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# Emotional Expression Management and Social Acceptance in Childhood: Ability, Strategy, and Gender.

Gregory S. Young

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EMOTIONAL EXPRESSION MANAGEMENT AND SOCIAL ACCEPTANCE IN  
CHILDHOOD: ABILITY, STRATEGY, AND GENDER

By

Gregory S. Young

B.A. University of Colorado, 1993

A THESIS

Submitted in Partial Fulfillment of the

Requirements for the Degree of

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(in Psychology)

The Graduate School

The University of Maine

August, 2001

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EMOTIONAL EXPRESSION MANAGEMENT AND SOCIAL  
ACCEPTANCE IN CHILDHOOD: ABILITY, STRATEGY, AND GENDER

By Gregory S. Young

Thesis Advisor: Dr. Janice Zeman

An Abstract of the Thesis Presented  
in Partial Fulfillment of the Requirements for the  
Degree of Doctor of Philosophy  
(in Psychology)  
August, 2001

The present study was designed to examine the relationship between children's ability to manage emotional expressions and peer acceptance. Specifically, using a mild mood induction paradigm, children between the ages of 8- to 10-years were instructed to neutralize and dissemble genuinely negative emotions. Children's ability to effectively manage their negative emotional expressions was then examined with respect to gender differences and in relation to peer acceptance ratings. Results indicated that girls were significantly better than boys at substituting positive expressions for genuine negative ones, were marginally worse than boys at neutralizing negative expressions, and overall were significantly more expressively positive than boys. With respect to social acceptance, findings revealed that the ability to neutralize negative expressions was significantly related to overall acceptance ratings for boys. For girls, the ability to substitute positive expressions for genuinely negative ones was significantly related to peer acceptance as rated only by girls. Taken together, these results support the general hypothesis that the ability to manage emotional expressions is an important component in children's social functioning.

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## INTRODUCTION

The idea that emotional expressions serve to regulate and negotiate social interactions has a long history in the study of human behavior. From Darwin's account of the adaptive function of emotional expressions (Darwin, 1872/1965) to Ekman's work on display rules (Ekman & Friesen, 1969) and the current "functionalist" theory of emotion (Barrett, 1993; Campos, Mumme, Kermoian, & Campos, 1994), emotional expressiveness has been treated as a fundamental component of interpersonal communication. As such, many have suggested that individual differences in the ability to regulate emotional displays are directly related to differences in adaptive interpersonal functioning (Feldman, Philippot, & Custrini, 1991; Halberstadt, 1991; Parke, 1990; Saarni, 2000). A child who is unable or unwilling, for example, to regulate his or her expressions of anger or sadness toward peers may be at risk for subsequent social rejection. Likewise, a child who is able to express sympathy or enjoyment appropriately to peers will likely have positive peer relations.

Although it is intuitively appealing to assume that emotional expression management is a critical skill for adaptive interpersonal functioning, research has only recently begun to document the nature of this relationship. Several lines of research have indicated that certain components of emotional functioning, such as emotion understanding (e.g., Cassidy, Parke, Butkovsky, & Braungart, 1992; Denham, McKinley, Couchoud, & Holt, 1990), emotion cue decoding (e.g., Dodge, Murphy, & Buchsbaum, 1984; Edwards, Manstead, & MacDonald, 1984), and emotion regulation (e.g., Eisenberg et al., 1997; Hubbard, Coie, & Dodge, 1993) are related to

measures of social functioning. Few studies, however, have specifically examined individual differences in the management of emotional expressions in relation to social functioning.

The present study was designed to understand further how children's ability to dissemble negative emotional expressions is related to social acceptance. Specifically, individual differences in children's ability to use different regulatory strategies for managing negative emotional expressions (i.e., neutralization versus substitution) were examined in relation to social acceptance. Moreover, given previous research on the normative development of emotional expression management in both males and females, the present study also examined gender as an important moderating variable.

Before considering the present study, however, it is necessary to give careful consideration to the definition of emotional expression management and descriptive research to date. As such, the following discussion will focus on defining emotional expression management and presenting a theoretical framework. Using this framework, descriptive research on emotional expression management will be considered, followed by a review of literature suggesting possible links between emotional expression management and social functioning.

### Theoretical Background

To provide an interpretive framework for research on the development of emotional expression management and how it might relate to individual differences in social acceptance, it is necessary to consider the factors that contribute to individual differences in the ability to manage

emotional expressions. As a starting place, it is helpful to define emotional expression management as a skill involving the flexible modification of any behavior that communicates one's internal affective state to others. Many communicative behavioral responses can be conceptualized as resulting directly from internal affective states. For certain behaviors, such as facial expressions, vocalizations, and even physiological responses (e.g., trembling, flushing, perspiring), it is reasonable to assume that links between behavior and internal affective states are biologically prepared (Ekman, 1972; Izard, 1977; Tomkins, 1962; but see also Lewis & Michalson, 1985). Indeed, research suggesting the universality of emotional expression (e.g., Ekman & Friesen, 1969) supports the notion that internal affective states give rise to certain innate, "hard-wired" behavioral responses (e.g., the emotional experience of joy leads to the biologically prepared behavior of smiling). Alternatively, other behavioral responses may be linked to internal emotional affective states through processes of learning. Aggression, for example, as a behavioral manifestation of anger, may be learned through socialization processes such as modeling and imitation. Regardless of whether behavioral responses are "hard-wired" or learned, however, the management of emotionally expressive behavior is assumed to entail the modification of any veridical correspondence between one's internal affective state and subsequent behavioral response. In general, then, the more an individual is able to alter affectively determined behavioral responses (e.g., facial expression, vocalizations, body language), the more skilled he or she is at managing emotional expressions.

Central to emotional expression management as defined above is the ability to dissociate one's internal affective state from the "default" behavioral manifestation of that state. Without at least a rudimentary ability to intervene between emotion-eliciting stimuli and spontaneous, immediate behavioral reactions (i.e., the ability to dissociate the two), emotional expression management would be impossible. Indeed, as Bronowski (1977) has suggested, the idea that appropriate behavioral responses (in any context) depend upon the ability to delay immediate elicited responses is considered fundamental to human behavior: "without it, it would not be possible to make neutral statements, to keep silent when angry, or to write scientific prose" (Bronowski, 1977, p. 115). The ability to delay one's immediate response then allows for the modification of that response; it makes possible the careful consideration and calculation of the most adaptive response given the particulars of the circumstances. In short, de-coupling stimulus and response allows for a tremendous degree of behavioral flexibility.

Evidence from developmental psychobiology suggests that the development of neural inhibitory mechanisms, particularly in the neocortical regions such as the orbital prefrontal cortex, is fundamental to the ability to delay immediate elicited responses (Schore, 1996). Although subcortical limbic systems are thought to be fundamental in the elicitation of basic spontaneous emotional reactions (e.g., LeDoux, 1994), the enervation of these subcortical areas by neocortical areas such as the orbital prefrontal cortex serves to delay such immediate responses and to modify behavior through more sophisticated cognitive processing (LeDoux, 1987). As Nelson (1994)

has suggested, the frontal lobe appears to be important in the conscious appraisal of both endogenous and exogenous stimuli, and in the formulation of more voluntary responses in order to maintain, inhibit, or even enhance emotional responses already activated subcortically. As neocortical inhibitory mechanisms develop then, there is an increasing ability to dissemble more "hard-wired" or over-learned veridical displays of internal affect.

Obviously, individual differences in the ability to dissemble emotional expressions will be due in part to individual differences in this underlying neurophysiology. For instance, a predisposition toward high emotional reactivity in subcortical limbic systems (e.g., the amygdala) may have a direct bearing on an individual's developing ability to regulate spontaneous emotional expressions (Kagan, 1994; Porges, Doussard-Roosevelt, & Maiti, 1994). The more emotionally reactive a child is to emotion eliciting stimuli, the more difficulty that child will have in delaying spontaneous emotional behaviors and modifying such behaviors in line with social demands. Research on temperament has indicated that this is indeed the case. For example, Kagan (1994; Kagan, Reznick, & Snidman, 1988; Kagan & Snidman, 1991) suggests that temperamentally inhibited children have lower reactivity thresholds in limbic systems governing avoidant emotional responses such as fear and anxiety. As a result, in contrast to temperamentally "uninhibited" children, these inhibited children are more likely to respond with withdrawal behaviors to threatening stimuli (e.g., strangers, unfamiliar objects and events). The relative strength of such reactions, in turn, will likely make the task of regulating such behaviors much more difficult (Thompson, 1994).

In addition to general limbic system reactivity, a child who evidences poor neocortical control mechanisms for governing such reactivity will likely exhibit less calculated and modified emotional behavior. Although there is no direct evidence for this claim, it is interesting to consider that individuals with lesions of the orbitofrontal cortex often exhibit deficits in the regulation and maintenance of socially appropriate emotional expressions and planful behavior (Heilman, Voeller, & Nadeau, 1991; Nelson, 1994; Stuss & Benson, 1984). Similarly, children with attention deficit hyperactivity disorder (ADHD), a disorder involving decreased levels of frontal lobe activity as measured by single photon emission computed tomography (Amen, Paldi, & Thisted, 1993), regional cerebral blood flow (Lou, Henriksen, & Bruhn, 1984), and glucose metabolism (Zametkin, Leibenauer, Fitzgerald, & King, 1993), often exhibit tremendous emotional lability and inappropriate emotional expressions (Barkley, 1990; 1994).

The importance of neocortical control mechanisms in dissociating emotional states from corresponding emotional expressions suggests a role for higher cognitive processing skills in the management of emotional expressions. As such, it is helpful to consider the role of information processing variables as they relate to emotional expression management. Dodge (1986; Crick & Dodge, 1994) has proposed a model of social information processing that posits a number of factors important in the regulation of emotional behavior (Lemerise & Arsenio, 2000). To begin with, Dodge (1991) suggests that an individual must be aware of and interpret emotion eliciting stimuli. Although a degree of "awareness" and "interpretation" is inherent even in relatively reflexive reactions to emotion

eliciting stimuli (e.g., smiling, crying, fighting, and fleeing), more deliberate and cognitive processing of such stimuli is thought to have a direct bearing on subsequent emotional responses. Research on ambiguous provocation (e.g., Dodge & Frame, 1982; Graham, Hudley, & Williams, 1992) suggests that if a child negatively interprets an ambiguous provocation such as a peer knocking over the child's toys (i.e., makes a hostile attribution), the child is more likely to enact angry and aggressive behavioral responses. As such, the regulation of emotional expressivity would appear to depend upon the child's ability to interpret the cause of his or her emotional response. As Saarni (1990, 1999) has also suggested, with respect to social "causes" (e.g., provocation by a peer), the regulation of emotional behavior is particularly dependent upon the child's ability to adopt the perspective of the other individual (i.e., to infer intent). In addition to the interpretation of external cues, emotional expression management is also likely to depend on the interpretation of internal cues of one's actual emotional state. As such, a degree of self-awareness and accurate self-evaluation is also important for modifying behavioral output (Crick & Dodge, 1994; Saarni, 1999)

Another important cognitive factor concerns social goals. Inherent in the idea of cognitive control over emotional behavior is the attempt to achieve a particular outcome or goal with such behavior. For instance, a child will likely control expressions of inappropriate glee during a church service in order to avoid parental punishment. Alternatively, a child who wants to play with another child's toy may exaggerate expressions of anger (e.g., threaten) in order to acquire the toy. Although research has not examined the role of social goals in emotional expression management specifically, it is interesting

to note that social goals are related to measures of emotional behavior such as aggression or, more loosely, prosocial behavior (Dodge, Asher, & Parkhurst, 1989; Erdley & Asher, 1996, 1999; Renshaw & Asher, 1983).

The role of social goals and motivation is also addressed by Ekman and Friesen's (1969) descriptive work on emotional expression management. Using the term "display rules" to refer to the management of emotional expressions, Ekman and Friesen have outlined three categories: cultural display rules, personal display rules, and strategic display rules. Cultural display rules are defined as social conventions for emotional expression that are typically shared by most everyone in a given society. Saarni (1982) suggests that these display rules serve to keep social interactions smooth and predictable, and to mediate the communicative impact of emotional expression on others. For example, expressing gratitude at another's hospitality, irrespective of genuine feelings, is a widely used cultural display rule. Cultural display rules thus tend to be prosocial in nature and are motivated by a desire for affiliation and by a concern for others. Personal display rules, on the other hand, generally serve an individual's own needs. As Saarni asserts, personal display rules are most often self-protective in nature in that they are motivated by a need to maintain the consistency of one's self-concept and avoid vulnerability. For instance, an individual may have a particularly stoic self-concept and therefore refrain from any expressions of sadness or pain. The use of strategic display rules, in contrast, is motivated primarily by the possibility of personal gain within a specific situation. Whereas personal display rules may be thought of as trait-like manifestations of one's self-concept or self-schema (Saarni, 1999), strategic



display rules are more state and context dependent. For example, masking anxiety and exaggerating positive expressions may be particularly beneficial during a job interview. Although using any display rule involves deception, strategic display rules involve direct deception for the purpose of gaining a particular interpersonal advantage or avoiding a disadvantage.

Given the information processing steps of interpreting external and internal cues and generating social goals, the modification of emotional expressions also depends upon the generation and enactment of alternative behavioral responses. Although the specifics of such alternative behaviors will undoubtedly depend upon the particulars of the individual and the given circumstances, it is helpful to consider a general taxonomy of ways in which emotional expressions may be modified. Ekman and Friesen (1969) have suggested four types of expressive regulation, based primarily on research examining facial expressions: exaggeration, which involves over-intensifying the expression of experienced emotion; minimization, which involves de-intensifying the expression of an emotion; neutralization, which involves expressing no emotion at all (e.g., a poker face); and substitution, which involves expressing an emotion dissimilar from the emotion actually experienced.

At this point, it is perhaps helpful to consider an example of emotional expression management in order to integrate the underlying processes discussed above into an interpretive framework. Consider a child who receives a birthday present from a friend:

The present is wrapped in colorful paper with a large bow and the child's friend, who is smiling and talking excitedly, is

obviously looking forward to the child opening it. "You're going to love this!" the friend says, "Go ahead and open it. I picked it out special just for you!" The child, with growing excitement herself, unwraps the present impatiently. When she gets the paper off and opens the box, however, instead of the great gift she was expecting, she sees a hideous lime-green baseball cap. She immediately feels disappointed not only because she dislikes lime-green, but also because she despises baseball caps. She instantly knows she will never want to wear the gift. Nevertheless, the child smiles and exclaims "Oh! A baseball cap! Thank you so much. I love it!" She takes it out of the box and puts it on her head. "How do I look?!" she asks, giving her friend a big smile.

The child in this example, in order to manage her emotional expression, must first and foremost have the ability to delay any immediate spontaneous reaction of disappointment. She must inhibit behaviors such as frowning in disgust over the lime-green color, slouching under the weight of dashed excitement, or tossing the box aside in disappointment. Having delayed such immediate affectively driven responses, she must then recognize her reaction of disappointment (i.e., self-awareness) and realize that, given her friend's genuine excitement over the gift, any genuine display of disappointment will undoubtedly upset her friend (i.e., cue detection, perspective taking). Moreover, the child may be motivated not to display such disappointment in order to avoid upsetting her friend and

to keep the social interaction smooth and predictable (i.e., social goal). In order to achieve this prosocial goal, she then proceeds to substitute genuine expressions of disappointment with expressions of joy, excitement, and gratitude (i.e., enactment of a substitution display rule).

In considering the above example, it is important to note that this particular child's success in appropriately managing her emotional expressions of disappointment will depend in large part on her specific learning history as well as her neurophysiological maturation. Although factors such as socialization experiences and maturation will vary from individual to individual, at a broader level of analysis, we might expect to find consistent differences in emotional expression management as a function of age and as a function of gender. Obviously age is a fairly robust measure of maturation; we would certainly expect a 12-year-old child to be better able to manage emotional expressions than a 2-year-old simply due to maturational differences in neurophysiology. With respect to socialization, it is likewise reasonable to assume that given differences in the ways males and females are socialized, especially in regard to emotional expressions (Brody & Hall, 2000; Casey & Fuller, 1994; Hall, 1979), emotional expression management will vary as a function of gender. Although a detailed consideration of specific mechanisms leading to individual differences in emotional expression management is beyond the scope of the present discussion, it is important to recognize that age and gender do appear to have a ubiquitous and significant impact on this skill, and are therefore important to consider when hypothesizing links between emotional expression management and social

acceptance. That is to say, the relationship between emotional expression management and social acceptance is expected to be moderated by age and gender. As such, it will be helpful to review prior research in order to elucidate the developmental trajectory and gender differences in emotional expression management. This review will, in turn, help to refine hypothesized links between emotional expression management and social acceptance.

### Emotional Expression Management: Age and Gender Differences

Before considering research on gender and age differences in emotion expression management, it is important to note that most of the research in this area has focused primarily on facial expressions of emotion. Although emotion may be communicated through verbalizations and various nonverbal channels such as body language, vocal intonations, and even more molar behaviors, the focus on facial expressions of emotion is perhaps justified in that facial expressions provide particularly immediate and salient cues to an individual's emotional state (Ekman & O'Sullivan, 1991; Rinn, 1991). It is also important to note, however, that there is a wide variety of methods used to measure facial expressions of emotion. Whereas some studies measure facial expressions using the valence ratings of naïve observers (e.g., Feldman, Jenkins, & Popoola, 1979), other studies use coding systems designed to identify specific components of expressions (e.g., nose wrinkle, down-turned mouth) and rate the valence of each component (e.g., the "Facial Action Coding System," Ekman & Friesen, 1976; Saarni, 1984). Therefore, it is somewhat difficult to compare the meaningfulness of findings across studies. For instance, if gender differences can be detected using a

fine-grained coding scheme that dismantles facial expressions into components such as the movement of the zygomatic muscles, can such gender differences likewise be detected by “naïve” individuals in everyday social interactions? If not, the ecological validity of such molecular coding schemes is certainly called into question. Nevertheless, keeping these caveats in mind, research using observational methodology on gender and age differences in emotional expression management has yielded relatively consistent findings overall.

Gender. In an effort to examine developmental trends and gender differences in the spontaneous use of display rules, Saarni (1984) used an observational, analog paradigm in which children were given a disappointing gift after being led to expect a desirable gift. Using 6-, 8-, and 10-year-old children, she first had children complete a pencil and paper task after which she gave them candy and money as a “prize.” One to two days later, the children came back, and completed another pencil and paper task with the expectation of again earning a prize for their efforts. Instead of candy and money, however, at this second session children received a “drab and unimaginative” baby toy, designed to induce disappointment. Participants’ emotional expressions were videotaped and coded for the purpose of determining whether they were regulating their emotional expression. Based on Ekman and Friesen’s (1969) work, three dimensions of expressive behavior were coded: positive behaviors (e.g. broad smile, eye contact, enthusiastic verbalizations of gratitude), negative behaviors (e.g., lowered brows, avoidance of eye contact, no verbalizations of gratitude), and transitional behaviors, which Ekman and Friesen have defined as

unsuccessful attempts at dissembling emotional expressions (e.g., giggling, lip biting, and knit brows in conjunction with only a slight smile).

Although all children claimed afterwards to have experienced disappointment upon receiving the baby toy, results indicated significant gender differences in the extent to which they had revealed this to the experimenter. Saarni found that boys were less likely than girls to express clear positive behaviors when given the disappointing prize. Specifically, 8- and 10-year-old girls tended to display more positive emotional expressions such as broad smiles and verbalizations of gratitude when receiving the disappointing prize. In contrast, boys tended to display either negative or transitional behaviors such as avoiding eye contact with the experimenter, omitting any verbalizations of gratitude, and not smiling or giving only a very slight smile in response to the disappointing prize. Given that all children in the study, both boys and girls, reported genuine disappointment during a debriefing, Saarni suggests that these gender differences reflect the use of different emotional expression management strategies. Specifically, whereas girls tend to use substitution (i.e., expressing positive affect in place of genuine disappointment), boys tend to use minimization and neutralization of genuine disappointment.

The interpretation that girls and boys use different strategies for regulating emotional expressions is supported by a replication of Saarni's study conducted by Cole (1986). Specifically, Cole also found that girls tended to smile more than boys when receiving the disappointing prize. Moreover, she found that the frequency and intensity of girls' feigned positive expressions in the disappointment session were equal to the

frequency and intensity of their genuine positive expressions in the first session in which they received the most desirable prize.

Although there appears to be a robust gender difference in the spontaneous use of display rules, with girls tending to use substitution and boys tending to use neutralization, it is important to consider the proximal causes of such gender differences. Saarni suggests that an important factor in the findings regarding gender differences may reflect differences in motivation. Although research has suggested that both boys and girls have a general awareness of the use of display rules for regulating social interactions (e.g., Gnepp & Hess, 1986; Saarni, 1979), boys may think that they are less likely to be chastised for ungrateful behavior and thus be significantly less motivated to pretend to like the disappointing prize. In contrast, girls may expect more social disapproval of ungrateful behavior and thus be more highly motivated to feign gratitude in such a situation. Indeed, research on the socialization of emotional expression management suggests that even from infancy there are a variety of social pressures for girls to be more emotionally positive than boys when responding to a negative event (Casey & Fuller, 1994; Saarni, 1989). As such, due to their learning histories, it is likely that boys and girls have developed significantly different expectations regarding the consequences of emotional expression.

In order to examine the hypothesis that motivational differences underlie gender differences in the spontaneous use of display rules, Davis (1995) adopted Saarni's disappointment paradigm with the addition of an experimental condition to control for such motivational differences. Using 7- and 9-year-old children, the first session involved a replication of the

procedures used by Saarni (1984) in the disappointment paradigm. During the second session--the "game task"--Davis presented children with two boxed gifts: one that the child had ranked as highly desirable and a second that the child had ranked as undesirable. Children were instructed to secretly look at the gifts in each of the boxes and then to convince an "uninformed" experimenter that both gifts were equally desirable. To control for motivation, Davis instructed the children that they would be able to keep both gifts only if they could "trick" the experimenter into thinking that they liked both of the gifts. If not, the children were told that they would not be able to keep either one. Thus, the consequences of failing to successfully feign expressions of gratitude and joy were the same for both girls and boys, with the expectation that the gender differences previously found by Saarni (1984) and Cole (1986) would be eliminated.

Findings indicated that although explicitly increasing children's motivation in the second session game task did seem to increase the overall frequency of feigned positive expressions in comparison to the first session disappointment paradigm, there were still significant differences between boys and girls. Consistent with Saarni's (1984) findings, Davis found that boys exhibited significantly more negative behaviors than girls when trying to convince the experimenter that they really liked the undesirable prize. Thus, despite having the same motive to dissemble disappointment, boys were still less likely to express positive emotions.

Given that gender differences were still found despite the fact that both boys and girls were explicitly told what to do (i.e., pretend to like the disappointing gift) and were motivated to do so (i.e., win the "game" to keep



both prizes), a reasonable conclusion is that these gender differences reflect differences in ability. Girls may simply be better than boys at overriding their spontaneous, genuine expressions of negative affect and feigning positive emotion in its place. Indeed, a number of other studies support this conclusion. For instance, Feldman and White (1980) and Feldman et al. (1979) examined gender differences in expression management ability by asking child and adult participants to feign enjoyment after drinking an unsweetened fruit drink. Both studies found that females were significantly better than males in deceiving naïve undergraduate judges; females were rated as liking the unsweetened drink significantly more than males. It is important to note, however, that all of these studies (i.e., Davis, 1995; Feldman & White, 1980; Feldman et al., 1979) only examined children's ability to substitute genuine negative affect with feigned positive affect. This leaves open the question of whether such gender differences would be found with other emotional expression management strategies such as minimization or neutralization. Indeed, in discussing the finding that boys tend to display more transitional behaviors such as avoiding eye contact or giving only a slight smile in the disappointment paradigm, Saarni (1984) suggested that such expressive behaviors may be an "endpoint" for boys in that they are socialized to minimize or neutralize negative affect as opposed to substitute negative affect with positive emotional expressions. As such, when asked to neutralize negative emotion, it is reasonable to expect that boys would be better at using this dissemblance strategy than girls. In support of this hypothesis, a study conducted on emotional dissemblance ability by Shennum and Bugental (1982) is particularly pertinent.

Shennum and Bugental examined children's ability both to substitute their emotional expression with an alternative one, and to inhibit (neutralize) their emotional expression in relation to induced mild emotional states by giving 6- to 12-year-old children explicit instructions as to which display rule they should use. A baseline measure of expressivity was first obtained from videotapes of an open-ended interview concerning each child's likes and dislikes. In the second session, children were given explicit instructions to answer questions concerning their likes and dislikes by either pretending to like what they actually disliked and to dislike what they actually liked (substitution condition), or to pretend that they did not care one way or the other about either their likes or dislikes (neutralization condition). Scores for emotional expressions were generated from valence ratings made by 10 trained adult raters on a 9-point scale (positive-negative). These valence scores, in turn, were then used to generate a "leakage" score--the difference between the baseline ratings of genuine expression and the dissemblance conditions for both facial and vocal expression (e.g., the difference between a child genuinely discussing a dislike in the first session, and his or her attempt to "fake" dislike in the second session). They also examined an "accuracy" score that reflected how closely substituted or neutralized expressions approximated the genuine expressions children exhibited in the first session (e.g., the similarity between a child's genuine expressions while discussing something he or she likes, and the expressed deceptive positive emotion when talking about what he or she dislikes).

Although both boys and girls in this study were able to substitute negative emotional expressions with positive expressions, when directed to

neutralize genuine negative expressions, girls consistently produced more positive expressions than did boys. That is, given that emotional expressions were rated on a continuum, girls tended to “overshoot” their target of disinterest when talking about something actively disliked by expressing positive affect instead (e.g., smiling, enthusiastic voice tone). In contrast, boys were better able to neutralize expressions of dislike by more closely approximating expressions of disinterest. Although these gender differences in the ability to manage emotional expressions may reflect differential socialization pressures for males and females, it is reasonable to conclude that because Shennum and Bugental’s (1982) study effectively controlled for cognitive and motivational variables (i.e., participants were explicitly instructed what and how to express for the purpose of the study), such differences may be ingrained by middle childhood to the extent that such gender differences are independent of social goals or contextual demands. Simply put, by middle childhood, boys seem to have a greater skill for neutralizing negative emotions whereas girls seem to have a greater skill for substituting positive expressions for genuinely negative ones. Moreover, given that boys and girls’ emotional expressions are differentially socialized even from infancy (Malatesta & Haviland, 1982), it is perhaps no surprise that such gender differences in ability have been found by middle childhood.

Maturation. Observational research examining the question of when the ability to manage emotional expressions develops is, unfortunately, not particularly consistent. Saarni (1982) has hypothesized that the development of display rule usage may consist of a developmental sequence of display rule strategy acquisition. She asserts that exaggeration may be the first strategy

to be acquired, followed by minimization, and finally by neutralization and substitution. Given the relative disparity between internal affective states and expressed emotion involved in each of these display rule strategies, such a hypothesis does make a good deal of intuitive sense: an exaggerated display of negative affect would not seem to entail the same degree of difference between genuine emotional reactions and external expression as does, say, using a substitution strategy. Blurton-Jones (1972) has conducted naturalistic observations of children ages 3 and 4 years on playgrounds and observed that when children were injured, they were more likely to express intense negative emotion (i.e., exaggeration) when their mother was paying attention than if their mother was occupied or was not present. Maccoby (1980) offered a similar illustrative example of a young preschooler whose mother discovered that he was injured. When the mother asked him why she had not heard him crying, he responded "I didn't know you were home" (p. 178). By preschool age, then, it seems that children have likely developed sufficient skills at least to exaggerate emotional expressions in the service of social communication.

The fact that strategies such as substitution and neutralization demand a greater degree of dissimilarity between felt and expressed affect suggests that children will likely develop such skills somewhat later than preschool age, when exaggeration begins to emerge. Unfortunately, research on the spontaneous use of such display rules using Saarni's (1984) disappointment paradigm does not entirely support this conclusion. Although Saarni (1984) originally reported a marginally significant age effect, with 10-year-old children expressing slightly more positive emotion than 6-year-old children

(i.e., more substitution), these findings were not replicated by either Davis (1995), using 7- and 9-year-old children, or Cole (1986), using 4-, 6-, and 8-year-old children. Indeed, Cole (1986) also conducted a follow-up study with 4-year-old girls in which the experimenter was either present (social condition) or absent (alone condition) when the child received the disappointing prize. It was found that girls in the social condition evidenced positive expressions significantly more than girls in the alone condition, suggesting not only that preschool children are capable of more sophisticated emotional expression management, but that children at this age are also quite sensitive to the social context, and regulate their expressions accordingly.

Despite the apparent lack of age effects found using the disappointment paradigm, other studies examining developmental trends in the accuracy of emotional expression management have found significant age differences (Feldman et al., 1979; Shennum & Bugental, 1982). For instance, in Shennum and Bugental's (1982) research examining both neutralization and substitution ability, findings indicated that 6-year-old children were significantly less accurate than 8- or 11-year-old children in their efforts to appear as though they liked (substitution) or were disinterested in (neutralization) something they actively disliked. Importantly, however, the "inaccuracy" of 6-year-old children was not in the direction of their genuine negative affect. Instead of "leaking" their true dislike, 6-year-old children tended to overshoot the target of positive expressions. That is, 6-year-old children "hammed it up" to the extent that their feigned expressions of enjoyment or disinterest were exaggerated toward the positive. By comparison, 11-year-old children were quite accurate in approximating their

targeted facial expressions of enjoyment or disinterest. It is important to note, however, that even 11-year-old children were relatively poor at approximating their targeted expressions in their tone of voice. Shennum and Bugental filtered the audio from the video tapes used by the raters in such a way that rendered the children's verbal content unintelligible while keeping their tone of voice (e.g., inflection) clear. Ratings of children's tone of voice revealed that all children overshot their targeted enjoyment or disinterest, expressing exaggerated positive affect instead.

The age effects found by Shennum and Bugental suggest that although children as young as 6 years are able to display mock positive affect when genuinely experiencing mild negative affect, their feigned expressions are highly exaggerated and therefore likely to be much less believable to observers. Given that the function of emotional expression management is to regulate social interactions, a lack of apparent authenticity in such displays would likely result in the failure of such a display to regulate the social interaction. In this sense, then, it seems that competency of emotional expression management, at least as indexed by facial expression accuracy, does not develop until somewhere between 8 and 11 years of age.

In sum, observational research on children's emotional expression management skills has revealed age and gender differences that appear to be relatively independent of social-cognitive and motivational variables. Research that has effectively controlled for such social-cognitive and motivational variables generally supports the conclusion that developmental differences and gender differences are primarily due to differences in the ability to accurately and convincingly enact particular display rules.

Specifically, boys seem better able to minimize and neutralize inappropriate negative affect whereas girls seem better able to feign positive affect in place of inappropriate negative affect. Further, the ability to manage emotional expressions effectively appears to emerge sometime during middle-childhood (i.e., 8-11 years of age).

### Emotional Expression Management and Interpersonal Functioning

Before considering research linking emotional expression management skills to measures of interpersonal functioning, it is important to consider what is meant by the term "interpersonal functioning." Perhaps the most frequently used term in reference to adaptive interpersonal functioning is "social competence." Unfortunately, there appears to be a good deal of confusion as to whether the term "social competence" refers to the cluster of skills involved in adaptive interpersonal functioning or to adaptive interpersonal functioning itself. As Dodge (1985) has noted, with respect to the skills thought to be important in interpersonal functioning, it seems as though there are as many definitions of "social competence" as there are researchers in the field. This observation underscores the need for a clear distinction between measures of social skills on the one hand and indices of adaptive interpersonal functioning on the other. Thus, in order to avoid such confusion, it is important to operationalize adaptive interpersonal functioning as the end result of social skills. Given that social skills develop in the service of establishing and maintaining affiliative relationships and resolving interpersonal conflicts, it is then reasonable to assume that any measure of the degree to which an individual is affiliated with, or accepted by, a group will be a direct measure of adaptive interpersonal functioning,

and only an indirect measure of social skills themselves. Operationalizing adaptive interpersonal functioning in this way has led to two primary measures: peer nominations and acceptance ratings (Terry & Coie, 1991).

Measures of social status using peer nominations typically involve asking children to nominate three peers whom they like the most and three peers whom they like the least from their classroom. The nominations each child receives from his or her peers are then tallied and used to generate a social preference score ("like most" scores minus "like least" scores) and a social impact score ("like most" scores plus "like least" scores). These scores, in turn, are used to group children into social status categories such as popular (children with high social preference scores), rejected (children with low social preference scores), and neglected (children with low social impact scores). Although specific categorization rules often vary between researchers, these social status groups (e.g., popular, rejected, and neglected) are widely used in the literature as an index of interpersonal functioning (Terry & Coie, 1991). A second method for measuring children's interpersonal functioning--peer acceptance ratings--consists of asking children to rate each of their peers on a 5-point scale in terms of how much they like them or would like to play with them (Terry & Coie, 1991). Scores for each child then consist of the average rating from their peers as an index of social acceptance. Moreover, peer ratings are typically convergent with peer nomination measures of social status (Kalfus & Berler, 1985; Terry & Coie, 1991); children who are rated by peers as someone with whom children do not like to play are typically identified as rejected using peer nominations.



Likewise, children who are rated as someone with whom children do like to play are often identified as popular using peer nominations.

The measures of social status and peer acceptance have provided a foundation for examining the antecedents of individual differences in adaptive interpersonal functioning. Perhaps one of the most robust findings is that children who are disliked by their peers generally display inappropriate emotional behavior (Dodge, 1991). Research using peer ratings, teacher ratings, and behavioral observations has indicated that popular or well-liked children are often described as helpful, cooperative, interpersonally sensitive, and rule-abiding. In contrast, children who are disliked by their peers are described as aggressive, hyperactive, and disruptive (e.g., Cantrell & Prinz, 1984; Carlson, Lahey, & Neeper, 1984; Crick, 1996; French & Waas, 1985; Ladd, 1983). Although most of this research has not focused on emotional expressive behavior specifically, it is reasonable to interpret the behavioral profiles of children who are disliked by their peers as manifestations of poor emotional expression management skills. Indeed, a great deal of research on the antecedents of social status has conceptualized peer rejection as the result of emotion regulation deficits (Crick & Dodge, 1994; Dodge, 1991; Hubbard & Coie, 1994). Thus, rejected children's displays of aggression, for instance, can be seen as failures to regulate expressions of anger. Conversely, popular children's cooperative, empathic, and largely unaggressive behaviors can be seen as relatively skillfully controlled expressions.

It is important to note, however, that behaviors such as aggression are relatively extreme manifestations of emotional dysregulation. At such

extremes of emotional behavior, it is perhaps not surprising that social status and peer acceptance are systematically impacted. As the previous review of emotional expression management research has suggested, however, individuals may vary in their emotional expression management skills in much more subtle ways. For instance, whereas one child may accurately and convincingly convey enjoyment of something he or she genuinely dislikes, another child may tend to exhibit transparent and obviously exaggerated deceptive expressions of enjoyment. Still another child may be unable to dissemble disappointment without "leaking" his or her true negative feelings. Moreover, as noted previously, emotional expression management skills have also been shown to vary as a function of gender with respect to different strategies for dissembling genuine affect (e.g., substitution versus neutralization). An important question, then, is whether social status and peer acceptance are related to such subtle differences in emotional expression management skills.

Unfortunately, very little research has examined the relationship between interpersonal functioning and emotional expression management. Several authors have reported significant relationships between social functioning and the clarity of spontaneous expressivity (Allen & Atkinson, 1978; Buck, 1975, 1977; Custrini & Feldman, 1989) and posed expressions (Bastiani, 1997; Carson, Burks, & Parke, 1987; Field & Walden, 1982). Overall, these studies suggest that children who are more expressive and who can clearly and accurately portray emotional expressions are more socially accepted and have better social skills. Although this research does suggest that emotional expressivity plays an important role in social status, such

research does not address emotional expression management specifically in that experimental procedures either require no emotional dissemblance (as in measures of spontaneous expressions) or do not induce any genuine emotions to be dissembled (as in measures of posed expressions). Such findings, therefore, have little bearing on the possible relationship between interpersonal functioning and emotional expression management per se. Two recent studies, however, have examined emotional expression management as measured by Saarni's (1984) disappointment paradigm in relation to measures of adjustment and social functioning.

In a study conducted by Cole, Zahn-Waxler, and Smith (1994), the ability to use display rules in the disappointment paradigm was examined in relation to behavior problems as rated by teachers and parents. Using 4- and 5-year-old children, Cole et al. presented each child with a disappointing prize in a social condition (i.e., the experimenter was present) in which display rule use would be expected, followed by an alone condition (i.e., the experimenter left the room) in which baseline genuine expressions would be expected. Children's emotional expressions were then coded in each segment (social and alone conditions) and examined in relation to teacher and parent ratings of behavior problems such as disruptiveness, hyperactivity, conduct problems, and negativity. Analyses revealed that, overall, children who were rated as exhibiting externalizing behavior problems at home and at school were less likely to exhibit positive emotional behavior when presented with a disappointing gift in the experimenter's presence. That is, children with behavior problems appeared to have difficulty using display rules.

The findings by Cole et al. (1994), however, are only suggestive of a relationship between emotional expression management and interpersonal functioning. Although teacher and parent ratings of behavior problems reveal behavior profiles that are consistent with those of children who are disliked by peers (e.g., disruptiveness, aggression, hyperactivity), it is important to note that such ratings do not index social status or peer acceptance per se. Moreover, the apparent relationship between behavior problems and display rule use appeared to pertain only to boys. Girls in the social condition (i.e., the display rule condition) exhibited relatively few negative emotional expressions irrespective of teacher and parent ratings of behavior problems. In the baseline condition (i.e., the alone condition), only those girls rated as having few behavior problems exhibited genuine negative expressions. Girls rated high on behavior problems continued to show few negative expressions suggesting either that such girls did not feel genuinely disappointed or were simply not emotionally expressive in any context. The interpretive difficulty posed by these gender findings is compounded by the fact that the study did not use any baseline measure of genuine positive expression as was done in Saarni's (1984) original disappointment procedure. As such, no direct comparisons between children's dissembled expressions and genuine positive expressions could be made.

The relationship between emotional expression management and interpersonal functioning was examined more directly by McDowell, O'Neil, and Parke (2000). Using 4th-grade boys and girls, interpersonal functioning was measured by peer sociometric nominations and peer acceptance ratings.

The peer nominations and acceptance ratings were then combined with teacher ratings of peer group behavior, and peer behavior ratings yielding composite “social competence” factors of avoidant and isolated behavior, aggressive behavior and rejection, and prosocial behaviors and likability. In keeping with Saarni’s (1984) original disappointment paradigm procedures, McDowell et al. first presented children with a desirable gift in order to obtain a baseline measure of genuine positive expressions of gratitude and appreciation. At a second session, children were then presented with an undesirable gift in order to obtain a measure of display rule usage. As was found in previous studies using the disappointment paradigm (i.e., Cole, 1986; Davis, 1995; Saarni, 1984), initial analyses indicated that, even when controlling for baseline positive expressions, girls exhibited significantly more positive expressions than boys when receiving the disappointing gift. Girls therefore tended to substitute positive expressions of gratitude for genuine negative emotional responses whereas boys tended to “leak” genuine negative emotional responses.

When examined in relation to the composite social competence scores, results indicated that children who did not use display rules (i.e., who did not exhibit positive expressions upon receiving the disappointing gift) were rated as more avoidant and isolated from peers, and more negative in social interactions. Interestingly, however, the relationship between social competence and display rule usage was found primarily in girls. Although there was a slight trend for boys who used display rules (i.e., positive expressions) to be rated as less avoidant by their peers, girls who used

display rules were rated as significantly less avoidant and more positive and likable by both peers and teachers.

Despite the fact that these results provide some support for the hypothesis that the management of emotional expressions is important for adaptive interpersonal functioning, several important issues remain unanswered. One issue concerns the use of a "social competence" measure incorporating both behaviors and sociometric scores. Although, as noted above, research has demonstrated that disliked and rejected children exhibit behaviors such as aggression, disruptiveness, and avoidance, such behaviors should not be automatically construed as synonymous with peer rejection. Indeed, as research has shown, behaviors such as aggression predict peer rejection primarily only when such behaviors are outside the behavioral norms of the social context (Boivin, Dodge, & Coie, 1995; Wright, Giammarino, & Parad, 1986). As such, the social competence measure used by McDowell et al. (2000) may have misclassified children in terms of their adaptive interpersonal functioning.

Another important issue concerns why social competence was related to display rule use only for girls. Although McDowell et al. do not offer any interpretation of this finding, a careful consideration of previous research on gender differences in emotional expression management, as reviewed above, suggests a possible explanation. Recall that girls appear to have a greater ability for successfully substituting positive expressions for genuine negative emotions. Moreover, such an ability seems to be independent of a knowledge of appropriate display rule use and motivation; girls' skill at substituting emotional expressions appears to be ingrained by middle

childhood. In contrast, although boys appear to be less successful at substituting positive expressions for genuinely negative emotions, they do appear to have a greater ability to neutralize genuinely negative emotions (e.g., Shennum & Bugental, 1982). As such, because the disappointment paradigm as used by McDowell et al. (2000) only examined the degree to which the display rule of substitution was being used (with no specific measure of neutralization), it would be reasonable to expect that a relationship to social competence would be found only for girls. That is, given that substitution may be more normative for girls and neutralization may be more normative for boys, it is reasonable to expect that if McDowell et al. had also included a measure of the degree to which children had successfully used neutralization as a strategy (e.g., observational codes for no apparent expression), such a measure would have been related to social competence in boys and not in girls. In short, given prior descriptive research, the degree to which children can successfully manage their emotional expressions consistent with their gender specific norms would likely mediate any relationship between emotional expression management and social competence.

A third important issue raised by McDowell et al.'s (2000) study concerns the fact that emotional expression management, as measured by the disappointment paradigm, includes several confounding variables. Specifically, the degree to which emotional expressions are managed in such an analog situation depends upon children's social-cognitive abilities to generate and evaluate a display rule as an alternative and appropriate response, their motivation to do so, as well as their ability to do so. As such,

the relationship between emotional expression management and social competence may be mediated by any one or more of these variables. Certainly it is reasonable to hypothesize that peer rejected children who do not use display rules are simply unaware of the need for emotional expression management. Similarly, it is plausible to suggest that such children do not evaluate these management strategies as effective possibilities or are not motivated to use such strategies. However, given that the rudimentary ability to manage emotional expressions appears to account for age and gender differences quite apart from cognitive and motivational variables, it is also reasonable to hypothesize that the relationship between emotional dissemblance and social competence is likewise primarily mediated by this ability, irrespective of knowledge, awareness, and motivation.

Clearly, research is needed to examine the relationship between emotional expression management and interpersonal functioning in greater detail. As such, the present study was designed to answer some of the questions raised by recent research in this area. Drawing upon the research and theory as discussed above, the following section will present the rationale and specific hypotheses of the present study.

### Present Study

The present study was designed to examine individual differences in emotional expression management through the use of an analog task similar to that used by Shennum and Bugental (1982). Specifically, children were asked to dissemble their genuine emotional expressions during a mild emotion eliciting interview. The use of explicit instructions and rewards for participation (i.e., prizes) was included to control for social-cognitive and



motivational variables, respectively. Observational data of individual differences in children's ability to use specific emotional expression management strategies during the interview were then examined in relation to a general measure of social acceptance.

The assumption that emotional expressions serve to communicate within and regulate social interactions underlies the overarching hypothesis of the present study: individual differences in the ability to manage emotional expressions are related to individual differences in interpersonal functioning. Although research has suggested that children who are less well-adjusted are less likely to manage their emotional expressions appropriately (e.g., Cole et al., 1994; McDowell et al., 2000), it is unclear whether this relationship is due to individual differences in social-cognitive variables such as perspective taking and response generation, differences in motivation, and/or differences in emotional expression management ability. Given that differences in the ability to manage emotional expressions, when controlling for variables such as response generation and motivation, are significantly related to gender differences and age differences (e.g., Davis, 1995; Feldman et al., 1979; Shennum & Bugental, 1982), it is possible that such differences in ability similarly underlie differences in interpersonal functioning. That is, the findings that demonstrate a relationship between maladjustment and emotional expression management may reflect individual differences in the rudimentary ability to manage emotional expressions.

In an attempt to index children's ability to manage emotional expressions, the methodology employed by Shennum and Bugental (1982)

was adopted and modified in order to control for possible confounding social-cognitive and motivational variables: participants were instructed to discuss something they dislike with explicit instructions as to what display rule strategy to use. Although this task did not require children to modify positive expressions (e.g., pretend to feel negative when genuinely feeling positive), the modification of negative affect was assumed to be a more relevant index of emotional expression management in that expressions of negative emotions are less likely to be socially acceptable than expressions of positive emotions. In addition, this methodology effectively controlled for any cognitive variables such as knowledge of display rules, or decisions as to when to use them (i.e., perspective taking, response generation and evaluation) by providing participants with explicit instructions. Moreover, to control for motivational differences in the use of display rules, all participants were given the opportunity to win a "prize" for enacting display rules as best they could (although all children received the prize, regardless of competency). This measure of emotional expression management ability, in turn, was hypothesized to be significantly related to a global measure of interpersonal functioning (i.e., peer acceptance). Given that the overall degree of positive expressivity in social interactions has also been shown to relate to interpersonal functioning (e.g., McDowell et al., 2000), this variable was statistically partialled out of the measure of peer acceptance thereby avoiding any confounds with specific measures of emotional expression management in relation to social acceptance.

The research findings on gender differences in emotional expression management suggest the hypothesis that the relationship between peer

acceptance and emotional expression management varies as a function of gender. Such a hypothesis was based on previous research, as reviewed above, suggesting that neutralization appears to be normative for boys and substitution appears to be normative for girls. Specifically, it was hypothesized that for girls, the ability to substitute positive expressions for genuinely negative ones would predict peer acceptance, whereas for boys, the ability to neutralize genuinely negative expressions would predict peer acceptance. Given that such normative gender differences in emotional expression management strategies have been found, it is reasonable to assume that the better children are at managing their emotional expressions consistent with gender specific norms, the more accepted they will be by peers.

It should also be noted that because previous research has indicated that it is not until around the age of 8 years that children become relatively accurate at emotional expression management, the social effectiveness of such expression management would likely increase with age. In other words, it is expected that not until around the age of 8 years does emotional expression management become particularly important in peer acceptance. Although the present study is not designed to test the assumption of a relatively weaker relationship between emotional expression management and peer acceptance in younger children, such an assumption does underlie the present study's use of 8- to 10-year-old children.

In sum, the present study examined the following central hypotheses:

1. Individual differences in emotional expression management ability are significantly related to individual differences in social acceptance.

Specifically, children who are better able to effectively manage negative emotional expressions are hypothesized to be better liked by their peers.

2. The ability to neutralize negative emotional expressions is expected to correlate with social acceptance significantly more for boys than for girls.

3. The ability to substitute positive emotional expressions for genuinely negative emotional expressions is expected to correlate with social acceptance significantly more for girls than for boys.

## METHOD

### Participants

Participants were 75 children (33 boys and 42 girls) recruited from five separate 3<sup>rd</sup> and 4<sup>th</sup> grade classrooms at a local public elementary school. Although all 75 children participated in social acceptance ratings, 60 children (30 boys and 30 girls) were randomly selected to participate in the emotional expression management interviews. The mean age of these 60 participants was 9.28 years (111.37 months,  $SD = 6.85$  months) and ranged from 99 months (8.25 years) to 121 months (10.08 years). There was no significant difference between the ages of boys ( $M = 112.17$ ,  $SD = 6.58$ ) and girls ( $M = 110.57$ ,  $SD = 7.14$ ). Participants were recruited from classrooms with the criterion of at least a 65% participation rate per classroom in order to obtain valid ratings of peer acceptance. Participation rates ranged from 70% to 93% ( $M = 82\%$ ,  $SD = 7.63\%$ ). Consistent with the demographics of the population in Maine, the majority of participants were Caucasian (98%) and were primarily from middle- to working-class homes.

Additional analyses showed that there were no significant effects for age or for classroom on any of the dependent variables used in the present study. As such, subsequent analyses did not include these variables.

### Measures and Procedures

Participant Recruitment. A local elementary school was contacted in order to solicit participation in the study. Once the school agreed to participate in the study and to provide space for data collection (a quiet room in the library) all students in 3<sup>rd</sup> and 4<sup>th</sup> grade classrooms were encouraged to participate in the study. Permission slips were sent home with the students (see Appendix A) and the classrooms were informed that in trade for returning the consent form, regardless of consent status, each child would receive a lollipop. Return rates for consent forms ranged from 93% in one classroom to 100% in each of the other four classrooms.

Social Acceptance Ratings. Social acceptance was measured through peer ratings by the participating classmates of each participant. Specifically, each child with parental/guardian consent was asked to rate each of his or her participating classmates on a class roster in response to the question "How much do you like to play with this person?" (see Appendix B). Ratings were made using a 5-point Likert scale where "1" corresponded to "I don't like to" and "5" corresponded to "I like to a lot." The ratings for each child were then averaged to yield an overall social acceptance score. This measure has the benefit of being frequently used in developmental research (e.g., Hymel, 1986; Parker & Asher, 1993; Putallaz & Sheppard, 1990), as well as demonstrating good reliability (Kalfus & Berler, 1985; Terry & Coie, 1991; Wasik, 1987), and acceptable convergent validity (Terry & Coie, 1991).

Moreover, this measure has the benefit of including the perceptions of all the child's classmates thereby avoiding the biases and restricted knowledge of a single rater.

It is important to note that there were significant sex differences between the mean ratings of peer acceptance for boys ( $M = 2.67$ ,  $SD = .92$ ) and girls ( $M = 3.16$ ,  $SD = .68$ ),  $t(1, 58) = 2.36$ ,  $p < .05$ . Such an effect seems to have been an artifact of there having been a greater number of girl raters than boy raters (i.e., although equal numbers of boys and girls were randomly recruited for the emotional expression management interviews, girls outnumbered boys in all classrooms for the peer rating portion of the study) and that same-sex ratings were significantly higher than opposite-sex ratings ( $t(1,58) = -3.34$ ,  $p < .05$  for ratings by boys;  $t(1,58) = 7.13$ ,  $p < .001$  for ratings by girls). Given that this finding is consistent with prior research (Asher & Hymel, 1981; Denham & McKinley, 1993), it does suggest the real possibility that girls and boys are differentially sensitive to the social behaviors of their classmates as a function of gender.

Due to the fact that children in middle childhood appear to place significantly greater emphasis on same-sex relationships (Bukowski & Cillessen, 1998; Bukowski, Sippola, & Hoza, 1999; Sippola, Bukowski, & Noll, 1997), peer acceptance ratings were also calculated for each child using only ratings by girls and only ratings by boys. Although this procedure resulted in fewer ratings for each child, exaggerated gender differences, and probable decreases in reliability, such acceptance ratings have the benefit of providing a more pure measure of each child's acceptance within his or her primary social group (Bukowski et al., 1999; Sippola et al., 1997).

Further examination of zero-order correlations between acceptance ratings by boys, acceptance ratings by girls, and overall acceptance revealed significant correlations between overall acceptance ratings and ratings by boys ( $r = .57, p < .001$ ) and between overall acceptance and ratings by girls ( $r = .72, p < .001$ ). In contrast, the correlation between ratings by boys and ratings by girls was not significant ( $r = -.05, p = .72$ ), suggesting important gender differences between same-sex ratings and opposite-sex ratings. In addition, when considering only the boys in the sample, peer acceptance ratings from boys were significantly correlated with ratings from girls ( $r = .49, p < .01$ ). For the girls in the sample, ratings from boys were not significantly correlated with ratings from girls ( $r = .09, p = .63$ ).

As such, calculating peer acceptance as a function of the gender of the rater may help to determine whether or not particular emotional expression management skills have a greater social impact for one gender and not the other. For example, it may be reasonable to presume that the ability to neutralize negative emotional expressions accurately is more important for boys when considering only how other boys judge such social behavior. Likewise, for girls, it seems reasonable to assume that the ability to substitute positive expressions for negative expressions accurately is more important for girls when considering only how other girls judge such social behavior. Alternatively, it is possible that only one gender is sufficiently sensitive to emotional behaviors as subtle as substitution or neutralization. For instance, it may be that only girls attenuate their acceptance of peers as a function of how well such peers manage emotional expressions in line with gender specific norms. In such a case, including boys' peer acceptance ratings might

mask any effects to be found with only girls' peer acceptance ratings. Given the conceptual and heuristic importance of such gender specific acceptance ratings, these two additional peer acceptance scores were used in analyzing the relationship between emotional expression management and peer acceptance.

Emotional Expression Management Interview. Sixty children (30 boys and 30 girls) were randomly selected from the 75 children recruited for social acceptance ratings to participate in an emotional expression management interview similar to that employed by Shennum and Bugental (1982). Each child participated in a 20 minute video-taped interview designed to elicit a range of mild intensity emotional expressions (see Appendix C). The interviews consisted of five separate segments that were used to generate three measures of genuine expressiveness and two measures of expression management. In order to elicit emotional responses, children were interviewed about their favorite and least favorite television or movie characters. The interview topic of television and movie characters was chosen because it was expected that children would have relatively strong emotional reactions to certain television or movie characters and because emotional expressions about people are conceptually relevant to the role of emotional expressions in regulating social interactions. Moreover, it was expected that strong emotional reactions to television or movie characters would be socially acceptable and would therefore be less prone to social desirability effects during the interview.

During the interview, each child was seated facing the researcher. One male researcher served as the interviewer. A video camera was set up such



that the child's entire face and upper body were visible. Prior to beginning the interview, the child was informed that the researcher would ask some questions about "people on television or in movies." In order to ease any anxiety on the part of the child, and to make him or her feel comfortable, the researcher first engaged the child in brief casual conversation. The child was also informed that he or she could earn a prize for participating at the end of the interview (e.g., miniature skateboard, yo-yo, colored pens).

The first segment of the interview consisted of the child describing his or her television set. This portion of the interview was used as a baseline measure of neutral expressions. The second segment consisted of the child describing his or her favorite television or movie character. A semi-structured interview format followed from this general topic obtaining specific information such as who the character is, why the child likes the character, what the character does that the child likes or admires, and the child's favorite episode involving the character. This second segment was used as a measure of genuine positive expression. The third segment consisted of the child describing his or her least favorite television or movie character. The same semi-structured interview format was used to obtain specific information such as who the character is, why the child dislikes the character, and so on. This portion of the interview then served as a measure of genuine negative expression.

Prior to the fourth interview segment, the child was told that he or she was to try to "trick" the research assistant who would be coding the video tapes into thinking he or she really likes his or her least favorite television or movie character. The child was also told that if he or she could convincingly

do so, as preliminarily judged by the interviewer, he or she would earn a prize. At this point, the child was shown several desirable prizes (e.g., miniature skateboards, yo-yos, colored pens) and asked to choose which one he or she would like to earn. Although all children received their chosen prize at the end of the interview, regardless of their apparent success, the use of a prize was included as a means to motivate children to use emotional expression management skills to the best of their ability. The fourth segment then consisted of having the child again answer interview questions about the character he or she really disliked, but with explicit instructions to appear as though he or she actually liked that particular character. This interview segment was then used as a measure of the child's ability to substitute positive expressions for genuinely negative expressions (substitution condition). Following this, the fifth and final segment of the interview consisted of again having the child answer questions about his or her least favorite television character, but with explicit instructions to appear uninterested and neutral. This portion then served as a measure of the child's ability to neutralize negative emotional expressions (neutralization condition). During the last two interview segments, the child received no prompts or reminders from the researcher as to how to act. The researcher did not give the child any overt feedback about his or her performance until the end of the entire interview, and maintained a relatively neutral demeanor. The last two segments were counterbalanced within gender.

As a check of the motivational component of the interview (the opportunity to earn a prize), it is important to note that all children did appear quite motivated to earn a prize as evidenced not only by their explicit

enthusiasm for the chosen prize during the interview but also by their vociferous requests to “be next” whenever the researcher entered the classroom to take a child to the interview room. As such, it is quite reasonable to assume that the inclusion of prizes for managing emotional expressions effectively controlled for any individual differences in motivation for managing emotional expressions as they relate to gender and social acceptance.

Additionally, as a further check on the integrity of the interviews, it was apparent that all children were readily able to think of television and movie characters that they liked and disliked. Moreover, all children appeared to understand easily the instructions for substituting positive expressions for genuinely negative ones and for neutralizing genuine negative expressions which suggests that individual differences in children’s knowledge of strategies for managing their emotional expressions was also held constant in relation to gender and social acceptance.

Video-tape Ratings. The video-tapes of each of the five interview segments for each child were digitized at 15 frames per second using a Macintosh G3 computer. Using Adobe Premiere 5.1 (a video editing software program) each interview segment for each child was then edited down to the first five seconds of video footage following an emotion eliciting interview question (e.g., “Who is your favorite television character?”). Due to difficulties with audio filtering equipment and a low signal-to-noise ratio, the audio portion of each segment was removed and each 5-second segment was then converted to a 320 by 240 pixel QuickTime movie. The resulting five separate video segments per participant (300 segments in all) were then

saved together in a directory on the computer to be accessed by the coder (see below). The order in which video segments would be accessed in the directory was then randomized for each subject, alternating between males and females.

For coding purposes, nine additional video segments obtained from nine children (5 girls and 4 boys) who were not included in the sample of 60 children (selected at random) were also digitized and converted to 160 by 120 pixel QuickTime movies to serve as prototype anchor points for video ratings. These "prototype" videos were selected by the researcher as the clearest representations of discrete emotional behaviors listed in Appendix D and then arranged in a 3x3 matrix on the computer screen ranging from "1", extremely negative, to "9", extremely positive, with "5" representing complete neutrality. Each prototype movie segment could then easily be played back by the coder at will to help orient herself to the resultant emotional valence scale while viewing each participant's video clips.

Coding thus consisted of the coder first familiarizing herself with the prototypes and then viewing each participant's video clip in order to determine which prototype most closely matched the segment to be coded. Moreover, to aid in coding, a written description of negative behaviors, neutral behaviors, and positive behaviors was given to the coder, as well as a written description of emotional behaviors associated with each prototype (see Appendix D). Nine directories (folders) numbered 1 through 9 (corresponding to the prototype numbers) were created on the computer desktop and aligned underneath the prototype matrix. Having determined which prototype most closely matched the segment to be coded, the coder

then saved the current segment in the corresponding numbered directory, thereby assigning a numerical rating to the video clip. In order to increase reliability, upon finishing the ratings for all the participants' video segments, the coder again viewed each of the segments in order to double-check her ratings. Any misclassifications were then remedied by moving the video segment in question to the appropriate directory (i.e., the ratings were revised when deemed necessary). Following this coding procedure, the rating for each video clip (i.e., the numbered directory to which the clip was saved) was recorded on a data sheet using the video file's name (encrypted with a numerical code known only to the researcher to avoid biasing the coder) to identify in which interview condition the rating belonged for each subject's clip (e.g., false neutral, genuine negative, etc.). Descriptive statistics for these ratings as a function of gender are presented in Table 1.

Table 1

Descriptive Statistics for Interview Segment Ratings<sup>a</sup>

Interview Segment	<u>Boys<sup>a</sup></u>		<u>Girls<sup>b</sup></u>	
	Mean <sup>c</sup>	Range	Mean <sup>c</sup>	Range
Genuine Positive	7.07 (.95)	5 - 9	7.40 (.59)	5 - 9
False Positive	6.17 (1.68)	3 - 9	7.13 (.81)	5 - 9
Genuine Neutral	4.93 (.37)	4 - 6	5.03 (.18)	4 - 6
False Neutral	5.17 (.90)	3 - 7	5.60 (1.28)	3 - 8
Genuine Negative	3.23 (1.01)	1 - 5	3.57 (1.15)	1 - 5

<sup>a</sup>n=30<sup>b</sup>n=30<sup>c</sup>Means are presented followed by standard deviations in parentheses.

A fourth-year female graduate student in a developmental-clinical psychology doctoral program served as the coder for all 300 video segments. In order to assess the reliability of the coding scheme, a second coder – a fourth-year female undergraduate psychology student – also coded all video segments from a randomly chosen third of the participants (10 males and 10 females resulting in 100 video clips). Both coders were unaware of the specific hypotheses of the study. Interrater reliability was assessed using the Pearson Product-Moment correlation. Results showed that the overall reliability for the 100 video segments rated by both coders was very high ( $r = .94$ ). Reliability for each of the interview conditions separately ( $n = 20$ ) were also acceptable, ranging from  $r = .72$  for ratings of the genuinely negative

condition to  $r = .89$  for the genuinely positive condition. Given that the overall reliability was high and that the reliability for ratings of the interview conditions used to generate substitution and neutralization accuracy scores (see below) were all between  $r = .82$  and  $r = .89$ , the multivariate and regression analyses conducted in the present study using such scores are considered to be justified.

Emotional Expression Scoring. The five valence scores for each participant's expressive behavior were combined to yield a number of separate emotional expression scores. One such score reflects the "accuracy" of participants' deceptive positive expressions in the substitution condition – the extent to which each participant's deceptive positive emotional expression approximated his or her genuine positive expression. Specifically, this *substitution accuracy score* was calculated as the absolute negative difference between the genuine positive expression and the deceptive positive expression. Absolute negative values were used to avoid curvilinear relationships with acceptance scores and to avoid positive inaccuracy scores canceling out negative inaccuracy scores in group comparisons. As such, greater deviations of the deceptive positive expressions from the genuine positive expressions on the 9-point scale in either direction consisted of more negative scores with 0 corresponding to completely accurate and –8 corresponding to extremely inaccurate. For the neutralization condition, an accuracy score was similarly calculated for each participant's deceptive neutral expression in the neutralization condition – the extent to which each participant's deceptive neutral expression approximated his or her genuinely neutral expression. Again, the *neutralization accuracy score* was calculated as

the absolute negative difference between the genuine neutral expression and the deceptive neutral expression indicating greater inaccuracy with more negative scores.

In order to determine the direction of inaccuracy for both the substitution and neutralization conditions, “leakage” scores were generated. Specifically, *substitution leakage* was calculated as the difference between the deceptive positive expression score and the genuine negative expression score. Likewise, *neutralization leakage* was calculated as the difference between the deceptive neutral expression score and the genuine negative expression score.

To clarify, the leakage and accuracy scores were derived by combining the genuine positive ( $G^{\text{pos}}$ ), genuine neutral ( $G^{\text{neut}}$ ), and genuine negative ( $G^{\text{neg}}$ ) emotional expression scores with the false positive ( $F^{\text{pos}}$ ), false neutral ( $F^{\text{neut}}$ ), and false negative ( $F^{\text{neg}}$ ) emotional expression scores to yield the following four separate emotional management scores:

1. Substitution accuracy =  $(-1) * |G^{\text{pos}} - F^{\text{pos}}|$
2. Substitution leakage =  $F^{\text{pos}} - G^{\text{neg}}$
3. Neutralization accuracy =  $(-1) * |G^{\text{neut}} - F^{\text{neut}}|$
4. Neutralization leakage =  $F^{\text{neut}} - G^{\text{neg}}$

In addition to the leakage and accuracy scores for each display rule condition, the valence (how negative or positive) of children’s overall expressivity was measured as the mean of their genuine emotional expressions ( $[G^{\text{pos}} + G^{\text{neg}}]/2$ ).



## RESULTS

### Data Analysis Strategy

Two primary statistical analyses were conducted, each employed to answer a particular set of questions in the present study. First, in order to determine whether the methodology adopted for use in the present study replicated previous findings on gender differences in emotional expression management (e.g., Shennum & Bugental, 1982), a multivariate analysis of variance (MANOVA) procedure was used to assess differences between males and females with respect to both substitution and neutralization accuracy scores and overall expressiveness. MANOVA was selected as appropriate given multiple dependent variables, and to provide a protection scheme to protect against chance differences when conducting multiple univariate tests. To further explore the patterns of inaccuracy, multiple regression techniques were employed to examine the direction of inaccuracy and any gender differences in the direction of inaccuracy. Specifically, this second analysis examined the relationship between leakage scores and accuracy scores where significant positive correlations would indicate that deceptive expressions were more negative than corresponding genuine expressions (i.e., that "leakage" of genuine negative emotions was responsible for inaccuracy) and where significant negative correlations would indicate that deceptive expressions were more positive than corresponding genuine expressions (i.e., that inaccuracy was due to overcompensating).

The second main set of analyses was directed at examining the primary hypotheses regarding the relationships between deceptive accuracy scores and peer acceptance for both males and females. Three multiple

regression analyses were conducted to assess the relationship between the two predictor variables (i.e., substitution accuracy and neutralization accuracy) and the three criterion variables (i.e., overall peer acceptance ratings, peer acceptance as rated by girls, and peer acceptance as rated by boys). Given that the primary hypotheses under investigation were concerned with the relationship between emotional expression management variables and social acceptance as a function of gender, each analysis included an interaction term (entered in a separate block after controlling for the main effects of gender and accuracy) consisting of the product vectors of (gender x substitution accuracy) and (gender x neutralization accuracy). In order to control for individual differences in overall expressive valence, given that such individual differences might account for differences in the accuracy variables and peer acceptance, the overall expressive valence score was entered into each regression model prior to the entry of any other predictor variables.

#### Tests of the Assumptions Underlying the Use of MANOVA and Multiple Regression

The appropriate use of MANOVA and multiple regression procedures is predicated upon several underlying assumptions about the characteristics of the data. As such, prior to using MANOVA and multiple regression statistics, these underlying assumptions were examined using SPSS procedures.

One assumption is that observations are independent. This was assessed by inspecting the casewise plots of residuals. No discernable

patterns were apparent suggesting that participants were indeed responding independently.

Another assumption concerns the normality of the distribution of scores on continuous variables. Inspection of normal probability plots as well as histograms of jackknife residuals revealed that most of the variables included in this study were normally distributed. It should be noted, however, that what deviations there were from normality (e.g., in accuracy scores and peer acceptance scores), such deviations were all in the same direction suggesting that the use of MANOVA and multiple regression techniques was still appropriate. (Indeed, analyses conducted on transformed scores, where appropriate, resulted in no discernable change in the results, despite complete normalization of such variable distributions).

A third assumption, particularly important for MANOVA procedures, concerns the homogeneity of the covariance matrices. Using Box's M statistic, it was found that heterogeneity was not significant ( $F(6, 24372) = 1.5, p = .17$ ). Moreover, univariate tests for heterogeneity, using Levene's Test also revealed no significant differences. For multiple regression procedures, the related assumption of homogeneity of variance was assessed through inspection of the scatterplots of predicted scores versus the residuals. The random scatter suggested that this assumption had also been met in that there was no apparent systematic relationship between the predictors and the residuals.

A fourth assumption important in the use of multiple regression procedures is that the data do not deviate from linearity. This assumption was assessed through standardized scatterplots of the predicted scores versus

the residuals of the dependent variables. For each of the dependent variables, these scatterplots exhibited seemingly random scatter about the means, suggesting a linear relationship between the predictor and criteria variables, and the absence of any non-linear trends.

Finally, the assumption that there were no influential outliers in the data set was examined. Although a few outliers were detected, when testing such outliers' influence with the Cook's Distance procedure, none was found to exert a significant influence on the data ( $p > .99$ ).

#### Gender Differences in Emotional Expression Management

The MANOVA conducted with gender as the independent variable and substitution accuracy, neutralization accuracy, and overall emotional valence as the three dependent variables revealed a significant effect for gender (Wilk's  $\lambda = .67$ ,  $F(3, 56) = 9.30$ ,  $p < .001$ ).

As can be seen in Table 2, at the univariate level, the ANOVA for substitution accuracy revealed that girls were significantly more accurate than boys when substituting a deceptive positive expression for a genuinely negative one ( $F(1, 58) = 22.87$ ,  $p < .001$ ). Moreover, this gender effect accounted for 28.3% of the variance in substitution accuracy with an observed power of .997, which can be considered to be a large effect (Cohen, 1977).

Table 2

Means and Standard Deviations for Emotion Expression Scores<sup>a</sup>

Variable	Boys <sup>b</sup>	Girls <sup>c</sup>
Substitution Accuracy	-1.77 (1.07)	-.67 (.66) <sup>***</sup>
Neutralization Accuracy	-.63 (.72)	-1.00 (.79) <sup>†</sup>
Overall Expression Valence	5.15 (.65)	5.48 (.58) <sup>*</sup>

<sup>a</sup>Means are presented followed by standard deviations in parentheses.

<sup>b</sup> $n=30$

<sup>c</sup> $n=30$

<sup>\*</sup> $p < .05$ , <sup>\*\*\*</sup> $p < .001$ , <sup>†</sup> $p = .065$

Analyses for overall emotional valence scores also revealed that girls were significantly more positive than boys ( $F(1, 58) = 4.43, p < .05$ ). This effect was smaller in that gender accounted for 7.1% of the variance in overall emotional valence with an observed power of .54. Although there was a trend in the data for neutralization accuracy scores, with boys appearing to be more accurate than girls in neutralizing genuine negative expressions, this effect was only marginally significant ( $F(1, 58) = 3.55, p = .065$ ). This gender effect was small to medium, accounting for only 5.8% of the variance in neutralization accuracy with an observed power of .46.

In order to determine whether inaccuracy in both the substitution and neutralization conditions was due to the leakage of genuine negative emotions or to overcompensation and exaggeration, and to determine further whether such patterns of inaccuracy differed as a function of gender, a separate multiple regression analysis was conducted for each condition

wherein the leakage score (e.g.,  $F^{\text{neut}} - G^{\text{neg}}$ ) was entered as a predictor of the corresponding accuracy score (e.g.,  $(-1) * |G^{\text{neut}} - F^{\text{neut}}|$ ) after controlling for gender differences. The direction of the resulting correlation would then indicate whether inaccuracy was due to leakage (where a significant correlation is positive), to exaggeration (where a significant correlation is negative), or to both leakage and exaggeration (where the correlation is not significant). In other words, when a significant correlation is positive, it would indicate that the accuracy scores (e.g.,  $(-1) * |G^{\text{pos}} - F^{\text{pos}}|$ ) increase as “leakage” scores (e.g.,  $F^{\text{pos}} - G^{\text{neg}}$ ) increase and, thus, that any inaccuracy is due to genuine negative emotions “leaking out” and compromising the accuracy of the deceptive emotional expression. Alternatively, when the significant correlation is negative, it would indicate that the accuracy scores decrease as “leakage” scores increase and, thus, that any inaccuracy is due to overcompensating for genuine negative emotions and exaggerating the deceptive emotional expression. Finally, a non-significant correlation would indicate that inaccuracy was due both to actual leakage and to exaggeration equally. (Although it could be argued that a non-significant effect might also indicate that greater accuracy was simply due to less genuinely felt negative emotions, such an interpretation is not warranted given that no significant correlations were found between genuine negative expressions and false positive or false neutral expressions.)

The multiple regression analysis for substitution accuracy revealed that after controlling for gender differences, substitution leakage scores were significantly related to substitution accuracy scores ( $b = .264, p < .05$ ). Moreover, the positive direction of this effect suggests that inaccuracy in the

substitution condition was due primarily to the actual leakage of genuine negative emotion.

In order to test whether inaccuracy due to leakage varied as a function of gender, the product vector of substitution leakage and gender (dummy coded) was entered into the regression model in a second block. Results indicated that this interaction term was not significant suggesting that substitution inaccuracy was explained by the actual leakage of genuine negative emotion equally well for both boys and girls.

The multiple regression analysis for neutralization accuracy revealed that after controlling for initial gender differences, neutralization “leakage” scores were significantly related to neutralization accuracy scores ( $b = -.383$ ,  $p < .01$ ). Given that the direction of this effect was negative, inaccuracy in the neutralization condition was apparently due to overcompensation resulting in deceptive neutral expressions which were more positive than neutral. As in the analysis for the substitution condition above, the possibility that this overcompensation in the neutralization condition varied as a function of gender was examined by entering the product vector of neutralization leakage and gender into the regression model in a second block. Results indicated that this interaction term was not significant, suggesting that neutralization inaccuracy was explained by overcompensation equally well for both boys and girls.

#### Emotion Expression Management and Social Acceptance

The primary multiple regression analyses conducted on each of the three social acceptance variables (i.e., overall acceptance, ratings by girls, and ratings by boys) were conducted in a series of four discrete steps. In the first

step, gender and overall expressive valence scores were entered into the model in order to control for any significant relationships with peer acceptance ratings. Indeed, as noted earlier, significant gender differences were found in peer acceptance ratings and, as such, it was particularly important to control for such sex differences in acceptance ratings so as not to confound any relationship between neutralization or substitution accuracy scores and acceptance. In the second step, the incremental significance of entering either substitution accuracy or neutralization accuracy into the model was assessed (i.e., controlling for gender and expressive valence). The third step assessed whether forced entry of both accuracy scores together added significantly to the model. The fourth step consisted of controlling for main effects of gender and substitution accuracy by removing neutralization accuracy from the model and assessing the entry of gender x substitution product vector for any significant ( $p < .05$ ) contribution. Similarly, the fifth step of the analyses consisted of controlling for main effects by forcing neutralization accuracy into the model (after removing substitution accuracy) and then assessing the gender x neutralization product vector for any significant incremental contribution.

It is important to note that several significant zero-order correlations, ranging in absolute value from .27 to .86, were found among the six predictor variables used in the multiple regression equations. These correlations are presented in Table 3.



Table 3

Zero-Order Correlations Between Predictor Variables

Variable	1	2	3	4	5	6
1. Expressive Valence	--					
2. Substitution Accuracy	.13	--				
3. Neutralization Accuracy	-.19	-.20	--			
4. Gender	-.27*	-.53***	.24	--		
5. Gender * Sub. Accuracy	-.02	-.86***	.10	.35**	--	
6. Gender * Neut. Accuracy	-.02	.11	-.69***	-.18	-.09	--

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , (2-tailed tests).

The existence of significant relationships between predictor variables can weaken the regression model by inflating the standard error of the beta weights, thus making the model less stable (Stevens, 1996). As such, the variance inflation factor (VIF) can be used to assess whether such multicollinearity is problematic for the regression equations. Inspection of the variance inflation factors for the predictor variables in each of the four regression equations, however, revealed that VIF values ranged from only 1.08 to 5.12. Given that variance inflation presents a significant problem only when the variance inflation factor nears values of 10.0 or greater (Stevens, 1996), multicollinearity was not considered to be a particular problem for these regression models. It should be noted, however, that the VIF value of 5.12 was observed for the product vector of gender and substitution accuracy

and that this value, considered in conjunction with the high correlations between this variable and both the gender and substitution accuracy variables (i.e., main effects), may have slightly attenuated the power of regression models using this product vector score.

The first multiple regression model examined the relationship between substitution and neutralization accuracy in relation to overall peer acceptance when controlling for overall expressive valence scores and gender. As can be seen in Table 4, results indicated that neither substitution nor neutralization accuracy scores were significantly related to overall peer acceptance. Additionally (although omitted from the table) no significant change in the model was observed when entering both accuracy variables into the analysis as a single block. When the product vectors for gender x accuracy score were entered in separate blocks and controlled for the main effects of accuracy and gender, a significant interaction effect was found for neutralization accuracy ( $b = -.356, p < .05$ ). As such, separate regression models for boys and girls were examined with respect to neutralization accuracy.

Table 4

Unique Effects, Regression Weights, and Standardized Coefficients of  
Covariables with Overall Peer Acceptance

Covariables	Unique Effect <sup>a</sup>	Beta	SEB	$\beta$
Gender <sup>b</sup>	.062	-.417	.215	-.251
Expressive Valence <sup>c</sup>	.029	.223	.172	.168
Substitution Accuracy <sup>d</sup>	.003	.047	.119	.058
Neutralization Accuracy <sup>d</sup>	.027	.175	.140	.161
Gender x Sub. Accuracy <sup>e</sup>	.009	.189	.270	.180
Gender x Neut. Accuracy <sup>e</sup>	.073*	-.582	.279	-.356*

<sup>a</sup>Semi-partial correlation coefficient squared

<sup>b</sup>Adjusted for expressive valence

<sup>c</sup>Adjusted for gender

<sup>d</sup>Adjusted for overall expressive valence and gender.

<sup>e</sup>Adjusted for overall expressive valence and main effects.

\* $p < .05$

The subsequent regression analysis for girls showed that, after controlling for overall emotional valence scores, neutralization accuracy was not significantly related to overall peer acceptance. The regression analysis for boys, however, after controlling for overall emotional valence scores, showed that neutralization accuracy was significantly related to overall peer acceptance ( $b = .375$ ,  $p < .05$ ). Specifically, as boys' ability to accurately neutralize genuine negative emotional expressions increased, their overall peer acceptance ratings also increased. Moreover, the effect size (as

measured by the change in  $R^2$ ) for neutralization accuracy accounted for 13.9% of the variance in boys' peer acceptance ratings with an observed power of .53.

The procedure for the second multiple regression model was identical to the first except that this second model examined the predictor variables in relation to participants' acceptance ratings as rated only by girls. The results are presented below in Table 5.

Table 5  
Unique Effects, Regression Weights, and Standardized Coefficients of Covariables with Peer Acceptance as Rated by Girls

Covariables	Unique Effect <sup>a</sup>	Beta	SEB	$\beta$
Gender <sup>b</sup>	.452***	-1.565	.228	-.687
Expressive Valence <sup>c</sup>	.029	-.026	.183	-.014
Substitution Accuracy <sup>d</sup>	.027	.155	.125	.141
Neutralization Accuracy <sup>d</sup>	.001	.037	.151	.025
Gender x Sub. Accuracy <sup>e</sup>	.057 <sup>†</sup>	.505	.277	.353 <sup>†</sup>
Gender x Neut. Accuracy <sup>e</sup>	.034	-.426	.306	-.190

<sup>a</sup>Semi-partial correlation coefficient squared

<sup>b</sup>Adjusted for expressive valence

<sup>c</sup>Adjusted for gender

<sup>d</sup>Adjusted for overall expressive valence and gender.

<sup>e</sup>Adjusted for overall expressive valence and main effects.

\*\*\* $p < .001$ , <sup>†</sup> $p = .07$

Although no main effects for substitution or neutralization accuracy were found, a marginally significant interaction effect for the gender  $\times$  substitution accuracy product vector was found ( $b = .353$ ,  $p = .07$ ). Given that a) this interaction was hypothesized a priori in the present study, b) the effect was marginally significant (using a two-tailed test), and c) the significance of such an interaction was possibly attenuated somewhat by the unavoidable increase in multicollinearity when using a product vector as mentioned above, regression models for boys and girls were examined separately with respect to the relationship between substitution accuracy and peer acceptance as rated by girls.

Results indicated that for boys, the ability to accurately substitute positive expressions for genuinely negative emotional expressions was not significantly related to peer acceptance as rated by girls. In contrast, for girls, substitution accuracy was significantly related to peer acceptance as rated by girls ( $b = .418$ ,  $p < .05$ ). Specifically, as girls' ability to accurately substitute positive expressions for negative emotional expressions increased, so did their peer acceptance as rated by girls. Moreover, the effect size (as measured by the change in  $R^2$ ) for substitution accuracy was fairly large, accounting for 17.1% of the variance in girls' peer acceptance ratings, with an observed power of .62.

The procedure for the third multiple regression analysis was again the same as the previous two analyses above except for the use of peer acceptance as rated only by boys. Results showed that there was no significant main effect for either neutralization or substitution accuracy scores in relation to peer acceptance as rated by boys. Additional analyses using

gender x accuracy product vectors also revealed no significant effects. Results of the third analysis are shown below in Table 6.

Table 6  
Unique Effects, Regression Weights, and Standardized Coefficients of  
Covariables with Peer Acceptance as Rated by Boys

Covariables	Unique Effect <sup>a</sup>	Beta	SEB	$\beta$
Gender <sup>b</sup>	.194***	1.038	.280	.456***
Expressive Valence <sup>c</sup>	.048	.376	.223	.207
Substitution Accuracy <sup>d</sup>	.003	-.067	.155	-.061
Neutralization Accuracy <sup>d</sup>	.025	.220	.183	.148
Gender x Sub. Accuracy <sup>e</sup>	.003	-.150	.352	-.105
Gender x Neut. Accuracy <sup>e</sup>	.024	-.436	.372	-.195

<sup>a</sup>Semi-partial correlation coefficient squared

<sup>b</sup>Adjusted for expressive valence

<sup>c</sup>Adjusted for gender

<sup>d</sup>Adjusted for overall expressive valence and gender.

<sup>e</sup>Adjusted for overall expressive valence and main effects.

\*\*\* $p < .05$

## DISCUSSION

The observation that emotional expressions serve as important communicative mediators of social functioning has had a long history in the study of human behavior. Expanding on this, it is likely that individual differences in the ability to manage emotional expressions consistent with social norms are related to individual differences in social functioning.

Although recent research has begun to demonstrate that the successful management of emotional expressions is related to adaptive social functioning (e.g., Cole et al., 1994; McDowell et al., 2000), many questions remain unanswered, leaving this hypothesis in need of further research.

One question addressed by the present study concerns whether emotional expression management is related to a global measure of social functioning as opposed to other, previously identified individual "social skills." Unfortunately, previous research has failed to assess adequately social functioning as a construct separate from skills that comprise the construct as a whole. As such, any relationship between emotional expression management and global social functioning is obscured by the relationships between emotional expression management and other social behaviors such as "being positive," cooperative, aggressive, or withdrawn. The present study, in contrast, examined emotional expression management as a skill related to a global measure of children's affiliation with their peer group.

A second question addressed by the present study concerns whether emotional expression management is related to social acceptance even when controlling for social-cognitive variables such as perspective taking, display rule knowledge, response generation, and social goals. Although a good deal of research has focused on how such social-information processing variables moderate the relationship between social competence and emotional behavior (e.g., Dodge, 1991; Hubbard & Coie, 1994), little has been done to examine whether such a relationship exists given a more pure measure of the ability to enact particular emotional expression management strategies. Given that age differences and gender differences exist in emotional

expression management abilities even when controlling for social cognitive factors, it was hypothesized that individual differences in such abilities would similarly help to explain individual differences in social functioning despite any individual differences in social-cognition.

A third question addressed by the present study concerns whether or not the relationship between emotional expression management and social acceptance is moderated by gender. Given that much descriptive research has shown significant gender differences in emotional expression management, with girls being better at substituting feigned positive expressions for genuinely negative ones, and boys being better at neutralizing genuinely negative expressions, it is likely that measures of adaptive interpersonal functioning would reflect such gender differences. Specifically, the ability to use substitution would likely have a greater impact on girls' social acceptance and the ability to neutralize genuinely negative emotions would likely have a greater impact on boys' social acceptance.

The methodology used in the present study, adapted from Shennum and Bugental (1982), provides children with explicit instructions on how and when to manage genuinely negative expressions. These instructions serve as a control for individual differences in social cognitive variables such as perspective taking, display rule knowledge, and response generation. Moreover, by using a tangible reward (i.e., a desirable prize), this methodology also helped to control for individual differences in social goals as children were all equally motivated to manage genuinely negative emotional expressions to the best of their ability. Finally, the present study attempted to improve upon prior research by operationalizing global social



functioning in terms of children's affiliation with their peer groups instead of in terms of a conceptually related cluster of skills thought to be important in establishing and maintaining social relationships.

In order to determine the validity of findings regarding the relationship between emotional expression management and social acceptance, it was important to consider first whether the methodology used in the present study was effective. That is, it was assumed that if the methodology succeeded in replicating previous findings regarding gender differences in emotional expression management, any findings regarding the relationship between emotional expression management and social acceptance were also likely to be valid. As such, the data were analyzed with two separate goals in mind: a) to validate the methodology by examining whether there were expected gender differences in the ability to manage emotional expressions, and b) to determine whether emotional expression management was related to social acceptance and whether any such relationship was moderated by gender.

#### Gender Differences in Emotional Expression Management

One major finding in the present study was that girls were significantly better than boys at substituting feigned positive expressions for genuine negative expressions. Although this was not found in Shennum and Bugental's original study from which the current methodology was adapted, this finding is highly consistent with much prior research examining gender differences in emotional expression management (Cole, 1986; Davis, 1995; Feldman & White, 1980; Feldman et al., 1979; Saarni, 1984). Moreover, this finding supports the theory that girls are better at substitution than boys

regardless of any possible moderating social cognitive variables such as display rule knowledge or motivation. As such, these results lend further support to the idea that girls' superior skill in dissembling genuine negative emotional expression may be the result of ingrained socialization pressures and overlearning. In other words, girls appear to simply have a greater ability to feign positive emotion when genuinely feeling negative.

Additionally, the finding that girls are significantly more genuinely positive in their overall emotional expressiveness than boys is also consistent with prior research (see Brody & Hall, 2000 for a review) and further supports the conclusion that the methodology used in the present study was sufficiently sensitive to gender differences in emotive behavior. Moreover, it is important to note that overall expressive valence was examined as a function of genuine emotional expressions only, and was therefore independent of gender differences regarding the dissemblance of such genuine emotional expressions.

Although the finding that boys were more skilled than girls at neutralizing genuine negative expressions was only marginally significant in the present study, this finding is also consistent with much prior research (e.g., Cole, 1986; Saarni, 1984; Shennum & Bugental, 1982). Indeed, Shennum and Bugental (1982) originally reported this gender difference as significant and research using the disappointment paradigm designed by Saarni (Cole, 1986; Davis, 1995; McDowell et al., 2000; Saarni, 1984) has also demonstrated that boys tend to show more neutral (or at least less positive) behaviors than girls during situations that encourage emotional expression management of negativity. Consistent with the hypothesis proposed by Saarni (1984) and

Davis (1995), socialization pressures for boys to neutralize and minimize their emotional expressions seem to become ingrained by middle-childhood to the extent that boys become more skilled than girls at neutralization, even when controlling for social cognitive variables and motivation.

The findings for the direction of inaccuracy in the substitution and neutralization conditions are particularly interesting in that inaccuracy did not differ as a function of gender. Although it might have been hypothesized that, when compared to boys, girls would overcompensate for genuine negative emotions in the substitution condition (given a propensity for positive emotional expressions in general) thereby “overshooting” target expressions of positive emotion, this was not the case. In fact, inaccuracy in the substitution condition was explained by more negative emotional expressions for both girls and boys. Thus, although girls were significantly more accurate at feigning positive expressions than boys, the inaccuracy of both girls and boys appeared to be due to underestimating their target expression of genuine positive emotion. When considered in relation to previous research regarding age differences in emotional expression management, this finding suggests that by the age of 8 to 10 years, the tendency of younger children to err on the side of exaggerated positive expressions (e.g., Feldman & White, 1980; Feldman et al., 1979; Shennum & Bugental, 1982) reverses in the direction of true “leakage” of negative emotion.

In contrast to the findings regarding inaccuracy in the substitution condition, both boys and girls in the neutralization condition tended to overestimate their target neutral expressions. One interpretation of the opposite

directions of inaccuracy for substitution and neutralization is that, as Ekman and Friesen (1969) have suggested, substitution is slightly less demanding than neutralization or minimization in that substitution at least provides an outlet for emotional energy. For instance, it may be easier to appear to be laughing while actually crying than it is to appear completely neutral and unmoved when overcome by an urge to cry. As such, the children in the present study may have been able to at least channel their emotional energy by appearing positive when their true emotions were negative, but are developmentally able to avoid transparent and inauthentic exaggerations of positive emotion. Neutralization of negative emotions, in turn, may provide a greater challenge to children than substitution, in that it provides no expressive outlet, resulting in overcompensation (i.e., more positive expressions) for genuine negative emotion and a pattern of inaccuracy that looks developmentally similar to younger children's inaccuracy when asked to substitute positive emotional expressions for genuinely negative ones. Although the present study was not designed to examine the meaning of such inaccuracy patterns, these findings do provide a starting place for future research. Specifically, it would be informative to systematically vary the degree of induced negative emotion to determine whether the direction of inaccuracy when feigning positive expressions is a function of a need to channel emotional energy or the leakage of truly negative affect.

In sum, the findings regarding gender differences in the present study are highly consistent with previous research on gender differences in emotional expression management, demonstrating that girls are more skilled at feigning positive expressions and boys are more skilled at neutralization

when experiencing genuinely negative emotions. Indeed, such findings are consistent with even broader theories and research regarding the relative expressiveness of males and females: males are typically more controlled and less emotional (i.e., they neutralize emotional expressions), whereas women are typically more emotionally expressive overall (DePaulo & Friedman, 1998). Indeed, as DePaulo and Friedman (1998) have suggested, such conclusions pervade the “cultural wisdom of the west” (p.11). Although the question of whether such cultural wisdom reflects a true difference or helps to create it is beyond the scope of this discussion, for purposes of the present study, these findings seem to indicate that the methodology used resulted in valid observations that reflect actual differences in emotional behavior. As such, these findings help to validate the results regarding the relationship between emotional expression management and social acceptance.

#### Emotional Expression Management and Social Acceptance

A major finding in the present study was that the ability to accurately neutralize negative emotional expressions was significantly related to peer acceptance for boys. Specifically, boys who were better at approximating a neutral expression when experiencing genuinely negative affect tended to be more liked by their peers. In contrast, boys who were unable to accurately feign neutral expressions were less liked by their classmates. When considering the research on gender differences which suggest that the norm for boys is to be able to effectively neutralize negative affect, this finding makes a good deal of sense; the closer boys are to approximating the social norms for male behavior, the more successful they are in their social relationships. The fact that the ability to neutralize negative affect was not

significant for girls is perhaps not surprising for the same reason; the norm for girls is not to neutralize negative affect so much as it is to appear positive. Moreover, the finding that boys' ability to neutralize negative affect is related to peer acceptance also may help to explain why previous research has failed to demonstrate a consistent relationship between display rule usage and social competence for boys. Although Cole et al. (1994) did find that boys with behavior problems exhibited less spontaneous use of cultural display rules, McDowell et al. (2000) did not find any relationship between display rule usage and a relatively more direct measure of social competence in boys. As the findings in the present study suggest, a possible reason for such a null effect may be that, for boys, the norms and behavioral expectancies held by their peers have to do primarily with neutralization as an emotion expression management strategy. As such, it is clear that searching for significant relationships between social competence and emotional expression management as assessed by the disappointment paradigm – which focuses primarily on how well children feign positive emotion -- misses the social importance of neutralization as a strategy for boys in managing negative affect.

A second major finding of the present study was that although girls' ability to neutralize negative expressions was not related to their overall peer acceptance, their ability to feign positive expressions was significantly related to peer acceptance as rated by girls. The fact that these findings for girls are, in general, consistent with McDowell et al.'s (2000) findings for a relationship between girls' social competence and spontaneous display rule usage is perhaps not surprising given that the disappointment paradigm, as noted,

focuses primarily on assessing the ability to feign positive emotion. What is surprising, however, is the fact that such a relationship between social competence and emotional expression management was found in the present study only when considering peer acceptance as rated by other girls. In contrast, no relationship was found between the ability to feign positive expressions in either boys or girls and peer acceptance as rated by boys, nor for boys' ability to feign positive expressions in relation to their peer acceptance as rated by girls. Taken together, these findings suggest that the effectiveness (as indexed by social acceptance) of a particular emotional expression management strategy is dependent upon both the gender of the individual communicating the emotion as well as the gender and expectancies of the peer group. Whereas girls seem to be sensitive to other girls' ability to manage emotional expressions along gender-specific norms, boys do not seem to consider such abilities in determining whether they like or dislike a peer. Indeed, if anything, boys tended to rate peers who were better at feigning positive expressions as less accepted. Moreover, the correlation between boys' acceptance ratings of girls and girls' acceptance ratings of girls was very close to zero suggesting that boys may use a very different set of criteria when evaluating their female peers than do girls. As such, the non-significant correlation between boys' peer acceptance ratings and girls' ability to feign positive emotion appears to have masked the social importance of such emotional expression management for girls.

One possible explanation for these results is that girls may be more sensitive to nonverbal communication than boys and, as such, may be more likely to make social judgments based on how their peers communicate

emotion. In contrast, nonverbal communication, at least through facial expressions, may not be particularly salient for boys. Indeed, previous research and theory has often identified females as being more sensitive to nonverbal communication than males (i.e., more sensitive to emotional cues), and more focused upon and better at identifying facial expressions (Blanck, Rosenthal, Snodgrass, DePaulo, & Zuckerman, 1981; Block, 1983; Zuckerman, Blanck, DePaulo, & Rosenthal, 1980). As such, it may be that individual differences in emotional expression management – as a medium through which social relations are negotiated – are simply more apparent and important to girls, thereby having greater impact on girls' social judgments. This, in turn, would explain why girls' ability to substitute positive emotions for genuinely negative ones was significantly related only to peer acceptance as rated by girls. It may also help to explain why boys' ability to neutralize negative emotion was related to peer acceptance only when combining peer acceptance as rated by boys with peer acceptance as rated by girls. In other words, the results of the present study are consistent with prior research and theory which suggests that females are more sensitive to the nonverbal communication of emotion.

#### Limitations and Needs for Future Study

Perhaps the most obvious limitation of the present study is the correlational nature of the research. Although it is intuitively appealing to conclude that greater ability to effectively manage one's emotional expressions in line with gender specific norms results in greater social adaptation, it is also possible that being accepted by one's peers leads to greater emotional expression management abilities. Specifically, it is possible



that social acceptance results in greater exposure to norms within the peer group and that such exposure entrains one's emotional expression repertoire to a better approximation of such norms. For individuals outside the peer group – those who are rejected or neglected by their peers – much less feedback may be available about one's emotional expression management style. Thus, such children may have less opportunity to learn management strategies “endorsed” by the peer group.

An argument against this alternative hypothesis is that individual differences in emotional expression management are not likely as context specific and flexible as this alternative hypothesis would need to assume. That is, if individual differences in emotional expression management can be accounted for as a function of exposure to the norms of one's peer group, such individual differences would then most likely be a function of knowledge about what emotional expression management strategies are appropriate and/or the motivation to use strategies commensurate with the norms of the peer group. Given that the present study controlled for variables such as knowledge and motivation by giving explicit instructions and rewards (i.e., the study controlled for variables that might be impacted by exposure to one's peer group), it is more likely that the results reflect a relationship in the direction of skilled emotional expression management ability leading to greater peer acceptance. Indeed, because such an ability is likely the result of both individual differences in neurophysiology and socialization pressures that begin *in infancy*, it is, perhaps, unlikely that individual differences in such ability would be as easily and significantly

impacted and altered by the time children begin to receive exposure to and feedback from the peer group.

Another possible interpretation of the results is that emotional expression management skills are only indirectly related to social acceptance. It may be, for instance, that social acceptance is related only to more egregious emotional displays such as aggression or withdrawal. As noted earlier, a good deal of research has demonstrated just such a relationship (e.g., Cantrell & Prinz, 1984; Carlson et al., 1984; Crick, 1996; French & Waas, 1985; Ladd, 1983), and it is possible that emotional expression management as operationalized in the present study is simply an extension of more obvious failures to regulate emotion such as aggression or withdrawal. It is important to note, however, that a problem with such an interpretation is that behaviors such as overt aggression are relatively infrequent. Moreover, as some research has suggested (e.g., Pelham & Bender, 1982), even when introduced into entirely new peer groups, rejected children will quickly provoke dislike in their peers despite the absence of any such overt displays of extreme aggression or withdrawal. As such, it is likely that more subtle forms of dysregulated emotion and social interactions account for these rapid social judgments by peers. Future research will undoubtedly have difficulty in determining whether individual differences in emotional expression management actually lead to individual differences in social acceptance, as the ability to manage emotional expressive behavior is likely to be resistant to experimental manipulation. Nevertheless, the use of careful observational measures and the assessment of how children formulate social judgments

about their peers will be of great value in exploring the validity of these various interpretations.

Another limitation of the present study is that the ability to accurately dissemble negative emotion only accounted for, at most, 17.1% of the variability in peer acceptance. Although such an effect size is relatively large in the discipline of psychology, it is important to recognize that peer acceptance is influenced by many other variables, many of which may have little or nothing to do with emotional expression management. To put the findings in perspective it is helpful to ask to what degree one might improve a child's social competence by fostering better emotional expression management skills. For a child who is rejected by his or her classmates, focusing on a skill that, at best, accounts for 17% of the variability in social acceptance may not be particularly helpful in isolation. As such, it is important to recognize that the findings in the present study are only a small part of a much larger picture. It will be important for future research to examine how emotional expression management skills relate to other variables important for adaptive social functioning in an attempt to identify larger clusters of skills.

Another limitation of the present study is the focus on only one age group. Given the significant age differences in the ability to dissemble emotional expressions, it is quite likely that the relationship between emotional expression management and social acceptance would change as a function of age. Indeed, given that very young children are particularly poor at effectively dissembling genuine negative emotions, it is possible that such subtle control is entirely unrelated to social acceptance. Additionally, it may

be that as children get older, the relationship between emotional expression management and social acceptance becomes even stronger. Future research could easily extend the present methodology for use with both younger and older children to examine developmental trends.

A fourth limitation of the present study is the fact that the measure of "accuracy" was particularly circumscribed. Accuracy was only measured as the difference in degree of emotional valence predominantly in the facial channel. Obviously, an important component of deception is not only to approximate a particular emotional valence but to do so believably. Specifically, it may be that although a child is able to accurately approximate her genuine positive expressions when dissembling negative expressions, she does so at the expense of other nonverbal channels. As such, her true feelings may be easily identified by attending to other "leaky" nonverbal channels, resulting in a particularly transparent and disingenuous display. Additionally, it may be that true feelings can be readily identified in the actual verbal content of what children say when attempting to hide their real feelings, similarly resulting in disingenuousness. Operationalizing "accuracy" as a product of *all* the communicative aspects of emotion may increase our understanding of how emotional expression management relates to social competence and might even then account for more variance in social acceptance. Future research aimed at parsing out the contribution of various communication channels may also help to resolve some of the issues brought up in the discussion of the importance of peer group expectancies and possible differences between boys and girls when decoding expressive behaviors.

It is also important to note that the present study only examined children from a relatively restricted demographic range. Specifically, 98% of the children were Caucasian and were primarily from middle- to working-class homes. As such, the findings of this study may reflect a very restricted set of cultural norms regarding emotional expression management. It will be important for future research to extend the findings of the present study using a more heterogeneous sample in order to increase the generalizability of these findings.

Finally, it is important to note that the present study only focused on a fairly circumscribed set of emotions. Indeed, the ability of children to manage other emotions such as anger or even glee was not examined. Given that the reality of emotional life is much more complicated and varied than simple oscillations from "positive" to "negative," it is important to recognize that emotional expression management itself is a much more complicated and varied thing. Future research could do well to examine emotional expression management as it relates to more specific emotional states, which may help to further explicate the role of emotional expression management in social functioning.

### Summary

This study examined the hypothesis that the ability to dissemble negative emotional expressions is related to social acceptance. Findings revealed that for boys, the ability to effectively neutralize expressions of negative affect was significantly related to peer acceptance ratings. In contrast, for girls, the ability to effectively feign positive emotion in place of negative emotion was significantly related to peer acceptance as rated by

girls. Given that the methodology employed in this study replicated many prior research findings on gender differences in emotional expression management, and that the findings for the relationship between social acceptance and emotional expression management support hypotheses generated from much previous theory and research in the field of emotion regulation, the results of the present study are particularly helpful in illuminating the importance of emotional expression management for adaptive social functioning.

## REFERENCES

- Allen, V. L., & Atkinson, M. L. (1978). Encoding of nonverbal behavior by high-achieving and low-achieving children. Journal of Educational Psychology, *70*, 298-305.
- Amen, D. G., Paldi, J. H., & Thisted, R. A. (1993). Brain SPECT imaging. Journal of the American Academy of Child and Adolescent Psychiatry, *32*, 1080-1081.
- Asher, S. R., & Hymel, S. (1981). Children's social competence in peer relations: Sociometric and behavioral assessment. In J. D. Wine & M. D. Syme (Eds.), Social competence (pp. 125-157). New York, NY: Guilford Press.
- Barkley, R. A. (1990). Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment. New York, NY: Guilford Press.
- Barkley, R. A. (1994). Delayed responding and attention deficit hyperactivity disorder: Toward a unified theory. In D. K. Routh (Ed.), Disruptive behavior disorders in children: Essays in honor of Herbert Quay (pp. 11-57). New York: Plenum.
- Barrett, K. C. (1993). The development of nonverbal communication of emotion: A functionalist perspective. Journal of Nonverbal Behavior, *17*, 145-169.
- Bastiani, A. M. (1997). Emotional communication skills and children's peer acceptance. Unpublished manuscript, Skidmore College.
- Blanck, P. D., Rosenthal, R., Snodgrass, R., DePaulo, B. M., & Zuckerman, M. (1981). Sex differences in eavesdropping on nonverbal cues: Developmental changes. Journal of Personality and Social Psychology, *41*, 391-396.

Block, J. H. (1983). Differential premises arising from differential socialization of the sexes: Some conjectures. Child Development, *54*, 1335-1354.

Blurton-Jones, N. (Ed.). (1972). Ethological studies of child behavior. Cambridge: Cambridge University Press.

Boivin, M., Dodge, K. A., & Coie, J. D. (1995). Individual-group behavioral similarity and peer status in experimental play groups of boys: The social misfit revisited. Journal of Personality and Social Psychology, *69*, 269-279.

Brody, L. R., & Hall, J. A. (2000). Gender and emotion. In M. Lewis & J. M. Haviland (Eds.), Handbook of emotions (pp. 447-460). New York: Guilford.

Bronowski, J. (1977). Human and animal languages. In J. Bronowski (Ed.), A sense of the future (pp. 104-131). Cambridge, MA: MIT Press.

Buck, R. (1975). Nonverbal communication of affect in children. Journal of Personality and Social Psychology, *31*, 644-653.

Buck, R. (1977). Nonverbal communication of affect in preschool children: Relationships with personality and skin conductance. Journal of Personality and Social Psychology, *35*, 225-236.

Bukowski, W. M., & Cillessen, A. H. (Eds.). (1998). Sociometry then and now: Building on six decades of measuring children's experiences with the peer group. San Francisco, CA: Jossey-Bass Inc.

Bukowski, W. M., Sippola, L. K., & Hoza, B. (1999). Same and other: Interdependency between participation in same- and other-sex friendships. Journal of Youth and Adolescence, *28*, 439-459.



Campos, J., Mumme, D., Kermoian, R., & Campos, R. (1994). A functionalist perspective on the nature of emotion. Monographs of the Society for Research in Child Development, 59 (2,3), 284-304.

Cantrell, V. L., & Prinz, R. J. (1985). Multiple perspectives of rejected, neglected, and accepted children: Relation between sociometric status and behavioral characteristics. Journal of Consulting and Clinical Psychology, 53, 884-889.

Carlson, C. L., Lahey, B. B., & Neeper, R. (1984). Peer assessment of the social behavior of accepted, rejected, and neglected children. Journal of Abnormal Child Psychology, 12, 189-198.

Carson, J., Burks, V., & Parke, R. D. (1987). Emotional encoding and decoding skills of parents and children of varying sociometric status. Unpublished manuscript, University of Illinois.

Casey, R. J., & Fuller, L. L. (1994). Maternal regulation of children's emotions. Journal of Nonverbal Behavior, 18, 57-89.

Cassidy, J., Parke, R. D., Butkovsky, L., & Braungart, J. M. (1992). Family-peer connections: The roles of emotional expressiveness within the family and children's understanding of emotions. Child Development, 63, 603-618.

Cole, P. M. (1986). Children's spontaneous expressive control of facial expression. Child Development, 57, 1309-1321.

Cole, P. M., Zahn-Waxler, C., & Smith, K. D. (1994). Expressive control during a disappointment: Variations related to preschoolers' behavior problems. Developmental Psychology, 30, 835-846.

Crick, N. R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. Child Development, *67*, 2317-2327.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social-information-processing mechanisms in children's social adjustment. Psychological Bulletin, *115*, 74-101.

Custrini, R. J., & Feldman, R. S. (1989). Children's social competence and nonverbal encoding and decoding of emotions. Journal of Clinical Child Psychology, *18*, 336-342.

Darwin, C. (1965). The expression of the emotions in man and animals. Chicago: University of Chicago Press. (Original work published 1872)

Davis, T. L. (1995). Gender differences in masking negative emotions: Ability or motivation? Developmental Psychology, *31*, 660-667.

Denham, S. A., & McKinley, M. (1993). Sociometric nominations of preschoolers: A psychometric analysis. Early Education and Development, *4*, 109-122.

Denham, S. A., McKinley, M., Couchoud, E. A., & Holt, R. (1990). Emotional and behavioral predictors of preschool peer ratings. Child Development, *61*, 1145-1152.

Depaulo, B. M., & Friedman, H. S. (1998). Nonverbal communication. In D. T. Gilbert & S. T. Fiske (Eds.), The handbook of social psychology (Vol. 2, pp. 3-40). Boston, MA: McGraw-Hill.

Dodge, K. A. (1985). Facets of social interaction and the assessment of social competence in children. In B. H. Schneider, K. H. Rubin, & J. E.

Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 3-22). New York: Springer-Verlag.

Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), Minnesota symposium in child psychology (Vol. 18, pp. 77-125). Hillsdale, NJ: Erlbaum.

Dodge, K. A. (1991). Emotion and social information processing. In J. Garber & K. Dodge (Eds.), The development of emotion regulation and dysregulation (pp. 159-181). New York: Cambridge University Press.

Dodge, K. A., & Frame, C. L. (1982). Social cognitive biases and deficits in aggressive boys. Child Development, 53, 620-635.

Dodge, K. A., Asher, S. R., & Parkhurst, J. T. (1989). Social life as a goal coordination task. In C. Ames & R. Ames (Eds.), Research on motivation in education (Vol. 3, pp. 107-135). New York: Academic Press.

Dodge, K. A., Murphy, R. M., & Buchsbaum, K. (1984). The assessment of intention-cue detection skills in children: Implications for developmental psychopathology. Child Development, 61, 1289-1309.

Edwards, R., Manstead, A. S. R., & MacDonald, C. J. (1984). The relationship between children's sociometric status and ability to recognize facial expressions of emotion. European Journal of Social Psychology, 14, 235-238.

Eisenberg, N., Guthrie, I. K., Fabes, R. A., Reiser, M., Murphy, B. C., Hogren, R., Maszk, P., & Losoya, S. (1997). The relations of regulation and emotionality to resiliency and competent social functioning in elementary school children. Child Development, 68, 295-311.

Ekman, P. (1972). Universals and cultural differences in facial expressions of emotion. In J. Cole (Ed.), Nebraska Symposium on Motivation (Vol. 19, pp. 207-283). Lincoln: University of Nebraska Press.

Ekman, P., & Friesen, W. V. (1969). The repertoire of nonverbal behavior: Categories, origins, usage, and coding. Semiotica, *1*, 49-98.

Ekman, P., & Friesen, W. V. (1976). Measuring facial movement. Journal of Nonverbal Behavior, *6*, 238-252.

Ekman, P., & O'Sullivan, M. (1991). Facial expression: Methods, means, and moes. In R. S. Feldman & B. Rimé (Eds.), Fundamentals of nonverbal behavior (pp. 163-199). New York: Cambridge University Press.

Erdley, C. A., & Asher, S. R. (1996). Children's social goals and self-efficacy perceptions as influences on their responses to ambiguous provocation. Child Development, *67*, 1329-1344.

Erdley, C. A., & Asher, S. R. (1999). A social goals perspective on children's social competence. Journal of Emotional and Behavioral Disorders, *7*, 156-167.

Feldman, R. S., & White, J. B. (1980). Detecting deception in children. Journal of Communication, *30*, 121-128.

Feldman, R. S., Jenkins, L., & Popoola, O. (1979). Detection of deception in adults and children via facial expressions. Child Development, *50*, 350-355.

Feldman, R. S., Philippot, P., & Custrini, R. J. (1991). Social competence and nonverbal behavior. In R. S. Feldman & B. Rimé (Eds.), Fundamentals of nonverbal behavior (pp. 329-350). New York: Cambridge University Press.

Field, T. M., & Walden, T. A. (1982). Production and perception of facial expressions in infancy and early childhood. In H. W. Reese & L. P. Lipsitt

(Eds.), Advances in child development and behavior (Vol. 16, pp. 171-211). New York: Academic Press.

French, D. C., & Waas, G. A. (1985). Behavior problems of peer-neglected and peer-rejected elementary-aged children: Parent and teacher perspectives. Child Development, *56*, 246-252.

Gnepp, J., & Hess, D. (1986). Children's understanding of verbal and facial display rules. Developmental Psychology, *22*, 103-108.

Graham, S., Hudley, C., & Williams, E. (1992). Attributional and emotional determinants of aggression among African-American and Latino young adolescents. Developmental Psychology, *28*, 731-740.

Halberstadt, A. G. (1991). Toward an ecology of expressiveness: Family socialization in particular and a model in general. In R. S. Feldman & B. Rimé (Eds.), Fundamentals of nonverbal behavior (pp. 106-160). New York: Cambridge University Press.

Hall, J. A. (1979). Gender, gender roles, and nonverbal communication skills. In R. Rosenthal (Ed.), Skill in nonverbal communication (pp. 32-67). Cambridge, MA: Oelgeschlager, Gunn, & Hain.

Heilman, K. M., Voeller, K. K., & Nadeau, S. E. (1991). A possible pathophysiologic substrate of attention deficit hyperactivity disorder. Journal of Child Neurology, *6* (Supp.), S76-S81.

Hubbard, J. A., & Coie, J. D. (1994). Emotional correlates of social competence in children's peer relationships. Merrill-Palmer Quarterly, *40*, 1-20.

Hubbard, J. A., Coie, J. D., & Dodge, K. A. (1993). The social behavior of popular and average status boys in a group of unfamiliar peers.

Unpublished manuscript, Duke University, Durham, NC.

Hymel, S. (1986). Interpretations of peer behavior: Affective bias in childhood and adolescence. Child Development, *57*, 431-445.

Izard, C. E. (1977). Human emotions. New York: Plenum Press.

Kagan, J. (1994). On the nature of emotion. In N. A. Fox (Ed.), Monographs of the Society for Research in Child Development, *59* (2,3), 7-24.

Kagan, J., Reznick, J. S., & Snidman, N. (1987). The physiology of behavioral inhibition in children. Child Development, *58*, 1459-1473.

Kagan, J., & Snidman, N. (1991). Infant predictors of inhibited and uninhibited profiles. Psychological Science, *2*, 40-44.

Kalfus, G. R., & Berler, E. S. (1985). Test-retest reliability of sociometric questionnaires across four grade levels. Journal of Clinical Child Psychology, *14*, 345-347.

Ladd, G. W. (1983). Social networks of popular, average, and rejected children in school settings. Merrill-Palmer Quarterly, *29*, 283-308.

LeDoux, J. E. (1987). Emotion. In F. Plum (Ed.), Handbook of physiology: Section 1. The nervous system: Vol. 5. Higher functions of the brain (pp. 419-460). Bethesda, MD: American Physiological Society.

LeDoux, J. E. (1994). Emotion, memory, and the brain. Scientific American, *270*, 50-57.

Lemerise, E. A., & Arsenio, W. F. (2000). An integrated model of emotion processing and cognition in social information processing. Child Development, *71*, 107-118.

Lewis, M., & Michalson, L. (1985). Faces as signs and symbols. In G. Zivin (Ed.), The development of expressive behavior: Biology-environment interactions (pp. 153-180). Orlando, FL: Academic Press.

Lou, H. C., Henriksen, L., & Bruhn, P. (1984). Focal cerebral hypoperfusion in children with dysphasia and/or attention deficit disorder. Archives of Neurology, *41*, 825-829.

Maccoby, E. E. (1980). Social development. New York: Harcourt.

Malatesta, C. Z., & Haviland, J. M. (1982). Learning display rules: The socialization of emotion expression in infancy. Child Development, *53*, 991-1003.

McDowell, D. J., O'Neil, R., & Parke, R. D. (2000). Display rule application in a disappointing situation and children's emotional reactivity: Relations with social competence. Merrill-Palmer Quarterly, *46*, 306-324.

Nelson, C. A. (1994). Neural bases of infant temperament. In J. Bates & T. D. Wachs (Eds.), Temperament: Individual differences at the interface of biology and behavior (pp. 47-82). Washington, DC: American Psychological Association.

Parke, R. D. (1990). In search of fathers: A narrative of an empirical journey. In I. E. Sigel & G. H. Brody (Eds.), Methods of family research: Biographies of research projects. Volume I: Normal families (pp. 153-188). Hillsdale, NJ: Erlbaum.

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. Developmental Psychology, *29*, 611-621.

Pelham, W. E., & Bender, M. E. (1982). Peer relationships in hyperactive children: Description and treatment. Advances in Learning & Behavioral Disabilities, 1, 365-436.

Porges, S. W., Doussard-Roosevelt, J. A., & Maiti, A. K. (1994). Vagal tone and the physiological regulation of emotion. In N. A. Fox (Ed.), Monographs of the Society for Research in Child Development, 59 (2,3), 167-188.

Putallaz, M., & Sheppard, B. H. (1990). Social status and children's orientations to limited resources. Child Development, 61, 2022-2027.

Renshaw, P. D., & Asher, S. R. (1983). Children's goals and strategies for social interaction. Merrill-Palmer Quarterly, 29, 353-374.

Rinn, W. E. (1991). Neuropsychology of facial expression. In R. S. Feldman & B. Rimé (Eds.), Fundamentals of nonverbal behavior (pp. 3-30). New York: Cambridge University Press.

Saarni, C. (1979). Children's understanding of display rules for expressive behavior. Developmental Psychology, 15, 424-429.

Saarni, C. (1982). Social and affective functions of nonverbal behavior: Developmental concerns. In R. Feldman (Ed.), Development of nonverbal behavior in children (pp. 123-147). New York: Springer-Verlag.

Saarni, C. (1984). An observational study of children's attempts to monitor their expressive behavior. Child Development, 55, 1504-1513.

Saarni, C. (1989). Children's understanding of strategic control of emotional expression in social transactions. In C. Saarni & P. Harris (Eds.), Children's understanding of emotion (pp. 181-209). Cambridge: Cambridge University Press.



Saarni, C. (1990). Emotional competence: How emotions and relationships become integrated. In R. A. Thompson (Ed.), Nebraska symposium on motivation: Vol. 36. Socioemotional development (pp. 115-182). Lincoln: University of Nebraska Press.

Saarni, C. (1999). The development of emotional competence. New York: Guilford.

Saarni, C. (2000). Socialization of emotion. In M. Lewis, & J. M. Haviland (Eds.), Handbook of emotions (pp. 435-446). New York: Guilford.

Schore, A. N. (1996). The experience-dependent maturation of a regulatory system in the orbital prefrontal cortex and the origin of developmental psychopathology. Development and Psychopathology, 8, 59-87.

Shennum, W. A., & Bugental, D. B. (1982). The development of control over affective expression in nonverbal behavior. In R. S. Feldman (Ed.), Development of nonverbal behavior in children (pp. 101-121). New York: Springer-Verlag.

Sippola, L. K., Bukowski, W. M., & Noll, R. B. (1997). Dimensions of liking and disliking underlying the same-sex preference in childhood and early adolescence. Merrill-Palmer Quarterly, 43, 591-609.

Stevens, J. (1996). Applied multivariate statistics for the social sciences. Mahwah, NJ: Lawrence Erlbaum.

Stuss, D. T., & Benson, D. F. (1984). Neuropsychological studies of the frontal lobes. Psychological Bulletin, 95, 3-28.

Terry, R., & Coie, J. D. (1991). A comparison of methods for defining sociometric status among children. Developmental Psychology, 27, 867-880.

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. In N. A. Fox (Ed.), Monographs of the Society for Research in Child Development, 59 (2,3), 25-52.

Tomkins, S. S. (1962). Affect, imagery, and consciousness: Vol. 1. The positive affects. New York: Springer.

Wasik, B. H. (1987). Sociometric measures and peer descriptions of kindergarten children: A study of reliability and validity. Journal of Clinical Child Psychology, 16, 218-224.

Wright, J. C., Giammarino, M., & Parad, H. W. (1986). Social status in small groups: Individual-group similarity and the social "misfit." Journal of Personality and Social Psychology, 50, 523-536.

Zametkin, A. J., Liebenauer, L. L., Fitzgerald, G. A., & King, A. C., (1993). Brain metabolism in teenagers with attention-deficit hyperactivity disorder. Archives of General Psychiatry, 50, 333-340.

Zuckerman, M., Blanck, P. D., DePaulo, B. M., & Rosenthal, R. (1980). Developmental changes in decoding discrepant and nondiscrepant nonverbal cues. Developmental Psychology, 16, 220-228.

## Appendix A

Consent Letter for Emotional Expression Interview

September, 2000

Dear Parents/Guardians,

Your child is being invited to participate in a University of Maine research project about children's emotional expressivity and peer relationships conducted by members of the Department of Psychology. The researchers for this project are Gregory S. Young, doctoral student, and Dr. Janice Zeman, Associate Professor.

**What's involved?** This project involves two brief sessions in your child's school. The first session will be conducted in your child's classroom, which will take about 10 minutes. During this first session, children will be asked to rate (privately) how much they like to play with each person in their classroom on a scale of 1 (don't like to) to 5 (like to a lot). Please note that only the names of children with permission to participate will appear on these lists. Also, each child will have a folder on his or her desk to shield answers from other classmates.

In the second session, which will last about 30 minutes, children will take part in an individual video-taped interview about their favorite and least favorite television characters. They will be asked simply to describe their favorite and their least favorite television characters and why they like or don't like such characters. Children will then be asked to 'pretend' to talk about their least favorite television character as though they really like that character. They will then be asked to talk about that same character as though they feel neutral about that character.

Your child's video-taped interview will then be edited down to approximately 1 minute, and the verbal content (what your child says during the interview) will be removed so that no one can understand what your child is saying. This 1-minute video segment will then be put onto a tape that will be seen by 2 research assistants who will be asked to try to figure out how much all the video-taped children like the TV characters they are talking about.

**Will answers be private?** All information obtained from the classroom ratings will be private. The video-taped interview will also be private and not seen by anyone except the researchers and the research assistants who will be trying to guess how your child feels about the interview topic on video tape. The information will only be used for research purposes. Your child's name will NOT be connected with the classroom ratings or video-tape interview. The ratings and the video-tape will be stored in a locked laboratory room and will be destroyed upon completion of the project. Also, your child will have the opportunity to decide not to participate at any time without penalty.

**Risks/Benefits:** There have been no specific types of risks from participating in this type of project noted in similar projects. However, should your child feel any distress during any portion of the project, we will make certain to talk with him or her about such feelings and discuss his or her concerns. We have done several studies in the past using classroom ratings and video-taped interviews and have found that most children enjoy participating. Moreover, for participating in the study, your child will earn a prize such as trading cards or a set of markers. This project will be very valuable in helping us to learn more about children's emotional expressiveness and how this relates to their relationships with their classmates.

**What do I need to do?** Please fill out the attached form and return it to your child's classroom teacher *as soon as possible*.

**Questions?** We hope you will allow your child to participate in this project. If you have any questions, please feel free to contact Gregory Young at 942-5499 or Dr. Janice Zeman at 581-2037. If you reside outside the local calling area, you can call collect. You may also contact Gregory Young by e-mail at: [Gregory.Young@umit.maine.edu](mailto:Gregory.Young@umit.maine.edu).

Thank you very much for your consideration!

Sincerely,

\_\_\_\_\_  
Gregory S. Young  
graduate student

\_\_\_\_\_  
Janice Zeman, Ph.D.  
Associate Professor

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Parent/Guardian consent for University of Maine research project on children's emotional expressivity and peer relationships. Gregory S. Young and Janice Zeman, Ph.D will conduct this project.

PLEASE RETURN AS SOON AS POSSIBLE-THANKS!!!

I have read the letter describing the study.

\_\_\_\_\_ YES, my child can participate

\_\_\_\_\_ NO, my child may not participate.

Child's name: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

Assent Script for Social Acceptance Questionnaire

Hi, my name is \_\_\_\_\_, and I'm from the University of Maine. I am here today because I'm interested in learning about how kids feel about playing with their classmates and how they do at expressing their feelings. There are two parts to our project.

Today I'll be asking you to tell me how much you like playing with the kids in your class.

In a few weeks, I will return and interview each of you about your favorite and least favorite television or movie characters.

This is not a test. There are no "right or wrong" answers. The important part is for you to tell me what you really think.

Your answers are private. First, we ask you not to talk about the study with other kids. We also ask you to use folders so that all your answers are private. Third, we keep your answers private by taking your name off of the questionnaire and using i.d. numbers. We won't share the answers you give today with any other people.

We sent a letter home with you to your parents/guardians and they agreed to let you participate in this project, but we'd like to have your permission also. So, as I'm passing out the folders and questionnaire, please tell me if you would like to participate or not. If you decide that you don't want to participate, that's okay. Also, you can decide to stop at any time and that is okay too.



### Instructions for Administering Peer Acceptance Questionnaire

Like I told you before, I am interested in learning how kids get along together at school. On the questionnaire I am giving you, there is a list with your classmate's names on it. There are no "right or wrong" answers. I am interested in your opinion – what you think. We won't be doing this outloud because this information is private. Your answers will be confidential. That means we will not be showing your answers to anyone else – we will not give them to your classmates, parents or teachers. We want you to help keep everyone's answers private. If you tell your answers to someone else, or ask them what their answers are, they won't be private. So if you are going to keep answers private, do you ask someone else what their answers are? No. Do you tell other kids what your answers are? No. We do this so everyone feels comfortable giving us honest answers.

*(Pass out social acceptance questionnaire with folders).*

When you get your handout, please wait for me to give you the directions before starting.

Okay, look at the page with the names on it. *(hold up sheet)*. I am going to go over how to fill out this sheet, so don't start until I tell you to do so. See the number 5? The number 5 means you like to do something a lot. Down at this end, the number 1 means you don't like to do something at all.

Now, if you look at the first page, you will see that it says, "How much do you like to play with this person at school?" This means only at school, like at recess or during gym class, or during free-time – not at home.

Now look down the list at all of the names until you find your own name. When you do, cross it out, all the way through all the numbers. You don't have to rate yourself. Can anyone NOT find their name on the list? *(If a child's name is not on the list, say, 'now, I need everyone to add \_\_\_\_\_ to their list. Write in the number of the scale, too, so it looks just like the others.')* Now look at the names on the list and make sure that you know who everyone is. If you don't know who someone is, please raise your hand and I can help you figure out who it is. You will notice that everyone's name is not on the list. We only include the number of kids who are participating in this project.

Let's do two examples before you start. Remember, the question is, "How much do you like to play with this person at school?" There is a name at the top of the first page: Jane Doe. Let's pretend that Jane Doe is in your class and you really like to play with Jane a lot. What number would you circle? *(Wait for response, review if necessary.)* Now, everybody circle the number 5 for Jane Doe. Now look at the next name: John Doe. Let's pretend that John Doe is in your class. Sometimes you like to play with John and sometimes you don't. What number should you circle? *(Wait for response, review if*

*necessary*). Now, everybody circle number 3 for John Doe. Now, everybody put your folders up so that no one else can see your answers, like this (*demonstrate with nearest child*).

Next I want you to go down the list and circle one number for each person in the class. Circle the number that tells how much you like to play with that person at school. Don't start yet. Remember, circle only one number for each person on your list. Also, please remember that no one will be told your answers. Also remember that after we are finished, you are not to discuss your answers with anyone else. Please don't talk to your neighbors and if you have questions, raise your hand. When you are finished, please flip over your paper. Go ahead.



## Appendix C

### Script for Emotional Expression Interview

Do you remember when I came into your class before? Well today, we are going to do the second part of the project. I am going to ask you some questions about television characters—characters you like and characters you don't like. For the first part, when I ask you about television characters, I will ask you to tell me about the characters and why you like them or don't like them. And I want you to feel like you can be honest: like if you really don't like a particular character, like a bad guy, then you can tell me why you really don't like them.

After I ask you about characters you really like and really don't like, then what we will do is I will ask you about a television character you really don't like and your job will be to pretend to feel differently about them. It will be a lot like acting. So I will ask you to act as though you really do like the television character that you don't like. Then I will ask you to act as though you don't care one way or the other about that same character you don't like.

Do you see the video camera there? What I will do is turn on the camera when we start, and that will film our interview. After we are all done here today, I will take out about 1-minute's worth of my interview with you and mix it all up. Then I will take the sound -- what you are saying during the interview -- so that anyone watching the tape can't understand exactly what you're saying. They will be able to see your face and shoulders, but they won't know exactly what you're saying. Your job, then, is to see if you can fake those people out. See if you can make them think that you really do like the television character that you and I know you really don't like. So, in that way, it's sort of like acting.

Now, the people who will see you acting on the tape will be two people who help me with research. They are research assistants and they will be trying to figure out how you feel about things I interview you about. And, like I said, they won't be able to understand exactly what you're saying because I will take out the sound on the tape. But they will see your face and your shoulders. Before we begin, I want to make sure that you understand that my research assistants will be watching the interview on tape. Do you feel comfortable with that? If you don't feel okay with that you can tell me that you don't want to participate and that is okay. Would you still like to participate? *(If child is unsure, elaborate on the above, what is involved, and that it is okay not to participate. If child does not want to participate, thank the child and accompany him or her back to the classroom. If child wants to continue, begin with interview questions).*

Okay, so before I start asking you about television characters, I am going to turn on the camera over here *(turn on video camera and begin taping)*.

*(Begin by asking following questions, asking child to elaborate where necessary.)*

1. Tell me about your favorite television character. Who is he or she?
2. Why do you like that character so much? What is it about him or her that is so likeable?
3. Tell me about your least favorite television character. Who is he or she?
4. Why do you not like that character so much? What is it about him or her that makes you dislike him or her so much?

Okay, great job! Now we are going to do the acting part I talked to you about. I am going to ask you about \_\_\_\_\_ *(child's least favorite television character)* again, but THIS time, I want you to pretend that you actually do like him or her. Remember how you felt about your favorite character? See if you can pretend to like your least favorite character as much as you like your favorite character. Do you understand? *(review if child is unsure, then begin with first two interview questions).*

Also, it's real important that you try to trick my research assistants. They are going to try to figure out how you really feel and I want to see if you can try and trick them so that they would see this part of the interview and say "Wow! She really likes whatever she's talking about." And I'll decide today how well I think you do at faking feelings. If you do a good job, you can win one of the prizes I brought with me today *(show child box of prizes and ask him or her to choose a prize to try and win)*. And remember, there are two acting parts. So you have to do good on both of them to win the prize.

So does that make sense? If I think you do a good job at faking out whoever will be watching the interview, you win the prize. *(Verify that child understands he or she will be winning the prize for accurate emotional expression management)*. So you can't win the prize if you don't seem believable. *(Reassure child that he or she will likely succeed if child shows any anxiety)*.

Okay, now the last part is to do one more acting part. I am going to ask you about your least favorite television character one last time, and THIS time, I want you to pretend that you really just don't care one way or the other. You don't really like him or her, but you don't really dislike him or her either. Pretend that you just really don't care—that you don't have an opinion one way or the other. Do you understand? *(review if child is unsure, then begin with first two interview questions)*.

*(When child answers the interview questions, turn camera off).*

Thank you very much! We are done with the interview now. You definitely won the prize! Great job! How do you feel about the interview?

*(The researcher should assess if the child is feeling any carry-over negative feelings from talking about least favorite television characters, and process with the child as necessary).*

Do you have any questions now that we are all done?

## Appendix D

Video-tape Rating Scale

Negative Behaviors	Neutral Behaviors	Positive Behaviors
Snarl lip	Shrug	Smile (without any negative behaviors)
Furrowed brow	"I don't know" expression	Head nod ("uh-huh, yes")
Sticks out tongue ("blech, yuck")	with no negative or positive behaviors	Laughter
Head shake ("uh-uh, no")	Flat	Bouncing or gestures of excitement
Wrinkled nose	Looking up or down with no apparent affect	Eyebrow raise
Pursed lips, lips pressed together firmly		
Sideways mouth		
Eye roll		
Eye narrowing and/or squinched shut		
Frown		
Wrinkled chin (from frown)		
Nostril flare		

Note: Some children may have smiles accompanied with negative behaviors. In such cases, negative supercedes such positive behavior.

1 = Combination of several instances of extreme negative behavior lasting entire clip. Seems as though child is saying "Oh! I can't stand it! Yuck!"

2 = Continuous negativity at medium level (2 or more negative behaviors) or one instance of a more extreme negative behavior (e.g., eye scrunch or "yuck" face). Seems as though child is saying "I really don't like that, yuck."

3 = One fairly continuous negative behavior such as a head shake or wrinkled nose, even if smiling. Can also be one clear but brief negative behavior. Seems as though child is saying "No, I don't like that."

4 = One slight instance of negativity such as a brief nose wrinkle with a smile or slight head shake with a skeptical look. Seems as though child is saying "Well, I guess I don't really like it that much, no."

5 = Neutral. Shrugs or expressions of "I don't know" or "I don't care" without any clear negative or positive behaviors. May appear totally flat.

6 = One slight instance of positive. Not a continuous smile, but may be brief, very small smile. Slight head nodding. Seems as though child is saying "Well, I guess it's okay, yeah."

7 = Continuous slight smile or one easily recognizable smile. Also a slight smile with a head nod or raised eyebrows. Seems as though child is saying "Yeah, that's neat. I do like that."

8 = Big genuine smile, toothy smile. May occur with slight laugh or giggle or head nod for emphasis. Seems as though child is saying "Yeah, I really like that!"

9 = Very excited or enthusiastic behavior. Big genuine smile in combination with body and hand movements expressing enthusiasm. Seems as though child is saying "I love that!"

## BIOGRAPHY OF THE AUTHOR

Gregory S. Young received his B.A. in 1993 with distinction from The University of Colorado, Boulder, in English and Psychology. In 1994, he enrolled in the Clinical-Developmental Psychology graduate program at The University of Maine, Orono. Since that time, Gregory S. Young has been involved in many research projects at The University of Maine, including independent research on children's emotional expression management, a research grant on juvenile sex offenders in the State of Maine, statistical consultation in the Department of Communication Sciences and Disorders, and data analysis and manuscript preparation at the Center for Research and Evaluation. Gregory S. Young currently works at the Neuro-Psychiatric Institute at UCLA conducting research on psychological outcomes of children experiencing medical trauma. He is a candidate for the Doctor of Philosophy degree in Psychology from the University of Maine in August, 2001.