Challenges to the Developmental Study of Coping

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Abstract

We summarize progress in the developmental study of coping, including specification of a multilevel framework, construction of definitions of coping that rely on regulation as a core concept, and identification of developmentally graded members of families of coping. We argue that these accomplishments are a prelude to the real tasks of a developmental agenda: (1) identifying age-graded shifts in how children and adolescents recognize, react to, and deal with the stressors they encounter in their daily lives; (2) determining the developmental processes that underlie these shifts; and (3) describing and explaining differential pathways for negotiating these normative transitions. © Wiley Periodicals, Inc.
A developmental agenda for the study of coping is easy to describe but challenging to undertake. A rich developmental literature would identify age-graded shifts in how people detect and respond to actual stressors in their everyday lives, depict the underlying developments that account for these patterns of change, and then describe and explain individual differences in how these pathways are traversed (Compas, 1998; Skinner & Zimmer-Gembeck, 2007). To achieve these goals, developmentally friendly conceptualizations are needed that portray coping as a phenomenon that not only reflects the developmental level and history of the person enacting it but also shapes the trajectory of their future development (Compas, 1998; Coping Consortium, 1998; Skinner & Edge, 1998).

Such a view is emerging, one that emphasizes coping as regulation under stress (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Eisenberg, Fabes, & Guthrie, 1997; Skinner, 1999). Coping describes how people mobilize, modulate, manage, and coordinate their behavior, emotion, and attention (or fail to do so) under stress. These processes have been studied under many labels, including self-regulation; behavioral, emotion, attention, and action regulation; ego control; self-control; compliance; and volition. Within the multiple overlapping traditions studying regulation, a portion of this work focuses on how these processes function under stress. Even narrower bands target age-graded changes. These theoretical and empirical efforts overlap with territory carved out by developmental conceptualizations of coping. As a result, these strands of work on regulation should be a valuable source of insight and guidance to developmental researchers focused on coping (Coping Consortium, 1998).

A Developmental Framework for the Study of Coping

The “bewildering richness” of coping (Pearlin & Schooler, 1978, p. 4) makes it challenging to conceptualize. Coping builds on temperament (Derryberry, Reed, & Pilkenton-Taylor, 2003) and stress physiology (Gunnar & Quevado, 2007), and entails the regulation of behavior, emotion, attention, cognition, and motivation. Literally hundreds of ways of coping have been identified. Contexts, relationships, and individual characteristics influence how coping unfolds. In turn, coping shapes the responses of social partners and contributes to the accumulation of short-term resources and liabilities. Coping is part of an iterative process of adaptation to stress, and it both reflects and contributes to the development of mental and physical health and disorder.

To capture the complexity of coping, we rely on integrative, multilevel life span developmental approaches (Baltes, Lindenberger, & Staudinger, 1998), which draw from closely related dynamic systems (Ford & Lerner, 1992), contextual-ecological (Bronfenbrenner & Morris, 1998), and action frameworks (Brandstädter, 1998). According to these perspectives, development emerges from the confluence of processes ranging from genetic and
physiological to societal. Dynamic systems views point out that it is the ongoing recursive interactions among subsystems that produce the pattern- ing of processes over time known as development.

The development of coping can be understood by considering the multiple individual processes that give rise to it, as well as the environmental contexts within which it unfolds. Families, peer groups, and schools create demands and act as filters for stressors and resources, forming the backup systems that will protect children (or leave them vulnerable) while their coping capacities are developing (Berg, Meegan, & Deviney, 1998; Cole, Teti, & Zahn-Waxler, 2003; Diener & Mangelsdorf, 2000; Kerns, Tomich, & Kim, 2006; Sroufe, 1996). We have been working with a model that specifies three nested levels and timescales (Figure 1.1; Coping Consortium, 1999, 2001).

**Coping as an Episodic Process.** As depicted in the middle of Figure 1.1, coping is organized into episodes that unfold over time. It is recruited in response to demands (environmental or intrapsychic) and is shaped by an individual’s appraisals of those demands and the social and individual resources available in the situation. Depending on how encounters evolve, different outcomes result, and these feed back into subsequent demands and resources. The effects of episodes can accumulate, creating short-term coping resources and liabilities.

**Coping as an Adaptive Process.** At the highest level (top portion of Figure 1.1), coping can be seen as part of the adaptive processes through which adversity has long-term effects on development. The consequences of coping are not limited to the resolution of stressful episodes, but accrue in the functioning, health, and survival of individuals, relationships, and groups. This implies that ways of coping are not simply lists of things people do in times of trouble. Their taxonomy should reflect basic adaptational processes and help differentiate the effects of stress on functioning and adaptation. At this level, the study of coping can contribute to an understanding of how adversity shapes the development of children and youth, fitting within the frameworks of risk, resilience, and competence (Compas, 2004; Wyman, Sandler, Wolchik, & Nelson, 2000).

**Coping as an Interactional Process.** As depicted at the bottom of Figure 1.1, coping interactions can also be viewed as real-time, reciprocal exchanges between person and context. As interactions unfold, individuals form and revise appraisals; at the same time, progress may be made toward alternative resolutions of the interaction. In such a transactional process, multiple components of reactions to stress are evoked and coordinated in real time. In this sense, coping is an organizational construct, capturing the interactions among behavior, emotion, attention, cognition, and motivation under stress and building on what is known about species general stress physiology and temperament.
Figure 1.1. A Model of Coping as a Multilevel Adaptive System


Developmentally Friendly Conceptualizations of Coping

To examine coping and development at all three levels, experts have found it useful to rely on definitions of coping as regulation under stress. Coping refers
to “conscious and volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (Compas et al., 2001, p. 89). It involves the regulation of multiple subsystems because stressors often cause physiological and psychological distress (requiring emotion-related regulation), thwart individuals’ goals (implicating behavioral regulation and goal pursuit), and heighten vigilance and selective deployment of attention (entailing attention regulation). Although coping is not always a key construct, researchers have made many connections from coping to regulation (Aspinwall & Taylor, 1997; Bridges & Grolnick, 1995; Kopp, 1989; Metcalfe & Mischel, 1999), attention (Wilson & Gottman, 1996), ego control and resiliency (Block & Block, 1980), and attachment and reliance on social partners (Mikulincer, Shaver, & Horesh, 2006).

Research on regulation has surged in the past two decades, with a burgeoning focus on the development of emotion-, mood-, and self-regulation across the life span. This work has been supplemented by studies in the areas of neuropsychological development (Compas, 2004; Fox & Calkins, 2003; Walker, 2002), as well as research on attention, memory, cognitive, self-development (Fox & Calkins), and social relationships (Kerns et al., 2006). All of these processes have important roles in the development of coping; they have been described as encompassing, overlapping, or an outcome of coping with stress (see Diener & Mangelsdorf, 2000; Kerns et al., 2006; Mikulincer et al., 2006; Posner & Rothbart, 2007). Together with research on stress and coping, this work provides a solid foundation for a developmental research agenda.

Like regulation, conceptualizations of coping have moved toward dual process models. Within regulation, distinctions are often made between the target to be regulated, usually an emotion or impulse, and the processes that can serve to modulate it. These two features have a variety of labels; for example, in work on emotion, they are referred to as “emotion” and “emotion regulation” (Cole, Martin, & Dennis, 2004); in work on temperament, as “reactivity” and “regulation” (Rothbart, Derryberry, & Posner, 1994); and in work on willpower, as the “hot” emotional and “cool” cognitive systems (Metcalfe & Mischel, 1999).

In work on coping, researchers distinguish between stress reactions, which describe immediate involuntary physiological, psychological, and behavioral responses to stressful situations (Compas et al., 2001), and action regulation (Skinner, 1999) which refers to “how people mobilize, guide, manage, energize, and direct behavior, emotion, and orientation, or how they fail to do so” under stress (Skinner & Wellborn, 1994, p. 113). Although there is active debate about how stress reactions and action regulation are coordinated, researchers agree that they mutually influence each other (Compas et al., 2001; Eisenberg et al., 1997; Skinner, 1999). Our view is that manifest coping responses reflect the balance (or, more precisely, the imbalance) between reactions and regulation, with involuntary stress responses the result of extreme stress reactions combined with weak or
disabled regulatory systems, and volitional coping responses the result of weak stress reactions or well-developed action regulation systems (Metcalfe & Mischel, 1990).

Two distinctions between regulation and coping are clear. First, coping can be viewed “as involving regulatory processes in a subset of contexts—those involving stress” (Eisenberg et al., 1997, p. 42; Compas et al., 2001; Skinner, 1999). Second, although most research on regulation focuses on efforts to manage a specific facet and is labeled according to that target (for example, emotion regulation, attention regulation), coping is an organizational construct, encompassing the regulation of multiple processes (Compas et al., 2001; Eisenberg et al., 1997; Lazarus & Folkman, 1984). When dealing with stressors, individuals attempt not only to quell emotions, but also to manage physiological reactions, behavior, attention, and thought; they may also try to influence the social and physical environments. Coping is especially concerned with the coordination among facets, for example, how efforts to influence one facet may have an (often unintended) impact on others, as when focusing on potential negative outcomes undermines persistence or when a decision to take action calms anxiety.

Developmentally Graded Families of Coping

Of central concern to coping researchers are the ways people deal with actual problems. The consideration of a profile of responses distinguishes coping from the largely independent programs of research on individual strategies, such as problem solving, help seeking, or distraction. However, systematizing the virtually infinite variety of ways of responding to stress presents a daunting task. To provide some organization, researchers use the notion of hierarchical families of coping, which encompass multiple lower-order ways and can themselves be organized by their higher-order adaptive functions (Skinner, Edge, Altman, & Sherwood, 2003). Analyses suggest about a dozen families (see Table 1.1). Families include not only the lower-order ways of coping for which they are named but also other responses that serve the same functions. For example, accommodation includes not only assenting to current constraints, but also minimization, distraction, positive restructuring, and other actions that flexibly adjust preferences to available options. Operationalizations of regulation have borrowed heavily from the lexicon of ways of coping. For example, studies of emotional self-regulation in preschoolers examine avoidance, distraction, and support-seeking strategies, which are among the most common ways of coping (Eisenberg et al., 1997; Skinner & Zimmer-Gembeck, 2007).

For developmentalists, the most challenging task is to figure out how these ways of coping (or regulation) change with age. Developmental capacities decisively constrain how particular adaptive functions can be fulfilled, but it may still be possible to plot age-graded members of a family by figuring out how the adaptive functions served by that family could be fulfilled.
Table 1.1. A Hierarchical Model of Adaptive Processes and Families of Coping

| Adaptive process 1: Coordinate actions and contingencies in the environment |
|---|---|---|---|
| Family of coping: | 1. Problem solving | 2. Information seeking | 3. Helplessness |
| Family function in adaptive process: | Adjust actions to be effective | Find additional contingencies | Find limits of actions |
| Ways of coping: | Strategizing | Reading | Confusion |
|  | Instrumental action | Observation | Cognitive interference |
|  | Planning | Asking others | Cognitive exhaustion |
|  | Mastery | | Passivity |

| Adaptive process 2: Coordinate reliance and social resources available |
|---|---|---|---|
| Family function in adaptive process: | Escape noncontingent environments | Protect available social resources | Use available social resources |
| Ways of coping: | Behavioral avoidance | Emotion regulation | Contact seeking |
|  | Mental withdrawal | Behavior regulation | Comfort seeking |
|  | Flight | Emotional expression | Instrumental aid |
|  | Denial | Emotion approach | Social referencing |
|  | Wishful thinking |  |  |

| Adaptive process 3: Coordinate preferences and available options |
|---|---|---|---|
| Family function in adaptive process: | Find limits of resources | Withdraw from unsupportive contexts | Flexibly adjust preferences to options |
| Ways of coping: | Maladaptive help seeking | Social withdrawal | Distraction |
|  | Social withdrawal | Concealment | Cognitive restructuring |
|  | Avoiding others | Emotional expression | Minimization |
|  | Freezing | Other-blame | Acceptance |
|  | | |  |

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<td></td>
<td>Find new options</td>
<td>Give up preferences</td>
<td>Remove constraints</td>
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<td>Bargaining</td>
<td>Rumination</td>
<td>Other-blame</td>
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<td>Persuasion</td>
<td>Rigid perseveration</td>
<td>Projection</td>
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<td>Priority setting</td>
<td>Intrusive thoughts</td>
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<td>Defiance</td>
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using the capacities available at different developmental levels. For example, gaze aversion or falling asleep may be early forms of escape, and social referencing or object exploration may be early forms of information seeking. Such analyses (which are also conducted in functionalist theories of attachment, emotion, self-regulation, and temperament) may allow the regulatory capacities of infants and young children to be mapped onto the functions of the overarching coping families.

**Next Steps in the Developmental Study of Coping**

The next major challenges are to identify age-graded shifts in coping and to depict the developments that underlie these shifts. We offer our current working model up to early adulthood, based on reviews of theory and research on stress and coping (Aldwin, 2007; Compas et al., 2001; Fields & Prinz, 1997; Losoya, Eisenberg, & Fabes, 1998). It is the model we hope will be revised and elaborated by work on regulation and extended by life span theories (such as those by Aldwin, 2007).

**Age-Graded Shifts in Coping.** Although there may be others, our review suggests several transitions in regulatory capacities (see Table 1.2; Skinner & Zimmer-Gembeck, 2007). Briefly, stress reactions predominate during the neonatal period, representing changes from modulation based

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<tr>
<th>Developmental Period</th>
<th>Approximate Ages</th>
<th>Nature of Coping</th>
<th>Role of Social Partners</th>
<th>Nature of Regulation</th>
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<tr>
<td>Infancy</td>
<td>Birth to 18 months</td>
<td>From reflexes to coordinated action schema</td>
<td>Carry out coping actions based on infant’s expressed intentions</td>
<td>Interpersonal coregulation</td>
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<td>Preschool age</td>
<td>Ages 2 to 5</td>
<td>Coping using voluntary direct actions</td>
<td>Available for direct help and participation</td>
<td>Intrapersonal self-regulation</td>
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<td>Middle childhood</td>
<td>Ages 6 to 8</td>
<td>Coping using cognitive means</td>
<td>Cooperate with and support child’s coping efforts</td>
<td>Coordinated self-regulation</td>
</tr>
<tr>
<td>Early adolescence</td>
<td>Ages 10 to 12</td>
<td>Coping using metacognitive means</td>
<td>Reminder coping</td>
<td>Proactive self-regulation</td>
</tr>
<tr>
<td>Middle adolescence</td>
<td>Ages 14 to 16</td>
<td>Coping based on personal values</td>
<td>Backup coping</td>
<td>Identified self-regulation</td>
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<tr>
<td>Late adolescence</td>
<td>Ages 18 to 22</td>
<td>Coping based on long-term goals</td>
<td>Monitoring coping</td>
<td>Integrated self-regulation</td>
</tr>
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</table>
largely on neurological and physiological systems (including temperamental systems, Derryberry et al., 2003) to sensorimotor modulation (Holodynski & Friedlmeier, 2006; Kopp, 1989; Stroufe, 1996), with much “coping” carried out by the caregivers (Holodynski & Friedlmeier, 2006; Stroufe, 1996). Hence, although there is some evidence of transitions in control, goals, self-soothing, and the ability to use behavioral distraction to cope with distress as early as six months of age (Kopp & Neufeld, 2003), the first shift we considered occurs about ages eighteen to twenty-four months, during which children are first able to reliably regulate their own behavior (Bronson, 2000; Grolnick, Bridges, & Connell, 1996; Kopp, 1989).

A second major shift takes place between ages five to seven, involving changes in memory, cognition, social relations, emotion, and self-understanding (Cole et al., 2003; Posner & Rothbart, 2007; Sameroff & Haith, 1996). Of great interest to coping researchers is the increased integration among regulatory subsystems allowed by cognitive advances, such as the intentional generation of alternative action strategies.

The third major shift occurs around ages ten to twelve, marked by physiological changes and changing patterns of thinking and feeling about the self, relationships, and the world (Davidson, Jackson, & Kalin, 2000; Kerns et al., 2006). Moreover, social worlds expand, bringing a greater range of potential social supports and stressful experiences. Additional important transitions may take place between ages fourteen to sixteen, when autonomy and identity are salient (Côté, 1996; Zimmer-Gembeck & Collins, 2003; Zimmer-Gembeck & Skinner, 2008), and from middle to late adolescence (about ages twenty to twenty-two), when there may be significant social transitions that motivate increased self-regulation; these are accompanied by new challenging experiences, such as leaving home (Arnett, 2000). These latter periods are also times when neurological development continues, linked with processing of emotions (Spear, 2000) and decision making (Reyna & Farley, 2006). Of special interest is how increasing metacognitive and emotion regulation capacities allow adolescents to manage their stress reactions, structure their environments, and consider long-term consequences, thereby becoming more capable of considering future goals while dealing with local stressors.

**Developments Underlying Shifts in Coping.** Once age-graded shifts in coping have been identified, the next task is to discover how developments in underlying processes produce these patterns of change (Compas, 1998). In Table 1.3, we have collected factors suggested by theories and research (Derryberry et al., 2003; Eisenberg et al., 1997; Fields & Prinz, 1997; Murphy & Moriarity, 1976). This list focuses on developments that could contribute to reorganizations of the coping system, potentially explaining why age-graded shifts occur (Band & Weisz, 1990). An important task will be transforming these heterogeneous candidate processes into a developmental theory by teasing out interrelated changes and determining how they work together to produce intraindividual changes in coping.
Table 1.3. Possible Developments Underlying Shifts in the Coping System

Preadapted species-specific programs, reflexes, freeze, protest (fight), turn off (flee)
**Neurophysiological** central nervous system growth, maturation
Sources of intrinsic pleasure/motivation, novelty, exploration, expression, social interaction, play
**Emotion**, differentiation of emotions as to causes, actions to modify or maintain, emotion regulatory capacities
**Sensorimotor development**, enhanced visual, tactile, auditory capacities, motor maturation, mobility
**Attention**, selective focus, attentional strategies
**Perceptual-cognitive-motor advances**: self-distraction, pleasure in play, action schema
Goal directedness, intentions, voluntary behavior, intrinsic goals, internalized goals
Signals, bids, communication, understanding social signals, social referencing, language
Comforting, soothing, attachment, trust, internal working model, interdependence
**Social understanding**, theories of mind, social comparison, taking others’ perspectives
**Memory**, temporal sequences
Sense of self as object, agent, self-system, identity
**Cognitive** processes, representational capacities, means-ends relationships, metacognition

*Note:* For each developmental process, earlier forms are listed before later forms. Bold text highlights a common term used to refer to each aspect of the coping system.

**Conclusion**

We have high hopes for a developmental perspective on coping. We think it has the potential to create connections from the level of stress physiology and temperament all the way up to higher-order contexts and adaptive processes. A multilevel integrative conceptualization builds on the study of real-time coping interactions, in which individuals’ responses to demands are constrained by their levels of cognitive, social, emotional, and motivational development. Coping could potentially link these strands of work, taking place largely within research on temperament and emotion and attention regulation, to developmental research on risk, resilience, and competence. This volume, which presents insights from leading experts on the development of coping and regulation, is an important next step toward helping the study of coping realize its potential.

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