Cognitive Control Therapy with Children and Adolescents

The Rationale of Cognitive Control Therapy

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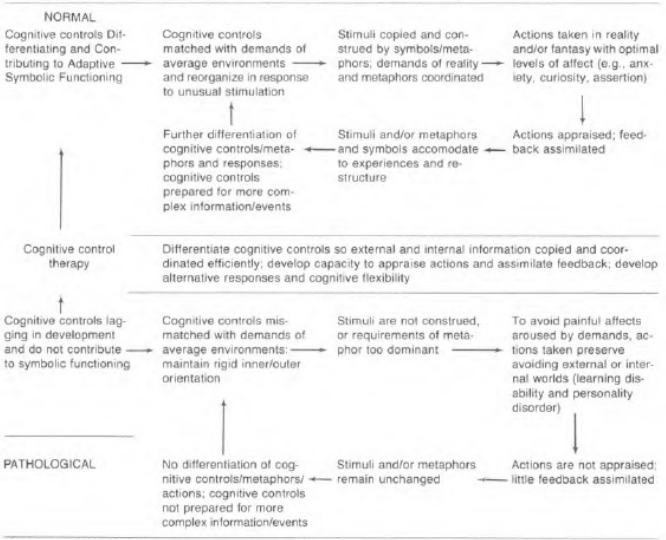
The Rationale of Cognitive Control Therapy

The preceding chapters introduce CCT within prevailing views of cognitive therapy, the population of children for whom the method is proposed, and a model of cognition in personality and adaptation which integrates cognition, metaphors, and contexts. Translating this model into a rationale for therapy, CCT is framed by several interlocking propositions diagramed in Figure 3.1.

FIGURE 3.1. CCT and Normal and Pathological Cognitive Functioning



BROAD PROPOSITIONS OF CCT

In normal development five hierarchically ordered cognitive controls differentiate with experiences, and are preadapted to meet the demands of average as well as unusual environments. They copy information and its requirements simultaneously from both external environments and metaphors. These two sets of requirements are coordinated to guide responses (in action, fantasy, and language modes or some combination) that deal with information as it is, as well as symbolically, that benefit from experimentation in pretending, and that are embedded in types and levels of affect which are optimal for learning and adaptation (e.g., curiosity, assertion, anxiety). The outcome of actions taken are appraised and assimilated, resulting in further differentiation of cognitive controls and metaphors, the development of additional alternative responses, and excitement and pleasure in learning. As a result of growth in one's personal world and in cognitive tools, the individual is prepared to deal with more complex demands.

In abnormal development, cognitive controls, initially immature because of mismatches during the first three years of life between stimulation and cognition, remain mismatched with the demands of usual and unusual environments, resulting in painful stress, anxiety, or aggressive tensions. To avoid or reduce these affects, cognitive controls coordinate reality and

metaphor by rigidly avoiding information from reality and/or metaphors.

As a result, reality information is not copied efficiently (if the requirements of metaphor/symbols dominate), or information is not expanded into new knowledge, (if metaphors and symbols do not construe it). Therefore, actions taken as a result of pathological cognitive functioning preserve avoiding the requirements of either reality or metaphor. Further, there is an inability to appraise and assimilate the failure of responses so that neither cognitive controls nor metaphors/symbols differentiate, and possible alternative responses are not developed. Cognition remains ill-equipped to deal with more complex stimuli and perpetuates this maladaptive cycle.

Children for whom CCT is intended have difficulties that result from various disabilities at several points along this process. These disabilities are treated by having the child work on graded tasks designed to rehabilitate and differentiate cognitive controls so they become more efficient in copying and coordinating external and internal information, and more effective in contributing to symbolic functioning, pretending, and manipulating information physically and mentally, in ways that serve learning. While the child deals with these tasks, not only do cognitive controls become more efficient, but the child also learns to observe and become aware of his pathological cognitive operations and when and how alternative responses are possible. By acquiring new cognitive tools and insight, the child is

equipped to change how he experiences and acts in the environment and, when indicated, to benefit from a more non-directed process of verbal/play therapy. With CCT, then, the goal is to interrupt the pathological cycle so that cognitive controls begin differentiating with experiences, contribute to the growth of a child's personal world, and provide tools for efficient learning and adaptation. From these broad propositions we consider next the coordination maintained by cognition between reality and fantasy over the course of normal development, and the different pathological forms this coordinating function takes.

NORMAL AND ABNORMAL COGNITIVE COORDINATION OF REALITY AND METAPHOR

Observations suggest three phases in the coordination maintained by cognitive controls within long-term personality development. Before the age of four years cognitive controls are oriented toward information from the world of fantasy (inner-oriented) so that information in the environment is typically experienced in highly personal terms (e.g., a 3-year-old moves and uses a shoebox in play as if it were a truck). During the first half of latency (ages 5 to 9), tempo regulation, scanning, selecting relevant information, constructing memory images, and categorizing, steadily and increasingly work on and become more oriented towards information in reality (outer—oriented). In this position coordination provided by cognitive controls

enables the child to keep a distance from, and limit the interference of, emotionally laden fantasies and wishes. By emphasizing work on reality information, cognitive controls facilitate the growth of other personality functions (e.g., identifying with and internalizing the standards of parents and teachers and stabilizing mechanisms of defense).

During the second half of latency (age 9 to adolescence), cognitive controls shift to a position that is both outer- and inner-oriented. Now when registering body percepts, regulating motility, scanning, articulating relevant from non-relevant, comparing images with present stimuli, and categorizing information, the older child responds more flexibly to the requirements of external reality, as well as to those of metaphors and symbols. While cognitive controls remain stable from one usual situation to another, they also become flexible and mobile, shifting regressively (e.g., to more narrow scanning) or progressively (e.g., to more broad scanning), or between fact and fantasy, as the environment and internal world change. In flexibly responding to both worlds of information, cognition in the older child and adolescent broadens the source of knowledge, contributes further to personality development, and adapts to changing environments.

An opposite course has been observed in the coordination unique to clinical groups. By the age of nine years, cognitive controls are either excessively occupied with information from fantasies, wishes, and impulses

(inner-oriented), with external information inefficiently copied, or they are excessively occupied with external stimuli (outer-oriented), limiting the contribution of private thoughts and fantasies. Of equal importance, cognitive controls in these rigid orientations fail to shift back and forth from reality to metaphor in keeping with opportunities, limits, and demands. As a result, efforts to adapt usually are limited whether the task involves learning in school, in psychotherapy sessions, or from experience.

The Origins of Pathological Cognitive Orientation

Several types of mismatch between a person's unique cognitive makeup and his/her environments are proposed as accounting for a pathological cognitive orientation. In one type an unusual environment, which persists over a long period of time, interferes with a child's negotiating key developmental issues. For example, an 18-month-old requires a hip cast for over a year, limiting motility and physical experimentation with the environment, behaviors that are critical for further development. In another example, a child is hospitalized for surgery at the age of four resulting in a cognitive shift toward the inner world at a time when the orientation of cognitive controls is about to shift rapidly towards external information. In both instances the mismatch is a function primarily of the developmental state of the child and "environmental accidents." In another type of mismatch, the content and form of a child's environment, from infancy, is uniquely ill-

suited given the child's make-up. For example, the child's caretaker is regularly depressed or ambivalent and inconsistent in responding to cues from the child. In this instance the mismatch is a function primarily of the state of the environment.

If the atypical environment persists, the long-term adaptive process (discussed in Chapter 2) gradually takes hold. Cognitive controls accommodate to the situation, fail to differentiate and to develop the capacity to coordinate metaphors and reality. Further, these dysfunctional controls become autonomous and persist long after the unusual environment disappears. For example, if, during the first two years of life, a child is continuously stimulated by a vigorous caretaking style that is excessive and ill-timed in terms of the child's unique make-up, the child could adapt by directing attention toward narrow segments of stimulation in order to attenuate it. In this way, a level of focal attention, characterized by passive-narrow scanning would be structured, becoming a slowly changing, habitual cognitive strategy. This strategy would then be employed years later in average environments (e.g., first grade) where it would fail to coordinate the requirements of the classroom.

Last, brain injury incurred in utero or in the first years of life could, of course, contribute to the formation of a pathological cognitive orientation. However, from the view of CCT, the issue would still be how the child's

cognitive functioning, now influenced by brain injury, becomes structured to coordinate external and internal information in terms of the child's capacity for complexity and change in information, the child's unique personal world, and the unusual environment surrounding him/her.

Types of Pathological Cognitive Orientation

The rationale of CCT takes a further step and distinguishes between dysfunctions in cognitive orientation that occur before the age of three years, and those occurring after, a distinction which converges with the onset of attention deficit disorders proposed by DSM III (see Chapter 1). For convenience, pathological cognitive orientations that are structured by the age of three years are referred to as Type I, and those structured after as Type II.

In the first type, information from reality and metaphor is copied inefficiently and remain segregated. As a result, by the third year of life the child shows significant failures in one or more of the following capacities: (a) delaying motor activity, a prerequisite if symbols are to be included, along with external stimuli, in constructing reality; (b) being aware of standards and requirements of stimulation in the environment; (c) being aware of one's actions and ability to meet these standards; (d) symbolic functioning-pretending (i.e., transforming information that has been copied into

something else with the use of symbols); and (e) connecting thoughts, beliefs, and verbal statements to fantasies and actions. Observation suggests that Type I pathology is associated with children viewed nosologically as personality trait disorders, developmental deviations, and attention deficit disorders.

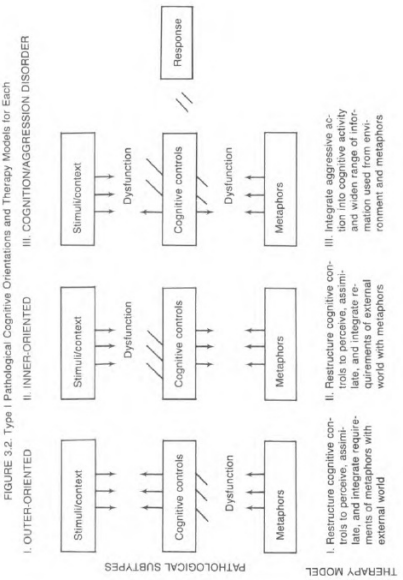
In the second type of pathological orientation, information is copied more or less adequately, whether from external stimuli or metaphors, and there is some capacity to pretend, to symbolize experiences, to appreciate the requirements of stimulation and how actions taken satisfy these requirements. The cognitive dysfunction of these children resides primarily in the inability to coordinate the requirements of reality and metaphor and is recruited to control information in the service of primary neurotic conflicts and the solutions they prescribe. Because these children leap back and forth between reality and metaphor, and fail to assimilate experiences, metaphors remain fixed, continually construing events and prescribing responses and affects that work against learning and adaptation (neurotic metaphors). Observation suggests that Type II pathology is associated with children viewed nosologically as severe anxiety and obsessional disorders with learning disabilities, and with either hyperactivity and flight of ideas, or physical and mental constriction and inhibition.

Subtypes of Pathological Cognitive Orientation and Therapeutic Approaches for Each

There are three subtypes of Type I pathology. Each is treated with a particular therapeutic approach as shown in Figure 3.2.

Subtype I. Outer Orientation: A pervasive, rigid, outer cognitive orientation which limits the accessibility of metaphors to discover new information as well as the contribution metaphors could make in serving adaptation. Cognitive controls are excessively occupied with external, discrete, usually concrete stimuli, while metaphors and their calls for action are avoided and rarely included in responses. For these children the therapeutic approach emphasizes rehabilitating cognitive controls to perceive and assimilate the requirements of metaphors efficiently and to integrate these requirements with those of the external stimuli.

Subtype II. Inner Orientation: A pervasive, rigid, inner cognitive orientation which limits the contributions and requirements of external information and the extent to which various opportunities and limitations provided by the environment could be taken advantage of in experimental actions. For these children, the therapeutic model emphasizes rehabilitating cognitive controls to perceive and assimilate the requirements of external stimuli and to integrate these requirements with those of metaphors.



Subtype III. Cognitive Pathology and Aggressive Disorders: Excessive aggressivity, usually physical, which interferes with gathering and coordinating information from both metaphors and external stimuli. While these children may have access to external stimuli and metaphors, their cognitive controls are usually myopic, centering on narrow details in reality or in metaphors and exaggerating their prescriptions. The therapeutic model followed for these children emphasizes integrating aggressive actions within mental cognitive activity, thereby rendering aggression under the influence of cognitive control, reducing the disrupting influence of physical actions on

thought, and promoting an increasingly widening range of information from external and internal environments.

Subtype IV. Excessive Shifts in Cognitive Orientation: There are two types of Type II pathology as diagramed in Figure 3.3. With the first, while these children tend to achieve cognitive control maturity when a metaphor is perceived, cognition rapidly shifts to an outer orientation, centering on a reality detail *unrelated* to the metaphor, as a way of avoiding its prescriptions. Similarly, when a reality detail and its requirements are perceived, cognition immediately shifts to an inner orientation, centering on a detail from fantasy *unrelated* to the external stimulus.

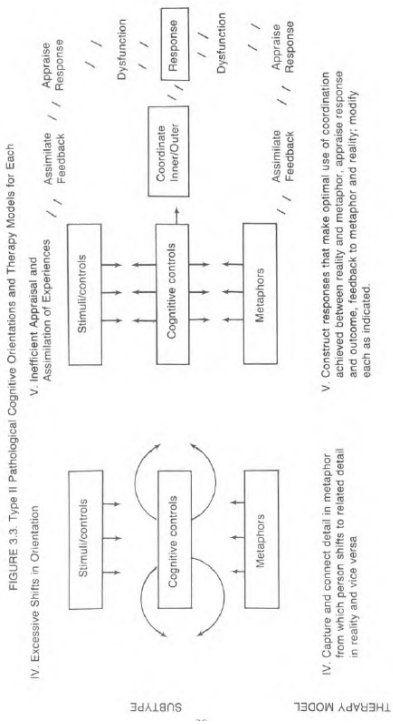
To aid these children, therapy emphasizes capturing the inner metaphor from which the child escapes by centering on an external stimulus (or conversely, capturing the external stimulus from which the child escapes by centering on a fantasy) and in a stepwise fashion connecting each external stimulus and its associated metaphor, coordinating, and integrating their respective prescriptions.

With each of the four subtypes, once the primary goal of the respective therapy model has been met, the final phases of CCT (Model V) focus on techniques that address appraising the actions taken and assimilating the outcomes of these actions so as to modify metaphors and/or situations in the

service of learning and adaptation. Each of these therapy models and the techniques employed are detailed in the chapters that follow.

THE PROCESS OF CCT: PRESENTING GRADED TASKS

Since CCT is conceptualized and conducted as a variation of psychodynamic psychotherapy, the next discussion considers why CCT, while retaining some tenets of psychotherapy, departs from others by presenting the child with particular tasks and materials.



The method of psychotherapy evolved by Freud shaped the approach of psychotherapy with children that allows the child the freedom to do in a playroom whatever he/she wishes (save for a few restrictions). With the benefit of this freedom, the child gradually repeats in play and verbal behaviors conflicts, unconscious attitudes, wishes, and feelings that are transferred to the therapist. The child resists reflecting on and understanding her behaviors in favor of repeating them. With the help of the therapist (primarily in the form of interpretation), the child gradually overcomes this resistance and learns about her conflicted wishes and fantasies, which have been outside of awareness but prescribing maladaptive behaviors. As a result of this insight or education, the child is free to modify (reform) the methods she has been using to conduct her life.

But, this non-directed treatment process has been reexamined over the past four decades by psychoanalytic ego psychologists. These therapists have observed that some adults and children cannot make use of a non-directed relationship with its deprivation of external stimuli (represented especially by lying on a couch). Some of these persons repeatedly describe daily details of life, rarely reporting dreams, daydreams, or fantasies. Others become quite stressed and frightened by the flood of thoughts and fantasies they experience and must sit up and keep a connection with the therapist and physical surroundings. In the first chapter we considered a girl who initiated checker games, session after session, in order to remain connected with

external stimulation and to avoid fantasies. And, we considered a boy who became stressed and frightened by the flood of fantasies and emotions he experienced, racing about the playroom colliding with one experience after the other.

From the view of CCT, these children and adults cannot make use of a non-directed treatment situation because of their pathological cognitive orientation. The person who clings to reality details may need therapy in learning how to image and symbolize external stimuli without being overwhelmed by intense anxiety. And, the person who is flooded with fantasies may need to learn how to perceive external stimulation and its requirements without becoming panicked. As already noted, to accomplish this, CCT sets a task before the patient with which she is asked to work, rather than leaving to the patient the job of organizing some activity or set of thoughts. As an example, with one program (see chapters that follow), the child is asked to walk along a pathway at various tempos. With another program a child is asked to survey 30 geometric cutouts and retrieve particular shapes. In so doing, CCT departs from one proposition of psychodynamic therapy stated by Freud that "it is wrong to set a patient tasks." The rationale for this departure comes from two particular concepts within psychoanalytic ego psychology which are also useful guides in conducting the techniques to be described. One is the concept of cognitive autonomy, which, in turn, relates to symbolic functioning. The other is the

concept of stimulus nutriment and the structuring of cognition.

The Concept of Cognitive Autonomy from Reality and Fantasy

In normal development, cognitive functioning is viewed as autonomous both from fantasies and drives and from stimulation in the external environment.[1] Cognitive functions are guaranteed autonomy from the influence of fantasies by virtue of the fact that from birth these functions are inherently preadapted to and "fitted with" reality stimulation. Many studies illustrating that infants, in the first days of life, track moving targets and scan increasingly complex patterns, could be viewed as examples of cognitive functioning inherently fitted to stimuli in reality. On the other hand, cognition's autonomy from the environment is guaranteed by the human's constitutionally-given ability to transform and represent stimuli in symbols and fantasies. Studies have shown that representational behavior surges at 12 months (e.g., the child tilts his head back, pretending to drink from an empty cup). A person's representational growth, then, is viewed as protecting the person from becoming stimulus-bound and a slave to environmental requirements.

We discussed above that cognition's autonomy shifts through the course of development: (a) from a phase when autonomy from the representational world is less and symbols are dominant in creating reality; (b) to a phase

when autonomy from reality is less and environmental stimuli are dominant in defining reality; (c) to a phase when cognition maintains flexible autonomy between reality and fantasy.

What do we mean behaviorally when cognition is conceptualized as autonomous from fantasy and reality? Consider the following behaviors of a 36-month-old preschooler who shows he has emerged from the first three years of life free of Type I pathological cognitive orientation and with solid capacity to exercise cognitive autonomy. He postures his body, extends his arms, and walks from a table to shelves across the room. There he surveys a large number of toys and then focuses on a 3-inch plastic figure of a spaceman. He rubs the head of the figure saying, "No helmet." He continues surveying, picking up and returning objects. Finally he takes a plastic spaceman, which now has a helmet, carries it back to his table, and sets it next to another identical figure.

At another time, the same child stands on all fours, tossing his head and opening his mouth wide. He crawls slowly across the floor, each forward movement of his arms and legs suggesting power and determination. He scans an array of toys and objects on the floor, crawls to a short wooden stick, leaves it, goes to another, growls, picks up the stick with his teeth, and carries it back to his "den." There he drops the stick from his mouth next to a 12-inch wooden figure of a man, the stick and figure are the same length. He raises his

head again, growls ferociously and says, referring to the stick just dropped, "Me killed him, too."

Both vignettes would be viewed as moments of play. In the first, the play involves cognitive functioning that deals with information as it exists. In the second, the play involves cognitive functioning that deals with information as it is imagined. What is critical for us is that *the same cognitive controls are operating in both episodes, in one they function relatively autonomous from fantasy and in the other relatively autonomous from reality.*

Body ego-tempo regulation is operating in the first episode when the boy extends his arms and walks across the room, and in the second when he crawls, tossing his head and posturing a fierce animal. Focal attention is operating in the first episode when the boy surveys the toys on the shelf, and in the second episode when he scans objects on the floor. Field articulation is operating in the first episode when the boy articulates relevant/irrelevant stimuli, selectively attending to a particular plastic figure, and in the second when he selectively attends to a particular stick. Leveling-sharpening is operating in the first episode when the boy compares the perception of the figure he picks up with an image (of a spaceman with a helmet), and in the second episode when he compares the perception of a stick with an image (of one of a particular length). Equivalence range is operating in the first episode when the boy sets the spaceman figure next to one that is identical, and in the

second when he lays the stick next to the wooden figure referring to them as belonging to the same category ("Me killed him, too.").

These vignettes illustrate that by the age of three years, a normal child achieves the capacity to handle stimulation from reality and fantasy, using cognitive controls with autonomy. Since this capacity is achieved during the time when pathological cognitive orientations are formed, we need to take a closer look at when and how a child symbolizes. A formulation of this process contributes to a rationale of the tasks, materials, and methods used in CCT to treat children.

Symbolic Functioning: When Does Pretending Emerge and What Makes It Possible?

In the following discussion it is important to recall the distinction made in Chapter 2 between the construction of symbols and metaphors.[2] Constructing a symbol involves a relatively molecular process, which represents a single object, person, or event. Constructing a metaphor involves a more molar process, which represents a complex developmental issue by using a pattern of behaviors and symbols that is persistent and habitual. First, a word about the ingredients of symbolic functioning.

When a symbol is constructed, something "is presented again" in some way other than its original form. In this process a referent, which is some meaning as it exists in the mind of the person constructing the symbol, is

conveyed by a vehicle which is the mode of behavior used to carry that meaning. Different behaviors can serve as vehicles (e.g., body movements, images, drawings, spoken language), and the vehicle carrying one meaning can consist of a combination of behaviors. For example, a child takes a wooden cube, "John," places it on a ruler, shouts, "Five, four, three, two, one—blast off," and slowly raises the ruler and cube. In terms of symbol construction, the cube, ruler, spoken words, and movements of the objects are all part of the vehicle conveying the referent "a spaceman in flight."

The sensory form of vehicles may or may not bear a relation to a quality of the referent. A child may place a pot on his head, or a wash cloth, as vehicles conveying the meaning of space helmet. The pot is viewed as a more conventional symbol, while the wash cloth as a more personal one, since the sensory attributes of a pot are more similar to those of a helmet. Linguistic vehicles have the least relation with their referents. Many words like "Philadelphia" or "kill", as they are, do not necessarily reflect qualities of the meaning a person may have in mind when saying, "You'll kill them in Philadelphia." Some words, especially vocalizations such as "boom," "pow," "zap," bear a closer similarity to their probable referents.

While symbolic functioning has been observed during the first year of life (e.g., a child opens its mouth as a vehicle to convey the meaning of a drawer opening), there is a sharp increase during the second year, as the

child initially constructs conventional symbols (e.g., holds a toy bottle to a doll's face; covers a doll in a crib with a piece of cloth). After the second year, personal symbols mushroom (e.g., the child manipulates a spoon to convey a bat hitting a ball, a tool fixing a toy truck, and a rocket ship soaring through space), and the child sustains pretending for at least 15 minutes.

By the third year, then, cognition achieves a two-fold capacity, illustrated by the earlier anecdotes. Cognition remains autonomous from fantasy, copying information as it is and symbolizing it with conventional symbols. And cognition remains autonomous from reality, transforming information into highly personal terms that are quite discordant with the actual sensory properties of the information. And, the child can sustain pretending for over an hour, shifting between information as it is and as it is transformed with conventional and personal symbols, orchestrating the activity around a continuous theme. In developing this two-fold capacity, the child has the tools to serve the requirements of reality with the benefit of rehearsals in thought and to serve the requirements of fantasy with the benefits of trial actions in reality.

What cognitive capacities are prerequisites for the emergence of symbolic functioning? During the second year of life the child can regulate body tempos to perform intentional acts, scan information, articulate particular pieces in a field, compare a perception of a present object with an

image of one encountered in the past, and categorize objects in terms of some physical similarity or usage. But while these cognitive functions develop, a network of other related functions also develop that implicate cognitive functioning.

One function concerns the capacity to be aware of standards defined by others and to be aware of when, whether, and how one's actions meet or violate these standards. Kagan has observed, for example, that during the second year of life children show awareness of alterations in materials (e.g., a cracked toy, a spot on one's shirt, a paint chip on a cupboard) and express behaviors that suggest standards have been violated.

Using these observations and other data, Kagan proposes that this awareness, in turn, requires the capacity *to infer* that the chipped paint, for example, was caused by someone's action and that certain actions violate standards. The capacity to infer emerges by 17-18 months. By the end of the second year the child is capable of inferring a psychological state in another person or the reasons for material or stimulation to be in some particular arrangement. Inferring, of course, requires recalling earlier experiences and relating these to present perceptions. Awareness of standards required by others and inferring whether and how one's actions meet these standards could be viewed as part of the process by which the child articulates external reality.

Other developments are more related to a child's inner world. One concerns the ability to treat objects as symbols. During the second year of life the child has the ability to substitute one object for another. Here the child must distance herself cognitively from the object and replace it with an alternative, the replacement selected initially because it shares some attribute of the original object.

The capacity to substitute one object for another relates to the capacity to assume different points of view and to shift from one to another. For example, by the age of three, a child can engage a glob of clay, as clay, assume another point of view and engage the clay as pizza pretending to eat it ("Yumm!"), assume another point of view and engage it as feces ("Yuk!"), and assume another point of view and engage it as a snake, with the child shrinking back in fear. It is important to note that with each point of view accompanying each transformation of the clay, the child assumes a different role and experiences different fantasies and emotions.

The Concept of Stimulus Nutriment and the Structuring of Cognition

During the first three years, as the child shifts between dealing with information as it is and as it is transformed and construed by fantasy, other cognitive controls gradually differentiate so that with each experience they become prepared to deal with more complex information. A formulation of

this process also contributes to a rationale of the tasks, materials, and methods used in CCT.

To address this question, CCT uses the ego psychological concept of stimulus nutriment (Gill, 1967), which extends Piaget's concept of alimentation. When the environment presents a new stimulus, more complex than previous ones, an already existing cognitive structure accommodates to it until it is fully assimilated. It is during this process of accommodating to and assimilating the more complex information that the cognitive structure undergoes differentiation. Cognitive structures differentiate, then, depending upon the availability of particular stimulation, which Piaget refers to as "aliment" and ego psychology as "stimulus nutriment."

One study, which observed that infants of different ages prefer to look at checkerboards of different complexity, serves as an illustration. Three- week-old infants look longest at a 2 x 2 checkerboard, 8-week-old infants look longest at an 8 x 8 checkerboard, and 14-week-old infants prefer a 24 x 24 checkerboard. From the viewpoint of stimulus nutriment, cognition of the youngest infants was structured and adapted to the simplest organization of information (2 x 2 checkerboard) which therefore was sought after and preferred over the other displays. With an increase in age, cognition was more differentiated and therefore sought nourishment in progressively more complex information.

In normal development, cognition seeks out a level of complexity in information that is only slightly greater than the complexity of existing cognitive structures, and when accommodating to and assimilating this information, the structure undergoes further differentiation. Ego psychology elaborates this process by suggesting how cognitive structuring takes place in abnormal development as well as normal, and why deviant cognitive structures lag in differentiating.

To illustrate, consider the example discussed in the previous chapter in which focal attention is structured to engage in passive-narrow scanning as one way of handling a pathological degree of mismatch between the child's attention system and the tempo and complexity of information. Here, passive-narrow scanning serves the goal of avoiding encounters with information so that stress and anxiety are kept at some tolerable level. Therefore, unlike instances of normal development where, as proposed by Piaget, cognitive structures are nourished by more complex organizations of information, the structure of narrow-passive scanning is nourished by freedom from stress and anxiety by this mode of scanning when information is avoided. In another example, it a patient's cognition centers on external stimuli, excluding the contribution of fantasies, this pathological outer orientation is nourished by freedom from stress and anxiety achieved by the orientation when fantasy is avoided.

THE RATIONALE OF CCT: THE COGNITIVE FUNCTIONS ADDRESSED IN THERAPY

The several cognitive capacities achieved in normal development by the third year of life can be summarized: (a) static, dynamic (moving), and anticipated information in reality is copied by a range of cognitive processes which involve the body, regulating motion, surveying, selectively attending, comparing images of information with present perceptions, and categorizing information; (b) the relation between perceptions and images and between actions and outcomes are inferred; (c) the same information is approached from different points of view; (d) information is transformed by symbolic functioning, which involves constructing conventional and personal symbols using various vehicles to convey meaning (e.g., body postures, gestures, images, words); (e) with symbolic functioning the child develops standards of behaviors permitted and prohibited in reality, which, in turn, influence rehearsals that take place in fantasy as well as actions selected for experimentation in reality; and (f) when each experience is assimilated, cognitive structures differentiate, search for, and are preadapted to deal with more complex stimulation.

As discussed in the first chapter, CCT takes the position that children who have failed to develop these capacities are limited in the use they can make of non-directed, verbal/play therapy. Their very developmental failures limit the efficiency with which they can initiate copying and transforming

information in the service of exploring and reforming the requirements of their inner worlds, experimenting in reality, and assimilating new experiences in preparation for more complex ones. Their pathological cognitive orientations, whether excessively inner- or outer-oriented, persist, nourished by the freedom they bring from intense anxiety and stress, which is aroused when situations press them to coordinate and integrate the requirements of reality and metaphor.

To treat these children, CCT takes the position that at the start the therapist initiates and directs tasks and the therapeutic process. With these tasks, each dysfunctional cognitive control, which is failing to differentiate, is rehabilitated in a developmental sequence beginning, if indicated, with body ego-tempo regulation and progressing through the hierarchy of controls to conceptual thinking (equivalence range). Therefore, a treatment program has been designed for each cognitive control.

While the task requirements vary from program to program, each of the programs address the same set of functions as outlined in Figure 3.4. The tasks require the control process being treated to: (a) copy information that is static, dynamic, and anticipated; (b) infer relationships between an image and a perception of a stimulus; (c) assume different points of view; (d) participate in symbolic functioning, constructing both conventional and personal symbols and using alternative modes as vehicles; and (e) participate in

shifting among points of view during a process of pretending.

To promote the differentiation of a cognitive control while it is dealing with each of these functions, the child is presented with a series of tasks graded in a stepwise fashion according to several variables: from simple to complex patterns of information; from requiring physical activity to requiring mental activity, with physical actions subordinated; from requiring little delay to requiring more delay; and from requiring that few standards be met to requiring careful appraisals of when and how the child's responses meet the requirements of the task and of her personal world.

Figure 3.4 also shows that the sequence with which these functions are addressed honors the child's presenting pathological cognitive orientation. For children who are outer-oriented, each program begins with tasks consisting of neutral information and then gradually consisting of information that arouses and invites the participation of fantasies and the construction of symbols, first conventional ones and then highly personal ones. For children who are inner-oriented, each program begins with tasks that emphasize transforming information first with highly personal symbols and later more conventional ones; then a reverse sequence is followed as the tasks address each of the other functions, gradually reaching a point where the child copies information as it is without the participation of fantasy.

Last, at each step of a program, with each series of tasks, the child is trained bit by bit to observe, evaluate, and become aware of his/her responses, when and whether they serve learning and adaptation, and to coordinate the outcome of responses in order to reform the requirements of metaphors and/or reality stimulation. When the child shows the capacity to engage all cognitive controls with flexible autonomy from reality and fantasy characteristic of the normal 3-year-old (described above), the therapist relinquishes giving direction and the child initiates and organizes activities for treatment. In the last phase, then, CCT resembles non-directed verbal/play therapy.

FIGURE 3.4. Cognitive Functions Addressed in Each Cognitive Control Therapy Program

Tasks Graded within Each Function	
A. Simple	_____ Complex
B. Physical Actions	_____ Mental Actions
C. Little Delay	_____ Much Delay
D. Responses not Evaluated	_____ Responses Evaluated

1. Process static information as it is.
2. Process dynamic information as it is.
3. Anticipate information as it is.
4. Infer a relation between an image of information and a perception of a stimulus.
5. Assume different points of view when engaging information; reason by analogy and categories.
6. Develop symbolic functioning—pretending
   A. Assign stimuli meanings (referents) that are usual (conventional) and unusual (personal); increase independence from external stimuli; increase distance of representation from events to which they refer
   B. Express meanings using a progression of (nested) vehicles: from body actions to fantasies to language; transform one inanimate object to another and an inanimate object to an animate object
   C. Shift flexibly among meanings (referents) and behaviors expressing meanings (vehicles)
   D. Shift flexibly among roles (identities) while pretending

The next chapter discusses techniques and procedures that apply to all CCT programs. The chapters that follow (5 to 9) describe the tasks and techniques for each of the programs developed to treat one of the cognitive controls. Chapter 10 discusses the last phase of treatment, when the process takes on a more non-directed format, and the child initiates and organizes the activity.

Notes

1 This discussion relies upon and elaborates one aspect of Rapaport's theory of ego autonomy (Gill, 1967).

2This discussion relies in particular on observations reported by Kagan (1981) and others (Smith & Franklin, 1979).

References

Anthony, E. J. (1956). The significance of Jean Piaget for child psychiatry. *British Journal of Medical Psychology, 29,* 20-34.

Arieti, S. (1970). The role of cognition in the development of inner reality. In J. Hellmuth (Ed.), *Cognitive studies* (Vol. 1, pp. 91-110). New York: Brunner/Mazel.

Arnkoff, D. B., & Glass, C. R. (1982). Clinical cognitive constructs: Examination, evaluation, and elaboration. In P. C. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy* (Vol. 1, pp. 1-34). New York: Academic Press.

Barten, S. S. (1979). Development of gesture. In N. R. Smith & M. B. Franklin (Eds.), *Symbolic functioning in childhood* (pp. 139-152). Hillsdale, NJ: Lawrence Erlbaum.

Beck, A. (1976). *Cognitive therapy and the emotional disorders.* New York: International Universities Press.

Bedrosian, R. C., & Beck, A. T. (1980). Principles of cognitive therapy. In M. J. Mahoney (Ed.), *Psychotherapy process: Current issues and future direction* (pp. 127-152). New York: Plenum Press.

Benjamin, J. D. (1961). The innate and experiential in development. In H. W. Brosin (Ed.), *Lectures in experimental psychiatry* (pp. 19-42). Pittsburgh: University of Pittsburgh Press.

Billow, R. M. (1977). Metaphor: A review of the psychological literature. *Psychological Bulletin, 84,* 81-92.

Bruner, J. S., & Klein, G. S. (1960). The functions of perception: New look retrospect. In B. Kaplan & S. Wapner (Eds.), *Perspectives in psychological theory* (pp. 61-77). New York: International Universities Press.

Bruner, J., & Postman, L. (1948). An approach to social perception. In W. Dennis (Ed.), *Current trends in social psychology* (pp. 71-118). Pittsburgh: University of Pittsburgh Press.

Cacioppo, J. T., & Petty, R. E. (1981). Social psychological procedures for cognitive response

assessment: The thought listing technique. In T. V. Merluzzi, C. R. Glass, & M. Genest (Eds.), *Cognitive assessment* (pp. 309-342). New York: Guilford Press.

Craine, J. F. (1982). Principles of cognitive rehabilitation. In L. E. Trexler (Ed.), *Cognitive rehabilitation: Conceptualization and intervention* (pp. 83-98). New York: Plenum Press.

Decarie, T. G. (1965). *Intelligence and affectivity in early childhood.* New York: International Universities Press.

Dember, W. N. (1974). Motivation and the cognitive revolution. *American Psychologist, 29,* 161-168.

Donahue, P., Rokous, B., & Santostefano, S. (1984a). Cognitive control therapy with children hospitalized in a psychiatric facility. Unpublished manuscript.

Donahue, P., Rokous, B., & Santostefano, S. (1984b). *Cognitive control therapy with outpatient children and adolescents.* Unpublished manuscript.

Ellis, A. (1970). The essence of rational psychotherapy: A comprehensive approach. New York: Institute for Rational Living. Emery, G., Hollon, S. D., & Bedrosian, R. C. (1981). *New directions in cognitive therapy.* New York: Guilford Press.

Erdelyi, M. H. (1974). A new look at the new look: Perceptual defense and vigilance. *Psychological Review*, 81, 1-25.

Feather, B. W., & Rhoads, J. M. (1972). Psychodynamic behavior therapy: I. Theoretical aspects. *Archives of General Psychiatry, 26,* 496-502.

Fein, G. G., & Apsel, N. (1979). Some preliminary observations on knowing and pretending. In N. R. Smith & M. B. Franklin (Eds.), *Symbolic functioning in childhood* (pp. 87-99). Hillsdale, NJ: Lawrence Erlbaum.

French, T. (1933). Interrelations between psychoanalysis and the experimental work of Pavlov. *Psychiatry*, 12, 1165-1203.

Freud, A. (1965). *Normality and pathology in childhood.* New York: International Universities Press.

Freud, S. (1958). Remembering, repeating, and working-through (Further recommendations on the technique of psychoanalysis: II. In *Standard edition of complete works* (Vol. 12). London: Hogarth. (Original work published 1914).

Gardner, R. W., Holzman, P. S., Klein, G. S., Linton, H. B., & Spence, D. P. (1959). Cognitive control: A study of individual consistencies in cognitive behavior. *Psychological Issues*, 1 (4).

Garrity, C. (1972). *Academic success of children from different social class and cultural groups.* Unpublished doctoral dissertation, University of Denver.

Gill, M. (Ed.). (1967). *The collected papers of David Rapaport.* New York: Basic Books.

Glass, C. R., & Arnkoff, D. B. (1982). Think cognitively: Selected issues in cognitive assessment and therapy. In P. C. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy* (Vol 1, pp. 36-75). New York: Academic Press.

Goldfried, M. R. (1980). Psychotherapy as coping skills training. In M. J. Mahoney (Ed.), *Psychotherapy process: Current issues and future directions* (pp. 89-119). New York: Plenum Press.

Golomb, C. (1979). Pretense play: A cognitive perspective. In N. R. Smith & M. B. Franklin (Eds.), *Symbolic functioning in childhood* (pp. 101-116). Hillsdale, NJ: Lawrence Erlbaum.

Gruber, H. E., Hammond, K. R., & Jesser, R. (Eds.). (1957). *Contemporary approaches to cognition.* Cambridge, MA: Harvard University Press.

Guidano, V. F., & Liotti, G. (1983). *Cognitive processes and emotional disorders: A structural approach to psychotherapy*. New York: Guilford Press.

Gunnoe, C. (1975). The evaluation of a structure-based and a skilled-based intervention program for at risk four and five-year old children. Unpublished doctoral dissertation. Harvard University.

Guthrie, G. D. (1967). Changes in cognitive functioning under stress: A study of plasticity in cognitive controls. (Doctoral dissertation, Clark University, 1967). *Dissertation Abstracts International*, 28, 2125B.

Holt, R. R. (1964). The emergence of cognitive psychology. *Journal of American Psychoanalytic Association*, 12, 650-665.

Holt, R. R. (1976). Drive or wish? A reconsideration of the psychoanalytic theory of motivation. *Psychological Issues*, 9 (36), 158-198.

Horowitz, M. J. (1978). *Image formation and cognition* (2nd ed.). New York: Appleton-Century-Crofts.

Kagan, J. (1981). *The second year: The emergence of self-awareness.* Cambridge, MA: Harvard University Press.

Kendall, P. C. (1981). Cognitive-behavioral interventions with children. In B. Lahey & A. E. Kardin (Eds.), *Advances in child clinical psychology* (pp. 53-87). New York: Plenum Press.

Kendall, P. C. (1984). Social cognition and problem solving: A developmental and child- clinical interface. In B. Gholson & T. Rosenthal (Eds.), *Applications of cognitive-developmental theory* (pp. 115-148). New York: Academic Press.

Kendall, P. C., & Hollon, S. D. (1979). *Cognitive-behavioral intervention: Theory, research and procedures*. New York: Academic Press.

Kendall, P. C., & Wilcox, L. E. (1980). Cognitive-behavioral treatment of impulsivity: Concrete versus conceptual training in non-self-controlled problem children. *Journal of Consulting and Clinical Psychology*, 48, 80-91.

Kihlstrom, J. F., & Nasby, W. (1981). Cognitive tasks in clinical assessment: An exercise in applied psychology. In P. C. Kendall & S. D. Hollon (Eds.), *Assessment strategies for cognitive-behavioral interventions* (pp. 287-317). New York: Academic Press.

Klein, G. S. (1951). The personal world through perception. In R. R. Blake & G. V. Ramsey (Eds.), *Perception: An approach to personality* (pp. 328-355). New York: Ronald Press.

Klein, G. S. (1954). Need and regulation. In M. R. Jones (Ed.), *Nebraska symposium on motivation* (Vol. 2, pp. 224-274). Lincoln: University of Nebraska Press.

Klein, G. S. (1970). *Perception, motives and personality.* New York: Knopf.

Klein, G. S., & Schlesinger, H. J. (1949). Where is the perceiver in perceptual theory? *Journal of Personality*, 18, 32-47.

Kogan, N. (1976). *Cognitive styles in infancy and early childhood.* Hillsdale, NJ: Lawrence Erlbaum.

Lazarus, R. S. (1980). Cognitive behavior therapy as psychodynamics revisited. In M. J. Mahoney (Ed.), *Psychotherapy process: Current issues and future directions* (pp. 121-126). New York: Plenum Press.

Leuner, H., Horn, G., & Klessmann, E. (1983). *Guided affective imagery with children and adolescents.* New York: Plenum Press.

Magnusson, D. (1981). *Toward a psychology of situations.* Hillsdale, NJ: Lawrence Erlbaum.

Mahoney, M. J. (1977). Reflections on the cognitive learning trend in psychotherapy. *American Psychologist*, 32, 5-13.

Mahoney, M. J. (Ed.). (1980). *Psychotherapy process: Current issues and future directions*. New York: Plenum Press.

Mahoney, M. J., & Arnkoff, D. B. (1978). Cognitive and self-control therapies. In S. Garfield & A. Bergin (Eds.), *Handbook of psychotherapy and behavior change* (2nd ed., pp. 689-722). New York: Wiley.

Marmor, M., & Woods, S. M. (Eds.). (1980). *The interface between psychodynamic and behavioral therapies.* New York: Plenum Press.

Meichenbaum, D. (1977). Cognitive-behavior modification: An integrative approach. New York: Plenum Press.

Mounoud, P. (1982). Revolutionary periods in early development. In T. G. Bever (Ed.), *Regressions*

in mental development (pp. 119-132). Hillsdale, NJ: Lawrence Erlbaum.

Ortony, A. (1975). Why metaphors are necessary and not just nice. *Educational Review,* 25, 45-53.

Ortony, A. (Ed.). (1979). *Metaphor and thought.* New York: Cambridge University Press.

Ortony, A., Reynolds, R. E., & Arter, J. A. (1978). Metaphors: Theoretical and empirical research. *Psychological Bulletin*, 85, 919-943.

Paivio, A. (1971). *Imagery and verbal processes.* New York: Holt.

Piaget, J. (1977). The role of action in the development of thinking. In W. F. Overton & J. M. Gallagher (Eds.), *Knowledge and development* (Vol. 1, pp. 17-42). New York: Plenum Press.

Rees, K. (1978). The child's understanding of the past. *Psychoanalytic Study of the Child,* 33, 237-259.

Reese, H. W., & Overton, W. F. (1970). Models of development and theories of development. In L. R. Goulet & P. B. Baltes (Eds.), *Life-span developmental psychology* (pp. 116-149). New York: Academic Press.

Ritvo, S. (1978). The psychoanalytic process in childhood. *Psychoanalytic Study of the Child,* 33, 295-305.

Sander, L. W. (1962). Issues in early mother-child interaction. *Journal of American Academy of Child Psychiatry*, 1, 141-166.

Sander, L. W. (1964). Adaptive relationships in early mother-child interaction. *Journal of American Academy of Child Psychiatry*, 3, 231-264.

Sander, L. W. (1976). Infant and caretaking environment. In E. J. Anthony (Ed.), *Explorations in child psychiatry.* New York: Plenum Press.

Santostefano, S. (1967). *Training in attention and concentration: A program of cognitive development for children*. Philadelphia: Educational Research Associates.

Santostefano, S. (1969a, December). *Clinical education and psychoanalytic cognitive theory: A structure-oriented approach to assessing and treating cognitive disabilities in children*. Paper presented at the meeting of the American Association of the Advancement of Science, Chicago, IL.

Santostefano, S. (1969b). Cognitive controls versus cognitive styles: An approach to diagnosing and treating cognitive disabilities in children. *Seminars in Psychiatry*, 1, 291-317.

Santostefano, S. (1977a). Action, fantasy, and language: Developmental levels of ego organization in communicating drives and affects. In N. Freedman & S. Grand (Eds.), *Communicative structures and psychic structures* (pp. 331-354). New York: Plenum Press.

Santostefano, S. (1977b). New views of motivation and cognition in psychoanalytic theory: The horse (id) and rider (ego) revisited. *McLean Hospital Journal*, 2, 48-64.

Santostefano, S. (1978). *A bio-developmental approach to clinical child psychology: Cognitive controls and cognitive control therapy*. New York: Wiley.

Santostefano, S. (1980). Cognition in personality and the treatment process: A psychoanalytic view. *Psychoanalytic Study of the Child*, 35, 41-66.

Santostefano, S. (1984). Cognitive control therapy with children: Rationale and technique. *Psychotherapy*, 21, 76-91.

Santostefano, S. (in press a). Cognitive controls, metaphors and contexts: An approach to cognition and emotion. In D. Bearison & H. Zimiles (Eds.), *Thinking and emotions.*

Santostefano, S. (in press b). Metaphor: An integration of action, fantasy, and language in development. *Imagination, Cognition, and Personality.*

Santostefano, S., & Reider, C. (1984). Cognitive controls and aggression in children: The concept of cognitive-affective balance. *Journal of Consulting and Clinical Psychology*, 52, 46-56.

Shapiro, I. F. (1972). Cognitive controls and adaptation in children (Doctoral dissertation, Boston

College, 1972). *Dissertation Abstracts International,* 33, 1780B.

Smith, N. R., & Franklin, M. B. (Eds.). (1979). *Symbolic functioning in childhood.* Hillsdale, NJ: Lawrence Erlbaum.

Sollod, R. N., & Wachtell, P. L. (1980). A structural and transactional approach to cognition in clinical problems. In M. J. Mahoney (Ed.), *Psychotherapy process: Current issues and future directions* (pp. 1-27). New York: Plenum Press.

Szasz, T. S. (1967). Behavior therapy and psychoanalysis. *Medical Opinion Review*, 2, 24-29.

Wachtel, P. L. (1977). *Psychoanalysis and behavior therapy: Toward an integration*. New York: Basic Books.

Wachtel, P. L. (Ed.). (1982). *Resistance: Psychodynamic and behavioral approaches.* New York: Plenum Press.

Weiner, M. L. (1975). *The cognitive unconscious: A Piagetian approach to psychotherapy.* New York: International Psychological Press.

Wertlieb, D. L. (1979). Cognitive organization, regulations of aggression and learning disorders in boys. Unpublished doctoral dissertation, Boston University.

Winner, E., Wapner, W., Cicone, M., & Gardner, H. (1979). Measures of metaphor. *New Directions for Child Development*, 6, 67-75.

Wolf, D., & Gardner, H. (1979). Style and sequence in early symbolic play. In N. R. Smith & M. B. Franklin (Eds.), *Symbolic functioning in childhood* (pp. 117-138). Hillsdale, NJ: Lawrence Erlbaum.

Wolff, P. H. (1960). The developmental psychologies of Jean Piaget and psychoanalysis. *Psychological Issues* (5). New York: International Universities Press.

Zimmerman, B. J. (1983). Social learning theory: A contextualist account of cognitive functioning. In C. J. Brainerd (Ed.), *Recent advances in cognitive-developmental theory* (pp. 1-50). New York: Springer-Verlag.