

## Perceived Threat, Controlling Parenting, and Children's Achievement Orientations

Suzanne T. Gurland<sup>1,2</sup> and Wendy S. Grolnick<sup>1,3</sup>

---

*Maternal perceptions of threat in the environment were examined as concomitants of controlling (vs. autonomy supportive) parenting. Forty mothers and their third-grade children were videotaped while completing homework-like tasks together. Maternal controlling (vs. autonomy supportive) behavior was measured both attitudinally by questionnaire, and behaviorally by coding of the videotapes. Mothers reported on their perceptions of environmental threat (worry, instability, scarcity). Results indicated that perceptions of threat were positively associated with controlling behaviors exhibited during the tasks, and negatively associated with children's motivation. Further, the relation between perceived instability and children's motivation was mediated by controlling parenting. Controlling parenting is associated with parental perceptions of threat and is one pathway through which threat may be associated with children's achievement goals.*

---

**KEY WORDS:** perceived threat; controlling parenting; achievement goals.

Recent theories of parenting have suggested that parenting practices may be seen not only as a result of parent personality but also as influenced by parents' beliefs and particularly their experience of their context. Studies have shown, for example, that more proximal family experiences of stressful life events (Conger, Patterson, & Ge, 1995; Grolnick, Weiss, McKenzie, & Wrightman, 1996), lack of resources (Dodge, Pettit, & Bates, 1994), and unemployment (McLoyd, 1989) affect the way parents interact with their children. In this project, we add to the study of context by focusing on the degree of threat parents perceive for their children and the implications those perceptions may have for child motivation. In particular, using developmental research, evolutionary theory, and data from traditional personality

<sup>1</sup>Clark University, Worcester, Massachusetts.

<sup>2</sup>Present Address: Middlebury College, Middlebury, Vermont.

<sup>3</sup>Address all correspondence to Wendy S. Grolnick, Frances L. Hiatt School of Psychology, Clark University, 950 Main Street, Worcester, Massachusetts 01610; e-mail: wgrolnick@clarku.edu.

psychology we explore the effects that parents' perceptions of the larger world as threatening might have on their parenting. Specifically, we examine aspects of threat, such as scarce resources and instability, in relation to the controlling versus autonomy supportive dimension of parenting. We then examine how this proposed pathway affects an important motivational outcome for children—namely, their achievement goals.

### **Autonomy Supportive Versus Controlling Parenting**

The term parental control has been used in many ways in the literature. Researchers have differentiated, for example, between psychological control, defined as parents' intrusion into the emotional and psychological development of the child, and behavioral control, which concerns attempts to manage children's behavior, such as in monitoring their whereabouts (Barber, 1996; Gray & Steinberg, 1999). Parental control is also a key variable in the differentiation between authoritative and authoritarian parenting (Baumrind, 1967, 1989). Authoritative parents are high in firm control, which refers to their serving as authorities and making demands for maturity, but they also encourage give and take and value autonomy and individuality. Authoritarian parents are also high in firm control but, in contrast to authoritative parents, they value obedience first and foremost and do not encourage give and take. Within self-determination theory (Deci & Ryan, 1985; Grolnick & Ryan, 1989) a distinction is made between the dimension of autonomy supportive to controlling behavior (i.e., the degree of pressure and coercion imparted) and structure (i.e., the presence of guidelines and expectations for behavior).

One way of understanding these different views is that some of the definitions of control, that is, behavioral control, firm control, and structure, involve behaviors that render parents "in control" of their children's lives. Other definitions involve parents' coercive or intrusive behaviors and refer to *how* parents are in control, that is, in more or less pressuring ways. Notably, Barber (1996) found that psychological and behavioral control were moderately negatively correlated whereas Grolnick and Ryan (1989) found that autonomy support and structure were positively, though not significantly related. Thus, two separate dimensions can be articulated.

In this study, our concern is with the second type of control—the dimension that varies from controlling to autonomy supportive which, as we will argue below, is expected to be sensitive to experiences of threat. Controlling parenting behaviors pressure children to behave in specific ways whereas autonomy supportive behaviors encourage children to initiate their own behavior. More specifically, parents who are autonomy supportive value and use techniques that encourage choice, self-initiation, and participation in decisions whereas those who are controlling motivate children using power assertive techniques and emphasize obedience and compliance. Parenting on the controlling dimension, as measured

by child report (e.g., Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Ginsburg & Bronstein, 1993; Grolnick, Ryan, & Deci, 1991) and ratings of parent interviews (Grolnick & Ryan, 1989), has been associated with children's lower perceived and teacher-rated competence, more external motivational orientations, and lower achievement.

In this study we include multiple measures of and methods for assessing parenting along this dimension including parents' interaction with their children coded for autonomy supportive (AS) versus controlling (CN) behaviors, parents' reports of their levels of psychological control with their children, parents' attitudes toward the use of AS versus CN, and parents' reports of their value for autonomy in children.

### **Threat as a Predictor of Controlling Parenting**

A focus of recent theory and research on predictors of controlling parenting has been parental experiences of pressure (Grolnick, 2003) and stress (Grolnick et al., 1996). Autonomy support requires the parent to take the child's perspective and allow for choice and independent problem solving. Such an approach requires both time and psychological availability, both of which are reduced under conditions of pressure. Pressure narrows parents' perspectives, focusing them on outcomes and on taking the most straightforward solution, which may involve solving problems for children.

Low SES (Dodge et al., 1994), stressful life events (Conger et al., 1995; Grolnick et al., 1996), perceptions of one's adolescent as difficult (Grolnick et al., 1996), and laboratory-induced stress (Zussman, 1980) have all been associated with controlling parenting behavior. Internal forms of pressure, like worry and anxiety, produce similar results. Pomerantz and Eaton (2001) found that children's low achievement made mothers worry, and this worry led to controlling behavior, which then fed back into the children's achievement. Further, mothers in a high-pressure, ego-involving condition, who were led to believe that their children must meet particular standards, exhibited more controlling parenting during a poem task with their children than did mothers in a low-pressure, non-ego involving condition (Grolnick, Gurland, DeCoursey, & Jacob, 2002).

One form of pressure that may be particularly psychologically salient for parents is their feeling or perception of threat for their children. We suggest that humans' evolutionary heritage may have adapted us to respond to cues of threat with controlling behavior.

A threat involves some indication of impending trouble or difficulty. The concept of threat has been examined from several perspectives. From a social-psychological perspective, threat has been largely studied as ego threat (e.g., Baumeister, Heatherton, & Tice, 1993), defined as the situation in which one's ego or self-esteem is under attack. From an evolutionary viewpoint, parental experiences of threat have been conceptualized as indications that one's offspring

are at risk. Finally, elsewhere in the literature, threat has been studied as economic or societal indicators that one's future well-being may be at risk. We discuss the latter two perspectives below as they are most relevant.

Consistent with current Darwinian approaches, natural selection has shaped many responses to threat or danger, often referred to as "inducible responses" (Nesse, 2001). Such responses would increase individuals' probability of surviving and reproducing. For example, responding with stress in the face of perceived danger would increase one's likelihood of surviving since stress prepares one for action, enabling escape from danger. However, such responses always have costs and benefits—the benefit of stress has already been described, but over time there are also costs, including increased incidence of disease (McEwen & Stellar, 1993). Natural selection favors responses when the cost of *not* responding would be extremely harmful (Nesse, 2005).

Parenting is certainly an area in which such responses to environmental threats would likely have evolved because parenting is geared toward creating competitive offspring who will prosper and thus have an increased likelihood of surviving and reproducing (Geary & Flinn, 2001). Given that parents have finite resources to distribute among current and potential future offspring (Trivers, 1974), it is argued that the parenting system is adapted to be flexible to cues in the environment (Lovejoy, 1981). Using both the principle of adaptive responses to threat and the function of parenting behavior, one can understand how humans would have the vulnerability to become controlling of their offspring in times of danger or risk. Given a risk to survival, a controlling response would make sense as an adaptation as it solved a key problem—vulnerability to predation (Barkow, Cosmides, & Tooby, 1992). However, given that we live in an environment that is safer than that in which we evolved, it is likely that this controlling response is overexpressed in modern times. The "smoke detector principle" (Nesse, 2001) suggests that, given uncertainty of danger, the mechanism would err on the side of excessive protection, even if this results in many "false alarms" which have their costs.

Thus, when parents see their children as competing against peers for scarce resources or see their well-being threatened by harsh environments, they may increase their level of controlling behavior, including directing them toward particular outcomes and solving problems for them. And, although such a vulnerability to becoming controlling would be adaptive evolutionarily, it may also have negative consequences when survival is not on the line (most of the time in our present environment), undermining children's own internal motivation and self-regulation, characteristics that are adaptive.

To our knowledge, no studies have examined the effects of threat on controlling parenting, but evidence from a related construct emerges from the traditional personality psychology literature. In these studies, economic threat, assessed objectively (e.g., Consumer Price Index) or subjectively by study participants is related to authoritarianism. Although authoritarianism differs from

controllingness since it was originally conceived as a personality dimension (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), it is related in that it involves autocratic, dogmatic behavior. Several studies (e.g., Doty, Peterson, & Winter, 1991; Sales, 1972) have shown that indices of authoritarianism (e.g., conversion to authoritarian churches, and acceptance of capital punishment) increased during high- and decreased during low-threat periods. Feldman and Stenner (1997) showed that perceptions of economic threat activated individuals' tendencies to be punitive and ethnocentric.

On the basis of evolutionary and personality literatures and studies of the effects of pressure on parents' controlling behavior, we suggest that parents who perceive the world their children will inhabit in the future as more threatening will act in a more controlling manner than those who perceive less threat. A new questionnaire assessing various aspects of threat, including scarcity of resources and instability, was constructed for and evaluated in this study. It was tested for relations both to mothers' behavior in interacting with their children on achievement-related tasks in the laboratory, and to mothers' reports of valuing of autonomy in children.

### Approaches to Achievement

Ames (1992) suggested that goals involve an integrated pattern of beliefs and attributions that represent the purpose of achievement behavior. These goals influence individuals' affective and cognitive experiences of tasks as well as how they approach and engage in the tasks (e.g., Dweck, 1986). Two broad types of goals have been identified. A learning or mastery goal involves individuals oriented toward acquiring new skills and improving their competence. Children with mastery goals tend to see effort and outcomes as covarying and try to learn based on self-referenced standards. By contrast, performance goals involve individuals seeking positive evaluations of their ability and trying to avoid negative evaluations. Their evidence of ability comes from doing better than others.

These goals have been linked to task behavior, with mastery or learning goals associated with the choice of challenging tasks, persistence during difficult tasks (e.g., Elliott & Dweck, 1988), and use of effective study strategies (e.g., Garner, 1990). Performance goals, on the other hand, have been negatively associated with effort, especially during failure experiences, with the avoidance of challenge, superficial learning strategies, and impaired problem solving, especially when individuals experience low perceptions of competence (Dweck & Leggett, 1988).

Recent work has acknowledged that individuals can have multiple goals in pursuing activities. Thus children may have *both* performance and learning goals. Although Meece and Holt (1993) and Pintrich and Garcia (1991) found that those with high mastery and low performance goals functioned most adaptively, Pintrich (2000) found few differences between high mastery/high performance goal and high mastery/low performance goal groups. We examine both types of goals here.

Much of the work on predictors of children's goals involves inducing goals within the laboratory and there has been surprisingly little work devoted to naturally occurring goals and to the role of significant others in the development of children's goals. Ames (1992) suggested that classroom factors such as the design of tasks, the type of evaluation, and the distribution of authority/responsibility would be important. Making tasks meaningful (Brophy, 1986), deemphasizing social comparison (Ames, 1984), shifting responsibility for learning from the teacher to the child (Ryan & Grolnick, 1986) and democratic communication (Wentzel, 2002) have been identified as classroom practices that facilitate mastery orientations.

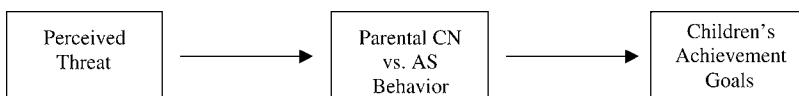
On the basis of literature linking controlling parenting to lower levels of autonomous self-regulation and work on classrooms, we suggest that children who experience pressure toward specific outcomes through controlling parenting are likely to become concerned with outcomes themselves and thus have performance goals. We chose to examine these issues in a young elementary sample as motivational and achievement trajectories are consolidating during this time (Entwisle & Hayduk, 1988) and parents and children are likely to interact on achievement tasks (Xu & Corno, 1998).

In sum, in this study, we examined a model in which parents' perceptions of a threatening world predict more controlling parenting which is then associated with higher performance and lower learning orientations in children (see Fig. 1).

## METHOD

### Participants

The sample included 40 mothers and their third-grade children (22 boys, 18 girls) from three elementary schools. Mothers varied in their levels of education: three (7.5%) completed high school, 17 (42.5%) reported some college or special training, 12 (30%) completed college, and eight (20%) reported schooling beyond college. Mothers primarily identified themselves and their children's fathers as Caucasian (92.5% of mothers, 82.1% of fathers), whereas two mothers (5%) and four fathers (10.26%) identified as Hispanic/Latino, one mother (2.5%) and two fathers (5.1%) identified as African American, and one father (2.6%) was of both African and Native American descent. The majority of mothers were married



**Fig. 1.** Proposed relations among perceived threat, parental control, and children's achievement goals.

(82.5%), whereas two (5%) had divorced, two (5%) had remarried, and three (7.5%) were single.

### Procedure

Sixty mothers who had participated with their third-grade children in an earlier study (Grolnick et al., 2002) were mailed a packet of questionnaires, a letter of explanation offering them a \$20 honorarium for the return of the completed questionnaires, and a consent form approved by the University's institutional review board (IRB). Forty (66.7%) mothers completed and returned the packet.

In the earlier study (Grolnick et al., 2002), mothers were videotaped while completing interactive, homework-like tasks with their third-grade children. Specifically, mothers had been told that we were interested in how parents and their children "work on schoolwork together." They joined their children in completing a map task, in which they provided directions for traveling to various locations on a large pictorial map, and a poem task, in which they identified rhyme schemes and composed a poem. Both tasks were identified after a review of workbooks used in third-grade classrooms. At the end of the session, mothers rated "how typical was this interaction for you and your child in terms of the way you usually work on schoolwork?" on a scale from 1 (*highly unusual*) to 7 (*very typical*). For the map task the mean rating was 6.30,  $SD = 1.02$ , and for the poem 6.25,  $SD = 1.00$ . Thus, the mothers saw the interaction as highly typical of a homework interaction. Children reported on their performance versus learning goals in school.

Approximately 3 months after participating in that study, mothers in this study reported on their parenting style, their parenting attitudes and values, and their perceptions of threat in the future world. Given that the measure of threat concerned the larger environment and the future world, rather than any specific current issue, it was expected to be a relatively stable construct. Thus, the 3 month lag was not expected to affect relations between threat and parenting variables. Further, parents' behavior during the tasks with their children was measured at a time before their perceptions of threat could have been heightened by completing a threat questionnaire.

### Measures

#### *The World Out There (WOT)*

The WOT was designed as a measure of parents' perceptions of threat in their children's current and future environments. We initially composed 25 items based on a broad review of threat-related constructs in the relevant literature, to be rated from 1 (*strongly disagree*) to 6 (*strongly agree*). For purposes of

questionnaire development only, we recruited an additional 60 mothers of fourth-grade children highly similar in ethnic and educational background to our study sample. Identical IRB oversight and consent procedures were used to recruit these additional mothers, and response rates were similar, with responses from 59% of those contacted, 61% of whom answered affirmatively. Data from all mothers ( $N = 100$ ) were submitted to a principal components factor analysis using oblique rotation. Findings revealed eight factors with eigenvalues greater than 1 (5.66, 2.82, 2.58, 1.74, 1.53, 1.31, 1.09, 1.03). The scree criterion suggested that three factors should be retained. A repeated analysis, constraining the results to a three factor solution indicated that the three factors (eigenvalues of 3.47, 2.05, and 1.21) accounted for 67% of the variance. Ten items loaded above .45 on one of the factors and did not cross-load on another (see Table I).

Items on the first factor (standardized loadings from .72 to .87) indexed parents' concern and worry about the future and was thus labeled worry (Cronbach's  $\alpha = .81$ ). Items loading on the second factor (standardized loadings from .80 to .92) suggested perceptions that resources were limited and was labeled scarcity (Cronbach's  $\alpha = .89$ ). Finally, items loading on the third (standardized loadings from .71 to .80) appeared to assess perceptions that the world is unpredictable or changing and the third factor was thus labeled instability (Cronbach's  $\alpha = .74$ ). Factor scores were calculated by reverse-scoring items where needed (see Table I), and computing the mean across items within each factor. Higher factor scores indicate greater worry, perceived scarcity, and perceived instability. There were low to moderate correlations between the three factors: worry and scarcity,  $r = .15$ , *ns*, instability and worry,  $r = .36$ ,  $p < .001$ , instability and

**Table I.** Rotated Factor Pattern for WOT Items (Standardized Regression Coefficients)

	Factor 1	Factor 2	Factor 3
I don't worry too much about today's kids. (R)	<b>.87</b>	-.13	-.17
It makes me nervous to think about all the dangers kids are exposed to these days.	<b>.85</b>	-.01	.02
These are troubling times. Parents these days have reasons to be concerned.	<b>.75</b>	-.02	.18
The world is a pretty safe place for kids today. (R)	<b>.70</b>	.05	.04
There are only so many good jobs to go around.	-.07	<b>.79</b>	.07
It's competitive out there. Only some kids can make it.	.16	<b>.84</b>	-.06
There aren't enough opportunities out there for everyone. Someone is always going to end up with the short end of the stick.	-.03	<b>.91</b>	-.04
It's getting harder and harder all the time to make a decent living.	.17	-.08	<b>.73</b>
Kids today face an unpredictable future. There can be prosperity one minute and poverty the next.	.07	.11	<b>.72</b>
These days you could work for the same company for 30 years and then suddenly get fired without any warning or explanation.	-.18	-.08	<b>.80</b>

*Note.* Bold entries indicate the factor on which each item loaded.



scarcity,  $r = .29$ ,  $p < .01$ . A detailed account of the measure is available from the authors.

*Children's Report of Parental Behavior Inventory (CRPBI)—Parent Report Version (Schaefer, 1965; Schwarz, Barton-Henry, & Pruzinsky, 1985)*

The CRPBI measures three parenting dimensions: acceptance (e.g., I smile at him/her often, I often praise him/her), psychological control (e.g., I say if he/she loved me, he/she would do what I want, I tell my son/daughter all the things I have done for him/her), and firm control (e.g., I give hard punishments, I see to it that he/she obeys when I tell him/her something) using a scale of 1 (*not like you*) to 3 (*like you*). Our reduced 57-item version of the scale yielded alphas comparable to the full scale—acceptance = .73, psychological control = .87, firm control = .63. Only the psychological control subscale captures the specific dimension of interest in this study.

*Parent Attitude Scale (PAS; Grolnick, Benjet, Kurowski, & Apostoleris, 1997)*

The PAS is a 16-item scale tapping parents' self-reports of their support of their child's autonomy, and their efficacy as parents. In this study, the ten autonomy support items,  $\alpha = .72$ , were of interest. Each item (e.g., I encourage my child to give his/her opinions even if we might disagree, Children should always do what their parents say, no matter what) is rated on a 5-point scale from *strongly agree* to *strongly disagree*.

*Kohn's Value Questionnaire (Kohn, 1977; Schaefer & Edgerton, 1985)*

Kohn's Value Questionnaire and the later revision of it (Schaefer & Edgerton, 1985) assess mothers' value for conformity versus self-direction in children. The authors discuss conformity as children's subjecting their will to pressures, threats, or authority, and bending to external constraints imposed on them. They discuss self-direction as children's freedom to pursue their own interests, voice their opinions, and affect their environments. Conformity and self-direction are thus consistent with our notions of compliance and autonomy in children. We therefore refer to this questionnaire as measuring mothers' value for autonomy in their children.

Respondents rank order each of three groups of 5 statements about a hypothetical child (e.g., She or he obeys his/her parents well, She or he is responsible) from most- to least-valued. In our adapted version, mothers grouped items into the five most valued (assigned a score of 3), the middle 5 (assigned a score of 2), and the five least valued (assigned a score of 1). We used the three items from each subscale that had the greatest face validity with respect to our theoretical

constructs. The three-item self-direction and conformity scores were found to represent opposite ends of a single dimension,  $r = -.59$ ,  $p < .001$ . Following others (Luster, Rhoades, & Haas, 1989; MacDermid & Williams, 1997), we therefore treated them as a single factor. Specifically, we standardized each score and subtracted the conformity mean from the self-direction mean to create our value for autonomy score.

### Maternal Behavior

Maternal behavior was assessed for the degree of autonomy supportiveness to controllingness, both by content-coding of the specific maternal behaviors present in each 5-s interval, and by numeric ratings on a 5-point scale of the overall style mothers conveyed in each interval, across the particular content. Both content-coding and style-rating were performed using the videotapes of the mothers and their children working together on homework-like tasks (Grolnick et al., 2002). Behaviors were considered controlling if they changed or intruded upon the child's ongoing course of activity, and autonomy supportive if they helped to sustain or encourage the child's activities. The same behavior could thus be rated as controlling in one context (e.g., the mother begins to write the child's answers, despite that the child had been doing fine on his or her own) but autonomy supportive in another (e.g., the mother begins to write the child's answers after the child, who is struggling, asks for the mother's assistance).

For content codes, controlling verbal codes included directives, taking over, telling answers, and unsolicited checking. Controlling nonverbal codes were leading behaviors, taking over, showing answers and unsolicited checking. Autonomy supportive verbal codes were information and feedback. Autonomy supportive nonverbal codes were nonverbal information, and mothers' availability. Frequencies of each code were divided by the total number of intervals the dyad took in completing the task to create proportion scores.

On the basis of intercorrelations among codes, controlling verbal codes were combined to create a verbal control composite and controlling nonverbal codes to create a nonverbal control composite. A detailed account of the original content codes and rationales for retaining, combining, and excluding particular codes is available in Grolnick et al. (2002).

For each interval, raters also rated the degree of CN vs. AS by assigning a value on a 5-point scale (1 = *highly controlling*, 5 = *highly autonomy supportive*) for the verbal behavior in the interval and separately for the nonverbal behavior in the interval.

Each videotape was coded independently by two raters who then resolved any disagreements through discussion until consensus was reached. Independent codes and ratings before discussion were used to compute reliability and the consensus codes and ratings were used in the final analyses. Interrater reliability for the

content codes yielded Cohen's kappas ranging from 0.82 to 0.87. Shrout-Fleiss intraclass correlations for the autonomy support to control ratings ranged from .77 to .97.

All four summary codes (verbal and nonverbal autonomy support, verbal and nonverbal control) were correlated above .60 (negative for autonomy support/control). We thus created a parenting behavior composite by standardizing the two scores and then subtracting the autonomy support average from the controlling average. Cronbach's alpha for the four-item composite, based on standardizing all four items and reverse-scoring two of them, was 0.92.

### Child Achievement Attitudes and Grades

#### *Performance Versus Learning Goals* (Dweck & Leggett, 1988)

This 14-item measure assesses children's goals in achievement situations. Children indicate their agreement or disagreement on a 6-point scale with items describing an orientation toward mastery and increasing competence and skills or learning goals (e.g., I get excited about learning something that really makes me think hard) and those indicating an orientation toward outcomes, winning positive judgments and looking smart or performance goals (e.g., I get frustrated when the teacher or books explain things more than I need to know for the test). Analyses of internal consistency indicated that two achievement goal items and one learning goal item were unreliable and these items were deleted. The resulting alphas were performance goals = .76 and learning goals = .65.

#### *Grades*

Children's end-of-year school grades were obtained as a measure of school performance. Letter grades were transformed into a continuous scale ranging from 0–13, and the average of students' mathematics and English grades was then computed.

## RESULTS

### Preliminary Analyses

Because not all of the participants from the original study participated in the present study, we analyzed whether the 20 nonparticipants differed from the 40 participants on maternal behavior indices. *T*-tests indicated no significant differences for any of the variables. We also tested whether girls and boys differed, and whether mothers of girls differed from mothers of boys. No such differences were found, and data from all participants were therefore analyzed together. Means and standard deviations for all variables are provided in Table II.

**Table II.** Reliability, Mean, Standard Deviation, and Range of All Variables

Variable	Alpha	Mean	SD	Min	Max
<b>Threat</b>					
Instability	.74	3.78	0.82	2.00	5.33
Scarcity	.89	3.18	1.07	1.33	6.00
Worry	.81	4.46	0.73	3.00	5.75
<b>Parent self-report</b>					
CRPBI Acceptance	.73	2.58	0.16	2.25	2.88
CRPBI Firm control	.63	2.28	0.21	1.80	2.67
CRPBI Psychological control	.87	1.67	0.34	1.13	2.51
PAS Autonomy support	.72	3.88	0.47	2.90	5.00
Value for autonomy	.64-.79 <sup>a</sup>	0.58	0.87	-1.00	2.00
<b>Parent behavior</b>					
Controlling composite	N/A <sup>b</sup>	-3.33	0.53	-4.64	-2.18
<b>Children's achievement goals and grades</b>					
Performance goals	.76	3.89	1.27	1.00	5.75
Learning goals	.65	4.61	0.72	2.75	6.00
Grades	N/A	10.20	2.31	3.00	13.00

<sup>a</sup>Schaefer and Edgerton (1985) reported test-retest reliabilities of .64 for conformity values and .79 for self-direction values.

<sup>b</sup>Cohen's kappas for content codes ranged from 0.82 to 0.87. Intraclass correlations for autonomy support ratings ranged from .77 to .97.

### Perceptions of Threat and Controlling Parenting

As would be expected, the three threat variables were moderately correlated, with *r*s ranging from .27 to .56. Further, there were significant correlations among the AS versus CN variables, with the controlling behavior composite negatively correlated with parents' reports of AS attitudes,  $r = -.40$ ,  $p < .05$ , and value for autonomy,  $r = -.41$ ,  $p < .01$ , and positively related to psychological control,  $r = .46$ ,  $p < .01$ .

The data supported the predicted links between perceived threat and CN versus AS parenting (Table III). Specifically, with respect to maternal behavior during homework-like tasks, worry and perceived instability in the environment were each significantly and positively associated with the controlling composite,  $r = .32$ ,  $p < .05$  and  $r = .40$ ,  $p < .01$ , respectively, whereas the result for scarcity was marginally significant,  $r = .30$ ,  $p < .06$ .

With regard to parenting values and self-reports of autonomy support versus control in parenting, results were also as hypothesized. Greater perceptions of worry and instability were associated with a lower value for autonomy,  $r = -.34$ ,  $p < .03$ ,  $r = -.39$ ,  $p < .05$ , respectively. Again, scarcity was marginally associated,  $r = -.29$ ,  $p < .07$ . Self-reports of autonomy support were negatively associated with worry,  $r = -.32$ ,  $p < .05$  and instability,  $r = -.31$ ,  $p < .05$ , and marginally significantly associated with scarcity,  $r = -.27$ ,  $p < .09$ . Finally,

**Table III.** Correlations Among Key Variables

	Instability	Scarcity	Worry
Parent report			
PAS Autonomy Support	-.31*	-.27 <sup>†</sup>	-.32*
Value for Autonomy	-.39**	-.29 <sup>†</sup>	-.34*
CRPBI Psychological control	.34*	.27 <sup>†</sup>	.30*
CRPBI Acceptance	-.08	-.09	-.02
CRPBI Firm Control	.09	.18	.19
Parent behavior			
Controlling (vs. AS) composite	.40**	.30 <sup>†</sup>	.32*
Child variables			
Performance goals	.30*	.10	.34*
Learning goals	-.06	-.18	-.09
Grades	-.37*	-.20	-.37*

<sup>†</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

greater worry was associated with parental endorsement of psychological control,  $r = .30$ ,  $p < .05$ , as was instability,  $r = .34$ ,  $p < .05$ , though this was only marginally so for perceived scarcity,  $r = .27$ ,  $p < .09$ . The other parenting subscales—acceptance and firm control—were not significantly related to the subscales of perceived threat.

Given that the three threat factors were moderately intercorrelated, we also tested whether they would show independent effects on parenting. Stepwise regressions with a significance level of .15 for entry into the model showed that in general, the effects of the three threat variables were largely overlapping. For psychological control, value for autonomy, and controlling behavior, instability entered first and accounted for 11, 14, and 16% of the variance, respectively. Neither of the other variables contributed a significant amount of variance beyond this variable. Worry entered first for autonomy supportive attitudes,  $R^2 = .09$ . No variables added significant variance beyond worry.

**Maternal CN Versus AS Behavior and Children’s Achievement Goals**

Children’s endorsement of performance goals was positively associated with the controlling behavior composite,  $r = .35$ ,  $p < .03$ , and reported psychological control,  $r = .42$ ,  $p < .01$ . Autonomy supportive attitudes were negatively related to performance goals,  $r = -.48$ ,  $p < .001$ , as was maternal valuing of autonomy,  $r = -.44$ ,  $p < .01$ .

For learning goals, only one index of parenting showed a significant association, maternal autonomy supportive attitudes,  $r = .42$ ,  $p < .01$ . The more autonomy supportive mothers reported themselves to be, the more their children endorsed learning-oriented achievement goals.

We hypothesized that controlling parenting would be associated with children’s greater endorsement of performance goals, and lesser emphasis on learning

goals. However, in light of other researchers' findings that children's performance goals had different effects depending on whether they were held in tandem with learning goals, we examined whether there were interactions between the two types of goals with respect to our other variables. Performance goals and learning goals themselves showed a negative correlation,  $r = -.32, p < .05$ . We regressed the two types of goals and their interaction onto each of the threat factors, and onto each of the parenting measures. In no case was the interaction term significant. Similarly, there was no interaction effect on children's grades. Performance goals were negatively related,  $r = -.35, p < .01$ , to grades, whereas the relation between learning goals and children's grades was nonsignificant.

### **Controlling Maternal Behavior as a Mediator Between Perceived Threat and Achievement Goals**

We hypothesized that the relation between perceived threat and children's achievement goals would be mediated by parental controlling behavior. Traditional tests of mediation (Baron & Kenny, 1986) would require that threat be related to controlling parenting, controlling parenting to children's achievement goals, and perceived threat to achievement goals. Our data satisfy these traditional prerequisites with the exception that the scarcity factor was not related to achievement goals. However, more recent approaches to mediation (Shrout & Bolger, 2002) suggest relaxing the requirement that the independent variable be significantly related to the dependent variable, particularly for tests of distal relations, as long as there are theoretical arguments in support of performing the test. We therefore tested perceived scarcity, as well.

To guard against spurious findings, we first conducted a test of mediation using a composite of the three threat variables. This would provide an overall test of the mediation hypothesis and determine whether it was appropriate to test the specific predictors. For the mediating variable, we used the controlling behavior composite. Because learning goals were less consistently related to parenting and threat variables, we focused on performance goals as the dependent measure.

Regressions were performed to test for mediation. For the overall threat variable, the relation between threat and performance goals,  $\beta = .12, p < .07$ , diminished and was no longer marginally significant,  $\beta = .04, ns$  when the controlling composite was included in the equation. A Sobel test (Sobel, 1982, 1986), computed as the mediated effect divided by its standard error, indicated significant mediation,  $z = 2.00, p < .05$ . Given this finding, the three threat variables were examined individually.

The relation between perceived instability and performance goals, standardized  $\beta = .32, p < .05$ , diminished substantially and was no longer significant when parenting was controlled, standardized  $\beta = .19, ns$ . The Sobel test was significant,  $z = 2.00, p < .05$ , thus indicating support for a mediational model. The relation between perceived scarcity and performance goals,  $\beta = .08, ns$ ,

diminished when parenting was controlled,  $\beta = -.02$ , *ns*, but was not significant either way. The Sobel test was not significant,  $z = 1.55$ , *ns*. The relation between worry and performance goals,  $\beta = .41$ ,  $p < .05$ , diminished and became marginally significant when parenting was controlled,  $\beta = .29$ ,  $p < .10$ . The Sobel effect for worry was marginally significant,  $z = 1.70$ ,  $p < .10$ , indicating that worry evidenced both marginally significant direct and indirect effects on performance goals.

## DISCUSSION

In this study, we examined maternal perceptions of environmental threat in relation to controlling versus autonomy supportive parenting and children's achievement goals. Specifically, we reasoned that mothers' perceptions of threat would be associated with controlling behavior which would in turn be associated with children's achievement goals. Thus, we examined mothers' perceptions of threat for their children, their parenting behaviors, values, and attitudes, and children's achievement goals and grades.

As predicted, mothers who perceived the world their children would inhabit as high in threat used more controlling behavior in interacting with their children, and were more likely to endorse controlling parenting attitudes and values. Thus, when mothers experience threat they may feel pressure to try to assure that their children perform well by solving problems for them and directing their behavior. Although this response may be well-meant, it may backfire by undermining children's own active attempts to master their environments. It would be interesting to consider whether parents perceive their behavior as possibly benefiting their children or whether the behavior is more automatic. Interestingly, the relations between threat and controlling parenting did not hold for other dimensions of parenting behavior. There were no significant relations between perceptions of threat and either acceptance versus rejection or firm control. Such specific relations support the theoretical perspective underlying the study.

Also as predicted, controlling parenting was associated with children's endorsement of performance-oriented achievement goals. That is, children of mothers who endorsed or used more controlling behavior reported focusing on grades (as opposed to learning), remembering course material only for the sake of doing well on a test, and choosing for their assignments easy topics that guarantee they will perform well. Although we understand this finding as suggesting that pressure toward specific outcomes focuses children on those outcomes and how they fare with respect to them rather than on increasing their skills, it could also be the case that children with performance goals may elicit more controlling behavior from their mothers

Interestingly, there were few relations between controlling parenting and learning goals. It may be that factors other than controlling behavior, such as

involvement or the provision of learning strategies may be important themselves, or in interaction with autonomy support for learning orientations. In addition, there was no evidence that the effect of controlling behavior on performance goals was dependent on whether children also held learning goals. Studies finding such interactive effects have generally used other questionnaires that differentiate between different types of performance goals (e.g., Pintrich, 2000).

There was some support for our mediational model in which threat was associated with controlling parenting which was then associated with children's performance goals. This was true for perceived threat overall, but differed for each of the threat factors taken individually. Specifically, mothers who perceived the world as more unpredictable tended to be more controlling and this controlling behavior was in turn associated with children's performance goals. For worry, this was marginally significant, as was the direct effect of worry on achievement goals. Finally, the link from perceptions of opportunities as scarce to children's achievement goals was not mediated by parental control. In understanding this pattern of findings we speculate that experiences of the world as unstable and unpredictable may be particularly vulnerable to "false alarms" (Nesse, 2001), in which parents protectively respond to uncertain dangers with extra control. Regarding worry, the results suggest that whereas mothers who worry may put pressure on their children through controlling behavior, children may also pick up on this worry more directly. Maternal worry, for example, may create an affective response in children whereby the children experience worry and anxiety about their school work and become focused on performance outcomes. Alternatively, children may detect their mothers' worry and strive toward performance-oriented goals to alleviate that worry. These interpretations are speculative and based on some marginal findings and it remains unclear why the effect of perceptions of scarcity on performance goals was unmediated by parental control. In future studies, it would be important and interesting to examine the interrelations among various aspects of threat, and to include child worry and/or perceptions of threat.

We recognize that the correlational nature of this study makes the direction of effects uncertain. Thus, although the effects as we have presented them are consistent with what we believe to be sound theoretical reasoning, we acknowledge that they could, for example, be bidirectional. That is, children who have performance goals cause their parents to worry about their performance through their own anxiety. Future studies using experimental designs may prove helpful in establishing the direction of causality. Further studies are warranted to examine whether the model holds for diverse populations, which may experience threat for different reasons and under different circumstances.

This study highlights an important pathway by which perceived threat and parental controlling behavior might affect children's achievement orientations, and offers initial empirical data in support of that pathway. The findings suggest that, in helping parents to work with their children in a way that supports the children's motivation, it would be important to understand their perceptions of the



larger environment. Interventions aimed at illuminating the contextual sensitivity of parenting may help parents monitor the impact of their feelings of threat on their parenting.

## REFERENCES

- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). *The authoritarian personality*. Oxford, England: Harpers.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261–271.
- Ames, C. (1984). Achievement attributions and self-instructions under competitive and individualistic goal structures. *Journal of Educational Psychology, 76*, 478–487.
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*, 3296–3319.
- Barkow, J. H., Cosmides, L., & Tooby, J. (1992). *The adapted mind: Evolutionary psychology and the generation of culture*. New York: Oxford University Press.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1993). When ego threats lead to self-regulation failure: Negative consequences of high self-esteem. *Journal of Personality and Social Psychology, 64*, 141–156.
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs, 75*, 43–88.
- Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child development today and tomorrow* (pp. 349–378), San Francisco, CA: Jossey-Bass/Pfeiffer.
- Brophy, J. (1986). Teacher influences on student achievement. *American Psychologist Special Issue: Psychological Science and Education, 41*, 1069–1077.
- Conger, R. D., Patterson, G. R., & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development, 66*, 80–97.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development Special Issue: Children and Poverty, 65*, 649–665.
- Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development Special Issue: Schools and Development, 58*, 1244–1257.
- Doty, R. M., Peterson, B. E., & Winter, D. G. (1991). Threat and authoritarianism in the United States, 1978–1987. *Journal of Personality and Social Psychology, 61*, 629–640.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256–273.
- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist Special Issue: Psychological science and education, 41*, 1040–1048.
- Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*, 5–12.
- Entwisle, D. R., & Hayduk, L. A. (1988). Lasting effects of elementary school. *Sociology of Education, 61*, 147–159.
- Feldman, S., & Stenner, K. (1997). Perceived threat and authoritarianism. *Political Psychology, 18*, 741–770.
- Garner, R. (1990). When children and adults do not use learning strategies: Toward a theory of settings. *Review of Educational Research Special Issue: Toward a unified approach to learning as a multisource phenomenon, 60*, 517–529.

- Geary, D. C., & Flinn, M. V. (2001). Evolution of human parental behavior and the human family. *Parenting: Science and Practice, 1*, 5–61.
- Ginsburg, G. S., & Bronstein, P. (1993). Family factors related to children's intrinsic/extrinsic motivational orientation and academic performance. *Child Development, 64*, 1461–1474.
- Gray, M. R., & Steinberg, L. (1999). Unpacking authoritative parenting: Reassessing a multidimensional construct. *Journal of Marriage and the Family, 61*, 574–587.
- Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. Mahwah, NJ: Erlbaum.
- Grolnick, W. S., Benjet, C., Kurowski, C., & Apostoleris, N. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology, 89*, 1–11.
- Grolnick, W. S., Gurland, S. G., DeCoursey, W., & Jacob, K. (2002). Antecedents and consequences of mothers' autonomy support: An experimental investigation. *Developmental Psychology, 38*, 143–155.
- Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology, 81*, 143–154.
- Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology, 83*, 508–517.
- Grolnick, W. S., Weiss, L., McKenzie, L., & Wrightman, J. (1996). Contextual, cognitive, and adolescent factors associated with parenting in adolescence. *Journal of Youth and Adolescence, 25*, 33–54.
- Kohn, M. (1977). *Class and conformity: A study in values* (2nd ed.). Chicago: University of Chicago Press.
- Lovejoy, C. O. (1981). The origin of man. *Science, 211*, 341–350.
- Luster, T., Rhoades, K., & Haas, B. (1989). The relation between parental values and parenting behavior: A test of the Kohn hypothesis. *Journal of Marriage and the Family, 51*, 139–147.
- MacDermid, S. M., & Williams, M. L. (1997). A within-industry comparison of employed mothers' experiences in small and large workplaces. *Journal of Family Issues, 18*, 545–566.
- McEwen, B. S., & Stellar, E. (1993). Stress and the individual: Mechanisms leading to disease. *Archives of Internal Medicine, 153*, 2093–2101.
- McLoyd, V. C. (1989). Socialization and development in a changing economy: The effects of paternal job and income loss on children. *American Psychologist, 44*, 293–302.
- Meece, J. L., & Holt, K. (1993). A pattern analysis of students' achievement goals. *Journal of Educational Psychology, 85*, 582–590.
- Nesse, R. M. (2001). The smoke detector principle: Natural selection and the regulation of defensive responses. *Annals of the New York Academy of Sciences, 935*, 75–85.
- Nesse, R. M. (2005). Maladaptation and natural selection. *The Quarterly Review of Biology, 80*, 62–71.
- Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology, 92*, 544–555.
- Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement: Goals and self-regulatory processes* (Vol. 7, pp. 371–402). Greenwich, CT: JAI Press.
- Pomerantz, E. M., & Eaton, M. M. (2001). Maternal intrusive support in the academic context: Transactional socialization processes. *Developmental Psychology, 37*, 174–186.
- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology, 50*, 550–558.
- Sales, S. M. (1972). Economic threat as a determinant of conversion rates in authoritarian and nonauthoritarian churches. *Journal of Personality and Social Psychology, 23*, 420–428.
- Schaefer, E. S. (1965). Children's reports of parental behavior: An inventory. *Child Development, 36*, 413–424.
- Schaefer, E. S., & Edgerton, M. (1985). Parent and child correlates of parental modernity. In I. E. Sigel (ed.), *Parental belief systems: The psychological consequences for children* (pp. 287–318). Hillsdale, NJ: Erlbaum.

- Schwarz, J. C., Barton-Henry, M. L., & Pruzinsky, T. (1985). Assessing child-rearing behaviors: A comparison of ratings made by mother, father, child and sibling on the CRPBI. *Child Development Special Issue: Family Development, 56*, 462–479.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7*, 422–445.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). San Francisco: Jossey Bass.
- Sobel, M. E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. In N. Tuma (Ed.), *Sociological methodology* (pp. 159–186). Washington, DC: American Sociological Association.
- Trivers, R. L. (1974). Parent-offspring conflict. *American Zoologist, 14*, 249–264.
- Wentzel, K. R. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development, 73*, 287–301.
- Xu, J., & Corno, L. (1998). Case studies of families doing third grade homework. *Teachers College Record, 100*, 402–436.
- Zussman, J. U. (1980). Situational determinants of parental behavior: Effects of competing cognitive activity. *Child Development, 51*, 792–800.

Copyright of Motivation & Emotion is the property of Springer Science & Business Media B.V.. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.