

Coping During Childhood and Adolescence: A Motivational Perspective

Ellen A. Skinner and James G. Wellborn

UNIVERSITY OF ROCHESTER

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Abstract

A new theory of coping across the life span is presented that departs radically from dominant perspectives in the field. It is based on the assumption that all people have basic needs for relatedness to others, for competence, and for autonomy or self-determination. Based on this assumption about human commitments, it is possible to derive dimensions of universal stress, namely, events that threaten or damage the three basic psychological needs. Hence, three universal stressors are posited: (a) neglect, because it threatens relatedness; (b) chaos, because it undermines competence; and (c) coercion, because it impinges on autonomy. In general, coping itself encompasses peoples struggles to maintain, restore, replenish, and repair the fulfillment of basic psychological needs in the face of experienced assaults on those needs. Hence, coping is an organizational construct, which describes how people regulate their own behavior, emotion, and motivational orientation under conditions of psychological

distress. Close relationships are seen as critical to whether children's needs are met and hence to the development of their coping. Three self-system processes are psychological resources for coping; they correspond to secure internal working models (which buffer threats to relatedness), perceived control (which protects competence against threats), and autonomy orientations (which minimize damage to autonomy). The way in which a child copes should predict whether the child will engage or withdraw from further encounters with challenging situations. This engagement or disaffection should in turn influence long-term outcomes for the child, viewed in general terms as developmental gains or losses.

I. Introduction

"Children are not strangers to stress" (Garmezy, 1983, p. 49). Chronic stressors as well as day-to-day problems are a feature of all children's lives. Optimal challenges are opportunities for children to exercise their competencies and so provide grist for developmental advancements. When children are overwhelmed, however, stress forestalls development and increases the likelihood of psychopathology. The study of stress and coping has a long tradition in the psychological, sociological, and medical sciences (Freud, 1927; Selye, 1951; see Moos & Billings, 1982, for a review). Its history in the developmental disciplines is as deep, although discussed under many different construct names (Compas, 1987; Garmezy & Rutter, 1983). Many factors influence the way a child copes with stress, including the social context of the event, the child's personal resources, and the way the child frames and responds to the event. The purpose of this chapter is to specify and integrate these elements of the coping process into a general theory of how children cope with psychological stress. As a context for evaluating the utility of the new theory, we present a selective overview and critique of current work on coping.

II. Stress, Coping, and Development

Views about what constitutes "stress" evolved long before the field of coping developed. Theories and research have examined biological, physiological, medical, interpersonal, and societal stresses, ranging in intensity from daily hassles to natural catastrophes, terminal illness, and wartime experiences. As many theorists have pointed out, "Stress seems to apply equally to a form of stimulus (or stressor), a force requiring change of adaptation (strain), a mental state (distress), and a bodily reaction or response (that is, Selye's general adaptation syndrome of stress)" (Rutter, 1983, p. 1).

A. STRESS

A thorny problem in any conceptualization of coping is to disentangle these facets of stress, and then to define them independently and specify

their interrelations. Two general approaches to this problem have been to define stress as (a) an internal subjective phenomenon or (b) an external objective phenomenon. Prominent theories in adulthood view stress as within the experience of the individual or in the individual-context interaction (Lazarus & Folkman, 1984). In contrast, developmental theories of coping tend to focus more on identifying objective events in the environment that are stressful (see Garmezy, 1983; Rutter, 1983, for a historical review). A wide range of specific life events and experiences in childhood have been considered, including war, maternal deprivation, divorce, birth of a sibling, relocation, chronic illness, and medical treatments.

The central problem with defining stress subjectively as a person-environment interaction is the difficulty of identifying the target of study. Do differences between people in distress experiences reflect people's differential *vulnerability* to the effects of similar events or the fact that people are dealing with differentially stressful objective *events*? These sources of distress could be separated if a definition of objective stress could be formulated. But it has proven very difficult to catalog events that are universally stressful or even to construct a metric to index the potential stressfulness of events. Indeed, a few events have been identified that seem to be universally stressful, such as maternal deprivation or loss of control. However, without a theoretical framework, it is very difficult to discover other stressors or even to explain why these particular events should be so stressful. In sum, in a theory of coping, it would be useful to include definitions of both objective stress and subjective distress.

B. COPING

Almost from the beginning of the study of stress, researchers have been impressed by the broad range of individual differences in physiological and psychological reactions to the same objective stressor. One approach to the study of these individual differences has been coping. Given the importance of the topic and the burgeoning literature devoted to it over the last 50 years, it is surprising to discover "the confusions as to what is meant by coping and how it functions in the process of adaptation" (Lazarus & Folkman, 1984, p. 117). A summary of definitions of coping in adulthood and childhood appear in Tables I and II, respectively (see Skinner, Altman, & Sherwood, in prep., for a review). As can be seen, at one end of the spectrum, definitions of coping are very broad and general. For example, Rutter (1983) defined coping at its most general as "individual differences in children's responses to all manner of stressful events, happenings, and circumstances" (p. 2). Silver and Wortman (1980) defined coping as "any and all responses made by an individual who encounters a potentially harmful outcome" (p. 281). Compas (1987) summarized this viewpoint by describing

TABLE I
Definitions of Coping in Adulthood

Author	Definition
Billings & Moos (1987)	"cognitive and behavioral responses to specific [stressful] events" (p. 952)
Carver, Scheler, & Weintraub (1989)	"the process of executing a perceived potential response to threat"
Endler & Parker (1990)	"a response to environmental and psychological demands in particular stressful situations" (p. 844)
Fleishman (1984)	"overt and covert behaviors that are taken to reduce or eliminate psychological distress or stressful conditions" (p. 2)
Lazarus & Folkman (1984)	"constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141)
McCrae (1982)	"behavior designed to relieve emotional distress or to solve the troubling problem or both" (p. 455)
Pearlin & Schooler (1978)	"things people do to avoid being harmed by life strains" (p.2) "any response to external life strains that serves to prevent, avoid, or control emotional distress" (p.3) "the behaviors, cognitions, and perceptions in which people engage when actually contending with their life problems" (p. 5)
Rosenbaum (1980)	use of cognitions and self statements to control emotional and physiological responses
Silver & Wortman (1980)	"any and all responses made by an individual who encounters a potentially harmful outcome" (p. 31)

the definition of coping as "all responses to stressful events or episodes" (p. 393).

Attempts to delimit this definition have led theorists to distinguish among aspects of the coping process. For example, coping responses can be differentiated from coping resources (Moos & Billings, 1982; Pearlin & Schooler, 1978). "Resources refer not to what people do, but to what is available to them in developing their coping repertoires" (Pearlin & Schooler, 1978, p. 5). More subtle is the distinction between initial *reactions* to potentially stressful events and coping *responses*. Reactions refer to the subjective experience of stress, and would include initial appraisals and psychological distress. Also important is the distinction between coping and its *consequences*. Early theories of coping tended to define coping by its outcomes. Coping was regarded as anything individuals did that reduced the objective stressor or reduced the individual's psychological distress. However, current theories of coping have argued that coping attempts must be defined independently of their effects (e.g., Lazarus & Folkman, 1984). As a result, responses to stress can be referred to as coping regardless of whether they are effective in reducing distress or eliminating the stressor.

Such distinctions are useful in identifying aspects of the coping process that should be excluded from the definition of coping responses per se. When discussing what definitions of coping responses should include, however, attempts to further delimit coping definitions have their own

TABLE II
Definitions of Coping in Childhood

Author	Definition
Ayers, Sandler, West, & Roosa (1990)	cognitive and behavioral processes
Band & Welsz (1988)	"internal response to stressful circumstances" (p. 248)
Compas (1987)	"all purposeful attempts to manage stress regardless of their effectiveness" (p. 394) "a subset of adaptational actions involving effort" (p. 399)
Elias, Gara, Rothbaum, Reese, & Ubriaco (1987)	"thought processes believed both to accompany and to direct behavioral performance" (p. 308)
Miller, Danaher, & Forbes (1986)	behavioral strategies used in situations where there is "a competition of viewpoints" (p. 543) or "an occasion that threatens to produce negative affect in either one's... partners or oneself" (p. 544)
Rutter (1983)	"What the person does about the stress situation. Coping mechanisms include individual's attempts to directly alter the threatening conditions themselves, and the attempts to change only their appraisal of them so that they need not feel so threatened" (p. 27)
Spirito, Overholser, Ashworth, Morgan, & Benedict-Drew (1988)	"cognitive and behavioral... strategies" (p. 706)
Tero & Connell (1984)	"the processes people use to deal with various forms of stress and threat" (p. 3)

drawbacks. One criterion upon which current theories have uneasily converged requires closer examination, namely, the notion of coping as purposeful, conscious, intentional, or strategic. In his review of coping in children and adolescents, Compas (1987) ended the section on conceptualizations of coping with the conclusion that it "seems necessary to limit the use of the term to a subset of adaptational actions involving effort" (p. 399). Endler and Parker (1990) defined coping as a "response to external stressful or negative events" (p. 844), noting that "these responses are usually conscious strategies or styles on the part of the individual" (p. 844). They conclude that "individuals actively and consciously select and engage in particular coping behaviors" (p. 846). Use of the terms *coping strategies*, *coping efforts*, and *coping attempts* also imply that coping is a purposeful, intentional, volitional, and effortful process.¹

The focus on purpose and effort creates two problems. First, it excludes phenomena that most researchers would agree are interesting facets of

¹It can be difficult to discern what theorists mean by *effortful*. For example, if by effortful responses, Lazarus and Folkman (1984) meant all responses a person shows "when demands are appraised as taxing or exceeding a person's resources" (p. 142), then the only defining characteristic of effortful responses seems to be that they follow appraisals of stress. Few coping theorists would disagree that coping follows such appraisals, although some (ourselves included) would disagree that *effortful* is an appropriate term to describe this.

coping, especially, but not exclusively, in children. For example, in Compas' (1987) review of coping in childhood, he cites learned helplessness as a form of coping. A helpless style of responding to the stress of failure includes passivity, self-derogation, pessimism, and discouragement (Dweck & Leggett, 1987). Although this form of catastrophizing would not be considered intentional, it captures an important pattern of coping responses (Dweck & Wortman, 1982). To exclude such reactions from definitions of coping robs conceptualizations of richness and complexity.

The second problem with defining coping as intentional and effortful stems from developmental considerations. Perhaps one of the most interesting developmental questions is how early coping responses are transformed with development into purposeful attempts to deal with challenges (Maccoby, 1983) and why some people never seem to accomplish this transformation. From this perspective, purposeful, reflective, self-guided attempts to manage stress are seen as only one kind of coping, and a very mature and unusual form of coping at that (see Pearlin & Schooler, 1978, for empirical support for this conclusion in adults). One of the key developmental issues is the epigenesis of such coping. This issue cannot be studied, of course, if all coping is defined a priori as intentional and purposeful. In sum, a clear definition of coping is needed that (a) distinguishes coping from its antecedents and consequences, (b) is not so global that it includes all reactions to stress, but at the same time (c) does not use criteria of purposefulness to exclude a range of interesting coping responses.

C. WAYS OF COPING

The identification of the ways that people cope is the bridge between relatively general conceptual definitions of coping and the specific responses that people show in situations of psychological distress. Given the heterogeneity in definitions of coping, it is not surprising that a range of category systems have been developed to identify kinds or ways of coping. A number of coping categories considered during adulthood and childhood are summarized in Tables III and IV, respectively (see Skinner et al., in prep., for a review).

Typically, these systems are based only loosely on corresponding definitions of coping. Instead, the overarching categories are typically the result of theoretical analyses of the functions of coping; whereas specific categories are usually identified using empirical analyses of coping responses (Carver, Scheier, & Weintraub, 1989). The difficulty with using functions of coping as a basis for identifying categories is that overarching functions, such as problem- or emotion-focused coping, cannot be used to derive specific lower order categories; functions can only be used to classify

categories after coping rely on specific coping

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categories after they have been identified. Hence, almost all theories of coping rely on empirical analyses of open-ended responses to generate specific coping categories.

Factor analyses of individuals' responses to open-ended questions about the "things you did and thought" during a recent specific stressful episode and of people's ratings of the responses generated by others have produced a wide array of dimensionalizations (Carver et al., 1989; see Skinner et al., in prep, for a review). The first drawback of this approach is the lack of consensus about the number and kinds of coping categories that should be used (Carver et al., 1989). Second is the interpretability of the dimensions so identified. The questions used to generate responses imply that coping is everything a person does, thinks, and feels following stress, a definition that has been explicitly rejected by current theories of coping. The critical measurement problem this creates is that the distinctions mentioned earlier, such as between distress reactions and coping responses, become empirically indistinguishable. In measurement terms, it is impossible to determine how the items that mark one factor are conceptually related: Are they parts of the same construct (as has been assumed) or are they distress reactions, causes, antecedents, or correlates of coping categories? In sum, a category system is needed that is derived from a definition of coping, that includes only coping responses (and not coping reactions, resources, or consequences), and that is comprehensive with respect to identifiable criteria.

D. COPING RESOURCES

Central to any theory of coping is the question: What are the resources that allow individuals to cope effectively with stress? The answer has important implications for efforts to intervene in stressful situations. On the one hand, theories of coping have been unanimous in asserting that a wide range of factors support and constrain coping responses. On the other, however, few theories have addressed the nature and effects of coping resources. Indeed, Lazarus and Folkman (1984) assert that "it would be impossible to catalogue all the resources upon which people draw in order to cope with the myriad demands of living" (p. 159).

In the adult literature, theorists typically distinguish between two major classes of resources, psychological and social (Pearlin & Schooler, 1978) or personal and environmental (Lazarus & Folkman, 1984). The spectrum of intrapsychic resources suggested by researchers is broad, ranging from optimism versus pessimism (Carver et al., 1989) to health and energy (Lazarus & Folkman, 1984) to ego development (Moos & Billings, 1982). The list of social resources is equally long. Research focuses on objective and subjective properties of social networks as well as the quantity and quality of different relationships.

TABLE III
Coping Categories in Adults

<i>Carver et al. (1989)</i>	<i>Endler & Parker (1990)</i>	<i>McCrae (1982)</i>
Active Coping	Task-Oriented Coping	Hostile Reaction
Planning	Emotion-Oriented Coping	Rational Action
Suppression of Competing Activities	Avoidance-Oriented Coping	Seeking Help
Restraint Coping		Isolation
Seeking Instrumental Social Support	<i>Holohan & Moos (1987)</i>	Fatalism
Seeking Emotional Social Support	Active-Cognitive Strategies	Expression of Feelings
Positive Reinterpretation	Active-Behavioral Strategies	Positive Thinking
Acceptance	Avoidance Strategies	Distraction
Turning to Religion		Escapist Fantasy
Emotional Venting	<i>Moos & Billings (1982)</i>	Intellectual Denial
Denial	Problem-Focused	Self-Blame
Behavioral Disengagement	Seek Information or Advice	Taking One Step at a Time
Mental Disengagement	Take Problem-Solving Action	Social Comparison
Alcohol-Drug Disengagement	Develop Alternative Rewards	Sedation
	Appraisal-Focused	Substitution
<i>Lazarus & Folkman (1984)</i>	Logical Analysis	Restraint
Information seeking	Cognitive Redefinition	Drawing Strength from Adversity
Problem-Solving	Cognitive Avoidance	Avoidance
Wishful Thinking	Emotion-Focused	Withdrawal
Interpretation	Affective Regulation	Self-Adaptation
Minimizing threat	Resigned Acceptance	Wishful Thinking
Seeking Social Support	Emotional Discharge	Active Forgetting
Blaming Self		Humor
Avoidance		

Lazarus & Folkman (1984)

- Information seeking
- Problem-Solving
- Wishful Thinking
- Interpretation
- Minimizing threat
- Seeking Social Support
- Blaming Self
- Avoidance

Develop Alternative Newtarus

- Appraisal-Focused
- Logical Analysis
- Cognitive Redefinition
- Cognitive Avoidance
- Emotion-Focused
- Affective Regulation
- Resigned Acceptance
- Emotional Discharge

Substitution

- Restraint
- Drawing Strength from Adversity
- Avoidance
- Withdrawal
- Self-Adaptation
- Wishful Thinking
- Active Forgetting
- Humor

Pearlin & Schooler (1978)

- Psychological Resources
- Self-Denigration
- Mastery
- Self-Esteem
- Marriage Coping Responses
- Self-Reliance versus Advice Seeking
- Controlled Reflectiveness versus Emotional Discharge
- Positive Comparisons
- Negotiations
- Self-Assertion versus Passive Forebearance
- Selective Ignoring

Rohde et al. (1990)

- Cognitive Self-control
- Ineffective Escapism
- Solace Seeking
- Rosenbaum (1980)*
- Cognitions to Control Emotional or Physiological Sensations
- Problem-Solving Strategies
- Delay Gratification
- Perceived Self-Efficacy

- Parental Coping Responses
- Exercise of Parental Potency
- Nonpunitiveness versus Reliance on Discipline
- Household Economic Coping Responses
- Devaluation of Money
- Optimistic Faith
- Occupational Coping Responses
- Substitution of Rewards

TABLE IV
Coping Categories in Childhood

<i>Band & Weisz (1988)</i>	<i>Elias et al. (1987)</i>	<i>Ayers et al. (1990)</i>
Primary Control	Stop and Think	Problem-Focused Strategies
Direct Problem Solving	Mutual Compromise	Cognitive Decision Making
Problem-Focused Crying	Direct Discussion	Direct Problem-Solving
Problem-Focused Aggression	Support Seeking	Emotion-Focused Strategies
Problem-Focused Avoidance	Nonconfrontation	Positive Cognitive Restructuring
Secondary Control	Give Up	Seeking Understanding
Social/Spiritual Support	Wishful Resolution	Expressing Feelings
Emotion-Focused Crying	Pestering	Distraction Strategies
Emotion-Focused Aggression	Aggression	Physical Release of Emotions
Cognitive Avoidance	Uncertainty	Distracting Actions
Pure Cognition		Avoidant Strategies
Relinquished Control		Avoidant Actions
Doing Nothing		Cognitive Avoidance
	<i>Spirito et al. (1988)</i>	Support Strategies
	Distraction	Problem Focused Support
	Social Withdrawal	Emotion Focused Support
	Cognitive Restructuring	Not Indicative of Coping
	Self-Criticism	Problem Behavior
	Blaming Others	
	Problem Solving	
	Emotional Regulation	
	Wishful Thinking	
	Social Support	
	Resignation	

Distraction
 Social Withdrawal
 Cognitive Restructuring
 Self-Criticism
 Blaming Others
 Problem Solving
 Emotional Regulation
 Wishful Thinking
 Social Support
 Resignation

Support Strategies
 Problem Focused Support
 Emotion Focused Support
 Not Indicative of Coping
 Problem Behavior

<i>Miller et al. (1986)</i>		<i>Tero & Connell (1984)</i>
Persuasion Tactics Heavy-Handed Physical Force Threat Moderate Simple Proposition Check Desire Check Ability Give Directions Entreaty Appeal to Situational Constraints Appeal to Social Norms Effusion of Affect Appeal to Social Norms Co-Opting Justification by Appropriateness Justification by Desire Outcome Offers Exchange Deescalation of Request Clarification of Social Intent Clarification of Reference	Conflict Mitigation Clarification of Others' Feelings Changing the Topic Peaceful Acquiescence Proposal of Compromise Indirect Display of Anger Avoidance	Positive Coping Projection Denial Anxiety Amplification <hr/> <i>Spaulding (1978)</i> <hr/> Aggressive Behavior Negative (Inappropriate), Attention-Getting Behavior Manipulating, Controlling, and- Directing Others Resisting Self-Directed Activity Paying Close Attention; Thinking, Pondering Integrative Sharing and Helping Integrative Social Interactions Integrative Seeking and Receiving Support, Assistance, and Information Following Directions Passively and Submissively Observing Passively Responding to Internal Stimuli Physical Withdrawal

In research with children, the primary literature from which insights about coping resources have been gained involves the study of *resilience*. In this research, individual differences in reactions to stress are the target phenomenon and a variety of individual and relationship characteristics are used to predict these (Rutter, 1983). These predictors can be thought of as analogous to coping resources; in fact, overlap exists in the factors that have been examined in childhood and adulthood. In childhood, individual factors include age, sex, genetic factors, temperament, intelligence, and other skills. Interpersonal resources are thought to be especially important during childhood, and they include social networks, close relationships with family members, teachers, and peers, social groups, and the social context (Rutter, 1983).

Although research has provided many insights into the social and psychological contexts of coping, three major problems remain: (a) The number of possible resources suggested is virtually limitless; (b) empirical support for the connection between resources and coping has been surprisingly inconsistent and difficult to uncover (Carver et al., 1989); and (c) little is understood about the mechanisms by which these resources support or undermine coping (Rutter, 1983). A serious attempt must be made to formulate a theory of the intrapsychic and interpersonal antecedents of coping that is comprehensive, that specifies the sets of resources that will support (or undermine) coping with particular classes of stressors, and that suggests the mechanisms by which these resources make coping easier or more difficult.

E. DEVELOPMENT

Theories have emphasized the importance of coping by focusing on its broad and pervasive impact on physical and mental health. For example, Lazarus and Folkman (1984) assert that "the three basic kinds of outcomes are functioning in work and social living, morale and life satisfaction, and somatic health" (p. 181). Likewise, in childhood, general outcomes are emphasized: functioning in school and with peers, personal adjustment, and developmental psychopathology (Rutter, 1983). Coping researchers have begun to recognize the problems created by using such global aggregated outcomes. Empirically, it has proven difficult to find strong relations between specific coping responses in specific stressful encounters and these general outcomes. Even when using diathesis-stress models in which connections between coping and outcomes are only expected to obtain under conditions of stress, robust relations are the exception and not the rule. In retrospect, this lack of consistent findings makes some sense. It is difficult to explain how specific coping responses accrue in their effects to produce outcomes of the magnitude that are considered.

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It makes sense that coping should have important global effects on children's development as well as on the development of psychopathology. To understand this connection, however, a theory is needed that distinguishes between the short- and long-term outcomes of coping and then explains how different kinds of coping result in short-term outcomes and how these short-term outcomes in turn result in long-term outcomes.

In short, a theory of coping is proposed that is organized according to a series of questions that are central to a developmental approach to understanding the process of coping: (a) What constitute objectively stressful events? (b) What constitute subjectively stressful experiences? (c) What are initial reactions to stressful experiences? (d) What is coping? (e) What are the qualities or kinds of coping? Along what dimensions can coping responses be arrayed? (f) What are the predictors, both individual and interpersonal, of coping? (g) What are the short- and long-term outcomes of different kinds of coping? and (h) Do the answers to these questions differ depending on the developmental level of the target individuals? This theory of coping is embedded within a motivational model of psychological needs and so we begin by describing the basics of that model.

III. A Motivational Theory of Psychological Needs

There are two central questions that guide the study of motivation: (a) What energizes behavior? and (b) What directs behavior? One bold and newly rediscovered answer (see McClelland, 1951; White, 1959) is that individuals' behaviors are energized and directed by basic psychological needs (Connell, 1990; Connell & Wellborn, 1991; Deci & Ryan, 1985; Harter, 1983). Theories of psychological needs, derived from organismic or dialectic meta-theories, assign a central role to the individual in shaping his or her development. The value of a motivational needs model as a framework for the theory of coping comes from its strong assumptions about universal human commitments. These commitments provide the foundation for deriving a theory of coping that can then be judged on its own merits.

A. NEEDS

The motivational model upon which the coping theory is based postulates three basic psychological needs: the need for *relatedness*, or the need to have close relationships with other people; the need for *competence*, or the need to be effective in interactions with the environment; and the need for *autonomy*, or the need to freely determine one's own course of action. (For a detailed presentation, see Connell, 1990, or Connell & Wellborn, 1991; see Fig. 1.) One of the basic, and most controversial, postulates of this theory

- Relatedness:** Need to feel securely connected to others and the need to experience oneself as worthy and capable of love (i.e., self-esteem).
- Competence:** Need for effective interactions with the environment (i.e., achieve positive outcomes and avoid negative ones).
- Autonomy:** Need for self-determined (i.e., choiceful) interactions with the environment.

Fig. 1. A definition of three fundamental, psychological needs.

is that the three psychological needs are universal and innate (Connell, 1990).

From an evolutionary perspective, the value of each need can be postulated. Infants who desire proximity with their caregivers, and who, under stress, use whatever behavioral repertoire is available to them in achieving it, are more likely to survive the vulnerable early years (Bowlby, 1969, 1973). As to the need for competence, individuals who innately seek to interact effectively with the environment will attempt to manipulate physical and social events until they discover how to produce and reproduce desired outcomes. Learning of great instrumental value would accumulate about contingencies in the environment and about repertoires of one's own effective behaviors (White, 1959). Finally, autonomy can be seen as a counterforce to the needs for relatedness and competence. It would provide a mechanism whereby individuals organize and channel personal development according to their unique talents and proclivities (Deci & Ryan, 1991).

Long and rich traditions of research that focus on each of the three needs can be identified. The need for relatedness has been identified and elaborated under the umbrella term *attachment* (Ainsworth, 1979; Bowlby, 1969, 1973), a dominant theme in infancy research and research on social development for decades. The study of the need for competence was organized by White (1959) in his seminal paper on effectance motivation. It has been elaborated by those studying perceived control in all its formulations (Abramson, Seligman, & Teasdale, 1978; Bandura, 1977; Connell, 1985; Crandall, Katkovsky, & Crandall, 1965; Rotter, 1966; Skinner, Chapman, & Baltes, 1988; Weiner, 1979). The need for autonomy has been studied under the rubrics of intrinsic motivation, effectance motivation, or self-determination (deCharms, 1968; Deci & Ryan, 1985; Harter, 1983). Taken together, research on attachment, on perceived

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Fig. 1

control, and on self-determination represent large theoretical and empirical commitments in developmental, social, personality, clinical, and motivational psychology.

B. ENGAGEMENT AND DISAFFECTION

The three needs can be used to organize a model of context, self, action, and developmental outcomes (Fig. 2). According to this model, the extent to which basic psychological needs are met determines whether individuals will be "engaged versus disaffected." Engagement versus disaffection includes three components: energized versus enervated behavior (initiation, effort, concentrated attention, persistence, and continued attempts in the face of failure vs. avoidance, passivity, resistance, giving up, fleeing); positive versus negative emotion (enthusiasm, happiness, curiosity, interest vs. boredom, anger, anxiety, fear); and orientation (commitment to vs. alienation from the goals of developing relatedness, competence, and autonomy). (For an integration of this perspective with major theories of motivation, see Wellborn, 1991.)

C. SELF-SYSTEM PROCESSES

According to the motivational model, individuals appraise the extent to which the context is meeting each of their psychological needs. In their most elaborated form, these appraisals, called self-system processes, have been conceptualized and studied for relatedness as internal working models of attachment figures (e.g., Main et al., 1985); for the competence need, as perceived control (e.g., Skinner, 1991); and for the need for self-determination, as autonomy orientations (e.g., Deci & Ryan, 1985). The components of self-system processes as well as their developmental course are a matter of vigorous theoretical and empirical debate.

D. SOCIAL CONTEXT

According to the motivational model, individuals construct their self-system processes based on their interactions with the environment. How the social context fulfills the three basic psychological needs has been studied by

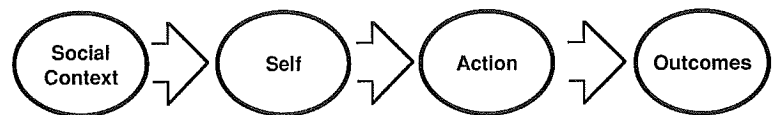


Fig. 2. A model of the relationship between the social context, the self, action, and outcomes.

motivational theorists (e.g., Connell & Wellborn, 1991; Deci & Ryan, 1985; Grolnick, Ryan, & Deci, 1989; Skinner, 1991) and is based in many other literatures as well. The activities of the social context that facilitate the experience of relatedness have been grouped under the construct *involvement*. The aspects of social contexts that promote the experience of competence are examined under the construct of *structure*. Finally, contextual features that allow children to experience themselves as self-determining are included in the construct of *autonomy support*. (More specific descriptions follow.) According to this motivational model, involvement, structure, and autonomy support, taken together, are the backbone for any context wishing to promote psychological development of the individual.

E. DEVELOPMENTAL OUTCOMES

From a motivational perspective, one of the primary mechanisms for development across the life span is engagement. Children (and adults) who show active, flexible, interested involvement in activities and relationships are hypothesized to derive maximum pleasure as well as maximum learning about the self and the activity. If environments are structured such that the three needs are fulfilled or optimally challenged, then learning and development will be optimal and adaptive. In contrast, children who are rigid or pressured in their involvement, or who are fearful, passive, and withdrawn will forego opportunities to exercise their own capacities or to learn about the context. Three kinds of developmental gains, broadly defined, are postulated to accrue from engagement with other people and the physical environment: social, cognitive, and personality development (see Fig. 3).

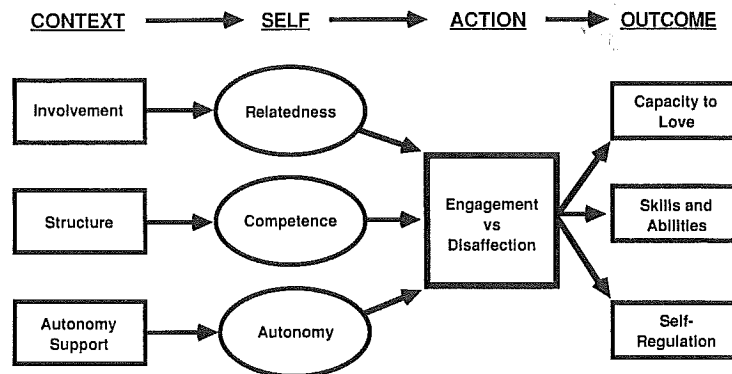


Fig. 3. A simple process model of the relationship between the social context, self, action, and outcomes.

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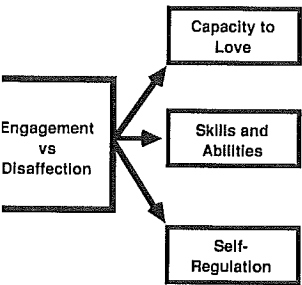
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born, 1991; Deci & Ryan, 1985; 91) and is based in many other social context that facilitate the need under the construct *involve-*ment that promote the experience of *structure*. Finally, context-experience themselves as self-*of autonomy support*. (More about this motivational model, important, taken together, are the psychological development of

OUTCOMES

of the primary mechanisms for engagement. Children (and adults) who are flexible in activities and relationships are able to reach as well as maximum learning capacities are structured such that the child is engaged, then learning and development. In contrast, children who are rigid or fearful, passive, and withdrawn have limited capacities or to learn about developmental gains, broadly defined, are not achieved in other people and the physical ability development (see Fig. 3).

ACTION → OUTCOME



between the social context, self, action,

IV. A Motivational Theory of Coping

The working definition of coping includes children's regulation of their behavior, emotion, and motivational orientation during psychological stress. When children's psychological needs are met, they will cope with stresses in more active, flexible, and positive ways. In contrast, when children feel that their needs are ignored or insulted, they will react to challenges in ways that are passive, rigid, and punitive. Close relationships are seen as the key to whether children's needs are met and, hence are central to the development of their coping. The general developmental trend is for coping to become more reflective, self-regulated, and internalized with age over middle childhood to adolescence, as well as more stable in either the adaptive or maladaptive direction. Furthermore, the ways in which a child copes should predict the child's emotional, behavioral, and orientational reaction to stress, and whether the child will engage or withdraw from further encounters with challenging situations. This engagement or disaffection should in turn influence long-term outcomes for the child, viewed in general terms as developmental gains or losses. The outline of the theory is presented in Fig. 4. The questions a developmental theory of coping should answer are used to organize the following sections.

A. WHAT ARE PSYCHOLOGICALLY STRESSFUL EVENTS?

According to the motivational perspective, objectively stressful events are those that threaten or damage the three basic psychological needs. Definitions of stress can be derived directly from the three kinds of social contextual elements that fulfill needs by considering the opposites of these

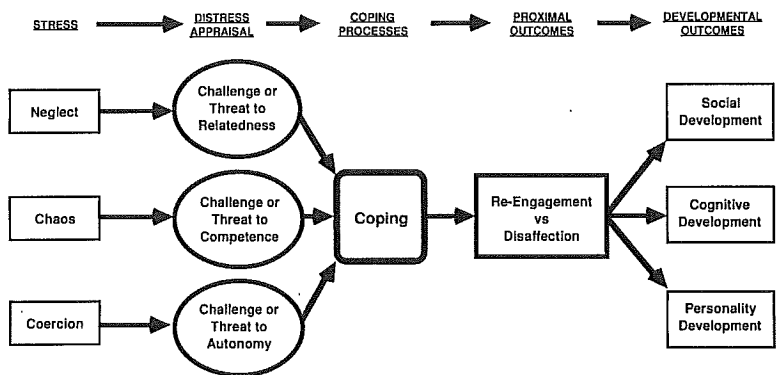


Fig. 4. A simple, process model of the relationship between the social context, self, coping, and developmental outcomes.

supports. If involvement, structure, and autonomy-support nurture children, then neglect, chaos, and coercion are the categories of major objective psychological stress. A brief review is presented to corroborate this argument.

Neglect

Neglect is defined as a lack of involvement from important social partners. The construct of *involvement* denotes the expression of affection and caring. It includes dedicating energy and resources, spending time, and listening, as well as being warm, dependable, and emotionally available, and expressing affection, interest, pleasure in and enjoyment of the child (Connell & Wellborn, 1991; Grolnick et al., 1989). The opposite of involvement is negligence and rejection. Neglect ranges from social partners who are physically or emotionally unavailable, who are cold and distant, and who do not like or enjoy the child to social partners who actively reject or hate the child. Neglect has been shown to predict developmental outcomes such as low self-esteem, depression, and withdrawal (Lipsitt, 1983; Sroufe, 1979). In developmental psychology, involvement versus neglect is the central feature of every theory of parenting, and is included as a basic requirement in major theories of adult-child socialization (Macoby & Martin, 1983).

Chaos

Chaos is defined as a lack of structure in the social context. Structure denotes information about pathways for interactions with the environment that lead to desired outcomes. Aspects of structure include the provision of clear expectations for behaviors, consistency, contingent responsiveness, challenges geared to the level of competence of the child, information about how to reach desired outcomes (e.g., strategies), and support in developing competencies to enact those strategies (Connell & Wellborn, 1991; Grolnick et al., 1989; Skinner, 1991).

Chaos is the opposite of structure, and refers to social contexts and relations characterized by inconsistency, unpredictability, noncontingency, normlessness, and vague or inconsistent expectations. Understimulation or challenges that are overwhelming, as well as lack of information and lack of support for trying out strategies and building competencies are also aspects of chaos. In stress research, unpredictability and loss of control have emerged as major themes, especially in experimental studies of animals (Weinberg & Levine, 1980). The aspect of chaos that has received the most intense empirical scrutiny in humans is noncontingency (Alloy & Abramson, 1979). Its devastating psychological consequences (emotional, behav-

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ioral, and motivational) as well as immunological effects have been documented in laboratory and field settings, from infancy to old age (Abramson et al., 1978; Baltes & Baltes, 1986; Gunnar, 1980; Levine, 1983; Seligman, 1975; Watson, 1979). Like involvement, structure is featured prominently in every theory of parenting and socialization (Maccoby & Martin, 1983).

Coercion

The third source of psychological stress is lack of support for autonomy. Autonomy support consists of allowing actual freedom of expression, through means such as choice, respect, and minimum constraints or rules. Autonomy support also involves facilitating the internalization of nonintrinsically motivated activities through means such as providing rationales, acknowledging conflicting feelings, and pointing out the relevance of the activities for the child's own goals (Deci & Ryan, 1985; Ryan, 1982).

The opposite of autonomy support is coercion. Coercion involves contexts that constrain, manipulate, or control the child. These ends can be accomplished through means that also appear coercive (such as verbal or physical threats or punishment) but they can also be achieved through more subtle means, such as love withdrawal, guilt induction, competition and comparison, or rewards and bribes (Ryan, 1982). The developmental effects of coercion have been widely documented, ranging from undermining intrinsic motivation, to failure to internalize norms and attitudes, to inability to regulate one's own behavior, to failure to develop an integrated self (Deci & Ryan, 1985). This dimension can be seen in theories of adult-child socialization as critical to the internalization of values, attitudes, and the regulation of behavior; it is an important aspect of discipline and rule setting (e.g., Baumrind, 1977; deCharms, 1968).

In sum, the motivational theory specifies three dimensions of social context that are hypothesized to be psychologically stressful; this assertion is consistent with evidence from major research traditions. The theory grounds the potency of these three dimensions to cause stress in an explanatory theory: Distress directly results from assaults on the three basic needs. The theory can organize a variety of components of stress under each dimension, arguing that they have in common the potential to undermine the respective need. Further, the theory asserts that it is reasonably comprehensive in terms of major categories of psychological stress. Finally, it points to the dynamics among the needs as a major source of stress. Maximally stressful would be a situation in which all three needs are threatened or a social context that makes the fulfillment of one need contingent on the denial of another.

B. WHAT IS THE EXPERIENCE OF PSYCHOLOGICAL DISTRESS?

Life events would be experienced as stressful when the individual feels that his or her basic psychological needs are not being met, or are being actively attacked. From a motivational perspective, infants are born with a "hard-wired" predisposition to react to contextual events that are relevant to their basic psychological needs. Reactions to opportunities to fulfill needs are coded in energized behaviors (active movement), positive emotions (enthusiasm, joy, satisfaction), and attentive orientations (toward the event, such as interest). Need-irrelevant events would result in a lack of attention and energy directed at the events. Events that impinge on the needs would result in distress reactions.

Distress Reactions

The set of reactions that are relevant to coping processes are those in which needs are impinged upon. Following Lazarus and Folkman (1984), appraisals are divided into irrelevant, challenge, threat, and loss. Consistent with the motivational theory, distress reactions are conceptualized as a complex of behavior, emotion, and orientation. During distress reactions, behavior can be either active or passive, emotions either positive or negative, and orientation either toward or away from the event. In general, responses to *challenges* to needs are active, positive, and oriented toward the event or activity. Challenge responses are energetic and optimistic, aimed at restoring or reestablishing need fulfillment. In general, *threat* responses are emotionally negative, are oriented toward the event or activity, and can be passive or active. Responses to threat are aimed at fighting for the needs and differ from responses to challenge in their tone of anxiety and deprivation. Responses to *loss* are, in general, passive, negative, and oriented away from the event or activity. Loss responses are aimed at protecting the self from the impact of the assault to the needs. Loss responses differ from threat responses in their tone of hopelessness and despair. Finally, as pointed out by Lazarus (Lazarus & Folkman, 1984), some events, those that do not impinge on commitments, lead to disinterest. These differ from disaffection in that the tone is emotionally benign or neutral (cf. Roth & Cohen, 1986).

Reactions to Impingement of the Needs

According to the motivational perspective, all individuals begin with a commitment to the fulfillment of the three needs.² However, based on the

²According to the motivational theory, it is possible for an individual, after prolonged periods of deprivation from a basic need, to eventually "detach" from that need and relinquish a commitment to that need. This would result in severe psychopathology and so is not considered part of this general theory. It is important to distinguish between *detachment* from

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	Appraisals	Coping Reactions	Behavior	Emotion	Orientation
RELATEDNESS	Challenge	Seek Proximity	Active (Move)	Positive (Love)	Away (Safety)
	Threat	Freeze	Passive (Don't Move)	Negative (Sadness)	Toward (Disappear)
COMPETENCE	Challenge	Observe	Passive (Look & Listen)	Positive (Wonder)	Toward (Attend)
	Threat	Flee	Active (Move)	Negative (Fear)	Away (Escape)
AUTONOMY	Challenge	Test	Active (Move)	Positive (Interest)	Toward (Choose)
	Threat	Fight	Active (Move)	Negative (Anger)	Toward (Attack)

Fig. 5. Reactions to psychological stress.

contexts in which they have developed, individuals will differ dramatically on the extent to which they currently experience themselves as related, competent, and autonomous. These individual differences act as filters for experience, rendering children vulnerable, for example, to feeling coerced when they have low perceived autonomy, or protecting them from feeling neglected when they have high perceived relatedness.

According to this theory, three simple sets of intuitive, nonreflective appraisals, corresponding to the needs, determine how easy it is for the social context to "push a child's buttons" and hence produce a distress reaction. Experienced impingement of each of the needs is predicted to produce a different stress reaction (see Fig. 5). Challenges to relatedness would produce a "seek contact" reaction, threats a "freeze" reaction. Challenges to competence would produce an "observe" reaction, threats a "flight" reaction. Challenges to autonomy would produce a "test" reaction, threats a "fight" reaction. Those familiar with the infancy literature will note that these reactions are present in normal infants: They will bid for physical proximity and comfort if separated from the caregiver (neglect), will protest physical constraint (coercion), and will react with fear and escape to unpredictable events (chaos). (See Levine, 1983; Lipsitt, 1983.)

These behavior-emotion-orientation patterns are seen as the developmental primitives out of which self-system processes, coping, and engagement are differentiated. These appraisals are prerequisites for the appearance of differential interpretations of (and hence, individual differences in distress responses to) ambiguous events. Although these filters are not intentional, reflective, or rational, they become more accessible to reflec-

a basic need and *disaffection or disengagement* from an activity, context, relationship, or enterprise in which it is impossible to have a need fulfilled. The latter allows for reengagement in alternative activities and relations that are more likely to fulfill needs whereas the former is a form of psychological suicide.

tion and self-regulation with age. With development, children's distress reactions may become more differentiated, reflecting the specific need being threatened by events. These differentiations can be expressed through emotions, behaviors, or orientations that imply the needs. For example, emotions would include loneliness (relatedness), embarrassment (competence), and shame (autonomy). Reflective indications of attacks on the needs would move from vague feelings of misgiving and panic ("Danger. Something's wrong.") to more differentiated feelings or reflections, such as "I feel alone. The world is cold" (relatedness), "I feel helpless. The world is unpredictable" (competence), or "I don't know what I want. The world is hostile" (autonomy). The advent of these changes makes it possible to assess children's appraisals independently from their stress reactions.

C. WHAT IS COPING?

From a motivational perspective, coping encompasses peoples' struggles to maintain, restore, replenish, and repair the fulfillment of basic psychological needs in the face of experienced assaults on those needs. Coping is energized by an individual's commitments to relatedness, competence, and autonomy, and is directed by the self-system processes associated with each need. More specifically, responses available to individuals are aimed at managing their engagement with (vs. disaffection from) the stressful situation, that is, managing their behavior, emotion, and outlook. Hence, *coping* is an organizational construct that describes how people regulate their own behavior, emotion, and motivational orientation under conditions of psychological distress.

The notion of coping as management and the notion of coping as aimed at changing problems, emotions, and appraisals appears as a theme in many definitions of coping. Both Carver et al. (1989) and Rohde, Tilson, Lewinson, and Seeley (1990) construct their theories of coping on theories of self-regulation. Maccoby (1983) specifically addresses the developmental importance to coping of maintaining behavioral organization. Lazarus and Folkman (1984) define coping as "efforts to manage specific external and/or internal demands" (p. 141), and Compas (1987) includes "all purposeful attempts to manage stress" (p. 394). In addition to its role in dealing with problems, management surfaces in discussions of the function of coping in regulating emotion (e.g., Lazarus & Folkman, 1984; Pearlin & Schooler, 1978). Finally, some theorists mention ways of coping that serve to transform meaning. For example, Billings and Moos (1984) identify one kind of coping, active-cognitive strategies, that are "efforts to manage the appraisal of the stressfulness of the event" (p. 878). Pearlin and Schooler (1978) include in coping responses those that control the meaning of the strainful experience.

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In general, regulation refers to how people mobilize, guide, manage, energize, and direct their behavior, emotion, and orientation, or how they fail to do so. From this definition, it can be concluded that coping has two poles: underregulation and overregulation, with flexible regulation falling in the middle (Block & Block, 1979). Underregulation occurs when behavior, emotion, and orientation are uncoordinated; underregulation includes impulsive behavior, emotional outbursts, or a confused non-goal-directed orientation. Over-regulated coping occurs when behavior, emotion, and orientation become rigid, pressured, repetitive, and unresponsive to internal or external feedback; overregulation includes rigid behavior, suppressed emotions, or perseverating at an outcome. With flexibly regulated coping, behavior, emotion, and orientation are coordinated; behavior is active and intentional, emotion is channeled, and orientation is goal directed. This conceptualization provides a scheme for organizing ways of coping according to the definition of coping (e.g., ways of regulating behavior, emotion, and orientation) rather than according to its functions (e.g., emotion-focused or problem-focused) or consequences (e.g., effectiveness in reducing stress).

In sum, the current definition of coping, in addition to the fact that it is part of a larger theory of motivation, has several strengths. It narrows extremely broad definitions of coping without excluding a range of interesting coping responses. It also includes and integrates many current theories of coping with psychological stress (psychodynamic theories are the exception). In addition, it can then use the literature on self-regulation, ego resilience and ego control, and the development of behavioral, emotional, and motivational regulation as a basis for forming a theory of the epigenesis of regulated coping (Maccoby, 1983).

D. WHAT ARE THE WAYS OF COPING?

Within the current theory, it was seen as desirable to construct a category system that could be derived from the definition of coping, that could be described along a specifiable number of dimensions, that was general enough to be applied to a wide range of stressors but could also be further specified to fit each context, and that could be expanded to incorporate developmental changes in the categories. The system upon which our work converged is pictured in Fig. 6. The specific categories included are the result of a review of all major category systems used for children and adults (Skinner et al., in prep.) as well open-ended interviews with children about their reactions to a variety of stresses (absence, conflict, loss) in the domains of academics and friendship (Mellor-Crummey, 1989; Skinner, Altman, & Sherwood, 1991). This system, or a close variation of it, is currently undergoing empirical scrutiny (Skinner & Wellborn, 1991).

		COPING RESPONSES					
		COPING REACTIONS	APPRAISALS	Regulation of Behavior	Regulation of Emotion	Regulation of Orientation	
R E L A T E D N E S S	SELF	CHALLENGE	"I will love."	Cooperate	Appreciate	Support	
		THREAT	"I am alone."	Delegation	Self-pity	Abandonment	
	CONTEXT	CHALLENGE	"I will reduce neglect."	Contact-seeking	Comfort-seeking	Help-seeking	
		THREAT	"The world is cold."	Concealment	Detachment	Avoidance	
	C O M P E T E N C E	SELF	CHALLENGE	"I will learn."	Strategize	Encouragement	Determination
			THREAT	"I am helpless."	Confusion	Self-doubt	Discouragement
CONTEXT		CHALLENGE	"I will reduce chaos."	Information-seeking	Optimism	Prevention	
		THREAT	"The world is unpredictable."	Escape	Pessimism	Procrastination	
A U T O N O M Y		SELF	CHALLENGE	"I will decide."	Flexibility	Accept Responsibility	Reevaluation
			THREAT	"I don't know what I want."	Perseveration	Self-blame	Obsession
	CONTEXT	CHALLENGE	"I will reduce coercion."	Negotiation	Blamelessness	Rededication	
		THREAT	"The world is hostile."	Aggression	Projection	Devaluation	

Fig. 6. Motivational coping categories.

The matrix of coping categories was derived by crossing the source of the distress with the targets of regulation. Twelve kinds of distress were considered, depending on which need was impinged upon (competence, autonomy, or relatedness), whether the impingement was experienced as a challenge or a threat, and whether the source of the distress was the self or the context. The other axis of the coping matrix distinguishes the target of the regulation, namely, the three components of engagement: behavior, emotion, and orientation. The current system is able to accommodate almost all of the categories proposed by other researchers (see III and IV). The system also suggests some categories not previously discussed as coping, such as "confusion," "abandonment," and "rededication."

The specific embodiment of each category of coping responses will depend on the developmental level of the target individuals and the domain of stress. Especially important in this regard are the power relationships in the context. When power relations are reciprocal (such as with siblings or peers), children can more directly express their coping responses. However, when relationships are complementary (such as in parent-child or teacher-child relations), children are more constrained. For example, when a competence need is threatened by a peer, a child would be predicted to cope by literally leaving the scene of the interaction; when an autonomy need is threatened, the child would aggress. However, in the classroom, under conditions of threat to competence or autonomy, the child is not allowed to leave or aggress against the teacher. In this context, the child is predicted to regulate behavior to "flee" as much as constraints will allow (wishing it were over) or "fight" as much as possible (e.g., opposition).

The current system makes explicit an issue suggested but not systematically considered in most category systems, namely, the notion that individuals do not have "styles" of coping but instead show patterns or profiles of coping responses. What has been left unspecified by these theories is whether any combinations of coping categories are possible, whether some forms of coping are mutually exclusive, or whether some are more likely to co-occur. As can be seen in Fig. 6, several general predictions can be made about profiles of coping. First, the three large blocks of coping categories organized under each need are independent of each other. Hence, at the very least, an individual could vary on the extent to which each of the three systems are activated. According to the current theory, this would be predicted from the appraisal of which need(s) have been impinged upon.

Second, the two kinds of appraisals within each need (challenge vs. threat) would determine which rows of coping responses would be activated within each block. In general, at any point in time these two appraisals are hypothesized to be mutually exclusive, and as a result, the coping categories they contain should in general be negatively related to each other. Third, whether individuals appraise the source of the impingement as the self

N E E D		T H R E A T		E s c a p e		P e s s i m i s m		P r o c r a s t i n a t i o n	
A U T O N O M Y		C H A L L E N G E		F l e x i b i l i t y		A c c e p t R e s p o n s i b i l i t y		R e e v a l u a t i o n	
		T H R E A T		P e r s e v e r a n c e		S e l f - b l a m e		O b s e s s i o n	
C O M P E T E N C E		C H A L L E N G E		N e g o t i a t i o n		B l a m e l e s s n e s s		R e d e d i c a t i o n	
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		S E L F							
		C O N T E X T							

Fig. 6. Motivational coping categories.

and/or the context determines which rows within challenge and threat would be activated. Self and context appraisals are not mutually exclusive; hence, multiple rows can be activated simultaneously. Fourth, because each row is hypothesized to be underlain by the same appraisal, the ways of coping in each row are seen as behavior-emotion-orientation patterns and so are predicted to be positively correlated with each other.

In sum, in addition to organizing existing categories of coping and suggesting new ones, the present dimensions of coping responses can be used to derive predictions about the relations among coping responses, suggesting both profiles of responses and underlying psychological processes that account for them.

E. WHAT ARE THE ANTECEDENTS, BOTH INDIVIDUAL AND INTERPERSONAL, OF COPING?

In the motivational model, intrapsychic and interpersonal resources are studied under the constructs labels *self-system processes* and *social context*, respectively. Three self-system processes are viewed as proximal predictors of coping responses: those associated with relatedness, competence, and autonomy. Three dimensions of the social context are equally important: involvement, structure, and autonomy support (see Fig. 7).

Self-System Processes as Personal Coping Resources

According to the motivational perspective, individual differences in the extent to which children's needs are fulfilled produce individual differences in children's beliefs about their relatedness, competence, and autonomy. These perceptions predict the extent to which potentially stressful environmental events produce psychological distress and how children will regulate.

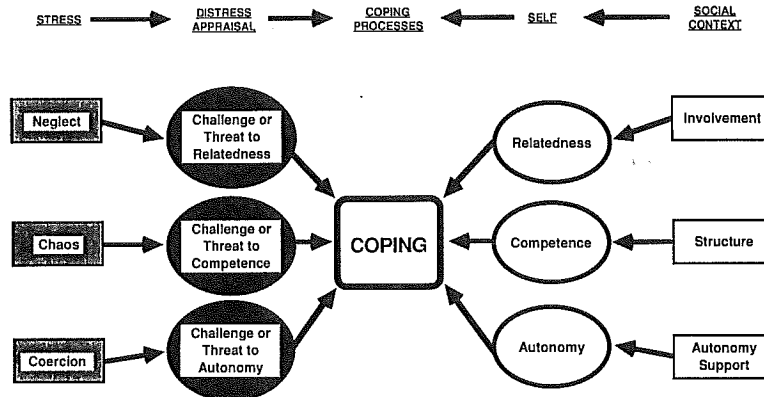


Fig. 7. Context and self as coping resources.

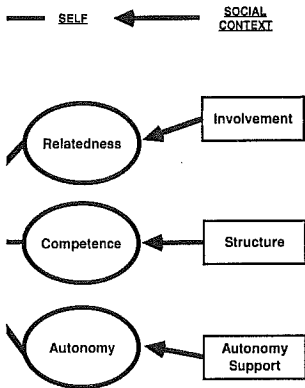
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their behavior, emotion, and orientation during stressful encounters. Research and theory about internal working models of attachment figures, perceived control, and autonomy orientations provide support for the proposition that these beliefs buffer or exacerbate children's reactions to potentially stressful events.

Attachment. The potential stress examined in attachment research is codified in "the strange situation" in which an infant is separated from and reunited with its mother as well as left alone in the presence of a stranger. Decades of research have shown that infants with secure attachments to their caregivers respond to this stress with much less distress than do insecurely attached infants, who respond with anxiety, anger, and disruption of their exploratory and play behavior (Ainsworth, 1979). Evidence that internal working models of attachment figures serve the same function at older ages is only inferential. Early attachment status (secure vs. insecure) predicts both the quality of the internal working model that will be formed and the child's resilience to social stress (Sroufe, 1979). Current research is only beginning to catch up to conceptualizations of working models; when measurement issues are resolved, the direct link will be subject to empirical test (Ainsworth, 1989).

Research with the social support construct can be seen as providing evidence that internal working models of relationships buffer the effects of stressful life events in adults. One of the most robust (and unexpected) findings in the stress and social support literature is that the amount of support actually received predicts negative coping and increases in distress; whereas the amount of social support perceived to be available predicts positive coping and decreases in distress (Cohen, McGowan, Fooskas, & Rose, 1984). A central dimension of internal working models of relationships is the perceived emotional and physical availability of the attachment figure.

Internal working models should act as psychological buffers during events that could otherwise threaten relatedness. First, they filter ambiguous potentially threatening events, preventing them from being interpreted as assaults to relatedness. For example, children with secure working models should not interpret events such as separation from a friend, a teacher's refusal of a request, or a group's exclusion as evidence that "they don't like me." In addition to reducing initial psychological distress, these relatedness self-system processes support a range of coping responses to threats of any kind that utilize interpersonal resources, through seeking of help, advice, contact, and comfort.

Perceived Control. One of the most robust findings in the stress literature is that when subjects believe that they can control (usually

terminate) a noxious event, they will experience the event as less stressful, even when they never exercise that control. With perceived control in children, the potentially stressful events most often studied are failure and noncontingency (Levine, 1983). Research with the constructs of learned helplessness, attribution theory, locus of control, and self-efficacy have shown that children's beliefs about whether they can control outcomes directly influences their responses to these stressful events (Skinner, 1991). In terms of emotional reactions to failure, for example, research on helplessness has shown that children who do not expect to be able to control outcomes become more upset, anxious, and discouraged in the face of failure than do children with higher perceived control (Dweck & Leggett, 1988). (For a review of research on coping and control in adulthood, see Folkman, 1984.)

As with other self-system processes, perceived control influences coping in two ways. First, it protects children from interpreting potentially distressing events as threats to competence. For example, when children with high perceived control cannot solve a problem or fail in an attempt to achieve something, they should be less likely to "feel stupid" or to feel pessimistic about the eventual outcome. Second, perceived control should support coping attempts that are aimed at discovering new strategies and developing new capacities, such as planning, problem solving, and information gathering.

Autonomy Versus Control Orientation. Within theories of intrinsic motivation and self-determination, researchers have become interested in individual differences in the ways in which people interpret events, as captured by their causality orientations (Deci & Ryan, 1985). Researchers propose that individuals with an *autonomy orientation* tend to interpret events as informational, that is, as providing them with information about conditions and contingencies in the environment upon which they can base their unpressured free choices of behavior. Individuals with a *control orientation*, in contrast, interpret events as controlling and pressuring them to behave in certain ways.

Research has shown that the hallmark of an autonomy orientation is a relaxed, unpressured response to environmental events (even those in which the context intends to control the individual), whereas the hallmark of a control orientation is subjective pressure and emotional distress, either anxiety or anger, in the face of events (even those in which social partners are not attempting to coerce the individual). Research with children has shown that high levels of anger and anxiety characterize children with control orientations (Ryan & Connell, 1989). No direct evidence exists that specifically examines whether the experience of stressful life events is mediated by causality orientations in children.

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According to the motivational theory, high perceived autonomy should buffer stress in two ways. First, individuals with an autonomy orientation are less likely to feel coerced, even by coercive circumstances. They are more likely to feel that they can make their own independent decisions and can exercise freely their own choice of actions. Second, in situations that are perceived as coercive, individuals with high perceived autonomy are more likely to cope in more flexible and self-determined ways, such as through negotiation and compromise, rather than in ways that are controlled, such as perseverance and aggression.

Social Contexts as Interpersonal Coping Resources

Theories of coping are unanimous in emphasizing the importance of close relationships, both during childhood and adulthood. The functions of these relationships have been studied most extensively under the rubric of social support. Not surprising to anyone who has studied close relationships is the finding that social support has both positive and negative features (Suls, 1982). In general, research has shown that an absence of social connections makes an individual more vulnerable to stress. However, the presence of dense social networks seem to have both advantages and disadvantages (Belle, 1982). Recent research has attempted to analyze the components of social support and to study them separately. The motivational model suggests that three dimensions will be especially important as buffers against stress. They are involvement, structure, and autonomy support. As described earlier, involvement includes the expression of affection and love, as well as dedication of time and resources; structure includes provision of clear expectations, consistent contingencies and help; and autonomy support includes provision of choice, minimal coercion, and rationales for disciplinary rules.

Just like self-system processes, social contextual supports would be expected to influence coping through two channels. First, they would buffer the effects of stress and by so doing they would reduce the individual's experience of psychological distress. For example, when a child moves to a new neighborhood, the absence of friends would be a potentially stressful event. The motivational theory would posit that the more involvement provided by parents and siblings, the less this event would be experienced as distressful by the child. Likewise, the more attention provided by the father following the birth of a new sibling, the less distress the older child would experience as a result of decreased time spent with the mother.

The second way in which the social context could act as a resource is by influencing the way in which a child copes. The more involved the social partners, the more likely the child will be to turn to the partners for help and comfort. The more structure the context provides, the more the child will

respond to distress with active attempts at problem solving. The more autonomy supportive the social context, the more flexible and self-determined children's coping will be. As can be inferred from the foregoing, the mechanism through which the context can have an impact on children's distress reactions and coping is through their effects on the child: by influencing the distress appraisals on the one hand and the self-system processes that direct coping on the other.

The use of involvement, structure, and autonomy support as environmental resources may seem confusing when at the same time their opposites (neglect, chaos, and coercion) are posited to be the three major classes of psychological stress. However, because of the complexity of most social situations, these constructs do not usually form single dimensions. Consider the case of divorce, which is a potentially stressful event involving the loss of proximity to one parent (usually the father). The construct of *neglect* can be used to analyze the severity of the potential impact of paternal separation on the target child (e.g., how often the father visits, the quality of the time spent, the father's availability and dependability). Then the construct of *involvement* can be used to assess the compensatory efforts of other social partners in the context, such as the mother, older brothers and sisters, uncles and aunts, or grandparents. The usefulness of distinguishing the role of the context in stressing children and its role in supporting them is clearest in cases in which the sources of the distress and support inhabit separate social systems. For example, it is a well-documented finding that, when families are marked by chaos and discord, a child's close relationship with a loving and consistent adult outside of the immediate family (often a grandparent or teacher) can provide a buffer against the effects of family stresses (Garmezy, 1983).

The Interaction of Stressors and Coping Resources

The motivational model can be used to specify the interaction of stressors and protective/risk factors. Personal and interpersonal resources should have their most notable effects in mediating stressors that impinge on corresponding needs. More specifically, the study of self-system processes for relatedness and the involvement dimension of social support would be important in coping with stresses that involve interpersonal loss or separation, such as divorce, separation from parents due to illness, relocation, adjustment to birth of a sibling (which usually includes subsequently less involvement from the mother), adjustment to alternative child care, or adjustment to school. Secure internal working models and the availability of other closely attached relationships should reduce children's experience of these events as distressing and should predict to their active attempts to establish new relationships.

with active attempts at problem solving. The more the social context, the more flexible and self-determined the child will be. As can be inferred from the foregoing, the social context can have an impact on children's coping through their effects on the child: by providing appraisals on the one hand and the self-system on the other.

Structure, and autonomy support as environmental factors seem confusing when at the same time their opposites (coercion) are posited to be the three major classes of social contexts. However, because of the complexity of most social contexts do not usually form single dimensions. Consider the loss of a potentially stressful event involving the loss of a parent (usually the father). The construct of *neglect* can refer to the potential impact of paternal separation (how often the father visits, the quality of the time spent together, ability and dependability). Then the construct of *chaos* refers to assess the compensatory efforts of other social supports such as the mother, older brothers and sisters, and grandparents. The usefulness of distinguishing the role of parents and its role in supporting them is clearest in children and their distress and support inhabit separate dimensions. For example, it is a well-documented finding that, when there is chaos and discord, a child's close relationship with an adult outside of the immediate family (often a grandparent) can provide a buffer against the effects of family

Stressors and Coping Resources

can be used to specify the interaction of stressors and coping resources. Personal and interpersonal resources should be considered in mediating stressors that impinge on children. Specifically, the study of self-system processes and the involvement dimension of social support would be particularly relevant in cases that involve interpersonal loss or separation from parents due to illness, relocation, divorce, and remarriage (which usually includes subsequently less frequent contact), adjustment to alternative child care, or foster care. The internal working models and the availability of social relationships should reduce children's experience of stress and should predict to their active attempts to

According to this line of thinking, perceived control and provision of structure would be especially important psychological and social resources in events involving failure, noncontingency, unpredictability, and novelty. Children with high perceived control and those whose social contexts provide structure are more likely to experience such events as challenges to be overcome rather than as threats to competence, and so evince less distress. Likewise they are likely to cope with these events in ways that involve active problem solving and result in increased learning. In the same vein, an autonomy orientation and contexts high in autonomy support would be expected to mitigate the effects of coercive contexts. For example, many parents find that schools and peer groups are contexts that demand excessive conformity from their children. According to this motivational theory, children who have high perceived autonomy and whose families support autonomy should be able to negotiate these demands using more flexible and independent coping strategies.

Three implications of this view of intrapsychic and social resources should be noted. First, it implies a differentiated picture of the positive and negative effects of certain coping resources. In some stressful encounters, certain self-system processes will be called upon and in others, they will be irrelevant. Likewise, certain social partners may be a great deal of help in specific stressful situations and a detriment in others. The present scheme allows these interactions and matches to be postulated a priori. This may augment empirical attempts to document the influences of social and psychological resources. Second, this view implies that the social context can almost totally ameliorate the long-term effects of any stressor, by compensating for the loss. Consider one of the single most stressful events imaginable, namely, the loss of a child's primary caregiver. If the child is immediately adopted by a loving set of parents who already have an attachment with the child (such as relatives), then the long-term effects would be expected to be minimized, despite the short-term severe distress that would accompany the loss.

Finally, this perspective identifies the mechanisms through which social and personal resources mediate the effects of stressors on children. On the one hand, they influence distress appraisals. Children are less likely to experience negative events as impinging on their basic psychological needs. Second, they influence the kinds of coping children actually show. With higher levels of personal and social resources, children are more likely to maintain the organization of their behavior, emotion, and orientation under conditions of psychological distress. Because many childhood stressors involve some combination of neglect, chaos, and coercion, the three self-system processes and the three social contextual dimensions are expected to facilitate more adaptive coping across a wide range of potentially stressful encounters.

F. WHAT ARE THE OUTCOMES OF COPING?

According to the motivational model, the route by which coping influences children's development is through their reengagement. *Reengagement* refers to the quality and intensity of involvement in the face of obstacles and setbacks; it consists of the same three components as ongoing engagement, namely, behavior, emotion, and orientation. Every coping category can be analyzed for its effects on behavior, emotion, and orientation. This approach solves a recurring problem in discussions of coping effectiveness. It has been difficult to make predictions about the short-term effects of specific coping responses. Most researchers have decided that the adaptiveness or maladaptiveness of a coping response simply cannot be determined; it depends on a myriad of contextual factors. The current theory argues that the short-term outcomes of coping responses are not "effectiveness" or "ineffectiveness" but the multiple effects of the coping response(s) on the intensity and quality of engagement in the face of stress.

The most straightforward hypotheses about the short-term effects of different kinds of coping can be derived directly from Fig. 6. That is, coping responses that regulate behavior are hypothesized to have behavioral effects, those that regulate emotion to have effects on emotion, and those that regulate orientation to have effects on orientation. More interesting predictions result from the general proposition that, although each kind of regulation has its primary effects on the target of that regulation (e.g., behavioral regulation on behavior), each kind nevertheless has an effect on the other two short-term outcomes as well (i.e., behavioral regulation also has an effect on emotion and orientation). In other words, a regulation aimed at a specific aspect of engagement can be effective in regulating that aspect and still impede the regulation of other aspects of engagement. For example, one effective way of regulating behavior to be active is perseverance. At the same time, however, perseverance has negative consequences for regulating emotion (i.e., anxiety) and orientation (i.e., loss of focus on learning).

According to this perspective, optimal coping consists of ways of regulating the target aspect of engagement without impeding any of the other aspects. An example can illustrate this point. Two coping responses that both involve behaviorally disengaging from the stressful activity are *escape* (running away from or avoiding an activity) and *reevaluation* (actively deciding that an activity cannot be pursued at the present time). However, the two differ in that escape involves both a negative emotion (fear) and an orientation that is away from the stressful activity. Both of these features make it less likely that the individual will actively reengage with the stressful activity in the future. In contrast, reevaluation involves less negative emotions (relief, regret) and a flexible orientation toward the

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The long-term outcomes of coping can also be painted with broader brushstrokes. In the motivational theory, long-term outcomes correspond to the development promoted by the three needs: social development, cognitive development, and personality development. Corresponding to relatedness, social development is defined as the capacity to love and be loved. Corresponding to competence, cognitive development is defined as the ability to discover and understand how to produce desired outcomes and the capacities to execute those strategies. Corresponding to autonomy, personality development is defined as the construction of a coherent self that integrates one's unique talents and proclivities with the demands internalized from society.

All three kinds of development involve transformation of the context and transformation of the self. Both of these transformations are hypothesized to occur as a result of active, sustained, attentive interactions with the social and physical world. In other words, taken together with engagement, reengagement in the face of obstacles and setbacks is hypothesized to be a major mechanism for cognitive, personality, and social development. By the same token, children who never encounter challenges and stresses are robbed of opportunities to exercise and develop their skills and capacities. This also explains the "stealing" effects of encounters with stress. When stressful encounters are successfully negotiated, they produce developmental resources that are useful in subsequent encounters. As Rutter (1983) points out, "the long-term outcomes will be determined by how the stressors are dealt with at the time, and perhaps especially on whether the outcome of the stress encounter was successful adaptation or humiliating failure" (p. 31).

From this perspective, maladaptive long-term outcomes involve both stasis and the development of patterns of interaction that actively work against the fulfillment of the needs (psychopathology). Ways of coping that forestall development would include (a) coping responses that prevent, avoid, or curtail interactions with the social and physical environment (such as escape or procrastination); (b) coping responses that do not prevent interactions but burden them with so much negative affect that it is impossible for the individual to learn from or enjoy them (such as perseverance or obsession); and (c) coping responses that direct such interactions away from the fulfillment of needs (and toward other targets such as appearing autonomous (through aggression) or appearing related (through delegation)). Fleshing out the long-term adaptive and maladaptive developmental outcomes of coping responses will itself be a long-term proposition. However, specifying the short-term mediational links (i.e., behavioral, emotional, and orientational reengagement) may illuminate the mechanisms by which coping influences broad adaptational outcomes.

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Also be painted with broader long-term outcomes correspond to needs: social development, competence. Corresponding to the capacity to love and be loved, development is defined as the capacity to produce desired outcomes and to be supported. Corresponding to autonomy, the development of a coherent self and its relationships with the demands

of the context and the demands are hypothesized to be interactions with the social context together with engagement, support. Support is hypothesized to be a condition for social development. By facing challenges and stresses are beyond their skills and capacities. Encounters with stress. When faced, they produce developmental encounters. As Rutter (1983) has noted, "it is determined by how the stressors are related to whether the outcome is a success or humiliating failure"

term outcomes involve both the interaction that actively work toward the goal (psychology). Ways of coping that prevent, reduce, or change the physical environment (such as responses that do not prevent the negative affect that it is to avoid or enjoy them (such as responses that direct such as toward other targets (avoidance) or appearing related to the adaptive and maladaptive responses will itself be a long-term developmental mediational links (i.e., the process) may illuminate the developmental outcomes.

Effects of Coping on Objective Stress

The stresses children experience influence the way in which they cope. At the same time, children's responses to stressful events seem likely to influence the stressors they subsequently encounter (Rutter, 1983). On the most general level, the effects of coping on future stressful events are unmediated. If one studies, one is less likely to fail; if one does not plan ahead, one is more likely to run into trouble. Research shows that adults who cope ineffectively are more likely to experience stressful life events (Moos & Billings, 1982).

The effects of coping on stress can also be mediated by the response of the social context. Two models have been suggested for the ways in which contexts respond to individuals (Kindermann & Skinner, 1992). The first, and more optimistic, is the *compensatory model* in which social partners respond to children's maladaptive coping with increased involvement, structure, and autonomy support. Over time, such contexts help "repair" children's self-system processes and so encourage them to use new coping strategies. The second model is the *exacerbatory model* or "the rich get richer model" in which the social context responds to children's poor coping in ways that undermine coping further. It is easy to imagine how, in the academic domain, coping responses such as passivity and confusion would lead teachers to lower their expectations of children's competence and provide them with less challenging activities, thus undermining children's already low competence beliefs. Or, in the domain of family relations, it is easy to see how aggression, projection, and opposition could produce parental coercion, again exacerbating children's feelings of low autonomy. Finally, in the friendship domain, it is possible to see how children who are isolating and self-pitying could lead peers to ignore or actively reject them.

G. COPING AND DEVELOPMENT

Although the theory presented in this chapter was derived from a developmental perspective, it is far from being a developmental theory. In this section, we outline a developmental agenda, identifying issues that will need to be addressed theoretically and empirically before a developmental theory of coping processes can take shape (Maccoby, 1983).

Developmental Changes in Vulnerability to Stress

In her discussion of developmental changes in response to stress, Maccoby (1983) pointed out that although "it is unlikely that there is any linear increase or decrease with age in vulnerability to stress, . . . the nature of the events which are capable of producing stress reactions, and the nature of the coping responses that can be mobilized, do change drastically with age" (p. 219). The first challenge to a motivational perspective would be to

identify the nature of events that constitute threats and challenges to relatedness, competence, and autonomy at different ages.

Three strategies may be useful in accomplishing this task. An analysis of the kinds of events that evoke protest and distress reactions at certain ages is one source of information. A second strategy would be to select a need and then to analyze how children's cognitive, social, and emotional capacities at certain ages would allow them to experience impingement of that need. A third source of age-related stressors can be found in the concept of developmental tasks. According to the current perspective, stressors include normative developmental tasks, such as learning to walk, eat, and dress alone, interacting with siblings, learning to follow rules and inhibit behavior, going to school, dealing with academic challenges, and venturing into peer relations. Whether children's navigation through these tasks leads to successful development or to psychopathology depends on how they view these events (appraisals) and how they cope with the inevitable setbacks and difficulties inherent in them.

Viewing developmental tasks as stressors sensitizes researchers to the potential for both challenge and threat in developmental tasks as well as the multiple directions in which these tasks can be resolved (Erikson, 1968). It takes a position in debates about whether increasingly normative life events such as divorce, full-time day care, moving, or self-care after school are stressors (Levine, 1983). According to this perspective, they are. How children experience and deal with them (i.e., whether they are distressing or are opportunities for developing new competencies) depends on a host of factors, including those described in this chapter. In addition, the focus on developmental tasks as potential stressors points out the importance of both coping responses and coping resources (personal and social) in predicting how these tasks will be resolved.

Finally, the domains in which children's needs for competence, autonomy, and relatedness are played out may also change with age. At the youngest ages, much of these take place within the family context. As children reach middle childhood, they are successively challenged in extra-familial domains, such as school, friendship, sports, and so on. Developmentally, domains may be differentially important as sources of need impingement. Rejection by peers is much less distressing to a preschooler than a middle-aged child. During adolescence, some children may give up their commitment to experiencing competence through participation in school and instead seek its fulfillment in peer networks.

Development of Coping

A descriptive theory of the development of coping is needed. It would begin with coping reactions at birth, taking seriously the defensive and

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aversive capabilities of infants (Lipsitt, 1983). The theory would describe the transformations by which these reactions become action patterns, and how these are in turn differentiated into coping appraisals, coping reactions, coping responses, and coping outcomes. Work will also need to focus on the emergence and transformation of self-regulated coping; discussions will be grounded in the rich literature on the development of behavioral and emotional self-regulation (Kopp, 1982, 1989) as well as on ego resilience and ego control (Block & Block, 1980).

At the core of these discussions will be a consideration of developmental changes and individual differences in the mechanisms of self-regulation. The present conceptualization can be used to generate an outline. At birth, distress reactions are regulated by hard-wired appraisals. Based on early interactions with challenges, infants would develop action patterns (complexes of behavior, emotion, and orientation). External structures would be essential in supporting coping responses at this age (Maccoby, 1983). With the onset of representational capacities, toddlers would develop rudimentary self-system processes in which the role of the self would be differentiated from the role of others. Individual differences in coping would begin to be based on interactions with the social context as mediated by these appraisals. As capacities to self-regulate emerge, regulation may first be mediated by other people, then by verbal means, and subsequently by cognitive reflection. At this point coping as self-regulation (as distinct from coping appraisals, reactions, and outcomes) would emerge.

One important developmental accomplishment would be the extent to which children are accurate in reporting which need(s) is being challenged or threatened by stressful events. Developmentally, children should become more capable of differentiating the dimensions of stressful contexts (neglect, chaos, coercion) with age. However, children may never develop the ability to accurately diagnose the source of the distress, especially if contexts have attempted to deny or distort the stresses to which they subject individuals. If differentiation of stress according to the needs does not occur, children will continue to experience a vague and uninformative generalized distress reaction to all stressful events (e.g., anxiety, fear, anger). On the other hand, differentiation may occur, but the mappings between contextual stressors and needs may not be accurate. For example, if relatedness and autonomy needs are crossed, coercion may be interpreted as a challenge to relatedness and result in proximity seeking. Such confusion or lack of differentiation among the needs cuts off information essential for shaping effective coping strategies.

Children's coping is expected to have effects on their social, cognitive, and personality development. These developments can themselves be seen as important "protective" factors that in turn influence how children cope. They buffer children against the actual occurrence of stressful events by

making it more likely that children will be able to get along well with parents, teachers, and peers, that they will succeed in school, and that they will be able to control their impulses. At the same time, the accomplishments produced by development in these three domains should promote children's self-system processes. These should, in turn, buffer children against the experience of psychological distress. Finally, developmental competencies should help children cope more effectively when confronting stress. Social development will increase the likelihood that children will have close relationships that they can use for help and comfort. Cognitive development ensures that children will be better able to problem solve and may have more strategies and solutions at their disposal. And personality development will allow children to use strategies that are more intentional and self-regulated.

Families and the Development of Coping

A developmental theory will have to consider carefully the role of the family in the shaping and support of children's coping. Although theories of coping are unanimous about the importance of close relationships, especially families and primary caregivers (Robins, 1983; Rutter, 1983), the current motivational model provides a differentiated explanation for this phenomenon. Specifically, the many functions close relationships serve in the process of coping can be distinguished.

First, they can be a source of objective stress for children. Glossaries of "stressful life events" often involve family members: drinking, drug use, child abuse, loss of a parent, divorce, and so forth. Second, families are the first line of defense in preventing stress from reaching children. Parents shield children from overwhelming stimulation, "childproof" the home, prevent others (e.g., siblings or peers) from coercing them, and in general structure challenges so that they are appropriate to the child's developmental level. Third, interactions with family members are the grist from which children's coping appraisals and coping responses are constructed. Especially at younger ages, families will influence how vulnerable children become to stress (threshold for and intensity of distress reactions) as well as shape their repertoire of coping responses. Fourth, these same interactions serve as the basis from which children's personal resources are formed (perceived control, security of relatedness, and autonomy orientation). Finally, parents act as social resources while children attempt to cope with challenges and threat.

V. Conclusions

Taken as a whole, this chapter can be seen as both a rationale for the importance of developing effective coping and as a blueprint for how to

be able to get along well with succeed in school, and that they the same time, the accomplish-three domains should promote ould, in turn, buffer children listress. Finally, developmental re effectively when confronting re likelihood that children will or help and comfort. Cognitive etter able to problem solve and their disposal. And personality tegies that are more intentional

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promote this development. Coping is posited to be important both for its effects on individual development and on interpersonal relationships. Effective coping, in addition to relieving children's short-term distress, is hypothesized to be an integral mechanism for their long-term social, cognitive, and personality development.

In terms of interventions aimed at facilitating coping, this theory makes clear that methods in which children are taught coping strategies or coping skills will be of limited use. Instead, the role of the social context is emphasized: in presenting challenges that are developmentally appropriate, in helping children develop personal resources that aid in effective coping, and in supporting children while they are coping. The concerted efforts of the child and of the child's social partners are needed to support the development of flexible, self-regulated, and adaptive repertoires of coping.

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