

Towards, Away, and Against: Emotions and Prosocial Behavior.

William Roberts

Thompson Rivers University

Janet Strayer

Simon Fraser University

In Katja Kokko & Sylvana Côté (Chairs), *Prosocial and Aggressive Behaviors over the Life Course*. Symposium conducted at meetings of the Society for Research in Child Development, Tampa, Florida, April, 2003.

Send correspondence to:

William Roberts

Psychology Department

Thompson Rivers University

900 McGill Drive

Kamloops, BC V2C 5N3, Canada

Phone: (250) 828-5374

E-mail: [WLRoberts@tru.ca](mailto:WLRoberts@tru.ca)

Abstract

Along with anger, the “social emotions” – empathy, guilt, and shame – have been thought to be linked with children’s prosocial behaviors. Nevertheless, few studies have assessed them simultaneously or across sources. We obtained Q-sort and questionnaire measures from fathers, mothers, teachers and best friends for 99 children (mean age = 9.4 years; range 6 to 13; 66% girls). As expected, these children were, on average, moderately high on empathy, guilt, and prosocial behavior, and not particularly angry or antisocial. Scales were aggregated by latent variables, giving measures of child behavior shared across sources. As expected, more empathic children had higher levels of guilt and lower levels of anger. Multiple regression analyses indicated that these three emotional factors were strongly related, in expected directions, to behavior that was friendly (vs. hostile) to peers (Baumrind, 1971) and cooperative with adults (Baumrind, 1971). Empathy, in particular, was strongly related to friendly behavior with peers. Together, emotions accounted for 68% of the variance in friendly behavior, 52% of cooperative behavior, and 21% of antisocial behavior. This study contributes further evidence that research on the regulation and expression of emotion is important for understanding children’s cooperative, prosocial behaviors.

Aristotle noted long ago in the *Politics* (1253a, 2-18) that we are social creatures, animals that live in families and organized communities. Language, he thought, set us apart from all other social creatures, for it is by talking with one another that we come to understand and experience emotionally such concepts as justice and injustice. Feelings of responsibility and attachment, of right and wrong, extending from the family out into the community, make social life possible, in his analysis. Thus the study of the socially generated and socially supportive emotions of empathy, guilt, and shame, as well as the socially disruptive emotion of anger, have a fundamental importance for our general social life, as well as for children's prosocial and antisocial behaviors.

*A process model.*

What processes are actually involved in the interplay between emotion and such behaviors as these? In Figure 1 (p. 38) we depict recursive processes involved in forging a response to a situation (Connolly & Bruner, 1974; Dodge, 2002; Roberts, 1984). Events and situations (the input at step 1) are interpreted and emotionally experienced at step 2 by children with individual emotional-cognitive histories. Consistent with developmental findings that children do not construe similar meaning for apparently similar events (Dodge, 1991), these evaluations reflect individual characteristics and developmental histories. From evaluating the situation, children select from among their available actions and plans at steps 3 at 4 their "best" (even if maladaptive) response at step 5. The response is

executed and consequences evaluated at step 6, and the process is either reiterated or terminated.

There are several points worth making about this logical model. First, the steps may vary in their extent of conscious awareness. Response selection (step 4), for example, may be either deliberate or automatic.

A second point is that emotions as well as cognitions are involved at each point in this process. Critically, emotions are involved in attending to a situation and interpreting and evaluating it, at step 1; in accessing or constructing possible responses at step 2; in evaluating these alternatives at step 3; in response selection at step 4 and response execution at step 5.

As we have summarized elsewhere (Roberts, 1999), evidence for the multiple influences of emotion in this model come from diverse viewpoints and research. For example, Piaget and others have suggested that positive affect and moderate levels of negative affect are important for the development of cognitive and social competencies (Piaget & Inhelder, 1969; Sroufe, 1979; Strayer, 2002; Thompson, 1994). In contrast, high levels of emotional distress are thought to have disruptive effects in general process models of competence and cognition (Bowlby, 1982; Connolly & Bruner, 1974; Kopp, 1989; Roberts, 1984), in experimental paradigms of dysfunction such as learned helplessness (Dweck & Elliot, 1983; Dweck & Wortman, 1982; Maier & Seligman, 1976), and in research on stress and coping (e.g., Rutter, 1981). In all these approaches, high levels of

negative affect are thought to have disruptive or disorganizing effects on concurrent behavior and to be partly responsible for long-term behavioral problems or difficulties.

Several authors (Bretherton, 1995; Breuer & Freud, 1893/1959; Roberts & Strayer, 1987; Roberts, 1999) have suggested that these long-term behavior problems (including aggression and antisocial behavior) result in part from faulty emotional regulation. The control or suppression of negative affect is thought, on this view, to result in the storage of negative affect in memory (along with other aspects of the situation, including any maladaptive responses), with the result that cognitive components of the episode remain relatively unassimilated and distorted. Similar circumstances in the future then evoke the stored negative affect, the cognitive distortions, and the maladaptive response (Dodge, 1991, 2002). As this behavioral pattern undergoes consolidation, the affective components may become less apparent, while the behavioral components may become ritualized and rigid (Bowlby, 1973).

In contrast, when the transition from disruptively high levels of negative affect to more functional levels is accomplished by allowing the expression of negative affect to run its course, this view suggests that the emotional components of the experience are dissipated, allowing cognitive components of the episode to be fully assimilated or integrated by the child. This cognitive-emotional response (Bowlby, 1982) facilitates behavioral flexibility, self-regulation (which we

believe is characterized by appropriate levels of guilt and empathy), and prosocial behavior.

By assessing emotions across contexts and sources, as we are in the present study, we are implicitly looking at emotions as characteristic qualities of the system shown in Figure 1, as characteristic evaluations of the situations in which children find themselves. Thus moderate to high levels of anger, for example, may indicate frequent evaluations of others as hostile. Moderate levels of guilt suggest frequent (and appropriate) evaluations of responsibility. Moderate levels of shame indicate the awareness and salience of social expectations, promoting appropriate levels of conformity or communality. Moderate to high levels of the empathy indicate frequent evaluations of emotional security (Sroufe, Egeland, & Carlson, 1999), combined with a belief in an underlying similarity with others. Let us consider each of these in turn.

*Empathy and prosocial behavior.* An empathic response has both cognitive and emotional components (Strayer, 1987, 1993). When we "feel with" others, we *understand* how they feel, and this knowledge evokes a fellow feeling in us. As such, empathy obviously has important implications for cooperative, prosocial behavior and, inversely, for antisocial behavior (Cohen & Strayer, 1996).

Seventeen years before he published *The Wealth of Nations*, Adam Smith (1759) proposed that empathic feelings were essential for the cooperative relationships on which society itself is founded. More recently, Martin Hoffman (1975, 1987)

discussed the relation between empathy and prosocial behavior. Nevertheless, as we noted in our 1996 *Child Development* article (Roberts & Strayer, 1996), empirical evidence on this point was inconsistent, with most supporting evidence coming from adult samples (Barnett, 1982, 1987; Batson, Fultz & Schoenrade, 1987; Eisenberg & Miller, 1987a, 1987b; Underwood & Moore, 1982). The data reported in that article, which assessed both prosocial behavior and empathy across methods and sources for 73 school-age children, gave clear evidence for a strong link between empathy and prosocial behavior, especially for boys. The results of our path analysis are illustrated in Figure 2, which shows that empathy accounted for 55 percent of the variance in boys' prosocial behavior. In the model for boys and girls combined (N = 73), which was quite similar, empathy accounted for 26% of the variance in prosocial behavior with a path coefficient of .51.

In the current study, we attempted to replicate these findings. We assessed prosocial behavior across sources – teachers, fathers, mothers, and best friends – using Q-sort descriptions from the adults and questionnaire responses from best friends. Prosocial behavior was assessed in three areas: Friendly with peers (Baumrind, 1971), Cooperative with adults (Baumrind, 1971), and antisocial behavior (Block, 1985). Scales were then aggregated across sources using principal components analysis. Details are shown in Tables 1 to 3. Note that mother and father scales were aggregated using factor scores, and this parental factor was then aggregated with teacher and best friend scales to form the final

latent variables. In this way, each context (home, school, peer) could potentially make an equal contribution to the final variable.

Empathy, shame, guilt, and anger were also assessed across these same four sources. As can be seen from Table 4, items for empathy assessed cognitive awareness of others' feelings as well as emotional responsiveness to them. Given that our sources are reporting on children's behavior in very different contexts, we expected – and found – very modest convergence in their descriptions – a median correlation of .20. Nevertheless, a single principal component accounted for 45% of the variance in the original scores, giving us a measure reflecting a response characteristic carried by the child across contexts.

*Guilt and Shame.* From a functionalist view (Barrett, 1995), shame and guilt are important regulators of both self and social development. Both emotions signal that a proscription (across social and moral domains) has occurred or is imminent. Their appraisals differ in that shame is focused more globally upon the self from the viewpoint of critical others (actual or internalized), with little or no sense of personal agency or control, whereas guilt is more specific, behaviorally focused, and entails a sense of personal agency and control. In our view, both emotions operate along an adaptive-maladaptive continuum (Lewis & Michalson, 1983; Luyten, Fontaine, & Corveleyn, 2002), in contrast to views and current operational measures that consider guilt an adaptive, and shame a maladaptive, emotion (Tangney, 1990, 1996).

Adaptively, shame checks excessive or inappropriate displays, leading to better self-regulation and integration of self into society. Shame helps children to acquire knowledge of the self-as-object by reflecting critical aspects of how one appears to others (Lindsay-Hartz, deRivera, & Mascolo, 1995); and it may motivate self-improvement by signaling a discrepancy between one's actual and ideal self (Higgins, 1987). At moderate levels, we expected generally positive relations for shame and prosocial behaviors, given shame's self-regulatory function. In contrast, because of the diminished sense of agency in shame, high levels of shame should be maladaptive, resulting in behavior that is more withdrawn and less prosocial.

Adaptively, guilt inhibits or mitigates harm to others, leading to approach behavior in order to make reparation. Thus, we expect positive relations for guilt and prosocial behavior. Guilt also helps children acquire knowledge of the self-as-agent by focusing on one's responsibility for wrongdoing and its reparation. Arguably, guilt is more positive than shame in our society because it stresses agency.

These contrasts between guilt and shame are evident in the sample items used to assess each construct across mothers, fathers, teachers, and best friends – Tables 5 and 6.

Our sources showed only slight convergence in their assessments of shame and guilt – median correlations were .14 and .13, respectively. Nevertheless,

single principal components accounted for 43% of the variance in the original guilt scores and 41% of the variance in shame scores.

### *Anger.*

Like shame and guilt, anger can also be considered along an adaptive-maladaptive continuum. At low levels, anger may serve to strengthen attachments and friendships by communicating needed relationship adjustment, or by signaling the violation of personal rights. Empathic anger (anger shared with another at his/her plight) is also possible (Smith, 1759; Strayer, 1993). However, moderately intense or prolonged anger tends to disrupt or even sever social relationships (Bowlby, 1982). Anger has long been implicated in aggression and antisocial behavior (Maccoby, 1980; Patterson, DeBaryshe, & Ramsey, 1989) as well as in the cognitive distortions of aggressive children (Coie & Dodge, 1998).

As our sample items indicate (Table 7), anger is a salient emotion, and we obtained high levels of internal consistency within sources and moderate convergence across sources (median correlation = .30). A single principal component accounted for 51% of the variance in original scores.

### *Relations between Anger, Empathy, Shame, and Guilt*

At moderate levels, we expected to find positive relations between empathy, shame, and guilt. Both guilt and shame are "social emotions" that entail an appraisal of self in relation to others, and so they are likely affected by differences in empathy (a process linking self with others). Thus empathy may

enhance guilt (and the relief associated with reparation) or occasionally initiate shame (when witnessing shamed others; Lewis, 1992). In normal development, empathy with others is thought to be aligned with or even necessary for adaptive guilt (Hoffman, 1982; Zahn-Waxler & Robinson, 1995), whereas it is less compatible with self-focused shame – a possibility needing empirical study. At high intensities, either guilt or shame may, like anger, preclude or preempt an empathic response and be less generally adaptive (Lewis, 1971). At a moderate or high levels, anger would not only preclude or preempt an empathic response, but also other adaptive responses characterized by guilt or shame. Therefore we expected to find negative relations between anger and the other emotions we assessed.

In addition to these considerations, anger, empathy, shame, and guilt should covary because all three are influenced by specific and general socialization practices (e.g., Strayer and Roberts, in press), a possibility that we will be investigating in future analyses of our data. Our first step, which we report here, is to establish their relations and the relative importance of these emotions for our outcomes.

## Results

### *Descriptive Findings.*

As shown in Figures 3 and 4 and Table 8, these children were described across sources as, on average, moderately high on empathy, guilt, and prosocial

behavior, and not particularly angry or antisocial.

*Relations between the emotions.*

As shown in the Table 9, our expectations for empathy, guilt, and anger were confirmed. Children who were described across sources as having high levels of empathy were also described as having high levels of guilt and relatively low levels of anger. In contrast, shame was positively related to anger, suggesting that shaming may cause anger or resentment, or that others may respond to children's anger in denigrating ways, or that some types of parenting may result in both shame and resentment.<sup>1</sup>

*Relations between prosocial and antisocial behaviors.*

As found in many samples, children who are friendly with peers are also cooperative with parents and teachers. As expected, antisocial behavior was negatively correlated with both these outcomes (Table 9).

*Relations between emotions and behaviors.*

The correlations shown in Table 9 supported our expectations for the relations between prosocial and antisocial behaviors and anger, empathy, and guilt. In contrast, shame was unrelated to these outcomes.

Because of the moderate to strong relations across our measures of emotions, we used multiple regression analyses to clarify the relations shown in Table 9.

As shown in Table 10, best friend, teacher and parent reports of behavior

that was friendly to peers was strongly predicted by children's empathy, guilt, and anger. Together, emotional factors accounted for 69 percent of the variance in friendly behavior, with empathy accounting for 14 percent of the variance independently of the other predictors.

In contrast, behavior that was rated by parents and teachers as cooperative with adults was best predicted by children's anger and guilt (but not their empathy – Table 11). These two predictors accounted for 53 percent of the variance in cooperative behavior.

As shown in Table 12, 23 percent of the variance in antisocial behavior was predicted by guilt and empathy. As expected, children characterized as relatively antisocial by parents, teachers, and best friends were also described as having lower levels of both guilt and empathy.

### Discussion

Results support the importance of emotional factors in prosocial behaviors. Jointly, they accounted for two-thirds of the variance in behavior that was friendly to peers, half of the variance in cooperative behavior with adults, and nearly a quarter of the variance in antisocial behavior. Moreover, empathy, guilt, and anger each made important independent contributions to different aspects of prosocial behavior, suggesting that each has an important place in different behavioral systems.

Consistent with our earlier findings (Roberts & Strayer, 1996), empathy was

an especially important predictor of prosocial, non-aggressive, relations with peers. In both cases, correlations between empathy and prosocial, nonaggressive behavior were strong (.51 in the earlier sample, and .72 in the current sample). We believe that the strength of these relations is due in part to the fact that we were able to assess constructs across sources in both studies and use latent variables to reduce the error variance and source bias that are always present in single measures.

We did not, however, replicate the gender differences that we found in our earlier sample, in which girls' empathy predicted their prosocial behavior with friends, whereas boys' empathy was clearly related to their prosocial behavior in the wider world of peers. In the current sample, girls' empathy, as well as boys', was related to prosocial behavior with peers in general, as well as with friends. It is not possible to say if this is a sample difference, or is due to the somewhat different measures used in the two studies.

In contrast to peer relations, empathy in this sample did not seem to motivate cooperation with adults. Instead, cooperation with adults was associated with feelings of responsibility (guilt) and the absence of anger or resentment. This differential pattern is consistent with views that adult-child and child-child relationships are qualitatively different (Hartup, 1979, Piaget, 1932), and with suggestions that committed compliance and cooperativeness are due primarily to parental warmth, guidance, and encouragement of autonomy (Grolnick & Farkas,

2002) rather than to child variables such as empathy. Thus although more empathic children might be more motivated to cooperate with teachers and parents, other factors may be predominant.

Although it may seem somewhat surprising that anger failed to emerge as a clear, strong predictor of antisocial behavior, this may be due to the way in which we assessed this construct. Following Block (1985), we characterized antisocial children as distrustful, stubborn and uncooperative, withdrawn, and disliked. We would not expect anger to be as strongly linked to these behaviors as to more aggressive, unfriendly behaviors with peers or to more resistive, noncompliant behaviors with adults. Moreover, levels of antisocial behavior were low to moderate in this sample. It may be that anger would be more characteristic of children who were clearly antisocial.

Despite these limitations, the importance of anger is indicated by the fact that it participated in our other regression analyses, where anger predicted behavior that was unfriendly or aggressive with peers and resistant with adults. Its strong association with this aspect of adult-child relationships suggests that anger or resentment may be linked to adult-child conflict. Consistent with this, home observations of preschool-age children indicate that children's anger occurs more frequently following parental directives than it does in other situations (Roberts and Strayer, 1987).

In our current sample, anger predicted prosocial, nonaggressive behavior

with peers independently of empathy (accounting for an additional 9% of the variance, and 5% of the variance independently of empathy and guilt). In contrast, in our earlier sample (Roberts & Strayer, 1996) anger was not directly linked to prosocial behavior but had only an indirect effect via empathy. We will be doing further analyses of our current data set to examine the relations between anger, empathy, and prosocial behavior more closely. In an article recently accepted for publication (Strayer and Roberts, in press), we report important relations between parents' empathy and parenting practices and children's empathy, all mediated by children's anger. We are interested in seeing if these family relations replicate in our current sample.

Finally, the importance of guilt in all our regression equations suggests the importance of internalization and self-regulation for these aspects of prosocial, cooperative behavior with peers and adults (Grolnick & Farkas, 2002). The development and regulation of guilt may be an important link between the self-regulation of emotions and the self-regulation of behavior. Thus guilt, as well as empathy and anger, merits inclusion in future research on prosocial and antisocial behavior. We hope that the results that we have presented here encourage others to examine the role of emotional factors in prosocial and aggressive behavior.

References

- Aristotle (1991). *Politics* (trans. B. Jowett). In J. Barnes (Ed.), *The Complete Works of Aristotle*, Volume 2 (pp 1986-2129). Princeton, New Jersey: Princeton University Press.
- Barnett, M. (1982). Empathy and prosocial behavior in children. In T. Field, A. Huston, H. Quay, L. Troll, & G. Finley (Eds.), *Review of Human Development*. New York: Wiley.
- Barnett, M. (1987). Empathy and related responses in children. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its Development* (pp. 146-162). New York: Cambridge University Press.
- Batson, C. D., Fultz, J., & Schoenrade, R.A. (1987). Adults' emotional reaction to the distress of others. In N. Eisenberg & J. Strayer (Eds.) *Empathy and its Development* (pp. 163-184). New York: Cambridge University Press.
- Barrett, K. C. (1995). A functionalist approach to shame and guilt. In J.P. Tangney & K.W. Fisher (Eds.), *Self-conscious Emotions* (pp. 25-63). New York: Guilford Press
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs*, 4, (1, Pt.2).
- Block, J. (April, 1985). *Distinguishing between antisocial behavior and undercontrol*. Paper presented at meetings of the Society for Research in Child Development, Toronto.

Bowlby, J. (1973). *Attachment and Loss: Vol. 2. Separation*. New York: Basic Books.

Bowlby, J. (1982). *Attachment and Loss. Volume 1, Attachment*. 2<sup>nd</sup> ed. New York: Basic Books.

Bretherton, I., (1995). Attachment theory and developmental psychopathology. In D. Cicchetti & S. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology, Vol. 6: Emotion, Cognition, and Representation* (pp. 231-260). Rochester, NY: University of Rochester Press.

Breuer, J., & Freud, S. (1893/1959). On the psychological mechanism of hysterical phenomena. In J. Riviere (Ed.), *Sigmund Freud, Collected Papers* (Vol. 1, pp. 24-41). New York: Basic Books.

Cohen, D. & Strayer, J. (1996). Empathy in conduct disorder and comparison youth. *Developmental Psychology*, 32, 988-998.

Coie, J. & Dodge, K. (1998). Aggression and antisocial behavior. In W. Damon (Ed.) *Handbook of Child Psychology*, Vol. 3, N. Eisenberg (Vol. Ed.), *Social Emotional, and Personality Development* (5th ed., pp. 779-862). New York: Wiley

Connolly, K., & Bruner, J. (1974). Competence: its nature and nurture. In K. Connolly & J. Bruner (Eds.), *The Growth of Competence* (pp. 3-10). New York: Academic Press.

Dodge, K. A. (1991). Emotion and social information processing. In J. Garber and K. A. Dodge (Eds.), *The Development of Emotion Regulation and Dysregulation*.

Cambridge: Cambridge University Press

Dodge, K. (2002). Mediation, moderation, and mechanisms in how parenting affects children's aggressive behavior. In John Borkowski, Sharon Ramey, & Marie Bristol-Power (Eds.) *Parenting and the child's world: Influences on academic, intellectual, and social-emotional development. Monographs in parenting* (pp. 215-229). Mahwah, NJ, US: Lawrence Erlbaum.

Dweck, C., & Elliot, E. (1983). Achievement motivation. In P. Mussen (Ed.), *Handbook of Child Psychology*, (Vol. 4), E. Hetherington (Vol. Ed.), *Socialization, Personality and Social Development* (pp. 643-692). New York: Wiley.

Dweck, C., & Wortman, C. (1982). Learned helplessness, anxiety, and achievement motivation: neglected parallels in cognitive, affective, and coping responses. In H. Krohne & L. Laux (Eds.), *Achievement, Stress, and Anxiety*. Washington, D.C.: Hemisphere.

Eisenberg, N., & Miller, P. A. (1987a). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101(1), 91-119.

Eisenberg, N., & Miller, P. A. (1987b). Empathy, sympathy, and altruism: Empirical and conceptual links. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its Development* (pp 292-316). New York: Cambridge University Press.

Grolnick, W. & Farkas, M. (2002). Parenting and the development of children's self-regulation. In M. Bornstein (Ed.), *Handbook of Parenting*, second edition, volume 5: *Practical Issues in Parenting* (pp. 89-110).

Hartup, W. (1979). The social worlds of childhood. *American Psychologist*, 34, 944-950.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319-340.

Hoffman, M. L. (1975). Developmental synthesis of affect and cognition and its implications for altruistic motivation. *Developmental Psychology*, 11, 606-622.

Hoffman, M. L. (1987). The contribution of empathy to justice and moral judgment. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its Development* (pp. 47-80.) New York: Cambridge University Press.

Kopp, C. (1989). Regulation of distress and negative emotions: a developmental view. *Developmental Psychology*, 25, 343-354.

Lewis, H. B. (1971). *Shame and guilt in neurosis*. New York: International Universities Press.

Lewis, M. (1992). *Shame: The exposed self*. New York: Free Press.

Lewis, M., & Michalson, L. (1983). *Children's Emotions and Moods: Developmental Theory and Measurement*. New York: Plenum.

Lindsay-Hartz, J., deRivera, J., & Mascolo, M.F. (1995) Differentiating guilt and shame and their effects on motivation. In J.P. Tangney & K.W. Fischer (Eds.), *Self-conscious Emotion*. New York: Guilford.

Luyten, P., Fontaine, J., & Corveleyn, J. (2002). Does the Test of Self-conscious Affect (TOSCA) measure maladaptive aspects of guilt and adaptive

aspects of shame? An empirical investigation. *Personality and Individual Differences*, 33, 1373-1387.

Maccoby, E. (1980). *Social Development: Psychological Growth and the Parent-child Relationship*. NY: Harcourt, Brace, Jovanovich.

Maier, S. & Seligman, M. (1976). Learned helplessness: theory and evidence. *Journal of Experimental Psychology: General*, 105, 3-46.

Patterson, G.R., DeBaryshe, B.D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, 44, 329-335.

Piaget, J. (1932/1983). *The Moral Judgment of the Child* (M. Gabrain, trans.). Harmondsworth, England: Penguin Books.

Piaget, J., & Inhelder, B. (1966/1969). *The Psychology of the Child* (H. Weaver, trans.). New York: Basic Books.

Roberts, W. (1984). *Family interactions and child competence in a preschool setting*. Unpublished doctoral dissertation, Simon Fraser University, Burnaby, BC.

Roberts, W. (1999). The socialization of emotion expression: Relations with prosocial behavior and competence in five samples. *Canadian Journal of Behavioural Science*, **31**, 72-85.

Roberts, W. & Strayer, J. (1987). Parents' responses to the emotional distress of their children: Relations with children's competence. *Developmental Psychology*, 23, 415-422.

Roberts, W. & Strayer, J. (1996). Emotional expressiveness, empathy, and

prosocial behavior. *Child Development*, 60, 140-177.

Rutter, M. (1981). Stress, coping, and development: some issues and some questions. *Journal of Child Psychology and Psychiatry*, 22, 323-356.

Smith, Adam. (1759/2000). *The Theory of Moral Sentiments*. Amherst, New York: Prometheus Books.

Sroufe, L. A. (1979). Socioemotional development. In J. Osofsky (Ed.), *Handbook of Infant Development* (pp.462-516). New York: Wiley.

Sroufe, L. A., Egeland, B. & Carlson, E. (1999). One social world: the integrated development of parent-child and peer relationships. In W. A. Collins & B. Laursen (Eds.), *Relationships as Developmental Contexts: The Minnesota Symposia on Child Psychology, Volume 30* (pp. 241-262). Mahwah, NJ: Erlbaum.

Strayer, J. (1987). Affective and cognitive perspectives on empathy, In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development*. New York: Cambridge University Press.

Strayer, J. (1993). Children's concordant emotions and cognitions in response to observed emotions. *Child Development*, 64, 188-201.

Strayer, J. (2002). The dynamics of emotions and lifecycle identity. *Identity: An International Journal of Theory and Research*. Special Issue, 2, 47-79.

Strayer, J. & Roberts, W. (in press). Children's Anger, Emotional Expressiveness, and Empathy: Relations with Parents' Empathy, Emotional Expressiveness, and Parenting Practices. *Social Development*.

Tangney, J. (1990). Assessing individual differences and proneness to shame and guilt: development of the self-conscious affect and attribution inventory. *Journal of Personality and Social Psychology*, 59, 102-111.

Tangney, J. (1996). Conceptual and methodological issues in the assessment of shame and guilt. *Behavior Research and Therapy*, 34, 741-754.

Thompson, R. (1994). Emotion regulation: A theme in search of definition. In N. Fox (Ed.), *The Development of Emotion Regulation: Biological and Behavioral Considerations* (pp. 25-52). *Monographs of the Society for Research in Child Development*. 59 (2-3, Serial No. 240).

Underwood, B., & Moore, B. (1982). Perspective taking and altruism. *Psychological Bulletin*, 91, 143-173.

Zahn-Waxler, C. & Robinson, J. (1995). Empathy and guilt: early origins of feelings of responsibility. In J. P. Tangney & K.W. Fisher (Eds.), *Self-conscious Emotions* (pp. 174-197). New York: Guilford Press.

Footnotes

1. The third possibility is that the association results from a third factor influencing both variables, for example, parents focusing on the child's never doing well-enough, lack of praise, diminution of the child's attention-seeking ventures, public humiliations (minor ones such as repeated teasing or more major ones like doing things that knowingly bait the child – putting him/her into conflict situations in which the adult will always have the upper hand). The child, understandably, would get angry in such situations, but might not have the verbal or action resources, or the power status, to reply effectively, and would thus remain shamed but angry or vengeful and would certainly feel "wronged" – the beginnings, perhaps, of an "unjust world" attitude.

Table 1. Friendly (vs. hostile with peers; Baumrind, 1971); prosocial

Sample Items		
<ul style="list-style-type: none"> <li>• Helps other children carry out their activities.</li> <li>• Shares possessions or materials with other children.</li> <li>• Does not tease or taunt other children.</li> <li>• Rarely aggressive (but may defend self if attacked)</li> <li>• <i>Best Friend</i> My friend knows how to work together with other kids, can cooperate.</li> <li>• <i>Best Friend</i> My friend is very friendly and nice to me and other kids.</li> <li>• <i>Best Friend</i> My friend sometimes hurts my feelings (teases me or makes me feel bad). <i>loads negatively</i></li> </ul>		
Construct	Source (rated by)	Comments
Friendly to peers	Teacher; CR-Q	14 items; $\alpha = .89$
	Father; CR-Q	12 items; $\alpha = .74$
	Mother; CR-Q	12 items; $\alpha = .70$
Prosocial	Best Friend	10 items; $\alpha = .74$
		<u>Loading</u>
Latent Friendly to peers, Prosocial	Mother & Father	.79
	Teacher	.78
	Best Friend	.48

Table 2. Cooperative with adults (Baumrind, 1971)

Sample Items		
<ul style="list-style-type: none"> <li>• Respects limits, rules and routines.</li> <li>• Does not challenge adult authority.</li> <li>• Obedient.</li> </ul>		
Construct	Source (rated by)	Comments
Cooperative with adults	Teacher; CR-Q	6 items; $\alpha = .89$
	Father; CR-Q	6 items; $\alpha = .77$
	Mother; CR-Q	6 items; $\alpha = .67$
		Loading
Latent Cooperative with adults	Mother & Father	.82
	Teacher	.82

Table 3. Antisocial (Block, 1985)

Items		
<ul style="list-style-type: none"> <li>• Distant or withdrawn; a bit of a loner</li> <li>• Tends to be suspicious and distrustful of others</li> <li>• Is stubborn, unwilling to accept suggestions or "go along" with others <i>(teachers only)</i></li> <li>• Is often uncooperative</li> <li>• Arouses dislike in adults, children.</li> </ul>		
Construct	Source (rated by)	Comments
Antisocial	Teacher; CR-Q	6 items; $\alpha = .77$
	Mother; CR-Q	5 items; $\alpha = .59$
	Father; CR-Q	5 items; $\alpha = .44$
		Loading
Latent Antisocial	Mother & Father	.71
	Teacher	.71

Table 4. Empathy

Sample Items		
<ul style="list-style-type: none"> <li>• Understands other child's viewpoint in interactions or disagreements.</li> <li>• Is sensitive and responsive to others' sadness, fear, or anxiety .</li> <li>• Is aware of the feelings of others.</li> <li>• Is moved or touched emotionally by others' feelings.</li> <li>• <i>Best Friend</i> When I'm sad, It makes my friend feel sad too.</li> <li>• <i>Best Friend</i> When I'm happy, it makes my friend happy too.</li> <li>• <i>Best Friend</i> My friend usually knows how I feel, even if I don't tell her/him.</li> </ul>		
Construct	Source (rated by)	Comments
Empathy	Teacher; CR-Q	11 items; $\alpha = .86$
	Mother; CR-Q	10 items; $\alpha = .73$
	Father; CR-Q	10 items; $\alpha = .72$
	Best Friend	6 items; $\alpha = .70$
		Loading
Latent Empathy	Teacher	.80
	Mother & Father	.65
	Best Friend	.54

Table 5. Guilt

Sample Items		
<ul style="list-style-type: none"> <li>• Accepts responsibility for misbehaving or for actions that contribute to an accident</li> <li>• Shows concern for what is right and wrong; concerned about fairness, the welfare of others.</li> <li>• Apologizes to others when appropriate.</li> <li>• <i>Best Friend</i> If my friend does something wrong, s/he lets people know s/he is sorry.</li> <li>• <i>Best Friend</i> My friend sees when something is his/her fault, and doesn't try to push it off on other people.</li> </ul>		
Construct	Source (rated by)	Comments
Guilt	Teacher; CR-Q	5 items; $\alpha = .74$
	Best Friend	6 items; $\alpha = .63$
	Father; CR-Q	5 items; $\alpha = .60$
	Mother; CR-Q	5 items; $\alpha = .58$
		Loading
Latent Guilt	Teacher	.73
	Best Friend	.69
	Mother & Father	.53

Table 6. Shame

Sample Items		
<ul style="list-style-type: none"> <li>• Is sensitive to being teased or ridiculed.</li> <li>• Is concerned about what other children think of him/her; wants to "look good" to others.</li> <li>• Is very upset by being the focus of gossip or criticism.</li> <li>• Easily embarrassed, even more than appropriate.</li> <li>• <i>Best Friend</i> My friend sometimes acts like s/he is ashamed of himself/herself.</li> <li>• <i>Best Friend</i> My friend is not afraid of making mistakes and tries things even if s/he may look foolish. <i>loads negatively</i></li> </ul>		
Construct	Source (rated by)	Comments
Shame	Teacher; CR-Q	7 items; $\alpha = .86$
	Mother; CR-Q	6 items; $\alpha = .72$
	Father; CR-Q	5 items; $\alpha = .67$
	Best Friend	5 items; $\alpha = .47$
		Loading
Latent Shame	Best Friend	.77
	Mother & Father	.61
	Teacher	.51

Table 7. Anger

Sample Items		
•	Minor frustrations lead to anger; is easily irritated.	
•	Is difficult to get along with; has a temper.	
•	Is not able to control his/her anger or temper	
•	Expresses anger inappropriately (excessive, out of context, or vengeful).	
•	<i>Best Friend</i> My friend gets angry a lot at other kids.	
•	<i>Best Friend</i> My friend gets angry a lot when we're playing.	
Construct	Source (rated by)	Comments
Anger	Teacher; CR-Q	8 items; $\alpha = .89$
	Father; CR-Q	8 items; $\alpha = .79$
	Mother; CR-Q	8 items; $\alpha = .79$
	Best Friend	2 items; $\alpha = .63$
		Loading
Latent Anger	Mother & Father	.77
	Best Friend	.69
	Teacher	.68

Table 8. Means and standard deviations for emotions and behaviors

Factor	Scale source	Mean	SD
Anger	Best Friend	3.5	1.4
	Mother	3.2	1.2
	Father	3.4	1.3
	Teacher	3.1	1.5
Empathy	Best Friend	6.8	1.3
	Mother	6.7	.9
	Father	6.4	.9
	Teacher	6.2	1.1
Guilt	Best Friend	6.3	1.3
	Mother	6.3	1.1
	Father	6.1	1.3
	Teacher	6.4	1.3
Shame	Best Friend	4.8	1.3
	Mother	5.4	1.4
	Father	5.9	1.4
	Teacher	5.3	1.6

(table continues)

Factor	Scale source	Mean	SD
Antisocial	Mother	2.7	1.0
	Father	2.8	1.0
	Teacher	3.2	1.3
Friendly to peers	Best Friend	7.9	.8
	Mother	7.1	.8
	Father	6.9	.9
	Teacher	6.7	1.2
Cooperative with adults	Mother	6.8	1.1
	Father	6.5	1.4
	Teacher	7.3	1.7

Notes. Adult scales scored 1 (= most uncharacteristic) to 9 (= most characteristic).

Best friend scales scored 1 to 4, with tabled values multiplied by 9/4 to facilitate comparison with adult scales.

Table 9. Correlations between latent variables for emotions and prosocial behavior.

Latent Variables	Anger	Empathy	Guilt	Shame
Anger	1.00			
Empathy	-0.42**	1.00		
Guilt	-0.39**	0.49**	1.00	
Shame	0.29*	0.07	0.03	1.00
Antisocial	0.34**	-0.38**	-0.44**	0.04
Friendly	-0.57**	0.72**	0.65**	0.01
Cooperative	-0.62**	0.44**	0.60**	-0.05
	Antisocial	Friendly	Cooperative	
Antisocial	1.00			
Friendly	-0.55**	1.00		
Cooperative	-0.45**	.66**	1.00	

Notes.  $N = 99$ .

\*  $p < .01$ ; \*\*  $p < .001$ . All tests are two-tailed.

Table 10. Multiple Regression Analysis: Friendly, prosocial

Multiple  $R^2 = .69$ ,  $F(3,95) = 69.86$ ,  $p < .0001$ 

Predictor	$r$	$\beta$	$sr^2$
Empathy	0.72***	0.45***	0.14***
Guilt	0.65***	0.33***	0.08***
Anger	-0.57***	-0.25***	0.05***

Notes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Tests are two-tailed.  $N = 99$ . $r$  = simple (raw) correlation $\beta$  = standardized regression coefficient $sr^2$  = the squared semipartial correlation; the variance accounted for independently of all other predictors.

Table 11. Multiple Regression Analysis: Cooperative with adults

Multiple  $R^2 = .53$ ,  $F(2,96) = 54.61$ ,  $p < .0001$ 

Predictor	$r$	$\beta$	$sr^2$
Anger	-0.62***	-0.45***	0.17***
Guilt	0.60***	0.43***	0.15***

Notes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Tests are two-tailed.  $N = 99$ .

$r$  = simple (raw) correlation

$\beta$  = standardized regression coefficient

$sr^2$  = the squared semipartial correlation; the variance accounted for independently of all other predictors.

Table 12. Multiple Regression Analysis: Antisocial

Multiple  $R^2 = .23$ ,  $F(2,96) = 14.11$ ,  $p < .0001$ 

Predictor	$r$	$\beta$	$sr^2$
Guilt	-0.44***	-0.33**	0.08**
Empathy	-0.38***	-0.22*	0.04*

Notes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Tests are two-tailed.  $N = 99$ .

$r$  = simple (raw) correlation

$\beta$  = standardized regression coefficient

$sr^2$  = the squared semipartial correlation; the variance accounted for independently of all other predictors.

Figure Captions

*Figure 1.* A cognitive-emotional process model of behavior

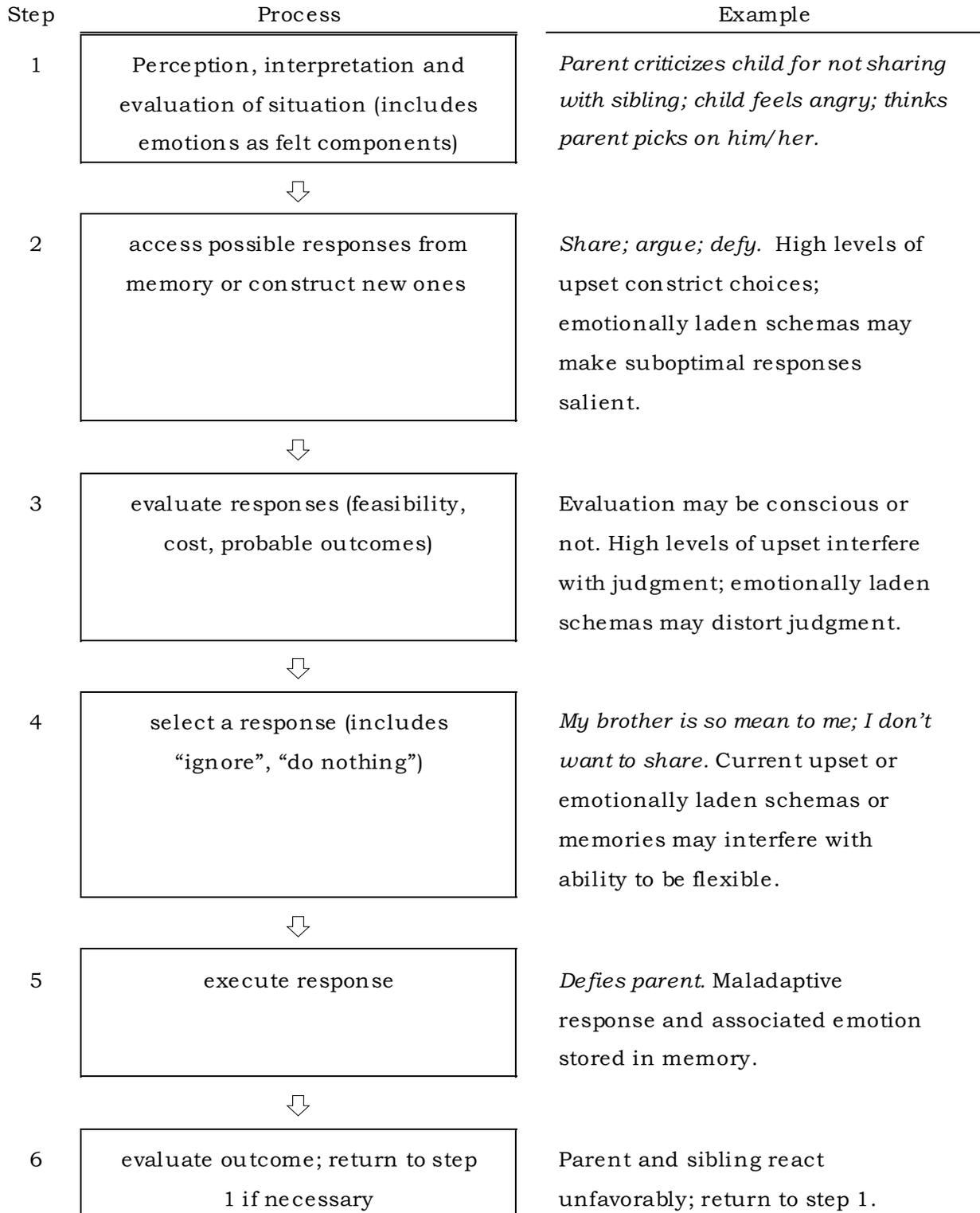
*Figure 2.* Path model for girls and boys,  $N = 73$  (Roberts & Strayer, 1996). Empathy accounted for 26% of the variance in prosocial behaviors,  $F(1,71) = 24.95$ ,  $p < .00001$

*Figure 3.* Path model for boys,  $N = 35$  (Roberts & Strayer, 1996). Empathy accounted for 55% of the variance in prosocial behaviors,  $F(1,33) = 40.33$ ,  $p < .00001$

*Figure 4.* Means and 95% confidence intervals for emotions, by source.

*Figure 5.* Means and 95% confidence intervals for behaviors, by source.

Figure 1. A cognitive-emotional process model of behavior



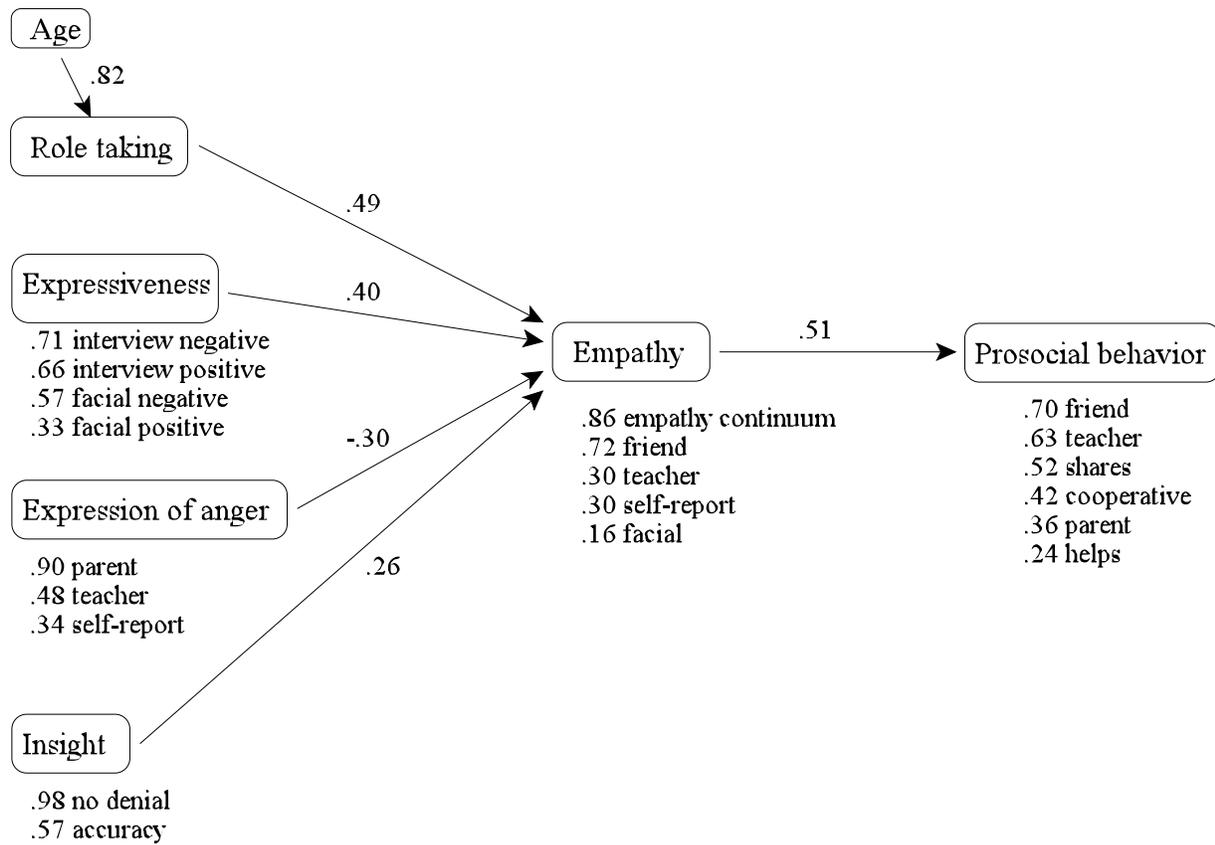


Figure 2. Path model for girls and boys,  $N = 73$  (Roberts & Strayer, 1996). Empathy accounted for 26% of the variance in prosocial behaviors,  $F(1,71) = 24.95, p < .00001$

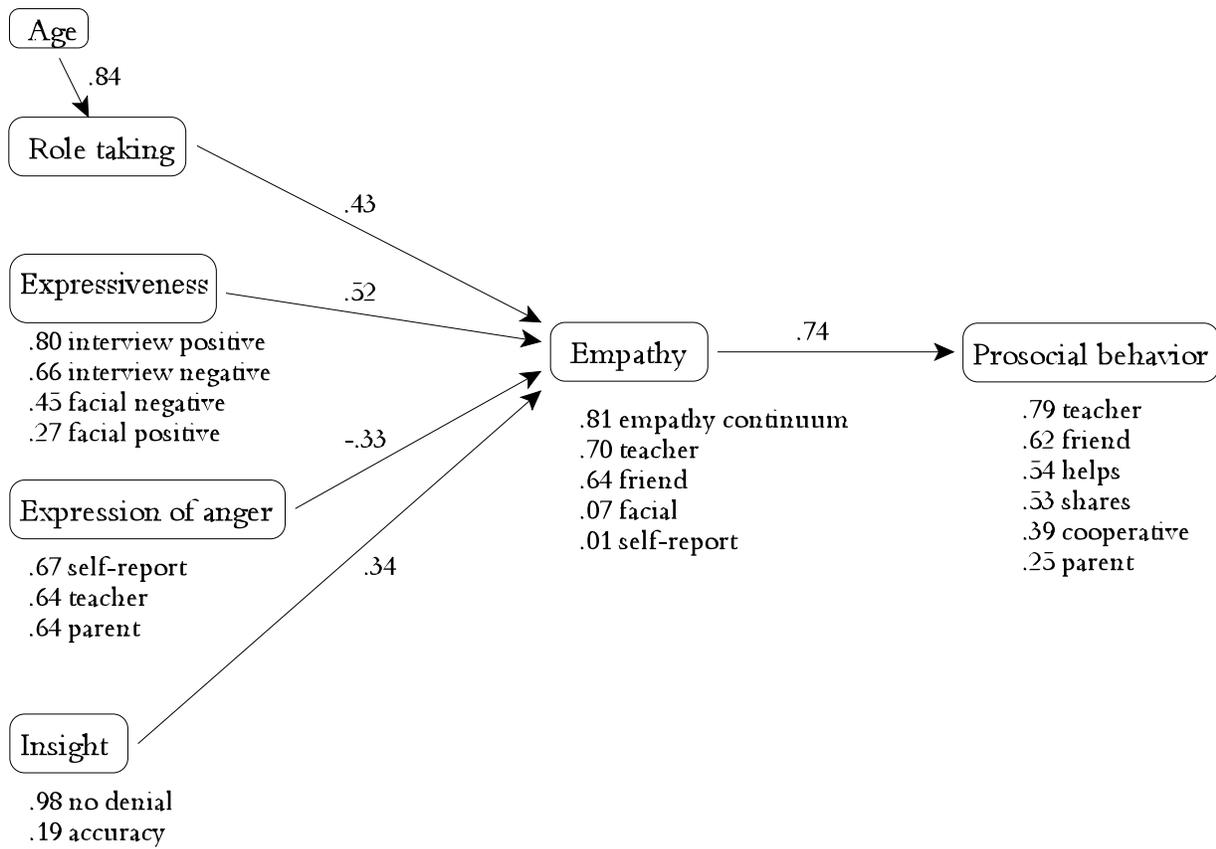


Figure 3. Path model for boys,  $N = 35$  (Roberts & Strayer, 1996). Empathy accounted for 55% of the variance in prosocial behaviors,  $F(1,33) = 40.33, p < .00001$

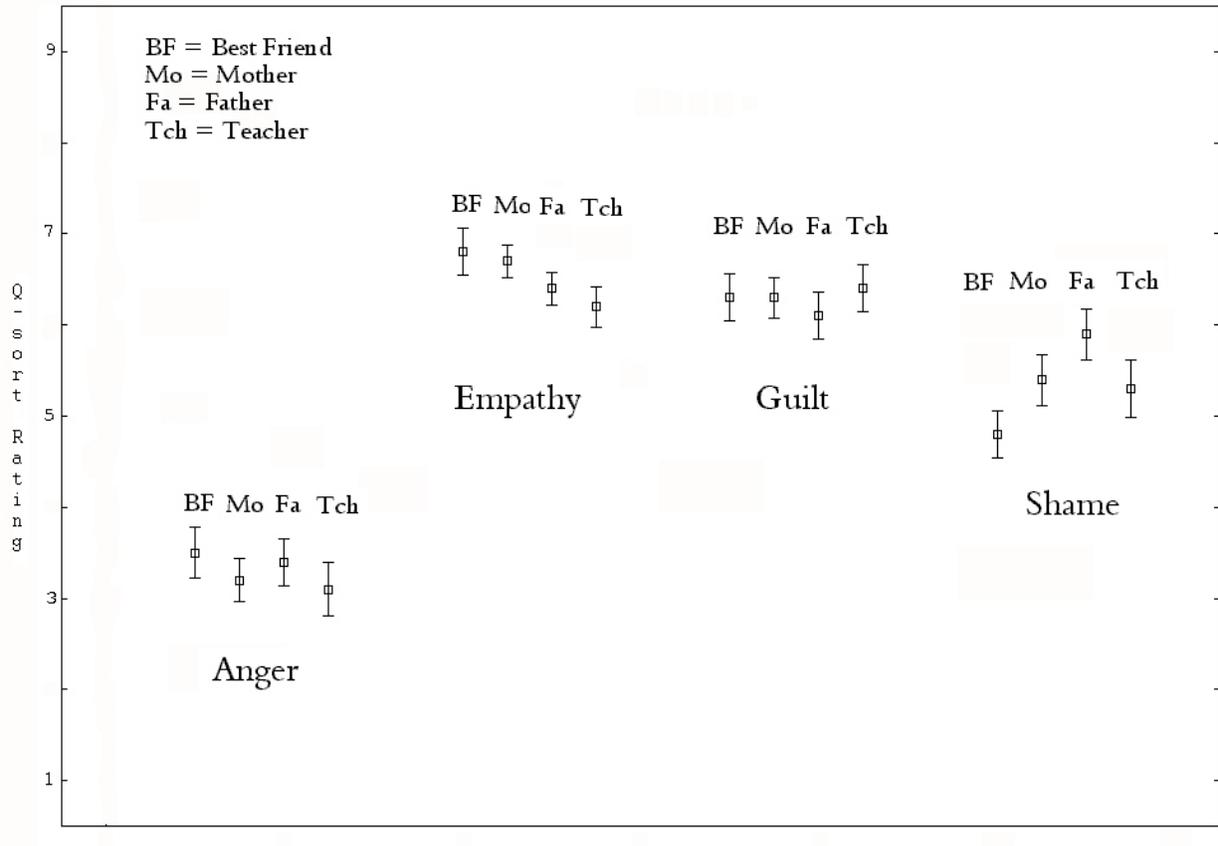


Figure 4. Means and 95% confidence intervals for emotions, by source.

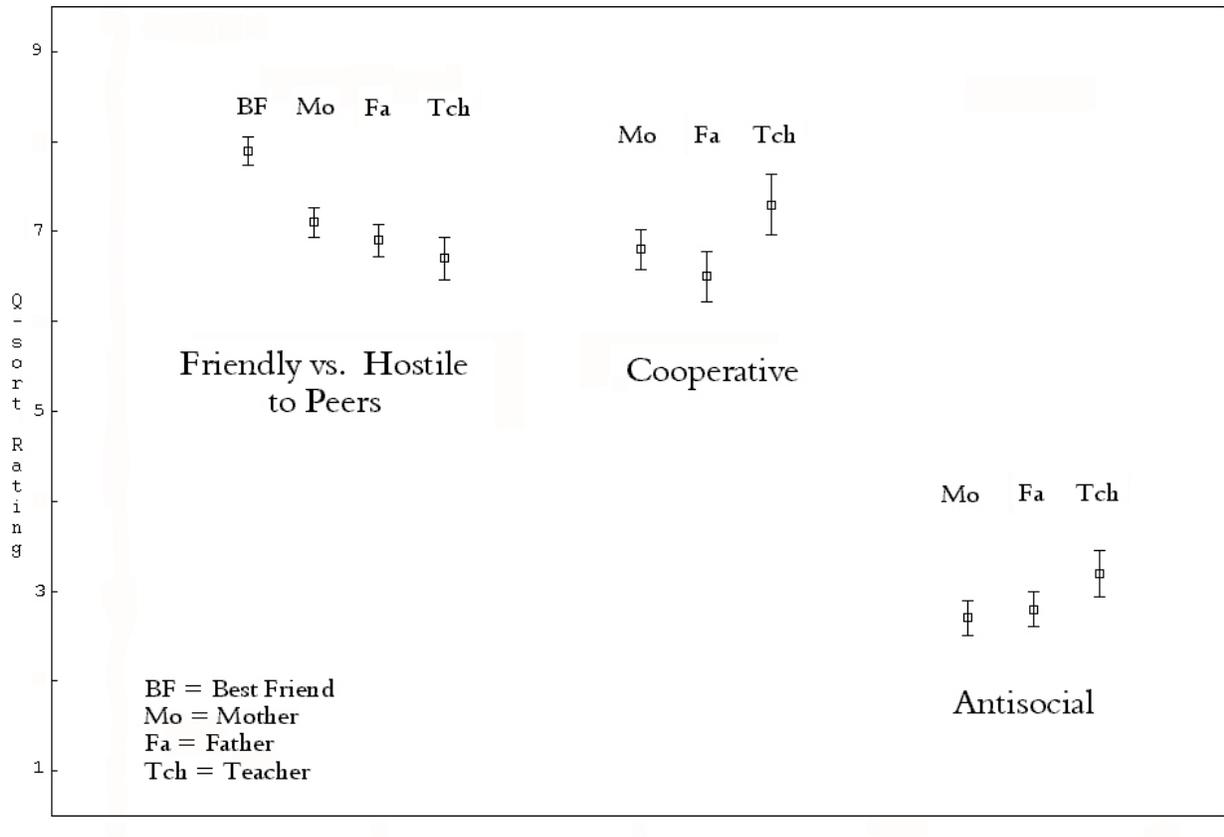


Figure 5. Means and 95% confidence intervals for behaviors, by source.