Cognitive Control Therapy with Children and Adolescents

Cognition in Personality and Adaptation

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Cognition in Personality and Adaptation

This chapter describes a theory which places cognition within personality functioning and adaptation and addresses the several needs listed at the close of Chapter 1. In brief, this theory brings together a person's cognition, her inner world, and the environment in which she is functioning. Cognition is defined as a particular set of mobile cognitive functions.

A person's inner world is defined as continually changing metaphors which condense and represent key past experiences while at the same time prescribing the way current stimulation is to be experienced and handled. The environment is defined as stimulation that continually changes and requires particular responses. The cognitive functions coordinate the requirements of reality with those of metaphor, and the coordination achieved guides the actions a person takes in the service of learning and adaptation.

First, a note about the historical roots of the theory presented here. Probably due to the influence of Freud and Piaget, studies of cognition changed emphasis after 1940 from ''formal'' to "functional" approaches (Bruner & Postman, 1948). Formal approaches explained cognition as determined by physical properties of stimuli. Functional approaches emphasized the ways in which cognitive behaviors serve an individual's

personality needs and adaptation to changing environments. The scientific ethos which emerged in the behavioral sciences at this time embraced the "organismic model" of human behavior (Reese & Overton, 1970), which viewed the individual as inherently and spontaneously active—approaching, avoiding, modifying, and giving meaning to stimuli in the service of adaptation and learning. This shift in emphasis gave rise to what came to be known as the "New Look" in perception (Bruner & Klein, 1960), a look that clinicians initially embraced eagerly.

What was it that was new? An attempt was being made to correlate cognition, affects, and personality. One of the New Look approaches was that of cognitive controls, a concept initially formulated by George Klein (1949, 1951,1954) when he observed that adults consistently use particular cognitive-ego strategies to approach, avoid, compare, and cluster information. Klein proposed that in managing information with these strategies, individuals coordinate information from external reality and from emotions, fantasies, and motives so as to remain in adaptive control of information. Hence the term “cognitive controls.”

Taking Klein's formulation as a starting point, the author conducted a program of research over the past two decades to study cognitive control functioning in normal and pathological children, as well as in adults. This program has focused on operationalizing and assessing the development of

cognitive controls within personality development, the relations between cognitive controls, emotions, and fantasy, and the role cognitive controls play in learning and coping with usual and unusual environments. The findings, reported elsewhere (Santostefano, 1978; 1984; in press a; in press b; Santostefano & Rieder, 1984) have been used to elaborate and refine cognitive control theory and to shape continually the techniques and concepts of CCT.

THE CONCEPT OF COGNITIVE CONTROLS

As noted in the first chapter, children for whom CCT is intended do not have the cognitive structures required for efficient learning. Piaget provides a brief but effective definition of learning in cognitive terms. “To know (to learn) . . . is to . . . reproduce the object (information) dynamically; but to reproduce, it is necessary to know how to produce (copy the information) . . ." (Piaget, 1977, p. 30). Copying and producing information, then, is a critical first step in learning. Recall the children described in Chapter 1 who were learning efficiently in therapy. John, for example, produced an ashtray, the number of books in the office, and a memory of a family trip. Mary produced the concert to be held for parents and a picture of her house. What cognitive mechanisms are involved in this process? And, how do the statements a person makes fit with these mechanisms? (Recall that John expressed the belief, "I can't seem to do anything right.") And, once information is copied,

how is it reproduced dynamically? (Recall that John reproduced his father as "cracked," and Mary produced her separated parents as multiple, never-ending persons.) With these questions as guides, cognitive controls are defined in more detail.

Cognitive Controls: Definition and Process

When children and adults deal with various tasks, how many distinctively different processes account for the ways information is gathered and produced? Of the several cognitive controls identified to date, five have withstood the test of numerous experiments. Each of these controls follows a developmental course, from cognitive behaviors characterizing the young child to those characterizing the adolescent and adult, and the five controls form a developmental hierarchy (see Figure 2.1).

Body-ego-tempo regulation, the first cognitive control, concerns the manner in which an individual uses images/symbols to represent and regulate the body and body motility. The young child registers vague body percepts represented in global images. In addition, body motility is regulated poorly. When asked to move fast and slow, the child produces about the same tempo and represents these with global images (e.g., a turtle walking, a rocket blasting off). With age, perceptions and representations of the body gradually become more detailed and differentiated (e.g., while balancing on one leg, the

child imagines a gymnast performing on parallel bars), and many tempos are refined and regulated, each distinguished from the other.

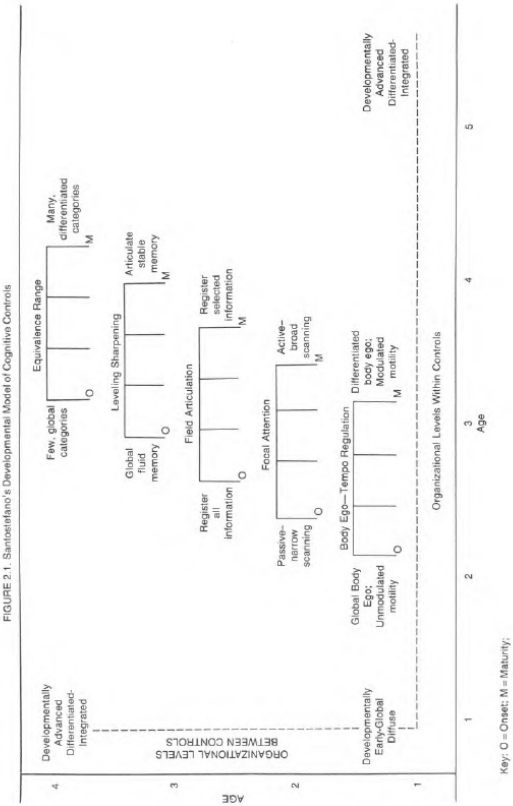
Focal attention concerns the manner in which a person surveys a field of information. The young child typically scans information slowly and directs attention to only narrow segments of the available field. With age, the child scans more actively and sweeps attention across larger segments.

Field articulation defines the manner in which an individual deals with a field of information which contains elements that are both relevant and irrelevant to the task at hand. The young child attends to relevant and irrelevant information almost equally. With age, the child gradually directs attention toward what is relevant while withholding attention from what is irrelevant to the task at hand.[1]

Leveling-sharpening concerns the manner in which an individual constructs images of information that change or remain stable over time and then compares these with present perceptions. The young child typically constructs fuzzy images of past information and fuses these with present perceptions so that subtle changes are not recognized. With age, the child constructs sharper, more differentiated images and distinguishes these from present perceptions so that subtle similarities and differences between past and present information are noticed.

Equivalence range concerns the way information is grouped and categorized in terms of a concept or belief. The young child groups information in terms of a few narrow and concrete categories (e.g., "These go together because they are all round," "These are all happy."). With age, the child constructs increasingly more broad categories, which are conceptualized in terms of more abstract concepts (e.g., "These are tools," "These kids all break rules in school but not at home.").

'The cognitive control principle of field articulation is related to, but not synonymous with, Witkin's cognitive style of the same name (see Santostefano, 1978).



From the definition of each control mechanism, we consider several concepts that add to our understanding of how these mechanisms produce information and serve learning and adaptation.

The Emergence of Cognitive Controls and the Relationships Among Them

These five cognitive controls become fully structured by the third year of life.[2] Moreover, the *process* of each remains the same throughout development, but the *organization* changes. For example, information is surveyed with the focal attention process whether the scanner is 3 or 13 years old. It is the organization of scanning that distinguishes these two individuals. The 3-year-old scans with narrow-passive visual sweeps, a less differentiated organization, while the 13-year-old scans with broad-active visual sweeps, a more differentiated organization. Growth in a behavioral structure from less to more differentiated forms is conceptualized in terms of the principle of "directiveness of behavior," which characterizes normal development. The growth of each of the other cognitive controls is viewed in similar terms from less differentiated to more differentiated organizations.

This principle permits us to view cognitive controls as interdependent and "nested one within the other," a view which has special relevance when diagnosing and treating cognitive control dysfunctions. When functioning adequately, the process of one control is viewed as relying upon, subsuming, and integrating the processes of other controls lower in the hierarchy. Consider the field articulation control as an illustration. The distinguishing feature of the process of this control is that a field of information is articulated into relevant and irrelevant parts and attention is sustained on what is relevant while withheld from what is irrelevant. But, if this process is to operate efficiently, it is necessary that two other controls, lower in the

hierarchy, also operate efficiently. Body motility must be subordinated and regulated (body ego—tempo regulation cognitive control) and the field of information must be scanned actively and broadly (focal attention cognitive control).

Similarly, the equivalence range control relies upon all of the others in its operating. Consider as an example a child who is asked to look over and group various objects that share something in common. The child groups a bottle of white glue, a hammer, and a roll of Scotch Tape because they are "things to fix with." While performing, the child regulated motility, scanned the available objects, articulated the attributes of each, compared perceptions of objects on the table with images of similar objects and experiences with them, and then united a particular cluster of objects in terms of a functional attribute they share (fixing). In constructing this group, it should be noted other attributes of these objects were subordinated as irrelevant to the category under construction (e.g., the glue bottle was white plastic, the Scotch Tape holder red metal). In the anecdote described in Chapter 1, when John offered that the therapist's ashtray and his father "were both cracked," and when he expressed the self-statement, "I can't seem to do anything right," he constructed categories having scanned, articulated, and related a wide array of information.

Cognitive Controls as Nonverbal and Verbal Activity: Deep and Surface Structures

We noted in Chapter 1 that other cognitive therapies emphasize verbal behaviors (e.g., beliefs, self-statements) as cognitions. The description of cognitive controls presented this far should make clear that words, thoughts, and beliefs are part of the process of only *one* cognitive control, namely, equivalence range. The preceding discussion also emphasizes that constructing a label, belief, self-statement, or an inference as to how something was caused, relies upon, and is nested within, deeper processes unique to each of the other four cognitive controls conceptualized as *nonverbal,* sensorimotor, and cognitive activity (i.e., regulating body schema and tempos, scanning, articulating information in terms of relevance, and comparing present information with images of past experiences). As will be discussed later, the notion that labeling relies upon deeper, nonverbal cognitive structures suggests that, when indicated, therapy should first rehabilitate deeper structures on which statements rely before treating beliefs as such.

Are Different Levels of Cognitive Controls “Good" or “Bad"?

One of the most common errors made by professionals when considering levels of behavioral structures is that one level is taken to denote "good" and another "bad." The reader was acquainted in Chapter 1 with Arnkoff and Glass's criticism of cognitive therapies that view logical beliefs as good and illogical beliefs as bad.

One cognitive control is conceptualized as higher, or lower, in a hierarchy, and one level of a control (e.g., narrow scanning) is defined as developmentally less mature than another level (e.g., broad scanning). These structures describe levels of development and do not indicate the adaptive value of a particular cognitive process. Functioning with the focal attention process is not automatically "bad," while sharpening information good. Discussed in more detail later, any cognitive control, and any structural level within a control, can be adaptive or maladaptive depending upon the age and developmental status of the child, the environmental conditions and expectations, and the requirements of the child's fantasies and emotions.

Adaptive Intention and Cognitive Control Functioning

Since all controls are available, what determines which control, or level within a control, dominates a person's functioning at the moment? Particular structures become operative depending upon an individual's "adaptive intention"; that is, the fit a person intends to negotiate between the demands of the environment and those of his/her motives, affects, and fantasies.

For example, a teacher sends a child to the supply closet to obtain a particular workbook, "like this one." Guided by this intention, the child actively compares perceptions of the attributes (e.g., color, size, lettering) of many workbooks with an image of the book the teacher held up and quickly

selects the correct one. Another child, guided at the moment by the intention to deal with the requirements of fantasies, compares a fuzzy image of the workbook the teacher displayed with inefficient perceptions of the workbooks in the closet and returns with the wrong one.

Cognitive Controls and the Issue of Conscious/Unconscious

An individual may or may not be conscious of his intention to cope with some task or situation. And, a person may be aware of a particular intention when another, unconscious intention, may in fact be guiding cognitive activity. The adaptive intention and cognitive control functioning in most situations are usually unconscious until experiences such as those made available in therapy bring them into awareness. For example, a child waiting to undergo surgery may be conscious of the intention to cope with the situation and his/her anxiety and fear, but unaware of the intention to level information in the external environment while attending to private thoughts and fantasies (see Chapter 11).

Cognitive Controls and Mechanisms of Defense

Cognitive controls are viewed as ego mechanisms that are separate from, but function in concert with, mechanisms of defense. The effective functioning of mechanisms of defense requires the effective functioning of

cognitive controls and vice versa. Each has a defensive purpose. Mechanisms of defense are organized to deal with the clash between drives and reality limitations. Cognitive controls are organized to deal with the clash between the demands of internal and external information. Each has an adaptive purpose. Mechanisms of defense disguise and displace needs and drives. Cognitive controls seek and avoid information in order to maintain a pace of stimulation that serves learning and adaptation.

When working in concert with mechanisms of defense, cognitive controls recruit particular information contributing to the direction behavioral expressions of drives take, either toward or away from certain objects and events. Cognitive controls also provide information about objects and events in the environment to which behavioral expressions of drives must accommodate.

Cognitive Controls in Normal Development and Adaptation

With the preceding discussions as a frame, we can now center more closely on cognitive control development and set the stage for a view of cognition within personality functioning and adaptation. In the view of adaptation maintained here, the individual and the environment are seen as interacting and negotiating with each attempting to influence the other until an accommodation is reached between their respective demands and

expectations. In this process, the individual actively avoids or remains autonomous from some stimuli in the environment while also engaging other stimuli and seeking change and novelty. The environment presents particular stimuli and demands, but also adjusts to unique features of the individual such as his developmental capabilities. The adaptive process explains how cognitive controls are structured over a relatively long time, as the child reciprocates with environments, and how cognitive controls are restructured temporarily in response to short-term changes in the environment.

Long-Term Adaptation and the Structuring of Cognitive Controls. In the course of development, the individual phases in and presents to the environment an evolving series of average and expectable behavioral structures (e.g., cognitive, motoric, and affective) that more or less match the environment's expectations, opportunities, and limitations. The environment, in turn, presents the individual with a continuous series of average and expectable organizations of stimulation that more or less fits the sensing and responding equipment of the individual. Since stimulation impinges on a person who has already adapted to what has taken place before, this stimulation activates cognitive structures already available to the individual and which are suited (preadapted) to accommodate to and assimilate the information.

In this give and take between individual and environment, cognitive

controls become shaped to fit the complexity and pace of stimulation characteristic of the individual's usual environments and to satisfy the individual's need for repetition of stimulation as well as for novelty and change. From this view, cognitive controls structured to manage stimulation unique to a small inner-city apartment and street life, for example, would be different than those structured to manage the stimulation of a suburban community.

Short-Term Adaptation and the Mobility of Cognitive Controls. The environment could shift, more or less abruptly, from usual to unusual stimulation. Examples would be: mother's depression leading to change in the pace and complexity of stimulation she provides; hospitalization of a child for several months; moving to a very different community, type of housing, or school. In dealing with these marked environmental changes, cognitive controls regress to earlier levels of organization or new levels evolve that depart significantly from modes previously employed, a process referred to as *cognitive control mobility.*

Individuals differ in the flexibility with which cognitive controls shift to handle short-term changes in the environment because of factors such as constitutional make-up (e.g., temperament, activity level), frequency, types and timing of unusual environmental changes the person has experienced in the past, and personality dynamics that the person is negotiating at the time

the environmental change occurs. In short-term adaptation, then, cognitive controls reorganize in a direction (regressive or progressive) that fit with the opportunities and limitations of the unusual situation and enable the person to regulate and express affects and fantasies aroused by the situation in ways that serve adaptation and learning.

Relating Long- and Short-Term Cognitive Control Adaptation. It follows from the previous discussions that the cognitive control functioning of an individual is represented both by a single level of a particular cognitive control process and by a range of levels within that process. The single level defines a relatively stable cognitive structure the individual uses to deal with many usual environments and which is modified slowly by the process of long-term adaptation. The range of levels defines a series of organizations within a cognitive control through which cognitive functioning temporarily moves (either regressively or progressively) as the person deals with short-term, unusual environments. When the environment returns to its usual status, the new organization is relinquished and cognitive activity returns to the structure the person uses in long-term adaptation.

To illustrate, consider a hypothetical situation involving an adolescent boy who has been brought into an emergency room and the surgeon attending him. When at home and school the adolescent usually directs attention actively both to external information and to private thoughts. As he

is brought into the emergency room, however, he scans narrow pieces of the environment (e.g., pictures on the wall) while directing attention more at private thoughts and fantasies (e.g., he should have returned the blade guard on the mower; it serves him right since he failed his history exam, etc.). This change in the orientation of cognitive controls toward inner information is regressive but serves to insulate the adolescent from an unusual situation over which he has little control, and to make available his inner world and opportunities to work on meanings assigned to the accident.

For the surgeon, the emergency room is a usual environment. Approaching the boy, the surgeon actively scans relevant external information (e.g., the boy's skin color, emotional state, location and type of wound), withholds attention from irrelevant internal stimulation (e.g., an earlier disagreement with a supervisor) while at the same time coordinating this information with perceptions of thoughts and memories that concern training in, and past experience with, injuries like the one before him. The surgeon's cognitive control of information is the outcome of long-term adaptation in many emergency rooms.

In discussing cognitive controls, reference is made repeatedly to stimulation from the "inner world." At this point we define what is meant by this concept which forms the second part of the theory proposed here.

METAPHOR: A CONCEPTUALIZATION OF THE INNER WORLD

Metaphor in the Psychological Literature

Before conceptualizing metaphor[3] as a dynamic system that makes up a person's inner world, we should first remind ourselves of the usual view of metaphor held in the psychological literature. Metaphor, along with its close relatives, simile and analogy, involves the transfer of meaning; something is described in terms of properties that belong to something else. To illustrate consider the following anecdote.

Spotting a jogger, a 3-year-old boy immediately leaned his body forward and with exuberant, "Choo-Choo!" vigorously thrust his right arm forward and back. Moments later he appeared to pretend being a train engine. He loaded blocks onto a toy wagon, grabbed the string attached to it, lowered his head and marched forward forcefully and rhythmically, pulling the wagon behind him.

This anecdote provides an example of a linguistic metaphor. In exclaiming, “Choo-Choo!" the toddler is essentially saying, "The man is a powerful train engine." At an older age this same child could provide examples of a simile and an analogy with the respective statements, “That man is running like a powerful engine," and “That man runs as if he is a powerful engine."

How is meaning transferred from one thing to something else? First a referent and its substitute are classified together and compared on the basis of a shared attribute. In our example, the attribute of power is the basis of comparison between the referent (jogger) and its substitute (train engine). Once constructed, a metaphor achieves a new meaning that goes beyond the objects compared and substituted and that synthesizes present and past experiences with them. In our example, the jogger is assigned a new meaning by the toddler that transcends particular properties of both the jogger and a train engine and within which are both no longer what they once were.

What functions are served by metaphor? While the view persists that metaphors are ornamental, decorative speech, Ortony (1975) proposed that metaphors are necessary and serve several important functions (e.g., they condense many facts, depict events which by their nature are not describable, reconstruct experiences, and are vivid, lying much closer to personal experiences).

The purpose served by metaphor relates to a key problem articulated by reviewers (e.g., Billow, 1977; Ortony, Reynolds, & Arter, 1978) who point out that most workers assume a word, or sentence, is the exclusive locus of a metaphor, that metaphor construction also involves pretending and imaging, and that a broader definition should be adopted. In the previous anecdote, the toddler was surely imaging a train engine as he verbalized, “Choo-Choo." But,

what should we make of the fact that he also postured and moved his body in a particular way? And, how should we understand that later he pretended and played being a train engine, dragging his wagon filled with blocks? And, how and why was this particular pattern of behavior prescribed? These questions lead us to the issue of a person's inner world.

Metaphor as a Person's Inner World

The reformulation of metaphor proposed responds to these promptings by expanding the definition to include, in addition to words, play action, imaging, emotions and cognition (Santostefano, 1977, 1978). In this way metaphor construction and the purpose of metaphor is given a more central role in personality development.

Acting, imaging (fantasizing), and verbalizing are conceptualized as alternative coding systems (modes of symbolic representation) as well as alternative modes of behaving. A physical object could be represented by a verbal label, an image, or an action, and a person can engage or respond to a physical object by verbalizing, imaging, or acting. For example, a child could represent a wooden block as a bomb by racing behind a barrier to protect himself from it, by imaging a bomb exploding, or by verbalizing, "It's a bomb!" Similarly, the child could engage the block by tossing it, as if a bomb, at a friend's fort, by sitting and imaging the block hurling toward the fort, or by

verbalizing, "I'll throw this bomb at you!"

A Definition of Metaphor. Phenomenologically, a metaphor is a persistent, habitual organization (pattern) of one or more of the following interrelated behaviors: images, symbols, words, emotions, postures, and physical actions. This pattern of behavior condenses, conserves, and represents issues and past experiences fundamental to a person's negotiating key developmental issues vis-a-vis the self, other persons, objects, and situations. Examples of these issues are: attachment-trust-love; loss-detachment; separation-individuation; controlling-being controlled; dependence- independence; initiating-reciprocating; assertiveness-aggression. In addition to representing past experiences, metaphors, at the same time, construe present situations and prescribe particular actions and emotions to handle them.

Metaphors should be distinguished from the similar but more molecular process of symbol construction. In opening her mouth when a matchbox was opened, an infant represents the action of the box with an action of the body. In contrast, a 20-month-old authored and repeated over many weeks a particular "game," a pattern of behaviors. He sat on his father's lap and asked father to button his shirt around his (the boy's) body; then asking that the shirt be unbuttoned, slid off father's lap, and darted off, with father looking for him. Here a metaphor is at work negotiating the key developmental issue

of attachment (being enveloped by father's shirt and at one with father's body) and separation (running off with father looking for him).

The Origin and Development of Metaphor. The first metaphors are constructed in the first year of life with roots primarily in body and sensory representations (Mounoud, 1982); a proposition that has received support from laboratory findings (Winner, Wapner, Cicone, & Gardner, 1979). These metaphors, coupled with cognitive structures, determine the infant's negotiations with caretakers.

One principle defines how an existing metaphor is reformed and another how new metaphors are constructed. Revolving continuously, and standing ready to assimilate each available situation, existing metaphors construe stimuli and prescribe actions in response to a range of available situations. In this process, during normal development, metaphors accommodate to particular experiences/environments with which the child engages and become ready to construe more complex stimuli and to require more complex calls for action. In abnormal development, metaphors do not accommodate to unique ingredients of experiences and remain fixed. As metaphors are repeatedly imposed on situations, the environment plays a specific role in restructuring them.

The following illustrates how the same metaphor can be imposed

repeatedly on different situations but not accommodate to the experiences. A 10-year-old revealed in treatment that she construed a number of situations in terms of a metaphor of herself as an empty basket which others pass by, refusing to place something in it. When this metaphor was imposed on the following situations the child behaved with the same action (running off) and emotion (crying)—in a restaurant with her family, she happened to be waited on last; in the classroom she was standing second to last in line waiting to receive worksheets from the teacher; and, at a birthday party she happened to receive a balloon containing less air than most.

New metaphors are constructed as they take on a new organization with the emergence of new coding systems and new modes of behaving (e.g., in Piagetian theory from sensorimotor schema to imaging to verbal modes of behaving; and, in psychoanalytic theory from oral to anal to genital sources of excitation which code experiences). Here, experience plays a lesser role relative to maturational influence. Although metaphors structured by new coding systems subordinate and integrate earlier ones, the latter can be reactivated and determine behavior (regression).

The following illustrates how the same event could be experienced through early metaphors which construe dyadic encounters in terms of nurture and control, as well as through a later metaphor which construes triangular relationships in terms of genital coding. In treatment a child

revealed that while listening to mother read her a story, she construed the experience at one moment as mother giving her as much milk as her baby brother received; at another time she construed the experience as mother controlling her since she had to go to bed after the story was read; and, at another, she construed mother as jealous, reading to her as a way of keeping her away from daddy's lap and the "special time" she spends with him.[4]

Metaphor as Representations and Plans of Action: A Progression of Ego Modes. In representing experiences and prescribing behaviors through metaphors, all three coding systems and modes of behaving are potentially available. However, younger children are more likely to represent events with the action mode. With development the action mode is subordinated by and integrated within the fantasy mode, and then both fantasy and action are integrated within the language mode. This progression is conceived as an ontogenetic shift from concrete processes (direct-immediate) to abstract (indirect-delayed). The action mode is most concrete and involves physically manipulating an object here and now. The fantasy mode is less concrete (direct) since images are manipulated rather than the object itself, both in the here and now and beyond in space and time, and since delay of action is required at least for the duration of the fantasy. The language mode is most indirect and delayed representing the greatest distance from the referents and action.

The same progression governs changes in metaphors within each mode. Initially, actions are immediate and tied to a narrow set of goals (e.g., a 4-year-old reveals a consistent pattern of behavior, striking his infant brother with his hand and striking his brother's crib and high chair with a toy hammer). With development, actions become tied to a wider range of goal objects and are more delayed (e.g., a 6-year-old topples various animal dolls belonging to his infant brother, obstructs the progress of an ant by laying a series of sticks in its path, and "decorates" his brother's crib with water colors). Similarly, fantasies are initially more concrete (e.g., a boy imagines his baby brother being attacked by a giant warrior) and gradually become more indirect and delayed (the boy imagines winning a bicycle race against a younger neighbor). Words also shift from concrete to more abstract forms (e.g., from "I'll smash you!" to "I'll win the game.").

By shifting from concrete to abstract, both within modes and from one mode to the next, the child gradually develops the capacity to employ alternative behaviors to achieve the same goal and to use alternative goals to satisfy the same behavior. The capacity for increasing delay and for multiple alternatives results in a range of representations and plans of action from highly personal to socially shared ones, permitting adaptive, flexible responses to changing opportunities (e.g., the second grader in the playground tackles a classmate in a game of King of the Mountain, and in the classroom he tackles math problems to get the best grade).

Restructuring Metaphor: Internalizing Behaviors of Idealized Models. The content and timing of the behavior of idealized models are critical ingredients in restructuring metaphors. When the child's action mode dominates, the actions of idealized adults and peers are centered and become especially potent, when assimilated, in differentiating the range of action responses available (from concrete to abstract). As one example, an aggressive boy revealed in treatment that his metaphors about assertion and aggression included memories/representations, constructed when three years old, of father suddenly hurling a car wrench across the driveway, and of chasing his mother with a kitchen knife.

In like manner, when the fantasy mode spirals as dominant in the child's functioning, the fantasies expressed by models, when internalized, become especially potent in restructuring the child's fantasy metaphors; and, when the language mode dominates, verbalizations by models play a more critical role in the restructuring of language metaphors.

The Issues of Present-Past; Conscious-Unconscious; and Dreams. Metaphors may or may not be at work when an individual is experiencing stimuli or reliving the past. For example, if a child describes a trip the family took last summer, revealing details that form a photocopy of the event, no metaphor is at work. But, if the same child describes the trip while again knocking hand puppets together, a metaphor of family conflict is construing

the event.

Similarly, a dream is not automatically a metaphor. A child could describe a dream (e.g., a tall building) as she would a picture and not show evidence that a metaphor is construing the information. In contrast, while describing the dream, the same child could stack and topple blocks, suggesting one meaning imposed on the dream.

Metaphors are not synonymous with unconscious. A person can be aware or unaware of a metaphor at work. While modeling clay, an encopretic boy did not reveal he was conscious of the possible meaning of his activity. Then, at one point, he oozed the clay between his fingers, grinned, and said, "A BM,'' suggesting he was becoming aware of his equation between clay and feces. Still later he angrily hurled pieces of clay at the wall. While aware that clay now equaled bullets, he was not yet conscious of the possible equation in his metaphor between defecation and destruction.

The Issue of Pathological Metaphors. A metaphor is pathological whenever its representation and associated calls for action: (a) result in behaviors that are highly idiosyncratic, inappropriate for, and/or rejected by the environment, producing anxiety, guilt, and conflict with significant others; (b) have failed over an extended period of time to accommodate to available experiences which contain ingredients (especially from models) suitable for

restructuring; and (c) do not fit with developmental expectations. For example, if a 3-year-old repeatedly covers the bathroom wall with water colors, this behavior would not be viewed necessarily as prescribed by a pathological metaphor but would be if displayed by a 10-year-old. In terms of context, if a 10-year-old repeatedly smears paint on the walls of his bedroom and his parents accept this behavior, the metaphor prescribing this behavior in the home would not be pathological, but it would be if he behaved this way in school.

The Definition of Metaphor Revisited. The several issues discussed elaborate the definition of metaphor proposed at the start: (a) when the child constructs metaphors (patterns of actions/images/words/emotions) to represent experiences, a developmental sequence is followed from centering and assimilating action then fantasy then language ingredients of events; (b) the same developmental sequence defines the behaviors and emotions displayed by idealized adults which, when assimilated by the child, are especially potent in restructuring the child's existing metaphors; (c) the behaviors and associated emotions which metaphors prescribe to deal with a situation could be primarily actions, fantasies, language, or some combination of the three; (d) in development the child constructs a wide range of metaphors (from highly personal to conventional ones) which flexibly accommodate to opportunities and limitations in the environment; (e) in abnormal development metaphors remain fixed failing to assimilate and

accommodate to available, relevant experiences; (f) a child could become aware of the meaning of a metaphor and the behaviors it prescribes.

CONTEXTS AND THE EXTERNAL ENVIRONMENT

We have considered cognition as changing in response to changing environments and metaphors as interpreting events and prescribing behaviors to deal with them. We are now prepared to consider the stimuli/situation a person is handling, the third part of the theory being described. In recent years the environment as a variable has become the subject of vigorous theorizing and research (e.g., Magnusson, 1981; Zimmerman, 1983, pp. 2-17). Several issues from this domain of inquiry are noted here because they have special bearing on the theory proposed to guide CCT.

First the psychology of situations has emphasized the contextual dependency of behavior. Events and stimuli are experienced not as “discrete things out there" but as a unified whole, including the meaning a person gives them and what the person intends to do with them. A person's behavior is determined, then, as much by the context as the context, in turn, is determined by the person's fantasies and behaviors. This interaction is a reciprocal process with each system attempting to influence the other. The influence exerted by the context includes variables such as the degree to

which a person has control over the stimulation and the degree to which the stimulation is unusual.

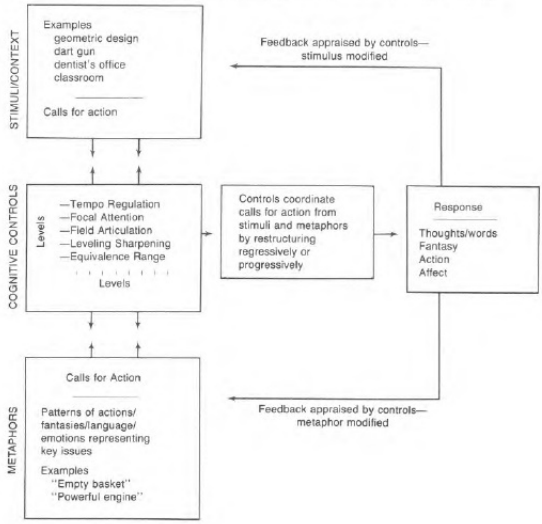
These variables in turn relate to whether and to what degree a situation will be construed by metaphors. The more a situation is unusual for a person, and/or limits the person in actively engaging the information, the more likely the situation will be interpreted in terms of the requirements of highly personal metaphors rather than socially shared ones. While individuals differ in the way a situation is interpreted, persons raised in the same environment and/or who share key personal variables are likely to share a representation of some situation. And, individuals may be conscious or unaware of the elements in a situation they are subjecting to some interpretation.

Situational psychology connects particularly to the issue of emotions and affects in terms of the stress a situation creates. While environments unusual for a person typically create stress, stress as such is not an inherent characteristic of situations but is determined by the way a person evaluates the demands of the situation and his/her ability to handle them successfully. Based on these evaluations the individual experiences the situation as requiring particular actions. Finally, situations are defined as ranging from molar ones (e.g., home; classroom; hospital setting; playground; dentist office) to molecular ones (e.g., a geometric design; a toy gun).

A MODEL OF COGNITION IN PERSONALITY AND ADAPTATION

We are now in the position to integrate the concepts of cognitive controls, metaphor, and context to form a model which conceptualizes cognitive functioning within personality functioning and adaptation. As diagramed in Figure 2.2, the five cognitive controls are viewed as dealing simultaneously with the prescriptions and calls for action from metaphors and from stimuli/context. When coordinating and integrating these prescriptions, cognitive controls accommodate by restructuring regressively or progressively (e.g., shift in organization from leveling to increased sharpening). Once some degree of coordination is achieved, the person responds with a thought, belief, spoken statement, fantasy, physical action, or some combination, and the response includes emotion. After a response is rendered, cognitive controls perceive and assimilate the outcome of the response within the context at hand. This feedback contributes to changes in the metaphor and its prescription and/or in the make-up of the stimulus/ situation.

FIGURE 2.2. Model of Cognitive Controls, Metaphors, and Context in Personality Functioning



Examining an anecdote should help illustrate the model. A 6-year-old girl bounded happily through a neighborhood park, her father trailing a few steps behind. Passing a gentleman who greeted her warmly, she told him with excitement that they were on their way to fly a kite, quickly adding, “This is my bird kite that Uncle Charlie gave me. It can fly super high." At the same time her body leaped repeatedly, taking the form of a kite bobbing gracefully in mid-air. She abruptly said "Let's go Dad. This time the kite will go even higher." As they continued walking she happily recalled their flying a kite at the beach, and the "fantastic" kite exhibit they visited at the museum.

Chance would have it that when they set out that same afternoon again to fly kites, she passed another gentleman who also seemed magnetized by her exuberance and who greeted her warmly. The girl paused. Now her body slouched as if by heavy burdens. As she studied this man with a searching look, tears filled her eyes. She hurried on, failing to return his greeting. Her father asked her why she had begun to cry all of a sudden. Her response came in disjointed mumbles, "His blue eyes . . . white . . . really skinny . . . Uncle Charlie." But she made clear the issue was closed and asked to go home.

Of course, the father puzzled. Uncle Charlie, a favorite of hers, had died just about a year ago, after a long bout of cancer. The broad smile and the sparkling blue eyes of the second man she encountered were at odds, the father thought, with his pale, thin appearance, and Charlie did have sparkling blue eyes. But if this explained why she became sad when encountering the second gentleman, why is it that she remained happy that morning when encountering the first gentleman to whom she had also mentioned Uncle Charlie?

Reconstruction of these two experiences in terms of the model presented provides one answer and illustrates cognitive functioning within personality and adaptation.[5] When dealing with the first man, her cognitive controls perceived stimuli and prescriptions he presented: his physical appearance, warm greeting, and request, "What are you doing?" At the same

time she perceived and assimilated stimuli and prescriptions from a personal metaphor which construed the man and the situation of the moment in a particular way. The metaphor concerned ambition/achievement/pride, which included condensations of past experiences with Uncle Charlie symbolized by the kite he had given her. The metaphor could be inferred, without much risk, from her body repeatedly leaping and arching, her exuberance, and her spontaneous comments about the height her "super" kite achieved and the "fantastic" museum exhibit. Coordinating these two prescriptions, she responded with, "This time the kite will fly higher," and engaged in flying her kite. We can presume she assimilated this experience into a continually revolving metaphor of ambition/pride because of other situations she construed and handled in similar ways (e.g., constructing a poster and giving an oral presentation on kites at school).

When dealing with the second man, her cognitive controls perceived stimuli presented by him (his physical appearance and warm greeting) which, however, were construed by another personal metaphor concerning loss and separation which also included Uncle Charlie (a metaphor that probably surfaced with the anniversary of her uncle's death). In coordinating the prescriptions from context and metaphor, her cognitive controls responded more to the requirements of the metaphor and centered on his eyes, skin color, and thinness. Her controls selected these details from many others and fused them with images of her uncle in the last months of his life. As a result

of this coordination, her response was, "Let's go, Dad," and she plodded home. In this encounter, then, her cognition became constricted and inhibited accompanied by sad affect. How this particular experience modified her metaphor of loss and separation, is left to conjecture. In the year following her uncle's death, she experienced goodbyes (by relatives visiting for a day, by her older brother returning to college) with tears, withdrawal, and constriction. But apparently the metaphor gradually restructured since in later years such experiences were followed by more context-relevant behavior.

The theory presented here conceptualizes highly mobile cognitive structures as mediating between the requirements, opportunities, and limitations of reality and those of the personal world of metaphor. When adequately developed, these cognitive structures enable a normal/neurotic child to develop continually a personal world, while at the same time dealing with reality demands in an organized process that fosters adaptation, personality development, and learning. This model is the roadmap that guides the rationale of CCT to which we turn in the next chapter.

Notes

1 The cognitive control principle of field articulation is elated to,k but not synonymous with, Witkin's cognitive style of the same name (See Santosefano, 1978).

2While the author's own research shows that cognitive controls can be measured reliably from the age

of 30 months, observations made of infants can be interpreted as indicating the operation of cognitive controls from the first days of life (see Kogan, 1976; Santostefano, 1978; Winner, Wapner, Cicone, & Gardner, 1979).

3The formulation of metaphor developed here relies upon Mounoud's (1982) model of revolutionary periods in development, writings on metaphor (e.g., Ortony, 1979, and Piaget, 1977) conceptualization of the process equilibration and equilibrium states.

4The metaphors stated by these three experiences are respectively: reading is milk; reading is you make me do with my body what you want my body to do; and reading is you keep me from the man I love because you want him for yourself.

5 Illustrations from the treatment situation of the role metaphors play in shaping a child's experiences are discussed in Chapter 10.

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