Dream Report: (Todd, do you know what a dream is?)--shakes head-(No?)I had one last night..(You did?) Yeah...(What was it, can you tell me about it?) I forget....(Okay, well I want to ask you a few things about dreams because I'm studying how kids learn about dreams, okay?) I'm collecting bottlecaps...(You're collecting bottlecaps in your dream?) No. (For real?) Yup. (Do you have a whole bunch of them?) I just started...(Oh...Are you collecting the kind that you screw off or that you pop off?) Tonic caps. ..(Any kind, so if I find some bottlecaps should I bring them to you here at school?) Sure. (Okay...)

Reality: (Tell me something Todd. When you have a dream, is it real or is it make-believe?) Um...make-believe

Origin: (Where does a dream come from?) I don't know. (You don't know? Well, who sends it, is it you or somebody else?) I don't know. (Okay....Some of these are very hard questions.)

Location: (When you have your dream are you in bed?) Yes. (Where is your dream?) I don't know. (You don't know where your dream is? Well do you think it's inside you or in your room?) Inside me, where else....(Where inside you? In your stomach? In your feet?...In your hands?... In your head?...In your...) head. (In your head? Let's pretend you have a really good dream, like a dream about playing. Where would that dream be?)-points-(In your head? Okay. What if you had a bad dream, like a dream about a monster, where would that be?) I had that TONIGHT--excited--(Oh, you DID?) Yeah! (Can you remember the dream? Oh...Where was it when you had it?) It was a bad guy....and it came in that way and stood...(Was it inside you or was it in the dream?) In my head. (In your head, right.)

External Visibility: (Let's do a pretend. Let's pretend that you're in your room at night, in bed, and you're asleep and you're having a dream. Now your mommy comes into the room. Does your mother see the dream?) No... (What's the reason? You don't know the reason....

--nods no--(Okay. Let's pretend I come into the room. Can I see your dream?) No..(No, I can't, can I? Tell me the reason?) Cause it's in my head. (Cause it's in your head, right.)

Internal Visibility: (Okay, now we're going to have a silly thing to do. Now we're going to pretend that your mommy can open up your head and look inside. Now does she see your dream?) Noooo. (No? Tell me the reason.) Because it's in your head...(Because it's in the head again? But she opens your head up. She goes --clucking noise-- and she looks inside.) But it's invisible...how does she know it's there? (Oh, it's INVISIBLE! So she can't see it even then, can she? You're right.)

Touch: (Can you touch a dream?) No. (No...and what's the reason for that?) They're inside your body. (That's right. And what's it made out of?) I don't know. (Yeah...Why do we dream?...You're not sure of that one...That's a very hard question, you know something? A lot of grownups don't know the answer to that one. Grownups are still trying to find out the answer to that question.)

Concrete Localization Task: Good dream marked in head.
Bad dream marked on same spot in head.

(Okay, I have one last thing to show you...)--Todd seems interested--(Look, see this boy?) Yup....(He's asleep in bed. Let's pretend he's having a good dream, a dream about playing. Can you tell me where his dream would be?) In the head. (In the head?) How did you make this picture? (Cause I drew it...do you like it?) Yeah. (I drew one and then I put it on the machine and made a lot of copies. This one is a boy and he's having a dream but he's having a BAD dream about a monster. Where would his dream be...?) I don't know. (again?) --points--Guess what? (What?) I had a bad dream about a monster tonight. (You did?) Two dreams. (Two dreams about a monster? Is it scary? Do you remeember what happened in the dream?)--nods no--(Oh you forgot it huh....? What do you dream when you get scared?) I go into my mother's room. (And does she help?) Yeah... And then go back in my own bed and go to sleep. (Oh.. I see...but your mom makes it feel better. That's good.)

(Todd?) Yes? (Tell me something. One kid told me that when you had a dream about a monster that the monster would really be in your room...standing on the rug in your room, he was really in your room...could that be true?) --nods no--(It couldn't be...? You think that was kind of a silly thing to think?)--nods yes--(Okay.. ..shall I play this back?) Yeah.

APPENDIX E

Protocol of a Child Evidencing Extreme Ambivalence

Billy Stage 2B

Age 51 months

(There's some initial talk about being "four years old and in the five day class," about "last year," and about Billy wanting to hear himself on the tape.)

Dream Report: (Billy - do you know what a dream is? Can you tell me a dream that you've had?) Yup. Know what? Once a dream that a BIG BIG boom in my house. (A big big...) BOOM. (A noise?) And I didn't know what it WAS...so I got out of my bed and and saw it was nothing...it was in my dream. (It was in your dream?) I did have one dream.. just one...(Just one?) Uh-hummmm (a dream of the boom? Was the boom for real, or was it in the dream?) It was in the dream. (Do you remember another dream?) No, I don't remember the other dream. (Okay, was that dream a good dream or a bad dream?) Bad dream. (What was the thing that made it bad?) What I thinked about it. (What did you think about it?) When the thing said BOOM.... (That's when it was bad?) Yeah. (How did you feel right then?) I got out of my bed and saw what it was...it WAS IN MY DREAM. (Was it a little scary?) No, because I know where it was when I was four...(You knew what it was when you were four..what was it?) It was just.. ...nothing. (Just nothing?....Boy, you have grown up, haven't you?)

Reality: (When you had that dream, Billy, was it real or was it make-believe?) It was make-believe. (Okay, where did it come from?) From the side of my bed and the side of my bed...night light...I have a night light, you know... the boom was where my night light was. (The dream was where your night light was?) And the boom turned off my light. (It turned off your light in the dream) It really was pretend....(It really was pretend?)

Origin: (Who sent the dream?) I did. (You did? Who made it up?) I did. (Oh, you did. When you had your dream, where were you?) I was in my bedroom going to sleep. (You were in

your bed.) Uh-huh, going to sleep with my Unclear and then I was STARTING to go to sleep and I hear that big boom. (Oh, right away, Huh?) Uh-hummm, right away. (So you were in your bed; where was your dream?) In my room with my Mommy. (Where was your mommy?) She was in her bedroom and my MOMMY hears the boom so she comes in my room and saw what it was - it was just nothing. (It was just nothing.) Uh-hummm. No, my BOOKS fell off my dresser. (Oh, is that what it was?) Uh-huh, a big boom. (Was that a dream or was that something that happened for real?) It was a dream.

Location: (It was a dream?...so you were in your bed, right...? and where was the dream?) The dream was on the ceiling (The dream was on the ceiling?) Uh-hummmm, pointing to the other one. (Pointing to the other one?) We have many ceilings--he talks about big ceilings, not clear-- (Oh, did you see a person on the ceiling?) Yes. (Who?) Um-ummm...Spiderman. (Spiderman? Was that in the dream too?)...Uh-humm...(Tell me something, you were in your bed; was the dream inside you or outside you?) Outside you - outside me. (In the room?) Yeah. (And tell me something else, if you were having a really good dream, if you were dreaming about playing...) Uh-huh... (Would that be inside you or outside you?) Umm, well inside me. (Inside you?) Yup. (And if you had a bad dream, a dream about a monster, would that be inside of you or outside of you?) Outside of me. The..the.. things I think about are that I be happy are inside and that I be mad are outside. (Oh, I see.) BUT, Spiderman was INside. (Spiderman was inside?) Yup, but the MONSTER was OUTside. (Oh...) It was REALLY outside. the monster was really outside my house. (It was?) Yeah..--mumbles--monster was really outside my house. (Was the monster real or was he make-believe?) He was make-believe. (Tell me something...)

Digression: You know what, when I was one year old there was a big boom and I cried. (You cried?) When I was a baby... (Why did you cry?) Because of the big boom. (You mean the boom made you cry?) Uh-hummm.

External Visibility: (Tell me something.) What? (Pretend you're having your dream, okay? You're asleep in your room and you're

having your dream. Your Mommy comes into your room. Can she see your dream?) No. (No? Tell me the reason.) Because...cause, bec...it was...all the things I dreamed was in my body--his voice shaking--(ALL the things you dreamed were in your body?) Yeah, so Mommy couldn't see, so I couldn't see. (You couldn't see either?) No, cause it was in my BODY. (I see...but sometimes you see your dreams, don't you?) Right.

Location: (Are they inside you or outside you?) Inside me. (They're inside you? What about the dreams of the monsters?) Yeah, yeah, inside me too. (They're inside you too? But a couple of minutes ago you said the monsters were outside, which way....) Well I was just joking....was really inside --his voice is shaking--(was really inside? Tell me something else...where inside is it?) In my body. (Where exactly?) Right here...bellybutton is (Right where your bellybutton is?)

Internal Visibility: (Tell me, if your mother could look inside your bellybutton and see inside you, pretend your mommy could do that, would she see your dream then?) No, cause after....it was in my bellybutton it was in my head. (After it was in your bellybutton it was in your head?) What is that? (That's a toothpick, a dirty one) Ooo...(Billy, what if your mother looked inside your head; then could she see your dream?) Um-hummmm...but how could she take off my HEAD? (We're pretending she can look inside. She can't for real, can she?) No. (No...but pretend she looked inside your head, where would she see your dream?) Right where...right where I grow. (Right where you grow?) Yeah.

Location: (Tell me, if you were having a good dream, would she see it there? In your head?) No. (No? Where would she see a good dream?) Right in my room. (In your room?) And what about a bad dream, where would she see a bad dream?) Ummm.. in my head. (In your head? Okay...and so, where's the good dream? I'm confused.)--He points--(In your head? Where's the bad dream?)--He points--(In your stomach? Are you kidding me or are you telling me for real?) I'm telling you for real. (For real this time. Okay. Sometimes you're being a little bit tricky, aren't you? So I wanted to know which way it was now. That's the one for real?) Yeah.

Touch: (Okay, now Billy, can you touch a dream?) Yeah. (What does it feel like?) Soft and tickley. (What's a dream made out of?) Plastic...like goosefeathers...it is goosefeathers...(Why do we dream?) Because, I don't know how you get dreams.

Segment of Connotation Questionaire:

(Which one is big?) The good dream...the BAD dream. (Which one?) The bad dream....(How is the bad dream big?) It grew by snow...and outside it grew by metal, and inside grew by snow (Tell me more)...and the BIG dream punched my whole house and my whole house broked. (Your house broked? Was that a good dream or a bad dream?) Bad dream...and it WAS REAL. It really punched my house up... my Mum needs to put it together...and me and my Daddy need to break the monster...we don't need to break the good one cause that's my friend...not the bad one...(The bad what?) The BAD ones. (Are there good monsters too?) There are good monsters...

Concrete Localization Task:

Good dream marked: on head
Bad dream marked: on stomach.

(Billy, look at this picture of a boy in bed, having a good dream about playing, show me where his dream would be?) In his head. (Here's another boy, having a dream about a monster) You mean a BAD dream...the other was a good dream and this one is a bad dream. (Where would his bad dream about the monster be?) Tummy...(I'm confused... before you said it would be in his room, now you say in his stomach, which way is it?) The bad dream breaks through my house so now it's right here, it's in my tummy, it's right here now...It's so big, so tall, taller than the house, right where the sun is. (You mean it WAS outside and then it comes into your tummy?) Uh-hummmm. (What about a good dream, is the good dream outside?) No, the good dream is sleeping right near me cause I love the good dream, the good monster, so, sleeps right next to me... (And then when you're going to have the dream, where does the good dream go?) Right near here--on pillow--that spot... he sleeps right here (And then you said that the good dream was in your head?) The good dream just goes--he hits his head--and I jumped right on here. (And when do you see it?) When I wake up, it's here when I wake up, I wake em up when my clock goes ding dong--jokes about his clock going DING DONG when it's night time--. (Can you do something special for me, can you make up a bad dream for me? A dream about a monster - just make one up, okay?)--He tells about a dream of hitting someone with an axe so he didn't get eaten up--and my daddy was home and I killed the monster and he got a big chain saw and he--interruption--he sawed the metal and now the monster isn't alive, he's dead...it was really pretend...but the nice dream was real and the bad dream was not real. (Was that the end of the bad dream?) The end.

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