DOCUMENT RESUME

ED 319 526 PS 018 821

AUTHOR El-Sheikh, Mona; Cummings, E. Mark
TITLE Control as a Moderator of Children's Responses to Angry Interactions.
PUB DATE Mar 90
NOTE 25p.; Paper presented at the Biennial Conference on Human Development (11th, Richmond, VA, March 29-31, 1990).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adults; *Affective Behavior; *Anger; Coping; *Emotional Experience; Heart Rate; *Preschool Children; Preschool Education; *Self Control; *Stress Variables
IDENTIFIERS *Childhood Experiences

ABSTRACT

This exploratory study examined children's sense of control as a cognitive and perceptual context for responding to the expression of interadult anger. Children's cardiovascular, electrodermal, and self-reported emotional responses to the angry interaction of adults were measured. Perceptions of control were manipulated in two ways: by giving children the option of terminating an angry interaction by pushing an escape button and by describing an intervention strategy for angry people to use. Participants were 43 preschool children and their mothers. Findings revealed that differences in perceived control were related to differences in children's cardiovascular, electrodermal, and self-reported emotional responses to interadult anger and resolution. The introduction of control may have increased distress in children. It is also possible that giving children a sense of control aroused them and that not giving children control increased a sense of helplessness about the situation. It is pointed out that given the relatively small changes observed in heart rate and skin conductance response and level, the clinical significance of the findings should be interpreted with caution. Cited are 30 references. (RH)

Control as a Moderator of Children's Responses to Angry Interactions

Mona El-Sheikh

E. Mark Cummings

West Virginia University

Poster presented at the Conference on Human Development, Richmond, VA, March, 1990. Please address correspondence to:

Mona El-Sheikh, Ph.D.
Department of Psychology
West Virginia University
Morgantown, WV 26506-6040

RUNNING HEAD: CONTROL AND ANGER

Control as a Moderator of Children's Responses to Angry Interactions

Anger between adults is an important category of emotion expression in children's everyday lives and in the family. Children are sensitive to angry expressions by adults, including parents (e.g., Crockenberg, 1985; Cummings, Zahn-Waxler, & Radke-Yarrow, 1981; Dunn & Munn, 1985), and relations have repeatedly been found between high levels of family discord and psychopathology in children (Emery, 1982; Grych & Fincham, in press). Further, angry environments may mediate the effects of divorce (Hetherington, 1989; Rutter, 1979; Wallerstein, 1983), alcoholism (Cork, 1969; West & Prinz, 1987) and other family processes on the child. Accordingly, research on the effects of adult's discord processes on children is burgeoning (e.g., Christensen & Margolin, 1988; Egeland, Jacobvitz, & Sroufe, 1988; Gottman & Fansilber Katz, 1989).

The role of the context and stimulus characteristics of anger in children's coping with anger and discord is an important and under-investigated topic pertinent to a process-level understanding of relatio between angry environments and child development (Cummings & Cummings, 1988). Several studies have recently examined the effects of the stimulus conditions of anger on children's responding, e.g., the forms of expression of anger (Cummings, Vogel, Cummings, & El-Sheikh, 1989), and the extent of resolution of anger (Cummings, Ballard, El-Sheikh, & Lake, 1990). However, context is not just a matter of the characteristics of the stimulus environment, but can also be defined in terms of the cognitions and perceptions that frame children's reactions to anger (e.g., their interpretations of others' motives and intents, expectations of outcomes, attributions of responsibility and control); this issue has received scant attention (Grych & Fincham, in press).

The present study examines children's sense of control as a cognitive/ perceptual context for responding to interadult anger. The clinical literature on divorce and marital discord has long emphasized the role of perceived control to children's coping processes (e.g., Wallerstein, 1983) but there has been little systematic study of relations between perceived control and children's coping with anger or other family stressors. Covell and Abramovitch (1987) found that children tended to attribute responsibility for mother's anger to themselves; this response was more pronounced at 5-6 than at 7-15 years of age. Rossman and Rosenberg (1990) reported both positive (reduced behavior problems) and negative (greater feelings of incompetence) correlates of high conflict control beliefs in high conflict families.

In the present study, children's cardiovascular (heart rate), electrodermal (skin conductance response and level), and self-reported emotional responses to interadult anger are examined. El-Sheikh, Cummings, and Goetsch (1989) found that heart rate changed in response to changes in the background emotional environment. In this study skin conductance response and level are both examined. Skin conductance response indicates momentary fluctuations in skin conductance while skin conductance level refers to the baseline of skin conductance at any given time (Andreassi, 1980). Andreassi (1980) reported that skin conductance response and level both increased during anxiety provoking situations. Further, socioemotional stimulation has been shown to induce palmar perspiration in very young children (Shields, 1983).

Perceptions of control will be manipulated in two ways in the present study. One manipulation involves giving children the option of terminating an angry interaction by pushing an escape button whereas the second involves giving children the option of describing an intervention strategy for angry people to implement. The option to terminate a stressor has consistently been found to mitigate physiological reactivity with adults and non-human organisms (Levine, 1983). Giving children the option to control the resolution of interadult anger is more pertinent to situations of everyday anger. This manipulation of control may be relevant to understanding the implications of children's actual control strategies when faced with interadult interactions.

Our expectation, based on the bulk of findings (e.g., Averill, 1973; Folkman, 1984; Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen, 1986; Thoits, 1988; Thompson, 1981) in the adult literature, was that introducing a sense of control would reduce children's stress. However, there is virtually no precedent for predicting children's responding in this context, and there are bases for expecting reversed relations. Without firm bases for prediction of the direction of effects, this study is thus most appropriately regarded as exploratory with regard to this issue.

Method

Subjects

Forty-three preschoolers and their mothers (fathers in four cases) participated in this study. The experimental sample consisted of 9 boys and 13 girls (mean age = 61.41 months, SD= 7.34) and the comparison sample consisted of 12 boys and 9 girls (mean age = 60.86 months, SD = 7.26). The physiological data for one girl was lost because she whined throughout the session. For two additional children procedures were not begun due to crying.

Apparatus and Materials

Physiological recording. All physiological responses were recorded by Beckman silver-silver chloride cup electrodes filled with .05 NaCl electrode paste. For heart rate measurement one electrode was attached 2 inches above the ankle of the right leg, outer surface, and two electrodes were attached on the left side of the neck next to the collar-bone. For the measurement of electrodermal responses an electrode was attached to the volar surface of the thenar eminence (thumb pad) and the second was attached on the palm between the intersection of the second and third fingers of the subject's left hand (cleaned with soap and water and rubbing alcohol). A constant 0.5 V was applied across the electrodes. The electrodes were connected to a Grass Model 79D polygraph located in an adjacent room. Electrodermal response signals were amplified by a Grass Low Level D. C. preamplifier Model 791DE and a Grass Polygraph D. C. driver amplifier Model 7DAF.

Taped verbal interactions. The stimulus set for each child consisted of two audiotaped one-minute verbal arguments and a one-minute reconciliation between a male and a female. Two different sets of interactions were recorded for the study, one centering on cleaning up the laboratory and the other on problems in male-female relationships.

Cards with facial expressions. Facial expressions were drawn in black on 12.7 cm x 10 cm white index cards. Happy, sad, mad, scared, and neutral emotions were represented.

Procedures

The parent was seated outside the laboratory, and asked to fill out questionnaires. Children were taken to an adjacent room, seated in an armchair, and electrodes were attached. The assistant then left, explaining that she would be nearby and back shortly, and the child was left alone for 5 minutes of adaptation to the laboratory.

The first argument. A one-minute baseline was obtained for physiological measures. An adult walked into the child's room, expressing anger about the messy laboratory. After a few moments she left, apparently continuing the argument with another adult outside the room. The first one-minute taped argument was begun at this point and that is what the child heard.

Interview. After the argument was over another adult (the interviewer) walked in and asked the child several questions. First, the child was asked "How did the two people who were fighting feel?" The interviewer pointed one by one to the cards with facial expressions on them, identifying them as mad, sad, okay (neutral), scared, or happy. The child was directed to point to the face that best represented how the actors felt. The interviewer repeated the child's response to ensure that the desired choice had been made. Next, the child was asked "How did you feel hearing the two people fighting?"; using again the just-described procedure for obtaining children's responses about emotions.

The second argument: First manipulation of perceived control. Children were left alone for 2 minutes (recovery period) and another one minute baseline was obtained. Then, for the experimental group, the interviewer walked in; at about this time the sounds of an angry interaction began coming through on the intercom. The interviewer pushed a button on the intercom, terminating the sounds of the conversation. The button was then placed within easy reach of the child. The child was told that the people in the next room might start talking again, but that the child could turn off the sound of their voices by pressing the button, although there would be a short delay before the sounds of the voices would stop (pushing the button was effective only after a 20 second delay to guarantee an adequate period for recording physiological responding). After checking for understanding of the instructions, the interviewer left. No manipulation was introduced for the comparison group at this time. A one-minute angry interaction was played through the intercom for all subjects, followed by the interview described above.

The reconciliation: Second manipulation of perceived control. Following the recovery period (2 minutes), another one-minute baseline was obtained, and then the interviewer returned. Children in the experimental group were told that the arguing adults had left but would be back soon. The interviewer offered to talk to the adults, telling them whatever message the child desired. The interviewer asked the child what s/he wanted the adults to do; further, they were reassured that adults would not know it was the child who had suggested a solution. Children's responses were recorded verbatim. Comparison group children were not given this option.

The interviewer then left and said through the intercom: "Hey guys, why don't you stop fighting now." Only the experimental group heard this sentence. Finally, all children heard the reconciliatory interaction played through the intercom. The interviewing procedure was then repeated one more time.

At the end of the session the interviewer removed the electrodes and debriefed each subject about the experiment.

Data Analysis: Physiological Measures

Coding. Heart rate (HR) and SCR were calculated within each phase by obtaining their frequency for 20 seconds and multiplying it by 3, to obtain HR and SCR per minute (EL-Sheikh et al., 1989). Skin conductance level (SCL) was calculated by obtaining the reciprocal of skin resistance during the specified 20-second periods, and is expressed in terms of micromhos (Venables & Christie, 1980).

Analysis plan. The last 20 seconds of all baselines were used to calculate physiological responses because they were the sections of baselines closest in time to the interactions (Eisenberg et al., 1988). The first 20 seconds of the angry interactions were used to calculate physiological reactivity to the social interactions because the onset of the stimuli (e.g., arguments) is the most critical period for examining reactivity.

For all subjects, scores were entered for three baselines and three interaction conditions.

Results

Preliminary Analyses

Context and age effects. Analyses indicated no significant main effects or interactions for age, context (script), or sex; accordingly, these variables were not analyzed further.

Use of Control Options by Children

First control option. Seventeen of 17 of 22 children pushed the escape button with a mean of 9.95 (SD = 7.45) seconds after the onset of the argument. SCR was higher among those who pushed the button than among those who did not, F (1,19) = 3.92, p = .06; comparisons for HR and SCL were non-significant.

Second control option. Nineteen of 22 subjects sent messages to the angry adults. Thirteen wanted the actors to be told to stop fighting, two wanted them to be told to be nice to each other, two wanted them to be told that (we or I) "love them", one wanted them to be told to leave, and one described a specific strategy for the interviewer to use to mediate the actor's differences. No significant differences in physiological responding were associated with the decision to send a message to the actors.

Physiological Reactivity

Control and Heart Rate

MANOVA indicated that the condition main effect, F (3,36) = 6.83, $p < .001$, and the group X condition interaction, F (3,36) = 3.37, $p < .05$, were significant. The means and standard deviations are presented in Table 1.

Table 1 about here

Follow-up analyses indicated that the group x condition interaction for the contrast of the second baseline and argument, F (1,38) = 10.14, $p < .005$, was significant. HR increased for the experimental group with the onset of the argument, whereas it decreased for the comparison group (see the table). Simple effects tests showed that the decrease for the comparison group was significant, $F\ (1,20) = 10.41$, $p < .01$.

A significant condition main effect was found for the contrast of the third baseline and reconciliation, $F\ (1,38) = 18.92$, $p < .001$. A trend was found for the group x condition interaction, $F\ (1,38) = 2.79$, $p = .10$. HR deceleration was larger for the comparison than for the experimental group (see the table).

Control and Skin Conductance Response

MANOVA indicated that for SCR the group, $F\ (2,33) = 3.40$, $p = .05$, and condition, $F\ (3,34) = 7.21$, $p < .01$, main effects were significant, and there was a trend for the group x condition interaction, $F\ (3,34) = 2.31$, $p < .10$. Means and standard deviations are shown in Table 2.

Table 2 about here

Follow-up analyses indicated that SCR increased between the first baseline and argument, $F\ (1,38) = 7.16$, $p < .01$, the second baseline and argument, $F\ (1,38) = 12.78$, $p < .001$, and the third baseline and the reconciliation, $F\ (1,37) = 7.60$, $p < .01$. There was also a group x condition interaction for the comparison of the second baseline and argument, $F\ (1,38) = 6.52$, $p < .025$. While SCR increased for both groups, simple effects tests indicated that the increase was significant for the experimental group, $F\ (1,20) = 17.66$, $p = .0001$, but not for the control group.

As noted above, SCR was different at the $p = .06$ level between those who pushed the button and those who did not. Since it can be argued that those who did not exercise control failed to perceive that they had control, the analyses were also conducted excluding those subjects (N = 5) who did not push the button. The group, $F(3, 33) = 7.24$, $p < .005$, and condition, $F(3, 33) = 8.93$, $p < .001$, main effects were significant, and the group x condition interaction, $F(3, 33) = 2.62$, $p = .06$, approached significance. The group x condition interaction for the planned comparison of the second argument and baseline was significant, $F(1, 35) = 8.22$, $p < .01$. The increase for the experimental group, as with the analysis using the entire sample, again emerged as significant, $F(1, 16) = 15.36$, $p < .01$; the results for the comparison group were again not significant.

Control and Skin Conductance Level

For SCL the main effect of condition was significant, $F(3,33) = 5.57$, $p < .005$. Follow-up analyses indicated that SCL increased between the first baseline and argument, $F(1,38) = 9.28$, $p < .005$, the second baseline and argument, $F(1,38) = 9.65$, $p < .005$, and the third baseline and argument, $F(1,35) = 6.30$, $p < .025$. Means and standard deviations are presented in Table 3. The group x condition interaction for the planned comparison of the second baseline and argument approached significance, $F(1,38) = 3.61$, $p = .065$. SCL increased more for the experimental group than for the comparison group (see the table).

Table 3 about here

Interview Responses

Perceptions of Adults' Emotions as a Function of Control

To examine the frequency of children's nominations of adults' emotions as a function of conditions scores of 1 (occurrence) and 0 (nonoccurrence) were assigned. Ratings of anger ("mad") and distressed ("sad" or "scared") were analyzed separately.

Anger. Means and standard deviations for the occurrence of "mad" responses are presented in Table 4. A main effects for condition was found, F (2, 40) = 40.67, $p < .001$. Follow-up tests indicated that responding decreased between the second argument and the reconciliation, F (1, 41) = 69.78, $p < .001$.

Table 4 about here

The main effect for group also approached significance, F (1, 41) = 2.96, $p < .10$. As the table shows experimental subjects viewed the actors as more angry than comparison children.

Distress. A main effect for group was found, F (1, 41) = 5.14, $p < .05$, reflecting that the comparison group viewed the actors as more distressed than the experimental group (see the table).

Children's Emotional Responses as a Function of Control

Angry responses. No significant effects were found for this dependent variable. Angry responding was uncommon. The overall means across conditions were .11 (SD = .19) for the experimental group and .08 (SD = .18) for the comparison group.

Distress responses. A main effect for condition was found, F (2, 40) = 6.60, $p < .01$. Follow-up analyses indicated that children's reports of distress declined between the first (mean = .44, SD = .50) and second (mean = .23, SD = .43) argument, F (1, 41) = 8.45, $p < .01$. Responding declined further during the reconciliation (mean = .14), but not significantly.

Discussion

Experimentally-induced differences in perceived control were related to differences in children's cardiovascular, electrodermal, and self-reported emotional responses to interadult anger and resolution. This is the first psychobiological demonstration of the effects of control on children's responses to interadult anger. However, the pattern of results regarding the impact of control on children's responses is not susceptible to easy or clearcut interpretation.

One interpretation is that the introduction of control increased distress in children. Children in the experimental group showed increased HR in response to interadult anger after they were given control. Relative to comparison subjects that were not given control, children in the experimental group showed less deceleration of HR in response to reconciliation, and increased SCR and SCL in response to anger. The notion that control may have stress-inducing properties in some contexts is consistent with the results of other studies (e.g., Mills & Krantz, 1979). Control may increase distress when subjects are not confident in their ability to actually decrease the aversiveness of the situation (Mills & Krantz, 1979). In the present study, children may have believed that escaping the interaction, or offering a resolution strategy, would not really influence the course of the argument between the two actors and, consequently, control was not a means of reducing the overall aversiveness of the fight. Alternatively, they may have felt responsible for dealing with the fight, thereby increasing their level of arousal.

There are certain aspects of the data that do not readily fit this interpretation, however. HR did not increase significantly for the experimental group in response to interadult anger but did decrease significantly for the comparison group. Further, comparison subjects more often saw the actors as distressed than did experimental children. The fact that the great majority of children given a control option readily chose that option also argues against a simple explanation that control is distressing or aversive to children.

This suggests an alternative interpretation, that is, giving children a sense of control made them more aroused but, at the same time, not giving children control increased a sense of helplessness about the situation. Thus, interadult anger may induce responses in children regardless of whether or not children are given control options, but the direction and nature of the response may be affected by whether or not children perceive that they have control.

Certain limitations to the interpretation of these data should be acknowledged. Given the relatively small changes in HR, SCR, and SCL that were observed, the clinical significance of the present findings should be interpreted with caution. The decision-making process for experimental children during the escape and pre-reconciliation periods were also different than for comparison children. While it is not readily apparent how these differences in procedure could have had unintended effects on responding, these limitations to interpretation should be noted and considered.

In sum, the present study showed that some dimensions of responding varied as a function of experimental manipulations of perceived control. Future research might focus on further delineating the significance of age, individual differences in children's coping styles (e.g., El-Sheikh et al., 1989), context, and response domain to children's coping processes.

References

Andreassi, J. L. (1980). Psychophysiology: Human behavior and physiological response. New York: Oxford University Press.

Averill, J. (1973). Personal control over aversive stimuli and its relationship to stress. Psychological Bulletin, 80, 286-303.

Christensen, A., & Margolin, G. (1988). Conflict and alliance in distressed and non-distressed families. In R. A. Hinde & J. Stevensen-Hinde (Eds.), Relationships within families. Oxford, Great Britain: Oxford University Press.

Cork, R. M. (1969). The forgotten child. Toronto: A.R.F. Books.

Covell, K., & Abramovitch, R. (1987). Understanding emotions in the family: Children's and parents' attributions of happiness, sadness, and anger. Child Development, 58, 985-991.

Crockenberg, S. (1985). Toddlers' reactions to maternal anger. Merril-Palmer-Quarterly, 31, 361-373.

Cummings, E. M., Ballard, M., El-Sheikh, M., & Lake, M. (1990). Resolution and children's response to interadult anger. Manuscript submitted for publication.

Cummings, E. M., & Cummings, J. S. (1988). A process oriented approach to children's coping with adults' angry behavior. Developmental Review, 8, 296-321.

Cummings, E. M., Vogel, D., Cummings, J. S., & El-Sheikh, M. (1989). Children's responses to different forms of expression of anger between adults. Child Development, 60, 1392-1404.

Cummings, E. M., Zahn-Waxler, C. & Radke-Yarrow, M. (1981). Young children's responses to expressions of anger and affection by others in the family. Child Development, 52, 1274-1282.

Dunn, J., & Munn, P. (1985). Becoming a family member: Family conflict and the development of social understanding in the second year. Child Development, 56, 480-492.

Egeland, B., Jacobvitz, D., & Sroufe, A. L. (1988). Breaking the cycle of abuse. Child Development, 59, 1080-1088.

Eisenberg, N., Fabes, R. A., Bustamante, D., Mathy, R. M., Miller, P. A., & Lindholm, E. (1988). Differentiation of vicariously induced emotional reactions in children. Developmental Psychology, 24, 237-247.

El-Sheikh, M., Cummings, E. M., & Goetsch, V. (1989). Coping with adults' angry behavior: Behavioral, physiological, and verbal responding in preschoolers. Developmental Psychology, 25, 490-498.

Emery, R. E. (1982). Interparent conflict and the children of discord and divorce. Psychological Bulletin, 92, 310-330.

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. Journal of Personality and Social Psychology, 46, 939-949.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of stressful encounter: Cognitive appraisal, coping, and encounter outcomes. Journal of Personality and Social Psychology, 50, 992-1003.

Gottman, J. M., & Fansilber Katz, L. (1989). Effects of marital discord on young children's peer interactions and health. Developmental Psychology, 5, 373-381.

Grych, J. H., & Fincham, F. D. (in press). Marital conflict and children's adjustment: A cognitive-contextual framework. Psychological Bulletin.

Hetherington, E. M. (1989). Coping with family transitions: Winners, losers, and survivors. Child Development, 60, 1-15.

Levine, S. (1983). A psychobiological approach to the ontogeny of coping. In N. Garmezy and M. Rutter (Eds.). Stress, coping, and development in children. New York: McGraw-Hill Book Company.

Mills, R. T., & Krantz, D. S. (1979). Information, choice, and reactions to stress: A field experiment in a blood bank with laboratory analogue. Journal of Personality and Social Psychology, 37, 608-620.

Rossman, B. B. R., & Rosenberg, M. S. (1989). Children in violent and discordant families: Coping, conflict control beliefs, and outcomes. Paper presented at the Meeting of the Society for Research in Child Development, Kansas City, Missouri.

Rutter, M. (1979). Maternal deprivation, 1972-1978: New findings, new concepts, new approaches. Child Development, 50, 283-305.

Shields, S. A. (1983). Development of autonomic nervous system responsivity in children: A review of the literature. International Journal of Behavioral Development, 6, 291-319.

Thoits, P. A. (1988). Patterns in coping with controllable and uncontrollable events. Paper presented at the Conference of Life-Span Development, Morgantown, West Virginia, March 24-27.

Thompson, S. (1981). Will it hurt less if I can control it? A complex answer to a simple question. Psychological Bulletin, 90, 89-101.

Venables, P. H. & Christie, M. J. (1980). Electrodermal activity. In I. Martin and P. H. Venables (Eds.), Techniques in Psychophysiology, (pp.3-67). New York: John Wiley & Sons Ltd.

Wallerstein, J. (1983). Children of divorce: Stress and developmental tasks. In N. Garmezy and M. Rutter (Eds.), Stress, coping and development in children. (pp. 265-302) New York: McGraw-Hill.

West, M. O., & Prinz, R. J. (1987). Parental alcoholism and childhood psychopathology. Psychological Bulletin, 102, 204-218.

Table 1

Children's Heart Rate as a Function of Condition

	Group			
Condition	Experimental (n=21)		Comparison (n=21)	
	Mean	SD	Mean	SD
Baseline 1	104.4	7.2	103.4	12.1
Argument 1	104.3	11.6	101.1	10.9
Baseline 2	102.3	7.0	102.0	12.6
Argument 2	104.0	9.2	97.9	9.9
Baseline 3	104.0	8.8	103.1	10.6
Reconciliation	102.0	8.5	98.4	9.4

Table 2

Children's Skin Conductance Response as a Function of Condition

Condition	Group			
	Experimental		Comparison	
	Mean	SD	Mean	SD
Baseline 1	5.7	5.2	5.7	4.3
Argument 1	8.4	6.5	7.3	5.9
Baseline 2	5.0	4.4	4.3	4.5
Argument 2	9.6	6.1	5.1	3.4
Baseline 3	2.9	4.1	4.8	5.4
Reconciliation	6.0	6.9	6.9	4.9

Table 3

Children's Skin Conductance Level as a Function of Condition

Condition	Group			
	Experimental		Comparison	
	Mean	SD	Mean	SD
Baseline 1	14.8	8.8	14.7	8.9
Argument 1	15.8	9.4	16.2	9.4
Baseline 2	19.6	10.6	16.6	9.2
Argument 2	22.9	12.7	17.3	9.8
Baseline 3	22.8	13.9	18.0	10.4
Reconciliation	26.8	15.6	18.8	11.1

Table 4

Children's Perceptions of Actors' Emotions as a Function of Control

Interaction	Inferred Actors' Emotions			
	Angry		Distressed	
	Mean	SD	Mean	SD
First Argument				
Control	.72	.45	.09	.29
No Control	.71	.46	.14	.35
Second Argument				
Control	.86	.35	.09	.29
No Control	.61	.49	.38	.49
Reconciliation				
Control	.18	.39	.04	.21
No Control	.04	.21	.14	.35