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Unilateral Friendship Outcomes and Preschool Friendship Formation

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Abstract

Unilateral friendships provide a powerful mechanism to study friendship formation, because these friendships contain interest in friendship, but have not yet become full, reciprocated friendship. This longitudinal study investigated whether the conversations of unilateral dyads identified in the fall were predictive of that dyad's relationship status in the winter. I hypothesized that the conversations of unilateral dyads would vary widely. I also hypothesized that unilateral dyads that develop into reciprocal friendships will speak more to each other, make more mutual/partner play statements, make more noncompliant/disapproving statements, and more commands/requests than unilateral friendships that remained unilateral or became non-friend relationships. Seventy-four preschool-aged children (37 boys, 37 girls, $M_{age} = 49.26$ months, $SD = 7.29$ months) from 5 classrooms participated in sociometric interviews in the fall. Unilateral dyads were identified from the sociometric data, and the dyads were observed during a 10-minute free play session. The conversations of the dyads were analyzed, and the outcomes of each of the unilateral dyads were determined using data from a second round of sociometric interviews conducted in the winter. The conversations of the dyads had wide variation in the amount of conversation and the number of the different conversational statements, although, conversations of unilateral dyads in the fall did not predict relationship status in the winter. Future research that examines how a child speaks to the other member of a dyad, and the intent behind their speech, may be more relevant than the content of the conversation when studying preschool friendship formation.

Unilateral Friendship Outcomes and Preschool Friendship Formation

The ability to make and maintain friendships in childhood is critical, as it has been linked with later academic achievement, self-image, and mental health (Berndt, 2002). The preschool years are characterized by the rapid development of social skills needed to make these important friendships. Historically, work in this area has focused on characteristics and social skills of individual children as predictors of success in friendship formation (Drewry & Clark, 1985). However, these approaches ignore the fact that any relationship is dependent not just upon the characteristics of the individuals, but also upon the properties of the dyad – properties that exist independently of either dyad member alone. Consequently, this study examines friendship formation during the preschool years by focusing on dyadic behaviors in relation to later friendship outcomes.

Many studies have explored the characteristics of friendship, and this research reveals the qualities associated with positive, reciprocal friendship. Less work has focused on processes that lead to this outcome, particularly during the preschool years. One feature of preschool friendship that has received some attention and might be related to friendship formation at this age, is the quality of unilateral friendships, or a relationship in which one child has nominated the other as a friend, but that nomination is not reciprocated. Unilateral relationships are powerful mechanisms to study friendship formation, because in unilateral friendship there is interest in friendship, but not yet reciprocated friendship. In particular, the mechanisms by which unilateral friendships become reciprocal friendships have yet to be thoroughly explored. Examination of the insights provided by unilateral relationships requires understanding the nature of preschool friendships generally, the qualities of unilateral friendships in particular, and the process of friendship formation in early childhood.

Friendship in Preschool

For many children, preschool presents the first significant opportunity to interact with children of their own age (Kerns, 2000). Preschool friendships share some characteristics with older friendships; as in adults, friendship in children is defined as a close relationship between two peers (Bukowski & Hoza, 1989). Unlike friendships in older children and adults, however, which are characterized by high levels of prosocial behavior, intimacy, authenticity, and other positive features, while maintaining low levels of conflict, rivalry and other negative features (Berndt, 2002), preschool friendships tend to be characterized by more overt properties of friendship. Thus, elements of friendship such as common activities, propinquity, and sharing secrets are key elements of preschool friendship. Children place increasing value on dispositional characteristics of friendship (e.g., consideration of others' feelings) as they grow older (Furman & Bierman, 1984).

Despite their young age and relative inexperience with peers, preschoolers' behaviors with friends are distinct from those with non-friends or acquaintances. When placed in a social situation with both a friend and a non-friend, children consistently share toys more equitably, play in closer physical proximity, verbalize more frequently, and express greater satisfaction with friends than with non-friends (Garcia Werebe & Baudonnière, 1988). The differences between friends and non-friends are apparent in other social contexts as well. When pairs of preschoolers are randomly assigned to be either a teacher or a learner, friends are more involved with their partners, more emotionally expressive, and more competitive than non-friends. Teachers who are friends are rated as more domineering, and learners as more playful and friendly. Thus, preschool friends engage in distinctly different kinds of interactions than non-friends in a variety of social contexts (Brachfeld-Child & Schiavo, 1990).

Kerns' (2000) analysis of the behaviors of pairs of preschool best-friends during a 1-hour free-play session revealed substantial variation on measures of positive social orientation, harmony, control, responsiveness, cohesiveness, and coordinated play. While the majority of friendships in this study were characterized by harmonious, responsive, and interactive play, some friendships were characterized by harmonious and independent play, and others were disjointed, marked by low levels of both coordinated play and positive interaction. A majority of the friendships in this study, whether highly harmonious or disjointed, remained stable over the course of one year; however, somewhat unexpectedly, the most stable friendships were those that were characterized by low levels of coordinated play and positive interaction. The generally high rates of friendship stability in this study may be attributed to the fact that only best friendships were recruited. The unexpected results regarding which type of friendships were the most stable may also be related to the manner in which the participants were recruited. Participants in this study were recruited via advertisements and by asking mothers whether her child had a best friend who would be available to participate in the study with her child. That the mothers of the children in the study were not only aware of their children's friendship, but also had the ability to coordinate with the other child's parents, indicates that the friendships in this study were likely to have a high degree of parental support, be formed at a relatively young age, and have relatively frequent interaction. Such a relationship may begin to take on the properties of a sibling relationship, which is often characterized by relatively high rates of conflict and disjointed behavior (Recchia & Howe, 2009).

If this study were conducted in a preschool context, as is the current study, where children have access to a greater choice of friends, children might be more likely to pursue and maintain friendships with high levels of coordinated play and positive affect. Indeed,

kindergarten friendships characterized by high validation and low rates of conflict were found to be the most stable over a 4-month period (Ladd, Kochenderfer, & Coleman, 1996). The different results regarding the stability of preschool friendship indicate that the children's environment may be a key variable in the children's development of friendships over time. Consequently, environment may also play a role when children originally develop, or form, these friendships.

Unilateral Friendship

A unilateral friendship is one in which an individual nominates another as a friend, but that friendship nomination is not reciprocated. Unilateral relationships differ from other relationships; elementary-aged children report liking unilateral friends less than reciprocal ones but more than non-friends. Elementary-aged children also report liking unilateral-given friends, friends they nominated, more than unilateral-received friends, friends from whom they received (but did not give) nominations (Hundley & Cohen, 1999). Children also tend to know more about their reciprocal friends than their unilateral ones; for example, children are more accurate at predicting shared characteristics of reciprocal friendships than unilateral ones (Ladd & Emerson, 1984). Reciprocal friends are more likely to be similar to each other with regard to interpersonal understanding, proximity, popularity, and self-concept than unilateral friends (Drewry & Clark, 1985; Kurdek & Krile, 1982).

While unilateral friendships have characteristics that distinguish them from other peer relationships, unilateral friendships can take on characteristics of both reciprocal and non-friend relationships. For instance, the nature of conflict between unilateral dyads contains some characteristics of reciprocal friends and some of non-friends. The nature and intensity of conflicts resemble reciprocal dyads; however, the manner in which unilateral pairs negotiate their conflict, with both parties sticking to their original positions, is more similar to non-friend

dyads. After conflict, unilateral dyads arrive at outcomes that tend to resemble non-friends, with one winner and one loser (Frayse, 1994). However, unilateral dyads are more similar to reciprocal pairs in the way interaction tends to resume immediately after conflict (Frayse, 1994; Hartup, Laursen, Stewart & Eastenson, 1988), perhaps due to the desire of the unilateral-given partner to resume interaction with the unilateral-received partner.

Unilateral Friendships among Preschool-aged Children. Unilateral friendships are more prevalent among preschool-aged children than older children (Gleason & Hohmann, 2006; Guralnick, Gottman & Hammond, 1996; Vaughn, Azria, Krysik, Caya, Bost, Newell & Kazura, 2000). Unilateral dyads have been found to have varying levels of stability; reciprocal friends are more likely to be maintained across a 6-month period than unilateral friends (Drewry & Clark, 1985; Gershman & Hayes, 1983). The ages and popularity scores of unilateral dyads are more disparate than those of reciprocal friends (Drewry & Clark, 1985). Clear behavioral distinctions exist between these two types of relationships. In naturalistic observation, reciprocal friend tend to interact more frequently than unilateral friends (Vaughn, Colvin, Azria, Caya & Krzysik, 2001).

Although unilateral friendships are common in preschoolers, and comprise a significant portion of preschoolers' social environments, how preschoolers understand these friendships is still unclear. Preschoolers are just beginning to develop the ability to recognize that others' mental representations of the world may or may not match their own (Astington, 1993). The ability to recognize the one-sided nature of a unilateral friendship may directly influence preschoolers' understanding of these friendships. Preschoolers appear to make some cognitive distinctions between these types of friendships. Preschoolers cite different reasons for liking unilateral vs. reciprocal friends; children are more likely to cite common activities and positive

evaluation (e.g., s/he is nice) as reasons for liking reciprocal friends than unilateral friends (Hayes, Gershman, & Bolin, 1980). Additionally, preschool-aged children appear to have differing expectations of reciprocal and unilateral friends with regard to social provisions, or social benefits, of friendship. The specific social provisions children expect of reciprocal vs. unilateral friendships do not differ, but children expect that reciprocal friends will offer these social provisions to a greater degree (Gleason & Hohmann, 2006). Reciprocal dyads' average social competence also tends to be greater than that of unilateral dyads (Vaughn et al., 2001).

Friendship Formation

Much research on children's friendship formation has focused on friendship selection, or identifying likely friendship candidates rather than the social processes involved in friendship formation. Preschool-aged children are highly influenced by similarities in sex, race, age, and common activities when selecting their friends (Aboud & Mendelson, 1998). In addition to these demographic characteristics, preschoolers also appear to be influenced by other, more nuanced, personal characteristics. Temperamental qualities, such as activity level, impulsivity, and soothability have all been shown to influence the likelihood of being selected as a friend. The effects of temperament and gender are intertwined; girls are more likely to choose low activity level friends (i.e., other girls), while boys are more likely to choose high activity level friends (i.e. other boys) (Gleason, Gower, Hohmann & Gleason, 2005). The probability of being chosen as a friend is related to a given child's general characteristics, but it is also related to specific interactions between a given pair.

Less research has focused on the underlying social mechanisms and processes involved in preschool friendship formation. One exception is Masters and Furman's (1981) study which demonstrated that a given child is more likely to be chosen as a "liked peer" or friend if the

interactions between that child and the chooser are characterized by high rates of reinforcing and neutral acts. Another key exception is a study by Gottman (1983), which performed extensive analysis of conversations between unacquainted dyads during three free-play sessions over a period of 6 weeks at one of the child's homes and marked their progression towards friendship. This analysis included, among many other variables, the amount of conversation, statements describing mutual play or partner's play, commands and requests, and noncompliance and disapproval. Gottman theorized that children who "hit it off" were those with the ability to interact in a connected fashion, noted high numbers of statements involving the dyad's mutual play, or commenting on their partner play. Children who hit it off were also able to exchange information successfully through commands and requests, to manage conflict (although rates of noncompliance and disapproval were high even among children who hit it off), and to establish a common-ground activity. Further, Gottman suggested that play that requires high levels of interaction has greater potential for friendship but also greater risk for conflict. Thus, children's progression from non-acquaintanceship to friendship is characterized by the balance children must find between playing at a level with high enough social interaction to form friendship, while at the same time successfully managing conflict.

While this landmark study chronicled the process of friendship formation to a great degree, examination of friendship formation in a preschool context has greater ecological validity as children acquire much of their social experiences with peers in preschool. Study of friendship formation in a social context in which interest in friendship is established, rather than one in which the children are unacquainted, may better isolate the social processes related to friendship formation from those related to initial attraction and compatibility. Unilateral friendships provide such a social context.

Studying Friendship Formation via Unilateral Dyads

While previous research investigating unilateral friendships has helped to identify the ways in which unilateral relationships are similar to and different from reciprocal and non-friend relationships, these categorical descriptions of unilateral relationships may be too broad.

Unilateral friendships may be as varied as the individuals that comprise them; therefore these descriptions fail to capture the range and variety of unilateral relationships during the preschool years. The relative instability of unilateral friendships suggests dynamic social development. What remains unexplored is the potential role of unilateral friendships in preschoolers' friendship formation.

This longitudinal study seeks to determine why some preschool friendships succeed while others do not by identifying the dyadic behaviors of unilateral friendships that are related to different unilateral friendship outcomes. Unlike other studies, which have monitored the interactions of unacquainted pairs and marked their progression towards friendship (Gottman, 1983), this study has the ability to identify what behaviors are associated with specifically transitioning (or not) from initial interest to reciprocal friendship. In unilateral friendship there is interest in friendship, but not yet full-reciprocated friendship. This study has greater ecological validity than Gottman's study because it takes place in a preschool where most early childhood peer interactions occur. Most importantly, this study differs from Gottman (1983) in that this study focuses on individual differences between dyads rather than commonalities in the friendship formation process. By examining differences in the conversation between unilateral dyads that go on to become reciprocal, become non-friend, or remain unilateral, it becomes possible to begin to ascertain why some dyads become friends while others do not.

First, I hypothesize that the conversations of the unilateral dyads will vary widely. Second, I hypothesize that conversations between unilateral dyads observed at Time 1 will be related to unilateral friendship outcomes at Time 2. Third, I hypothesize that unilateral friendships at Time 1 that become reciprocal friendships at Time 2 will 1) generally speak more with each other 2) speak more about the mutual play they are engaging in or in the play that their partner is engaging in 3) be more noncompliant to partner requests 4) disapprove of their partners more and 5) be more likely to command their partner or request certain behaviors from their partners than those dyads that become non-friends or remain unilateral at Time 2.

Methods

Participants

Seventy-four preschool-aged children (37 boys, 37 girls, $M_{age} = 49.26$ months, $SD = 7.29$ months) participated. Children were recruited from two classrooms at a laboratory preschool affiliated with a liberal arts college in New England, and three classrooms at a nearby day care facility. The majority came from a predominantly white, upper-middle class suburban area. General parental consent at the laboratory preschool was obtained upon children's enrollment; before any sessions were run, parents had access to a summary of the study and retained the right to withdraw their child from this particular investigation. Parental consent was obtained individually for children from the day care.

Procedure

Sociometric interviews were conducted twice (fall and winter). The interview protocol was based on previous studies in which the friendships identified via the interview had high correlations with both observational data and teacher report (Brachfeld-Child & Schiavo, 1990; Lindsey, 2002; Rosen, Furman, & Hartup, 1988), and differed only in that children were allowed

to make unlimited peer nominations, rather than being limited to three nominations. Unlimited nominations prevent the total number of unilateral nominations in the data set from being artificially increased. At the start of the sociometric interview, participants were asked to identify the names of all of their classmates. Next, participants were asked to select the pictures of the children they “like to play with the most.” From those nominations, children were asked to rank their nominations in order of whom they “like to play with the *very* most.” Next, children rated all of their classmates by sorting them into three groups: “play with a lot,” “play with sometimes,” and “play with not so much.”

From the sociometric interviews conducted in the fall, unilateral pairs were identified (see Coding and Reliability below). Between the fall and winter sociometric interviews, each unilateral pair was escorted from their classroom to a separate room equipped with a pretend kitchen, a dramatic play area similar to those found in the children’s classrooms. The experimenter explained to the children that the children were going to play together in the pretend kitchen, and briefly showed the children the available toys. While the children played, the experimenter sat in a chair beside the play area and pretended to work. The experimenter did not engage in the children’s play except in the case of conflict or when asked a direct question. The children played for 10 minutes and were told when they had 1 minute left to play in order to prepare them to transition back to their classrooms. All sessions were videotaped.

Coding and Reliability

Friendship Pairings. Following the first round of sociometric interviews, children were sorted into unilateral pairs. Unilateral matches were first drawn from nominations, and the lowest ranked (1 stood for 1st nomination) unreciprocated nominations were used. In the case that a child had no unreciprocated nominations, or the lowest unreciprocated nomination was

ranked higher than five, ratings were used to match unilateral dyads. In unilateral pairs composed from the ratings data, the target child was matched with a child whom s/he rated as “plays with a lot” and from whom s/he received a “plays with not so much” rating. In the case that such a pair was not possible, a pair was used in which the target child was matched with a child whom s/he rated as “plays with a lot” and from whom s/he received a “plays with sometimes” rating. In unilateral pairs made using ratings data, preference was given to same-sex dyads and those whom the target child had listed in their nominations. Some children were chosen as a unilateral-given match from multiple target children, but no child was more than three children’s unilateral-given match. If multiple choices existed, preference was given to children who were not already chosen as a unilateral-given match in an effort to limit the number of times any one child was represented in the data. In order to check inter-rater reliability, a second researcher used the rules to make pairs. Coders agreed on 94.8% of pairs and all discrepancies were resolved by discussion.

Based on the second (winter) round of sociometric interviews, all unilateral pairs identified in the fall were categorized as either still unilateral, changed to reciprocal, changed to non-friend, or changed to reverse-unilateral (which member of the dyad was the unilateral-giver and which was the unilateral-receiver reversed at Time 2). Unilateral friends were identified using the same criteria as in the fall. Reciprocal friendships were identified using children’s nominations. I determined which nominations were reciprocated, and averaged the nomination the target child gave with the nomination s/he received (an average of 1 indicated that both children nominated each other first in the nominations process). All reciprocated nominations with averaged scores of less than 5 were considered reciprocal friend relationships. Non-friend relationships were defined as pairs who neither nominated each other nor had a rating

combination of “play with a lot-play with a lot” or “play with a lot-play with sometimes.”

Coders agreed on 87.0% of pair outcomes and all discrepancies were resolved by discussion.

Conversational Variables. The conversations of the children during the observations were coded using the procedure described by Furman (1987). First, all conversations were transcribed from the video recordings of the observations. Next, a second transcriber checked and revised the transcript where necessary. Last, each transcript was re-checked by the original transcriber who determined which edits should be kept for conversational analysis. After transcription, all transcripts were then divided into “thought units,” or an expressed idea or fragment. This unit could be one utterance or several, and it could be either a phrase or a sentence (Furman, 1987; Gottman, 1983). Thought units were categorized into five categories: 1) *mutual/partner play statements*, or statements that refer to the children’s joint play or the partner’s play, 2) *noncompliance*, or refusals to obey the partner’s command or request, 3) *disapproval*, insults or other forms of disapproval of the partner’s behavior, 4) *commands/requests*, or statements intended to direct the partner’s or dyad’s behavior, or 5) *other*, statements that did not fall into any of the other four categories. For example, the statement, “The babies aren’t sleeping, but yours is awake,” contains two thought units, “The babies aren’t sleeping,” and “but yours is awake,” and contains two *mutual/partner play* statements. Coders used both transcripts and videos to code the conversational variables. Inter-rater reliability was obtained with the help of coders unfamiliar with the hypotheses. Two coders coded one-third of the transcripts. With the exception of noncompliance ($r = 0.532$), inter-rater reliability was high; Pearson-r values ranged from 0.910 to 0.994. Discrepancies were resolved using the author’s coding.

Results

The average age of the dyads was 49.26 months ($SD = 7.29$). The average age difference between members of the dyad was 3.92 months, and ranged from 0 to 11 months. Of the 64 unilateral dyads at Time 1, 12 remained unilateral, 26 became non-friends, and 25 became reciprocal friends at Time 2. The direction of the unilateral relationship, that is, which member of the dyad was the unilateral-giver and which was the unilateral-receiver, reversed at Time 2 in 6 of the 12 unilateral dyads.

The number of thought units, as well as the number of each type of conversational statement had a large range (see Table 1 for descriptive statistics). Conversational data was available for 63 out of the 64 dyads; one pair's conversational data was missing due to a recording failure.

In order to determine whether the number of thought units, mutual/partner play statements, commands/requests, noncompliant statements, or disapproving statements were predictive of status at Time 2, I ran a multinomial regression using unilateral status at Time 2 as a baseline, and the other three statuses (non-friend, reciprocal, and reverse-unilateral) as dependent outcomes. The average age of the two children within the dyad, and whether the dyad was same-gender or mixed-gender, were also included in the model. None of the variables were significant predictors of relationship status at Time 2 (see Table 2).

The power of the multinomial regression was low due to the relatively large number of predictors in comparison to the sample size and the few unilateral or reverse-unilateral outcomes. Thirty dyads had no noncompliant statements ($M = 0.78$, $SD = 1.24$), and 27 dyads had no disapproving statements ($M = 1.88$, $SD = 2.93$). In order to address the low power, I eliminated dyads with unilateral or reverse-unilateral outcomes, and ran a logistic regression using only

non-friend or reciprocal outcomes. Eliminating those pairs is valid because stable unilateral friendships are rare (Gershman & Hayes, 1983), and because the main aim of the current study was to determine why some unilateral friendships successfully transition to reciprocal friendship while others become non-friends. In order to address the low frequency of noncompliant and disapproving statements, the two variables were also removed. The logistic regression revealed that none of the variables (age, gender, commands/requests, or mutual/partner play statements) were significant predictors of status at Time 2 (see Table 3).

Some children appeared as many as three times within the data set, and the independence assumptions for the multinomial and logistic regressions could not be met. In order to determine if the dependence in the data set significantly affected the results of the logistic regression, I conducted another logistic regression using the same variables as above with a randomly generated subset of the data (30 dyads) in which children appeared in the data set only once. The results of this logistic regression did not appear to be significantly different than the one conducted with the full data set (see Table 4).

Discussion

This study hypothesized that the nature of the relationships between unilateral dyads would vary widely as demonstrated by their conversations, and this hypothesis was supported by the data. The amount of conversation, as well as the number of the different types of conversational statements, ranged greatly amongst dyads. The other two hypotheses of the study, that 1) conversation of unilateral dyads would be predictive of later relationship outcomes and that 2) the amount of conversation, the number of mutual/partner play statements, commands/requests, noncompliant statements, and disapproving statements during a short play session would be predictive of later friendship outcomes, were not supported. This finding,

when considered in terms of both preschool friendship formation and conversation between preschool peers, reveals the limitations of using preschool conversation to predict future outcomes, underscores the importance of studying unilateral friendships in the context of friendship formation, and illuminates several new areas of research.

Friendship Formation

Analysis of conversation in this study was unable to predict future status of dyads as it did in Gottman's (1983) study. A key difference between this study and Gottman's (1983) is that this study considered unilateral dyads who were well acquainted with each other instead of children who were previously unacquainted with each other. In Gottman's study, the children met each other for the first time and interacted with each other a maximum of three times. In each of their conversations, the children needed to become acquainted with each other and determine how much interest they had in becoming friends. In the current study, the unilateral dyads knew each other for at least a few months, and the conversation observed during the study was one of many the children had had. The children in the current study thus had already assessed whether they had interest in friendship (one member of the dyad had active interest in friendship, and the other did not). One interpretation of these findings is that conversational characteristics differ significantly between new acquaintances that are likely to become friends versus those that are not, but after getting to know each other, conversational variations between dyads wane.

One way in which conversations between children who have just met might differ from those who are unilateral friends might be in the importance of the conversation itself. The conversation between the dyads in Gottman's (1983) study may have had higher stakes than in the current study. In Gottman's study, the new acquaintances not only sought to get along and

have fun with each other, but also to determine the degree to which they had interest in friendship. Such higher-stakes conversations may be a better predictor of later relationship status than lower-stakes ones. The conversations between unilateral dyads in this study may be lower stakes, because the members of the dyads came from the same classrooms, and therefore had ample opportunity to interact with each other. The members of the dyads came from the same classroom and so had many opportunities to speak with each other. The observed conversations for the unilateral dyads in the current study comprised a much smaller percentage of total conversations than it did for the acquaintances in Gottman's study. Thus, single conversations are not predictive in this situation the way they are for acquaintances perhaps because they are not nearly so representative of these children's interactions the way they are for acquaintances.

Conversations of Preschool-aged Children

Instances of mutual/partner play statements, commands/requests, noncompliant statements and disapproving statements have all been found to differ significantly between acquaintances and reciprocal friends (Furman, 1987), but did not differ significantly between unilateral friends that developed into reciprocal from those that developed into non-friend relationships in this study. The inability of these variables to distinguish between the two types of relationships suggests two insights into the conversation of unilateral dyads and the salient elements of preschool friendship formation.

First, a key assumption in this study's hypothesis that the number of different conversational statements would be predictive of a dyad's outcome was that not only would there be significant differences between dyads with different outcomes, but also that the conversations of unilateral dyads that became non-friends would be more like the conversations of acquaintances, while those that became reciprocal friends would be more like reciprocal dyads.

That this hypothesis was unsupported suggests that unilateral dyads' conversations may have unique characteristics that differ from either non-friend or reciprocal friends. In that regard, the lack of significant difference in conversations between unilateral dyads with different outcomes corroborates previous research that found that unilateral friendships have unique characteristics that distinguish them from reciprocal and non-friend relationships (Drewry & Clark, 1985; Kurdek & Krile, 1982).

Second, while these specific conversational measures (amount of total conversation, mutual/partner play statements, commands/ requests, noncompliant statements, and disapproving statements) were successful in differentiating between dyads in older children (Furman, 1987), they were not helpful when attempting to predict unilateral friendship outcomes of preschool-aged children. Preschool peer conversations may lack the complexity needed to distinguish between dyads with regard to these conversational measures. However, lack of conversational complexity is an unlikely explanation, because typically developing preschool-aged children are able to remark, request, and respond in conversation with their peers (Hoyle & Adger, 1998). A more likely explanation is that preschoolers may not be as attentive to the underlying emotional meaning of these particular conversational variables as older children are.

Clues to which elements of preschool unilateral dyads' interactions might successfully predict relationship outcomes, because these conversational variables did not, are found in previous research demonstrating differences in preschool conversation between reciprocal friends and non-friends (Bauminger-Zviely, Karin, Kimhi & Agam-Ben-Artzi, 2014; Chisholm & Pitcairn, 1998; Rotenberg, 1995). Factors such as self-disclosure (Rotenberg, 1995), responsiveness (Bauminger-Zviely et al., 2014), and attempts to include or exclude (Chisholm & Pitcairn, 1998) all differed in reciprocal and non-friend dyads. For example, when applied to

unilateral relationships, children who feel comfortable with the other member of the dyad may be more likely to disclose personal information. Children who are engaged with the other member of the dyad are also likely to have conversation that is more responsive to their partner's statements—a variable not measured by the categorization of statements in this study. Lastly, children who are more interested in friendship are more likely to attempt to include rather than exclude the other member of the dyad, and such measures could be investigated in the transcripts of conversations gathered for this study.

These conversational variables (self-disclosure, responsiveness, and attempts to include/exclude the other member of the dyad) differ from the ones considered in the current study, because they access how a child feels towards the other member of the dyad. Thus, variables that operationalize a speaker's feeling or intent toward the other member of the dyad may be better predictors of later relationship status than variables that quantify the content of a dyad's conversation. Perhaps *how* one is saying what one is saying, and the intent behind one's words, is more relevant to preschoolers' development of friendship than the actual words themselves.

Limitations

The current study has two limitations. First, the sample size was small and not representative of the general population of preschool-aged children. Second, the timing of the observation in relation to the first and second sociometric interviews varied between dyads. Most observations took place within several weeks of the first sociometric interview, but 15 observations were conducted closer to the second sociometric interview. Therefore, the status of some of the dyads may have shifted from unilateral to another status before the observation took place.

Conclusions and Future Directions

The inability of certain conversational variables to predict unilateral outcomes suggests that conversations between unilateral dyads are different from those between acquaintances. Because the observed conversation in this study was one of many for the unilateral dyads, their conversations may have been lower-stakes and less revealing than higher-stakes conversations between acquaintances. Research on preschool conversations that has been able to distinguish between non-friend and reciprocal relationships has tended to focus on conversational variables that reveal the speaker's feelings towards the other member of the dyad (Bauminger-Zviely et al., 2014; Chisholm & Pitcairn, 1998; Rotenberg, 1995), an approach that might work well in future examinations of outcomes of unilateral friendship.

Perhaps the most important element of this study is not the specific implications of which conversational variables may predict unilateral friendship outcomes, but rather the use of unilateral friendship as a framework for studying preschool friendship formation. Unilateral friendships offer a unique way to study friendship formation. In unilateral friendship, an interest in friendship is established but not yet reciprocated. Therefore, if we can determine which factors are involved in transitioning from unilateral to reciprocal friendship, we will know something about what it takes to transition from interest in friendship to reciprocated friendship. This way of thinking about unilateral friendship has the potential both to clarify the role of unilateral friendship in preschool social development, and to reveal how preschoolers understand and execute friendship formation.

Two areas of future research emerge from the findings of this study. First, if the length of conversations and the number of statement types within conversations between unilateral dyads are lower-stakes and do not predict future outcomes, perhaps the general affective qualities

of those conversations over time may provide useful insight into unilateral friendship outcomes. The transcripts of conversations of unilateral dyads from the current study could also be reexamined to take into account the affect and intent of the speaker through measures of self-disclosure, responsiveness, and attempts to include/exclude the other member of the dyad.

Second, a better predictor of unilateral friendship outcomes may be the behavior rather than the conversation of these dyads, specifically, actions that reveal mutual engagement by reciprocity or coordination of action, or actions that attempt to include/exclude the other member of the dyad. Behavioral variables that assess the children's feelings toward each other and measure the degree to which dyads are successful in engaging in mutual and positive play may provide insight into why some unilateral friends develop into reciprocal ones while others do not.

The exploration of factors involved in unilateral friendships transitioning to, or failing to transition to, reciprocal friendship can reveal the potential social processes involved in transitioning from interest in friendship to reciprocated friendship. This line of inquiry has the potential to reveal how preschoolers develop these meaningful ties with their peers. Given preschoolers' burgeoning ability to form friendships, and the importance of peer relationships in child development, a thorough understanding of preschool friendship formation, and the potential role of unilateral friendship in that process are crucial.

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Table 1

Conversational Statements

Variable	<i>M</i>	<i>SD</i>	Min	Max
Thought Units	120.69	63.72	4	260
Commands/ Requests	17.22	11.32	0	44
Mutual/Partner Play Statements	19.16	16.01	0	65
Noncompliant Statements	0.78	1.24	0	5
Disapproving Statements	1.88	2.93	0	12

Table 2

Results of Multinomial Regression

Variable	Relationship Outcome at Time 2											
	Non-Friend				Reciprocal				Reverse-Unilateral			
	<i>b</i>	<i>SE</i>	<i>p</i>	Exp(<i>b</i>)	<i>b</i>	<i>SE</i>	<i>p</i>	Exp(<i>b</i>)	<i>b</i>	<i>SE</i>	<i>p</i>	Exp(<i>b</i>)
Age	-.049	.084	.561	.952	-.035	.083	.678	.966	-.014	.122	.912	.987
Gender	1.244	1.146	.278	3.471	1.104	1.106	.318	3.016	2.683	1.853	.148	14.626
Thought Units	.003	.017	.880	1.003	-.007	.017	.682	.993	-.017	.024	.485	.984
Commands/ Requests	.012	.070	.864	1.012	-.034	.072	.638	.967	.151	.093	.107	1.163
Mutual/Partner Play Statements	-.025	.050	.617	.975	.020	.048	.678	1.020	.079	.071	.261	1.163
Noncompliant Statements	-.331	.518	.408	.523	.171	.478	.720	1.187	-1.149	.981	.242	.317
Disapproving Statements	-.258	.173	.136	.773	-.096	.148	.516	.908	-.315	.284	.268	.730

Table 3

Results of Logistic Regression

Variable	<i>b</i>	<i>SE</i>	<i>p</i>	Exp(<i>b</i>)
Age	0.014	0.046	0.754	1.014
Gender	0.214	0.640	0.738	1.238
Thought Units	-0.007	0.009	0.460	0.993
Commands/Requests	-0.007	0.044	0.880	0.993
Mutual/Partner Play Statements	0.035	0.029	0.225	1.036

Table 4

Results of Logistic Regression on Subset of Data

Variable	<i>b</i>	<i>SE</i>	<i>p</i>	Exp(<i>b</i>)
Age	-0.020	0.079	0.799	0.980
Gender	1.798	1.213	0.138	6.040
Thought Units	-0.024	0.019	0.219	0.977
Commands/Requests	0.157	0.102	0.126	1.170
Mutual/Partner Play Statements	-0.041	0.057	0.472	0.960