

**NEO-COGNITIVE LEARNING THEORY:
IMPLICATIONS FOR PREVENTION AND EARLY
INTERVENTION STRATEGIES WITH AT-RISK YOUTH**

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ABSTRACT

A new perspective has emerged in psychological learning theory which provides a more precise understanding of the relationship between cognition, emotion, and delinquent behavior. These new assumptions about learning have now been formalized in the literature as neo-cognitive learning theory. The objectives of the present paper are to describe the theory's major principles and assumptions, cite contemporary research evidence which supports each assumption of this new perspective, distinguish how this model of learning offers a significant advance over first-generation cognitive and reciprocal social learning models of deviance, and discuss the implications of the neo-cognitive learning perspective for prevention and early intervention strategies with at-risk youth.

A new perspective has emerged in psychological learning theory which provides a more precise understanding of the relationship between cognition, emotion, and delinquent behavior. This new understanding has striking implications for the prevention of delinquency, most notably through early intervention programs with at-risk youth. The pioneering work leading to these discoveries about learning was carried out by Suarez (1985a, 1985b), Suarez and Mills (1982), and Suarez, Mills, and Stewart (1987). These researchers formulated a set of four psychological principles which they called Psychology Of Mind. These principles then served as the foundation for a group of new assumptions about learning which has now been formalized in the literature as neo-cognitive learning theory, or NLT (Mills, 1987, 1988; Mills, Dunham, & Alpert, 1988; Shuford, 1986; Phelps, 1987; Suarez, Phelps, & Blevens, 1987; Kelley, 1990).

In a recent article, I examined and then utilized the principles of Psychology Of Mind in an attempt to explain most forms of delinquent and criminal behavior (Kelley, 1990). The purpose of the present paper is to describe the major principles and assumptions of NLT, cite con-

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temporary research evidence which supports each assumption of this new perspective, distinguish how this model of learning offers a significant advance over first-generation cognitive and reciprocal social learning models of deviance, and discuss the implications of the neo-cognitive learning perspective for prevention and early intervention strategies with at-risk youth.

MAJOR ASSUMPTIONS OF NEO-COGNITIVE LEARNING THEORY

NLT Assumption 1: The Natural Mental Health of Children

NLT is based on a "wellness" model of human psychological functioning and contains three major principles or assumptions. The first is that every child begins life with a natural, inborn capacity for healthy psychological functioning. That is, at birth, children do not have a mind-set which points them toward delinquency, drug use, or other forms of deviant behavior. On the contrary, this innate capacity for healthy functioning includes the use of common sense, a desire to learn, and the motivation to develop and utilize these abilities in pursuing prosocial lifestyles. Further, this mind state incorporates unconditional, positive self-worth, a desire to learn for the satisfaction of learning, and a natural joy in the understanding and mastery of the environment (Suarez, 1985b; Suarez, Mills, & Stewart, 1987; Mills et al., 1988).

From this natural psychological perspective, high self-esteem is automatic and effortless. It need not be taught, developed, or strengthened (Mills, 1990a, 1990b; Mills et al., 1988). Self-esteem, in this mind state, is not derived from outside activities, but serves instead as the motivation behind the desire to achieve. Children will innately use their common sense and capacity for insight, and have genuine peace of mind. Further, learning and performance are not experienced as particularly stressful or effortful. According to the neo-cognitive model, all these capacities exist in one cohesive package (Mills et al., 1988; Peck, Law, & Mills, 1987; Mills, 1987, 1990a, 1990b).

NLT Assumption 2: The Learning of an Alienated Frame of Reference

The second major assumption of NLT is that delinquency and other dysfunctional behaviors become possible to the degree that children begin to learn and incorporate into their belief systems alienated frames of reference. Such alienated mind-sets are molded by ongoing conditioning which starts early in the family environment as a result of continuous exposure to conflict, negative beliefs, and other forms of unhealthy parental and family functioning. According to NLT, re-

peated exposure to such dysfunctional processes leads to feelings of insecurity, often experienced by children at very early ages.

Specifically, NLT proposes two distinct types of learning (conditioned and unconditioned), both of which occur simultaneously and are experienced by all children. Unconditioned learning is a natural, basically effortless form of learning based on insight and intuition. Conditioned learning, on the other hand, is more stressful, forced, and motivated by fear and insecurity. Which type of learning predominates depends upon the quality of the child's early home environment and school experiences. According to Mills (1987):

If a child grows up in a nurturing, supportive, nonstressful home environment, the child will learn primarily by a process of insight and realization. Once something is understood, a child will utilize the brain's information processing, storage and retrieval mechanisms in an objective and functional manner. The child will store learned information in memory for later use at an appropriate time and manner. Under these conditions, the primary process of learning is unconditioned (by insight).

If the child's early learning occurs in a stressful, nonsupportive, indifferent or hostile environment, the child is more likely to learn primarily at a level of conditioning. What this statement means is that the child will tend to process and store experiences connected to feelings of self-worth and well-being in a way that results in associations (programmed into the brain) that involve feelings of insecurity. In this way, a child begins to build up an *insecure belief system* as one aspect of his or her cognitive programming. (p. 12)

Within the neo-cognitive learning perspective, unconditioned belief systems are associated with higher states of mental health or higher levels of mood. On these more natural and unconditioned levels of functioning, a youth's ego is less a source of motivation. According to NLT, ego is defined as a conditioned system of beliefs through which a child comes to define his or her personal identity or self-concept as well as the measures of performance and personal expectations which must be met for this thought-created identity or image to be validated. In lower mood states or more conditioned levels of functioning, motivation is more highly ego determined. Under these conditions, anything perceived by a child to invalidate, differ with, or contradict the ego will result in some feeling of insecurity (e.g., anger, anxiety, depression). The more ego based "learned insecurity," the higher the level of self-consciousness experienced and the lower the natural experience of self-esteem. Thus, anytime a youth's conditioned ego appears to be challenged or threatened, he or she will automatically feel insecure. This feeling then serves as the breeding ground for dysfunctional behaviors, such as delinquency, drug use, and school failure. Ultimately, it is through the relationship of ego and insecurity that all forms of

health-damaging behavior are fostered and maintained (Mills et al., 1988; Bailey, 1990; Pransky, 1990; Peck et al., 1987; Mills, 1990a, 1990b).

Thus, according to NLT, it is the internalization (i.e., conditioned programming) of a negative, alienated belief system which blocks the expression of innate healthy psychological functioning. Learning and performance become effortful and deviant behavior desirable through conditioned beliefs. Put another way, children possess and will display natural feelings of emotional wellness and unconditional self-worth before acquiring the belief that they must prove themselves in socially or culturally conforming ways in order to reduce the intensity of insecure feelings and/or achieve fleeting and artificial states of well-being and self-worth. It follows, therefore, that if youths do not incorporate an alienated belief system through early cognitive programming, their innate capacity for healthy functioning will evolve naturally into mature behavior, unconditional self-esteem, and emotional well-being.

NLT Assumption 3: Drawing Out Children's Natural, Healthy Functioning

The third major assumption is that any child's innate capacity for healthy, mature psychological functioning can be rekindled regardless of prior history of delinquent or other self-damaging behavior. According to NLT, the two qualitatively distinct states of mind (unconditioned and conditioned) are not interactive or related, although they are both produced through the agency of thought. Thus, if certain conditions are present, alienated youths have the ability to understand how their thinking process works, and through this understanding regain access to natural, healthy psychological functioning.

In the neo-cognitive learning model, a key to drawing out healthy functioning is discerning what factors, at any given moment, determine whether a youth will function at unconditioned levels (learning and behaving by insight) rather than more conditioned levels of insecurity-driven learning and motivation. In other words, NLT proposes that while high-risk youths have higher levels of learned insecurity, they can be helped to achieve frames of mind that are less likely to stimulate insecurity.

SUPPORTIVE EVIDENCE FROM CONTEMPORARY RESEARCH AND THEORY

There is considerable evidence from contemporary criminological research to support these assumptions. With respect to the first assumption, that children are born with a natural capacity for healthy

psychological functioning, Wilson and Herrnstein (1985), in their review of the child development literature, concluded that "the infant cries to signal distress/hunger, not, so far as we know, to control the behavior of others, [and] devoted attention to the infant's needs at this stage does not produce a spoiled child" (p. 222). Further, examination of hundreds of infants and toddlers raised in nurturing settings reveals clearly that they possess a natural curiosity to explore and learn as much as possible about their surroundings. In fact, most early childhood research appears to support the assumption of the natural mental health of children. According to Mills (1987), the vast body of developmental research reveals conclusively that, at birth, children do not have a mind-set which predisposes them toward delinquency, drug use, or other forms of deviant behavior. On the contrary, such studies point almost unanimously to the natural inborn state of healthy mental functioning for children, which includes a natural interest to learn, an intrinsic ability to act in mature, common-sense, nondelinquent ways, and a natural desire to use and expand their abilities in legitimate and prosocial directions (Mills, 1987; Mills et al., 1988; Wilson & Herrnstein, 1985; Stewart, 1985; Dodge & Frame, 1982; Patterson, 1982; Suarez, Mills, & Stewart, 1987; Arend, Gove, & Sroufe, 1979; Sroufe, 1979; Ainsworth, 1982; Sroufe et al., 1983). The bulk of contemporary early childhood development research further concludes that this natural state of healthy functioning includes a high capacity for learning new behaviors and skills along with little or no awareness or self-consciousness surrounding the learning process.

Further support for this first NLT assumption is provided by Mills, who cites several current studies on motivation stemming from research demonstration grants on primary prevention at the University of Oregon in the late 1970s, followed by research demonstration programs at a variety of sites in the 1980s. According to Mills, this research has produced a new look at what has been called the "higher self" or "true self"—a basically healthy, already actualized self as a source of intrinsic motivation (Mills, 1990a, 1990b, 1987; Mills et al., 1988; Peck, Law, & Mills, 1987). Mills notes that several researchers in the field of motivation are beginning to point toward a recognition of this deeper or truer "meta-cognitive" self as an agent in producing and sustaining intrinsic motivation and in mediating external reinforcers (McCombs, 1991; Weiner, 1990; Bandura, 1989, 1991; Carver & Schier, 1990; Deci & Ryan, 1991; Harter, 1988, 1990; Iran-Nejad, 1990; McCombs & Marzano, 1990). Mills also notes that while authors such as Maslow (1970) recognized the existence of this state, they felt that one had to first go through and satisfy lower need states to attain actualization. The above research on motivation, however, tends to

support the conclusion that everyone starts out in life in this actualized state and then learns or is conditioned to function in lower need states.

The second major assumption of NLT is that delinquency, drug use, and other forms of deviant behavior results from acquiring (learning) an insecure, alienated belief system. Much of the evidence which supports this assumption relates to delinquency and is summarized by Mills et al. (1987, 1988) and Kelley (1990), who review several relevant etiological studies, cross-sectional research programs, and youth panel surveys. According to Mills, delinquency, drug use, and school failure appear to be related to a common set of social-psychological variables. The first is well documented and involves the family environment. At-risk youth tend to come from families experiencing high levels of turmoil or stress. Parent-child interaction involves excessive fault-finding. Discipline in such families is characterized by inconsistency and a lack of fairness and empathy. In addition, in these families, parents were found not to explain rules and to demonstrate little verbal or nonverbal caring, support, or sustained interest in the child's activities (Patterson, 1982; Loeber & Dishion, 1984; Tittle, 1980; Smith & Walters, 1978; Robinson, 1978; Hanson, Henggeler, Haefele, & Rodick, 1984; Hershorn & Rosenbaum, 1985; Block, Keyes, & Block, 1986; Baumrind, 1985; McCord & McCord, 1959; West & Farrington, 1973; Conger, 1976; Hirschi, 1969; Schaefer, 1959).

Mills (1988) cites the results of the University of Minnesota's Mother-Child Study as being illustrative of this process. This study examined a group of low-income, single-parent mothers and their children from infancy to age 5. Researchers looked first at infants with a secure attachment to their mothers. At age 5, most children in this group tended to be more creative in responding to environmental changes and more persistent in staying with complex tasks. On the other hand, children with a less secure attachment tended to decompensate when challenged with complicated tasks, were more likely to avoid their mothers, and were quicker to become angry, oppositional, overwhelmed, and depressed. Further, at age 4, children with secure attachments had generally higher self-esteem, were less dependent, and more mature. Those with less secure attachments at age 4 were more impulsive and aggressive (Arend, Gove, & Sroufe, 1979; Sroufe, 1979; Ainsworth, 1982; Sroufe et al., 1983).

According to Mills, the bulk of contemporary longitudinal research concludes that, as a consequence of these dysfunctional patterns of familial interaction, these youths tend to develop behavioral, emotional, and learning problems at early ages. These problems tend to worsen as the child enters the school environment. Research on the early school experiences of these youths indicates that the process of

acquiring an insecure belief system, which begins in the home, tends to be reinforced or reconfirmed by the types of interactions they have with school personnel and other students. According to Mills et al. (1988):

In the absence of understanding that these qualities of interactional patterns are a consequence of their parents' habitual states of mind, they will interpret them to mean that there is something wrong or inadequate about themselves, programming these biased attributions into their cognitive structure at a very fundamental level. This cognitive programming begins to obscure children's natural common sense, ability to learn by insight, and natural feelings of well-being. As a result, they develop an insecure belief system. They then enter school with poor self-concept, insecurity about learning and performance, and mistrust of others, particularly adults, in terms of perceiving genuine caring and interest (Suarez, Mills, & Stewart, 1987; Mills, 1986, 1987; Peck, Law, & Mills, 1987). (p. 648)

Thus, early negative childhood experiences appear to combine with later school and community experiences, resulting in even higher levels of alienation. Much research indicates that insecure belief systems foster high levels of self-consciousness, which make it more difficult for children to concentrate, follow instructions, and relax in the classroom setting. Another outcome of learned insecurity is a strong urge in such children to prove themselves, which often leads to acting-out behavior and discipline problems in school.

Mills cites considerable research from several sources which reveals that at-risk youth develop a cognitive style or structure of interpretation that results in negative school attitudes and self-cognitions related to school and learning. Dissatisfaction with the entire school experience appears to be one of the strongest factors leading to school misbehavior. High-risk youth are, in general, more alienated from school and from nondeviant lifestyles (Dunham & Alpert, 1987; Cippolone, 1986; Stern & Catterall, 1985; Howell & Frege, 1982; Coombs & Cooley, 1986; Glasser, 1969; Polk & Schafer, 1972).

These findings are consistent with contemporary social process theories (Hirschi, 1969; Reckless, 1967), sociological theories of alienation (Kaplan et al., 1986), and the symbolic interactionist perspective (Blumer, 1969), all of which predict that youth will develop aversive attitudes toward school and prosocial peers in response to a repetitive pattern of perceived failure and learned insecurity in family, school, and community. Mills states that recent studies of high-risk youth, grounded in contemporary cognitive learning theory, support the notion of a cumulative learning process which leads to higher levels of alienation and predicts many forms of deviant, often criminal, behav-

ior (Block, Keyes, & Block, 1986; Elliot & Huizinga, 1984; Ekstrom, Goertz, Pollack, & Rock, 1986; Jessor & Jessor, 1977; Elliot & Voss, 1974; West & Farrington, 1977; Wehlage & Rutter, 1986).

Further, Mills cites many cognitive learning theorists, who now support a model of the brain that likens it to a biological computer, with comparable information processing and representational and retrieval characteristics, capable of projecting thought as a sensory-motor experience (Penfield, 1975; Haugeland, 1985; Dodge, 1986; Lochman, Lampron, Burch, & Curry, 1985; Chandler, 1973; Selman, 1976; Cermack & Craik, 1979; Dodge, Murphy, & Bushbaum, 1984). Several researchers suggest that the thought system works in much the same way as computers are programmed—by a process known as nested programming (Miller, Galanter, & Pribram, 1960; Baylor & Gason, 1974; Anzai & Simon, 1979; Klahr, 1982).

The findings of these and other researchers appear to support the conclusion that at-risk youth are more likely to interpret present circumstances through use of an existing thought system which has been mechanically programmed in memory from idiosyncratic interpretations of past experience. These preprogrammed sets, expectations, or attributions have been confirmed by empirical research (Blumer, 1969; Burger & Luckman, 1966; Polk & Kobrin, 1972; Wilson & Herrnstein, 1985). For example, Dodge et al. (1981) and Lochman et al. (1985) found that aggressive delinquents are more likely to misperceive the intentions of others as hostile, are significantly less able to recognize neutral or passive intentions, and are more apt to assume continued hostility. Mills points out that these flaws in attribution are not a function of general intelligence, but are related to assessments of the meaning of an event rather than its real properties. This process tends to become a self-perpetuating spiral. According to Mills (1987):

It is argued that, over time, the "aberrant" child will start to function, habitually, more of the time from his/her more insecure state of mind. This habit results from a self-validating psychological process in which (1) the child encounters stimuli that "trigger" conditioned insecure thoughts and feelings; (2) the child begins to function in a more insecure or negative frame of mind (lower mood); (3) the child's perceptions become distorted in a more negative direction; (4) the child then responds to situations that arise in a more negative or self-defeating manner; (5) the consequences of this type of behavior are that people around the child (to whom he/she is reacting out of insecurity) respond with aversion, dislike, or in an overly critical, punitive and judgmental way and, in turn; (6) these responses or outcomes of his/her behavior provide additional evidence to the child that he/she is basically unlikable, that there really is something wrong with him/her. (p. 13)

The above research lends support to the neo-cognitive view that delinquent behavior is interpreted by insecure youth as one solution to the problem of insecurity and low self-esteem. Nondelinquent persons, values, and institutions tend to be rejected as they become connected more strongly with insecure feelings. Seen through an insecure belief system, delinquency and drug use, for example, become desirable behaviors because they enhance self-concept and/or serve as ways to reduce or avoid uncomfortable feelings of insecurity. Within this framework, the attraction to other delinquent peers is predictable, serving as another way of obtaining confirmation of distorted attributions and ego validation.

At present, there is considerable evidence in the literature to support the third NLT assumption that this self-perpetuating cycle can be countered and that even high-risk youth possess a natural ability to behave in more mature, common-sense, noncriminal ways (Stewart, 1985; Dodge & Frame, 1982; Patterson, 1982; Suarez, Mills, & Stewart, 1987; Mills, 1987). For example, Patterson (1982), by home observations, documented an average of 3.1 acting-out behaviors a day in the more disturbed children he studied. Many researchers have concluded that even highly insecure children are not, most of the time, in a frame of mind which results in deviant behavior. This third NLT assumption is further supported by several studies of national prevention programs focusing on substance abusers, dropouts, and delinquents. Mills (1987) cites several such evaluations of programs in which at-risk youth who became involved in certain types of positive, healthy, productive relationships with adults, teachers, and peers began to display higher levels of healthy functioning, as predicted by NLT (Peck, Law, & Mills, 1987; Wehlage & Rutter, 1986; O'Conner, 1985; Stern, Catterall, Alhadeff, & Ash, 1985; Foley & Warren, 1985; Gadwa & Griggs, 1985; Shure & Spivack, 1982). According to Mills, youth involved in such relationships showed significant improvement in positive attitudes, rational problem-solving ability, prosocial behavior, and motivation to attain educational goals and nondeviant lifestyles. Mills (1987) underscores that "the consistent predictors of program success were the observed qualities of interaction and therapeutic qualities of the relationship between program staff and project youth (Peck, Law, & Mills, 1987; Mills, Alpert, & Dunham, 1988; Wehlage & Rutter, 1986a, 1986b)" (p. 14). These qualities are summarized below (Mills, 1987):

1. Consistent, unconditional positive regard, affection, and respect from trainers and program staff.
2. Emotional/psychological support from staff for the child in addressing and solving problems in an objective, common-sense way.
3. The role of program staff as effective, attractive, and supportive role models for responsible and rational problem solving.

4. Support for the child in solving problems, in a consistent, nonjudgmental, noncritical, nonpunitive atmosphere.
5. The realization on the child's part that there are alternative ways of looking at and resolving interpersonal problems that lead to more positive solutions. (p. 15)

Mills (1987) concludes that these conditions foster a significant increase in healthy psychological functioning for at-risk youth because they "(1) are least likely to 'trigger' a child's more insecure states of mind, and (2) facilitate the child's ability to function in more common-sense (mentally healthy) states of mind, while (3) developing cognitive skills that are characteristic of more mature, healthier cognitive processes" (p. 17).

The evidence supports the conclusion that even high-risk children will tend to gravitate toward higher mood levels or more healthy psychological functioning when conditions exist which draw out improved functioning. Over time, NLT would predict that this healthier, "common sense" level of functioning will begin to take precedence over the child's alienated programming and learned insecurity.

NLT AS AN ADVANCE OVER RECIPROCAL SOCIAL LEARNING
AND FIRST-GENERATION COGNITIVE MODELS OF DELINQUENCY

At present, social-psychological, integrated models appear to be the best predictors of delinquency and other deviant youthful activities such as drug use. Elliot and Huizinga (1984), for example, formulated a predictive model of delinquency which combined elements of social control, strain theory, bonding theory, and social learning theory. They tested this model in a longitudinal cohort study of 1,725 youth aged 11-17 between 1976 and 1983. Results showed that this model was capable of predicting about 50% of the variance in delinquent activity and 34% of the variance in illegal drug use. Similar theoretical models have tested several combinations of social-psychological variables such as parental supervision and control, prosocial and antisocial bonds, peer group values, social modeling, and family dysfunction. There has been much empirical support for such models in explaining delinquency (Clayton & Voss, 1981; Akers et al., 1974; Jessor et al., 1980; Ginsburg & Greenly, 1978; Jessor & Jessor, 1977; Elliot & Voss, 1974; Kandel, 1978; West & Farrington, 1977; Johnson, 1979; Conger, 1976; Jensen & Erickson, 1977; Hindelang, 1973; Linden & Hackler, 1973; Meade & Marsden, 1981; Winfree et al., 1981). While longitudinal and cross-sectional studies constructed on such interdisciplinary social-psychological models have shown the greatest power in predicting multiple-problem youthful deviance, they have several limitations.

First, there is normally a fairly "loose" conceptual relationship between the variables involved. In the majority of these studies, the relationship is derived from a path model or other form of statistical "clustering" technique for deriving the causal dimensions from the data that implies a uni-directional interpretation of cause and effect. Also, in the best of these studies, the "explained" variance is anywhere from 25 to 49%. That leaves the greatest percentage of the variance still in the "unexplained" category. Another limitation of these studies . . . is that they have not, as yet, led to preventive interventions that have successfully addressed the problems identified by this area of research. (Mills, 1987, p. 5)

First-generation cognitive models of delinquency are information-processing models derived from research on the function of the brain in processing, interpreting, and storing information (Chomsky, 1989; Waugh & Norman, 1965; Bandura, 1977). In such models, the delinquent's developing thought system serves as the context for attributions, expectations, and predispositions toward future experiences. Further, self-concept, attitudes, beliefs, and values are considered to be derived from attributions, interpretations, and experiences stemming from the child's early cognitive programming. For delinquent youth and those involved in other self-destructive behaviors, these models predict that their cognitive structures cause them to perceive the world in a manner which involves extreme, systematic bias or distortion. As a result, these youth are more likely to have a low self-image and antisocial attitudes, values, and beliefs, which generally increases the likelihood of dysfunctional behavior such as delinquency (Beck, 1970; Ellis, 1962; Meichenbaum, 1977). What these cognitive models appear to lack, however, is the ability to explain why the same youth will function at very different levels of perception, affect, and behavior at various times.

The neo-cognitive learning model represents a significant advance over the cognitive models and other reciprocal social learning models of delinquency in that it describes "(1) how delinquent youth function at a conditioned level of awareness, (2) how delinquent youth function at unconditioned levels, and (3) what variables determine whether they will function at either one of these two levels of perception, affect, and behavior at any given moment in time" (Mills, 1987, p. 7). Mills underscores that the intervening variable, which accounts for the extent and direction of reciprocal effects of various experiences such as the attractiveness of delinquent peers, negative school experiences, and family conflict, is a youth's subjective organization of beliefs and perceptions (i.e., frame of reference) at the beginning of each experience. According to the neo-cognitive model, a youth's frame of reference is made up of distinct components. Mills (1987) states:

A part of this frame of reference is the beliefs, attitudes, and expectations a child has picked up from prior experiences. This framework of beliefs constitutes his/her unique, separate, conditioned reality. Another aspect of the youth's frame of reference is the ability to process new information with common sense or good judgment. This aspect of a youth's psychological functioning could be called the ability to keep things in proper perspective, or the level of mental health (i.e., the ability to function in a rational, common-sense frame of mind, regardless of prior experiences). Neo-cognitive theory describes the principles of learning that determine the extent to which a youth is able to function at different levels of mental health in this respect at any given time. (p. 9)

Put another way, this model is a "state" model of delinquency, as contrasted with traditional single and multiple "trait" models. Youth move through different states of mind in which their perceptions are affected to varying degrees by their prior conditioning. Lower, more negative, insecure states of mind are characterized by the introduction of negative, distorted, and maladaptive thoughts and the experience of the thinking process as being more involuntary. In more positive, mentally healthy states of mind, youth experience their thinking process as more voluntary. Further, they understand that their personal experience of life is primarily a function of the quality of their thinking within the context of their existing mood level and only secondarily a function of external circumstances.

PREVENTION IMPLICATIONS AND APPLICATIONS OF NLT PRINCIPLES

The major principles of NLT, when applied to prevention programming, lead to a different set of intervention strategies and types of interactions with at-risk youth from those typically used in most contemporary efforts. According to Mills (1988):

The premise that the natural state of mental health is something that is always potentially accessible and, under certain conditions, naturally emerges from within the youth themselves means that it must be drawn out of rather than "put into" youth. Put another way, it is not something that youth learn by being supplied from the outside with something that is considered missing. Thus, environmental reinforcements and external techniques for behavior change are not an integral part of this model. (p. 7)

Contemporary approaches to delinquency prevention and control have focused almost exclusively on supplying young offenders with some missing factor (e.g., values, discipline, punishment, jobs, self-esteem, limits), the presence of which would supposedly reduce the inclination to engage in deviant behavior. Thus, traditional behavior

theories (Patterson, 1982; Skinner, 1971; Rutherford, 1975; Klein, 1977; Bandura, 1977) assume that certain external reinforcements are missing and therefore attempt to supply them through behavior modification techniques such as token economies, behavior contracting, and "scared straight" type programs. Social process theories (Agnew, 1985; Hirschi, 1969; Reckless, 1967; Sutherland, 1939; Sykes & Matza, 1957) assume the absence of certain external constraints or limits on the behavior of offenders. First-generation cognitive theories (Ellis, 1962; Samenow, 1984; Burns, 1980; Walters & White, 1989) utilize a variety of techniques, rituals, and discussions by which offenders' criminal beliefs are monitored, analyzed, disputed, condemned, and judged so they can learn to identify and abandon thinking patterns that have supposedly misguided their behavior.

Prevention and early intervention programs based on this "something is missing" assumption have also been the focus of evaluative research. Programs that utilize reward-and-punishment-based operant conditioning paradigms, teach coping skills, provide values clarification, and offer cognitive restructuring have all been studied (Patterson, 1982; Agnew, 1985; Peck, Law, & Mills, 1987). Mills (1987) summarizes the results of this research:

Overall, outcome studies of these approaches conclude that at-risk students show a positive change in behavior while in a controlled environment, and that children can be taught to respond appropriately in role-play situations; however, improved performances did not generalize to the natural school settings and treatment did not affect ratings of peer acceptance (Burler, Gross, & Drabman, 1985). From the perspective of neo-cognitive learning theory, it could be argued that when behavior change or attitude change did generalize, it was due to the children's beginning to function in a more common-sense state of mind, in which (1) they realized for themselves the self-validating and self-defeating consequences of immature or negative behavior and (2) they recognized the distortion built into their conditioned thoughts and attributions. (p. 13)

While social learning, social process, and first-generation cognitive models of crime and delinquency may be on the right track, what they appear to lack is the understanding that replacing bad thoughts with good thoughts, altering the frequency, intensity, or duration of pro-criminal relationships, or strengthening positive beliefs with regard to primary socializing institutions (i.e., bonding) all miss the point. Such conversion processes do not result in any transformation in level of understanding; offenders just move in and out of belief systems while staying at exactly the same level in their thinking.

In addition, from the neo-cognitive perspective, there is no value to focusing on the details, contents, or sources of an alienated frame of

reference. Results of the applications of this approach to prevention suggest that to the degree that it is practical, the less importance accorded the child's alienated beliefs, past behavior, family dysfunction, early traumas, and past and present failures, the better. First, these details are essentially irrelevant because they are only thoughts. Second, giving credence to such details only reinforces the level of understanding that creates the problem of delinquency in the first place. Taking these details seriously validates the child's idiosyncratic system of thinking. Thus, according to NLT, the main priority of prevention must be to create a climate that minimizes the triggering of insecure attributions and at the same time emphasizes the positive, nonthreatening environment in which the natural mental health of children has an opportunity to emerge.

With respect to specific prevention efforts, there is considerable evidence in the school setting that children can learn to recognize their movement from healthier, more unconditioned levels to dysfunctional or more conditioned levels of psychological functioning. Research on a national level to identify teachers capable of influencing youth who were likely to drop out of school found that such teachers were consistently positive, empathic, and demonstrated respect and concern for their students. These teachers were consistently optimistic about their students' ability to learn, and allowed them to structure their own learning. In doing so, they were creative and flexible in adapting their teaching methods to the needs, interests, and performance levels of each student. In this type of educational climate, even high-risk youth were able to see the distortions and illusions which emerge from an alienated thought system and then begin to act in a more mature and objective frame of mind (Wehrlage & Rutter, 1986; Mills, 1987; Stewart, 1985; Krot, 1983; Suarez, 1985b; Shuford, 1986).

There is also increasing evidence that parents of high-risk youth can be taught to alter dysfunctional patterns of interaction in the home in ways that assist their children in improving their self-esteem, learning ability, and mental health. Shure and Spivack (1982), for example, found that they could teach low-income inner-city parents of low educational levels how to improve their children's interpersonal problem-solving skills. Mills (1988) reported that parents of high-risk youth could be taught to monitor their own mood levels and make significant, positive changes in their patterns of interaction with their children.

At present, the neo-cognitive learning model has been applied directly in several prevention and early intervention programs with at-risk youth as well as in clinical treatment programs with different populations displaying deviant (frequently criminal) behaviors. Several clinical outcome studies have demonstrated the effectiveness of

the intervention paradigm based on neo-cognitive psychotherapy. These studies have demonstrated its effectiveness across cultures and the entire spectrum of DSM-III diagnoses seen in outpatient settings. Significant reductions in clinical symptoms have been achieved (measured by standardized psychological inventories) in sample sizes ranging from 42 to 242. One noteworthy finding in each of these studies was that several patients, when measured posttreatment, improved in level of mental health to a degree that was significantly higher than that of the mean for the "normal" nonpatient control group (Bailey, Blevens, & Heath, 1988; Shuford & Crystal, 1988). In addition, neo-cognitive psychotherapy has demonstrated success in the treatment of alcohol and drug abuse (Bailey, Blevens, & Heath, 1988), several forms of family violence (Crystal & Shuford, 1988), and several other diagnostic groups of emotional disorders (Shuford, 1986).

One specific project utilizing the neo-cognitive learning model deserves special attention, namely the Modello/Homestead Gardens Program, funded by the U.S. Department of Justice beginning in October 1987. Modello and Homestead Gardens are two housing projects located in Dade County, Florida, which were determined to be the worst areas in the county in terms of illicit drug trade, teen pregnancy, school dropout rates, delinquency, truancy, gangs, and welfare dependents. A pre-project survey revealed that approximately 85% of the heads of households were on public assistance, and approximately two thirds of the families in these neighborhoods were either using or dealing drugs. Further, truancy rates were around 80% and, based on referrals for discipline expulsions and suspensions, these youth had the worst school behavior problems. The intervention methods used in this program were based on NLT and were adopted in parenting classes, leadership training courses for residents, teacher training programs, family and individual counseling, and student counseling groups. According to Mills (1990b):

The grant was based on the premise that everyone has access to a higher level of well-being and wisdom, to a higher Self, that empowers them to live a saner, more responsible and easier life. It was proposed that, as these natural states of well-being and self-esteem emerged in people, they themselves would use their innate common sense to live a life that was more to their benefit, that was healthier both for themselves and their children, than what they had previously thought possible. (p. 20)

Results from the Modello/Homestead Gardens Intervention Program have been extremely positive. Following the second year of the project, truancy rates decreased to almost zero. Failure rates at the junior high level decreased from 64% to less than 15%, and there was an overall improvement in grade point average of 64% for at-risk students at the

senior high level. Discipline referrals decreased by over 75%, while suspensions and expulsions for serious delinquent behaviors decreased by over 80%. Students showed significant improvement in self-esteem scores and overall mental health status. The number of teen pregnancies at the junior high level decreased by over 80%. The majority of parents also showed significant improvement in self-esteem, overall mental health, and began either working or going to school themselves. Finally, the overall rates of drug abuse and child abuse or neglect decreased by over 65% in both communities (Mills, 1990a, 1990b).

SUMMARY AND CONCLUSIONS

At present, social-psychological, integrated models of deviance are the best predictors of delinquency, drug use, and other health-damaging behaviors. These models are limited, however, in that they leave "unexplained" the greatest percentage of the variance, have not led to particularly successful preventive interventions, and do not adequately explain why the same youth will display different kinds of perception, affect, and behavior at different times. The neo-cognitive learning model, on the other hand, is a reciprocal, "state" model of deviance which proposes that youth move through different states of mind in which their perceptions are affected to varying degrees by their prior conditioning. The major advance represented by this model is that it describes the principles of learning that determine the extent to which a youth is able to function at different levels of mental health at any given time.

The prevention implications of this model have been summarized by Mills et al. (1988):

It is hypothesized that if school personnel, parents, probation officers, and others understand how this process works in high-risk youth, they will be able to both interact with youth in a way that corrects distortions in attributions and create a climate that is less likely to trigger more insecure states of mind. It is also hypothesized that, over time, consistency in these types of interactions and in these settings will reverse the cumulative process that results in deviance, which leads in turn to school failure, dropout, and health-damaging behaviors. In addition, the assumption is that if youth are exposed to concepts of mental health in a way that relates to their own experiences, are responded to in ways that engage their positive states of mind, and these interactions occur within the context of healthy, supportive settings, the results will have a cumulative, reciprocal effect that can reverse the process leading to increasing degrees of alienation which, in turn, leads to problems of drug abuse, delinquency, school failure, and health-damaging behavior. (p. 565)

There is considerable evidence from research and theory on delinquency that supports each major assumption of the neo-cognitive learning model. Further, there is evidence from evaluation research, naturalistic observations, and youth panel surveys that NLT principles can be used to reverse the cumulative process of learned insecurity and perceived alienation by drawing out the natural, healthy psychological functioning of which even severely at-risk youth are capable. More innovative and effective programs are likely to emerge as researchers and youth advocates become aware of the accuracy and power of the comparatively simple principles of neo-cognitive learning theory and Psychology Of Mind.

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