

**Theories of Interpersonal Attraction: An
Investigation of Their Applicability to Children's
Peer Relations through the Gender Cleavage
Phenomenon**

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A thesis submitted as partial requirement for Master of
Psychology (Education)

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January, 1996

Acknowledgements

Firstly, I would like to thank my supervisor, Mrs Rosanne Rawlinson for her advice, support and encouragement during the completion of this thesis.

Thanks must also go to the Principals, staff and students of the participating schools for their support, co-operation and interest in this research.

Statement

I certify that this thesis contains no material which has been accepted for the award of any other higher degree or diploma in any tertiary institution, and that to the best of my knowledge and belief, this thesis contains no material previously published or written by another author, except where due reference is made in the text of the thesis.

A handwritten signature in black ink, appearing to read "Lewis". The signature is fluid and cursive, with a large initial 'L'.

Literature Review

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Abstract

It is recognised that children's experiences with their peers have implication for their adjustment in later life. Much research in the area of children's peer relations has been conducted. However, studies largely have been atheoretical in nature. Existing theories of interpersonal attraction more usually applied to adult social relations appear to have some applicability to understanding children's sociometric status and friendship. The aim of this review is to examine these theories and determine their usefulness with respect to the area of children's peer relations. One clearly identified peer relations phenomenon in the literature is the gender cleavage, that is, the tendency for children to prefer same-gender as opposed to opposite-gender peers as friends. This review discusses the adequacy of two opposing theories of interpersonal attraction, specifically the Balance Theory (Heider, 1958) and the Theory of Social Exchange (Homans, 1951) in explaining gender cleavage. Although both theories may be used to explain children's peer preferences, it is not clear which is more useful in understanding children's peer relations. The review concludes that the gender cleavage phenomenon, while constituting but one aspect of children's sociometric status and friendship, may provide a useful platform from which to test the applicability of two contrasting theories of interpersonal attraction to children's peer relations.

The Significance of Friendship and Sociometric Status in Children's Peer Relations

Why do individuals choose others as friends and why do we find some people more attractive than others? These are questions which need to be understood to comprehend the nature of children's peer relations. This area has been investigated for many years under the auspice of sociometry which can be defined as the study of social relationships (Hallinan, 1981) and includes sociometric status and friendship. Both status and friendship can be measured using similar sociometric techniques, but the resulting data are used in different ways. Although friendship and sociometric status are linked, there are some key differences. Sociometric status is a measure of popularity within a group, while friendship refers to the attraction between two people (Berndt, 1984). Friendship, then, refers to a dyadic mutuality perspective while sociometric status is a measure of the individual's social position within a group.

Lowe Vandell and Hembree (1994) note that both friendship and sociometric status are important for the adjustment of children. Parker and Asher (1993) found that each aspect has a role to play in assisting children with their development, and that their absences contribute additively to an individual's feelings of loneliness. Sociometric status has been found to be related to emotional well-being, with depression and loneliness more likely in children who have low levels of acceptance (Asher, Hymel, & Renshaw, 1984; Asher & Wheeler, 1985; Vosk, Forehand, Parker, & Rickard, 1982). Low sociometric status has also been found to be related to adjustment problems in later life (Cowen, Pederson, Babigian, Izzo, & Trost, 1973).

Much of the research in the area of children's peer relations has focussed on describing characteristics of members of different sociometric groups. A large number has also been concerned with evaluating interventions implemented to assist neglected, rejected or controversial children in developing skills which aim to increase their level of acceptance (e.g., Foster, DeLawyer, & Guevremont, 1985).

Theories of interpersonal attraction seem to have some applicability in explaining children's peer relations but have not been used widely in this context (e.g., Hallinan, 1981; 1992). The aim of this review is firstly to examine these theories and secondly to relate them to research in the area of interpersonal attraction between children. Gender cleavage is a well documented phenomenon in the area of children's peer relations and involves the tendency for individuals to prefer same-gender peers as friends as opposed to opposite-gender peers. The review aims to discuss the applicability of these theories as explanations for the gender cleavage phenomenon.

Theories of Interpersonal Attraction

Theories of interpersonal attraction have been used to explain sociometric choice patterns which reflect the major dimensions of peer relationships: friendship and peer status. Under the umbrella of social psychological theories, two major approaches have been identified. The cognitive consistency theories incorporating Heider's Balance Theory (1958) and reinforcement approaches including Homans' (1951) Social Exchange Theory.

Cognitive Consistency Theories

Balance Theory

In 1958, Heider proposed that in order to understand interpersonal attraction, it is necessary to focus on the individual's perception of a relationship rather than the objective realities. This he called the Balance Theory which suggests that there are a number of reasons why individuals become attracted to one another. According to Heider, friendship choices involve each individual's quests for consistency between feelings of attraction towards others, and personal beliefs, attitudes and values. People strive for balanced relationships between the way they feel and the action they take.

Heider (1958) used a triadic formation to illustrate the two types of relationships which may exist between an individual, another person and any other event, person, place or concept. He proposed a sentiment (liking/disliking) relationship, and a unit relationship between any two of these elements in a person's consciousness. The latter relationship involves the perception that two individuals either belong or do not belong together. Both types of relationships tend towards a balanced state, so that people feel positive sentiments (liking) for individuals with whom they perceive themselves to belong, and negative sentiment (disliking) for those they do not perceive themselves to belong. If there is an imbalance, for example, then individuals feel uncomfortable. They will, therefore, try to restore the balance by changing their sentiment towards the other, or by changing the unit relationship.

Heider (1958) outlined a number of dimensions along which individuals may be attracted, the first being reciprocity, whereby the chances of two people becoming friends are increased if there is a mutual attraction

between them. Proximity is also proposed to have an effect on friendship formation. Heider states that individuals may become friendly with one another because they spend a lot of time together. So the formation of a unit relationship induces positive sentiment and therefore friendship. Conversely, people may state that they spend a lot of time together because they are friends. However, by providing this reason, congruity between the individual's feeling and the action they have taken is maintained. Studies have supported this idea, and have found that time spent in interaction leads individuals to like each other (Adelman, 1969; Berscheid, Boye, & Darley, 1968; Tyler & Sears, 1967). Newcomb (1961), for instance, studied male college students who were all strangers to each other at the beginning of the year. They were offered free room and board for participating in the study. Attitudes and levels of attraction towards all other subjects in the study were assessed for each participant at the beginning of the study and reassessed at various points throughout the research. Although there was little relationship between attitude similarity and attraction during the early stages, results during the final phase indicated a significant positive relationship between the degree to which individuals held similar attitudes to each other and expressed levels of attraction. This finding supports the idea that individuals who spend a lot of time together are more likely to become friends.

Modifications to the Balance Theory (Heider, 1958) were proposed by Newcomb (1961). He found that although Heider's theory applied in circumstances where positive sentiments were concerned, problems arose with negative relationships. People prefer to like others rather than dislike them, even when according to Heider's theory, disliking the other would create a more balanced situation. Newcomb applied Heider's theory to larger groups of people and not the triads suggested by Heider. He proposed that imbalance among a collective group would be noticed

by individual members of the group. The alerted member would consequently attempt to reduce the imbalance which may lead to changes in both attitude and attraction among members of the group in order to restore balance. Newcomb's (1961) study mentioned earlier using male college students also supports the idea that groups tend to move towards a balanced situation and that balance among a group of people tends to increase with the length of time they have known each other (Berscheid, 1985).

Cognitive Dissonance Theory

Festinger's Cognitive Dissonance Theory (1957) is another cognitive consistency approach to interpersonal attraction, and incorporates ideas similar to Heider's. Festinger's theory states that thoughts are dissonant when they are illogical or incompatible, thus creating a state of discomfort that individuals try to rectify by decreasing cognitive incompatibilities. Attraction, according to Festinger, is caused by the characteristics and behaviour of others, but an individual's own behaviour towards others also influences attraction. This can be the case even when the other person has no influence over the individual's behaviour. An example of this would be if an individual was placed in the position where he or she were forced to harm another. As most people tend to think of themselves as kind, this action would create dissonance between the way they perceive themselves and their action. To decrease the amount of cognitive dissonance, the individual might change his/her cognitions to believe that the individual deserved the punishment. Although it does have some contribution to make to the interpersonal attraction area, Cognitive Dissonance Theory primarily deals with attitude change.

Evidence for Cognitive Consistency Theories

The cognitive consistency theories conceptualised by Newcomb (1961) and Festinger (1957) suggest that tensions between feelings of attraction and one's own beliefs, attitudes, and values are best resolved by choosing individuals similar to oneself along a number of dimensions. It is proposed that people feel more comfortable with others who are similar to them. Similarities on a range of aspects can be seen then, as a reflection of the individual. People may become friends because they share similar views, interests, or activities and even factors such as similarities in physical appearance, socioeconomic status and personality may contribute. It could be argued that individuals see their friends as mirrors, as friends provide an image of themselves consistent with the way in which they see themselves, thus supporting their own self concept (e.g., Bailey, DiGiacomo, & Zinser, 1976).

Werner and Parmelee (1979) investigated the real and perceived importance of similarity of activity and similarity of attitudes of friendship pairs among adults. They discovered that attitudes tended to be as dissimilar among friendship pairs as they were amongst strangers, whilst preferences in activity were more similar. The individuals involved, however, believed the converse to be true, that is, that the attitudes they held would be more similar to their friends rather than their activity. This supports Festinger's (1957) idea that individuals may become friends because they share similar interests. There appears, however, to be some confusion about the real meaning of these results if we relate them to theories of cognitive consistency. The individual's subjective evaluation of the aspects he or she shares with friends is different to the actual reality of the situation. The question arises as to

which is the important factor here: The actual similarity of activity *or* the perceived similarity of attitude.

It has been well documented that children tend to choose others of the same race, gender, and age as friends. These phenomena have been referred to as 'cleavages'. Theories of cognitive consistency seem useful in explaining cleavage formation among children. For example, Balance Theory (Heider, 1958) suggests that individuals tend to choose as friends others who are similar to themselves on a number of aspects. This would seem to be supported by the cleavage phenomena with individuals preferring to choose others of similar race, age, and gender as friends (Hallinan, 1981). Theories of cognitive consistency, such as Festinger's (1957) Cognitive Dissonance Theory, propose that individuals choose others who are similar to them because they mirror the individual themselves and that this is reinforcing. Children tend to choose as friends others of a comparable age perhaps because they are interested in similar activities. Individuals with dark skin tend to be attracted to others with dark skin because they look more similar than those with lighter skin. However, race and skin colour are presumably only relevant factors where these aspects are viewed as significant such as in America where distinct racial barriers have been an aspect of that society. In other relatively 'colour blind' societies, it is possible that race would be as insignificant in creating cleavages as hair colour or eye colour are in western societies. In addition, it may be that they share similar cultural experiences and values which may lead them to hold like views on a range of issues.

The cognitive consistency approaches appear to be more useful in examining friendship choice than sociometric status in children. They provide explanations as to why people become friends, but are not as

useful in identifying what it is that leads to individuals being accepted or rejected by a larger group. Whilst there is some support for these theories in explaining friendship patterns, their adequacy as a theoretical base for sociometric status could be questioned.

Reinforcement Theories

Reinforcement theories represent a contrasting approach to explaining interpersonal attraction. These theories focus on the idea that rewards and punishments in the physical environment or administered by another, influence interpersonal attraction. It is suggested that individuals seek to gain maximum reward and minimal punishment from their interactions with others and thus have a higher level of attraction for individuals who provide these. The dimension of status is seen as more important here, with group-valued attributes the criterion rather than perceived similarity. Examples of these theories include equity theories such as that of Adams (1965) and the Theory of Social Interdependence (Thibaut & Kelley, 1959).

Theory of Social Interdependence

Thibaut and Kelley (1959) describe the ways in which individuals depend on the behaviour of others in achieving favourable outcomes for themselves. Based on the premise that behaviour will not be repeated unless it is reinforced, the theory refers to a behaviour outcome matrix characteristic of relationships. As an individual's behaviour is affected by the responses of others to that behaviour, the other person can therefore influence the kind of behaviour exhibited by the individual by varying their own response to it. Included in this theory are the ideas of comparison level and comparison level of alternatives. Comparison level refers to the standard against which individuals evaluate their

relationships with others according to what they believe they deserve. Relationships which incur outcomes above the comparative level are considered to be satisfactory and attractive to the individual. However, if outcomes fall below comparative level, they will be seen by the individual as unsatisfactory. The comparison level of alternatives is the standard against which the individual decides whether or not to maintain a relationship with another. The individual will have an idea regarding the lowest level of outcomes they will accept before they end a relationship in the belief that they will receive greater benefits from being in a different relationship. What separates these two comparative levels is that, at times, individuals may remain in relationships with people whom they find unattractive or which are unsatisfactory because they do not have a better alternative and the individual is dependent on the relationship. Likewise, an individual can be in a relationship with someone without being dependent as other good alternatives do exist, however, the individual finds their relationship satisfactory and/or the other attractive enough to maintain good outcomes. According to Thibaut and Kelley then, attraction and dependence are not necessarily closely associated.

Gain and Loss Theory

Aronson's Gain and Loss Theory of Attraction (1969, in Berscheid, 1985) is another reinforcement theory. Aronson suggested that increases in rewards have more value than consistent rewards. Similarly, decreases in rewards have more impact than intermittent punishment. So, Gain-Loss Theory proposes that it is not only important to examine the events occurring within the relationship but also that the contextual factors need to be considered. The context in which the reward is provided is important in that it can change the meaning of the reward and thus the

level of attraction held by the individual. This idea seems to have value and further clarifies the somewhat confusing puzzle of interpersonal attraction and the variables which need to be considered within the area.

Social Exchange Theory

Social Exchange Theory (Homans, 1951) proposes that certain characteristics are valued among different groups. Valued aspects may vary between groups and individuals who epitomise the valued characteristics for a particular group become valued by its members. People associated with those individuals are also associated with their value. The theory proposes that during interpersonal interactions, a system of costs and benefits is in operation. Benefits may be intrinsically rewarding such as love or social approval, or they may be extrinsic. These benefits operate to encourage individuals to continue to supply benefits and thus perpetuate the relationship. Individuals become more integrated through this process, and the social relationship becomes stronger (Blau, 1964). Homans (1951) theorises that individuals expect the benefits of a relationship to be proportional to their costs and that the more the individual invests in a relationship, the greater his/her profits will be. Costs can be tangible, such as time and money; or social, for example, social disapproval, rejection or ridicule. Valued individuals have many benefits associated with them and thus become desirable associates.

Equity Theory

Equity Theory includes similar concepts to Social Exchange Theory (Homans, 1951) such as rewards, costs and profits but uses different labels for them such as positive outcomes, negative outcomes and net outcomes respectively. However, the additional notion of investment is also

incorporated. Investments are subjective and can be anything that leads an individual to believe he is entitled to rewards, costs and profits. Adams (1965) suggests that individuals evaluate relationships they have with others and weigh up their inputs compared with outcomes. Individuals seek to maximise equity in relationships rather than maximising raw outcomes (Adams, 1963). A state of equity between two people is said to be apparent when their ratios of profit to investment are equal. Equity Theory states that if there is a discrepancy between the amount individuals feel they are putting into a relationship and the amount they receive from it, the individual will experience a degree of tension. Tension is uncomfortable and, as a result, individuals seek to alter their inputs or outcomes so that the ratio of inputs to outputs becomes equal.

Griffeth, Vecchio and Logan (1989) conducted an experiment with 66 overpaid, equitably paid and underpaid short term employees performing a pay-by-the-page proof reading task. Interpersonal attraction was introduced as a variable with subjects being informed that their co-worker possessed very similar or dissimilar attitudes to the subject. It was found that individuals altered the quality and quantity of their work to achieve equity. Underpaid employees tended to increase the quantity and decrease the quality of their performance while overpaid employees decreased quantity but increased quality. An interesting interaction with interpersonal attraction was also found with the presence of an attractive other seeming to increase the subjects' sense of overcompensation and thus heightening the individual's attempt to restore equity. When the subject was underpaid, the individual seemed to find it easier to accept the inequity of the situation if their co-worker was attractive to them, however, if the other was unattractive, the subject seemed to increase efforts to establish equity by increasing the quantity of their output. For

overcompensated subjects, the presence of an unattractive other, individuals were likely to discount that aspect or even feel some satisfaction at the inequitable situation.

There are three key differences between Equity Theory and Social Exchange Theory (Brown, 1986). Firstly, there is the incorporation of the additional concept of investments. Secondly, Social Exchange Theory (Homans, 1951) states that the profits of a person who is exchanging directly with another should be equivalent in the long term. For Equity Theory, the rule of fairness is more complex in that two individuals who exchange with one another should have equal ratios or proportions of profits to investments. Finally a comparison of the outcomes between a person and another can be made by the two individuals involved but also by a third party. It is suggested that individuals also compare their own profits-to-investments ratios with those of others.

Research continues into the area of Equity Theory and it has been used to investigate a variety of relationships ranging from employer/employee (e.g., Griffeth et al., 1989) and interaction in groups (e.g., Tziner, 1986) to more intimate relationships (Sprecher, 1986).

Theory of the Role of Rewards in the Acquisition of Positive Interpersonal Attitudes

Similar to Social Exchange Theory is Lott and Lott's (1974) theory of the role of rewards in the acquisition of positive interpersonal attitudes, specific to interpersonal attraction. The theory suggests that an individual's liking for another person is determined by the rewards associated with that individual. Rewarding events do not have to come directly from the other individual but rather need to be associated with their presence. Another person may possess personal characteristics

which are rewarding just by the individual being in close proximity, for example, physical attractiveness. Alternatively, direct rewards such as money or compliments may be provided to the individual by the other person. The presence of the other may be instrumental in providing rewards for the individual, for example, talents which ensure the success of a group project. Another situation which may lead the other person to be rewarding is when they are associated with a number of independent rewarding events. The other, therefore, becomes associated with rewards, but is not in fact instrumental in the individual receiving them. It has been found (Isen, 1970) that individuals who enter situations with a positive attitude generated by a prior event, tend to feel more positive and act in a positive way to another person. As a contrary example, Griffit and Veitch (1971) found that individuals were more likely to evaluate a stranger negatively if they were in an uncomfortably hot and crowded room.

Reinforcement theories seem to have more implications for sociometric status than they do for friendship formation. They provide a rather materialistic perspective on relationships.

Evidence for Reinforcement Theories

Reinforcement theories such as those of Lott and Lott and Homans could be used to explain phenomena that have been long established in child sociometric research. According to the social exchange theory, the costs and benefits of being in a relationship with another are weighed up and a decision is made about whether or not to continue the relationship. It has been found that individuals with high levels of academic ability tend to have higher sociometric status (Vosk, Forehand, Parker, & Rickard, 1982). Conversely, it has been found that intellectually disabled children tend to have lower sociometric status in a group than their non-disabled

peers (Gresham & Reschly, 1987). Gottlieb, Semmel, and Veldman (1978) also found mainstreamed children to have lower sociometric status than their non-handicapped peers. Gottlieb (1974) found that middle class subjects presented with children labelled as either disabled or non disabled, gave higher sociometric ratings to children indicated as being academically competent than to individuals also labelled as disabled or non disabled but who were depicted as academically incompetent. Academic competence would seem to be the important variable in this study rather than the disability label. In our society, academic achievement is a valued characteristic and according to the Theory of Social Exchange, it would seem that high academic ability would lead an individual to become valued and thus have a higher level of social acceptance. Individuals with an intellectual disability have lower levels of achievement and would, therefore, have lower social acceptance. Relationships with those who have less valued attributes may incur greater costs than benefits. Children with an intellectual disability, for instance, do not have high value in terms of intrinsic or extrinsic rewards and, therefore, have limited benefits to offer to a relationship. Individuals associating with these children may be subjected to additional costs such as social ridicule. More directly, limitations on mutual activities may be imposed due to an individual's disability such as physical disability decreasing the number and type of games which can be played. Limitations may also be placed on seemingly simple activities such as conversation in cases where speech impediments are associated with the disability. This may also apply for migrants who have limited language proficiency in their place of residence. These types of factors can lead the individual to possess less valued characteristics thus making them less desirable as friends. The costs of such relationships for individuals associating with others upon whom such limitations are

placed may, therefore, outweigh the benefits, and the relationship may be discontinued. In contrast, individuals who have valued characteristics such as physical prowess have high benefits associated with them. Physical attractiveness and athletic ability have also been found to be associated with higher sociometric status (Vaughan & Langlois, 1983; Zakin, 1983). Others associated with individuals possessing such characteristics may not only receive immediate rewards, for example, from the individual being aesthetically pleasing, but may also gain other positive consequences from the association with the individual such as more friends. If individuals spend time with popular people, it is possible that they themselves will form friendships with that individual's associates.

It appears that reinforcement theories and the Social Exchange Theory in particular have some contribution to make to the theoretical base in the area of children's peer relations. The theory throws some light on the processes through which individuals become accepted or rejected, but does not provide specific information on the variables which determine sociometric status. As a result, this theory more adequately explains popularity rather than friendship.

Research into sociometric status and friendships in children has tended to be descriptive, rather than theoretical in its orientation. Few comprehensive theories have been developed to explain both children's sociometric status and friendships, and research has tended to be conducted in a rather ad hoc manner. Coie (1990) has proposed a developmental model which looks specifically at the genesis of peer rejection. Rubin, LeMare and Lollis (1990) have developed a model which is applicable to isolated and withdrawn children. Although each of these models appears useful in the areas they target, a number of other

aspects not included under the respective umbrellas of rejected or isolated/withdrawn and neglected need to be considered. The models do not investigate the general question of what makes children attracted to each other but rather concentrate on the specific issues of rejected or isolated and withdrawn children. Developmental models proposed by Coie (1990) and Rubin et al. (1990) perhaps provide a less comprehensive approach to the area of peer relations than the more sociological theories of interpersonal attraction already discussed. Although the major theories of social relationships and interpersonal attraction have been developed in the context of adult social relations and tested using adult studies, they could well provide a sound theoretical basis for the understanding of children's peer relationships, particularly the phenomenon of gender bias in friendship and sociometric status (Hallinan, 1981).

Gender Cleavage and Theories of Interpersonal Attraction

Early sociometric studies (e.g., Criswell, 1939, in Renshaw, 1981) first identified the gender cleavage phenomenon. The existence of gender cleavages has been confirmed by both behavioural and sociometric data. It is manifest not only in children's expressed preference for same-sex peers, but observational data also indicates that children tend to play more often with same-sex peers (Hartup, 1983). Later studies have confirmed the presence of the cleavage and have established it as an apparently robust phenomenon during the developmental period of childhood, beginning in preschool years and persisting until adolescence (Renshaw, 1981). With the current concerns regarding the status of women in society and girls' education, along with the relatively recent

focus on boys' socialisation, their needs and their education (Biddulph, 1994), interest in gender issues has increased.

Gender is one of the most obvious and basic dimensions of similarity, and thus the gender cleavage provides strong evidence and support for Balance Theory. This evidence is also supported by observational studies of children's interactions in school. It has been suggested that the sexes develop different cultures at a young age and that this is maintained even into adulthood (Dweck, 1981; Karweit & Hansell, 1983). Schofield's (1981) observational findings support this contention as he observed that two separate gender cultures do emerge during childhood with informal cross-gender socialisation rare. When it does occur, it tends to be superficial and highly ritualised.

It would seem that either biology (including physical body shape) or the social construction of gender can offer a basis for perceived similarity. Hallinan (1981) suggests that the drive towards similarity fulfils a need for social identity. Same-gender choice and socialisation may realise this aim in relation to gender identity (Schofield, 1981). Females tend to be attracted to other females because they have similar bodies and it could be argued that they have been socialised to adopt a set of 'feminine' attitudes and values. It may also be the case that gender-specific socialisation leads members of both sexes to have like values and that this could be one reason they choose one another in preference to opposite gender peers. Gender-based socialisation patterns and same-gender sociometric choices are strongest in late childhood. Schofield (1981) suggests this may occur due to the increasing romantic and sexual connotations placed upon cross-gender friendship and socialisation, and the concomitant fear of rejection by the opposite sex for children in puberty.

Homans' (1951) Theory of Social Exchange also seems to have implications in terms of explaining sociometric choice. Here the dimension of status is seen as more important, with group-valued attributes the criterion rather than perceived similarity. At one level this theoretical model is at odds with Balance Theory (Heider, 1958) in explaining sociometric choice, indicating individual differences rather than similarity as the basis for choice. In other words, individuals who are higher in status and who reflect valued social attributes such as physical attractiveness, academic ability and athletic prowess, may be preferred (Vaughan & Langlois, 1983; Zakin, 1983). Some research has suggested that femaleness may be more valued in the school setting compared to maleness due perhaps to greater female conformity to school behavioural norms and achievement of teacher valued requirements (Hallinan, 1981). If this is the case, it would be expected that girls would have higher levels of acceptance from their peers compared to boys. It may be that other characteristics are differentially valued by the sexes. For example, boys may value competitiveness while girls cherish intimacy (Karweit & Hansell, 1983).

Although theories of interpersonal attraction have been proposed, they tend to originate from a sociological perspective and have been more commonly applied to adult relationships. Child studies tend to be conducted from a psychological perspective and it is not entirely clear what implications such theories may have for research into children's peer relations. Theories of interpersonal attraction logically do seem to have some applicability to children's interpersonal choices. It is not clear, however, which of the theories is most generally useful as a model for sociometric choice, although Balance Theory and the Theory of Social Exchange seem differentially appropriate in regards to friendship formation and sociometric status. It is possible to investigate the

applicability of these theories to children's sociometric choices, which underlie both sociometric status and friendship measures, by focussing on one aspect of sociometric choice, gender cleavage. This robust phenomenon may provide an appropriate platform on which to investigate the usefulness of contrasting theories of interpersonal attraction to the domain of child social relations.

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Abstract

The relative strength of gender bias in sociometric choices where sociometric technique and social criteria underlying children's age levels were varied was examined in order to investigate the applicability of Balance Theory as a model for children's interpersonal preferences, as opposed to a contrasting theory, the Theory of Social Exchange. A total of 94 male and 103 female Grade 2 to 6 children participated using rating scale and nomination questionnaire techniques. Gender bias was found to be prominent at all grade levels for the acceptance and positive choice data. Rejection data indicated some interesting results. While females were fairly equivocal in their judgements, males displayed a tendency to reject same-gender peers as playmates and workmates more often than they did opposite-gender peers. Individual grade results were also investigated with no evidence of developmental effects for positive choices. It would appear that the Balance Theory may account more adequately for positive choice data, while the Theory of Social Exchange provides a more adequate model where peer rejection is concerned.

Research into children's peer relations has identified age, race and gender cleavages, some of the first phenomena identified in sociometric research. Gender cleavage is defined as the tendency for children to nominate as friends or rate positively same sex peers rather than opposite sex peers. Early sociometric studies (e.g., Criswell, 1939 in Renshaw, 1981) identified the gender cleavage phenomenon and later studies have confirmed its presence (Renshaw, 1981). It is an apparently robust phenomenon which occurs during the developmental period of childhood beginning in pre-school years, increasing during middle school and reaching its peak in early adolescence (Hayden-Thompson, Rubin, & Hymel, 1987; Moore & Updegraff, 1984). It has been found that children choose same-sex peers in their early interactions even without adult intervention (Hayden-Thompson, Rubin, & Hymel, 1987; Moore & Updegraff, 1984), indicating the fundamental and pervasive nature of the gender cleavage. These results would imply that the gender cleavage is a formidable and pervasive phenomenon, but involving a number of factors affecting its strength and ubiquity. These factors, and the modifiability of the gender cleavage, have implications for the application of theories of interpersonal attraction as explanations of children's interpersonal choices.

Factors Affecting Gender Cleavage

Gender cleavages have been found in many studies, but the strength of the cleavage may differ over the developmental period. A study by Shrum, Creek, and Hunter (1988) found almost complete sex-segregation by Grade 3 with children preferring same-sex peers. Early high school saw a gradual decline in what they refer to as gender homophily. It is suggested that the onset of romantic attraction facilitates cross-sex interaction during adolescence, but may inhibit cross-sex choices for some tasks lest the alliance

be considered to be romantic attraction (Sagar, Schofield, & Snyder, 1983; Schofield, 1981).

It has been proposed that children's conceptions of friendships develop and become qualitatively different as they move through primary school. As children get older, their views of friendship become less self-centred and common values and interests take on greater importance (Hayden-Thompson et al., 1987). This may constitute one reason for the weakening of the gender cleavage during adolescence when children begin to look beyond gender similarity as a basis for friendship choices.

Organisational variables have been found to influence gender cleavage. It has been suggested that classroom setting has an effect on cross-sex friendship formation. Children from classes including multiple grades or multilevel classrooms have been found to have more cross-age and cross-sex friends compared to those in traditional classrooms (Bianchi & Bakeman, 1978; Smith & Inder, 1990). Contrary evidence has been found by Hallinan who discovered that cross-sex friendships were more likely in traditional classes than in open class situations (1979). Class size was also found to affect friendship choice with larger classes having fewer cross-sex friendships than smaller classes (Hallinan, 1979).

Cross-cultural research also provides evidence that the gender cleavage can be modified. Cohen, D'Heurle, and Widmark-Peterson (1980) used American and Swedish fifth grade students to investigate cross-cultural differences in children's attitudes towards cross-sex interactions. The results suggest that children tended to prefer same-sex peers for relationships of a more intimate nature. Interestingly, cultural differences emerged. It was found that American boys showed a greater propensity for crossing gender lines than Swedish boys when a school related task was considered. However, this difference was not apparent where more intimate tasks were

concerned. The results also indicated that Swedish girls were more amenable to crossing gender lines than American girls for both tasks. Cohen et al. (1980) postulate differing socialisation practices to be one possible explanation including speculation that in Sweden, norms for cross-sex interaction are applied to the two genders more equally than in America. It was also postulated that social norms affecting cross-gender interactions vary across cultures.

Singleton and Asher (1979) used play and work measures of popularity to investigate race and gender-based friendships in sixth grade children. Results indicate the presence of both race and gender cleavages but gender cleavages were a stronger phenomenon accounting for greater variance in choices than did race. This finding was replicated by Sagar et al. (1983) but contrary evidence is provided by Shrum et al. (1988) who found that race posed a greater barrier to the formation of intergroup relations. Singleton and Asher (1979) also found that for play situations, black children were more likely to choose opposite-sex peers than white children. Although these results could be interpreted as implying cultural differences in acceptability of cross-gender relations, it is also possible that the differences are due to the nature of the sample used. The classes included contained a minority of black children, and it is possible that this led to more cross-sex choices on their part because of limited availability of same race peers.

Implications for the study of gender cleavage

The literature to date generally supports the presence of the gender cleavage. However, aspects of modifiability emerge which suggest that the phenomenon may not be as pervasive as previously indicated. The fact that classroom organisation and size seems to have an effect on cross sex interaction, for example, may indicate that gender cleavage may be more easily manipulated than previously believed. This has implications for the

various theoretical positions. For example, if a change in the environment can reduce the gender cleavage, then perhaps fundamental characteristics such as similarity as postulated by the Balance Theory (Heider, 1958) are not as important as previously suggested. The noted lessening of racial cleavages in post-integration schools may also support the idea that gender cleavages may be influenced by societal changes. It could be postulated that a greater societal acceptance of interracial relations has led to this decrease in racial bias. Societal changes have also been apparent with respect to gender relations in recent years. The research cited on the gender cleavage is comparatively old and it is possible that these changes have had an effect on the presence of a gender cleavage. It may, therefore, be beneficial to examine in more depth the types of changes which have taken place and investigate the presence of a gender cleavage today.

The measurement technique used may also have an effect on the apparent pervasiveness of the gender cleavage phenomenon. Gender cleavages may only be as prominent as the measurement tool allows them to be.

Sociometric Measurement and Gender Bias

Peer relationships in children have been studied using a number of sociometric techniques. Two common methods used are nomination techniques and the roster and rating scale method. Nomination techniques are the most common in sociometric research. They typically require a child to identify peers according to certain interpersonal criteria such as 'best friend' and 'especially liked' (Asher & Hymel, 1981). Positive as well as negative nominations may be obtained (e.g., 'Name the person in your class you would most/least like to play with'). Sociometric choices are usually school class based and children are typically asked to nominate another child from their own class. Both friendship and sociometric status measures are available from the use of nomination techniques. Sociometric status can be

calculated using a frequency count of how many times the child is nominated by other members of the class. Friendship measures can be gained by looking at the reciprocated choices of that individual.

Nomination techniques using 'friend' nominations have in previous studies (e.g., Moore & Updegraff, 1964) revealed potent evidence for gender bias and support for the Balance Theory of interpersonal attraction (Heider, 1958). Balance Theory (Heider, 1958) suggests that individuals can be attracted to others along a number of dimensions and that people strive for consistency between feelings of attraction for others and values, attitudes and beliefs. By choosing individuals who are similar to themselves on a variety of aspects, tensions can be avoided and those individuals therefore become more attractive.

'Friend' nominations, however, tend to reflect the strict gender-based informal socialisation patterns seen in observational studies and may represent a limited choice criterion tapping a limited aspect of children's everyday social interactions. Applying different choice criteria which examine a range of social situations may provide different evidence. It is possible that using sociometric criteria linked to more formalised social situations (e.g., classroom activities) may reveal less evidence of gender bias and therefore less support for the Balance Theory of interpersonal attraction as applied to children's peer relations. 'Workmate' choices based on achievement-oriented social situations may also reveal less evidence of gender bias. It is possible that status-related factors such as achievement emphasised by the Theory of Social Exchange (Homans, 1951) will be more strongly felt in choosing a partner for writing a class project for example. The Theory of Social Exchange (Homans, 1951) states that certain characteristics such as high academic achievement, physical attractiveness and athletic prowess are valued among different groups. A system of costs

and benefits is proposed to be in operation during interpersonal interaction and people expect the benefits of a relationship to be proportional to their costs. People possessing valued characteristics are associated with benefits and therefore become desirable as associates. If status related factors are more strongly felt, it would be expected that children would be more prepared to cross gender lines when choosing a workmate than when nominating a friend.

Nomination techniques are usually restricted in the number of choices as well as the social criteria used. Because of limited choices, this methodological approach may in fact exaggerate the presence of gender bias in sociometric choice and, as a result, the importance of Balance Theory (Heider, 1958) in explaining sociometric choice. Limited choice techniques such as this make the assumption that boys and girls use the same criteria to select their three 'best friends' or the three people with whom they would most like to play. As has been discussed, boys tend to move in large groups while girls prefer to interact in dyads (Daniels-Bierness, 1989). A restriction of choosing three friends may therefore lead to arbitrary selection of best friends on the part of boys and may force girls to include the names of one best friend and two others who really do not qualify for this title (Daniels-Bierness, 1989). A more stringent test of gender bias is possible by using sociometric techniques which more clearly test the limits of sociometric choice.

The roster and rating scale method provides an alternative popularity measure to summed nominations. Unlike nominations, it requires all group members to rate all other members on their likability or acceptance. Criteria such as friendship, work, and play, can also be used. A five point scale is often used to allow participants to indicate their attitude towards each individual in the group. Low ratings show a lack of preference according to

the criterion, and a high rating the reverse. The score representing sociometric status for such a measure is the average rating received from the class members. Friendship measures can also be calculated using peer ratings by looking for mutually high scores. One benefit of using such a technique is that the child rates all other members of the class whereas with the nomination method, only the child's view of those children he or she nominates is obtained (Asher & Hymel, 1981).

Rating scales may be a more stringent test of gender bias as they focus on a range of criterion points rather than requiring the subject to make a judgement based on either rejection or acceptance. For this reason, the criterion of acceptance as reflected by the rating scale, is more accessible to achievement and other valued characteristics which have been found to be related to acceptance such as physical attractiveness (Zakin, 1983) and athletic prowess (Vaughan & Langlois, 1983). Moreover, such techniques canvass the whole class group for opinion - each child is required to rate every other child. As this is not as restricted as nomination methods, it would seem that there is more scope for children to give favourable ratings of members of the opposite gender. As a consequence, it would be expected that the strength of the gender cleavage would not be as evident in the rating scale data, and thus give credence to alternate theoretical models such as the Theory of Social Exchange (Homans, 1951).

The aim of the present study, therefore, is to investigate the relative strength of gender bias in sociometric choices where the sociometric technique and social criteria underlying choices and children's age levels are varied. It has been suggested that females possess more valued characteristics in the school setting (e.g., greater conformity to group norms) than males. If valued characteristics are important criteria along which children rate their peers, then it would be expected that girls would tend to attract higher

ratings compared to boys, again conforming with the Theory of Social Exchange (Homans, 1951).

The literature also suggests that the gender cleavage is established from a very early age (Moore & Updegraff, 1984) and persists with increasing intensity, peaking in the teenage years (Hayden-Thompson, Rubin, & Hymel, 1987). It would be expected, therefore, that the gender cleavage would be less pronounced for younger primary-aged children than it is for older primary-aged children.

Many socio-cultural changes have taken place since research into the gender cleavage began. It may be that gender bias in sociometric choice (based on conventional 'friend' nominations) will be less evident today than in earlier studies (i.e., pre-1970).

Specific hypotheses investigated by this study therefore are:

1. Gender bias is expected to be less evident in 'workmate' choices than in either 'friend' or 'playmate' choices and less evident in 'workmate' rejections compared to 'playmate' rejections.
2. Females are hypothesised to exhibit higher overall popularity and less rejection than males.
3. It is predicted that any gender bias will be more pronounced in older compared with younger primary-aged children.

Method

Participants

A total of 94 male and 103 female Grade 2 to 6 children from two urban coeducational Tasmanian primary schools were involved in the study - one in a lower and one in a higher socioeconomic area. All classes were

composite classes except for a Grade 5 and Grade 6 class at one school. Table 1 shows the numbers of males and females in each grade.

Table 1: Numbers of males and females in each grade.

Grade	Number of Males	Number of Females	Total
Grade 2	16	14	30
Grade 3	20	11	31
Grade 4	18	21	39
Grade 5	25	27	52
Grade 6	15	30	45
Total	94	103	197

Participants were selected according to class-based groups as this is the basic unit of sociometric research. Written parental consent and verbal child assent was obtained prior to the commencement of interviews. Participation rates in the two schools ranged from 80.8% to 100% with an average participation rate of 91.1%.

Instruments

A restricted choice Sociometric Nomination Questionnaire (SNQ) (Rawlinson, 1990) was used. Here, first, second and third positive choices and rejections were elicited. A mixed-gender group was specified as the basis for choice and a list of names of children in their class who were involved in the study was presented as a stimulus. For any children who had experienced difficulty reading the list of names, the researcher read the list out. Students were encouraged to look at the list before responding to each question and the researcher facilitated this by running a pencil up and

down the list alternately with each question. Nominations were obtained for playmate in a dyadic game, workmate on a school project and best friend.

A modified version of the *How I Feel Towards Others* (HIFTO) questionnaire (Agard, Veldman, Kaufman, & Semmel, 1978) (see Appendix C) was used as a measure of peer acceptance. All class members were listed with four stylised faces indicating how the respondent felt towards the subject. The meaning of each face was provided in the standardised instructions and animal examples were used to ensure these instructions and the meanings of the faces were understood. Children were presented with the task of applying a forced-choice decision involving four sociometric categories (acceptance, rejection, toleration, and not known) to both male and female children in the class.

The HIFTO has typically been used categorically, however, in this case it was used as an equal interval scale as in the *Peer Preference Schedule* (Bruininks, Rynders, & Gross, 1974) but employing similar icons to those used by Asher, Singleton, Tinsley, and Hymel (1979). The HIFTO was used as a rating scale in the present study because the study sought to identify the differential effects in gender cleavage brought about by measurement approaches that differed fundamentally according to two aspects. First, the effects of a roster based approach where all opinions in the class were investigated as opposed to a restricted nomination. Second the rating aspect where children were presented with a continuum of acceptance rather than a categorical decision making process was investigated. Used in this way, the HIFTO distinguishes whether a child is known or not known by peers, therefore, if the child's schedule was marked with 'don't know', no rating on his or her acceptance was possible. If this option was not endorsed, one of the three remaining icons indicated the child's level of acceptance. These icons were assigned a value between 1 and 3 depending on the level of acceptance. The

HIFTO was originally a group administered scale, however, the standardised instructions were modified by Rawlinson (1991). This allows individual administration (see Appendix C) which is believed to be an ethical procedure yielding more reliable results because confidentiality is assured. Ratings of acceptance were obtained by assigning values 1 to 3 to the faces with 1 being assigned to the rejection face, 2 to the neutral face and three to the acceptance face. The average for each child was then calculated.

Design

A mixed within-subjects design was used with the dependent variables being sociometric status measures from the HIFTO and peer nominations from the SNQ. Independent variables were gender, grade level and social choice criteria used in the sociometric methodologies. Descriptive statistics, ANOVA and chi square were used to evaluate the hypotheses. Analysis was carried out using 2 (gender of nominator) \times 2 (gender of nominee) ANOVAs in order to explore hypotheses 2 and 3 at each grade level.

Procedure

Classes were selected on the recommendation of the Principal of each school. Initial contact was made by the principal with follow up approaches by the researchers. A letter explaining the study was sent to parents and guardians of all potential participants with a consent form attached. Once consent forms had been returned, each class was briefed, during which the general aims and procedure of the study were explained to students. Individuals were invited to ask questions but remained naive to the specific aim of the study. Students were informed in general terms that the research was a study of how children make friends.

Each child with parental consent was selected from class lists at random and individually extracted from normal classroom activities to a quiet private

room during normal school hours by one of three interviewers. Interviews were not conducted during recess and lunch periods or other extra-curricular activities to ensure maximum motivation and concentration.

After some time was spent establishing rapport through general conversation, participants were asked if they recalled the purpose and conditions of the study discussed in the class briefing. In cases where the child did not remember, they were briefed again. Child assent was then obtained and participants were given the option to terminate the interview at any time. Questionnaires were then administered in counterbalanced order. Standard instructions were used for individual administration in order to decrease any interviewer effects. Individual administration assured participants of confidentiality which, it was assumed, would allow them to feel more comfortable and provide more honest responses. Neutral reassurance was given to children to ensure they felt comfortable particularly when making a negative judgement. The individual attention of an adult was also believed to be intrinsically reinforcing and to decrease the likelihood of such problems as loss of concentration.

Six randomised lists of names for each class were used for the HIFTO and the SNQ. Participants were asked to read through the names on the HIFTO sheet and the stimulus sheet provided with the SNQ to ensure they had no difficulties in this area. If any problem was identified, the interviewer read the names out. Children were asked to fill in a face for each child on the HIFTO and to respond to each question on the SNQ but were also allowed the "don't know" option. During the HIFTO task, the individual's visual field was limited to one name at a time in order to decrease the possibility of contamination effects.

Each interview took an average of 25-30 minutes. Participants were debriefed at the conclusion of the interview and were given the opportunity

to ask questions. Students were asked if they felt any personal discomfort and an agreement was made between each subject and the interviewing researcher that the responses given during the interview would not be discussed with other individuals in the class. Reasons for this request and some possible responses to inquiries from other students were also discussed.

Results

Ratings received by each child from all class members on the HIFTO were summed and averaged. Grand means for males and females were calculated according to gender of the referent group - male or female. For nomination data first choice nominations were tallied according to gender of the chooser and gender of the chosen individual.

Gender effects in the HIFTO acceptance ratings were investigated using analysis of variance. An alpha level of .05 was used for all statistical tests. There was no significant effect for gender of the ratee, indicating that there was no significant difference between acceptance ratings for males and females when both genders are used as the referent group. However, a main effect for rater was found with females rating both genders more positively than did males, $F(1,195) = 9.04$ ($p < .05$). A significant interaction was found with both male and female raters consistently rating same gender peers higher than opposite gender peers, $F(1,195) = 323.15$ ($p < .05$). When same gender ratings are compared, girls rated their own gender peers higher than boys rated their own gender ($p < .05$). When opposite gender ratings are compared, girls rated the opposite gender more positively in terms of acceptance than did boys ($p < .05$) (see Figure 1).

Similar analyses of variance were carried out for separate grades to investigate any development effects in the data. As with the whole group results, no significant main effects were found for gender of ratee. Contrary

to the whole group results, the main effects for gender of rater were not significant showing that the female positivity effect found in the whole group results was not evident in individual grade results. A significant interaction was found for Grade 3, $F(1, 29) = 67.88$ ($p < .001$) (see Figure 2) with same gender peers rating their own gender more highly. Similar results were found for Grade 4, $F(1, 37) = 67.88$ ($p < .001$), Grade 5, $F(1, 50) = 91.93$ ($p < .001$) and Grade 6, $F(1, 43) = 41.79$ ($p < .001$). Similar and very strong interaction effects across the grades indicates an absence of developmental differences in the gender cleavage effect for acceptance ratings. Figures 2 to 5 show the interactions with mean HIFTO ratings received by males and females in Grades 3 to 6. Means and standard deviations for these analyses are presented in Table 2.

Table 2: Means and standard deviations for HIFTO ratings received by males and females

		Male		Female	
Grade		M	SD	M	SD
3	Boys	2.62	.34	2.11	.50
	Girls	1.78	.44	2.60	.33
4	Boys	2.43	.48	1.76	.56
	Girls	1.66	.47	2.60	.30
5	Boys	2.48	.45	1.98	.45
	Girls	1.98	.42	2.55	.34
6	Boys	2.38	.34	1.98	.40
	Girls	1.93	.51	2.51	.32
2-6	Boys	2.49	.44	2.00	.49
	Girls	1.92	.49	2.58	.31

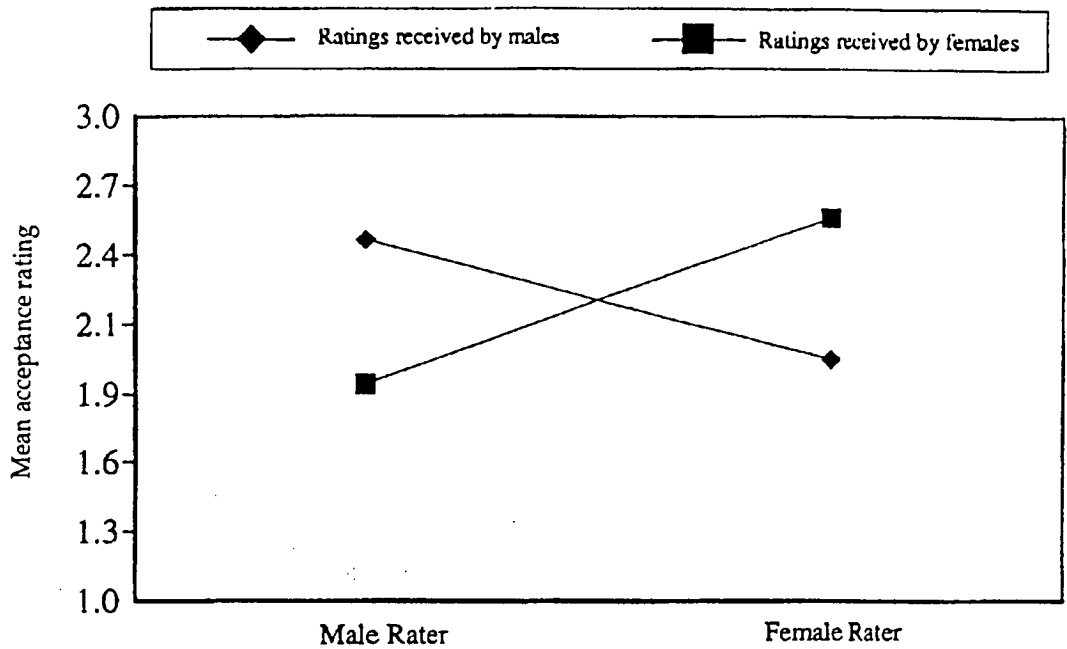


Figure 1: Mean HIFTO ratings received by males (n= 94) and females (n=103) by male and female raters for all subjects.

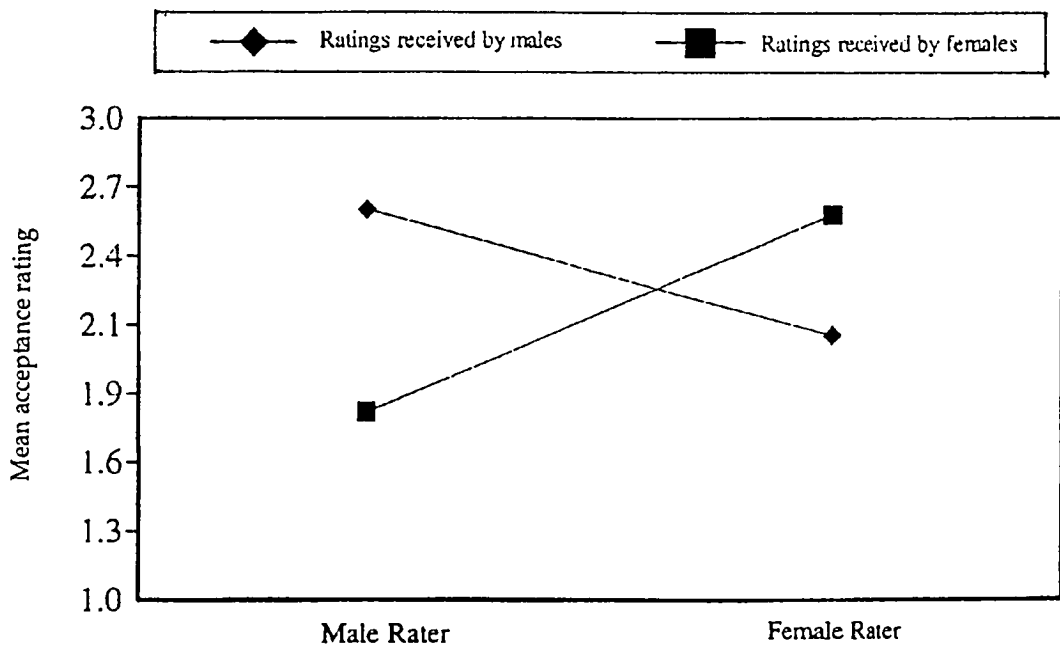


Figure 2: Mean HIFTO ratings received by males (n= 20) and females (n=11) by male and female raters for grade three.

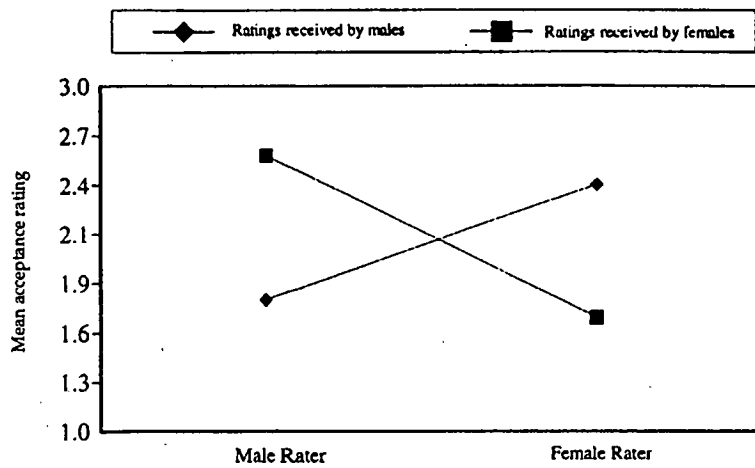


Figure 3: Mean HIFTO ratings received by males (n= 18) and females (n=21) by male and female raters for grade 4.

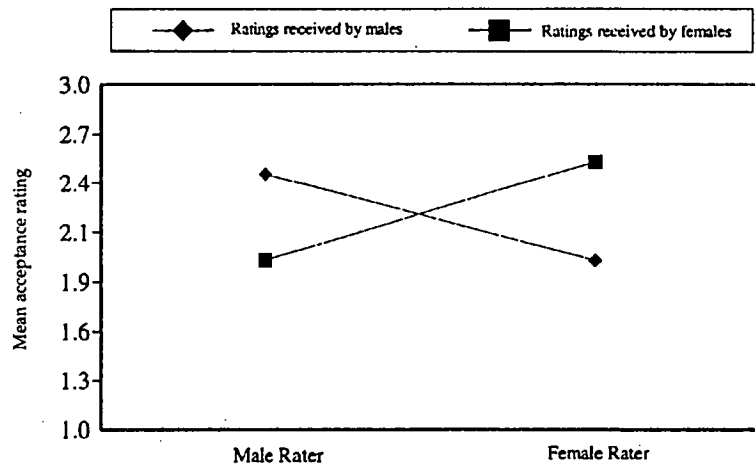


Figure 4: Mean HIFTO ratings received by males (n= 25) and females (n=27) by male and female raters for grade 5.

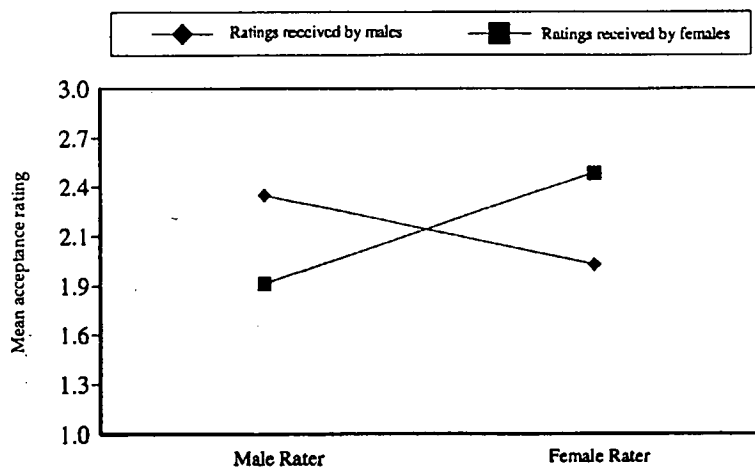


Figure 5: Mean HIFTO ratings received by males (n= 15) and females (n=30) by male and female raters for grade 6.

Chi square analysis was carried out to determine the presence and extent of gender cleavage in sociometric nominations. An alpha level of .05 was used for all statistical tests. The results for the whole group indicate a strong cross-over effect with males and females being significantly more likely to positively nominate their own gender on playmate ($X^2 = 164.12$, $p < .001$, 1 df), workmate ($X^2 = 142.87$, $p < .001$, 1 df) and best friend ($X^2 = 132.02$, $p < .001$, 1 df) criteria, and less likely to positively nominate opposite gender peers on the same criteria. In addition, the percentages of positive same and cross-gender nominations were similar for males and females (see Table 3).

Table 3: Mean percentage of positive nominations by males and females of same and cross gender peers according to playmate, workmate and best friend criterion for whole group.

	Percentage Nominated					
	Playmate		Workmate		Best Friend	
Nominators	% Males	% Females	% Males	% Females	% Males	% Females
Males	45.55	2.62	43.59	3.59	45.56	1.59
	n=87	n=5	n=85	n=7	n=88	n=3
Females	1.05	50.79	3.59	49.23	6.88	44.97
	n=2	n=97	n=7	n=96	n=13	n=85

Similar results were found for individual classes from Grades 3 to 6 with strong gender effects being noted for positive nominations across grades (see Appendix A). Individual class results for Grade 2 were not obtained due to the small subject number in this year group.

The rejection data for the whole group are shown in Table 4. It was found that while females were prepared to cross gender lines when rejecting, males were significantly less likely to reject females than they were to reject their own gender as a playmate ($X^2=8.14$, $p < .01$) and as a workmate ($X^2=7.76$,

p<.01). Females were fairly equivocal in their judgements and were just as likely to reject same gender peers as they were cross-gender peers.

Table 4: Mean percentage of rejection nominations by males and females of same and cross gender peers according to playmate and workmate criterion for whole group.

	Percentage Nominated			
	Playmate		Workmate	
	Nominators			
	% Males	%Females	% Males	%Females
Males	32.05	26.92	32.93	29.27
	n=50	n=42	n=54	n=48
Females	12.82	28.21	11.56	26.22
	n=20	n=44	n=19	n=43

The rejection data for Grades 3 and 4 indicate that there was no significant gender effect (see Appendix A). Both male and female nominators were just as likely to reject same gender peers as they were opposite sex peers for the workmate criterion. Thus, boys in these grades are just as likely to reject boys as they are girls, and girls are just as likely to reject girls as they are boys for that criterion. This was also the case on the playmate criterion for Grade 4. Analysis of Grade 3 rejection data for the playmate criterion could not be carried out as the expected frequency fell below 5 in more than 25 percent of the cells.

For Grade 5, similar effects to the whole group rejection data were found (see Appendix A). While girls were just as likely to reject same gender peers as they were cross gender peers, boys were significantly more likely to reject same gender peers for playmates ($X^2=5.99$, $p<.01$) and workmates ($X^2=5.72$, $p<.05$). Results for Grade 6 playmate rejections were not significant. Analysis of Grade 6 workmate rejection data could not be carried out as the expected frequency fell below 5 in more than 25 percent of the cells.

Overall, females were more likely to cross gender lines to reject than males. However, there were some developmental differences in the data with males in Grades 5 rejecting their own gender more often than across gender for workmate rejections and displaying the same pattern for playmate rejections.

Discussion

Gender bias was found to be prominent at all grade levels for all the acceptance criteria. The hypothesis that gender bias would be less evident in workmate choices than in playmate or best friend choices was, therefore, not supported. It was also shown that boys are less likely to cross gender barriers when rejecting compared to girls. Girls were just as likely to reject a member of their own gender as a cross-sex peer while the whole group data indicated that boys were more likely to reject other boys. Grade 3 and 4 children showed no differences in their tendency to reject same and cross-gender peers. However, Grade 5 boys tended to reject other boys as workmates and playmates. Overall, females and males exhibited comparable levels of popularity evidenced both in ratings and nominations, and the hypothesis that females would exhibit higher popularity levels and less rejection overall was not supported. For the acceptance rating data with Grade 3 children were just as reluctant to cross gender lines for acceptance criteria as Grade 6 students.

Rejection data indicated that while females were fairly equivocal in their judgements, males displayed a tendency to reject same-gender peers as playmates and workmates more often than they did cross-gender peers. Although this was replicated in the Grade 5 data, it was not the case for Grades 3 and 4 boys.

In line with the Theory of Social Exchange (Homans, 1951), it is possible that status characteristics such as academic achievement may be more important

than similarity of gender in determining workmate choices. However, from the nomination data, it was apparent that children were just as reluctant to cross gender lines when nominating according to this criterion as when choosing playmates and best friends. In the case of positive choices, it would appear that the Balance Theory (Heider, 1958) has more applicability to children's interpersonal choices than Social Exchange Theory regardless of the criterion used. It would seem that similarity of gender may be more important in determining positive interpersonal choices than status variables such as academic achievement.

Similarity along major dimensions such as age, race and gender is evidence for the Balance Theory of interpersonal attraction (Heider, 1958). This theoretical stance is evidenced by males choosing males as friends and females choosing females as friends as shown by playmate and best friend nominations. It would be expected that the obverse would also be true, with dissimilarity leading to a greater likelihood of rejection. Thus, the same degree of cross-gender negativity would be expected in the rejection nominations as there is same-gender positivity in the positive nominations. So males would be expected overwhelmingly to reject females and vice versa with both genders rarely rejecting members of their own sex. This picture would provide support for the Balance Theory of interpersonal attraction as it is consistent with the idea of similarity engendering greater feelings of interpersonal attraction and dissimilarity leading to the obverse. Findings for positive choices tend to fulfil the picture, however, for rejections, a more complex pattern emerges.

Females appear equally likely to reject males and females, while males tend more to reject their own gender. It would appear, therefore, that in both cases the obverse of Balance Theory (Heider, 1958) is not upheld, because both genders are far from exclusive in rejecting the opposite gender. Males

are more prepared to reject their own gender than the opposite gender suggesting that attributes other than similarity/dissimilarity are important with respect to negative choices. It could be that females display more valued attributes in terms of interpersonal relationships, such as being more pro-social, less aggressive and more academically competent, and that these attributes lead them to be less likely to be rejected by males. On the other hand, males may be more likely to display antisocial, non-valued tendencies, and are rejected more often because of it. These data would, therefore, tend to be explained more adequately by the Theory of Social Exchange (Homans, 1951). Although these attributes were not explored in the present study, they would be important factors for investigation in future research.

Females are also far from exclusive in rejecting the opposite gender, but appear more equivocal in their patterns of rejection than boys. They tend to reject males with equal frequency to females. It would appear here that variables other than a broad similarity/dissimilarity dimension are important and could include social skills, academic ability and other valued attributes. Thus the Theory of Social Exchange (Homans, 1951) would appear to account better for the rejection findings for female nominators.

It may be that status criteria have more of a role to play in determining this negative aspect of children's peer relations, indicating that Social Exchange Theory (Homans, 1951) has greater usefulness with respect to the rejection phenomenon in children's interpersonal choices. Previous research has indicated that females possess more valued characteristics in the school environment (Hallinan, 1981) and although this may not have had an effect on positive nominations, it may be an important factor in explaining boys' tendencies to reject their own gender more than girls, as shown by the nomination data. It may be valuable to investigate the status variables which could be in operation with respect to rejection in order to fully

understand the area of children's peer relations. Alternatively, other theories such as Coie (1990) specific to peer rejection may operate well in conjunction with Balance Theory to provide a more comprehensive view of the area.

Although females were hypothesised to possess more valued characteristics in the school environment and thus attract higher overall popularity ratings, this was not found to be the case. It was expected that status characteristics would make a significant contribution to popularity ratings. However, it was discovered that females did not attract higher acceptance ratings than males overall, indicating that status factors were not the overriding variable contributing to popularity. It may be that gender similarity is a more important variable when children are rating their peers, than are status characteristics, implying that the Balance Theory (Heider, 1958) is again more useful in explaining the data. It may be that rejection is based on a lack of status variables such as low academic achievement or a lack of physical attractiveness and hence the Social Exchange Theory (Homans, 1951) is more applicable in the area of peer rejection.

The gender cleavage phenomenon was found to be equally prominent across grades with respect to acceptance, concurring with the finding of Shrum et al. (1988) that the sexes were almost completely segregated by Grade 3. Other researchers (e.g., Hayden-Thompson et al., 1987) indicate that the strength of the gender cleavage increases through middle childhood. This finding was not replicated in the current study as it was found that the gender cleavage phenomenon is equally apparent across Grades 3 to 6. Consistent with previous findings, (e.g., Criswell, 1939 in Renshaw, 1981; Hayden-Thompson et al., 1987) however, is the apparently robust and pervasive nature of the gender cleavage despite the use of a variety of different criteria for measuring interpersonal attraction. One interesting anomaly was found with overall ratings of both genders by girls being

significantly higher than ratings by boys which is not concurrent with results of Shrum et al. (1988) who found that boys displayed a greater preference for same sex peers compared to girls in the elementary years. This finding, however, was not apparent for individual grade data.

A number of questions remain unanswered. While a very strong gender cleavage was identified for acceptance criteria, the results for rejection are mixed. Why, then, are females prepared to cross gender lines when rejecting but not when accepting? Why is it that males are more prepared to judge their own gender harshly than they are the opposite gender? Perhaps it is because children use different criteria when selecting friends and identifying children they like to those they use when they are rejecting. Maybe the gender differences for the rejection data are due to the possession by girls of highly valued characteristics within the school setting and the absence of these for boys. It would seem that the Balance Theory (Heider, 1958) has applicability as far as acceptance is concerned but perhaps the status variables suggested by Social Exchange Theory (Homans, 1951) are important in the case of rejection.

Given the rejection data, it would appear that the picture is more complex than previously recognised. It may be that some of the behavioural variables identified as correlates of rejection are status factors of major importance when children are determining which children they will reject. Further investigation of these variables in relation to rejection is required.

This study must be considered as an exploration into an area which has tended to be atheoretical. While there has been much research into the area of children's peer relations covering a wide variety of aspects, studies have tended not to relate findings back to a theoretical basis. In considering the applicability of the Balance Theory (Heider, 1958) and Social Exchange Theory (Homans, 1951) to the gender cleavage phenomenon, this study has

focussed on a limited aspect of children's peer relations. Although the gender cleavage is clearly identified as a pervasive phenomenon, it is only one aspect of children's peer relations. Further investigation of the applicability of these theories of interpersonal attraction in relation to other aspects of children's friendships and popularity would provide additional insights into their overall usefulness.

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Appendices

Appendix A

1. Chi Square Analyses

GRADE 3

Table 3: Mean percentage of positive nominations by males and females of same and cross gender peers according to playmate, workmate and best friend criterion for grade 3.

	Percentage Nominated					
	Playmate		Workmate		Best Friend	
Nominators	% Males	%Females	% Males	%Females	% Males	%Females
Males	77.42	0.00	67.74	6.45	69.44	0.00
	n=24	n=0	n=21	n=2	n=25	n=0
Females	0.00	22.58	0.00	25.81	0.00	30.56
	n=0	n=7	n=0	n=8	n=0	n=11
Chi Square		31.00		22.64		36.00
		(p<0.001)		(p<0.001)		(p<0.001)

Table 4: Mean percentage of rejection nominations by males and females of same and cross gender peers according to workmate criterion for grade 3.

	Percentage Nominated	
	Workmate	
Nominators	% Males	%Females
Males	17.88	39.29
	n=5	n=11
Females	28.57	14.29
	n=8	n=4

GRADE 4

Table 5: Mean percentage of positive nominations by males and females of same and cross gender peers according to playmate, workmate and best friend criterion for grade 4.

Percentage Nominated						
Playmate		Workmate		Best Friend		
Nominators	% Males	%Females	% Males	%Females	% Males	%Females
Males	37.84	2.70	41.03	7.69	42.86	5.71
	n=14	n=1	n=16	n=3	n=15	n=2
Females	2.70	56.78	2.56	48.72	2.857	48.57
	n=1	n=21	n=1	n=19	n=1	n=17
Chi Square		29.17		24.86		24.08
		(p<0.001)		(p<0.001)		(p<0.001)

Table 6: Mean percentage of rejection nominations by males and females of same and cross gender peers according to playmate and workmate criterion for grade 4.

Percentage Nominated				
Playmate			Workmate	
Nominators	% Males	%Females	% Males	%Females
Males	34.29	31.43	32.14	32.14
	n=12	n=11	n=9	n=9
Females	11.43	22.86	10.71	25.00
	n=4	n=8	n=3	n=7

GRADE 5

Table 7: Mean percentage of positive nominations by males and females of same and cross gender peers according to playmate, workmate and best friend criterion for grade 5.

Percentage Nominated						
Nominators	Playmate		Workmate		Best Friend	
	% Males	%Females	% Males	%Females	% Males	%Females
Males	46.15	0.00	46.81	0.00	48.94	0.00
	n=24	n=0	n=22	n=0	n=23	n=0
Females	0.00	53.85	4.26	48.94	23.40	27.66
	n=0	n=28	n=2	n=23	n=11	n=13
Chi Square		52.00		39.64		17.22
		(p<0.001)		(p<0.001)		(p<0.001)

Table 8: Mean percentage of rejection nominations by males and females of same and cross gender peers according to playmate and workmate criterion for grade 5.

Percentage Nominated				
Nominators	Playmate		Workmate	
	% Males	%Females	% Males	%Females
Males	33.33	25.93	38.18	23.64
	n=18	n=14	n=21	n=13
Females	9.26	31.48	10.91	27.27
	n=5	n=17	n=6	n=15

GRADE 6

Table 9: Mean percentage of positive nominations by males and females of same and cross gender peers according to playmate, workmate and best friend criterion for grade 6.

	Percentage Nominated					
	Playmate		Workmate		Best Friend	
Nominators	% Males	%Females	% Males	%Females	% Males	%Females
Males	32.56	0.00	28.26	2.17	31.11	0.00
	n=14	n=0	n=13	n=1	n=14	n=0
Females	0.00	67.44	2.17	67.39	0.00	68.89
	n=0	n=29	n=1	n=31	n=0	n=31
Chi Square		43.00		37.04		45.00
		(p<0.001)		(p<0.001)		(p<0.001)

Table 10: Mean percentage of rejection nominations by males and females of same and cross gender peers according to playmate criterion for grade 6.

	Percentage Nominated	
	Playmate	
Nominators	% Males	%Females
Males	22.22	18.52
	n=6	n=5
Females	11.11	48.15
	n=3	n=13

Appendix B

Information Provided to Teachers and Participants and Consent Forms

1. Parental Consent Letter
2. Parental Consent Form
3. Class Briefing Script



UNIVERSITY OF TASMANIA

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RESEARCH PROJECT ON CHILDREN'S PEER ACCEPTANCE INFORMATION SHEET FOR PARENTS

To the parents of.....

This is to let you know about a research project at Goodwood Primary School. We are three researchers from the Psychology Department, University of Tasmania. We're looking at children's relationships with their classmates. We began this project at Goodwood School several years ago, and worked at the school between 1990 and 1992. We are very grateful for the interest and support parents and staff gave us in the past, and we would like to continue the research at the school this year.

We are interested in children's friendships, and what kinds of things affect the popularity of children at school. You probably remember from your own school days how some children were very popular and others seemed to be "loners" that nobody liked very much. However, we're not trying to pick out which children are the most popular or unpopular. Instead, we'd like to find out how children pick their friends, and what things are the most important in making children popular. By doing this we hope that we can help schools to encourage good relationships between all children. This year we want to look at three things in particular. We'd like to know whether boys and girls are different in the way they choose their friends, and how their behaviour and school work affect their popularity.

This year we will be repeating what we did in previous years to collect the information we need. We'd like children in Grades 2 to 6 to spend 20-30 minutes talking with one of us during lesson time. We'll be asking children about who they regard as friends, and who they prefer to work and play with. Also we'll be asking them to name classmates who show certain behaviours and skills in class. All the interviews will be done with one child at a time, in a private room at the school. First we'll carefully explain the research to children in a way they will be able to understand. After the interview we'll give some more information so that they understand as much as possible about our project. We will also ask if children have any questions. It is possible that some children may feel uncomfortable talking about classmates, but we have found at the other schools we have visited this year, children have been very interested in the interviews and have enjoyed talking with us. However, if children show that they really don't want to do these activities with us, they will be able to stop immediately. During the interview, we ask questions very carefully and make sure that children are happy to answer them. Because the questions are carefully asked and the interviews are private, we feel

that the interviews will not cause problems. All children's answers and names will be kept private. We are interested in the results from the whole group of children, not individuals. To complete the information for our research, we'll also need to know your child's date of birth, home address, and the names and ages of brothers and sisters from school records.

We have chosen Grades 2/3, 3/4, 5 and 6 at Goodwood School, and we hope that as many children as possible in each of these classes can take part in the interviews. Also, we'd like each class to do 2 tests of reading and 1 maths test, in class time. These are fairly regular tests which are used a lot in classrooms. The tests will not be too difficult, and your son or daughter's teacher will help us to choose the right level of test for the class. The tests will take 1 hour and 20 minutes.

Our research project has been approved by the Education Department and the University of Tasmania Ethics Committee. Mrs Clarkson is happy for this project to go ahead in the school, and staff have given their support to it. All three of us have qualifications and experience working with children in schools. Rosanne Rawlinson will be in charge of this research. She is a lecturer in child psychology at the Psychology Department, University of Tasmania.

We would greatly appreciate it if you could support our project, by giving your permission for..... to participate. Could you please fill in the form stapled to this sheet, and give it to your son or daughter to take back to school as soon as possible? Please keep this sheet for your own information. If you would like to know more about the research, feel free to ring Rosanne Rawlinson on 20 2237 during business hours, or on 27 8078 after 6.00 pm.

Rosanne Rawlinson M.Ed.(Psych) (Exeter, U.K.)
Sharon Cowles B.A., Dip Ed Psych (Tas)
Monica Anis M.Ed. (Birmingham, U.K.), Dip Ed (Tas)

STATEMENT OF INFORMED CONSENT

RESEARCH PROJECT ON CHILDREN'S PEER ACCEPTANCE

Parent/s: Please complete this part of the form

I have read and understood the information sheet for this research. The research and how it may possibly affect children, and as well as the things my child will be involved in have been explained to me. I understand that my child will answer questions about classmates and who they prefer as friends, workmates and playmates in school. I understand that these questions will be asked in a private interview. I also understand that my child will do a test of reading and mathematics as part of a class group. I understand that some children may feel uncomfortable talking about their classmates, but that the questions will be asked carefully in private, and my child's privacy will be guarded at all times to prevent negative effects. Any questions that I have asked have been answered and I am satisfied with the answers. I also understand that I can take my child out of the research at any time, and that I will have access to a copy of the research report when it is finished.

I hereby give consent for _____ (name of child/ren) to take part in this research, and agree that the information given by my child may be used for the research, and may be published, provided that my child's identity is kept private.

(Parents signature)

Date

To be filled in by Researcher at time of interview:

I have explained this research and what it is about to(child's name). I believe he/she has given his/her consent, and that he/she understands what will be asked and what will be done with the answers he/she gives.

.....
(Researcher's signature)

Date.....

BRIEFING SCRIPT

Hello. My name is Miss Cowles. I'm from the University and I've come to tell you about some research I'm doing this year. I've checked with your Principal Mr/Mrs/Ms to see if I could do a survey of some children and he/she said it's O.K. Scientists do research to find answers to questions and this is a similar sort of thing. Mr/Mrs/Ms (teacher) might have told you a bit about what I'm doing when he/she gave you the forms for your parents to fill out. Can anyone tell me what Mr/Mrs/Ms said about what I'm doing? (Response elicited from children)

Yes, well my project is looking at how children make friends with each other. There aren't any books about this so how do you think I could find out about the way children make friends? (Response elicited from children)

Yes, we could ask some children about their friends, who they like to play with and why they like them. Or we could go to a playground and look at children playing and working with each other and notice what they do and say. I'll be around the school a bit and I'll be asking you some questions about friends.

When I write about this, I won't be using anyone's name - I'm just going to talk about everyone in a general sort of way. We've written to your parents and they've agreed for you to be involved in the project.

If you feel uncertain or uncomfortable about what I'm going to do, please tell me straight away. I want everyone to feel O.K. about my project.

Does anyone have any questions about what I'll be doing over the next few weeks?

Thank you all for listening so well.

Appendix C

Sociometric Instruments Used in this Study

1. The *How I Feel Towards Others Scale* (Agard et al., 1978).

Standardised Instructions modified by Rawlinson (1991).

2. The *Sociometric Nomination Questionnaire* (Rawlinson, 1990).

Standard Instructions.

HOW I FEEL TOWARDS OTHER QUESTIONNAIRE

Administrator's Instructions (Individual Administration)

If this is the first questionnaire administered, establish rapport with the child by talking for a few minutes about innocuous subjects i.e. favourite games at school, where they live, how long at school, pets, etc. Avoid talking about other children, friends, etc. Ask the child if he/she was in class when they were told about the project. If not, brief the child. Ask the child if there is anything he/she doesn't understand about the project. Answer any queries the child may have before beginning questioning. Make sure the child has a coloured pencil (not crayon or felt-tipped marker).

Show the child the HIFTO answer sheet. Introduce the task by saying:

"See this sheet, it has all of the names of the children in your class on it. Let's read through it and find your name."

Ask child to read aloud the names on the list. Note on the answer sheet if the child has difficulty in reading the names. If so, read list aloud to the child.

When reaching the child's name on the list say: **"Is it spelt correctly?"** (Correct child's name if necessary) **"OK. Let's finish reading the names."**

Say: **"Now look at the side of the sheet. There are rows of little faces next to each name. Each of these faces is going to help you to show how you feel about each of the boys and girls whose names are on this list. I'll explain to you what all the faces mean."**

Cover up all of the sheet except the first line with the template so that the class names do not act as a distracter while the meaning of the faces is being explained.

Say: **"Look at this first face. It hasn't got eyes, a nose or a mouth, just a question mark in the middle. What do you think this face stands for? (Elicit a response from the child.) That's right, it stands for children you don't know very well. Maybe you haven't been with them enough to know much about them. When you see the name of a boy or girl you don't know very well, I want you to colour in the face that has a question mark."**

"Now look at the next face. This face has a smile on it. What do you think it stands for ? (Elicit a response from the child.) That's right, it stands for boys and girls who are your friends. When you see the name of a boy or girl you're friendly with, I want you to colour in the face that has a smile."

This face has a straight mouth. What do you think it means? (Elicit a response from the child.) That's right, it stands for boys and girls you know pretty well but whom you don't especially care about. If you see the name of a boy or a girl you don't especially care about one way or the other, colour in the face that has a straight mouth."

"Look at this face. It has a turned-down mouth - it looks unhappy. What do you think it stands for? (Elicit a response for the child.) Yes, the frowning face stands for boys or girls you do not want to have as friends as long as they are like they are now. These boys and girls may be alright in some ways. They may be good friends with other children but not with you. If you see the name of any children who are not your friends, colour in the face that has a frown."

"Make sure that you colour in the face that says how you really feel about the boy or girl whose name is next to it. Your answers will be kept private, just between you and me. Remember, this is not a test. There are no right or wrong answers. Your answers will probably be different from other people's and that's OK."

Leave the template in place, covering all of the page except the line the child is working on. Once completed, move the sheet down one line.

"Now let's look at the answer sheet and have some practice so you are sure about what the faces mean and what you must do."

"Look at the first name on the sheet - dog. Think about what each of the faces means and how you feel about dogs. Then colour in the face that is most like the way you feel about dogs. Good. You've coloured in the face. That means you" (Repeat the meaning of the face that has been filled in.)

"The next name on the sheet is tiger. Think about what each of the faces means and how your feel about tigers. Then colour in the face that is the most like the way you feel about tigers. Good. You've coloured in the face. That means you..... (Repeat the meaning, if different

from the previous two examples. If not explain what another face would mean, using your own feelings as an example.)

“What’s the next name? That’s right, how do you feel about cows? Colour in the face that is the most like the way you feel about cows. Good. You’ve filled in the face. (Repeat the meaning, if different from the previous two examples. If not explain what another face would mean. Using your own feelings as an example.)

“The next one is capybara. Do you know anything about capybaras? Which face would be most like the way you feel about capybaras? (Elicit a response from the child) That’s good. You don’t really know them, so you colour in the face with a question mark. Some children might be like this for you. You don’t know them enough, so you colour the face with a question mark.”

Explain what a capybara is. (It is the largest rodent in the world. Indicate about 3-4 feet using your hands. It is like a rat or a beaver to look at, but without a tail. It is the colour of sand and lives in South America.)

Ask the child to fill in the monkey item. If necessary use this example to explain the final face type.

“Do you understand what to do now? Mark your answer sheet in the same way as you did for the animals, but this time for all the boys and girls in your class. Remember only colour in one face for each person. If you want to change your mind after you’ve coloured in a face, just put a big cross through that face using this black pencil (hold up), and colour in another one.”

Make sure the child fills in the faces consecutively.

Ask the child to use the template to align the name and faces he/she is working on. This will also cover the remaining names, which will prevent them from acting as a distracter.

If the child has experienced difficulties in reading the list aloud, read each name on the list to the child as he/she comes to it.

When the child reaches his/her own name, allow him/her to fill in a face if he/ she wants to.

When the child has finished, thank him/her and give praise for the work done saying that the information given will be very useful for the project. Comment on the neatness of colouring or the care taken in making choices.

Ask the child if he/she would like a short break before going on to the next task.

Dog



Tiger



Cow



Capibara



Monkey



SOCIOMETRIC NOMINATION QUESTIONNAIRE

Administrator's Instructions (Individual Administration)

If this is the first questionnaire administered, establish rapport with the child by talking for a few minutes about innocuous subjects i.e. favourite games at school, where they live, how long at school, pets, etc. Avoid talking about other children, friends, etc. Ask the child if he/she was in class when they were told about the project. If not, brief the child about the purpose of the study (as per the class briefing notes). Ask the child if there is anything he/she doesn't understand about the project. Answer any queries the child may have before beginning questioning.

Introduce the task by saying:

"Now I'm going to ask you some questions about the children in your class. This is not a test, so there are no right or wrong answers. It is important to tell me just what you think. Your answers will probably be different from other people's and that's OK.! Everything you tell me will be kept private, just between you and me."

Show the child the randomised class list and ask him/her to read through it aloud. If the child has experienced reading difficulties in the other two tasks, read the list aloud to the child.

Say to the child: **"I want you to imagine something. It's recess time. Imagine that you're in the playground at your school. All the children in your class and in the school are there. Nobody is away sick, going swimming, or anything like that. Let's pretend that you want to play with just ONE other person."**

Ask: **"What's a game you like to play with just one other person?"**

Record in full the name (or explanation) of the game the child nominates in the appropriate space on the answer sheet.

Say: **"Let's pretend that you can choose anyone to play ... (name of nominated play activity) with you. Who would you choose?"**

Encourage the child to look at the class list before making each choice, giving a physical prompt by slowly running the blunt end of a pen up and down

the class list, taking care not to pause by any name. Do this for each choice, reversing the direction of the physical prompt each time (i.e. up-down, down-up).

If the child wishes to nominate a child who is not on the class list, allow this, but be sure to record the name in full and identify the class the child comes from.

Record the nominated child's first and last names in the space marked 1 (A) on the answer sheet.

Say: **"Let's pretend that (nominated child's first name) is away sick, but everyone else in the school is there in the playground. Who would you choose to play with then?"**

Record the nominated child's first and last names in the space marked 1 (B) on the answer sheet.

Say: **"Let's pretend that both and (nominated child's first name) are away sick, but everyone else in the school is there in the playground. Who would you choose to play with then?"**

Record the nominated child's first and last names in the space marked 1 (C) on the answer sheet.

Say: **"Imagine it's still recess time. Remember, everyone in your class and in the school is there in the playground and you can name anyone you like. Now, is there anyone you would NOT choose to play (name of chosen play activity) with?"**

Give a physical prompt by slowly running the blunt end of a pen up and down the class list, taking care not to pause by any name. Give no further verbal prompts.

Record both names of the nominated child under 2 (A) on the answer sheet.

Say: **"Is there anyone else you would NOT choose to play with?"**

Allow the child to nominate up to three children, repeating the above prompt. Do not press the child to nominate if unwilling.

Record both names of the nominated children under 2 (B) and 2 (C) on the answer sheet. Be sure to record the nominations in the order they are given.

Say: "I want you to imagine something. Let's pretend that you're in your classroom doing a project (check first that the class does projects. If not, substitute a suitable dyadic activity). Everyone in your class is there. No-one is away sick, or in another part of the school. Let's pretend that the teacher wants you to work in PAIRS, with ONE other person. The teacher says you can choose anyone in your class to work with. Who would you choose?"

Encourage the child to look at the class list before making each choice, giving a physical prompt by slowly running the blunt end of a pen up and down the list, taking care not to pause by any name. Do this for each choice, reversing the direction of the physical prompt each time (ie. up-down, down-up).

Record the first and last names of the nominated child in the space marked 3 (A).

Say: "Let's pretend that (nominated child's first name) is away sick, but everyone else in your class is there in your classroom. Who would you choose to work with then?"

Record the first and last names of the nominated child in the space marked 3 (B).

Say: "Let's pretend that both and (first names of two nominated children) are away sick, but everyone else in your class is there in your classroom. Who would you choose to work with then?"

Record the first and last names of the nominated child in the space marked 3 (C).

Say: "Imagine that you're still in the classroom getting ready to do your project (or alternate activity). Remember that everyone in the class is there and you can name anyone you like. Now is there anyone you would NOT choose to work with on a project/ doing problem-solving?"

Give a physical prompt by slowly running the blunt end of a pen up and down the class list, taking care not to pause by any name. Give no further verbal prompts.

Record both names of the nominated child under 4 (A) on the answer sheet.

Say: **"Is there anyone else you would NOT choose to work with?"**

Allow the child to nominate up to three children, repeating the same prompt. Do not press the child to nominate if unwilling.

Record both names of the nominated children under 4 (B) and 4 (C) on the answer sheet. Be sure to record the nominations in the order they are given.

Say to the child: **"Who are your best friends?"**

Ask the child for three names, but make it clear that less than three is OK. If no other names are forthcoming after the first is given, say: **"Do you have any other best friends?"**

Give a physical prompt by running the blunt end of a pen slowly up and down the class list, taking care not to pause by any name. Give no further verbal prompt.

Record the nominated children's first and last names in the order they are given on the answer sheet under 5 (A), 5 (B) and 5 (C).

Praise the child for his/her efforts and ask him/her if he/she would like a short break before moving on to the next task if necessary.

**SOCIOMETRIC NOMINATION QUESTIONNAIRE
STUDENTS ANSWER SHEET**

Student name:..... Sex: M/F D.O.B:.....
Home address:..... Class:.....
Date of administration:.....
Age at date of administration:.....years.....months
Length attendance at present school:.....years.....months
Siblings attending school: Name.....Age...Sex M/F Grade...
Name.....Age...Sex M/F Grade...

QUESTION 1 (Dyadic Playmate Ch.)

A.....(First & last names)
B..... (First & last names)
C..... (First & last names)

QUESTION 2 (Dyadic Playmate Rej.)

A.....(First & last names)
B..... (First & last names)
C..... (First & last names)

QUESTION 3 (Dyadic Workmate Ch.)

A.....(First & last names)
B..... (First & last names)
C..... (First & last names)

QUESTION 4 (Dyadic Workmate Rej.)

A.....(First & last names)
B..... (First & last names)
C..... (First & last names)

QUESTION 5 (Best Friend Nom.)

A.....(First & last names)
B..... (First & last names)
C..... (First & last names)

GENERAL COMMENTS AND OBSERVATIONS

Rate rapport: (circle one)

poor moderate good

Child's approach to the task (comment only if problems).