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Longitudinal Examination of Forms of Childrens Antipathetic Relationships and Peer Social Competence: An Autoregressive Cross-Lagged Panel Analysis

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LONGITUDINAL EXAMINATION OF FORMS OF CHILDREN'S ANTIPATHETIC
RELATIONSHIPS AND PEER SOCIAL COMPETENCE: AN AUTOREGRESSIVE CROSS-
LAGGED PANEL ANALYSIS

By

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Abstract

The present research (N = 121) examined a) the stability of previously established, empirically derived profiles of forms of children's dislike relationships (i.e., unilateral-received dislike, unilateral-given dislike, mutual dislike) at two time points (one academic year apart) and, b) the reciprocal, cross-lagged relations between these antipathetic profiles and a number of peer social competence measures (i.e., loneliness, peer optimism, self-perceived social competence, mutual friends, sociability nominations, and popularity nominations). The three profiles included a High Disliked profile (characterized by high unilateral-received and mutual dislike nominations), an Average Dislike profile (characterized by average dislike nominations across all indicators), and a High Dislikers profile (characterized by the lowest unilateral-received and the highest unilateral-given dislike nominations). Children were assessed as third and fourth graders (Time 1) and then as fourth and fifth graders (Time 2). Using an autoregressive cross-lagged panel model, results revealed stability in the measurements of the constructs, including both children's most likely profile membership and social competence correlates, across time. Children's Social Dysphoria and Sociable-Popular status at Time 1 predicted their most likely profile membership at Time 2, but children's most likely profile membership at Time 1 did not predict any of the social competence correlates at Time 2. Gender only predicted children's Social Dysphoria at Time 2 and was not associated with any other variables in the model. These findings suggest that the measurement of profiles based on children's unilateral and mutual dislike hold over time and highlight indices of children's social competence that are associated with this profile membership over time.

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The study of dyadic relationships has a prominent place in social developmental research and theory (e.g., Hinde, 1992; Rubin, Bukowki, & Parker, 2006). The most researched form of children's relationships has been mutual friendships with an extensive literature documenting the positive social competence correlates of having mutual friends (Hartup, 1996). Recently, researchers have also considered children's mutual antipathies, relationships characterized by reciprocated dislike, as an important variation of children's relationships. Research has consistently documented the positive association of friendships and the negative association of antipathies for children's adjustment in general and peer relations in particular (see Card, 2010; Hartup, 1996; Rubin et al., 2006).

Research on children's relationships, both friendships and antipathetic, has traditionally been limited to the evaluation of mutual, reciprocated relationships. Obviously, not all relationship nominations (friendship or antipathetic) are reciprocated. A few studies have documented associations between peer social competence and number of unilateral, non-reciprocated friendship nominations (Hundley & Cohen, 1999; Olsen, Parra, Cohen, Schoffstall, & Egli, 2012). Further, one study has evaluated social competence distinctions associated with number of unilateral antipathetic relationships (Barnes, Berlin, & Cohen, unpublished manuscript). Interestingly, when both unilateral and mutual antipathetic relationships are examined simultaneously, peer social competence differences are observed (see Barnes et al., unpublished manuscript). Thus, there is an important value to looking at different forms (i.e., mutual and unilateral) of children's antipathetic relationships.

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Research has begun to examine different forms of antipathetic relationships in terms of patterns of nominations, but few studies have examined the longitudinal stability of antipathetic relationships over time, and none have also considered reciprocal, cross-lagged relations such as children's social competence. Given that early involvement in an antipathetic relationship has been shown to be associated with subsequent antipathetic relationships (Berger, Rodkin, & Dijkstra, 2011; Rodkin, Pearl, Farmer, & Van Acker, 2003), and that children's antipathetic relationships have been associated with a number of indices of maladjustment (Card, 2010), it is important to examine these relationships in young children and examine the trajectory of these relationships over time.

The present research extends our understanding of forms of antipathetic relationships over time and related social competence correlates. Following Barnes et al. (2017), one purpose of the present study was to examine the stability of empirically derived profiles of antipathetic relationships (based on mutual and unilateral antipathies) over time using an autoregressive cross-lagged panel analysis, a type of structural equation modeling (SEM) that examines the structural relations of repeatedly measured constructs (Selig & Little, 2012). A second goal of the present work was to examine the reciprocal, cross-lagged relations between children's profile membership and their social competence correlates across two time points. Finally, the role of gender was included for analysis because gender has been shown to be associated with antipathetic relationships in relation to social competence (see Barnes et al., unpublished manuscript).

By way of introduction, a framework for understanding children's peer relationships is briefly outlined. Children's antipathetic relationships, including how such relationships have been traditionally conceptualized and measured, are then discussed, as well as prevalence rates,

associations with maladjustment, and associations with gender. The limited research on unilateral, non-reciprocated antipathetic relationships is then reviewed, with a particular emphasis on Barnes et al. (2017). Finally, the few studies that have examined the stability of children's antipathetic relationships are discussed, followed by an overview of the present research.

A Framework for Understanding Children's Peer Relations

Adequate peer relations are presumed to be essential for children's adjustment and development (e.g., Parker & Asher, 1987; Rubin, Bukowski, & Parker, 2006). Further, children's peer relationships become increasingly important and influential as they enter the school-age years and often lay the foundation for subsequent relationships with peers (Rubin et al., 2006). Hinde (1992), elaborated in Rubin et al., (2006), offers a comprehensive framework for understanding children's peer relations. It is argued in this framework that children's experiences with peers can be best understood as operating at multiple, interdependent hierarchical levels of social complexity (e.g., individual, interaction, relationship, and group). A central assumption is the bidirectional nature of each level, such that experiences and processes at each level influence, and are influenced by, experiences and processes at adjacent levels. Further, each level of complexity contains unique properties, meaning that functioning at one level cannot be completely understood by only studying functioning at lower levels. Thus, it is explicit in this framework that the interplay of functioning among levels is critical for understanding peer relations.

Children's Peer Relationships: Antipathetic Relationships

Conceptualizing and measuring children's antipathetic relationships. Recently, dyadic relationships based on mutual dislike have emerged as an important variation for the

study of children's relationships. Early research on this topic used various terms to describe and refer to these relationships, including *enemy*, *enemy relationships*, or *inimical relationships* (Hodges & Card, 2003). It is important to clarify the terminology, as terms such as those listed likely describe only a small subset of antipathetic relationships in which participants hold a particularly strong form of dislike, such as hatred, toward one another (Abecassis, 2003; Hartup, 2003). Alternatively, the term *mutual antipathies* has also been used to clarify and highlight the mutual, reciprocal dislike and aversion characterized by these dyads (Abecassis, 2003). Card (2007) recommends using the term *antipathetic relationships*, as this term emphasizes the dyadic, interpersonal phenomenon of two individuals disliking one another. For the present research, the term *antipathetic relationships* will be used.

For identifying antipathetic relationships, researchers have fairly consistently used sociometric nomination inventories, or used peer rating scales where children assign a numerical rating to the other children in their classroom. When two children reciprocally choose (i.e., nominate) each other, or two children assign the same low ratings to one another, they are considered to be involved in a mutually antipathetic relationship. However, descriptions defining choices have varied greatly, including phrases such as *"like least*," "*dislike*," "*enemy,"* and *"hate."* Rather than using these types of evaluative terms, other studies have framed measurements around shared activities, with nominations such as *"someone you would least like to play or work with"* (Card & Hodges, 2007) or *"someone with whom you would least like to spend time"* (Hafen, Laursen, Nurmi, & Salmela-Aro, 2013; Laursen et al., 2010). These variations in terminology and measurement are worth noting, as the identification of antipathetic relationships may be attenuated or magnified based on the connotation of the choices. For example, such relationships may be identified less frequently when the question is asking for

nominations of *"classmates you hate,"* and there may be a greater number of antipathetic relationships for *"children you dislike."* Including nomination items that capture antipathetic relationships in the context of shared activities (e.g., playtime) also likely influence the number of antipathetic relationships that are identified, as the relationships are then limited to a particular context, rather than reflecting a more global, affective response to another individual.

A second consideration for measuring antipathetic relationships involves the number of choices children are allowed for nominating or rating their peers. Some studies allow children unlimited nominations (Berger et al., 2011), whereas other studies have allowed children a limited number of nominations (Card & Hodges, 2007; Pope, 2003; Witkow, Bellmore, Nishina, Juvonen, & Graham, 2005). Gronlund (1959) proposed that unlimited nomination procedures might better reflect an individual's "social expansiveness" in the peer group. Further, Abecassis, Hartup, Haselager, Scholte, and Van Lieshout (2002) noted that the size of the pool from which children make nominations is an important methodological consideration for children's antipathetic relationships. Specifically, according to Abecassis and colleagues (2002), prevalence rates of antipathetic relationships are likely to vary depending on the size of the pool, with lower rates of reciprocity expected with larger pool sizes.

In sum, children's antipathetic relationships have been described using a variety of terms that capture the mutual dislike that is fundamental to these relationships. Measurement of these relationships is primarily made using sociometric nomination inventories and peer rating scales, with a range of negative choices to capture the dislike and aversion central to these relationships. Additionally, studies have varied in the number of nominations children are allowed to make. This, along with the pool from which children make these nominations may have an impact on the prevalence of these types of relationships.

Prevalence of antipathetic relationships. Given the variation in measurement methods described above, it is perhaps not surprising that rates of children's antipathetic relationships vary widely across studies. For example, one early study put the prevalence of children and adolescents involved in a mutually antipathetic relationship at just 2.6% (Hayes, Gershman, & Bolin, 1980). Other studies have reported prevalence rates of 22% (Witkow et al., 2005), 58% (Parker & Gamm, 2003), and a sizeable majority at 65% (Hembree & Vandell, 1999).

In an effort to draw more substantive conclusions regarding the prevalence of children and adolescents' antipathetic relationships, Card (2010) conducted a meta-analysis of 26 studies consisting of over 23,000 children and youth aged 18 years and younger. He found significant heterogeneity across studies and used a random-effects model (Hedges & Vevea, 1998) to compute average prevalence rates. Results revealed that, on average, about one-third of children and youth were engaged in a mutual antipathetic relationship. This prevalence rate is certainly substantial when compared to that of other common problems of peer relations that have received considerably more attention, including peer rejection (e.g. about 10% – 15% of children; Card & Hodges, 2008) and peer victimization (e.g., about 10% - 20% of children; Newcomb, Bukowski, & Bagwell, 1999). Thus, these results suggest that antipathetic relationships are common occurrences within peer relations for children and youth.

Antipathetic relationships and associations with adjustment. Given that antipathetic relationships are rooted in dislike and aversion, it is not surprising that these relationships have been shown to be associated with a host of indices of maladjustment. In his meta-analytic review, Card (2010) found positive associations of small magnitude for having a mutual antipathy with internalizing problems, low prosocial behavior, low academic achievement, low positive peer regard, and fewer friendships. Small to medium positive effects were found for

antipathetic relationships and peer victimization, and medium positive effects were found for externalizing problems, particularly aggression.

Similarly, Erath, Pettit, Dodge, and Bates (2009) found that having a mutually antipathetic relationship positively predicted aggressive behavior, even while controlling for earlier aggression and concurrent group-level peer disliking. This relation was moderated, however, by the aggressiveness of others in the mutually antipathetic relationship and by gender, such that only boys who were involved in mutually antipathetic relationships with relatively non-aggressive children demonstrated higher aggression. Having an antipathetic relationship has also been negatively associated with social acceptance and prosocial behavior (Rodkin et al., 2003; Parker & Gamm, 2003). Interestingly, although being unpopular was strongly associated with having antipathetic relationships, there was also a substantial number of popular and average-popular children who were involved in antipathetic relationships (Hembree & Vandell, 2000; Pope, 2003). Thus, it appears that involvement in antipathetic relationships is widespread and not limited to unpopular children.

Gender and antipathetic relationships. As with children's mutual friendships (see Galambos, 2004), gender differences have been reported for children's antipathetic relationships, although the findings have been mixed. These inconsistent findings are due in part to variations across studies in how these relationships have been measured, as some studies have examined these relationships across gender (i.e., mixed-gender antipathies), and others have focused exclusively on same-gender antipathetic relations, and still others make no distinction. Abecassis et al. (2002) found that elementary school-aged boys were involved in more same-gender antipathies than girls, and comparable levels of involvement were found for boys and girls in mixed-gender antipathies. Other studies have found equal rates of involvement in

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antipathetic relationships for boys and girls, though some of these differences may vary as a function of age (Abecassis et al., 2002; Berger & Dijkstra, 2013; Berger et al., 2011; Witkow et al., 2005). From his meta-analytic review, Card (2010) reported a small but significant gender difference in prevalence of antipathetic relationships, with elementary school-aged boys having slightly more antipathetic relationships than girls. This finding has been replicated in other studies utilizing adolescent samples that have also found that boys tend to have more same-gender mutual antipathies than girls (Güroğlu, Haselager, Van Lieshout, & Scholte., 2009; Rodkin et al., 2003).

In terms of adjustment, some studies have found differences across genders when calculating number of antipathetic relationships using rating scales, but not using nomination procedures. For example, Pope (2003) found that the extent of mutual antipathetic relationships was associated with lower peer social preference and likeability for school-aged boys and girls. Additionally, number of antipathetic relationships was significantly associated with low social impact for boys only, and greater withdrawal and higher levels of aggression only for girls. Interestingly, Berger et al. (2011) reported that adolescent girls involved in antipathetic relationships were rated higher in popularity, social preference, and prosocial behavior than boys involved in antipathetic relationships. Additionally, girls were less aggressive relative to boys, although they were more likely to be victimized.

In sum, the existing evidence is mixed regarding the association of gender to both the prevalence of children's antipathetic relationships and to adjustment correlates. These inconsistent findings are likely attributable in part to the variation across studies in how antipathetic relationships are measured, the age of the participants, and the types of nomination procedures used (i.e., same or mixed-gender antipathetic relationships). Notably, all of the

reviewed studies have examined gender in the context of *mutually* antipathetic relationships, leaving the potential role that gender may play in relationships based on unilateral, non-reciprocated dislike less well understood.

Unilateral Antipathetic Relationships

As reviewed above, children's antipathetic relationships have emerged as an important variation in children's relationships. The previous sections reviewed the literature on *mutually* antipathetic relationships and issues related to conceptualization and measurement, as well as prevalence, associations with adjustment, and the role of gender. Of primary importance for the present research are different *forms* of antipathetic relationships, specifically, unilateral or non-reciprocated relationships. As noted, the vast majority of the literature on children's antipathetic relationships has examined these relationships as mutual, reciprocal relationships, with markedly little attention paid to unilateral (i.e., non-reciprocated) relationships of dislike.

A few studies have examined a different form of antipathetic relationship (i.e., unilateral received dislike, also referred to as rejection) in the context of mutually antipathetic relationships. For example, Witkow and colleagues (2005) found that when the effects of peer rejection (i.e., unilaterally received dislike) among participants with at least one rejection nomination were controlled, those children who did not have a mutual antipathy exhibited poorer outcomes than those children involved in a mutually antipathetic relationship. These results highlight how adjustment can vary among children when both mutually antipathetic relationships and relationships characterized by unilateral dislike are considered. Similarly, unilaterally received dislike has been found to moderate the relation between mutual antipathetic relationships and children's concurrent and longitudinal adjustment, such that unilaterally received dislike in addition to holding a mutually antipathetic relationship increased the

likelihood of negative outcomes (see Pope, 2003). Notably, these relations varied by gender, such that for girls with high levels of dislike, having a mutual antipathy was associated with higher levels of concurrent sadness, and lower levels of social preference and social impact, the following year. For boys with mutual antipathies, higher levels of dislike were associated with lower levels of concurrent social preference. Interestingly, boys with mutual antipathies who were also highly disliked were lower in subsequent withdrawal the following year. This study highlights the importance of examining different forms of children's dislike relations and gender, particularly in the context of examining other markers of children's peer group functioning.

Card and Hodges (2007) examined children's victimization experiences within mutually antipathetic relationships as well as in dyads involving unilateral dislike. Results revealed that victimization occurred to a significantly greater extent within mutually antipathetic relationships than relationships characterized by unilaterally-given dislike or unilaterally-received dislike. Further, victimization in the context of a mutually antipathetic relationship predicted adjustment correlates (e.g., self-reported internalizing symptoms and self-reported global self-worth) above and beyond victimization occurring in unilaterally disliking and unilaterally disliked relationships with peers.

Although the studies reviewed above considered broader forms of children's dislike relationships (i.e., unilateral-given dislike, unilateral-received dislike, and mutual dislike), there are a number of methodological concerns present in each of the studies that warrant mentioning. First, all three studies relied on a limited-choice nomination procedure (e.g., up to three nominations), potentially limiting the number of antipathetic relationships captured in each of the studies. Further, in Witkow et al. (2005) and Pope (2003), unilateral-given dislike nominations were not examined. Excluding this form of antipathetic relationship from analysis precludes a

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complete view of relationships characterized by dislike. Finally, Card and Hodges (2007) exclusively examined same-gender antipathetic relationships, rather than considering these relationships across gender, which constrains the antipathetic dyads captured in the study. Thus, the literature on unilateral forms of children's antipathetic relationships remains in its infancy and has a number of methodological and conceptual concerns to consider.

Empirically Derived Patterns of Antipathetic Relationships

To provide a more nuanced understanding of children's antipathetic relationships, Barnes and colleagues (2017) systematically examined patterns and variations in the different forms of children's dislike relationships (i.e., mutual versus unilateral nominations) and then compared those patterns to a variety of social competence indices. These associations were explored among a sample of third, fourth, and fifth grade children. Using Latent Variable Mixture Modeling, a person-centered analytical approach, empirically derived profiles were constructed using three forms of children's dislike relationships based on number of nominations (unlimited classroom nominations): unilateral-given dislike, unilateral-received dislike, and mutual dislike. Results revealed three unique profiles: a High Disliked profile (characterized by high unilateral-received and mutual dislike nominations); an Average Dislike profile (characterized by average dislike nominations across all indicators); and a High Dislikers profile (characterized by the lowest unilateral-received and the highest unilateral-given dislike nominations) (See Figure 1). Significantly more girls than boys were assigned to the High Dislikers profile (65.4% female), and more boys than girls to the High Disliked profile (55.8% male) and Average Dislike profile (57.6% male).

Barnes and colleagues (2017) also related the empirically derived profiles to a number of indices of social competence, including loneliness, peer optimism, self-perceived social

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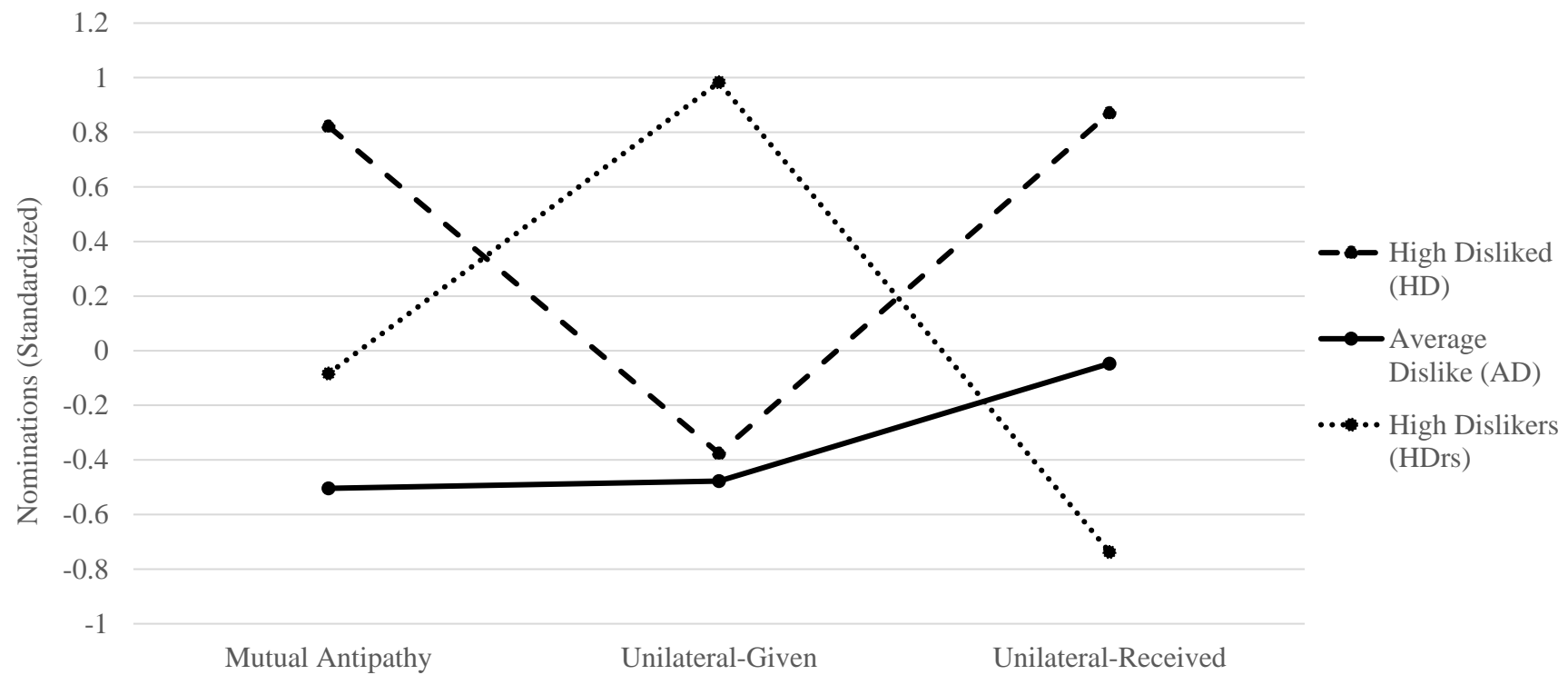
Figure 1. *Profiles of Different Forms of Antipathetic Relationships* from Barnes et al. (2017)

competence, number of mutual friendships, and peer nominations for sociability, popularity, victimization, and overt aggression behaviors. Membership in the High Disliked profile was associated with the poorest social competence outcomes, relative to membership in the other two groups (i.e., greater loneliness, significantly less peer optimism, fewest reciprocated mutual friendships, significantly more overt aggressive and victimization peer behavior nominations, fewest peer nominations for sociability and popularity). In contrast, membership in the High Dislikers profile was associated with the most positive outcomes, relative to membership in the other two groups. This profile appeared similar to the Average Dislike profile across some outcomes (i.e., loneliness, self-perceived social competence, peer optimism, overt aggression, and victimization), but received significantly more nominations for sociability and popularity, in addition to having the greatest number of reciprocated mutual friendships. Although gender predicted profile membership as noted above, interestingly, there was no significant gender-by-profile interaction, suggesting that the social competence differences between boys and girls were comparable across profiles.

Of particular relevance for the present research, although Barnes and colleagues (2017) revealed unique associations between the various forms of children's antipathetic relationships and indices of social competence, the cross-sectional nature of the study did not allow for the consideration of how profiles may vary over time or the consideration of the cross-lagged relations between profile membership, based on patterns of dislike, and social competence indices. Thus, the stability of profile membership, social competence outcomes, and the reciprocal relations between the two remain unclear. A brief discussion of the few longitudinal studies examining children's antipathetic relationships follows.

Longitudinal Examinations of Children's Antipathetic Relationships

There have been numerous calls for longitudinal research designs of antipathetic relationships. In particular, in his meta-analytic review, Card (2010) highlighted that such designs would allow for the examination of the stability of antipathetic relationships over time. A few studies have answered this call. Rodkin et al., (2003), examined the stability of children's mutually antipathetic relationships at three time points over the course of third and fourth grade. Rodkin and colleagues (2003) examined whether children maintained an antipathetic relationship with the same individual over time, as well as if children demonstrated stability in being involved in an antipathetic relationship in general. The researchers found low stability in children's maintenance of antipathetic relationships with specific individuals, with only 17% of the mutually antipathetic relationships maintained across the school year. Further, Rodkin et al. (2003) found that both girls and boys involved in a mutually antipathetic relationship at the first time point of the study were more likely to be involved in a mutually antipathetic relationship at the third and final time point. These results suggest that being involved in a mutually antipathetic relationship may be related to future antipathetic relationships with others, though such relationships with specific individuals may be less stable over time.

In another study considering stability of mutual antipathies, Rambaran, Dijkstra, Munniksma, and Cillessen (2015) examined friendships and antipathetic relationships among middle school aged children across grades six through eight. The researchers found that children changed antipathies more frequently from one time point to the next relative to how often they changed friendships. Similar results were found in a study of preschool-aged children, with only about 9% of children in mutually antipathetic relationships maintaining this relationship the next school year (Daniel, Santos, Antunes, Fernandes, & Vaughn, 2016).

Berger et al. (2011) also examined the stability of antipathetic relationships over time in fourth and fifth graders from the United States and fifth and sixth graders from Chile. Across the span of seven months for the children in the United States, and one year for the children in Chile, rhose who were involved in a mutually antipathetic relationship at Time 1 were more likely to be involved in an antipathetic relationship at Time 2 (39% and 72% of the samples from Chile and the United States, respectively). Similar to Rodkin and colleagues (2003), Berger et al., (2011) found that children were less likely to retain a specific antipathy over time, with only 2% of the Chilean sample and 21% of the United States sample reporting maintaining the same antipathetic relationship across time points.

In a longitudinal study of the development and outcomes of mutually antipathetic relationships, Jacobs (2009) examined a number of individual characteristics as predictors of the development of later mutually antipathetic relationships among children in grades four through seven. Jacobs (2009) found that neither perceived popularity nor a number of emotional difficulties, including sadness, emotion dysregulation, and anger, significantly predicted the development of mutually antipathetic relationships. Interestingly, the inverse relation was also non-significant. However, Jacobs (2009) did find evidence that aggression and victimization were significant positive predictors of the development of mutually antipathetic relationships. The results of this study highlight the dynamic relations between indices of multiple levels (i.e., individual and group-level) of children's social competence and the formation and development of mutually antipathetic relationships.

Although the aforementioned studies are noteworthy for examining the stability of antipathetic relationships across time, a number of important limitations should be noted. First, none of the studies examined *predictors* of stability, with most instead relying on simple

comparisons of the number of antipathetic relationships across time. In doing so, it is difficult to make conclusions about the factors that may influence the stability of antipathetic relationships. Given that involvement in antipathetic relationships is a common occurrence across multiple developmental periods and has been associated with indices of maladjustment, it is important to understand what factors may be influential in maintaining these relationships across time.

Second, the reviewed studies focused exclusively on mutually antipathetic relationships, with no inclusion of unilateral forms of antipathetic relationships. As reviewed above in Barnes and colleagues (2017), the inclusion of various forms of dislike relationships allows for a more nuanced understanding of how this important metric of children's social standing, peer dislike, operates in the peer context. Further, the study by Barnes and colleagues (2017) showed that including different forms of dislike relationships (i.e., reciprocated and non-reciprocated) produced unique, empirically derived profiles of these patterns of relationships that were in turn differentially related to social competence indices. What remains unclear, however, is the relation of patterns of antipathetic relationships and associated social competence outcomes over time.

The Present Research

Children's relationships have most often been studied in terms of mutual, reciprocated friendships. Antipathetic relationships, relationships rooted in dislike and aversion, have garnered research attention in recent years. Although there have been inconsistencies in conceptualizing and measuring antipathetic relationships, studies have found that they are a common occurrence in childhood and adolescence and that they have generally been associated with indices of maladjustment. As with children's friendships, the extent and nature of

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antipathetic relationships have been shown to vary by gender, although findings from this literature remains mixed.

Notably, the existing research has largely examined antipathetic relationships as reciprocated relationships. Of the few studies that have included broader forms of these relationships (i.e., including unilateral and mutual antipathetic relationships, or controlling for dislike), a number of methodological limitations exist, such as (a) including limited-choice nomination procedures; (b) only examining same-gender relationships; (c) and not accounting for different forms of these relationships (i.e., unilateral-given, unilateral-received, mutual). A notable exception is the study by Barnes and colleagues (2017), which established empirically derived profiles of children's mutual and unilateral dislike relationships using a person-centered analytical approach. The study by Barnes and colleagues (2017) was cross-sectional in nature, and examined profiles of dislike relationships and social competence outcomes at a single point in time. This limitation is representative of the antipathetic relationship literature as a whole, which has a scarcity of longitudinal research. This limitation, coupled with the fact that most studies examined only mutually antipathetic relationships of children and adolescents leaves several gaps in our understanding of how these important relationships rooted in dislike, both unilateral and mutual, operate among children.

The major goals of the present research were to examine the stability of patterns of children's antipathetic relationships at two time points (one year/grade level apart), and to examine the reciprocal, cross-lagged relations between these antipathetic relationships and a number of peer social competence correlates. This one-year time frame was chosen to see how the dislike relationship profiles and associated social competence correlates related between a single academic year as children are introduced to a somewhat new set of classmates with

opportunities to establish or maintain dyadic relationships. Specifically, this study builds on

Barnes and colleagues (2017) in four ways. First, this study examined the stability of the

empirically derived profiles of children's mutual and unilateral antipathetic relationships

established previously (i.e., High Disliked, High Dislikers, Average Dislike) to determine a) if

these profiles hold across time and b) if children remain in the same profiles at both time points.

Second, this study examined the reciprocal, cross-lagged relations of social competence

correlates (i.e., loneliness, self-perceived social competence, peer optimism, number of

reciprocated mutual friendships, and peer nominated popularity and sociability behaviors) that

were uniquely related to the empirically derived dislike profiles in the research by Barnes et al.

(2017). Third, using an autoregressive cross-lagged panel analysis, the present research

examined how profile membership at Time 1 related to profile membership (i.e., stability) and

social competence indices at Time 2 (i.e., reciprocal relations), while simultaneously examining

the relation between social competence indices at Time 1 and profile membership (i.e., reciprocal

relations) and social competence indices at Time 2 (i.e., stability). It should be noted that this

study focused on stability of patterns (i.e., profiles) of dislike relationships, and did not examine

the stability of children's antipathetic relationships with specific classmates over time. Finally,

given that gender has been inconsistently related to antipathetic relationships, and was a

significant predictor of profile membership in the study by Barnes and colleagues (2017), the

predictive value of gender was examined in the model.

Method

Participants

Data for the present research were drawn from a larger longitudinal study investigating

peer relations. Participants included 135 children who attended a university-affiliated public

school. If children moved or were not given permission to participate the following year, they were not included in the sample. Thus, complete data were available for 121 children (female = 58; male = 63). Children were assessed as third ($n = 69$) and fourth ($n = 52$) graders and were assessed again in the following year as fourth and fifth graders. The majority of children were White (75%), with 21% Black, and 4% other ethnicities. The participants were largely from middle-class socioeconomic backgrounds, as evidenced by less than 20 percent of the children qualifying for any lunch subsidy.

The University Institutional Review Board (IRB) approved the measures and procedure for this study. At school enrollment, parents provided consent to allow their children to participate in a wide range of studies occurring at the school. For each study, parents were given specific information about each research project being conducted, as well as the opportunity to decline participation for their children in specific studies or all studies. Information about the present study was mailed to parents who were informed there would be no penalty to their child if they chose to opt out of the research study. Children were informed about the purpose of the research and confidentiality at the beginning of the data collection session. Additionally, children were informed of their right to refuse or discontinue participation at any time with no penalty. For the present study, all children provided their assent.

Measures

Seven measures were group-administered to children by classrooms during the fall semester of the 2010-2011 school year (Time 1) and the fall of the 2011-2012 school year (Time 2). All measures were administered at both time points. A sociometric nomination procedure was used to calculate mutual and unilateral antipathetic relationships. The remaining eight social competence measures, following the Rubin et al. (2006) framework, consisted of assessments of

individual (i.e., loneliness, peer optimism, self-perceived social competence), relationship (i.e., number of mutual friendships), and group-level indices (i.e., peer nominations for popularity and sociability).

Sociometric nominations for antipathetic relationships. Children were provided with a classroom roster and asked to circle the names of the children in their classroom whom they "liked the least." Children were allowed an unlimited number of nominations, and were also allowed cross-gender nominations. Reciprocated like-least nominations (i.e., two children circled each other's names) were considered mutual antipathies. A unilateral-given antipathy relationship occurred if a child gave a like-least nomination that was not reciprocated. Conversely, a unilateral-received antipathy relationship occurred if a child received a like-least nomination that the child did not reciprocate. The number of these forms of antipathetic relationships was summed separately for each child and standardized by classroom to control for differences in classroom sizes. Notably, the classroom memberships changed at the start of the Time 2 year, meaning that the subsequent classroom rosters also changed. Thus, the pool from which children nominated each other was different across time points. It is important to note that this study examined stability of profiles of antipathies, and not antipathetic relationships with *specific* individuals over time.

Individual level assessment of peer social competence. Three measures were used to assess children's individual peer social competence: peer optimism, loneliness, and self-perceived social competence.

Peer Optimism. The Peer Life Orientation Test (PLOT; Deptula, Cohen, Phillipsen, & Ey, 2006), an adaptation of the Life Orientation Test-Revised (Scheier & Carver, 1985; Scheier, Carver, & Bridges, 1994), was used to assess children's peer optimism. This 10-item, self-report

measure assesses expectations for peer interactions and relations. Children rated the extent to which they agreed to each item on a 4-point Likert scale from 1 (*really disagree*) to 4 (*really agree*). Items on this measure are worded to reflect pessimism (e.g., "I don't usually expect good things to happen to me when I am with other kids") and optimism (e.g., "When I see a group of kids doing something fun, it is usually easy for me to join them") and related to peer expectancies. A total peer optimism score was created by reverse scoring the responses to the pessimism items and combining them with the summed optimism items (Time 1 alpha = .85; Time 2 alpha = .87).

Loneliness. Asher and Wheeler's (1985) loneliness questionnaire was administered to assess children's self-reported feeling of loneliness. This 24-item measure was developed for use with school-aged children, and includes 16 primary items and eight filler items. Using a 5-point Likert scale, children rated how true each item was for them from 1 (*that's not true about me*) to 5 (*that's always true about me.*) The primary items assess children's feelings of loneliness (e.g., "I am lonely at school"), feelings of social adequacy/inadequacy (e.g., "I'm good at working with other children at school"), and perceived peer status (e.g., "I have lots of friends in my class"). The eight filler items focus on children's hobbies or activities (e.g., "I like to paint and draw"). The 16 primary item responses are averaged into a single score, with higher scores indicating greater feelings of loneliness (Time 1 alpha = .92; Time 2 alpha = .93).

Self-Perceived Social Competence. Children's self-perceived social competence was assessed using the Self-Perceived Social Competence Scale, a 6-item subscale of the 36-item Perceived Competence Scale (Harter, 1982). Children were asked to read a pair of scenarios (e.g., "Some kids find it hard to make friends" and "Other kids find it pretty easy to make friends") and then choose the scenario that was more true for them. Children then rated whether

the chosen scenario was "*really true for them*" or "*sort of true for them*," resulting in a 4-point scale with higher scores indicating higher self-perceived social competence (Time 1 alpha = .62; Time 2 alpha = .72).

Relationship level of peer social competence. Children's mutual friendships were calculated as an index of their social functioning at the relationship level. Children were provided with a classroom roster and asked to circle the names of all of the children in their class with whom they were friends. An unlimited number of nominations and cross-gender nominations were allowed. If two children circled each other's names, they were classified as mutual friends. The number of mutual friendships was summed for each child and standardized by classroom to control for differences in classroom sizes. Of note, unilateral friendships were not examined, as this study wanted to examine how both unilateral and mutual dislike relates to the reciprocated nature of mutual friendships which have been shown to be associated with a number of adjustment indices (see Hartup, 1996).

Group level of peer social competence. Popularity was assessed to determine an evaluation of children's peer standing at the peer group level. In addition, peer classroom nominations for sociable behaviors were included.

Popularity. To assess children's perceived popularity, children were provided with a classroom roster and were instructed to circle the names of all the children in their classroom whom they believed to be the most popular. Consistent with the nominations for friendships, children were again allowed unlimited nominations and cross-gender nominations. Children were not allowed to nominate themselves. Popularity nominations were summed for each child and standardized by classroom to control for classroom size differences.

Behavior nominations for sociability. A widely used behavior nomination measure, The Revised Class Play procedure (Masten, Morison, & Pelligrini, 1985), was used to calculate peer perceptions of children's sociable behaviors. Children were told to pretend that they were the director of a play and instructed to "cast" their fellow classmates as characters in a play based on who could best fit certain behavioral characteristics. The children were given classroom rosters and asked to circle the names of their classmates for each of 35 behavior descriptions. Four items from Masten et al. (1985) were used to assess peer evaluations of sociable behavior (e.g., "a person everybody likes to be with"). Nominations received were combined and summed separately for each child. To control for differences in class size, these sums were then standardized by classroom. Children were allowed unlimited nominations of their classmates, but were instructed that they could not nominate themselves for any of the items.

Procedures

Data were collected during the fall semesters of the 2010-2011 (Time 1) and 2011-2012 (Time 2) academic school year. All measures were group administered by classroom to the children in two sessions. These sessions were led and monitored by at least two graduate student research assistants, with additional assistance provided by at least two additional graduate students and/or undergraduate research assistants. The measure instructions were read aloud by the session leader while the other researchers gave individual assistance to children as needed. Children were made aware of their right to discontinue the study at any time without penalty, and were assured that their responses would remain confidential. Children were instructed to work quietly and not to discuss their answers with classmates or teachers.

Data Analytic Plan

As stated, the purpose of this study was to examine the measurement of stability of empirically derived profiles of children's mutual and unilateral antipathetic relationships established previously (i.e., High Disliked, High Dislikers, Average Dislike) by Barnes et al. (2017). Second, this study examined the reciprocal, cross-lagged relations of social competence correlates (i.e., loneliness, self-perceived social competence, peer optimism, number of reciprocated mutual friendships, and peer nominated popularity and sociability) that were uniquely related to the empirically derived dislike profiles in the research by Barnes et al. (2017). Finally, gender was examined in the model to address the inconsistencies in the literature on gender and antipathetic relationships.

Data were analyzed using MPLUS Version 8.0 (Muthen & Muthen, 1998-2017). Data were screened following guidelines established by Tabachnick and Fidell (2013). Given the nature of the data (i.e., children reporting on their dislike relationships with others, and children reporting on various behavioral measures), Maximum Likelihood with robust standard errors (MLR) was used as the estimator in the primary analyses, described below, as MLR is robust in relation to non-normality and non-independence of observations (Muthen & Muthen, 1998-2017). To accomplish the goals of the present study, analyses were conducted in three steps: (1) a Latent Transition Analysis across latent profiles at Time 1 and Time 2, (2) a longitudinal measurement model on social competence correlates at Time 1 and Time 2, and (3) the autoregressive cross-lagged panel model combining class membership and social competence correlates at both time points, as well as the potential role of gender. These steps are discussed more fully below.

Step 1: Latent Transition Analysis. A Latent Transition Analysis (LTA) was

conducted as the first step in the analyses. Latent Transition Analysis is a statistical model in

which latent categorical constructs are defined at two or more time points and individuals are

allowed to transition between latent classes (Rindskopf, 2010). Latent Transition Analysis is

unique in that it allows for the examination of the initial distribution of people across categories

(e.g., distribution of children across classes of antipathetic relationships), as well as the

examination of how people transition from category to category, either the same or different, at

another time point (Rindskopf, 2010). Within LTA, parameters are included that assess initial

status and transition probabilities from multiple time points.

An LTA with no covariates was computed using the latent profiles previously established

in Barnes et al. (2017). Measurement invariance of the Latent Profile Analysis indicators was

assumed across the two time points. Results from the LTA yielded CPROBS, values that

represent an individual's *posterior* probabilities for membership in each class at Time 1 and

Time 2 (Muthen & Muthen, 1998-2017). These values were exported and modeled as observed

variables in Step 3 of the analyses (described below). Following recommendations by Nylund

(2007), it is appropriate to use either CPROBS values or Bolck-Croon-Hagenaars (BCH) weights

(Asparouhov & Muthen, 2014) when the entropy, a standard fit index representing a measure of

classification precision (Berlin, Williams, & Parra, 2014), is greater than 0.80.

Step 2: Longitudinal Measurement Model. From Barnes and colleagues (2017), a

number of social competence correlates were of interest to the present research. These social

competence correlates were chosen to reflect varying levels of the hierarchy of social complexity

proposed by Hinde (Hinde, 1992; Rubin et al., 2006). In an attempt at data reduction and to

decrease model complexity, a longitudinal measurement model was conducted with five of the

25

six variables, representing individual (i.e., self-perceived social competence, loneliness, peer optimism) and group (i.e., peer nominations for popularity and sociability behaviors) level variables of Hinde's hierarchy (Hinde, 1992; Rubin et al., 2006). This model was constrained to be invariant across the two time points at the scalar level, which tests the equality of intercept terms (i.e., thresholds). Constraining the model to be invariant at the scalar level allowed the latent means, variances, and covariances to be interpreted similarly over time (Gregorich, 2006). Latent variable factor scores were exported and an aggregate was taken to be modeled as observed variables in the final model (described below). Number of mutual friendships was not included in the longitudinal measurement model; instead, it was modeled as an observed variable representing the relationship-level of Hinde's hierarchy (Hinde, 1992; Rubin et al., 2006) in the final model.

Step 3: Autoregressive cross-lagged panel model. Finally, the results from the preceding two steps were combined in an autoregressive cross-lagged panel model. Autoregressive cross-lagged panel models are used to examine the structural relations of repeatedly measured constructs. Although these types of models lack an explicit theory of change (Selig & Little, 2012), they can be particularly useful for developmental research as they make it easy to examine reciprocal relations that are often emphasized in developmentally relevant theories, such as systems theory (Sameroff, 1983). Specifically, autoregressive cross-lagged panel models can help determine if cross-lagged effects occur in both directions and allow for the assessment of the strength of the cross-lagged effects (Selig & Little, 2012).

A conceptual diagram of the full model examined in the present study is presented in Figure 2. Participants' most likely class membership at Time 1 and Time 2 (determined in Step 1) were modeled as observed variables examining class membership across time points. Next,
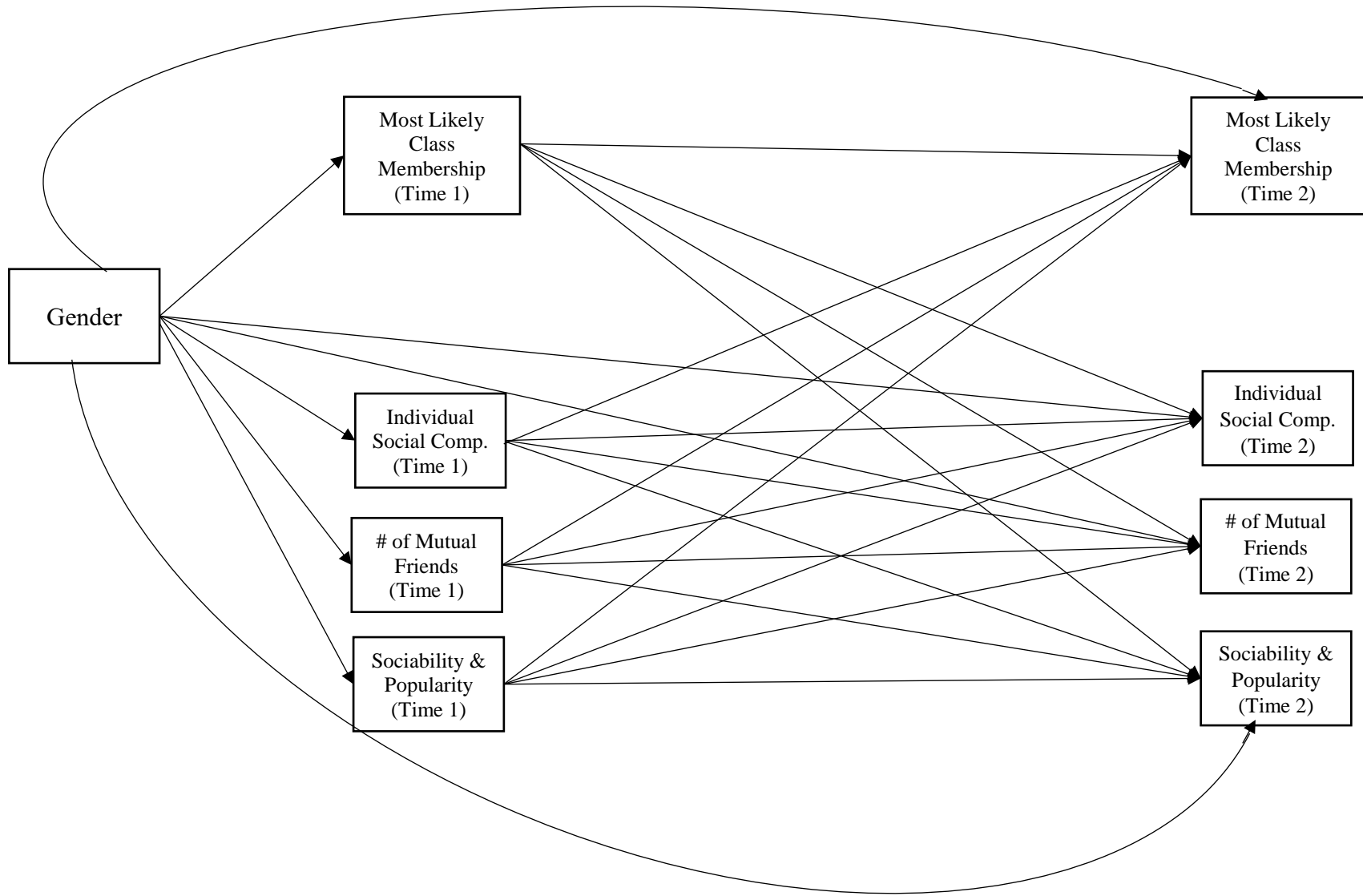
Figure 2. *Conceptual diagram of autoregressive cross-lagged panel model. Note*: Individual social competence = self-perceived social competence, peer optimism, loneliness

the social competence correlates derived in Step 2, representing individual, relationship, and group-level variables (Hinde, 1992; Rubin et al., 2006) at both time points, were added to the model as observed variables. All variables (i.e., most likely class membership and the three social competence correlates) at Time 1 were used to predict all other variables at Time 2. Finally, gender was examined in the model, predicting all variables across both time points. Given that children's most likely class membership (derived in Step 1 of the analyses) is a nominal variable, the final step of the analysis involved computing a multinomial logistic within the autoregressive cross-lagged panel model. For this reason, contrast codes were created using the Average Dislike class (see Barnes et al., unpublished manuscript) as the reference group.

Results

Step 1: Latent Transition Analysis

Correlations across the measures at both time points and means and standard deviations of the study measures are presented in Tables 1-3. With regard to children's antipathetic relationship nominations, children received an average of 1.41 ($SD = 2.26$) mutual antipathy, 2.26 ($SD = 5.47$) unilateral-given antipathy, and 2.69 ($SD = 7.80$) unilateral-received antipathy nominations at the first time point. At the second time point, children received an average of 1.40 ($SD = 4.93$) mutual antipathy, 3.12 ($SD = 8.44$) unilateral-given antipathy, and 3.12 ($SD = 10.90$) unilateral-received antipathy nominations.

The first step of the analyses involved computing an LTA with no covariates to allow for the examination of transition across the previously established classes (see Barnes et al., unpublished manuscript) from Time 1 to Time 2. As described above, the High Disliked profile was characterized by high unilateral-received and mutual dislike nominations, the Average Dislike profile was characterized by average dislike nominations across all indicators, and the

Table 1. *Correlations among study measures at Time 1.*

	Social Competence	Loneliness	Peer Optimism	Mutual Friends	Popularity	Sociability
Soc. Comp.	3.01 (0.54)					
Loneliness	-.66**	2.00 (0.68)				
Peer Optimism	.61**	-.61**	3.32 (0.70)			
Mutual Friends	.25**	-.74**	-.07	0 (0.95)		
Popularity	.40**	-.36**	.14	.38**	0 (0.95)	
Sociability	.25**	-.32**	.10	.42**	.67**	0 (0.95)

Note: *$p < .05$; **$p < .01$.

Means and standard deviations are presented on the diagonal.   Mutual Friends, Popularity, and Sociability are standardized values.

Table 2. *Correlations among study measures at Time 2.*

	Social Competence	Loneliness	Peer Optimism	Mutual Friends	Popularity	Sociability
Soc. Comp.	2.91 (0.41)					
Loneliness	-.66**	1.94 (0.67)				
Peer Optimism	.64**	-.85**	3.23 (0.46)			
Mutual Friends	.18	-.33**	.31**	0 (0.96)		
Popularity	.27**	-.38**	.34**	.47**	0 (0.97)	
Sociability	.29**	-.40**	.38**	.40**	.84**	0.01 (0.96)

Note: $*p < .05$; $**p < .01$

Table 3. *Correlations among study measures at Time 1 and Time 2.*

	Soc. Comp. (T2)	Loneliness (T2)	Peer Optimism (T2)	Mutual Friends (T2)	Popularity (T2)	Sociability (T2)
Soc. Comp. (T1)	.55**	-.61**	.60**	.24*	.37**	.35**
Loneliness (T1)	-.41**	.51**	-.49**	-.24*	-.44**	-.38**
Peer Optimism (T1)	.32**	-.33**	.33**	.10	.23*	.20*
Mutual Friends (T1)	.15	-.26**	.28**	.36**	.38**	.37**
Popularity (T1)	.29**	-.41**	.42**	.29**	.71**	.68**
Sociability (T1)	.20*	-.37**	.36**	.38**	.57**	.67**

Note: *$p < .05$; **$p < .01$

High Dislikers profile was characterized by the lowest unilateral-received and the highest unilateral-given dislike nominations.

As displayed in Table 4, the values along the diagonal show the latent transition probabilities of children staying in the same latent profile over time. Table 5 presents the counts and proportions of each latent class pattern across Time 1 and Time 2. Children in the Average and High Dislikers profiles at Time 1 were more likely to remain in the same respective class at Time 2 (Average-Average at Time 2: $n = 72$; probability = .84; High Dislikers-High Dislikers at Time 2: $n = 18$; probability = .50). Regarding the Average Group at Time 1, there was little movement to the High Dislikers ($n = 4$; probability = .05) or High Disliked group ($n = 7$; probability = .11) group at Time 2. Some children in the High Dislikers Group at Time 1 moved to the Average profile at Time 2 ($n = 12$; probability = .40), whereas relatively few moved to the High Disliked profile at Time 2 ($n = 4$; probability = .28).

Table 4. *Results from the LTA: Transition probabilities for Time 1 to Time 2 based on the estimated model*

	Time 2		
Time 1	Average Group	High Dislikers	High Disliked
Average Group	0.84	0.05	0.11
High Dislikers	0.40	0.50	0.10
High Disliked	0.64	0.08	0.28

Table 5. *Results from the LTA: Latent class counts and proportions across time points*.

	Time 2		
Time 1	Average Group	High Dislikers	High Disliked
Average Group	72 (53.30%)	4 (2.96%)	7 (5.19%)
High Dislikers	12 (8.89%)	18 (13.30%)	4 (2.96%)
High Disliked	12 (8.89%)	1 (0.74%)	5 (3.70%)

Distinct from the Average and High Dislikers profile which saw the majority of children remaining in the same class across time, the High Disliked profile saw more children transitioning out of this group, rather than remaining, at Time 2. Specifically, the transition probability for remaining in the High Disliked profile at Time 2 was .28 ($n = 5$), whereas moving to the Average profile held a transition probability of .64 ($n = 12$). Few children transitioned from the High Disliked profile at Time 1 to the High Dislikers profile at Time 2 ($n = 1$; probability = .08).

In sum, results from the LTA revealed stability across many of the profiles, particularly the Average Dislike profile. Specifically, the majority of the children started out in the Average Dislike profile and remained there at the second time point. Additionally, children in the High Dislikers profile also demonstrated some stability, though a nontrivial number of these children also transitioned into the Average Dislike profile at Time 2. The High Disliked profile showed the least stability over time, with a greater number of children transitioning to the Average Dislike profile at Time 2, rather than remaining in the High Disliked profile.

Step 2: Longitudinal Measurement Model

Five competence variables were included in a longitudinal measurement model assessing individual-level functioning (i.e., peer optimism, loneliness, and self-perceived social competence) and group-level functioning (i.e., peer nominations for sociability and popularity) (See Figure 3). Recall that, the number of children's reciprocated mutual friendships was not included in the measurement model. The model was constrained to be invariant at the scalar level, allowing for equivalence of item intercepts and factor loadings. Results of the model revealed good fit ($\chi^2 = 669.34$, $p < .001$; BIC = 2420.81; RMSEA = .05 (90% CI: 0.00 – 0.09); CFI = .98; SRMR = .07;) and resulted in latent variables for individual- and group-level functioning across the two time points. The individual-level latent variable was characterized by high feelings of loneliness and low levels of peer optimism and self-perceived social competence. Therefore, this latent variable was named "Socially Dysphoric." The group-level latent variable was characterized by high peer nominations for popularity and sociability. Thus, this latent variable was named "Sociable-Popular." The factor scores for each of these latent variables at both time points were exported and combined into a dataset containing the CPROBS values from Step 1 for examination of the full model, as described below.

Step 3: Autoregressive Cross-Lagged Panel Model

The results of the LTA and the longitudinal measurement model were combined and included in an autoregressive cross-lagged panel model. Additionally, the role of gender was included in the model as an observed variable. The autoregressive cross-lagged panel model allowed for both the examination of stability of variables across time, as well as cross-lagged effects over time. Important to note, the autoregressive cross-lagged model computes all of the regressions simultaneously, meaning that significant findings are significant holding all else
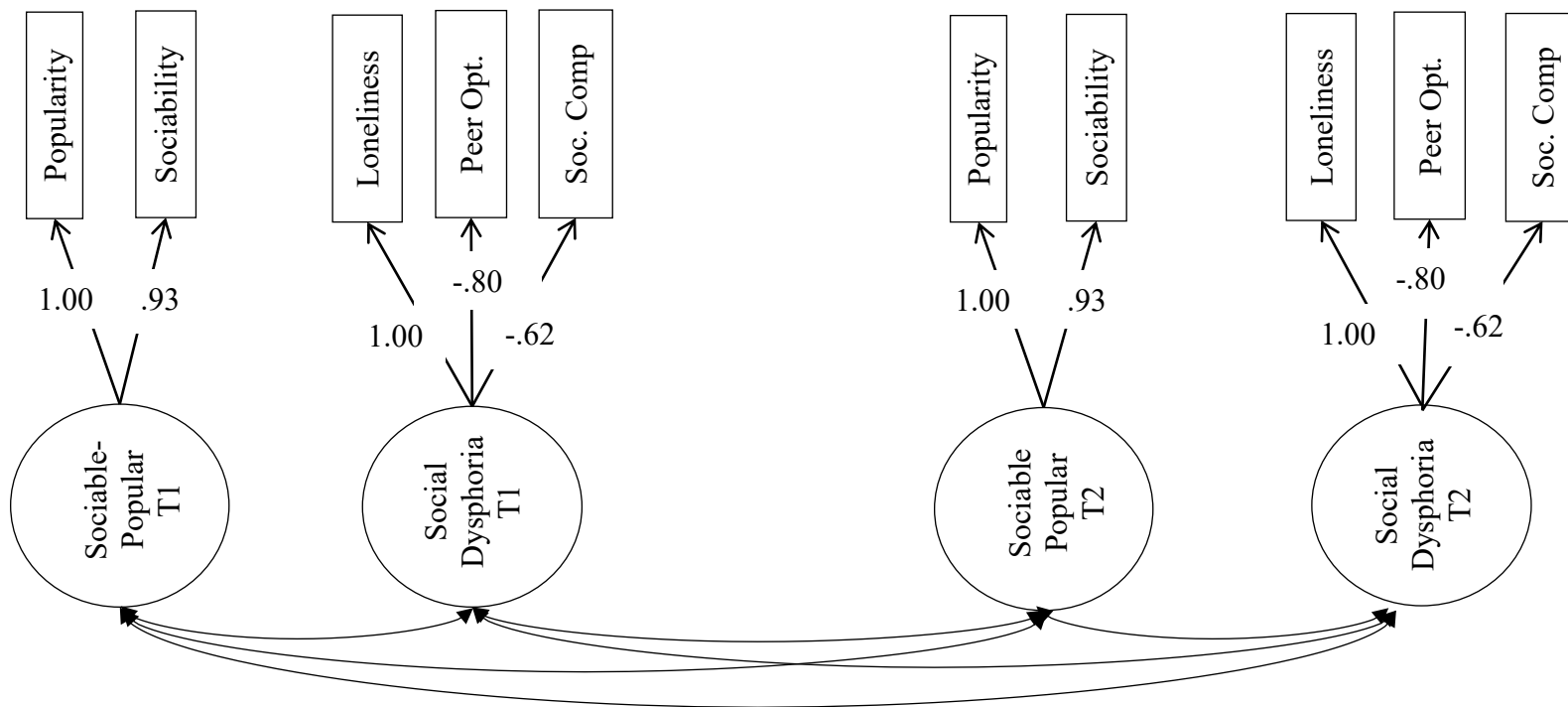
Figure 3. *Results from the longitudinal measurement model on children's social competence correlates.*

Note: Model Fit - $\chi^2 = 669.34$, $p < .0001$; BIC = 2420.81; RMSEA = .05 (90% CI: .00 – .09); CFI = .98; SRMR = .07

constant. Results related to the prediction of children's class membership at Time 2 are discussed first, followed by the associations with social competence correlates at Time 2 (See Table 6 and Figure 4 for a conceptual diagram of the significant unstandardized estimates).
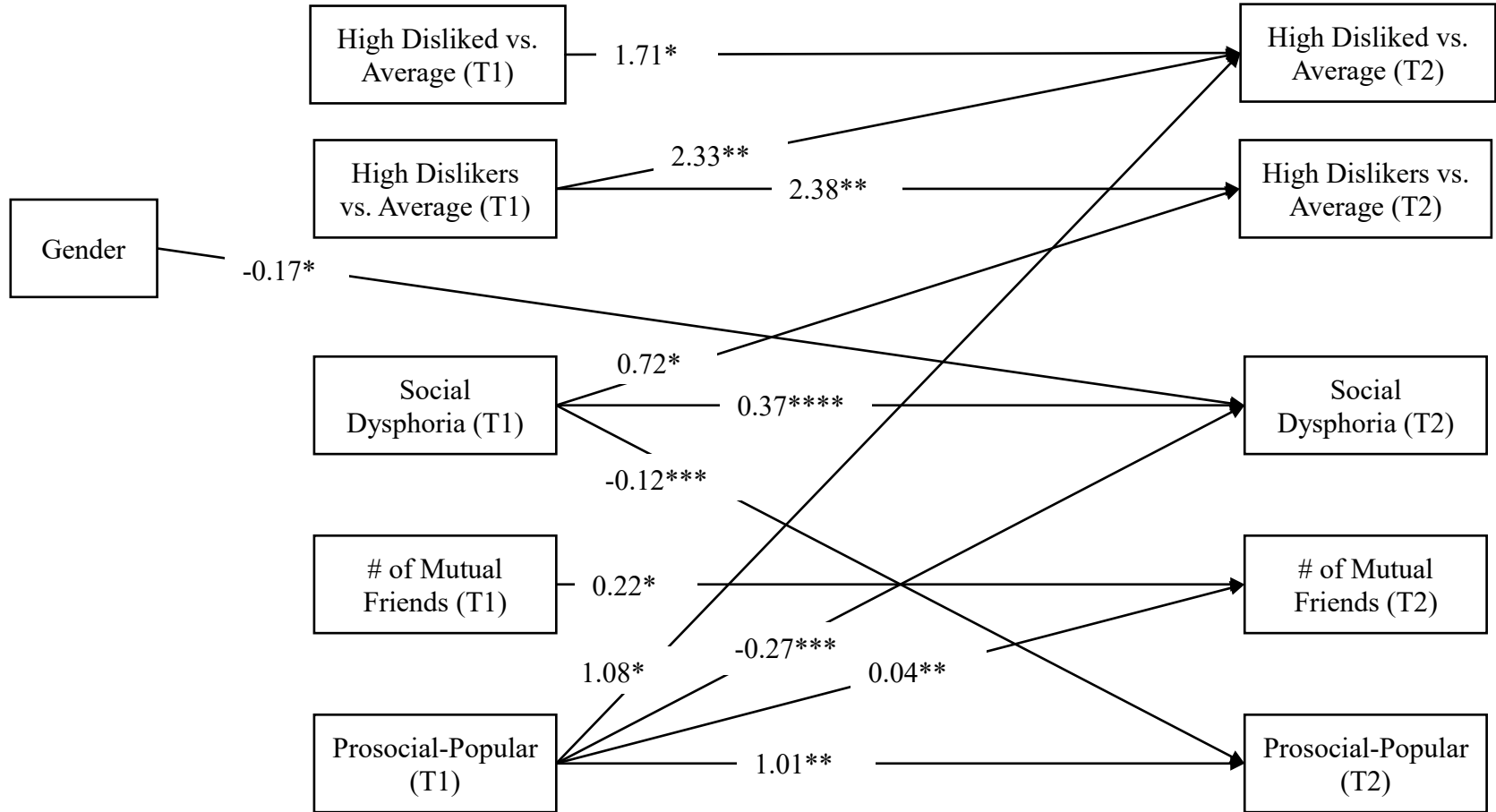
Prediction of Children's Class Membership at Time 2: High Disliked vs. Average Group. Using contrast codes, the Average Dislike profile was selected as the reference group given that it was the largest latent profile at both time points and the group that comprised the most typical, average social functioning. Relative to the Average Dislike profile, being in the High Dislikers profile at Time 1 increased the log odds of being in the High Disliked profile, compared to the Average Dislike profile, at Time 2 by 2.33 ($p = .009$). In a similar fashion, compared to the Average profile, being in the High Disliked profile at Time 1 increased the log odds of being in the High Disliked profile, compared to the Average Dislike profile, at Time 2 by 1.71 ($p = .015$). Thus, relative to the children in the Average Dislike profile, High Dislikers were more likely to become disliked, and High Disliked children were more likely to remain in the High Disliked profile at the second time point, as compared to the Average Dislike profile.

With regard to individual- and group-level functioning, only children's Sociable-Popular status predicted class membership at Time 2. Specifically, a one-unit increase in children's Sociable-Popular status at Time 1 was associated with a 1.08 increase in the relative log odds of children being in High Disliked profile, compared to the Average Dislike profile, at Time 2 ($p = .015$). However, neither gender, Social Dysphoria, nor number of reciprocated mutual friendships at Time 1 was significantly associated with membership in the High Disliked profile, relative to the Average Dislike profile, at Time 2. In sum, poor group level peer evaluations at Time 1 were related to being in the High Dislike profile at Time 2, relative to the Average

Table 6. *Results from the autoregressive cross-lagged panel model.*

	Estimate	S.E.	Est./S.E.	*p*-value
High Disliked vs. Average (T2)				
High Dislikers vs. Average (T1)	2.33	0.89	2.60	.009
High Disliked vs. Average (T1)	1.71	0.71	2.43	.015
Social Dysphoria (T1)	0.17	0.40	0.43	.671
Sociable-Popular (T1)	1.08	0.45	2.44	.015
# Mutual Friends (T1)	0.04	0.34	0.12	.901
Gender	0.44	0.58	0.75	.452
High Dislikers vs. Average (T2)				
High Dislikers vs. Average (T1)	2.38	0.82	2.92	.004
High Disliked vs. Average (T1)	0.24	1.17	0.21	.836
Social Dysphoria (T1)	0.72	0.36	2.01	.044
Sociable-Popular (T1)	-0.86	0.68	-1.25	.211
# Mutual Friends (T1)	-0.74	0.48	-1.55	.121
Gender	-0.96	0.63	1.52	.129
Social Dysphoria (T2)				
High Dislikers vs. Average (T1)	0.24	0.16	1.49	.138
High Disliked vs. Average (T1)	0.06	0.12	0.45	.653
Social Dysphoria (T1)	0.37	0.06	6.15	.000
Sociable-Popular (T1)	-0.27	0.06	-4.39	.000
# Mutual Friends (T1)	-0.05	0.06	-0.87	.384
Gender	-0.17	0.08	-2.04	.042
# Mutual Friends (T2)				
High Dislikers vs. Average (T1)	-0.08	0.21	-0.37	.715
High Disliked vs. Average (T1)	0.14	0.19	0.75	.452
Social Dysphoria (T1)	-0.04	0.08	-0.47	.641
Sociable-Popular (T1)	0.36	0.12	3.07	.002
# Mutual Friends (T1)	0.22	0.09	2.52	.012
Gender	0.19	0.16	1.19	.233
Sociable-Popular (T2)				
High Dislikers vs. Average (T1)	0.13	0.08	1.75	.080
High Disliked vs. Average (T1)	-0.08	0.09	-0.82	.413
Social Dysphoria (T1)	-0.12	0.03	-3.57	.000
Sociable-Popular (T1)	1.01	0.06	16.37	.000
# Mutual Friends (T1)	0.04	0.05	0.84	.403
Gender	0.01	0.06	0.13	.895

Note: Gender is coded 0 = Male, Female = 1

Figure 4. *Conceptual diagram of the significant results from the autoregressive cross-lagged panel model*

Note: Only the significant paths are presented (unstandardized estimates)

p < .05; ***p* < .01; ****p* < .001

Dislike profile. Interestingly, individual level social competence assessments did not relate to being in the High Disliked profile relative to the Average Dislike profile at Time 2.

Prediction of Children's Class Membership at Time 2: High Dislikers vs. Average Group. Compared to the Average profile, being in the High Dislikers profile at Time 1 increased the log odds of being in the High Dislikers profile, compared to the Average Dislike profile, at Time 2 by 2.38 ($p = .004$). However, being in the High Disliked profile, compared to the Average Dislike profile, at Time 1 did not change the odds of being in the High Dislikers profile at Time 2. Distinct from the High Disliked vs. Average profile at Time 2 described above, only children's Social Dysphoria at Time 1 predicted class membership. Specifically, a one-unit increase in children's Social-Dysphoria at Time 1 was associated with a .72 increase in the relative log odds of children being in the High Dislikers profile, compared to the Average profile, at Time 2 ($p = .044$). Children's gender, number of mutually reciprocated friendships, and children's Sociable-Popular status, at Time 1 did not change the odds of being in the High Dislikers profile, compared to the Average profile, at Time 2.

Prediction of Children's Social Competence Correlates at Time 2. Beyond children's class membership, the stability and cross-lagged effects of children's social competence correlates were also examined. With regard to children's Social Dysphoria at Time 2, class membership at Time 1 was not significantly associated with Social Dysphoria at the second time point. Similarly, number of children's reciprocated mutual friendships at Time 1 was not significantly associated with Social Dysphoria at Time 2. However, children's Social Dysphoria at Time 1 was significantly and positively associated with their Social Dysphoria at Time 2 (Estimate $= 0.37$, $p < .0001$). Additionally, children's Sociable-Popular behavior at Time 1 was significantly and negatively associated with their Social Dysphoria at Time 2 (Estimate $= -0.27$,

$p < .0001$). Finally, children's gender was significantly associated with Social Dysphoria at Time 2 (Estimate = -0.17, $p < .042$), such that boys, compared to girls, were high in Social Dysphoria at Time 2. In sum, stability in children's Social Dysphoria was demonstrated, as children's Social Dysphoria at Time 1 significantly predicted their Social Dysphoria at Time 2. Additionally, cross-lagged effects were found with children's Social Dysphoria at Time 2, with gender and class membership at Time 1 acting as significant predictors of Social Dysphoria at Time 2.

Next, children's mutually reciprocated friends at Time 2 was examined. Similar to Social Dysphoria at Time 2, children's class membership at Time 1 was again not a significant predictor. Similarly, children's gender and Social Dysphoria at Time 1 did not predict mutually reciprocated friendships at Time 2. However, both children's Sociable-Popular behavior (Estimate = 0.36, $p = .002$) and their number of mutually reciprocated friendships (Estimate = 0.22, $p = .012$) at Time 1 were significantly and positively associated with children's number of mutually reciprocated friendships at Time 2. Thus, stability was demonstrated, with children's number of mutual friends at Time 1 predicting subsequent number of mutual friends at Time 2, along with a cross-lagged effect of children's Sociable-Popular status at Time 1 predicting number of mutually reciprocated friendships at Time 2.

Finally, with regard to the prediction of children's Sociable-Popular behavior at Time 2, children's class membership at Time 1 was not a significant predictor of Children's Sociable-Popular behavior at the second time point. Further, neither gender nor number of mutually reciprocated friendships at Time 1 was associated with children's Sociable-Popular behavior at Time 2. However, children's Sociable-Popular behavior at Time 1 was significantly and positively associated with their prosocial behavior at Time 2 (Estimate = 1.01, $p < .0001$), and

their Social Dysphoria at Time 1 was significantly and negatively associated with Sociable-Popular behavior a year later (Estimate = -0.12, $p < .0001$). In sum, there were significant cross-lagged effects, with both children's Social Dysphoria and number of reciprocated mutual friendships at Time 1 predicting children's Sociable-Popular status at Time 2, as well as stability over time, with children's Sociable-Popular status at Time 1 predicting Sociable-Popular status at Time 2.

In sum, the results from the autoregressive cross-lagged panel model, in conjunction with the LTA and longitudinal measurement model, demonstrate the stability of measurement of the empirically derived profiles of children's antipathetic relationships over the course of one year. Additionally, these findings highlight the associations between various indices of children's social competence and children's profile membership a year later, along with the stability of these variables themselves.

Discussion

Children's dyadic relationships relate to their social functioning and adjustment, and it is important to acknowledge both positive (i.e., friendships) and negative (i.e., antipathies) forms of these relationships. The literature on children's antipathetic relationships has expanded in recent years, with studies documenting that antipathies are common in childhood and adolescence (Card, 2010; Parker & Gamm, 2003; Witkow et al., 2005) and have been generally associated with indices of maladjustment (see Card, 2010). However, the majority of studies have examined children's antipathetic relationships as reciprocated relationships, with little attention paid to unilateral (i.e., non-reciprocated) forms of these relationships. A notable exception to this limitation is the study by Barnes and colleagues (2017) which established empirically derived profiles based on mutual and unilateral antipathy relationships. However, much like the

antipathy literature as a whole, the design of this study was cross-sectional and did not allow for the examination of children's antipathetic relationships over time.

The present research expands our understanding of children's antipathetic relationships in a number of ways. First, this study is the first to systematically examine the nuances and variations in all forms of children's antipathetic relationships (i.e., mutual and unilateral) across time. Building on the study by Barnes and colleagues (2017), the present research took the empirically derived profiles of children's unilateral and mutual antipathy nominations and replicated them at a second time point. Using Latent Transition Analysis, we examined changes in children's profile membership over time, highlighting how children transition from the empirically derived profiles over the span of a year. In addition, we examined the social competence correlates that were uniquely related to antipathy profiles in Barnes et al. (2017) and documented associations between composites of social functioning and antipathy profile membership across time. The full autoregressive cross-lagged panel model allowed for the examination of the stability of both social competence correlates and children's most likely antipathy profile membership across time, as well as cross-lagged associations between these variables. Finally, gender was included in the final model in an attempt to further elucidate how gender was associated with children's antipathetic relationships and social competence over time. The remaining discussion is organized in terms of antipathy profiles, longitudinal examination of antipathy profiles, and children's social competence.

Profiles of Antipathy Nominations: Results from the Latent Transition Analysis

We examined the empirically derived profiles of children's mutual and unilateral antipathy nominations from Barnes and colleagues (unpublished manuscript, i.e., Average Dislike, High Disliked, High Dislikers), over time. Using Latent Profile Analysis, these profiles

were assumed to replicate at a second time point and then a Latent Transition Analysis examined the transition of children across the profiles at the two time points. Results from this set of analyses revealed both patterns of antipathy profile membership stability, as well as some notable points of transition.

Stability was most clearly seen with the children in the Average Dislike profile, the majority of whom remained in this profile at the second time point. Few children in the Average Dislike profile transitioned to either the High Dislikers or the High Disliked profile at the second time point. This is not altogether surprising given the literature documenting that most children work to adopt behaviors and attitudes similar to the rest of those in the larger peer context (Chang, 2004). Some stability was also documented for the High Dislikers group, though the transition probability was not as strong for this profile relative to the Average Dislike profile. Specifically, children in the High Dislikers profile at Time 1 had a transition probability of 0.501 of remaining in the same profile at Time 2.

Interestingly, a sizeable proportion of children in the High Dislikers profile at Time 1 transitioned to the Average Dislike profile at Time 2. Recall that children in the High Dislikers profile made the greatest number of unilateral-given dislike nominations, and had low unilateral-received and mutual dislike nominations. Perhaps these Time 1 High Dislikers gradually adopted less extreme behaviors over time, becoming more "average" in relation to their peers. It may also be the case that there was pressure from the peer group for children who fall outside of the norm to adopt the more typical behaviors and attitudes of the classroom as a whole.

Regarding the High Disliked profile, there was some stability in profile membership across time, with a little more than a quarter of the children remaining in this profile at Time 2. However, nearly two-thirds of the children transitioned out of this profile and into the Average

Dislike profile at Time 2. This is especially noteworthy given that, in the paper by Barnes and colleagues (2017), being in the High Disliked profile was consistently associated with the poorest social competence outcomes. Thus, despite the concurrent negative outcomes, many children demonstrated the ability to transition to a profile characterized by more normative social functioning. Similar to the High Dislikers profile, these findings may underscore the influence of the larger peer group which may push for the adoption of more normative attitudes and behaviors for those individuals who fall outside of the majority (Chang, 2004). In a similar vein, it is likely that teachers are influential in establishing a classroom climate that is characterized by prosocial behaviors and attitudes (Buyse, Verschueren, Verachtert, & Damme, 2009), and other family members and siblings may also work to promote such functioning (Silver, Measelle, Armstrong, & Essex, 2005). Alternatively, it may also be that these children benefit from the additional year of socialization and mature enough to demonstrate greater gains in their antipathy status as a result. Relatedly, given that the floor for these children was relatively low, it may be that any improvement is enough for a child to move out of the High Disliked group, when compared to the Average Dislike profile.

In sum, these results highlight that the empirically derived profiles of all forms of children's antipathetic relationships (i.e., unilateral-given, unilateral-received, and mutual) that were uncovered in the study by Barnes and colleagues (2017) held over time. The majority of children were in the Average Dislike profile at both time points, with this group showing the most stability across time. This group was comprised of children who exhibited average levels of all forms of dislike and thus represent the majority of functioning of the children in this sample. Given the literature documenting that most children work to adopt and maintain the attitudes and behaviors of the larger peer group (Chang, 2004), it is unsurprising that the

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measurement of this group demonstrated the most stability over time. Interestingly, a sizeable proportion of children in the more extreme profiles, the High Disliked and High Dislikers, transitioned to the Average Dislike profile at the second time point, potentially highlighting the influence of this more normative group in producing movement toward adopting the behaviors and attitudes of this group at large. It is important to emphasize that there was some stability in both the High Dislikers and High Disliked profile across time, suggesting some children do remain in these more extreme profiles over the course of a year.

Children's Social Competence Over Time: Results from the Longitudinal Measurement Model

The present research also examined social competence correlates uniquely associated with children's antipathy profiles in the study by Barnes and colleagues (2017) over time. Guided by Hinde's hierarchy of social complexity (Hinde, 1992; Rubin et al., 2006), the present study conducted a longitudinal measurement model with five social competence variables in an attempt to reduce model complexity, with the resulting latent variables representing individual- and group-level functioning. The individual-level variable, Social Dysphoria, was characterized by high self-reports of loneliness, low self-reported peer optimism, and low self-perceived social competence, thus representing maladaptive individual level functioning. The group-level variable, Sociable-Popular, was characterized by high peer-nominations for popularity and high nominations for sociability behaviors, thus comprising positive group adjustment. Given the good fit of the measurement model (see Results section above) and the constraint of the measurement model to be invariant at the scalar level across the two time points, these latent constructs can be interpreted similarly. These findings suggested that this constellation of behaviors and functioning at both the individual and group level held over time.

Prediction of Children's Most Likely Class Membership Over Time: Results from the Autoregressive Cross-Lagged Panel Model.

The present research expanded previous research by examining how children's most likely profile membership and social competence correlates at Time 1 predicted the same set of variables at Time 2. Additionally, gender was included in the final model given the inconsistencies regarding the role of gender in children's antipathetic relationships noted in the Introduction (Berger & Dijkstra, 2013; Berger et al., 2011; Card, 2010; Witkow et al., 2005). Using an autoregressive cross-lagged panel model, the present research examined both the stability of variables across time, as well as cross-lagged associations among variables. The remaining discussion first elaborates on the prediction of children's class membership at Time 2 (i.e., High Dislikers vs. Average Dislike; High Disliked vs. Average Dislike) and then details the prediction of the social competence correlates at the second time point.

Prediction of Children's Class Membership at Time 2: High Disliked vs. Average Dislike Profile. In comparing the High Disliked profile and Average Dislike profile at Time 1, being in the High Disliked profile was significantly and positively associated with being in the High Disliked profile, relative to the Average Dislike profile, at Time 2. This finding suggests that there is some degree of stability in remaining in the High Disliked profile, compared to the Average Dislike profile, over time. This is somewhat surprising given the findings of the LTA, which showed a relatively high transition probability for moving out of the High Disliked profile at Time 1 and into the Average Dislike profile at Time 2. The fact that this stability was observed in the autoregressive cross-lagged panel model, which holds all other variables constant, is intriguing. It is unclear if the children in this profile characterized by high unilateral-received and mutual dislike were continuing to engage in the same behaviors that originally

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caused them to be disliked, or if those early dislike relationships were simply so influential that they carried over to the following year, regardless of the child's present behavior or functioning. There is evidence that early rejection from the peer group proves difficult to recover from, which may account for these findings here (Dodge, Coie, & Lynam, 2006; Rubin, Coplan, Chen, Bowker, McDonald, & Heverly-Fitt, 2015).

Interestingly, compared to the Average Dislike profile at Time 1, being in the High Dislikers group was also significantly and positively associated with being in the High Disliked profile, relative to the Average Dislike profile, at Time 2. This finding is especially interesting given that these profiles are virtually mirror opposites of one another, with the High Disliked group characterized by high unilateral-received and mutual dislike nominations and the High Dislikers profile characterized by low unilateral-received and mutual dislike nominations, but highest in unilateral-given dislike nominations. It may be that for children in the High Dislikers group, the act of giving out large numbers of dislike nominations is "catching up" with these children, and causing them to be more disliked the subsequent year. Similar to the discussion of the LTA above, it may be that the relatively favorable standing that was concurrently associated with this profile in the study by Barnes and colleagues (2017) is not potent enough to hold over time. Thus, the very act of giving numerous unilateral dislike nominations, which is what characterized this group, may be working against these children long term.

Regarding the social competence correlates, only children's Sociable-Popular status at Time 1 predicted class membership at Time 2. Specifically, children's nominations for popularity and sociable behaviors were positively associated with being in the High Disliked profile at Time 2, compared to the Average Dislike profile. This finding seems counterintuitive. A possible explanation may concern an often reported diversity among popular children,

particularly in terms of aggressive behaviors, with popular children often being high in aggression (Rose, Swenson, & Waller, 2004). Perhaps children receiving high levels of popularity nominations also engage in a large number of aggressive behaviors and subsequently had larger numbers of mutual and unilateral-received antipathy nominations at Time 2.

The nonsignificant finding of children's Social Dysphoria at Time 1 and children's class membership at Time 2 was also surprising, given previous research. There is literature that has documented that children's internalizing symptoms and behaviors (e.g., withdrawal, loneliness, poor self-concept) are perceived negatively by the peer group (Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). It could be argued that the self-report measures included in the present study as private experiences were less noticeable by the peer group at large, thus resulting in less negative evaluation and rejection from the larger peer network.

In sum, these findings show stability in class membership over time, with membership in the High Disliked profile at Time 1, compared to the Average Dislike profile, associated with membership in the High Disliked profile at Time 2, relative to the Average Dislike profile. Additionally, membership in the High Dislikers profile at Time 1, compared to the Average Dislike profile, was also associated with being in the High Disliked profile, relative to the Average Dislike profile, at the second time point. Only children's Sociable-Popular status at Time 1 predicted membership in the High Disliked profile at Time 2, compared to the Average Dislike profile at the second time point.

Prediction of Children's Class Membership at Time 2: High Dislikers vs. Average Dislike Profile. At Time 1, compared to the Average Dislike profile, being in the High Dislikers profile was significantly and positively associated with being in the High Dislikers profile, relative to the Average Dislike profile, at Time 2. This finding was expected given the

results of the LTA, and suggests that there was some degree of stability in profile membership for those children in the High Dislikers profile, relative to the Average Dislike profile. No significant associations were found for the High Disliked profile, relative to the Average Dislike profile. This too is unsurprising as the High Disliked and High Dislikers profiles were near mirror images of one another, with the High Disliked profile characterized by the highest unilateral-received and mutual dislike, and the High Dislikers profile had the greatest number of unilateral-given dislike nominations with the lowest unilateral-received and mutual dislike. Thus, it was unexpected for the children in the High Disliked profile to make the transition to the High Dislikers profile compared to the Average Dislike profile at Time 2, particularly as doing so would reflect a marked upward shift in children's status. Taken together with the previous set of findings (i.e., prediction of High Disliked vs. Average at Time 1), it would seem that it is harder to shed dislike status, and easier to gain it, over the course of a year, suggesting that this important metric of children's social functioning has long-lasting implications.

Regarding social competence correlates, only children's Social Dysphoria at Time 1 predicted membership into the High Dislikers profile, compared to the Average Dislike profile, at Time 2. Interestingly, this association was positive, meaning that greater feelings of loneliness and lower levels of peer optimism and self-perceived social competence were associated with a greater likelihood of being in the High Dislikers profile, as compared to the Average Dislike profile, a year later. Perhaps significant feelings of social isolation and discontent preceded the High Dislikers profile status, that was characterized by a high amount of unilateral given dislike nominations.

In sum, compared to the Average Dislike profile at Time 1, children were more likely to remain in the High Dislikers profile, relative to the Average Dislike profile, at Time 2. There

were no significant associations found for being in the High Disliked profile, compared to the Average Dislike profile, and only children's Social Dysphoria at Time 1 predicted class membership (i.e., being in the High Dislikers vs. Average Dislike profile) at Time 2. Thus, when predicting membership into the High Dislikers, compared to the Average Dislike profile at the second time point, it seems that stability, rather than transition, as well as individual levels of Social Dysphoria was a more potent predictor.

Prediction of Children's Social Competence at Time 2. We examined the stability and prediction of the social competence indices over time. With regard to Social Dysphoria at Time 2, class membership at Time 1 (i.e., being in the High Dislikers vs. Average Dislike; being in the High Disliked vs. Average Dislike profile) was not a significant predictor of children's Social Dysphoria at Time 2. These findings highlight that although children's Social Dysphoria at Time 1 may have driven children's class membership at Time 2 (e.g., High Dislikers vs. Average Dislike), class membership at Time 1 did not drive Social Dysphoria at the second time point. Thus, it seems that children's class membership did not exert as powerful of an effect on children's Social Dysphoria across time.

Children's Social Dysphoria at Time 1 significantly and positively predicted subsequent levels of Social Dysphoria at Time 2. This finding suggests stability in this construct over time and highlights that these experiences (e.g., loneliness, low peer optimism, and low self-perceived social competence) were pervasive for children. Children's Sociable-Popular status at Time 1 was also significantly and negatively associated with children's Social Dysphoria at Time 2. This finding highlights the influential nature of the peer group, with peer group standing associated with a decrease in self-reported, individual-level functioning. Children's gender was associated with their Social Dysphoria at Time 2, with boys more likely to have higher Social Dysphoria at

Time 2. Gender differences for these types of self reports vary considerably across studies and it is notable that this finding is the only that showed gender as a significant predictor of any variable in the full model. Interestingly, gender was predictive of children's antipathy profile membership in Barnes et al. (2017), such that more boys than girls were in the High Disliked profile, and more girls than boys in the High Dislikers profile. However, there was not a significant sex by profile interaction, meaning that the differences in the social competence correlates in the study by Barnes and colleagues (2017) could be assumed to be comparable for boys and girls. Thus, it is interesting that gender did more play a more powerful role in predicting children's dislike profile membership over time, and that it was only associated with one social competence correlate (i.e., children's Social Dysphoria).

As with Social Dysphoria, class membership at Time 1 was not predictive of the number of children's reciprocated mutual friendships at Time 2. This highlights the distinction between profiles characterized by dislike and the construct of friendships. It would seem that children's dislike profile membership, including both unilateral and mutual dislike, exerted little influence on the number of reciprocated mutual friendships children's possessed a year later. Children's gender and Social Dysphoria at Time 1 were also not significantly associated with the number of reciprocated mutual friendships a year later. However, stability was demonstrated with mutual friendships, as number of children's mutually reciprocated friendships at Time 1 was positively associated with number of their reciprocated mutual friendships at Time 2. Perhaps number of mutual friendships remain more stable than the various forms of dislike relationships. This finding has been replicated in previous studies that have found that children maintain mutual friendships to a greater extent than antipathies (Rambaran et al., 2015). Also significant, children's Sociable-Popular status at Time 1 was positively associated with the number of

reciprocated mutual friendships at Time 2, highlighting an interesting dynamic between dyad and the larger peer group. Perhaps it is the case that those children who are highly socially visible (i.e., popular) and high in prosocial behaviors more easily attract friends over time.

Finally, with regard to children's Sociable-Popular status at Time 2, profile membership at Time 1 was again not statistically significant. This is intriguing given the role of children's Sociable-Popular status at Time 1 in predicting being in the High Disliked vs. Average Dislike profile at Time 2. However, as with the other indices of social competence, it appears that children's membership in profiles of dislike was less influential in predicting subsequent social adjustment. Children's gender was also nonsignificant in predicting Sociable-Popular status at Time 2, as was the number of children's reciprocated friendships. There was stability in this construct over time, with children's Sociable-Popular status at Time 1 predicting Sociable-Popular status at Time 2. This would suggest that those children who embody these highly visible and prosocial behaviors do so across time but gender and number of mutual friends don't appear to facilitate this relation. Finally, children's Social Dysphoria at Time 1 was significantly and negatively associated with their Sociable-Popular status at Time 2. Thus, it would seem that children who exhibit this poorer social adjustment early on have a difficult time overcoming these challenges to adopt more adaptive and positive functioning within the larger peer group a year later.

Limitations and Future Directions

Although this study addresses several important gaps in the literature on children's antipathetic relationships, some limitations should be discussed. Notably, the present research looked at the stability of patterns of antipathetic relationships over time, and did not focus on the stability of individual children's antipathetic relationships with specific people. Examining the

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latter and comparing those findings to these in the present research would be an important extension of this study (see Daniel et al., 2016; Rodkin et al., 2003). Further, the sample size for the current study, although adequate, was relatively small. Also, the current sample consisted of a largely White, middle class group of elementary-aged students, which poses some limits to generalizability of the findings. Future research should strive for larger samples of a broader and more diverse groups of students. Additionally, including children across a range of ages and over a longer period of time would be helpful in elucidating how dislike relationships may vary across age and development. For example, examining antipathetic relationships across a longer period of time may further elucidate the trajectory of these relationships across different developmental stages and may reveal unique factors related to these stages that can account for or relate to children's and youth's antipathetic relationships. Relatedly, it would also be worthwhile to consider examining a broader range of behaviors and social competence correlates to further understand how certain behavioral characteristics and social functioning may relate to children's antipathy status.

Clinical Implications

The findings of this study suggest a number of implications and directions for clinical work, especially when considering the numerous correlates of maladjustment and antipathetic relationships. For example, this study showed that a sizeable number of children experienced both unilateral and mutual dislike, that these profiles held over time, and that children's group-level standing may be particularly influential in maintaining this dislike status. Thus, interventions should consider various forms of dislike relationships when aiming to mitigate the negative correlates associated with being disliked, and pay close attention to children's highly visible group status behaviors as potential behaviors that are associated with children's dislike.

Further, this study suggests a relation between various indices of social competence (e.g., Social Dysphoria and Sociable-Popular in this study) at one time point and their dislike profile membership a year later. Taken together with the concurrent associations between dislike profile membership and social competence in the Barnes et al. study (2017), it would be worthwhile for interventions to conceptualize children's dislike status as something that stems from both concurrent behavior/functioning, as well as behavior/functioning over time. In a related vein, stability was documented for all of the social competence correlates, suggesting that these behaviors and characteristics may carry over time. This is particularly noteworthy for children's Social-Dysphoria and highlights the need to intervene early to address children's concerns with loneliness, low peer optimism, and low self-perceived social competence. Further, given the multi-rater nature of the present study, interventions may vary depending on the target behavior. For example, bolstering group-level functioning with social skills groups and maladaptive/poor self-concept with cognitive-behavioral techniques may be particularly helpful.

Conclusions

In sum, the present research examined the stability of previously established, empirically derived profiles of children's dislike over the course of one year. Further, this study examined cross-lagged associations between antipathy profile membership and a number of social competence correlates encompassing numerous levels of social of functioning (i.e., individual, dyad, group). This study extends previous literature by examining the stability of empirically derived profiles of children's dislike relationships over time, and how indices of children's social competence and functioning may relate. In short, the findings allow for a more nuanced understanding of how the many forms of dislike relationships, an important metric of children's peer group functioning, relate to children's social functioning, and vice versa, over the span of a

year. Further, this study highlights the relation between behavior characteristics and multi-rater social competence assessments, as unique patterns emerged across the self-report and peer-nominated measures as related to the dislike profiles. The findings from this study offer a dynamic perspective in the burgeoning field of children's antipathetic relationships and suggest a number of future research and clinical directions.

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Appendix

October 2011

Dear Parent,

School is of course a very important setting for children's social interactions. Learning about these interactions and relationships is an important priority for teachers and school administrators for structuring an optimal learning environment for our children. We are interested in learning more about factors that may contribute to children's peer relations.

This letter is being sent to notify you that we wish to conduct a project at Campus School beginning in November. We will be asking children to fill out several questionnaires. These questionnaires are designed to evaluate children's self-perceptions about their peer relations, their expectations about peers; their friendships; their perceptions about social behaviors; their general coping styles; and their understanding of the concept of respect. Children are told that they do not have to complete any part of the questionnaires that they do not wish to complete and they will be assured that there will be no consequences should they decide not to participate. We are also asking that we be allowed to examine some brief essays assigned by the classroom teacher during the year that pertain to children's peer relations.

The questionnaires will be completed in the classroom in group sessions lasting approximately one-half hour at times chosen by the classroom teacher. Every child at Campus School is being asked to participate; no child is being singled out. No information about any individual child will be made available to any teacher or administrator at the school. Our information will be kept completely confidential. All data will be encoded with ID numbers; all publications and reports to the school resulting from this research will appear as group analyses. Again, no individual child will ever be identified by name.

Dr. Susan Copeland, Director of Campus School, has approved this project.   If you have any questions concerning this project, please call us at 678-2906 and ask to speak to Katie Gore. For answers to questions regarding research subjects' rights, you may contact the Chair of the Committee for the Protection of Human Research Participants at 678-2533.

We greatly appreciate your support.

Sincerely,

Robert Cohen

Professor

** ONLY sign the following and return this letter to school if you DON'T wish your child to participate. **

I do NOT wish my child _____ to participate with the class.

Parent's signature _____

Teacher _____

THE UNIVERSITY OF MEMPHIS

Institutional Review Board

To: Robert Cohen
                       Psychology

From: Chair, Institutional Review Board
                       For the Protection of Human Subjects
                       irb@memphis.edu

Subject: A Comprehensive Analysis of Children's Peer Relations (083111-876)
                       (Continuing Review for H0150-09-01)

Approval Date: September 22, 2011

This is to notify you of the board approval of the above referenced protocol. This project was reviewed in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. At the end of one year from the approval date, an approved renewal must be in effect to continue the project. If approval is not obtained, the human consent form is no longer valid and accrual of new subjects must stop.
2. When the project is finished or terminated, the attached form must be completed and sent to the board.
3. No change may be made in the approved protocol without board approval, except where necessary to eliminate apparent immediate hazards or threats to subjects. Such changes must be reported promptly to the board to obtain approval.
4. The stamped, approved human subjects consent form must be used. Photocopies of the form may be made.

This approval expires one year from the date above, and must be renewed prior to that date if the study is ongoing.

_____
Chair, Institutional Review Board
The University of Memphis