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The Development and Maintenance of Children's
Reputation Among Peers: An analogue study

Submitted in Partial Fulfilment of the Requirements
for the Degree of Doctorate of Philosophy in
Clinical Psychology

Carole Gentile
School of Psychology
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Running head: Children's Peer Reputations



Carole Gentile, Ottawa, Canada, 1994



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Abstract

Children who are disliked by their peers often behave in manifestly aversive ways that elicit rejection. Accordingly, considerable effort has been devoted to social skills training which rests on the assumption that children can be taught to behave in more acceptable ways, and that such changes will lead to improvements in their peer reputation. Literature reviews have concluded that social skills training has frequently succeeded in improving rejected children's behaviour, although these improvements have not invariably lead to improvements in children's peer reputation. One explanation for these findings is that children who have completed social skills training may continue to behave in subtly aversive ways that maintain peer rejection. A second explanation for these findings is that children's expectations (or schemas) of rejected peers cause them to overlook meaningful but not dramatic departures from these peers' reputation, thereby maintaining their original perception of the rejected peer as unlikeable. The combined and unique influence of these two explanations on our understanding of the development and maintenance of peer reputation have not yet been examined.

The present study addressed this issue in a short-term prospective design in which vignettes of a hypothetical child were presented to 211 fourth-, fifth-, and sixth-grade children on three separate occasions (i.e., Times 1, 2, and 3). At Time 1, the hypothetical child was described as either prosocial, subtly aversive, or manifestly aversive, thus, establishing his reputation as popular, mildly rejected, or strongly rejected, respectively. At Times 2 and 3, the hypothetical child's behaviour was

described either remaining stable or changing progressively. For the hypothetical child who changed progressively, his subsequent behaviour was either prosocial, subtly aversive, or manifestly aversive. All possible combinations of initial and subsequent behaviour involving prosocial, subtly aversive, and manifestly aversive behaviour were, therefore, represented in the study. Children's liking of the hypothetical child as well as their recall of the hypothetical child's behaviour and their attributions for his behaviour were assessed.

Children liked the prosocial child most, followed by the subtly aversive child, and finally, by the manifestly aversive child. Once the hypothetical child's reputation had been established, marked improvements or decrements in his behaviour led to incremental changes in children's liking of him. When the hypothetical child's subsequent behaviour departed only mildly from his reputation, children did not immediately change their liking of the character. These reputational effects did not, however, have an enduring impact on children's liking of the hypothetical child once his behaviour had clearly improved or deteriorated at Time 3. Instead, at Time 3 children based their liking of the hypothetical child on his current behaviour.

Children recalled manifestly aversive behaviour better than they did subtly aversive behaviour at both Times 1 and 3. At Times 1 and 3, children also ascribed schema-consistent behaviours to the hypothetical child that were not included in the vignettes, and distorted the information presented to them to make it more compatible with the hypothetical child's behaviour. At Time 3, these errors of commission were based on the hypothetical child's current behaviour rather than his previous

reputation. This again suggests that there were no enduring reputational effects at Time 3 once the hypothetical child's behaviour had changed.

Children's attributions for the prosocial and the subtly aversive hypothetical children's behaviour at Time 1 suggested a positive bias towards these characters. Children's attributions for the manifestly aversive hypothetical child at Time 1 did not show a clear bias of any kind. At Time 3, children gave the hypothetical child whose subsequent behaviour was prosocial credit for his good behaviour, although the pattern of attributions was not as clear as at Time 1. No other significant reputational effects were found at Time 3 suggesting that children thought of the hypothetical child in terms of his present behaviour rather than his reputation.

The importance of considering behavioural and reputational factors in the understanding of the development and maintenance of children's reputation among peers is discussed in reference to these findings. Conceptual and methodological refinements for future research are presented.

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There is an extensive body of research suggesting that children who are disliked by their peers often behave in manifestly aversive ways that elicit rejection. In a meta-analysis of the literature on elementary school-aged children in different sociometric status groups, Newcomb, Bukowski, and Pattee (1993) found that rejected children were more aggressive and socially withdrawn and less sociable and cognitively skilled than average children. Rejected children manifested higher levels of disruptive, negative, and physical aggression, as well as lower levels of social interaction, positive social action, positive social traits, and friendship relations. By contrast, popular, as compared to average, children showed higher levels of sociability and cognitive abilities and lower levels of aggression and social withdrawal. Newcomb et al.'s quantitative review of the literature does not provide unequivocal evidence that differences in children's behaviour contribute to the emergence of peer reputation and are not the result of being liked or disliked by one's peers (Moore, 1967).

The most compelling evidence for the causal link between aversive social behaviour and peer rejection comes from four prospective studies of social behaviour and emerging peer reputation in groups of unacquainted peers. In a first such study, Coie and Kupersmidt (1983a) placed rejected, neglected, average, and popular fourth-grade boys in groups of acquainted or unacquainted peers. Children quickly re-established their peer reputations in the newly-formed play groups. Rejected boys showed higher levels of talking, general activity, aggressive and inappropriate behaviour as well as more solitary and off-task behaviour than non-rejected boys. By contrast, popular children were rarely aggressive and instead reminded others of the rules, provided suggestions and direction, and established group norms. Coie and

Kupersmidt (1983a) concluded that the aggressive and inappropriate behaviour displayed by rejected boys played a determining role in the emergence of their peer reputation. By contrast, the higher levels of solitary and off-task behaviour shown by rejected boys emerged only after children had established their reputations, suggesting that this was a consequence of rather than a precursor to peer rejection.

Dodge (1983) replicated these findings in a second prospective study. The behaviour of second-grade boys placed in play groups of unacquainted children predicted their subsequent peer reputations. Rejected boys displayed more physical and verbal aggression, disruptive and inappropriate behaviour, and rough-and-tumble play, as well as less prosocial behaviour than non-rejected boys. Rejected boys also became progressively more isolated over the course of the study. By contrast, popular boys engaged in high levels of cooperative play activities and social conversation, and low levels of aggression.

In a third prospective study, Dodge, Coie, Pettit, and Price (1990) again found that rejected first- and third-grade boys quickly re-established their reputations among unacquainted peers. Relative to average boys, rejected boys showed higher rates of solitary play and low rates of positive social interactions with peers, including cooperative play, social conversation, and leadership behaviours. Rejected boys also demonstrated higher levels of reactive and instrumental aggression and were more likely to respond aggressively to ambiguous situations and to escalate conflict with others. As with the earlier studies, Dodge et al. (1990) found that rejected boys

became increasingly isolated over time. By contrast, popular children spent little time in solitary inappropriate and parallel play and more time in social conversation and such assertive activities as leadership, persuasion attempts, and successful group entry. Interestingly, rejected boys' higher rates of aggression did not predict their social relations among group members. The authors speculated that the structure of the play groups with one-third of the boys being rejected may have made aggression normative for the play groups.

Finally, Putallaz (1983) found that first-grade children's ability to enter a dyad of unacquainted peers predicted their subsequent reputations. Rejected boys made task-irrelevant comments, asked informational questions, and disagreed with others when attempting to join a dyad. This was not true of popular children who seemed able to accurately perceive the group's activity and adopt the group's frame of reference.

In keeping with these findings, the social skills deficit model conceptualizes peer rejection as the direct outcome of children's inappropriate social behaviour (e.g., Ladd, 1985). Relying on basic learning principles, the model states that children can be taught to behave in socially-appropriate ways, and that such changes will bring about improvements in children's peer relations (Cartledge & Fellows Milburn, 1988; Dodge, 1989; Ladd, 1985). Social skills training has, in fact, frequently succeeded in improving rejected children's behaviour (Dodge, 1989; Krehbiel & Milich, 1986). Several authors have concluded, however, that such behavioural improvements do not

invariably lead to improvements in children's peer relations (Bierman, 1986b; Dodge, 1989; Furman & Gavin, 1988; Hymel, Wagner, & Butler, 1990; Krehbiel & Milich, 1986; Lochman, Coie, Underwood, & Terry, in press). In two meta-analyses of the social skills literature, Schneider and Byrne (1985) and Schneider (1992) found that the overall short-term effectiveness of social skills training was moderate, although peer reputation was clearly less sensitive to change than was children's behaviour. The basis for these inconsistencies is not well understood (Furman & Gavin, 1988). In keeping with the social skills deficit model, Hughes and Sullivan (1988) have suggested that the elusiveness of the goal of improved peer acceptance can be attributed to the fact that rejected peers who have completed social skills training may behave in subtly aversive ways that are not captured by the molar behavioural codes generally used in naturalistic observations. Bierman (1986b) similarly suggests that children may be willing to tolerate negative behaviour from friends because negative interactions between friends differ in subtle ways from those occurring between non-friends.

Hughes and Sullivan's (1988) position is supported by the fact that some of the inconsistencies in the social skills training literature can be attributed to the methodological and conceptual limitations currently characterizing the field (see Bierman, 1986a and Dodge, 1989 for a discussion of these). An elaboration of the social skills deficit model, therefore, becomes tenable when one considers the social skills training literature an imperfect test of a skill-based conceptualization of peer

rejection.

Subtly aversive behaviours have not been well researched and remain largely unarticulated in the literature. There is, however, evidence to suggest that subtly aversive behaviours are qualitatively and quantitatively distinct from the type of manifestly aversive behaviour described earlier. Dodge et al. (1990) observed that in their initial encounters, children who did not know one another responded more negatively to rejected peers than to popular peers. The authors argued that peer reputation could not have influenced behaviour at a time when children's opinions of one another were not yet crystallized. Instead, Dodge et al. (1990) suggested that rejected peers must have been showing less skilful behaviour than popular peers. This was not, however, supported by the observational data that showed no differences between rejected and popular children. Still, it is worth noting that the behavioural coding scheme used by Dodge et al. (1990) focused on global dimensions of behaviour and would not have been sensitive to the type of subtly aversive behaviours suggested by the authors.

In contrast to the views proffered by Hughes and Sullivan (1988), some researchers have emphasized the role of the peer group in explaining peer rejection (Bierman, 1989; Cillessen & Ferguson, 1989; Hymel et al., 1990). These authors maintain that although children primarily base their perceptions of and behaviour towards peers on observed behaviour, they are also strongly influenced by the cognitive structures or schemas that they have of peers (Hymel et al., 1990).

Schemas are cognitive structures that represent the knowledge of a concept or person, including its attributes and the relations among these attributes (Fiske & Taylor, 1991). Schemas are the outcome of both data-driven and concept-driven processes, containing exemplars of a peer's behaviour as well as children's inferences about a peers' attributes and the expected relationship between these attributes (Cillessen & Ferguson, 1989; Fiske & Taylor, 1991). Schemas are believed to influence the encoding or interpretation of incoming information, memory of existing information, and inferences about missing information (Fiske & Taylor, 1991).

Once established, children's cognitive schemas of peers become resistant to change (Hymel et al., 1990). Schema-inconsistent information may be overlooked or appraised in a manner which eliminates its evaluative inconsistencies with prior attitudes and beliefs (Hymel et al., 1990). Other processes contributing to the maintenance of schemas include selective attention and recall of schema-congruent information, schema-consistent overgeneralization, as well as biased attributions and evaluation for an individual's behaviour (Hymel et al., 1990; Fiske & Taylor, 1991). In terms of the application of schema theory to peer reputation, children's negative schemas of rejected peers may cause them to overlook or minimize the importance of meaningful but not dramatic departures from a peer's reputation. A rejected child's prosocial behaviour may, for example, be carefully scrutinized by his peers and interpreted as an expression of hostility rather than one of kindness, whereas the same behaviour on the part of a popular peer may be accepted at face value.

Children's cognitive schemas may also cause them to make false generalizations about rejected peers.

Research has shown that children's cognitive schemas influence their expectations of rejected peers as well as their attributions for rejected peers' behaviour. A number of studies have also found that children have negative expectations of rejected peers. Koslin, Haarlow, Karlins, and Pargament (1968) found that 11- to 13-year-old boys children systematically underestimated the competencies of rejected peers and overestimated the competencies of popular peers on several dimensions including intelligence, height, and athletic ability. Yarrow and Campbell (1963) similarly found that 8- to 13-year-old children perceived rejected peers as less friendly and more aggressive than popular peers, even when the actual behaviour of the two groups did not differ. In the earlier described study by Coie and Kupersmidt (1983a), fourth-grade children in newly-formed and existing peer groups viewed rejected boys as most likely to start fights, even though the behavioural data did not support this view.

Studies on children's attributions of rejected peers' behaviour describe the same type of negative bias. Hymel (1986) assessed the peer reputations of second-, fifth-, and tenth-grade children. Children were presented hypothetical situations in which their actual peers were depicted behaving either prosocially or aggressively. Children were then asked to explain why their peers may have behaved the way they did. Responses were coded along three attributional dimensions: stable versus

unstable, internal versus external, and children's moral responsibility for their actions versus exemption from such responsibility. Children's attributions for their peers' behaviour varied as a function of the peer's reputation and the behaviour depicted. Children interpreted the prosocial behaviour of popular peers as resulting from internal and stable causes, whereas they viewed the aggressive behaviour of popular peers as resulting from transient and external causes. Children also gave credit to popular peers for their prosocial behaviours while minimizing popular peers' responsibility for negative behaviours. By contrast, children interpreted the behaviour of rejected peers in a negative fashion. They viewed the aggressive behaviour of rejected peers as resulting from stable causes, although prosocial behaviour on the part of these children was viewed as resulting from unstable causes. Hymel suggested that children's schemas of peers bias their interpretation of rejected peers' behaviour in such a manner as to minimize the influence of schema-inconsistent information.

Waas and Honer (1990) evaluated second-, fourth-, and sixth-grade boys' causal attributions for the behaviour of hypothetical peers described to them as either popular or rejected. The hypothetical peers were depicted engaging in positive or negative interactions set in ambiguous social situations. Following the presentation, children were asked to describe the hypothetical peer, and complete a structured questionnaire that listed possible explanations for the hypothetical child's behaviour. The causal explanations varied as a function of stability, internality, and justifiability. Children described the rejected peer more negatively than the popular peer.

Irrespective of age, children ascribed more malicious intent and less justifiability to the rejected peer when he was depicted in negative situations. Fourth- and sixth-grade boys also made internal and stable attributions for the rejected peer's negative interactions. These children predicted that any future interactions with the hypothetical rejected peer would likely be conflictual.

Negatively biased attributions and expectations appear to cause children to respond less positively to rejected peers (Bierman, 1989). DeLawyer and Foster (1986) presented fifth-grade children vignettes of hypothetical popular, rejected, average, or unacquainted peer engaging in either positive or negative behaviours. Children were asked to describe how they would feel in the situation and what they would say or do to the hypothetical peer. Responses were rated as active versus passive, effective versus ineffective, and relationship enhancing versus relationship diminishing. Children responded to positive behaviour on the part of rejected peers in ways that were as reciprocal, relationship enhancing, active, and socially effective as their responses to popular peers displaying the same behaviour. Children were, however, more active in their responses to the negative behaviour of rejected peers, and girls in particular felt more negatively about interactions involving rejected peers than those involving non-rejected peers.

Cirino and Beck (1991) presented second- and fifth-grade children hypothetical situations describing interactions with actual peers who were either rejected, neglected, average, controversial, or popular. Reputational biases towards rejected

peers were displayed by second-grade children when the behaviour of the peer was ambiguous.

Two studies have concurrently examined children's expectations and attributions for their peer's behaviour, as well as their expected behavioural responses to peers in hypothetical situations. In a first such study, Butler (1984) interviewed sixth-grade children about their perceptions of a hypothetical child whom they had been lead to believe was either popular or rejected. The hypothetical child was then described engaging in an equal number of positive, negative, and neutral behaviours. In an unexpected recall task, children remembered more positive behaviours in the case of the popular than the rejected child. Children also preferred the popular to the rejected child, rating him more favourably on several dimensions.

In a related study, Butler (1984) presented fifth-grade children descriptions of a hypothetical popular or rejected child engaging in positive and negative interactions. Children's attributions showed a clear positive bias for the hypothetical popular child. They attributed his positive behaviour to internal and enduring causes, and his negative behaviour to external and transient causes. The popular child was also rated as more responsible for positive interactions and less responsible for negative interactions with others. An opposite pattern of attributions was observed for the rejected hypothetical peer.

In a second study examining these issues, Wagner (1986) described hypothetical situations to sixth-grade children in which their actual peers were

depicted trying to enter a group. The reputation of the focal peer was found to influence most dependent variables. Children interpreted ambiguous group entry overtures on the part of popular peer in a positive light and indicated personal and peer approval for their behaviour. Children's attributions also reflected this same positive bias towards popular peers. By contrast, rejected peers were viewed in an unfavourable light. Children attributed malicious intent to these hypothetical peers' behaviour, and predicted that both themselves and their classmates would respond poorly to them.

Studies carried out in naturalistic settings have confirmed these results. Children are more antagonistic towards rejected peers even when such antagonism appears unwarranted. In a study of fourth- and sixth-grade boys, Asarnow (1983) found that despite the generally aversive behaviour of rejected children, peers responded favourably to positive overtures on the part of rejected children. Children responded differently, however, to negative behaviour depending on whether they were made by a rejected or popular boy. Children responded negatively to aggressive behaviour on the part of rejected peers, but responded in a neutral, noncombatant manner when popular peers displayed aggressive behaviour. Foster and Ritchey (1985) found that children initiated few positive overtures towards rejected peers, even though the behavioural data showed no differences in the rates of positive or negative behaviours initiated by rejected children and their peers. In the previously-described study by Dodge (1983), children also responded less positively to rejected

peers even when they behaved in the same manner as non-rejected peers. Putallaz and Gottman (1981) also found that school-aged children were clearly less responsive to rejected than popular peers in a group entry situation. The behavioural data did not, however, show any basis for the difficulties experienced by rejected peers.

Finally, in a study of peer-mediated social skills training among sixth-grade children, Solomon and Wahler (1973) found that although children were remarkably successful in reducing their attention to negative behaviour of disruptive (presumably rejected) peers, they had difficulty dispensing approval for these peers' prosocial behaviours.

Rejected children may also be the target of more serious forms of aggression on the part of peers. Dodge and Frame (1982) studied the occurrence of unprovoked aggression among a group of unacquainted second-grade boys previously identified as aggressive/rejected or non-aggressive. Aggressive/rejected boys were more likely to be the recipients of unprovoked aggression on the part of peers. By focusing on unprovoked acts of aggression, Dodge and Frame (1982) eliminated the possibility that children were acting aggressively towards rejected peers in order to defend themselves. Rather, the data clearly demonstrated that children directed more aggression towards rejected peers, even when such aggression was apparently unwarranted.

Although the above-mentioned cognitive biases and behavioural prejudices are believed to colour children's perceptions of all their peers, there are several reasons

why children's schemas of rejected peers may be especially resistant to change.

First, there is evidence that although negative perceptions of others are formed on the basis of relatively weak behavioural evidence, such perceptions are only refuted in the face of strong disconfirmatory information (Aloise, 1989; Darley & Fazio, 1980; Gurwitz & Dodge, 1977; Rothbart & Park, 1986). Children's negative schemas of rejected peers may, therefore, only be called into question when they are confronted with overwhelming disconfirmatory evidence; perhaps in the form of flawless behaviour on the part of a rejected peer.

Second, the specific nature of rejected peers' behaviour may serve to exacerbate children's negative schemas of them. Research with children (Ladd & Mars, 1986) and adults (Wright & Dawson, 1988) reveals that aggression is more salient to the social observer than prosocial or neutral behaviours. Insofar as rejected peers are more aggressive than other children, their behaviour is likely to attract more attention. Consequently, if a rejected child engages in an equal amount of aggressive and prosocial behaviour, his aggressive behaviour is likely to be more conspicuous to his peers, and will, therefore, carry more weight in these children's social judgment of the rejected peer.

Evidence of schema-based biases is not limited to the area of peer rejection and can also be found in children's perceptions of aggressive and withdrawn peers, and their views of gender-consistent and gender-inconsistent behaviour. With respect to children's perceptions of aggressive and withdrawn peers, Dodge (1980) found that

second-, fourth-, and sixth-grade boys were five times more likely to attribute hostile intent to an aggressive peer than a non-aggressive peer. Children also indicated mistrusting aggressive peers, and were more likely to report that they would retaliate aggressively towards an aggressive peer.

Younger and Piccinin (1989) examined first-, third-, fifth-, and seventh-grade children's perceptions of a hypothetical aggressive, withdrawn, or average hypothetical peer. Across grades children attributed negative characteristics to the aggressive and withdrawn hypothetical children that were not actually contained in the descriptions.

Research on children's gender schemas points to similar findings. In a review of the literature, Ruble and Stangor (1986) concluded children process and recall gender-consistent information more efficiently than they do gender-inconsistent information.

Taken together the previous research suggests that children may continue to dislike and behave antagonistically towards rejected peers even when these peers behave appropriately. A number of studies support this suggestion. LaGreca and Santogrossi (1980) evaluated the efficacy of social skills training, an attention-placebo and a waiting-list control among third-, fourth-, and fifth-grade rejected children. Only children involved in skills training showed higher post-treatment knowledge of social skills, competence in a role-play situation, and better peer interactions. These behavioural improvements were not, however, associated with improvements in

children's reputation.

In a study of the impact of social skills training on first-, second-, and third-grade rejected boys, Bierman, Miller, and Stabb (1987) found similar results. Children were assigned to one of four conditions: 1) instructions to promote positive social behaviour, 2) prohibitions to reduce negative social behaviour, 3) a combination of instruction and prohibition, and 4) no treatment control condition. Behavioural observations and peer- and teacher-ratings were collected prior to treatment, immediately after treatment, and at 6-weeks post-treatment; peer- and teacher-ratings were also obtained at 1-year follow-up. All interventions produced immediate and sustained improvements in children's behaviour and social interactions, although these did not produce meaningful gains in children's reputations at the post-treatment, and the 6-week and 1-year follow-up assessments.

Bierman and Furman (1984) expanded on the previous investigations. These researchers examined the effects of coaching and positive peer group experiences on rejected fifth- and sixth-grade children. Children were randomly assigned to one of four treatment conditions: 1) individual coaching in conversational skills, 2) positive peer group experiences in the form of a film-making project with two non-rejected peers, 3) both coaching and positive peer group experiences, and 4) a no-treatment control condition. Behavioural observations as well as self- and teacher-reports were obtained at post-treatment and follow-up. Highly circumscribed treatment effects were found. Children who received coaching demonstrated improvements in conversational

skills, but showed no gains in peer acceptance. Conversely, children in the positive peer experience condition showed gains in peer acceptance, but no improvements in conversational skills. The treatment effects observed at post-treatment were not, however, maintained at the 6-week follow-up. Only children involved in the condition combining coaching and positive peer group experiences displayed lasting improvements in conversational skills and peer acceptance.

These studies highlight the importance of children's behaviour and reputation in maintaining peer rejection and suggest that skills training coupled with peer involvement produces the most powerful and enduring therapeutic effects (see Dodge, 1989 for a discussion). Dodge (1989) explains,

Rejected children may require a structured positive experience with their peer group in order to break down stereotypic and reputational barriers ...; however, [in the absence of skills training] such an experience is not sufficient to bring about lasting effects, since (presumably) their poor skills will again become evident to the peer group (p. 238).

Dodge (1989) further states that these findings can only make sense within the social skills deficit model if one accepts that the impact of behavioural improvements may be delayed until children can overcome their perceptual biases against rejected peers.

Schneider and Byrne (1985) have similarly suggested that there may be a lag between changes in behaviour and gains in peer acceptance.

This hypothesis was borne out in a study by Bierman (1986a). She examined the mechanisms responsible for the treatment effects observed by Bierman and Furman (1984). Bierman (1986a) found that children who had received social skills

training began to show improved conversational skills during the latter sessions of the intervention. These improved skills were followed by positive responses from peers that were, in turn, associated with enhancements in peer interactions. Improved interactions with peers were related to increments in peer acceptance at the post-treatment and follow-up assessments. The findings suggest that skills training enhances rejected peers' behaviour and that these behavioural improvements lead to improvements in social interactions with peers that, in time, result in gains in peer acceptance. Although the study provides valuable information on the process of change in social skills training, it does not further our understanding of the thoughts and feelings of the peer group as change unfolds in previously rejected children.

Theoretical Integration of the Skills Deficit and Reputational Models of Peer Rejection

Although the skills deficit and reputational models of peer rejection have been presented separately and are often considered diametric categories, they are not mutually exclusive. Rather, children's behaviour and their peer reputations can be considered two sources of influence contributing to the development and maintenance of peer reputation (Bierman, 1989; Dodge, 1989). Price and Dodge (1988) and Coie (1990) have articulated a model of peer rejection that takes these factors into consideration. A central point to both these models is that the processes that characterize the development of peer rejection are distinct from those explaining its maintenance over time. In the emergent phase of peer rejection, children are primarily disliked by peers because they behave in manifestly aversive ways that elicit such

rejection. In the maintenance phase once peer rejection is established, children's dislike is fuelled by their negative perceptions and prejudicial behaviour towards rejected peers. A child's initial reputation, therefore, sets up expectations of acceptance or rejection by peers that prime the situation for certain types of social interactions. Rejection is, thus, considered a homeostatic system that works actively against change.

It is not clear how change in peer reputation can be achieved in this homeostatic system. Coie (1990) points out that very little is, in fact, known about naturally-occurring or therapeutically-derived change. Still, Bierman and Furman (1984) and Bierman (1986a) clearly demonstrate that such change is possible, particularly when both rejected children and their peers participate jointly in the intervention. A two-step model similar to that proffered by Coie (1990) can also be used to understand change in rejected peers. In a nascent phase of change, children may not be responsive to positive behaviour on the part of rejected peers and instead continue to view the child as unlikeable. In the maintenance phase of change, however, children can be expected to begin to recognize and respond positively to the rejected child's newly-acquired behaviour.

Hughes and Sullivan's (1988) ideas can be integrated into these suggestions. Perhaps subtly aversive behaviours produce different outcomes in the emergent and maintenance phases of peer rejection, as well as the nascent and maintenance phases of change. In the emergent phase of peer rejection, when children have no

prior expectations of a peer, subtly aversive behaviours can be expected to lead to mild dislike because, as stated earlier, they are less aversive than the manifestly aversive behaviours generally attributed to rejected peers. Subtly aversive behaviours on the part of a rejected peer in the nascent phase of change may, however, be sufficient to maintain strong dislike for the child. Conversely, subtly aversive behaviour on the part of a popular child in the nascent phase of change may not be sufficient to alter children's perceptions of the peer as well-liked.

Conclusion and Proposed Plan of Study

Children who are disliked by their peers often behave in ways that elicit such rejection. Accordingly, social skills training has become the treatment of choice for rejected peers. This approach operates under the assumption that children can be taught to behave in more acceptable ways, and that such changes will lead to improvements in children's peer reputation. Social skills training has, in fact, frequently succeeded in improving rejected children's behaviour. Several literature reviews have, however, concluded that such behavioural improvements do not invariably lead to improvements in children's peer reputation. The basis for these inconsistencies is not well understood. Some researchers have suggested that children who have completed social skills training continue to behave in subtly aversive ways that maintain peer rejection. A second explanation for the elusiveness of the goal of improved peer acceptance is that children develop enduring expectations or schemas of rejected peers cause them to overlook meaningful but not

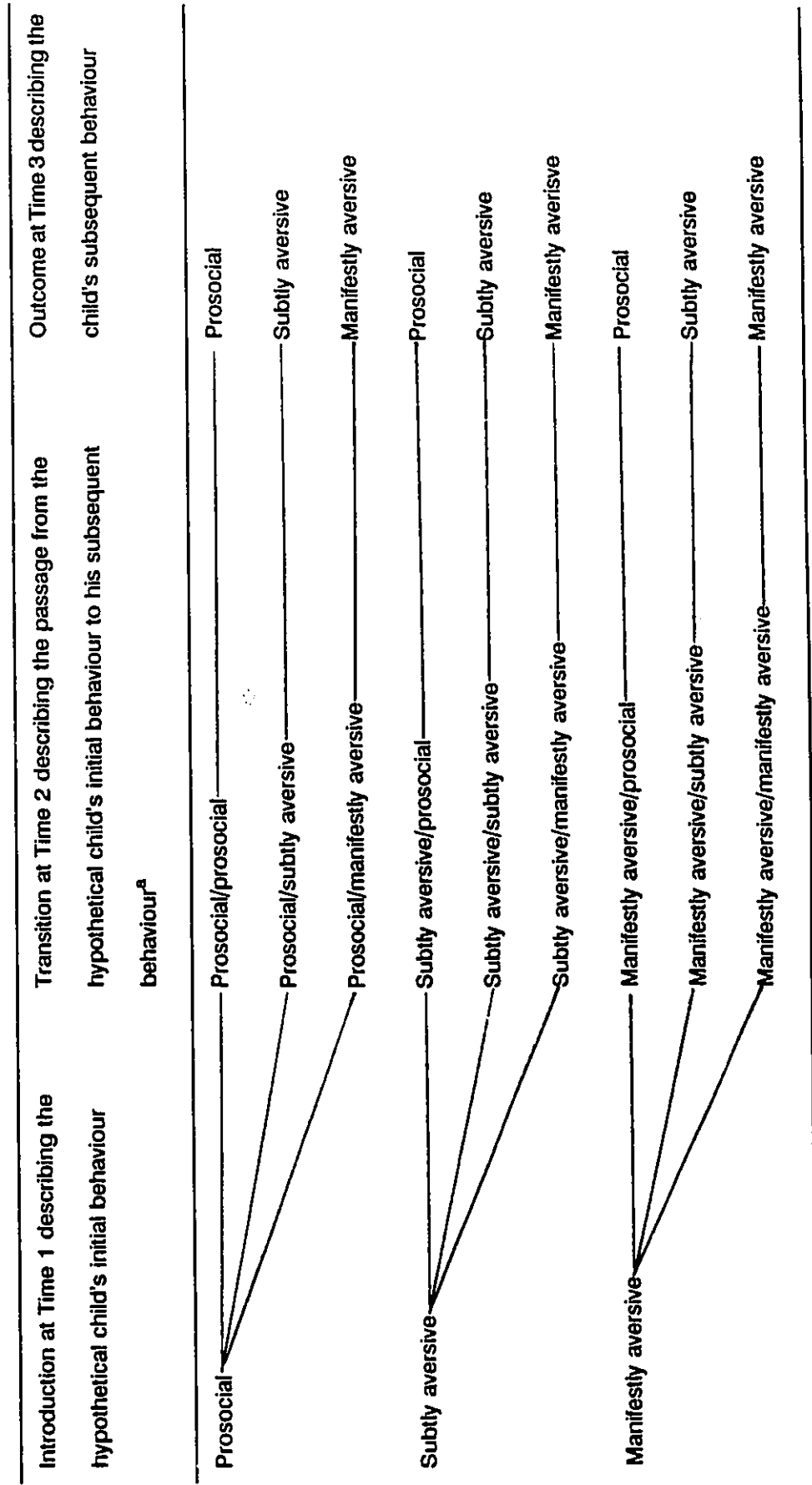
dramatic departures from these peers' reputation, thereby maintaining their original perception of the rejected peer as unlikeable. It is also possible that children's perceptions of peers are based on the combination of these two influences. Studies documenting changes in children's peer acceptance over time have not been conducted in ways that allow an experimental analysis of the behavioural and reputational variables underlying such changes. Only a careful manipulation of these variables can clarify their role in the development and maintenance of children's reputation among peers.

The purpose of this study was to examine the combined and unique influence of behavioural and reputational factors on children's perceptions of a hypothetical peer. Using a short-term prospective design, fourth-, fifth-, and sixth-grade children were presented vignettes featuring a hypothetical child. The vignettes portrayed the hypothetical child over a three week period (i.e., five days a week for three weeks corresponding to three experimental trials that occurred on three consecutive days).

A schematic representation of the design is shown in Table 1. At Time 1, the vignettes depicted the hypothetical child as either prosocial, subtly aversive, or manifestly aversive, thus, establishing his reputation as popular, mildly rejected, or strongly rejected, respectively. The hypothetical child's behaviour was then described as either remaining stable or changing progressively over Times 2 and 3. For the hypothetical child who changed progressively, his subsequent behaviour was either prosocial, subtly aversive, or manifestly aversive. Changing behaviour, therefore,

Table 1

Schematic Representation of the Experimental Design



^a The hypothetical child's behaviour did not always change at Time 2, as in the conditions, prosocial-prosocial, subtly aversive-subtly aversive, and manifestly aversive-manifestly aversive.

involved mild or marked departures from the hypothetical child's previous reputation. For example, in the condition where the hypothetical child's initial behaviour was prosocial and his subsequent behaviour was subtly aversive, Time 1 described the hypothetical child as prosocial; at Time 2, three of the hypothetical child's five behaviours were prosocial, and two were subtly aversive; and Time 3 described the hypothetical child as subtly aversive.

The degree to which participants' perceptions of the hypothetical child kept pace with changes in his behaviour, lagged behind such changes, or overlooked such changes altogether could, thus, be measured. Participants' liking of the hypothetical child, as well as their recall of and attributions for the hypothetical child's behaviour were assessed. In addition, the extent to which participants ascribed behaviour to the hypothetical child that was not included in the vignette, or significantly distorted the information presented to them was evaluated.

The study was exploratory in nature and few specific hypotheses could be formulated. Still, three possible outcomes could be drawn from the literature. First, if children's social judgments are strictly empirical, participants should like the prosocial hypothetical child most, followed by the subtly aversive hypothetical child, and finally, by the manifestly aversive child. Their recall and attributions of his behaviour should not be influenced by his reputation.

Second, if participants' judgments are strongly influenced by peer reputation, their liking of the hypothetical should remain stable across trials. Participants should

show preferential recall for schema-consistent behaviour, and distort and overgeneralize the information presented to them to fit their notion of the hypothetical child. Their attributions for the hypothetical child's behaviour should also down-play schema-inconsistent information and emphasize schema-consistent information.

Third, if participants' judgments are influenced by both behavioural and reputational factors, their liking of the hypothetical child should change only when the character's subsequent behaviour departs markedly from his reputation. Mild behavioural changes should not alter participants' liking of the hypothetical child and, instead, be assimilated into their schema of the hypothetical child. Participants should also show a negative attributional bias towards the hypothetical child if his subsequent behaviour departs only mildly from his reputation. These biases should, however, change if the hypothetical child's subsequent behaviour departs markedly from his previous reputation. Similar effects for the recall of schema-related information should occur.

Scope of the Study

The study is limited in scope in several ways that warrant mention. First, the hypothetical child depicted in the vignettes is male because boys constitute the majority of rejected children (Daniels-Beirness, 1989), and the bulk of the research on peer rejection has focused on boys.

Second, fourth-, fifth-, and sixth-grade children participated in the study because research on the development of person perception is consistent in

suggesting that after eight years of age children develop the ability to consider their peers in abstract, dispositional, and trait-like terms and use person schemas to guide their social perceptions (e.g., Feldman & Ruble, 1981; Feldman & Ruble, 1986; Ferguson, van Roozendaal, & Rule, 1986; Gnepp & Chilamkurti, 1988; Livesley & Bromley, 1973; Peevers & Second, 1973; Rholes & Ruble, 1984, 1986; Rogosh & Newcomb, 1989; Rotenberg, 1982; Scarlett, Press, & Crockett, 1971; Wood, 1978). Reputational biases can, therefore, be expected to emerge after eight years of age. Studies of children below this age have, in fact, generally failed to find evidence for reputational biases in children's perceptions and behaviour towards peers (e.g., Ladd, Price, & Hart, 1988; Waas & Honer, 1990).

Third, the study does not focus on social withdrawal as a correlate or precursor of peer rejection. There are three primary reasons for this decision. First, although social withdrawal is associated with rejection in later elementary-school years (Younger, Gentile, & Burgess, 1993), aggressive and socially-incompetent behaviour is more strongly related to peer rejection across grades (Cantrell & Prinz, 1985; Coie & Dodge, 1988; Coie, Dodge, & Coppotelli, 1982; Coie & Kupersmidt, 1983a; Dodge, 1983; Dodge, Coie, & Brakke, 1982; Price & Dodge, 1989; Putallaz, 1983; Putallaz & Gottman, 1981; Rogosh & Newcomb, 1989). Second, peer rejection involving aggression is more stable and prevalent than rejection involving social withdrawal (Cillessen, van Ijzendoorn, van Lieshout, & Hartup, 1992; Coie & Kupersmidt, 1983b; French, 1988). Third, aggressive/rejected boys are more disturbed than non-

aggressive/rejected boys (Cillessen et al., 1992; French, 1988).

Finally, no consideration was given to the myriad of extra-psychological factors (e.g., appearance, academic performance, ethnicity) that influence children's peers relations (Hartup, 1983; Patzer & Burke, 1988).

METHOD

Participants

Two-hundred-eleven fourth-, fifth-, and sixth-grade children (98 boys and 113 girls) participated in the study. Participants ranged in age from 8 to 12 years with a mean age of 9 years 11 months and a standard deviation of 11.5 months. Parental consent was obtained for all participants (see Appendix A for the parental consent letter). A consent rate of 54% was obtained for the sample, though the consent rate varied according to grade: 62% for fourth-grade children, 48% for fifth-grade children, and 51% for sixth-grade children. The consent rate was not due to a poor rate of returning the consent letters; 73% of the consent letters were returned by participants.

Nine participants were not included in the analyses because they did not complete Times 2 and 3; one child was omitted from the analyses because his teacher identified him as learning disabled and he did not appear to understand the instructions. The final sample, therefore, consisted of 201 participants. The grade and gender distribution of the sample is shown in Table 2.

Materials

Vignettes of the Hypothetical Child

The vignettes portrayed the hypothetical child over a three week period (i.e.,

Table 2

Grade and Gender Distribution of the Sample

Grade	Female	Male	Total
4	50	37	87
5	29	31	60
6	34	30	64

five days a week for three weeks corresponding to the three experimental trials that occurred over three consecutive days). Target items in the vignettes described the hypothetical child as either prosocial, subtly aversive, or manifestly aversive. At Time 1, the vignettes contained five target items that described the hypothetical child's initial behaviour. At Time 3, the vignettes contained five target items that described the hypothetical child's subsequent behaviour. At Time 2, the vignettes contained three target items that described the hypothetical child's initial behaviour and two target items that described the hypothetical child's subsequent behaviour. The target items were paired with neutral, non-social items (to be described subsequently in greater detail). The order of the target and neutral items was counterbalanced in the daily descriptions of the hypothetical child's behaviour. In each experimental trial, the daily descriptions were presented randomly to participants. All vignettes were of equal length; in a 3 x 3 x 3 ANOVA with the hypothetical child's initial and subsequent behaviour, as well as the three experimental trials as between-subjects factors, no significant differences were found in the length of the vignettes [$F(26, 108) = .328, p > .05$].

The vignettes were developed in several stages. An initial pool of prosocial and manifestly aversive items were first drawn from: (a) research on the behavioural precursors and correlates of peer rejection and acceptance, (b) items from peer-, teacher-, and parent-rating scales of children's peer relations that related strongly to either peer rejection or acceptance [i.e., Child Behaviour Profile (Achenbach, 1977);

Pupil Evaluation Inventory (Pekarik, Prinz, Liebert, Weintraub, & Neale, 1978); Peer Nomination Inventory (Winder & Wiggins, 1961); Peer Rating of Aggression (Walder, Abelson, Eron, Banta, & Laulicht, 1961); Revised-Class Play (Masten, Morison, & Pellegrini, 1985)], and (c) an instrument developed by Butler (1984) describing the aversive and prosocial behaviours of preadolescent children in school settings.

Subtly aversive behaviours were considered both quantitatively and qualitatively distinct from manifestly aversive behaviours; quantitatively distinct in that they were believed to be less severe than manifestly aversive behaviours, and qualitatively distinct in that they were believed to be different from subtly aversive behaviours. Because the literature does not provide a clear description of subtly aversive behaviours, these target items were based on: (a) my own conceptualization of subtly aversive behaviours, and (b) items from the previously-mentioned peer-, teacher-, and parent-rating scales that related mildly to peer rejection, and were distinct from those used for the manifestly aversive items. The neutral, non-social items were drawn from Butler's (1984) previously-described instrument and the stimuli used in Younger and Piccinin (1988), as well as my own conceptualization of neutral, non-social behaviours.

Items were not taken verbatim from these various sources. Instead, the sources were used to identify behaviours that were then depicted in social situations that might occur among school-aged children. For example, the behaviour, "does not know when to stop teasing", was depicted as, "On (day of the week) a girl in John's class got new glasses. John teased her about it and he kept on teasing her until she

started to cry".

The vocabulary in the initial pool of items was evaluated using Carroll, Daires, and Richman's (1971) word count. Some words rated by these authors as above the Grade 4 level were, nevertheless, included in the study because they are frequently used either in contemporary English (e.g., recycling) or in the region in which the study was conducted (e.g., hockey).

The initial pool of target items was then examined in two pilot studies. In a first pilot study, four graduate students in clinical psychology categorized the items as prosocial, subtly aversive, or manifestly aversive. An item was retained if 3 of the 4 judges categorized it correctly. On this basis of this information, 56 of the original 68 target items were retained.

These 56 target items were then examined in a second pilot study with eight fourth-, fifth-, and sixth-grade children (four boys and four girls). These children did not participate in the larger study and were paid \$10 for their participation (see Appendix B for the parental consent form for the pilot study). Participants in the pilot study were interviewed individually and asked to rate the comprehension and plausibility of the items. Their comprehension of the items was assessed by asking them to describe what was depicted in the item. Participants' responses were then evaluated as being consistent or not with the description they were given. Plausibility was assessed by asking participants, "Does this sound like something that could or does happen at your school?", to which the participants could either respond yes,

no, or maybe. When participants responded 'maybe' they were asked to explain why they were not sure.

The results showed that participants understood all 56 target items. Some of the target items were, however, rated by participants as implausible. As a result, 7 items were eliminated from the initial item pool, leaving 49 target items. Some of the 49 remaining target items were also revised on the basis of participants' spontaneous comments about them. For example, several participants commented that an item describing an activity in the school cafeteria would not occur at their school because they did not have a cafeteria. A final set of 45 target items including 15 prosocial items, 15 subtly aversive items, and 15 manifestly aversive items were chosen from this pool of 49 items (see Appendix C for the behavioural vignettes presented to participants in each of the nine experimental conditions).

Participants' Liking of the Hypothetical Child

Peer rating scale. A standard peer rating scale of likeability was used to measure participants' liking of the hypothetical child. Participants used a 5-point scale to indicate how much they would like to work (or play) with the hypothetical child (Asher & Hymel, 1981; see Appendix D for the peer rating scale). Faces ranging from a frown to a smile were used to help communicate the meaning of the peer rating scale scores. Low scores reflected dislike for the hypothetical child and high scores reflected liking of the hypothetical child.

The peer rating scale possesses several strengths including sound validity and

reliability (see Asher & Hymel, 1981; Asher, Singleton, Tinsley, & Hymel, 1979; Kalfus & Berler, 1985; Ladd, 1981; Oden & Asher, 1977; Olson & Lifgren, 1988; Singleton & Asher, 1977). As well, the peer rating scale which is ordinal in nature has been shown to possess interval scale properties (Gentile & Younger, 1992).

Participants' Free Recall of the Hypothetical Child's Behaviour

Free recall. Participants' free recall of the hypothetical child's behaviour was used as an index of schema formation. Cognitive schemas facilitate the encoding and retrieval of schema-consistent information, and should therefore, influence the nature of the information recalled by participants. Recall, rather than recognition memory was assessed because the former is a better indicator of person schemas in both adults (Wyer, Bodenhausen, & Srull, 1984), and children (Stangor & Ruble, 1989).

Participants were asked what they remembered about the hypothetical child's week followed by a question asking if they could remember anything else about the hypothetical child's week. A behaviour was considered recalled if the child articulated the essence of the behaviour in which the hypothetical child was described.

Substitutions of verbs (e.g., "teased" for "called names" or "bugged") that retained the same meaning were permitted. Accuracy of circumstantial details such as time and place was not required.

Participants' errors of commission. Participants' errors of commission were also assessed. An error of commission occurred when a child ascribed a behaviour to the hypothetical child that was not actually included in the vignette, or significantly

distorted the information presented in the vignette. The affective valence of these errors of commission was coded as negative, neutral, or positive. General evaluative statements about the hypothetical child or broad statements about the hypothetical child's behaviour such as "he's mean; he's got problems; he shouldn't act that way; he's always doing bad things" were not coded.

Reliability for the coding of the recall data was evaluated on 25% of the Time 1 and Time 3 protocols ($n=100$). The time 2 vignettes were different for the nine experimental conditions and, therefore, not included in the analyses. The Kappa coefficient for the Time 1 data was $.87 \pm .02$, and the Kappa coefficient for the Time 3 was $.92 \pm .02$ (see Cohen, 1960). This yielded an overall Kappa coefficient of $.89 \pm .0003$.

Participants' Attributions for the Hypothetical Child's Behaviour

Participants' attributions for the hypothetical child's behaviour were assessed. Schema-formation was expected to influence participants' attributions for the hypothetical child's behaviour so that schema-inconsistent information would be minimized and schema-consistent information would be underscored. Participants were asked, "What are some of the reasons you think John acted that way?", followed by, "Are there any other reasons that John acted that way?".

The attributional data were coded using a the Coding Scheme of Perceived Causality (CSPC; Elig & Frieze, 1975), a manual for coding open-ended questions regarding causal attributions. The CSPC was modified slightly to make it more

appropriate to the current study. The CSPC uses a three-dimensional analysis of causal attributions: internality-externality, stability-instability, intentionality-unintentionality. With respect to the internality-externality dimension, responses were rated as internal, external, or mediate. Internal responses referred to the hypothetical child's ability, effort, mood, motivation, physical characteristics, personality, or past behaviour. External responses were not directly associated with the hypothetical child, but rather referred to third-party agents, luck, situational and environmental factors, or social norms and conventions. Mediate responses referred to both internal and external factors where the attribution rested in part but not entirely with the hypothetical child. These included references to the relationship between the hypothetical child and his peers or the situation, or references to third party or environmental factors (e.g., "he didn't like the kids in his class"). The internal-external dimension did not indicate control of reinforcements which was coded along the intentional-unintentional dimension.

With respect to the intentional-unintentional attributional dimension, responses were rated as either intentional, unintentional, or mediate. This causal dimension referred to whether or not the hypothetical child's behaviour was purposeful. Intentional responses referred to purposive, goal-directed behaviours that involved the hypothetical child's accountability for his behaviour. Unintentional responses referred to behaviours that were beyond the hypothetical child's control. Mediate responses referred to responses that were neither entirely under the hypothetical child's control,

nor entirely beyond his control.

With respect to the stable-unstable attributional dimension, responses were rated as either stable, unstable, or mediate. Stable responses were those that were not expected to vary over time. These referred to enduring, typical, unchangeable attributions. Unstable responses were those that were temporary, changeable or atypical and, therefore, fluctuated over time. When stability was uncertain or when the response referred to causes that were neither clearly stable nor clearly unstable but could be either, the response was coded as mediate.

Participants' responses were not simple, unambiguous examples of the theoretical dimensions described above. A number of participants gave multiple causal explanations that were inconsistent in terms of their causal logic [e.g., he may have wanted to make friends (an internal response) or maybe the kids in his class were nice to him (an external response)]. When this occurred, the entire response was scored as a single unit. In this example, the response would have been scored as mediate on the internality-externality dimension. Many participants also did not respond to the second attributional question. Only responses to the first attributional question were, therefore, considered in the analyses. As with the recall findings, only data from Times 1 and 3 were coded. Comparisons between the Time 2 data were not considered meaningful as the behavioural vignettes for this trial differed across the nine experimental conditions.

Reliability for these data was evaluated on 25% of the Time 1 and Time 3

protocols ($n=100$). The Kappa coefficient for the internal-external attributional dimension at Time 1 was $.83 \pm .08$, and $.92 \pm .04$ at Time 3 (see Cohen, 1960). The Kappa coefficient intentional-unintentional attributional dimension was $.96 \pm .06$ at Time 1, and $.93 \pm .04$ at Time 3. The Kappa coefficient for the stable-unstable attributional dimension at Time 1 was $.77 \pm .09$, and $.76 \pm .08$ at Time 3.

Procedure

Participants were randomly assigned to the nine experimental conditions. The number of participants in each of the nine experimental conditions was not equal because of unexpected absences. Table 3 shows the number of subjects in each condition.

Data collection was carried out in three trials occurring over three consecutive days. Participants were interviewed individually by a trained interviewer (i.e., the author or two undergraduate students in psychology). The interviews were tape-recorded and later transcribed verbatim for coding. Participants were presented the vignettes followed by the peer rating scale, the free recall task, and the attributional questions (see Appendix E for the verbatim instructions given to participants). The peer rating scale was administered prior to the other two measures to discourage conscious efforts at memorizing the vignettes and to favour greater schematic organization of the information, thereby, ensuring that long-term memory rather than short-term memory was being evaluated in the free recall task.

Table 3

Number of Children Participating in Each of the Nine Experimental Conditions

		Hypothetical child's initial behaviour		
		Prosocial	Subtly aversive	Manifestly aversive
Hypothetical child's subsequent behaviour	Prosocial	21	24	21
	Subtly aversive	23	24	22
	Manifestly aversive	21	23	22

Results

Statistical and Methodological Considerations

A number of statistical and methodological issues regarding to the analyses warrant mention. First, missing data were substituted for 10 participants who had completed Times 1 and 2, but not Time 3¹. These participants with missing data were evenly distributed across the nine experimental conditions and did not differ from participants with complete data in terms of age or gender. The following formula was used to estimate missing values: $M + Z \times SD$; where M is the sample mean, Z is a random normal deviate, and SD is the sample standard deviation (Marascuilo & Levin, 1983). This formula preserves the power of the analyses as well as the variance of the original data.

Second, the design of the study was atypical. The two between-subject factors (i.e., the hypothetical child's initial and subsequent behaviour) were nested in the within-subjects factor (i.e., the experimental trials). The hypothetical child's initial behaviour was presented at Times 1 and 2, and the hypothetical child's subsequent behaviour was presented at Times 2 and 3. In addition, although the hypothetical child's initial behaviour was presented at Times 1 and 2, it could have an enduring effect on participants' perception of the hypothetical child at Time 3 (i.e., a reputational effect). By contrast, the hypothetical child's subsequent behaviour could not have a retroactive effect on participants' response at Time 1. For these reasons, an omnibus test of the model was considered inappropriate. Instead, the analyses focused on

specific dimensions of the model that were conceptually and methodologically meaningful. The error rate for these analyses was controlled hypothesis-wise such that the collection of comparisons used to evaluate a specific hypothesis constituted the unit for controlling α .

The results are divided into three sections: (a) participants' liking of the hypothetical child; (b) participants' recall of the hypothetical child's behaviour; and (c) participants' attributions for the hypothetical child's behaviour.

Participants' Liking of the Hypothetical Child

A series of five ANOVAs examined the influence of the hypothetical child's initial and subsequent behaviour on participants' liking of him; each ANOVA was evaluated at the .01 level.

Participants' liking of the hypothetical child as a function of his initial behaviour at Time 1. The first such analysis examined the influence of the hypothetical child's initial behaviour on participants' liking when they had no prior expectations of the character at Time 1. The between-subjects factor in this analysis consisted of the hypothetical child's initial behaviour (i.e., prosocial, subtly aversive, and manifestly aversive). The data were examined for homogeneity of variance and normality. Although the assumption of homogeneity of variance was met, the within-cell distributions differed across the three conditions. The peer rating scale scores for the prosocial hypothetical child were negatively skewed; those for the subtly aversive hypothetical child were normally distributed; and those for the manifestly aversive

hypothetical child were positively skewed. Although data transformation is generally indicated in such cases, a number of transformations did not succeed in normalizing the within-cell distributions (i.e., square root, logarithmic, inverse, and reflect; see Tabachnick & Fidell, 1989 for a discussion). Consequently, the non-parametric Kruskal-Wallis one-way analysis of variance by ranks (i.e., H-test) was used.

Participants' liking of the hypothetical child at Time 1 varied significantly as a function of his initial behaviour, $H(2, N = 201) = 111.9579, p < .0001$. Following Siegel (1988) a critical difference was calculated for all possible pairwise comparisons. All three groups differed significantly at the .01 level. As shown in Table 4, participants liked the prosocial hypothetical child most, followed by the subtly aversive hypothetical child, and finally, by the manifestly aversive hypothetical child.

Participants' liking of the prosocial hypothetical child as a function of his subsequent behaviour across Times 1, 2, and 3. To determine how the hypothetical child's subsequent behaviour influenced participants' liking of him once his reputation was established, three 3 x 3 repeated measures ANOVAs were performed on the peer rating scale scores. The within-subjects factor for these analyses consisted of the three experimental trials and the between-subjects factor consisted of the three types of subsequent behaviour (i.e., prosocial, subtly aversive, and manifestly aversive). In the first repeated measures ANOVA, participants' liking of the prosocial hypothetical child was examined across Times 1, 2, and 3 as the character either remained prosocial, or became subtly aversive or manifestly aversive.

Table 4

Cell Means, Medians, Modes and Standard Deviations for the Peer Rating Scale Scores as a Function of the Hypothetical Child's Initial Behaviour at Time 1

	Hypothetical child's initial behaviour		
	Prosocial	Subtly aversive	Manifestly aversive
<u>M</u>	4.492	3.042	1.892
Median	5.000	3.000	2.000
Mode	5.000	3.000	1.000
<u>SD</u>	.616	.992	1.017
<u>N</u>	65	71	65

Note: The median and mode are considered more appropriate measures of central tendency in skewed distributions. Participants' liking of the prosocial hypothetical child and the manifestly aversive hypothetical child produced skewed distributions.

Examination of the assumption of homogeneity of variance was satisfactory. The normality assumption was not, however, met at all trials. Two cells showed significant negative skew although the remaining within-cell distributions were normal. These departures from normality were not considered serious as the F-test is robust to violations of the normality assumption when there are at least 20 degrees of freedom for the error term (Kennedy & Bush, 1985; Tabachnick & Fidell, 1989; Winer, Brown, & Michels, 1992). Repeated measures ANOVAs also operate under the assumption of sphericity. Keppel (1982) states that violation of this assumption is so commonplace that repeated measures design should routinely be evaluated with adjusted degrees of freedom. The Huynh-Feldt correction for repeated measures designs was, therefore, used.

A significant interaction was observed between the prosocial hypothetical child's subsequent behaviour and the experimental trials, $F(3.78, 117.21) = 13.92, p < .001$ (see Table 5). Post-hoc Tukey-HSD tests ($\alpha = .01$) showed that participants' liking of the consistently prosocial hypothetical child remained stable and high across trials. Participants' liking of the two prosocial hypothetical characters whose subsequent behaviour was aversive decreased over trials. Participants' liking of the prosocial hypothetical child who became manifestly aversive fell significantly across trials. By contrast, the prosocial hypothetical child who became subtly aversive only obtained significantly lower scores at Time 3; there was no difference between his liking scores at Times 1 and 2.

At Time 2, participants' liking did not discriminate between the three hypothetical characters. At Time 3, participants' liking of the hypothetical child who remained prosocial was significantly higher than that of the two characters who became aversive. However, there were no significant differences between participants' liking of the prosocial hypothetical characters who became aversive at Time 3, whether subtly or manifestly aversive. For ease of interpretation, these data are presented graphically in Figure 1. Descriptive statistics and the source table for the analysis are presented in Tables 5 and 6, respectively.

Participants' liking of the subtly aversive hypothetical child as a function of his subsequent behaviour across Times 1, 2, and 3. In the second repeated measures ANOVA participants' liking of the subtly aversive hypothetical child was examined across Times 1, 2, and 3. Examination of the assumption of homogeneity of variance was satisfactory. With respect to the normality assumption, only one cell showed significant negative skew. This departure from normality was not considered serious. Using the Huynh-Feldt correction for repeated measures designs, a significant interaction between the subtly aversive hypothetical child's subsequent behaviour and the experimental trials was found, $F(3.84, 130.61) = 8.13, p < .001$ (see Table 7). Post-hoc Tukey-HSD tests ($\alpha = .01$) showed that participants' liking of the consistently subtly aversive hypothetical child remained stable across trials. Interestingly, no cross-trial differences were found for the subtly aversive hypothetical child who became manifestly aversive. By contrast, participants' liking of the subtly aversive

Figure 1

Participants' Liking of the Prosocial Hypothetical Child as a Function of his
Subsequent Behaviour Across Times 1, 2, and 3

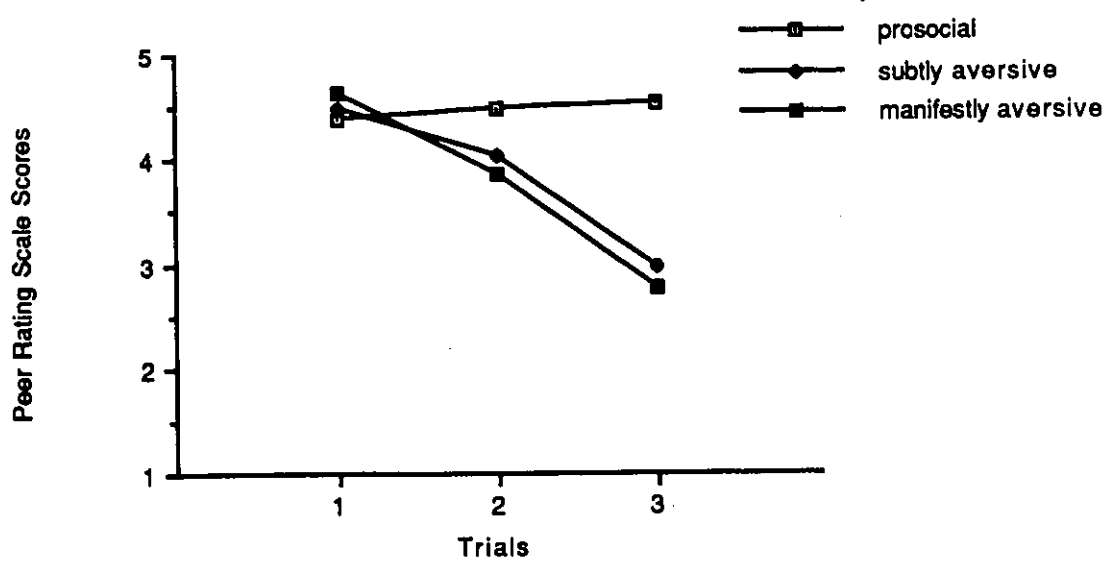


Table 5

Cell Means and Standard Deviations for the Peer Rating Scale Scores as a Function of the Prosocial Hypothetical Child's Subsequent Behaviour Across Times 1, 2, and 3

	Prosocial hypothetical child's subsequent behaviour		
	Prosocial	Subtly aversive	Manifestly aversive
Time 1	Prosocial	Prosocial	Prosocial
<u>M</u>	4.381	4.478	4.619
<u>SD</u>	.590	.665	.590
N	21	23	21
Time 2	Prosocial	Prosocial-Subtly Aversive	Prosocial-Manifestly Aversive
<u>M</u>	4.476	4.043	3.857
<u>SD</u>	.602	.825	.727
N	21	23	21
Time 3	Prosocial	Subtly Aversive	Manifestly Aversive
<u>M</u>	4.524	2.957	2.762
<u>SD</u>	.680	1.186	1.338
N	21	23	21

Table 6

Repeated Measures Analysis of Variance of Participants' Liking of the Prosocial Hypothetical Child as a Function of his Subsequent Behaviour

Sources of variation	SS	DF	MS	F
Trials	39.03	1.89	19.51	43.54*
Hypothetical child's subsequent behaviour x trials	24.95	3.78	6.24	13.92*
Error	55.58	117.21	.45	-

* $p < .001$

hypothetical child who became prosocial increased across trials, although only the difference between Times 1 and 3 was significant.

At Time 2 participants' liking of the subtly aversive hypothetical child who became prosocial was significantly higher than their liking of the subtly aversive hypothetical child whose subsequent behaviour was manifestly aversive. At Time 2, neither of these conditions were, however, significantly different from the consistently subtly aversive hypothetical child.

At Time 3 participants' liking discriminated between the subtly aversive hypothetical child who became prosocial and the two aversive hypothetical characters who became aversive. Participants did not, however, make a distinction between the consistently subtly aversive hypothetical child and the hypothetical child who became manifestly aversive. For ease of interpretation, these findings are presented in Tables 7 and 8 as well as Figure 2.

Participants' liking of the manifestly aversive hypothetical child as a function of his subsequent behaviour across Times 1, 2, and 3. In the third repeated measures ANOVA participants' liking of the manifestly aversive hypothetical child was examined across Times 1, 2, and 3. Although the assumption of normality was not consistently met, this was not considered serious. The assumption of homogeneity of variance was not met for Time 3, but this assumption was met for Times 1 and 2. Because ANOVA is robust to heterogeneity of variance when groups are equal or nearly equal, the data were not transformed (Kennedy & Bush, 1985). Using the Huynh-Feldt

Figure 2

Participants' Liking of the Subtly Aversive Hypothetical Child as a Function of his Subsequent Behaviour Across Times 1, 2, and 3

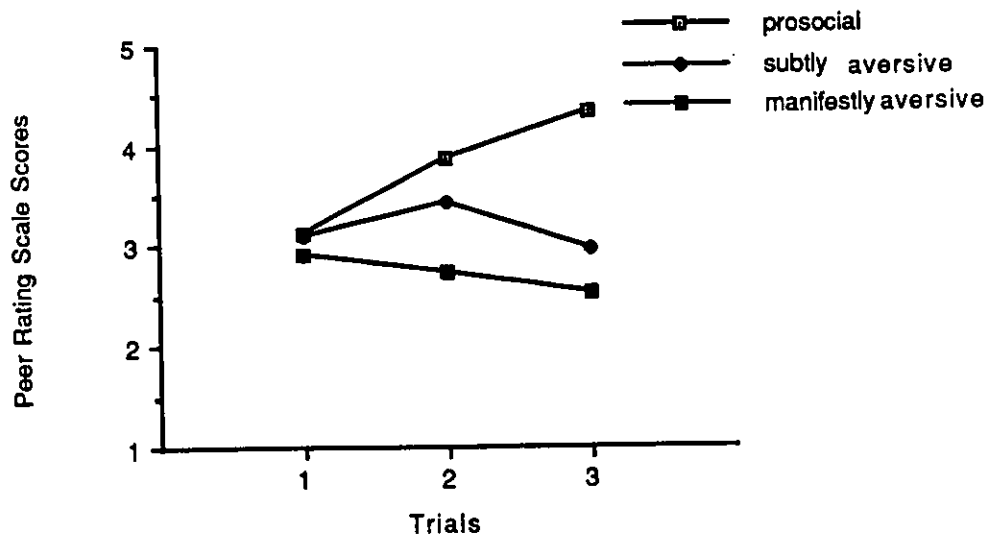


Table 7

Cell Means and Standard Deviations for the Peer Rating Scale Scores as a Function of the Subtly Aversive Hypothetical Child's Subsequent Behaviour Across Times 1, 2, and 3

	Subtly Aversive hypothetical child's subsequent behaviour		
	Prosocial	Subtly aversive	Manifestly aversive
Time 1	Subtly Aversive	Subtly Aversive	Subtly Aversive
<u>M</u>	3.125	3.083	2.913
<u>SD</u>	1.076	1.018	.900
N	24	24	23
Time 2	Subtly Aversive-Prosocial	Subtly Aversive	Subtly Aversive-Manifestly Aversive
<u>M</u>	3.875	3.417	2.739
<u>SD</u>	.797	.974	1.137
N	24	24	23
Time 3	Prosocial	Subtly Aversive	Manifestly Aversive
<u>M</u>	4.333	2.958	2.522
<u>SD</u>	.816	1.233	1.082
N	24	24	23

Table 8

Repeated Measures Analysis of Variance of Participants' Liking of the Subtly Aversive Hypothetical Child as a Function of his Subsequent Behaviour

Sources of variation	SS	DF	MS	F
Trials	3.56	1.92	1.78	3.11
Hypothetical child's subsequent behaviour x trials	18.58	3.84	4.64	8.13*
Error	77.68	130.61	.57	-

* $p < .001$

correction for repeated measures designs, a significant interaction was found between the manifestly aversive hypothetical child's subsequent behaviour and the experimental trials, $F(3.67, 113.79) = 14.91, p < .001$. Post-hoc Tukey-HSD tests ($\alpha = .01$) showed that participants' liking of the consistently manifestly aversive hypothetical child was stable and low across trials. Participants' liking of the manifestly aversive hypothetical child who became subtly aversive increased gradually across trials, although only the difference between Times 1 and 3 was significant. By contrast, participants' liking of the manifestly aversive hypothetical child who became prosocial increased significantly across the three trials.

At Time 2 participants' liking of the hypothetical child who became prosocial was significantly higher than that of the two aversive hypothetical characters, whether subtly or manifestly aversive. Participants did not, however, discriminate between the two aversive characters at Time 2. At Time 3 participants' liking discriminated between the three hypothetical characters. Participants liked the hypothetical child who became prosocial most, followed by the hypothetical child who became subtly aversive, and finally, by the consistently manifestly aversive hypothetical child. Figure 3 illustrates these data graphically. Tables 9 and 10 shows the descriptive statistics and source table for the analysis.

Participants' liking of the hypothetical child as a function of his initial and subsequent behaviour at Time 3. The previous repeated measures analyses trace participants' liking of the prosocial, subtly aversive, and manifestly aversive

Table 9

Cell Means and Standard Deviations for the Peer Rating Scale Scores as a Function of the Manifestly Aversive Hypothetical Child's Subsequent Behaviour Across Times 1, 2, and 3

Manifestly Aversive hypothetical child's subsequent behaviour			
	Prosocial	Subtly aversive	Manifestly aversive
Time 1	Manifestly Aversive	Manifestly Aversive	Manifestly Aversive
<u>M</u>	2.143	1.591	1.955
<u>SD</u>	1.236	.666	1.046
N	21	22	22
Time 2	Manifestly Aversive - Prosocial	Manifestly Aversive - Subtly Aversive	Manifestly Aversive
<u>M</u>	3.143	2.091	1.864
<u>SD</u>	.727	.811	.941
N	21	22	22
Time 3	Prosocial	Subtly Aversive	Manifestly Aversive
<u>M</u>	4.714	2.864	2.000
<u>SD</u>	.561	.889	1.195
N	21	22	22

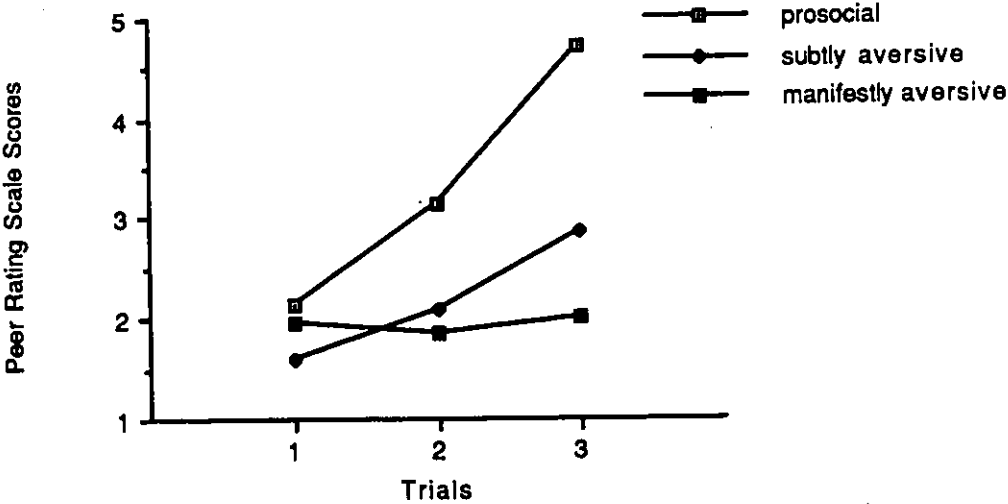
Table 10

Repeated Measures Analysis of Variance of Participants' Liking of the Manifestly
Aversive Hypothetical Child as a Function of his Subsequent Behaviour

Sources of variation	SS	DF	MS	F
Trials	55.99	1.84	27.99	48.35*
Hypothetical child's subsequent behaviour X trials	34.53	3.67	8.63	14.91*
Error	71.79	113.79	.58	-

* $p < .001$

Figure 3
Participants Liking of the Manifestly Aversive Hypothetical Child as a Function of his
Subsequent Behaviour Across Times 1, 2, and 3



hypothetical characters across trials. Although the hypothetical child's subsequent behaviour influenced participants' liking, this varied considerably according to the hypothetical child's reputation. To make comparisons between the hypothetical characters, a 3 x 3 ANOVA was performed on the peer rating scale scores at Time 3. The hypothetical child's initial and subsequent behaviour (i.e., prosocial, subtly aversive, and manifestly aversive) constituted the between-subjects factor in this analysis. Examination of the assumption of homogeneity of variance was satisfactory. The assumption of normality was not met in all cells. The cells involving the hypothetical prosocial child were negatively skewed. This was not considered serious, however. A significant main effect for the hypothetical child's subsequent behaviour on participants' liking was found, $F(2, 192) = 74.11, p < .001$. Post-hoc Tukey-HSD tests showed that participants liked the hypothetical child who became prosocial more than they did the two aversive characters. There were no differences in participants' liking of the subtly aversive and manifestly aversive characters. Descriptive statistics and the source table for the analysis are shown in Tables 11 and 12, respectively.

Summary. As expected, when participants had no prior expectations of the hypothetical character, they liked the prosocial hypothetical child most, followed by the subtly aversive hypothetical child, and finally, by the manifestly aversive hypothetical child. Once the hypothetical child's reputation was established, marked changes in his behaviour led to incremental changes in participants' liking of him. Participants' liking of the initially prosocial child fell dramatically when he became manifestly

Table 11

Cell Means and Standard Deviations for the Peer Rating Scale Scores as a Function of the Hypothetical Child's Subsequent Behaviour at Time 3

	Hypothetical child's subsequent behaviour		
	Prosocial	Subtly aversive	Manifestly aversive
<u>M</u>	4.515	2.928	2.424
<u>SD</u>	.707	1.102	1.229
<u>N</u>	65	71	65

Table 12

Analysis of Variance of Participants' Liking of the Hypothetical Child as a Function of both his Initial and Subsequent Behaviour

Source of variation	SS	DF	MS	F
Hypothetical child's initial behaviour	1.64	2	.82	.77
Hypothetical child's subsequent behaviour	158.18	2	79.09	74.11*
Hypothetical child's initial x subsequent behaviour	6.67	4	1.67	1.56
Error	204.91	192	1.07	-

* $p < .001$

aversive behaviour, and participants' liking of the manifestly aversive child improved dramatically when he became prosocial. When changes in the hypothetical child's behaviour involved mild departures from the character's reputation, participants generally did not immediately adjust their liking of the character. They seemed reluctant to modify their liking of the hypothetical child on the basis of weak evidence, and relied instead on the hypothetical child's reputation to arrive at an affective judgment of him.

In considering the influence of the hypothetical child's initial behaviour and subsequent behaviour on participants' liking of the character at Time 3, only a main effect for subsequent behaviour was noted. Participants liked the hypothetical child whose subsequent behaviour was prosocial more than they did the two aversive characters whom they disliked equally. The reputational effects observed at Time 2 did not, therefore, have an enduring effect on participants' liking of the hypothetical child once his behaviour had clearly improved or deteriorated at Time 3. Instead, at Time 3 participants based their liking of the hypothetical child on his current, rather than his past, behaviour.

Participants' Recall of the Hypothetical Child's Behaviour

Two aspects of participants' memory of the hypothetical child's behaviour were assessed: (a) free recall of the hypothetical child's behaviour, and (b) the frequency and affective valence of participants' errors of commission (reliability for these data is shown in the Method section). An error of commission occurred when participants

either significantly distorted the information presented in the vignette, or ascribed a behaviour to the hypothetical child that was not actually included in the vignette. The affective valence of these errors of commission was coded as either negative, neutral, or positive. The error rate for these analyses was again controlled hypothesis-wise at the .05 level ($\alpha = .0125$ for each of four analyses).

Participants' recall of the hypothetical child's behaviour as a function of his initial behaviour at Time 1. To determine if the hypothetical child's behaviour influenced participants' recall of his behaviour when they had no prior expectation of the hypothetical character a simple one-way ANOVA was performed on the free recall data at Time 1. The three types of initial behaviour constituted the between-subjects factor (i.e., prosocial, subtly aversive, manifestly aversive). Recall varied significantly as a function of the hypothetical child's initial behaviour, $F(2, 198) = 6.12, p < .0125$. Post-hoc Tukey-HSD tests ($\alpha = .0125$) revealed that participants recalled the behaviour of the manifestly aversive hypothetical child better than they did the behaviour of the prosocial and subtly aversive hypothetical characters. No other differences were noted. See Table 13 and 14 for the descriptive statistics and source table for the analysis.

Participants' recall of the hypothetical child's behaviour as a function of his initial and subsequent behaviour at Time 3. To determine if both the hypothetical child's initial and subsequent behaviour influenced participants' recall of his behaviour, a 3 x 3 ANOVA was performed on the free recall data for Time 3. The between-subjects

Table 13

Cell Means and Standard Deviations for Participants' Recall of the Hypothetical Child's Behaviour at Time 1

	Hypothetical child's initial behaviour		
	Prosocial	Subtly aversive	Manifestly aversive
<u>M</u>	2.323	2.324	2.892
<u>SD</u>	1.091	1.131	1.002
<u>N</u>	65	71	65

Table 14

Analysis of Variance of Participants' Recall for the Hypothetical Child's Behaviour as a Function of his Initial Behaviour at Time 1

Sources of variation	SS	DF	MS	F
Hypothetical child's initial behaviour	14.23	2	7.11	6.12*
Error	230.01	198	1.16	-

* $p < .01$

factors consisted of the three types of initial and subsequent behaviour (i.e., prosocial, subtly aversive, and manifestly aversive). The test of homogeneity of variance was not significant and normality was observed across cells. Recall varied significantly as a function of the hypothetical child's subsequent behaviour, $F(2, 192) = 4.37, p < .0125$ (see Table 15). Post-hoc Tukey-HSD tests ($\alpha = .0125$) revealed that participants recalled the behaviour of the manifestly aversive hypothetical child better than they did that of the subtly aversive hypothetical child. No other significant differences were noted. Descriptive statistics and the source table for the analysis are shown in Tables 15 and 16.

Participants' errors of commission as a function of the hypothetical child's initial and subsequent behaviour at Time 3. Nonparametric analyses were used to analyze the frequency and nature of participants' errors of commission because: (a) errors of commission occurred infrequently (only 77 errors of commission were recorded at Time 3 whereas over 550 instances of accurate recall were recorded at Time 3) and (b) errors of commission were distributed unevenly across the experimental conditions. A hierarchical loglinear analysis was used to determine whether the hypothetical child's initial and subsequent behaviour influenced the frequency and affective valence of participants' errors of commission at Time 3. The data were submitted to a 3 x 3 x 3 hierarchical loglinear analysis where the affective valence of the participants' errors of commission (i.e., negative, neutral, and positive), and the hypothetical child's initial and subsequent behaviour (i.e., prosocial, subtly aversive,

Table 15

Cell Means and Standard Deviations for Participants' Recall of the Hypothetical Child's Behaviour as a Function of his Subsequent Behaviour at Time 3

	Hypothetical child's subsequent behaviour		
	Prosocial	Subtly aversive	Manifestly aversive
<u>M</u>	2.803	2.507	3.030
<u>SD</u>	1.099	1.080	1.099
<u>N</u>	65	71	65

Table 16

Analysis of Variance of Participants' Recall for the Hypothetical Child's Behaviour as a Function of his Initial and Subsequent Behaviour at Time 3

Sources of variation	SS	DF	MS	F
Hypothetical child's initial behaviour	2.04	2	1.02	.95
Hypothetical child's subsequent behaviour	9.35	2	4.68	4.37*
Hypothetical child's initial X subsequent behaviour	2.39	4	.60	.56
Error	205.23	192	1.07	.

* $p < .01$

and manifestly aversive) constituted the between-subjects factors.

Hierarchical loglinear analysis is similar to the chi-square analysis although it can accommodate contingency tables of three or more discrete, independent variables (Tabachnick & Fidell, 1989). The analysis uses the likelihood ratio (G^2) as its test statistic (Marascuilo & Busk, 1987; Norusis, 1985; Tabachnick & Fidell, 1989). In light of the fact that G^2 is a measure of fit between the observed and expected cell frequencies, a good model is one in which G^2 is non-significant. In other words, G^2 evaluates residual frequencies not accounted by the model. When there is good fit between the obtained and expected cell frequencies, the residuals are not significant.

The assumptions required by hierarchical loglinear analysis are minimal, although it is advisable that none of the cell frequencies be less than 1 and that no more than 20% of the cells have frequencies less than 5 (Marascuilo & Busk, 1987; Tabachnick & Fidell, 1989). Inadequate expected cell frequencies do not, however, lead to increased Type 1 errors but rather result in a decrease in power (Marascuilo & Busk, 1987; Tabachnick & Fidell, 1989). The present loglinear analysis, that included low cell frequencies should, therefore, be interpreted with caution as nonsignificant effects may be attributed to a lack of power. To achieve equal cell sizes and ensure that any differences in the prevalence of errors of commission could not be attributed to differences in the number of participants participating in each condition, twelve subjects were randomly deleted from this analysis ($N = 21$ per cell).

Using a backward elimination process in which the 3-way interaction is tested

first, followed by tests of all two-way interactions and main effects, the most parsimonious model included the two 2-way interactions between: (a) the hypothetical child's initial and subsequent behaviour, and (b) the hypothetical child's subsequent behaviour and the affective valence of participants' errors of commission. The data predicted with this model were not significantly different from the observed data, $G^2(12, N = 77) = 9.545, p = .702$.

To further investigate these two 2-way interactions the parameter estimates (i.e., a standardized measure of the discrepancy between observed and expected frequencies in each cell) for both interactions were statistically tested by means of the Z statistic. Following Marascuilo and Busk's (1987) guideline that the usual Type 1 error control be ignored in loglinear analyses, all parameter estimates were evaluated against a Z-score of ± 2.50 (corresponding to an α of .0125). Tests of the parameter estimates showed that participants made significantly more errors of commission when the hypothetical child's initial behaviour was prosocial and his subsequent behaviour was subtly aversive. No other significant differences were noted in this 2-way interaction. It is worth noting that this interaction did not influence the type of errors of commission made by participants. Cell frequencies and parameter-based Z-scores for participants' errors of commission as a function of the hypothetical child's initial and subsequent behaviour at Time 3 are presented in Table 17.

The type of errors of commission made by participants was, however, influenced by the nature of hypothetical child's subsequent behaviour as illustrated by

Table 17
Cell Frequencies and Parameter-based Z-scores for Participants' Errors of Commission as a Function of the

Hypothetical Child's Initial and Subsequent Behaviour at Time 3

		Hypothetical child's initial behaviour			
		Prosocial	Subtly aversive	Manifestly aversive	
Hypothetical child's subsequent behaviour	Prosocial	2	7	8	
	Z-score	-1.31	.38	1.03	
Subtly aversive	Frequency	18	7	9	
	Z-score	2.50	1.36	-.55	
Manifestly aversive	Frequency	6	14	6	
	Z-score	-.41	.95	-.53	

the second significant 2-way interaction. Tests of the parameter estimates showed that participants made fewer negative and more positive errors of commission when the hypothetical child's subsequent behaviour was prosocial, and more negative and fewer positive errors of commission when the hypothetical child's subsequent behaviour was manifestly aversive. Cell frequencies and parameter-based Z-scores for participants' errors of commission as a function of their affective valence codes and the hypothetical child's subsequent behaviour at Time 3 are shown in Table 18.

Participants' errors of commission as a function of the hypothetical child's initial behaviour at Time 1. Comparable findings were obtained in a 3 x 3 chi-square analysis of participants' errors of commission at Time 1 in which the hypothetical child's initial behaviour (prosocial, subtly aversive, and manifestly aversive) and the affective valence of the participants' errors of commission (i.e., negative, neutral, and positive) constituted the between-subjects variables². Results showed a significant $\chi^2(4, N = 100) = 23.27, p < .0125$. To identify the cells in the contingency table responsible for the significant overall chi-square, the adjusted residuals were examined (i.e., a standardized measure of the discrepancy between observed and expected frequencies in each cell; Everitt, 1992). Everitt (1992) explains that adjusted residuals can be judged by comparison to Z-scores; in this case, the adjusted residuals were evaluated with a Z-score of ± 2.50 (coinciding with an α of .0125). Participants made fewer negative and more positive errors of commission when the hypothetical child's initial behaviour was prosocial, and more negative errors of commission when the

Table 18
Cell Frequencies and Parameter-based Z-scores for Participants' Errors of Commission as a Function of their Affective Valence Codes and the Hypothetical Child's Subsequent Behaviour at Time 3

Hypothetical child's subsequent behaviour	Prosocial	Affective valence codes of children's errors of commission		
		Negative	Neutral	Positive
	Frequency	0	6	11
	Z-score	-2.50	-1.40	4.24
	Frequency	8	24	2
	Z-score	.33	1.80	-1.53
	Frequency	15	11	0
	Z-score	2.87	-.02	-2.50

hypothetical child's initial behaviour was subtly aversive. No other differences were observed. Cell frequencies and parameter-based Z-scores for participants' errors of commission as a function of their affective valence codes and the hypothetical child's initial behaviour at Time 1 are shown in Table 19.

Summary. The data on participants' memory of the hypothetical child's behaviour suggest that manifestly aversive behaviour was salient to participants and was, therefore, more easily recalled. In considering these results it is important to note that participants' recall for the neutral items did not vary as a function of the hypothetical child's behaviour [$\chi^2(2, N = 187) = 1.294, p < .05$ for Time 1; and $\chi^2(4, N = 267) = 5.61, p < .05$ for Time 3], suggesting that the previously-described effects on recall were specific to the target items.

Participants were also found to make schema-consistent errors of commission at Times 1 and 3. Participants ascribed schema-consistent behaviours to the hypothetical child that were not actually included in the vignettes, and distorted the information presented in the vignettes to make it more compatible with what they already knew to be true of the hypothetical child. Participants' errors of commission at Time 3 were not, however, influenced by the hypothetical child's initial behaviour, so that by Time 3 participants appeared to be thinking of the hypothetical child in terms of his current, rather than his past, behaviour.

Participants' Causal Attributions for the Hypothetical Child's Behaviour

Participants' causal attributions for the hypothetical child's behaviour were

Table 19
Cell Frequencies and Adjusted Residuals for the Affective Valence Codes of Participants' Errors of Commission as a
Function of the Hypothetical Child's Initial Behaviour at Time 1

Hypothetical child's initial behaviour	Prosocial	Affective valence codes of children's errors of commission		
		Negative	Neutral	Positive
Prosocial	Frequency	3	8	12
	Adjusted residuals	-3.40	-.30	4.60
Subtly aversive	Frequency	26	15	4
	Adjusted residuals	2.50	-.71	-2.30
Manifestly aversive	Frequency	15	14	3
	Adjusted residuals	.40	1.00	-1.72

analyzed by means of nonparametric statistics because these data were discrete and categorical rather than continuous. Chi-square analyses were used to determine whether the nature of participants' causal attributions at Time 1 were influenced by the hypothetical child's initial behaviour. Each causal dimension (internal-external, stable-unstable, intentional-unintentional) was analyzed separately. The error rate for these analyses was controlled hypothesis-wise at the .05 level ($\alpha = .008$ for each of six analyses; three for the Time 1 data and three for the Time 3 data). To achieve equal cell sizes and ensure that any differences in the prevalence of specific attributional responses could not be attributed to differences in the number of participants participating in each condition, twelve subjects were randomly deleted from these analyses ($N = 21$ per cell).

Participants' internal-external attributions as a function of the hypothetical child's initial behaviour at Time 1. A 4 x 3 chi-square analysis of participants' internal-external attributions (i.e., internal, mediate, external, and uncodeable) and the hypothetical child's initial behaviour (i.e., prosocial, subtly aversive, and manifestly aversive) at Time 1 revealed a significant overall effect, $\chi^2(6, N = 189) = 33.74, p < .008$. To identify the cells in the contingency table responsible for the significant overall chi-square, the adjusted residuals were evaluated against a Z-score of ± 2.65 (coinciding with an α of .008). Participants made more internal attributions when the hypothetical child's initial behaviour was prosocial suggesting that they perceived the character as deserving credit for his good actions. Participants also gave more uncodeable responses when

the hypothetical child's initial behaviour was subtly aversive suggesting ambivalence regarding the source of attributed causation. Finally, participants gave more mediate responses when the hypothetical child's initial behaviour was manifestly aversive. No other differences reached significance. Cell frequencies and adjusted residuals for the internal-external dimension of participants' attributions as a function of the hypothetical child's initial behaviour at Time 1 are shown in Table 20.

Participants' stable-unstable attributions as a function of the hypothetical child's initial behaviour at Time 1. A 4 x 3 chi-square analysis of participants' stable-unstable attributions (i.e., stable, mediate, unstable, and uncodeable) as a function of the hypothetical child's initial behaviour (i.e., prosocial, subtly aversive, and manifestly aversive) at Time 1 revealed a significant overall effect, $\chi^2(6, N = 189) = 24.41, p < .008$. The adjusted residuals were evaluated against a Z-score of ± 2.65 (coinciding with an α of .008). Participants attributed the prosocial hypothetical child's good behaviour to stable, enduring causes. Participants also gave more mediate and uncodeable responses when the hypothetical child was initially subtly aversive suggesting uncertainty about the permanence of attributed causation. No other differences were significant. Cell frequencies and adjusted residuals for the stable-unstable dimension of participants' attributions as a function of the hypothetical child's initial behaviour at Time 1 are shown in Table 21.

Participants' intentional-unintentional attributions as a function of the hypothetical child's initial behaviour at Time 1. A 4 x 3 chi-square of the intentional

Table 20
Cell Frequencies and Adjusted Residuals for the Internal-External Dimension of Participants' Attributions as a Function of the

Hypothetical Child's Initial Behaviour at Time 1

		Causal attributions of the hypothetical child's behaviour			
		Internal	Mediate	External	Uncodeable
Hypothetical child's initial behaviour	Prosocial	22	33	1	7
	Adjusted residuals	3.80	-.70	-2.50	-1.10
Subtly aversive	Frequency	9	28	8	18
	Adjusted residuals	-1.30	-2.30	1.30	3.60
Manifestly aversive	Frequency	6	45	8	4
	Adjusted residuals	-2.50	3.00	1.30	-2.40

Table 21
Cell Frequencies and Adjusted Residuals for the Stable-Unstable Dimension of Participants' Attributions as a Function of the
Hypothetical Child's Initial Behaviour at Time 1

		Causal attributions of the hypothetical child's behaviour			
		Stable	Mediate	Unstable	Uncodeable
Hypothetical child's initial behaviour	Prosocial	12	32	12	7
		2.70	.60	-1.60	-1.10
Subtly aversive	Frequency	3	21	21	18
	Adjusted residuals	-1.80	-2.80	1.50	3.60
Manifestly aversive	Frequency	5	37	17	4
	Adjusted residuals	-.80	2.20	.10	-2.40

unintentional dimension (i.e., intentional, mediate, unintentional, and uncodeable) of participants' attributions as a function of the hypothetical child's initial behaviour (i.e., prosocial, subtly aversive, and manifestly aversive) at Time 1 revealed a significant overall effect, $\chi^2(6, N = 189) = 63.24, p < .008$. The adjusted residuals (established at a Z-score of ± 2.65) revealed that participants gave more intentional and less unintentional causal attributions when the hypothetical child's initial behaviour was prosocial, and less intentional and more unintentional causal attributions when the hypothetical child's behaviour was subtly aversive. Participants also gave more uncodeable responses when the hypothetical child's initial behaviour was subtly aversive. No other differences were observed. Cell frequencies and adjusted residuals for the intentional-unintentional dimension of participants' attributions as a function of the hypothetical child's initial behaviour at Time 1 are shown in Table 22.

Summary of participants' attributions at Time 1. At Time 1 participants typically gave credit to the prosocial hypothetical child for his good behaviour as demonstrated by their internal, stable, and intentional attributions for this character's behaviour. Participants' causal attributions for the subtly aversive hypothetical child were less straightforward and typically involved mediate stability, and unintentionality (as well as less intentionality). This pattern of attributions suggests that participants gave the subtly aversive hypothetical child the "benefit of the doubt" at Time 1. Participants also gave significantly more uncodeable responses at Time 1 when the hypothetical child was subtly aversive, suggesting some confusion regarding the reasons underlying this

Table 22
Cell Frequencies and Parameter-based Z-scores for the Intentional-Unintentional Dimension of Participants' Attributions as a Function of the Hypothetical Child's Initial Behaviour at Time 1

Hypothetical child's initial behaviour		Causal attributions of the hypothetical child's behaviour					
		Intentional	Mediate	Unintentional	Uncodeable	Frequency	Adjusted residuals
Prosocial	Frequency	30	22	4	7		
	Adjusted residuals	5.30	.70	-4.80	-1.10		
Subtly aversive	Frequency	3	13	29	18		
	Adjusted residuals	-4.40	2.30	3.80	3.60		
Manifestly aversive	Frequency	13	25	21	4		
	Adjusted residuals	-.80	1.70	1.00	-2.40		

character's behaviour. Participants' attributions for the manifestly aversive hypothetical child at Time 1 typically involved mediate internality; no other significant effects were noted for this character. In isolation this does not suggest that participants gave the manifestly aversive hypothetical child the "benefit of the doubt", although participants were also not willing to condemn this character for his bad behaviour.

Participants' internal-external attributions as a function of the hypothetical child's initial and subsequent behaviour at Time 3. To determine if participants' attributions for the hypothetical child's subsequent behaviour at Time 3 were influenced by the character's initial and subsequent behaviour, three hierarchical loglinear analyses were conducted. To achieve equal cell sizes and ensure that any differences in the prevalence of errors of commission could not be attributed to differences in the number of participants in each condition, twelve subjects were randomly deleted from these analyses (N = 21 per cell). The first hierarchical loglinear analysis assessed whether the frequency of participants' responses along the internal-external attributional dimension at Time 3 were influenced by the hypothetical child's initial and subsequent behaviour. The data were submitted to a 4 x 3 x 3 hierarchical loglinear analysis where participants' attributions (i.e., internal, mediate, external, and uncodeable), and the hypothetical child's initial and subsequent behaviour (i.e., prosocial, subtly aversive, and manifestly aversive) constituted the between-subjects factors. Using a backward elimination process in which the 3-way interaction is tested

first, followed by tests of all two-way interactions and main effects, the most parsimonious model included the 2-way interaction between participants' attributions and the hypothetical child's subsequent behaviour. The data predicted using this model were not significantly different from the observed data, $G^2(24, N = 189) = 32.94, p = .11$. To further investigate these effects the parameter-based Z-values were evaluated at ± 2.65 (corresponding to an α of .008). No significant differences were found, although participants showed a trend towards giving more uncodeable responses when the hypothetical character's subsequent behaviour was subtly aversive. This finding was not affected by the hypothetical child's initial behaviour. Cell frequencies and parameter-based Z-scores for the internal-external dimension of participants' attributions as a function of the hypothetical child's subsequent behaviour at Time 3 are shown in Table 23.

Participants' stable-unstable attributions as a function of the hypothetical child's initial and subsequent behaviour at Time 3. The second hierarchical loglinear analysis assessed whether the frequency of participants' responses along the stable-unstable attributional dimension at Time 3 were influenced by the hypothetical child's initial and subsequent behaviour. The data were again submitted to a 4 x 3 x 3 hierarchical loglinear analysis where participants' attributions (i.e., stable, mediate, unstable, and uncodeable), and the hypothetical child's initial and subsequent behaviour (i.e., prosocial, subtly aversive, manifestly aversive) constituted the between-subjects factors. Using a backward elimination process in which the 3-way interaction is tested

Table 23
Cell Frequencies and Parameter-based Z-scores for the Internal-External Dimension of Participants' Attributions as a Function of the

Hypothetical Child's Subsequent Behaviour at Time 3

		Causal attributions of the hypothetical child's behaviour				
		Internal	Mediate	External	Uncodeable	
Hypothetical child's subsequent behaviour	Prosocial	15	35	2	11	
	Z-score	2.19	-.12	-.57	-1.62	
Subtly aversive	Frequency	3	31	3	26	
	Z-score	-1.82	.20	.23	2.55	
Manifestly aversive	Frequency	11	34	4	14	
	Z-score	.11	.12	.34	-.82	

first, followed by tests of all two-way interactions and main effects, the most parsimonious model contained the main effect for participants' attributions. The data predicted using this model were not significantly different from the observed data, $G^2(32, N = 189) = 39.51, p = .17$. To further investigate this effect the parameter-based Z-values were evaluated at ± 2.65 (corresponding to an α of .008). At Time 3 participants made significantly fewer stable, and significantly more mediate stability attributions for the hypothetical child's behaviour. This finding was not affected by the hypothetical child's initial or subsequent behaviour. Cell frequencies and parameter-based Z-scores for the stable-unstable dimension of participants' attributions as a function of the hypothetical child's subsequent behaviour at Time 3 are shown in Table 24.

Participants' intentional-unintentional attributions as a function of the hypothetical child's initial and subsequent behaviour at Time 3. The third hierarchical loglinear analysis assessed whether the frequency of participants' responses along the intentional-unintentional attributional dimension at Time 3 were influenced by the hypothetical child's initial and subsequent behaviour. The data were submitted to a 4 x 3 x 3 hierarchical loglinear analysis where participants' attributions (i.e., intentional, mediate, unintentional, and uncodeable), and the hypothetical child's initial and subsequent behaviour (i.e., prosocial, subtly aversive, and manifestly aversive) constituted the between-subjects factors. Using a backward elimination process in which the 3-way interaction is tested first, followed by tests of all two-way interactions

Table 24

Cell Frequencies and Parameter-Based Z-scores for the Stable-Unstable Dimension of Participants' Attributions as a Function of the Hypothetical Child's Subsequent Behaviour at Time 3

	Causal attributions of the hypothetical child's behaviour			
	Stable	Mediate	Unstable	Uncodeable
Frequency	17	94	27	51
Z-score	-3.77	7.16	-1.39	1.70

and main effects, the most parsimonious model included the two 2-way interactions between the hypothetical child's subsequent behaviour and participants' responses along the intentional-unintentional attributional dimension. The data predicted using this model were not significantly different from the observed data, $G^2(24, N = 189) = 19.85, p = .705$. To further investigate this two 2-way interaction the parameter-based Z-values were evaluated at ± 2.65 (corresponding to an α of .008). Participants were more likely to explain the prosocial hypothetical child's subsequent behaviour at Time 3 in terms of mediate intentionality, and less likely to explain his behaviour in terms of unintentional reasons. By contrast, participants were less likely to explain the subtly aversive hypothetical child's behaviour in terms of mediate intentionality. Participants also gave more uncodeable responses when the hypothetical child's subsequent behaviour was subtly aversive suggesting confusion about the causes underlying this character's behaviour. This finding was not affected by the hypothetical child's initial behaviour. Cell frequencies and parameter-based Z-scores for the intentional-unintentional dimension of participants' attributions as a function of the hypothetical child's subsequent behaviour at Time 3 are shown in Table 25.

Summary of participants' attributions at Time 3. The data suggest that participants gave the prosocial child credit for his good behaviour at Time 3, although the results were less straightforward than at Time 1. Participants also remained unsure about the basis for the subtly aversive character's subsequent behaviour at

Table 25
Cell Frequencies and Parameter-Based Z-scores for the Intentional-Unintentional Dimension of Participants' Attributions as a Function of the Hypothetical Child's Initial Behaviour at Time 3

		Causal attributions of the hypothetical child's behaviour				
		Intentional	Mediate	Unintentional	Uncodeable	
Hypothetical child's subsequent behaviour	Prosocial	23	23	6	11	
	Z-score	2.51	2.80	-3.14	-1.56	
Subtly aversive	Frequency	11	7	19	26	
	Z-score	-.89	-2.69	2.08	3.03	
Manifestly aversive	Frequency	12	17	20	14	
	Z-score	1.36	1.03	1.67	-1.31	

Time 3, as indicated by their tendency to give more uncodeable answers to explain this character's behaviour. Still, participants were more likely to use mediateintentional reasons to explain the subtly aversive child's subsequent behaviour at Time 3.

Notwithstanding the hypothetical child's initial or subsequent behaviour, participants were also more likely to use less stable and more mediate stability reasons to explain the hypothetical child's subsequent behaviour at Time 3. This finding may arise from the fact that two-thirds of the hypothetical characters changed their behaviour across the experimental trials. No significant effects were observed for the manifestly aversive hypothetical child at Time 3. As well, participants' attributions for the hypothetical child's subsequent behaviour at Time 3 were not influenced by reputation at Time 1.

Discussion

The study investigated the combined and unique influences of behavioural and reputational factors on children's perceptions of a hypothetical child. Fourth-, fifth-, and sixth-grade children were presented vignettes that portrayed a hypothetical child over a three week period (i.e., corresponding to three experimental trials). At Time 1, the vignettes depicted the hypothetical child as either prosocial, subtly aversive, or manifestly aversive, thus, establishing his reputation as popular, mildly rejected, or strongly rejected, respectively. The hypothetical child's behaviour was then described as either remaining stable, or changing progressively over Times 2 and 3. For the hypothetical child who changed progressively, his subsequent behaviour was either prosocial, subtly aversive, or manifestly aversive. Participants' liking of the hypothetical child, as well as their recall of and attributions for his behaviour were evaluated. The results of the study are discussed first with regard to the liking data, and then with regard to the attributional and recall data. A theoretical integration of the skills deficit and reputational models of peer rejection is then discussed. The methodological limitations of the study are presented, followed by a final section on the therapeutic implications of the results and future avenues of investigation.

Participants' Liking of the Hypothetical Child

When participants had no prior expectations of the hypothetical child, they liked the prosocial hypothetical child most, followed by the subtly aversive hypothetical child, and finally, by the manifestly aversive hypothetical child. The modal liking

ratings for each of these three characters indicated that, as expected, the prosocial hypothetical child was strongly liked, the subtly aversive hypothetical child was mildly disliked, and the manifestly aversive hypothetical child was strongly disliked.

Once the hypothetical child's reputation had been established, only marked changes in behaviour led to immediate changes in liking. Participants' liking of the initially prosocial child fell dramatically when he became manifestly aversive, and participants' liking of the manifestly aversive child improved dramatically when he became prosocial. When changes in the hypothetical child's behaviour involved mild departures from his previous reputation, participants did not immediately alter their liking of the character. Instead, they seemed to rely on the hypothetical child's initial reputation to arrive at an affective judgment of him. This finding extends the results of previous research that shows that children are reluctant to modify their negative perceptions of others on the basis of weak evidence (Aloise, 1989; Darley & Fazio, 1980; Gurwitz & Dodge, 1977; Rothbart & Park, 1986). In the present study, participants showed the same type of reluctance in relation to both their positive and negative perceptions of the hypothetical characters.

Participants' liking of the hypothetical child, therefore, rested on both behavioural and reputational factors. The reputational effects were not, however, sufficient to override the influence of enduring changes in behaviour. At Time 3, only the hypothetical child's subsequent behaviour influenced participants' liking of him. Participants liked the hypothetical child whose subsequent behaviour was prosocial

more than they did the two aversive characters, whom they disliked equally. It appeared that at Time 3 participants perceived the hypothetical child in a manner congruent with his emerging reputation.

As hypothesized by Dodge (1989) as well as Schneider and Byrne (1985), and documented by Bierman (1986a), reputation created a lag between changes in behaviour and changes in liking. This was only true when the progressively changing behaviour could not be assimilated into participants' existing notion of the hypothetical child. When changing behaviour was markedly different from the hypothetical child's previous conduct, no such lag was found and participants instead responded to the hypothetical child's changing behaviour at face value and immediately adjusted their liking of the character.

Participants' Recall of the Hypothetical Child's Behaviour

The findings concerning participants' recall of the hypothetical child's behaviour suggest that manifestly aversive behaviours were highly salient to participants, and were more easily recalled by them at both Times 1 and 3. In considering these results it is important to note that participants' recall of the neutral items did not vary as a function of the hypothetical child's behaviour, suggesting that the previously-described memory effects were specific to the target items. These results are consistent with previous research with both children and adults which shows superior recall for negative behaviour (Ladd & Mars, 1986; Wright & Dawson, 1988). Butler (1986) explains that negative behaviour may be better recalled because it has higher

diagnosticity for predicting an individual's behaviour and the probable course of future interactions with that individual.

Participants' recall at Time 3 was not influenced by the hypothetical child's initial behaviour. The hypothetical child's reputation did not, therefore, have an enduring effect on participants' encoding of incoming information. This suggests that their internal representation of the hypothetical child was by this time no longer influenced by his initial behaviour. This is an interesting effect because peer reputation is expected to have an influence on children's recall of peers' behaviour and yet no such effect was found.

Participants also ascribed to the hypothetical child schema-consistent behaviours that were not actually included in the vignettes, and distorted the information presented to them to make it more compatible with what they already knew to be true of the hypothetical child. At Time 1, participants made fewer negative and more positive errors of commission when the hypothetical child's behaviour was prosocial, and more negative errors of commission when the hypothetical child's behaviour was subtly aversive. There were no differences in the nature of participants' errors of commission for the manifestly aversive hypothetical child.

At Time 3, participants made fewer negative and more positive errors of commission when the hypothetical child's subsequent behaviour was prosocial, and more negative and fewer positive errors of commission when the hypothetical child's subsequent behaviour was manifestly aversive. There were no differences in the

nature of participants' errors of commission for the subtly aversive hypothetical child at Time 3. As was the case with recall, participants' errors of commission at Time 3 were not influenced by the hypothetical child's initial behaviour. By Time 3, participants appeared to be thinking of the hypothetical child in terms of his current, rather than his past, behaviour. Participants, therefore, formed a cognitive schema of the hypothetical child which they used as a basis for making false, but reputation-consistent, generalizations about his behaviour. These schema-based effects were not powerful enough to have an enduring effect on participants' thoughts about the hypothetical child at Time 3, when they began instead to make errors of commission that were in keeping with the hypothetical child's current, rather than past, behaviour.

At Time 3, participants also made more errors of commission when the hypothetical child's initial behaviour was prosocial and his subsequent behaviour was subtly aversive, although there was no difference in the nature of errors of commission made. This finding is interesting and suggests that participants may have had a more richly integrated and elaborated cognitive representation of the hypothetical child when his initial behaviour was prosocial and his subsequent behaviour was subtly aversive. Perhaps the specific nature of this hypothetical child's behaviour change required more reflection on the part of participants. Subtly aversive behaviour on the part of the prosocial hypothetical child may have prompted a deeper level of processing than similar behaviour on the part of, for example, the manifestly aversive hypothetical child.

Participants' Attributions for the Hypothetical Child's Behaviour

At Time 1, participants typically gave credit to the prosocial hypothetical child for his good behaviour, as demonstrated by their internal, stable, and intentional attributions. The findings also show that participants viewed the prosocial child in this manner at Time 3, irrespective of his initial reputation. This is striking in view of the fact that at Time 3, two-thirds of the prosocial hypothetical characters had previously behaved aversively (be it subtly or manifestly aversive). Again these findings point to the flexibility of participants' perceptions of the hypothetical child and the likelihood that at Time 3 the hypothetical child was developing a new reputation based on his behaviour at that time.

Participants' causal attributions for the subtly aversive hypothetical child were more complex, typically involved mediate stability and unintentionality (as well as less intentionality). This pattern of attributions suggests that participants were willing to give the subtly aversive hypothetical child the "benefit of the doubt" at the outset of the study. It is worth noting, however, that participants also gave significantly more uncodeable responses to explain the hypothetical subtly aversive child's behaviour, suggesting some confusion about the reasons underlying this character's behaviour. Irrespective of the hypothetical child's initial reputation, participants remained unsure about the basis for the subtly aversive character's behaviour at Time 3, as indicated by the greater frequency with which they relied on mediate intentional and uncodeable reasons to explain this character's behaviour.

Participants' initial attributions for the manifestly aversive hypothetical child's behaviour typically involved mediate internality. Although participants were not willing to condemn this character for his bad behaviour, they also did not show a positive bias towards him. There were no differences in participants' attributions of the manifestly aversive hypothetical child's behaviour at Time 3. Of the three types of hypothetical characters, the manifestly aversive child was, therefore, associated with the least well-defined set of attributions.

These results are consistent with those of Hymel (1986) and Butler (1984) in suggesting that differences between children's interpretation of positive and negative peer behaviours are most notable in the case of popular, as compared to rejected, peers. Participants in the present study did not display an overtly hostile attributional bias towards the manifestly aversive hypothetical child, and instead, showed a hardy, positive bias towards the prosocial hypothetical child. Hymel (1986) describes children's reluctance to condemn others they do not know well as an adaptive strategy that may contribute to the maintenance of harmonious peer relations. It seems that participants may have employed these same strategies with the hypothetical child.

The above-described attributional biases did not endure once the hypothetical child's behaviour had clearly improved or deteriorated at Time 3. At that point, participants appeared to be thinking of the hypothetical child in terms of his current, rather than his past, behaviour. Whatever advantage the prosocial hypothetical child,

and to a lesser extent, the subtly aversive hypothetical child, had initially at Time 1 disappeared when the character's behaviour changed.

Theoretical Integration of the Skills Deficit and Reputational Models of Peer Rejection

The current study extended Price and Dodge's (1988) and Coie's (1990) models of peer rejection and proffered a two-step model of children's perceptions of behavioural change in their peers. In a nascent phase of behavioural change, it was suggested that children would not respond to positive behaviour on the part of rejected peers and continue to view them as unlikeable. In a second maintenance phase of change, it was suggested that children would begin to recognize and respond to the rejected peer's newly-acquired behaviour. Accordingly, the subtly aversive behaviours discussed by Hughes and Sullivan (1988) were expected to produce different effects in the nascent and maintenance phases of behavioural change. In the emergent phase of peer rejection, when children have no prior expectations of a peer, subtly aversive behaviours were expected to produce mild dislike. Subtly aversive behaviours on the part of a rejected peer in the nascent phase of change were expected to be sufficient to maintain strong dislike for the child. Conversely, subtly aversive behaviour on the part of a popular child in the nascent phase of change were not expected to alter children's perceptions of the peer as well-liked.

These expectations were borne out by the current findings. Subtly aversive behaviour on the part of the manifestly aversive hypothetical child was sufficient to

maintain participants' strong dislike of the character. However, subtly aversive behaviour on the part of an unknown hypothetical child resulted in mild dislike. By contrast, subtly aversive behaviour on the part of a prosocial hypothetical child did not lessen participants' liking of the character. The findings of the current study also shed light on the cognitive and attributional factors that accompany these processes. Participants made false generalizations about the hypothetical child that were consistent with his behaviour at both Times 1 and 3. Participants also showed a positive approach towards the prosocial hypothetical child, and a charitable approach towards the subtly aversive hypothetical child.

Although the findings underscore the importance of behavioural and reputational factors in the development and maintenance of peer reputation, they also point to the limitations of each of these effects. The effect of reputation was evident only when the hypothetical child's changing behaviour deviated mildly from his previous reputation. Participants' did not overlook dramatic changes in behaviour, irrespective of the hypothetical child's previous reputation. Moreover, once the hypothetical child had entered the maintenance stage of behavioural change, participants' perceptions of the hypothetical child relied exclusively on his current, rather than his past, behaviour.

In generalizing these results to rejected children, it would be expected that when rejected children improve their behaviour, their peers might also improve their perceptions of them. This process can only be expected to be automatic, however, if

the rejected child's behaviour change is dramatic. If, on the other hand, rejected children who have completed social skills training revert to negative behaviours, fail to perform their newly-acquired behaviour properly, or continue to display subtly aversive behaviour, their peers might not change their perceptions of them. When the manifestly aversive hypothetical child became subtly aversive, participants' liking of him lagged behind his changes in behaviour. This is important because learning of new behaviour is slow and cumulative and it is, therefore, unrealistic to expect children who are in the process of acquiring new social skills to display these skills flawlessly. The same type of lag that was observed in this study can, thus, be expected to characterize changes in children's perceptions of a rejected peer having completed social skills training.

Methodological Limitations of the Study

Five areas of methodological concern should be highlighted with respect to the present study: 1) external validity; 2) the scope of the study; 3) sampling problems; 4) the nature of the behavioural vignettes; and 5) putative confounds.

External validity. Studies such as this sacrifice validity for experimental control. As a result, several points relating to the external validity of the study warrant mention. First, the study constituted an early attempt at studying the role of subtly aversive behaviours in establishing and maintaining peer rejection. In the pilot study, participants described these behaviours as occurring in their social worlds, and rated the descriptions as being plausible. It is unclear, however, if subtly aversive behaviour

constitutes a clear constellation of behaviour, and if they do what role they play in the process of peer rejection. Further research on subtly aversive behaviour should address this issue.

Second, children were presented descriptions that highlighted the hypothetical child's initial and subsequent behaviour. This approach required that participants use the limited information at their disposal to form an impression of the hypothetical child. It is important to determine in what manner children's responses to the hypothetical characters used in this study match their responses to similar children with whom they interact on the playground and in the classroom.

Third, although the proper manipulation checks were used, some of experimental conditions were likely more plausible to participants than others. Rubin and Coplan (in press) point out that the reputation of popular and rejected peers is fairly stable. When change in peer reputation occurs it usually involves a popular child becoming average and vice-versa. Popular peers rarely become rejected, and rejected peers rarely became popular. The experimental conditions that depicted such changes, although theoretically relevant were, therefore, likely to be more remote from children's personal experiences with peers, and the possibility remains that the marked changes in participants' liking observed in some conditions were partially related to the novelty of the situations described in them. Children may have, for example, considered a description of a prosocial child behaving in a subtly aversive manner as implausible, thereby explaining their initial readiness to overlook negative

behaviour on this character's part.

Fourth, although social rejection is related to disruptiveness and aggression at all ages, the form of aggression becomes more differentiated and less obvious as children age (Coie, Dodge, & Kupersmidt, 1990). The behavioural vignettes of the manifestly aversive hypothetical child, in particular, included blatant examples of aggressive behaviour. It would have been interesting to ask participants to rate the age of the hypothetical child to determine if they thought of him as being a younger child than they. In this manner the appropriateness of the description of the manifestly aversive hypothetical child could have been assessed.

Fifth, the behavioural vignettes simulated the hypothesized nascent and maintenance phases of peers' behaviour change. It is unclear that behavioural change in children actually follows such a trajectory, however. Therefore, subsequent research should address the validity of this distinction.

Sixth, from the outset of the study participants' knew that they would never meet the hypothetical child as he presumably attended another school. Their personal investment in the experimental task was, therefore, likely to have been weak. This is important because children's social impressions of others are influenced by their level of personal investment in a given individual (Feldman & Ruble, 1988; Masters & Furman, 1981; Ruble & Stangor, 1986; Waas, 1991). Future research should, thus, employ experimental tasks that promote higher levels of personal investment from children (e.g., through the use of confederate child actors in realistic interpersonal

interactions).

Seventh, the vignettes represented pure portrayals of the behaviours being depicted. At Times 1 and 3, the manifestly aversive hypothetical child was not shown behaving positively, and the prosocial hypothetical child was not shown behaving negatively. As Nangle and Foster (1992) point out, children's aversive and prosocial behavioural repertoires in the natural environment consist of varied and complex behaviours taking place in various situations, all of which may affect the social impact of these behaviours. Future research should employ more realistic and balanced portrayals of hypothetical characters to avoid this difficulty.

The scope of the study. The investigation focused on aggressive and disruptive behaviours as precursors of peer rejection. This information cannot be used to draw inferences about all rejected peers. Although aggression and disruptive behaviours are clearly the most commonly cited precursors of peer rejection across age groups and methodologies, the link is not invariant (Coie, Belding, & Underwood, 1989). Not all aggressive children are rejected, and not all rejected peers are aggressive. In addition, as Bierman (1986) points out, some children are rejected for no obvious behavioural reason.

Sampling problems. A substantial number of children declined to participate in the study, thus, limiting the generalizability of the results. Forty-six percent of the children who were approached to participate in the study declined to do so. Although these values do not differ from those generally obtained in research on children's peer

relations (see Foster, Bell-Dolan, & Berler, 1986 for a review), it is not clear to what degree children who participated in the study differed from those who declined to do so. Foster et al. (1986) report evidence to support the hypothesis that children who volunteer for research are of higher social status than those who do not. Hymel (1986), Wagner (1986), and Butler (1984) did not, however, find consistent effects of participants' social status on their impressions of hypothetical or actual peers. Consequently, even if more well-adjusted children participated in the study, this should not have had an important effect on the findings. Still, more creative approaches to subject recruitment can be used in future investigations to yield higher consent rates.

The nature of the vignettes. The same number of behaviours were shown in Times 1 and 3. Therefore, in the conditions where the hypothetical child changed his behaviour, by Time 3 he had been shown engaging in roughly the same amount of reputation-consistent as reputation-inconsistent behaviour. Future research would do well to develop the hypothetical child's reputation and depict behaviour change over a longer period of time, so that participants expectations of the character can be strongly built up before any changes are attempted. Such a design may garner more enduring reputational effects than the current study.

Putative confounds. Participants were told that the behavioural vignettes occurred during the first three weeks of school. This introduced a confound to the experiment insofar as some participants used this information in their causal attributions for the hypothetical child's behaviour. For example, a few participants

reported that the prosocial hypothetical child was especially generous and helpful at the beginning of the school year because he was eager to make friends, or, alternatively, that the subtly and manifestly aversive hypothetical characters were unkind to others because they were nervous and uncomfortable with their classmates whom they did not know. Although, there was no systematic pattern to children's use of this information, future research should set the time frame of such vignettes at a given point in the previous academic year to avoid introducing extraneous information into the study.

Therapeutic Implications of the Current Findings and Future Directions

Traditionally, treatment with rejected children has involved a didactic, social skills training approach. Consistent with Bierman's (1986) recommendations, the current findings underscore the importance of expanding this method to include peer-mediated interventions. In particular, when behaviour change is modest, children might not respond to it immediately. Children having completed social skills training can also be given specific problem-solving strategies and emotional support to deal with their continued rejection as they begin to implement the positive behaviour changes they have learned.

The current findings also highlight several potential avenues of future investigation. First, several recent investigations have documented heterogeneity among peer-rejected children (French, 1988; 1990; Cillessen et al., 1992). More information is needed on children's perceptions of the different behavioural profiles

suggested by such sub-typing. Gender is one obvious grouping that merits further study. Would children have responded differently had the hypothetical character been a girl? Do boys and girls respond differently to rejected peers? Unfortunately, the present study did not have sufficient power to adequately investigate these effects.

Second, there is a need to consider developmental issues in relation to the questions addressed in this study. Fourth-, fifth-, and sixth-grade children were grouped together on the basis of evidence that children under eight years of age tend to focus on concrete, perceptually salient, and readily accessible information, rather than the more abstract, dispositional, and trait-like factors used by older children and adults (e.g., Feldman & Ruble, 1986; Ferguson et al., 1986; Gnepp & Chilamkurti, 1988; Livesley & Bromley, 1973; Peevers & Second, 1973; Rholes & Ruble, 1984, 1986; Rogosh & Newcomb, 1989; Rotenberg, 1982; Wood, 1978). However, children are likely to continue to evolve in their approach to impression formation after age eight, and this may have an impact on their perceptions of hypothetical characters such as those used in the present study. Again, the present study did not have sufficient power to investigate possible age-related effects.

Third, an adequate account of the development and maintenance of peer rejection must consider both children's interpretations of their peers' behavioural change, as well as the effect of these interpretations on children's behaviour towards peers. It is also important to consider the affective and motivational processes that influence children's interpretations and behaviour towards rejected peers.

Finally, recent research has identified individual differences in children's willingness to consider behaviour change on the part of rejected peers (Erdley & Dweck, 1989; 1993). In a study employing descriptions of a hypothetical peer, Erdley and Dweck (1989; 1993) identified two types of social perceivers among children. Children classified as "entity theorists" were more likely to make extreme social judgments and false generalizations about the hypothetical character. These children were also less likely to show empathy towards the hypothetical character and to integrate discrepant information into their conceptualization of him. By contrast, children classified as "incremental theorists" were more sensitive to behavioural changes and less rigid in their judgments of others. It would be interesting to incorporate this information into future studies on the development and maintenance of peer rejection.

Conclusions

In conclusion, the present study clarifies the influence of peer behaviour and reputation on children's impressions. When children have no prior expectations of peers, they appear to rely on their peers' behaviour to arrive at an impression of them. Over time, however, they use their peers' initial reputation as a heuristic for interpreting subsequent behaviour. Children seem to overlook behaviour change on the part of peers if such behaviour departs only mildly from their peers' initial reputation. A lag, therefore, emerges between mild changes in behaviour and changes in children's impressions. Marked changes in behaviour do not produce this effect and instead

have an immediate impact on children's impressions of peers. Still, whether changes in behaviour are marked or less obvious, children eventually adjust their perceptions of others to fit their peers' behaviour. These findings have implications for clinical practice with rejected peers, and highlight several avenues of future investigation in the study of the development and maintenance of peer reputation.

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Appendix A

Parental Consent Letter

Dear Parent/Guardian,

We are asking for your child's participation in a research project being conducted by Carole Gentile and Dr. Alastair Younger of the School of Psychology at the University of Ottawa. This project has been approved by the Superintendent for Staff Development and Evaluation of the Carleton Roman Catholic School Board and the principal of your child's school. The goal of the project is to find out more about the way children form impressions of others. If you give permission, your child would participate in three 15- to 20-minute interviews about his/her opinions of a make-believe child. Because we cannot write as quickly as many children give their answers, the interviews will be tape-recorded. After we have transcribed these tapes, they will be erased. Information obtained from the project will be used to develop ways to help children who have problems making friends. If you are interested in the results of the project, you may obtain a copy of the final report.

The project will not cause any embarrassment or harm to your child; in fact, most children enjoy participating in such projects. Your child's answers will be kept strictly confidential, will not be seen by anyone other than the researchers, and will be used only for research purposes. Participation in the project is completely voluntary and is in no way connected with your child's grades or services provided by the school. Even if you decide to allow your child to participate in the project, you or your son/daughter may withdraw from the project at any time.

Please complete the section below and have your child return it to his/her teacher as soon as possible. If you have any questions, contact Carole Gentile (564-2463).

Yours sincerely,

Carole Gentile
Ph.D. Student

Alastair Younger, Ph.D.
Associate Professor

I have read and understood this request for my son/daughter to participate in a project on children's impression of others. I have discussed this with my child, and:

____ I give permission for my child to participate.

____ I do not give permission for my child to participate.

Name of child: _____

Date: _____

Signature of Parent or Guardian: _____

Appendix B

Parental Consent Letter for Pilot Study

Dear Parent/Guardian,

We are asking for your child's participation in a research project being conducted by Carole Gentile and Dr. Alastair Younger of the School of Psychology at the University of Ottawa. The goal of this project is to find out if children understand a questionnaire that will be used in a future study about children's relationships with peers. Your child's participation in the project would involve a 25 to 30-minute interview in which he/she would be presented descriptions of a child behaving in either positive or negative ways. Your child would then be asked to say what the descriptions mean, and how likely it would be for someone to behave that way. Your child would receive \$10 after having completed the interview. The interview would be scheduled at your convenience and would take place either at the child's home or at a local library. You may read the questionnaire in advance if you wish.

The project will not cause any embarrassment or harm to your child in any way; in fact, most children enjoy participating in such projects. Your child's answers will be kept strictly confidential, will not be seen by anyone other than the researchers, and will be used only for purposes of the research project itself. Participation in the project is completely voluntary. Even if you decide to allow your child to participate in the project, you or your son/daughter may later withdraw from the project at any time.

Please complete the section below. If you have any questions please do not hesitate to contact Carole Gentile [telephone: 564-6578 (work) or 738-8022 (home)].

Yours truly,

Carole Gentile
Ph.D. student

Alastair Younger, Ph.D.
Associate Professor

I have read and understood this request for my son/daughter to participate in the above research project. I have discussed this with my child, and:

____ I give permission for my child to participate.

____ I do not give permission for my child to participate.

Name of child: _____

Date: _____

Signature of Parent or Guardian: _____

Appendix C

Behavioural Vignettes for Each of the Nine Experimental Conditions³

Behavioural Vignette for Time 1 for the Experimental Conditions in which the

Hypothetical Child's Initial and Subsequent Behaviour is Prosocial

1. On (day of the week) John wore his blue sweater for the class picture. Everyone was dressed really nicely. Later that day the fire drill went off while the teacher wasn't in the classroom and some kids weren't sure what they should do, but then John said that they were supposed to leave the building (good leader).
2. On (day of the week) John told funny jokes. In the afternoon John made a really funny joke and everyone laughed (tells jokes).
(day of the week) afternoon John and his class did a project on seeds. The class planted some seeds and put the pots near the window.
3. On (day of the week) morning John and his class had a spelling test. At lunch John saw a little girl crying in the school yard. She told John that she'd lost her schoolbag so he helped her look for it (kind).
4. On (day of the week) John painted a picture of a day at camp. Later in gym John had to pick players for his basketball team, he picked a kid to be on his team who wasn't such a good player, just to be nice (friendly).
5. On (day of the week) John played baseball with some kids in his class. When one of the kids made a good play, John told him that he was playing really well (dispenses high levels of positive reinforcement).
Later in music class everyone in John's class chose an instrument. John chose the recorder.

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Prosocial and his Subsequent Behaviour is Subtly Aversive

1. On (day of the week) John wore his blue sweater for the class picture. Everyone was dressed really nicely. Later that day the fire drill went off while the teacher wasn't in the classroom and some kids weren't sure what they should do, but then John said that they were supposed to leave the building (good leader).
2. On (day of the week) John told funny jokes. In the afternoon John made a really funny joke and everyone laughed (tells jokes).
(day of the week) afternoon John and his class did a project on seeds. The class planted some seeds and put the pots near the window.
3. On (day of the week) morning John and his class had a spelling test. At lunch John saw a little girl crying in the school yard. She told John that she'd lost her schoolbag so he helped her look for it (kind).
4. On (day of the week) John painted a picture of a day at camp. Later in gym John had to pick players for his basketball team, he picked a kid to be on his team who wasn't such a good player, just to be nice (friendly).
5. On (day of the week) John played baseball with some kids in his class. When one of the kids made a good play, John told him that he was playing really well (dispenses high levels of positive reinforcement).
Later in music class everyone in John's class chose an instrument. John chose the recorder.

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Prosocial and his Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) John wore his blue sweater for the class picture. Everyone was dressed really nicely. Later that day the fire drill went off while the teacher wasn't in the classroom and some kids weren't sure what they should do, but then John said that they were supposed to leave the building (good leader).
2. On (day of the week) John told funny jokes. In the afternoon John made a really funny joke and everyone laughed (tells jokes).
(day of the week) afternoon John and his class did a project on seeds. The class planted some seeds and put the pots near the window.
3. On (day of the week) morning John and his class had a spelling test. At lunch John saw a little girl crying in the school yard. She told John that she'd lost her schoolbag so he helped her look for it (kind).
4. On (day of the week) John painted a picture of a day at camp. Later in gym John had to pick players for his basketball team, he picked a kid to be on his team who wasn't such a good player, just to be nice (friendly).
5. On (day of the week) John played baseball with some kids in his class. When one of the kids made a good play, John told him that he was playing really well (dispenses high levels of positive reinforcement).
Later in music class everyone in John's class chose an instrument. John chose the recorder.

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Subtly Aversive and his Subsequent Behaviour is Prosocial

1. On (day of the week) morning John and his class remembered all the French words to the National Anthem. In the afternoon John got angry about losing his pencil case so he slammed the door on his way out to recess (when angry will do things like bang a door or slam a desk).
2. On (day of the week) the nurse came to the school and checked everyone's eyes. When it was John's turn to see the nurse, he acted like a baby. He wouldn't let anyone use his speller while he was gone (behaves immaturely).
3. On (day of the week) John painted a picture of a day at camp. Later that day John kept picking at his nose when he thought that no one was looking at him (picks his nose).
4. On (day of the week) morning John was talking to a kid, and he was standing really close to him. The kid felt kind of funny that John was so close so he kept backing away from John (does not respect personal boundaries). Later in music class everyone in John's class chose an instrument. John chose the recorder.
5. On (day of the week) John's Math partner tried to tell him that he was doing his Math problems wrong but John got all touchy about it, and wouldn't listen to what his partner was saying (resents criticism). In the afternoon John and his class went to the gym to see the school play.

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial and Subsequent Behaviour is Subtly Aversive

- 1. On (day of the week) morning John and his class remembered all the French words to the National Anthem. In the afternoon John got angry about losing his pencil case so he slammed the door on his way out to recess (when angry will do things like bang a door or slam a desk).**
- 2. On (day of the week) the nurse came to the school and checked everyone's eyes. When it was John's turn to see the nurse, he acted like a baby. He wouldn't let anyone use his speller while he was gone (behaves immaturely).**
- 3. On (day of the week) John painted a picture of a day at camp. Later that day John kept picking at his nose when he thought that no one was looking at him (picks his nose).**
- 4. On (day of the week) morning John was talking to a kid, and he was standing really close to him. The kid felt kind of funny that John was so close so he kept backing away from John (does not respect personal boundaries). Later in music class everyone in John's class chose an instrument. John chose the recorder.**
- 5. On (day of the week) John's Math partner tried to tell him that he was doing his Math problems wrong but John got all touchy about it, and wouldn't listen to what his partner was saying (resents criticism). In the afternoon John and his class went to the gym to see the school play.**

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Subtly Aversive and his Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) morning John and his class remembered all the French words to the National Anthem. In the afternoon John got angry about losing his pencil case so he slammed the door on his way out to recess (when angry will do things like bang a door or slam a desk).
2. On (day of the week) the nurse came to the school and checked everyone's eyes. When it was John's turn to see the nurse, he acted like a baby. He wouldn't let anyone use his speller while he was gone (behaves immaturely).
3. On (day of the week) John painted a picture of a day at camp. Later that day John kept picking at his nose when he thought that no one was looking at him (picks his nose).
4. On (day of the week) morning John was talking to a kid, and he was standing really close to him. The kid felt kind of funny that John was so close so he kept backing away from John (does not respect personal boundaries). Later in music class everyone in John's class chose an instrument. John chose the recorder.
5. On (day of the week) John's Math partner tried to tell him that he was doing his Math problems wrong but John got all touchy about it, and wouldn't listen to what his partner was saying (resents criticism). In the afternoon John and his class went to the gym to see the school play.

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Manifestly Aversive and his Subsequent Behaviour is Prosocial

1. On (day of the week) a girl in John's class got new glasses. John teased her about it and kept on teasing her until she started to cry (does not know when to stop teasing).
In the afternoon John and his class went on a field trip to the experimental farm.
2. On (day of the week) John brought his new schoolbag to school. Later that day the kids in John's class were playing basketball and John kept bossing them around and telling them how to throw the ball (bossy towards other children).
3. On (day of the week) morning John learned the French words for some animals. In the morning that day the kids in John's French group all wanted to do their project one way, and John kept on arguing with them and saying that he wanted to do it another way (argues with other children).
4. On (day of the week) morning John and his class remembered all the French words to the National Anthem. In the school yard that day John tried to bully some kids into giving him the snack they'd brought for recess (bullies other children).
5. On (day of the week) morning John and his class had a spelling test. Later that day a kid in John's Math class was having trouble doing his homework. John started calling him "stupid" and putting him down (puts other children down).

Behavioural Vignette for Time 1 for the Experimental Conditions in which the

Hypothetical Child's Initial Behaviour is Manifestly Aversive and his

Subsequent Behaviour is Subtly Aversive

1. On (day of the week) a girl in John's class got new glasses. John teased her about it and kept on teasing her until she started to cry (does not know when to stop teasing).

In the afternoon John and his class went on a field trip to the experimental farm.

2. On (day of the week) John brought his new schoolbag to school.

Later that day the kids in John's class were playing basketball and John kept bossing them around and telling them how to throw the ball (bossy towards other children).

3. On (day of the week) morning John learned the French words for some animals.

In the morning that day the kids in John's French group all wanted to do their project one way, and John kept on arguing with them and saying that he wanted to do it another way (argues with other children).

4. On (day of the week) morning John and his class remembered all the French words to the National Anthem. In the school yard that day John tried to bully some kids into giving him the snack they'd brought for recess (bullies other children).

5. On (day of the week) morning John and his class had a spelling test.

Later that day a kid in John's Math class was having trouble doing his homework. John started calling him "stupid" and putting him down (puts other children down).

Behavioural Vignette for Time 1 for the Experimental Conditions in which the Hypothetical Child's Initial and Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) a girl in John's class got new glasses. John teased her about it and kept on teasing her until she started to cry (does not know when to stop teasing).

In the afternoon John and his class went on a field trip to the experimental farm.

2. On (day of the week) John brought his new schoolbag to school.

Later that day the kids in John's class were playing basketball and John kept bossing them around and telling them how to throw the ball (bossy towards other children).

3. On (day of the week) morning John learned the French words for some animals. In the morning that day the kids in John's French group all wanted to do their project one way, and John kept on arguing with them and saying that he wanted to do it another way (argues with other children).

4. On (day of the week) morning John and his class remembered all the French words to the National Anthem. In the school yard that day John tried to bully some kids into giving him the snack they'd brought for recess (bullies other children).

5. On (day of the week) morning John and his class had a spelling test.

Later that day a kid in John's Math class was having trouble doing his homework. John started calling him "stupid" and putting him down (puts other children down).

Behavioural Vignette for Time 2 for the Experimental Condition in which the Hypothetical Child's Initial and Subsequent Behaviour is Prosocial

1. On (day of the week) a policeman came to John's school to talk about safety. After school that day John played hockey and his team really wanted to win so some kids started cheating but John told them to play fair (plays fair).
2. On (day of the week) morning the kids in John's class were talking a lot so the teacher told them to sit down and be quiet and John was the first one to listen to what she said (complies with norms and rules of the group).
In the afternoon John and his class went to the gym to see the school play.
3. On (day of the week) a kid in John's class fell down in the school yard and got hurt so John helped him to the principal's office (nurturing).
Later that day John and his class went on a field trip to the experimental farm.
4. On (day of the week) morning John and his class remembered all the French words to the National Anthem.
Later that afternoon a kid in John's class found out that he hadn't done too well on last week's spelling test. John did okay on the test but he didn't say anything so that he wouldn't make the kid feel bad (considerate of other people's feeling).
5. On (day of the week) John brought his new schoolbag to school.
Later that day, a kid in John's class forgot his lunch at home, so John shared his sandwich with him (shares things with other children).

Behavioural Vignette for Time 2 for the Experimental Condition in which the Hypothetical Child's Initial Behaviour is Subtly Aversive and his Subsequent Behaviour is Prosocial

1. On (day of the week) a kid in John's class brought in a hockey puck signed by a famous player. John wanted to hold it, but he wasn't careful with it and the puck fell in the mud and got all dirty (disrespectful of other children's belongings). Later after recess John worked on his project on recycling.
2. On (day of the week) when the teacher was telling the class how to do their French project, John kept asking goofy questions, and acting silly (acts silly). Later that morning John learned the French words for some animals.
3. On (day of the week) morning John and his class watched a film about Canada. In the afternoon John was talking too loud. Some kids blocked their ears with their fingers and finally they told him to "shh" (talks too loud).
4. On (day of the week) a policeman came to John's school to talk about safety. After school that day John played hockey and his team really wanted to win so some kids started cheating but John told them to play fair (plays fair).
5. On (day of the week) morning the kids in John's class were talking a lot so the teacher told them to sit down and be quiet and John was the first one to listen to what she said (complies with norms and rules of the group). In the afternoon John and his class had a spelling test.

Behavioural Vignette for Time 2 for the Experimental Condition in which the Hypothetical Child's Initial Behaviour is Manifestly Aversive and his Subsequent Behaviour is Prosocial

1. The nurse came to the school on (day of the week) and checked everyone's eyes. That day John got into a fight with a bunch of kids. In the afternoon the teacher had to break up a fight between John and some other kid (gets into many fights).

2. On (day of the week) John was bugging the kids sitting next to him while they were trying to do their work. It was hard for them to get their work done with John sitting next to them (bothers other children).

Later that day John painted a picture of a day at camp. 3. On (day of the week) a kid told John that he couldn't borrow her speller because she needed it so after when the kids were going out to recess John pushed her (high levels of reactive aggression). Later in music class everyone in John's class chose an instrument. John chose the recorder.

4. On (day of the week) a policeman came to John's school to talk about safety. After school that day John played hockey and his team really wanted to win so some kids started cheating but John told them to play fair (plays fair).

5. On (day of the week) morning the kids in John's class were talking a lot so the teacher told them to sit down and be quiet and John was the first one to listen to what she said (complies with the norms and rules of the group).

In the afternoon John and his class went to the gym to see the school play.

**Behavioural Vignette for Time 2 for the Experimental Condition in which the
Hypothetical Child's Initial Behaviour is Prosocial and his Subsequent
Behaviour is Subtly Aversive**

1. On (day of the week) a policeman came to John's school to talk about safety. After school that day John played hockey and his team really wanted to win so some kids started cheating but John told them to play fair (plays fair).
2. On (day of the week) morning the kids in John's class were talking a lot so the teacher told them to sit down and be quiet and John was the first one to listen to what she said (complies with the norms and rules of the group).
In the afternoon John and his class went to the gym to see the school play.
3. On (day of the week) a kid in John's class fell down in the school yard and got hurt so John helped him to the principal's office (nurturing).
Later that day John and his class went on a field trip to the experimental farm.
4. On (day of the week) a kid in John's class brought in a hockey puck signed by a famous player. John wanted to hold it, but he wasn't careful with it and the puck fell in the mud and got all dirty (disrespectful of other children's belongings).
Later after recess John worked on his project on recycling.
5. On (day of the week) when the teacher was telling the class how to do their French project, John kept asking goofy questions, and acting silly (acts silly).
Later that morning John learned the French words for some animals.

Behavioural Vignette for Time 2 for the Experimental Condition in which the Hypothetical Child's Initial and Subsequent Behaviour is Subtly Aversive

1. On (day of the week) a kid in John's class brought in a hockey puck signed by a famous player.
John wanted to hold it, but he wasn't careful with it and the puck fell in the mud and got all dirty (disrespectful of other children's belonging).
Later after recess John worked on his project on recycling.
2. On (day of the week) when the teacher was telling the class how to do their French project, John kept asking goofy questions, and acting silly (acts silly).
Later that morning John learned the French words for some animals.
3. On (day of the week) morning John and his class watched a film about Canada. In the afternoon John was talking too loud. Some kids blocked their ears with their fingers and finally they told him to "shh" (talks too loud).
4. On (day of the week) John brought his new schoolbag to school.
That day some kids in John's class teased him about his it. John didn't think it was funny and he got all upset about his name (reacts poorly when teased).
5. Last week John borrowed a kid's t-shirt for gym class. John kept forgetting to bring it back and on (day of the week) John hadn't brought it back yet (forgets to return things that he has borrowed).
Later that day John and his class went on a field trip to the experimental farm.

**Behavioural Vignette for Time 2 for the Experimental Condition in which the
Hypothetical Child's Initial is Manifestly Aversive and his Subsequent
Behaviour is Subtly Aversive**

1. The nurse came to the school on (day of the week) and checked everyone's eyes. That day John got into a fight with a bunch of kids. In the afternoon the teacher had to break up a fight between John and some other kid (gets into many fights).
2. On (day of the week) John was bugging the kids sitting next to him while they were trying to do their work. It was hard for them to get their work done with John sitting next to them (bothers other children).
Later that day John painted a picture of a day at camp.
3. On (day of the week) a kid told John that he couldn't borrow her speller because she needed it so after when the kids were going out to recess John pushed her (high levels of reactive aggression).
Later in music class everyone in John's class chose an instrument. John chose the recorder.
4. On (day of the week) a kid in John's class brought in a hockey puck signed by a famous player.
John wanted to hold it, but he wasn't careful with it and the puck fell in the mud and got all dirty.
Later after recess John worked on his project on recycling (disrespectful of other children's belongings).
5. On (day of the week) when the teacher was telling the class how to do their French project, John kept asking goofy questions, and acting silly (acts silly).
In the afternoon John and his class went to the gym to see the school play.

Behavioural Vignette for Time 2 for the Experimental Condition in which the
Hypothetical Child's Initial is Prosocial and his Subsequent Behaviour is

Manifestly Aversive

1. On (day of the week) a policeman came to John's school to talk about safety. After school that day John played hockey and his team really wanted to win so some kids started cheating but John told them to play fair (plays fair).
2. On (day of the week) morning the kids in John's class were talking a lot so the teacher told them to sit down and be quiet and John was the first one to listen to what she said (complies with the norms and rules of the group).
In the afternoon John and his class went to the gym to see the school play.
3. On (day of the week) a kid in John's class fell down in the school yard and got hurt so John helped him to the principal's office (nurturing).
Later that day John and his class went on a field trip to the experimental farm.
4. On (day of the week) John was bugging the kids sitting next to him while they were trying to do their work. It was hard for them to get their work done with John sitting next to them (bothers other children).
The nurse came to the school in the afternoon and checked everyone's eyes.
5. On (day of the week) a kid told John that he couldn't borrow her speller because she needed it so after when the kids were going out to recess John pushed her (high levels of reactive aggression).
In the afternoon John and his class watched a film about Canada.

Behavioural Vignette for Time 2 for the Experimental Condition in which the Hypothetical Child's Initial as Subtly Aversive and his Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) a kid in John's class brought in a hockey puck signed by a famous player. John wanted to hold it, but he wasn't careful with it and the puck fell in the mud and got all dirty (disrespectful of other children's belongings).
Later after recess John worked on his project on recycling.
2. On (day of the week) when the teacher was telling the class how to do their French project, John kept asking goofy questions, and acting silly (acts silly).
Later that morning John learned the French words for some animals.
3. On (day of the week) morning John and his class watched a film about Canada. In the afternoon John was talking too loud. Some kids blocked their ears with their fingers and finally they told him to "shh" (talks too loud).
4. On (day of the week) John was bugging the kids sitting next to him while they were trying to do their work. It was hard for them to get their work done with John sitting next to them (bothers other children).
That day John wore his blue sweater for the class picture. Everyone was dressed really nicely.
5. On (day of the week) a kid told John that he couldn't borrow her speller because she needed it so after when the kids were going out to recess John pushed her (high levels of reactive aggression).
In the afternoon John and his class had a spelling test.

Behavioural Vignette for Time 2 for the Experimental Condition in which the Hypothetical Child's Initial and Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) morning John and his class watched a film about Canada. Later at recess John's team was losing the baseball game so John lost his temper and started yelling at the kids on his team (loses his temper quickly).
2. The nurse came to the school on (day of the week) and checked everyone's eyes. That day John got into a fight with a bunch of kids. In the afternoon the teacher had to break up a fight between John and some other kid (gets into many fights).
3. On (day of the week) John was bugging the kids sitting next to him while they were trying to do their work. It was hard for them to get their work done with John sitting next to them (bothers other children).
Later that day John painted a picture of a day at camp.
4. On (day of the week) a kid told John that he couldn't borrow her speller because she needed it so after when the kids were going out to recess John pushed her (high levels of reactive aggression).
Later in music class everyone in John's class chose an instrument. John chose the recorder.
5. On (day of the week) John wore his blue sweater for the class picture. Everyone was dressed really nicely.
Later that morning a kid in John's class bumped into him by accident, so John punched him in the arm (high rates of unprovoked aggression).

Behavioural Vignette for Time 3 for the Experimental Conditions in which the

Hypothetical Child's Initial and Subsequent Behaviour is Prosocial

1. On (day of the week) morning John learned the French words for some animals. In the afternoon a kid in John's class didn't know what to paint for the school art contest so John gave him some good ideas about what he could paint (gives good advice).

2. On (day of the week) morning John and his class watched a film about Canada. After school John helped a kid bring his science project home because it was pretty heavy (helpful).

3. On (day of the week) morning a bully was picking on John and pushing him around. So John told him that he didn't want to fight with him but if he had to, he would defend himself (displays proactive aggression).

Later after recess John worked on his project on recycling.

4. On (day of the week) morning the teacher asked for someone to go in front of the class and read their story. John put up his hand and said he'd go first (volunteers to recite in class).

It was hot that day so John and his class went outside for gym that afternoon.

5. On (day of the week) the teacher told the class to get some cardboard and scissors from the supply room. Some kids cut in front of others but John waited his turn (waits his turn).

The nurse came to the school in the afternoon and checked everyone's eyes.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Subtly Aversive and his Subsequent Behaviour is Prosocial

1. On (day of the week) morning John and his class did a project on seeds. The class planted some seeds and put the pots near the window. In the afternoon a kid in John's class didn't know what to paint for the school art contest so John gave him some good ideas about what he could paint (gives good advice).
2. On (day of the week) morning John brought his new schoolbag to school. After school John helped a kid bring his science project home because it was pretty heavy (helpful).
3. On (day of the week) morning a bully was picking on John and pushing him around. So John told him that he didn't want to fight with him but if he had to, he would defend himself (displays proactive aggression).
Later that day John and his class went on a field trip to the experimental farm.
4. On (day of the week) morning the teacher asked for someone to go in front of the class and read their story. John put up his hand and said he'd go first (volunteers to recite in class).
It was hot that day so John and his class went outside for gym that afternoon.
5. On (day of the week) the teacher told the class to get some cardboard and scissors from the supply room. Some kids cut in front of others but John waited his turn (waits his turn).
That day John wore his blue sweater for the class picture. Everyone was dressed really nicely.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Manifestly Aversive and his Subsequent Behaviour is Prosocial

1. On (day of the week) morning John and his class did a project on seeds. The class planted some seeds and put the pots near the window. In the afternoon a kid in John's class didn't know what to paint for the school art contest so John gave him some good ideas about what he could paint (gives good advice).
2. On (day of the week) morning John and his class watched a film about Canada. After school John helped a kid bring his science project home because it was pretty heavy (helpful).
3. On (day of the week) morning a bully was picking on John and pushing him around. So John told him that he didn't want to fight with him but if he had to, he would defend himself (displays proactive aggression).
Later after recess John worked on his project on recycling.
4. On (day of the week) morning the teacher asked for someone to go in front of the class and read their story. John put up his hand and said he'd go first (volunteers to recite in class).
It was hot that day so John and his class went outside for gym that afternoon.
5. On (day of the week) the teacher told the class to get some cardboard and scissors from the supply room. Some kids cut in front of others but John waited his turn (waits his turn).
That day John wore his blue sweater for the class picture. Everyone was dressed really nicely.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Prosocial and his Subsequent Behaviour is Subtly Aversive

1. On (day of the week) John brought his new schoolbag to school. Later that day John didn't get picked to be the referee for basketball, so he pouted all afternoon (sulks or gets upset when he does not get his own way).
2. On (day of the week) John worked with some kids on a science project. The teacher asked one of the kids in the group to be in charge, but John wouldn't listen to him (does not take orders when other children are in charge).
It was hot that day so John and his class went outside for gym that afternoon.
3. The nurse came to the school on (day of the week) and checked everyone's eyes. In the afternoon John's class had a spelling quiz. John whined and complained to the teacher that it was way too long and that he'd never finish in time (complains to the teacher when she tells them what to do).
4. On (day of the week) John was talking too much, he was talking all the time. Even when the other kids weren't talking to him, John tried to talk to them (talks excessively).
On (day of the week) afternoon John and his class watched a film about Canada.
5. On (day of the week) was jealous of a kid in his class who got a new pair of running shoes (jealous of other children).
That morning John and his class remembered all the french words to the National Anthem.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour and Subsequent Behaviour is Subtly

Aversive

1. On (day of the week) John and his class had a spelling test. Later that day John didn't get picked to be the referee for basketball, so he pouted all afternoon (sulks or gets upset when he does not get his own way).
2. On (day of the week) John worked with some kids on a science project. The teacher asked one of the kids in the group to be in charge, but John wouldn't listen to him (does not take orders when other children are in charge). It was hot that day so John and his class went outside for gym that afternoon.
3. On (day of the week) John wore his blue sweater for the class picture. Everyone was dressed really nicely. In the afternoon John's class had a math quiz. John whined and complained to the teacher that it was way too long and that he'd never finish in time (complains to the teacher when she tells them what to do).
4. On (day of the week) John was talking too much, he was talking all the time. Even when the other kids weren't talking to him, John tried to talk to them (talks excessively). On (day of the week) afternoon that day a policeman came to John's class to talk about safety.
5. On (day of the week) was jealous of a kid in his class who got a new pair of running shoes (jealous of other children). That day John and his class did a project on seeds. The class planted some seeds and put the pots near the window.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the

Hypothetical Child's Initial Behaviour is Manifestly Aversive and his

Subsequent Behaviour is Subtly Aversive

1. On (day of the week) morning John and his class watched a film about Canada. Later that day John didn't get picked to be the referee for basketball, so he pouted all afternoon (sulks or gets upset when he does not get his own way).
2. On (day of the week) John worked with some kids on a science project. The teacher asked one of the kids in the group to be in charge, but John wouldn't listen to him (does not take orders when other children are in charge).
It was hot that day so John and his class went outside for gym that afternoon.
3. On (day of the week) John wore his blue sweater for the class picture. Everyone was dressed really nicely.
In the afternoon John's class had a math quiz. John whined and complained to the teacher that it was way too long and that he'd never finish in time (complains to the teacher when she tells them what to do).
4. On (day of the week) John was talking too much, he was talking all the time. Even when the other kids weren't talking to him, John tried to talk to them (talks excessively).
In the afternoon that day a policeman came to John's class to talk about safety.
5. On (day of the week) was jealous of a kid in his class who got a new pair of running shoes (jealous of other children).
That day John and his class did a project on seeds. The class planted some seeds and put the pots near the window.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Prosocial and Subsequent Behaviour is Manifestly Aversive

i. On (day of the week) John told his class all about this kid failing last week's spelling test; the kid who failed turned red and got all embarrassed (embarrasses other children).

That day John brought his new schoolbag to school.

2. It was hot on (day of the week) so John and his class went outside for gym that afternoon.

During gym the class didn't know if they should play basketball or soccer. John wanted to play basketball so he lied and told them they weren't allowed to play soccer (lies to get his own way).

3. On (day of the week) John kept sticking his tongue out at the kids in his class and giving them dirty looks too (sticks out his tongue and gives dirty looks at other children).

In the afternoon John learned the French words for some animals.

4. On (day of the week) someone broke the chalk into pieces and made a big mess. John lied and told the teacher that a kid in his class did it (lies to get other children in trouble).

Also on (day of the week) John and his class remembered all the French words to the National Anthem.

5. On (day of the week) John wanted to work on the computer so he told the kid who was using it to get off right away or he'd hit him (high rates of instrumental aggression).

Later after recess John worked on his project on recycling.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial Behaviour is Subtly Aversive and his Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) John told his class all about this kid failing last week's spelling test; the kid who failed turned red and got all embarrassed (embarrasses other children).

After lunch that day a policeman came to John's school to talk about safety.

2. It was hot on (day of the week) so John and his class went outside for gym that afternoon.

During gym the class didn't know if they should play basketball or soccer. John wanted to play basketball so he lied and told them they weren't allowed to play soccer (lies to get his own way).

3. On (day of the week) John kept sticking his tongue out at the kids in his class and giving them dirty looks too (sticks out his tongue and gives dirty looks at other children).

That day John brought his new schoolbag to school.

4. On (day of the week) someone broke the chaik into pieces and made a big mess. John lied and told the teacher that a kid in his class did it (lies to get other children in trouble).

Also on (day of the week) John and his class did a project on seeds. The class planted some seeds and put the pots near the window.

5. On (day of the week) John wanted to work on the computer so he told the kid who was using it to get off right away or he'd hit him (high rates of instrumental aggression).

In the afternoon John and his class went on a field trip to the experimental farm.

Behavioural Vignette for Time 3 for the Experimental Conditions in which the Hypothetical Child's Initial and Subsequent Behaviour is Manifestly Aversive

1. On (day of the week) John told his class all about this kid failing last week's spelling test; the kid who failed turned red and got all embarrassed (embarrasses other children).

After lunch that day a policeman came to John's school to talk about safety.

2. It was hot on (day of the week) so John and his class went outside for gym that afternoon.

During gym the class didn't know if they should play basketball or soccer. John wanted to play basketball so he lied and told them they weren't allowed to play soccer (lies to get his own way).

3. On (day of the week) John kept sticking his tongue out at the kids in his class and giving them dirty looks too (sticks out his tongue and gives dirty looks at other children).

In the afternoon John and his class went to the gym to see the school play.

4. On (day of the week) someone broke the chalk into pieces and made a big mess. John lied and told the teacher that a kid in his class did it (lies to get other children in trouble).

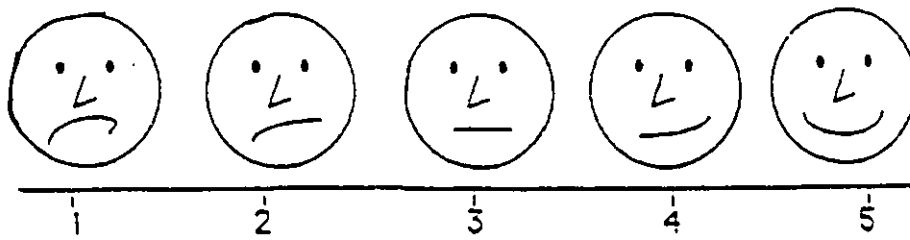
Also on (day of the week) John and his class did a project on seeds. The class planted some seeds and put the pots near the window.

5. On (day of the week) John wanted to work on the computer so he told the kid who was using it to get off right away or he'd hit him (high rates of instrumental aggression).

Later after recess John worked on his project on recycling.

Appendix D

Peer Rating Scale



Appendix E

Verbatim Instructions to Children

This is a project about how people your age figure out what other people are like when you don't know them very well or when you don't know them yet at all. That might remind you of the first day of school. You may not have known everyone in your class, and so you had to figure out what all these new people were about, what you thought of them. Even now I bet there's still people in your classroom, or your school, or even in your neighbourhood who you don't know very well but you still have some idea about what their like.

Well, I'm going to tell you about a kid who goes to another school, his name is John, and your job is pretty simple, I want you to try and figure him out, see what you think of him. Today, I'm going to tell you about John's first week of school, tomorrow I'll come back and tell you about John's second week of school, and the day after that I'll tell you about John's third week of school. All the while your job is always the same, you're trying to figure this kid out, see what you think of him. Okay? Now, after I finish telling you about John's first week of school today, I'll ask you how much you'd like to play or work with him, what you remember about his week and also what you think are some of the reasons that John may have acted the way he did this week, so it's a good idea to try and listen carefully.

There's a couple of more things I want to tell you about the project before we begin. One is that there are no right or wrong answers to the questions I'll be asking you so you don't have to worry about getting the right answer 'cause there is no right answer. Two is that your answers are confidential and that just means that your answers are just between you and me, and my helpers. So I won't be telling other people what answers you gave to the questions I asked you. And three is that I'm going to be using the tape-recorder a little bit later on. That's just so that I don't have to write so quickly while you're talking. Right now I'm just going to say your name into the tape-recorder so that I don't get mixed up later on.

Okay are you ready to hear about John's week. Listen carefully.

This is what John's first week of school was like this year.

I'd like you to use this to tell me how much you would like to work or play with John?

[Experimenter shows the peer rating scale to the child.]

As you can see, the face at the end on the left (point to left endpoint) is the least you can like to work or play with someone, and the face at the end on the right (point to right endpoint) is the most you can like to work or play with someone, and then there are all these faces in between. Any questions?

[If the child has any questions or seems unclear about the task, the experimenter should demonstrate again how the faces reflect the meaning of the scale, "Do you see how this face at the left end that's the least you can like to work or play with John, and the face at the right that's the most you can like to work or play with John, and then there's all these faces in the middle depending on how you're feeling.]

So how much you would like to work or play with John?

[Circle the child's response directly on the form.]

Okay now tell me what you remember about John's week, describe John to me in your own words. Try to include everything that you remember John doing this week.

Do you remember anything else about John's week?

Now think of John's week again. What are some of the reasons you think John acted the way he did this week?

[If child says he/she doesn't know say, "How about if you think about it for a little while. What are some of the reasons you think John acted the way he did this week?"]

Are there any other reasons that John may have acted that way?

That's all the questions I have for you today. Thank you very much for your help. I'll see you tomorrow and we'll see what John's second week of school was like. [Escort the child back to his/her classroom and ask him/her to quietly get the next child on your list.]

Footnotes

¹Missing data were not substituted for children's errors of commission and their accompanying affective valence codes. This is because: (a) errors of commission occurred infrequently and data substitution would have unduly influenced the results, and (b) nonparametric statistics were used to analyze these results. Missing data were also not substituted for the attributional data, because nonparametric statistics were used to analyze these results.

²It should be noted that a chi-square rather than a log-linear analysis was used because there were only two between-subjects factors in these analyses.

³The hypothetical child's name was John, Scott, or Todd; a name was not used if it appeared on the child's class list. The name John is used here for illustrative purposes. The behaviour described by the target item is indicated in parentheses.