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## Girls' and Boys' Problem Talk: Implications for Emotional Closeness in Friendships

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### Abstract

This research highlights the critical role of gender in the context of problem talk and social support in adolescents' friendships. Early- and middle-adolescents' ( $N = 314$  friend dyads;  $M_s = 13.01$  and  $16.03$  years) conversations about problems were studied using observation and a short-term longitudinal design. Mean-level gender differences emerged in that girls participated in problem talk more than boys and responded in a more positive and engaged manner to friends' statements about problems (e.g., by saying something supportive, asking a question) than did boys. Interestingly, boys used humor during problem talk more than girls. Despite mean-level differences, there were not gender differences in the functional significance of participating in problem talk and positive engaged responses in that these behaviors predicted increased friendship closeness for both boys and girls. In contrast, humor during problem talk predicted increased closeness only for boys, highlighting an understudied pathway to closeness in boys' friendships.

### Keywords

Friendship; friendship quality; gender; social support

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The relational orientations of girls are more communal and interdependent as compared to boys. These orientations play out in a variety of ways in girls' and boys' relationships, including their tendency to talk about problems in friendships. Using an observational assessment, the current study of adolescents aimed to replicate previous work indicating that girls talk with friends about problems more than boys and to extend past research by examining in detail how girls and boys respond to friends' statements about problems (e.g., by offering support, changing the subject). Importantly, in addition to examining *mean-level* gender differences, the current study considered whether there are gender differences in the *functional significance* of problem talk in friendships. That is, a short-term prospective design was used to test whether the impact of problem talk on changes over time in adolescents' feelings of closeness in friendships differed for girls and boys. Of particular interest was whether (or not) behaviors that are particularly common among girls or

boys also have an especially strong impact on friendship for that gender. In addition, boys' use of humor during problem talk was considered as a possible understudied pathway to friendship closeness for boys.

## Talking About Problems as a Context for Providing Social Support

When an individual discloses about problems to a relationship partner, the partner has a chance to offer support. Moreover, given the salience of personal problems and the vulnerability inherent in sharing problems, how the partner responds should impact the nature of the relationship. Notably, by adolescence, friends are common recipients of disclosure and central sources of social support (Bagwell & Schmidt, 2011; Rubin, Bukowski & Parker, 2006).

In fact, research on friendships has identified a variety of ways that friends respond to one another's talk about personal problems (see Glick & Rose, 2011; Leaper, Carson, Baker, Holiday, & Myers, 1995; Rose & Asher, 2004). Many of the possible responses to friends' disclosures can be conceptualized as *positive engaged* responses. For example, responses such as offering support or agreement, asking a question, sharing a related experience, offering relevant information, giving advice, or simply acknowledging the friends' statements all indicate positive engagement in the conversation. However, not all responses are supportive, and some can be classified as *negative* responses, such as changing the subject, minimizing the problem, saying something explicitly non-supportive, or even remaining silent. Finally, the coping literature suggests an additional, previously unstudied response to problem talk, humor. That is, research on coping indicates that some adolescents cope with problems by joking about them or laughing about them (e.g., Erickson & Feldstein, 2007; Sugimura, Rudolph, & Agoston, 2014; Vera et al., 2012). Similarly, a friend could respond to problem talk by saying something humorous about the problem, perhaps to lighten the mood.

## Gender and Talking About Problems: Mean-Level Differences and Functional Significance

As noted, compared to males, females' relational orientations tend to be more communal and interdependent (Cross & Madson, 1997; Helgeson, 1994). For example, girls are more likely than boys to see relationships as central to their sense of self (McGuire & McGuire, 1982), to adopt goals aimed at promoting the smooth functioning of relationships (Jarvinen & Nicholls, 1996; Rose & Asher, 2004; Strough & Berg, 2000), and to take the perspective of their friends (Smith & Rose, 2011). Given girls' greater interpersonal orientations, along with their tendency to empathize in the context of close relationships (Smith & Rose, 2011), it is not surprising that mean-level gender differences emerge in regards to talking about problems.

In fact, considerable research indicates that girls disclose to friends more than do boys (Rose & Rudolph, 2006). Although fewer studies specifically focus on talking about problems, the studies that do also indicate that girls disclose to friends about problems more than boys (Glick & Rose, 2011; Rose & Asher, 2004). Moreover, research regarding co-rumination in

friendship, or friends extensively discussing and re-hashing problems, indicates that girls co-ruminate more than boys (e.g., Hankin, Stone, & Wright, 2010; Jose, Wilkins, & Spindelov, 2012; Rose, Carlson, & Waller, 2007; Smith & Rose, 2011; Stone, Hankin, Gibb, & Abela, 2011).

No studies have analyzed adolescent friends' problem talk with the detail necessary to assess gender differences in specific responses to problem statements (e.g., saying something supportive, asking a question). However, some previous work is consistent with the idea that girls may produce more positive engaged responses to friends' problem talk than boys. Meta-analytic results indicate that girls produce more affiliative speech than boys (Leaper & Smith, 2004). In addition, observational work considering tasks other than problem solving tasks, such as conflict tasks (e.g., Black, 2000) and joint activity and decision making tasks (e.g., planning a camping trip; Phillipsen, 1999) suggest that females' speech is more sensitive and responsive than males' speech. Similar results emerge in observational studies that collapse scores across a variety of observational tasks (e.g., Brendgen, Markiewicz, Doyle, & Bukowski, 2001; Shomaker & Furman, 2009). In addition, studies in which youth were presented with vignettes in which a friend experienced a social stressor also indicated that girls were more likely than boys to endorse verbally supportive strategies (Glick & Rose, 2011; Rose & Asher, 2004).

In contrast, as compared to girls, boys may produce more negative responses and more humor in response to friends' problem statements. In terms of negative responses, the vignette studies found that boys endorsed strategies such as minimizing the problem and blaming the friend for having the problem more than did girls (Glick & Rose, 2011; Rose & Asher, 2004). Although humor has not previously been considered as a response to problem talk, boys often are found to use humor to cope more than girls (e.g., Sugimura et al., 2014) and boys have been nominated by peers as having better senses of humor than girls (Markovic & Bowker, 2015). As such, boys may respond to friends' problem statements with humor more than do girls.

Importantly, these findings address mean-level gender differences but not whether the significance, value, or meaning of problem talk with friends differs for girls and boys. This distinction is blurred, for example, when friendship behaviors that are more *common* among girls or boys are assumed to be more *important* for that gender (e.g., to be related especially strongly to friendship outcomes for that gender). One possibility is that youth of each gender engage especially frequently in behaviors that are particularly important for friendship success for that gender. However, it is equally plausible that some friendship behaviors are displayed more frequently by one gender but have effects on friendships that hold across genders.

Relatively little is known about whether there are gender differences in the functional significance of problem talk in friendships (i.e., whether problem talk behaviors are related to friendship outcomes more strongly for one gender or the other). One possibility is that girls value problem talk and positive engaged responses more than boys and dislike negative responses more than boys. If this is true, then engagement in problem talk and positive engaged responses and negative responses might be related to friendship outcomes more

strongly for girls than boys. To date, the few studies that have tested gender differences in the functional significance of problem talk did not find gender differences in the strength of the relations of disclosure to friends (Camarena, Sarigiani, & Petersen, 1990), co-rumination between friends (Rose et al., 2007; Smith & Rose, 2011) or verbally supportive or blaming/minimizing strategies (Glick & Rose, 2011; Rose & Asher, 2004) with friendship quality or closeness. However, given the small number of relevant studies, more work is needed to examine whether there are gender differences in the functional significance of engaging in problem talk and of positive engaged and negative responses.

Moreover, there are conceptual reasons to suspect gender differences in the functional significance of humor during problem talk. The humor literature indicates that a number of factors, including culture, can influence whether a humor attempt is appreciated and perceived to be pleasant and amusing (Robert & Yan, 2007; Wyer & Collins, 1992). Given that different norms are often present in girls' and boys' peer groups (or gender "cultures;" Maccoby, 1998), there may be gender differences in how humor is perceived in the context of problem talk. Given girls' tendencies to communicate in an affiliative and responsive manner (e.g., Leaper & Smith, 2004), humor in the context of problem talk may be perceived as inconsistent with norms in girls' peer groups and as inappropriate. If this is the case, then humor during problem talk would not be expected to contribute to positive friendship outcomes. In contrast, humor during boys' problem talk may seem less out of place. Previous work indicates that shared positive affect that results from humor facilitates social bonding (Fine, 1977; Robert & Wilbanks, 2012). Therefore, if humor is acceptable to boys in this context, humor during problem talk may contribute to positive friendship outcomes for boys.

## The Current Study

The current study used observation to examine detailed conversational processes during problem talk among over 300 pairs of adolescent friends. Gender differences in the degree to which friends participated in problem talk and in responses to friends' problem talk (i.e., positive engaged, negative, and humor responses) were examined. In addition, in order to test for gender differences in the effects of problem talk on friendship outcomes, the adolescents reported on feelings of closeness in the friendship at the initial assessment and again nine months later.

Considering the construct of intimacy is useful for understanding the focus on friendship closeness. Intimacy is considered a critical feature of close relationships, including friendships. Nonetheless, there is not a single definition of the construct. Historically, intimacy has most often been conceptualized as sharing personal thoughts and feelings (i.e., intimate disclosure; Jourard, 1979) or in terms of the affective components of relationships, such as closeness (Reis & Shaver, 1988; Sullivan, 1953). If personal disclosure and feelings of closeness are components of the broader construct of intimacy, they would be expected to co-occur. However, the degree to which personal disclosure (and responses to personal disclosure) and emotional closeness co-occur, and whether there are gender differences in the degree to which they co-occur, are empirical questions. In the current study, adolescents report on friendship closeness at the initial assessment and nine months later so that changes

over time can be assessed. If disclosure processes observed in the laboratory are typical of the friends' interactions and impact feelings of closeness, then observed problem talk should predict changes in friendship closeness over time.

In addition, given that both adolescents in each friend dyad participated and the recent advances in analyzing dyadic data (Kenny, Kashy, & Cook, 2006), both actor effects and partner effects could be tested. Actor effects involved testing the effect of adolescents' problem talk variables (i.e., participating in problem talk and responses to friends' problem talk) on changes over time in their own feelings of friendship closeness. Partner effects involved testing the effect of adolescents' problem talk variables on changes in their friends' feelings of closeness.

Partner effects should be especially strong for the response variables. Friends' problems are likely emotionally salient to the friends and so how adolescents respond to the friends' statements about the problems (i.e., whether the adolescents produce positive engaged, negative, or humorous responses) should impact the friends' feelings of closeness toward them. Assuming adolescents' own problems are especially salient to them, actor effects (i.e., effects of adolescents' statements about *friends'* problems on their own feelings of closeness) are likely weaker than partner effects. Nonetheless, actor effects are plausible as well. One possibility is that adolescents' behavior toward friends serves as a marker of their current trajectory in regards to feelings of closeness. For example, adolescents' negative responses to friends' problem statements may serve as a marker that they are already detaching from the friendship.

Finally, although gender was the main focus of the study, developmental differences also could be considered because both early and middle adolescents were included. During the transition from early to middle adolescence, friendships become increasingly important (Bagwell & Schmidt, 2011). Social perspective taking skills also increase with age (Selman, 1980). Given these developmental changes, middle adolescents were expected to participate in problem talk with friends more than early adolescents. This fits with past work indicating that self-disclosure to friends increases with age (e.g., Doglin & Kim, 1994; McNelles & Connolly, 1999). Due to their more advanced social perspective taking skills, middle adolescents also were expected to respond more sensitively to friends' problem statements (i.e., with more positive engaged and fewer negative responses) than early adolescents. Whether gender and age jointly impact adolescents' problem talk or the relations with friendship closeness was considered as well.

## Summary of Hypotheses

To summarize, in terms of mean-level differences, hypotheses were that: (a) girls would participate in problem talk with friends more than boys, (b) girls would produce more positive engaged responses to friends' problem statements than boys, (c) boys would produce more negative responses to friends' problem statements than girls, and (d) boys would produce more humorous responses to friends' problem statements than girls. In terms of gender differences in the functional significance of problem talk for friendship closeness, no firm hypotheses were put forth for participating in problem talk or producing engaged or

negative responses. However, humor was expected to predict friendship closeness more strongly for boys than girls. Partner effects for responses to problem statements (effects of adolescents' responses on friends' feelings of closeness) also were hypothesized to be stronger than actor effects (effects of adolescents' responses on their own feelings of closeness). Finally, developmental differences were expected such that middle adolescents would engage in more problem talk and produce more positive engaged and fewer negative responses to friends' problem statements as compared to early adolescents.

## Method

### Participants

Data collections took place with adolescents who had just completed seventh or tenth grade. Data were collected in three cohorts across three consecutive summers ( $Ns = 160, 234, 248$ ). Rosters with contact information were obtained from the public school district of a mid-size University town. Names were randomly selected from the rosters with the constraints of recruiting similar numbers of girls and boys from each grade and oversampling African American youth (to comprise at least 25% of the sample). Letters describing the study were mailed to the families of 1,771 youth. Of these, 937 families were reached via telephone (of the 834 families we did not reach, 248 had disconnected telephones and 586 never answered despite multiple attempts). Of the 937 families contacted via telephone, 616 did not participate (362 declined; 254 expressed interest but never committed to an appointment). The remaining 321 youth visited our lab with a friend. Youth were asked to choose a best or close same-sex friend who was not a relative and was their age. Seven youth visited the lab with someone who did not meet these requirements and were excluded. Of the remaining 314 friend dyads, 310 were within one year of each other (the friends were two years apart in the other 4 dyads).

The final sample (628 youth in 314 dyads) included 314 seventh graders (160 girls and 154 boys) and 314 tenth graders (166 girls and 148 boys). Mean ages were 13.01 and 16.03 years, respectively. The sample was 62.76% European American, 29.21% African American, and less than 2% each American Indian, Pacific Islander, and Asian American; 5.78% reported more than one race. In terms of ethnicity, 3.73% of the sample was Latino/a.

Of the 628 participants, 469 (75%) participated in the follow up (240 seventh graders, 120 girls; 120 boys; 229 tenth graders, 126 girls; 103 boys). Participants who did not complete the follow-up assessment had complete data for the variables collected at the initial assessment but had missing data for the friendship closeness variable collected at the follow-up assessment. Little's test indicated that these data were not missing completely at random (MCAR),  $\chi^2(16) = 39.12, p < .001$ . Representative analyses indicated that adolescents who completed the follow-up assessment reported higher levels of friendship closeness at the initial assessment than did adolescents who did not complete the follow-up assessment. There were no other significant differences between adolescents who did and did not participate in the follow-up assessment. Although imputing missing data is considered least problematic when the data are MCAR, imputing missing data when the data are not MCAR is nonetheless preferable to more traditional methods of handling missing data (e.g., pairwise deletion, listwise deletion; Little, Jorgensen, Lang, Moore, & Whitney, 2014;

Widaman, 2006). Moreover, potential biases in the data are reduced when variables related to the likelihood of participants having missing data (i.e., friendship closeness data from the initial assessment in the current study) are included in the model for imputation. Therefore, an expectation-maximization procedure using all available data for all variables in the study from the initial and follow-up assessments were used to impute the missing data. The full sample of 628 adolescents was used in analyses.

## Procedure

Participation took place in a University laboratory. Initially, the friends were separated and completed a series of questionnaires, including the assessment of emotional closeness used in the present study. Then, the friends were reunited in a small observation room with a table and two chairs. For the first task, the friends planned a party (this task was not used in the current research). The friends were then separated and completed questionnaires, including one that asked them to “list a problem you have.” The friends then returned to the observation room for the Problem Talk task. They were told that they had 16 minutes to discuss the problems they generated and that they could discuss anything about the problems. They were asked to discuss each friend’s problem and were told that they could spend as much time as they wanted to on each person’s problem. They were told that, if they finished talking about problems, they could talk about something else or play with a jigsaw puzzle that was on the table. Nine months after the initial assessment, youth were invited to again complete questionnaires (through the mail or in the laboratory), including the self report of closeness with the friend that was administered at the initial assessment.

## Coding

There were two major aims of coding. The first was to provide information regarding the degree to which the friends participated in problem talk. The second was to provide information regarding how adolescents responded to friends’ statements about problems.

A team of two coders coded the data for each of the three cohorts. For the first cohort, the team included one female doctoral student and one male doctoral student. For cohorts two and three, the team consisted of the same female doctoral student who coded the data for cohort one and a different male doctoral student. Within each cohort, the coders first obtained interrater reliability based on 25% of the interactions and then individually coded the remaining interactions.

**Own-Problem Statements, Friend-Problem Statements, and Non-Problem Statements**—In order to determine how much the adolescents participated in problem talk, all thought units that adolescents produced were coded as Own-Problem Statements, Friend-Problem Statements, or Non-Problem Statements. To do this, interactions in the Problem Talk task were first transcribed and segmented into thought units, or logical divisions of speech identified based on contextual and syntactic clues, such as pauses, changes in ideas, or changes in who was speaking (Leaper, Tennenbaum, Shaffer, & Graham, 1999; Strough & Berg, 2000). Based on 25% of the dyads within each cohort, the percent agreements for the starting and ending points of thought units were 93.4%, 87.9%,

and 91.1% (for Cohorts 1-3, respectively). Across all of the problem talk tasks, 131,086 thought units were identified.

Next, all 131,086 thought units were classified as Own-Problem Statements, Friend-Problem Statements, or Non-Problem Statements. Although the friends typically began the conversations by discussing the problems that they generated for the questionnaires, the conversations often covered other problems too. Statements about other problems were included as long as there was an indication that the statements were problem focused (e.g., the youth indicated the issue was problematic, challenging, distressing, etc.). Coders first classified all thought units according to whether they were Own-Problem Statements (i.e., statements about the speaker's own problems) or not. Based on 25% of the dyads within each cohort, the reliabilities were  $K = .87, .84, \text{ and } .87$  (Cohorts 1-3, respectively). Of all of the thought units, 25,544 Own-Problem Statements were identified. Next, the thought units were classified according to whether they were Friend-Problem Statements (i.e., statements about the speaker's friend's problems) or not. Based on 25% of the dyads within each cohort, the reliabilities were  $K = .86, .83, \text{ and } .86$  (Cohorts 1-3, respectively). Of all of the thought units, 13,993 Friend-Problem Statements were identified. The remaining 91,549 thought units (which were not classified as either Own-Problem Statements or Friend-Problem Statements) were classified as Non-Problem Statements. Each adolescent was given a score for the total number of Own-Problem Statements, Friend-Problem Statements, and Non-Problem Statements that they produced.

**Responses to friend problem statements**—Adolescents' responses to friends' Own-Problem Statements were coded next. All turns with at least one Own-Problem Statement were identified. A turn was defined as a stream of uninterrupted speech with one or more thought units. A turn began when a youth began to speak. A turn ended when the friend spoke or there was a pause of approximately 15 seconds.

Similar to prior coding approaches (see Leaper et al., 1995), each thought unit produced by the adolescent in the turns directly following turns produced by the friend that included at least one Own-Problem Statement was coded into one of the 10 response categories. Six of the categories were considered *Positive Engaged* responses: Support/Agree (e.g., "I think you did the right thing."), Question (e.g., "When did it happen?"), Related Experience (statement on problem topic about one's own experience that is related to the statement from the original speaker, e.g., "I feel sad when she doesn't return my calls too."), Information/Opinion (new information about problem, e.g., "And her parents let her stay out past midnight" or an opinion presented in a relatively neutral manner, e.g., "I thought he worked hard on that."), Acknowledge/Prompt (conveys the listener is paying attention, with or without explicitly encouraging the speaker to continue, e.g., "Uh-huh," "Oh," "Keep talking."), Advice Giving (e.g., "You should call her."). Three of the responses were *Negative*: Changing the Subject (statements that are not focused on the problem topic, e.g., "I'm hungry" or that focus on the adolescent's experience with the problem topic in a manner that draws attention away from original speaker, e.g., "Well, the person who she ignores the most is me!"), Minimization/Non-Support (explicitly non-supportive statements or statements that convey the problem is less important than the speaker portrayed it to be, e.g., "Everyone hates it when you say that," "That's not a problem."), and Silence/No



Response (no response and a break in the conversation for about 15 seconds or more). The final response was *Humor* (conveys humor, joking, or non-hostile sarcasm). There was an Other category for thought units that were unintelligible or had no substantive meaning (e.g., “Well,” “Um”); the Other category was not used in analyses. Kappas were computed for each response type based on 25% of the dyads (Cohort 1 Kappas, range = .70 – 1.0,  $M = .82$ ; Cohort 2 Kappas, range = .67 – 1.0,  $M = .83$ ; Cohort 3, range = .60 - .96,  $M = .80$ ).

Summed scores were computed for each adolescent that were the total number of responses of each type that the adolescent produced. The decision to use summed scores for the analyses (as opposed to proportion scores; i.e., the percent of responses of each type out of the total number of responses) was based on the idea that the total number of experiences that adolescents have in which they hear positive engaged, negative or humorous response statements (in other words, the cumulative experience of hearing these responses) should have a particularly critical influence on friendships.

## Measures

**Emotional closeness in friendships**—At the initial assessment and nine months later, participants responded to two items from the Friendship Quality Questionnaire (Rose’s 2002 revision of Parker & Asher, 1993) and two items from the Friendship Qualities Scale (Bukowski, Hoza, & Boivin, 1994). These four items assessed affective feelings of closeness in the friendship. The items were customized by inserting the friend’s name in each item. The Friendship Quality Questionnaire items were: “[Friend] and I make each other feel important and special,” “[Friend] and I make each other feel good about ideas that [Friend] or I have,”.” The Friendship Qualities Scale items were: “If [Friend] had to move away, I would miss [Friend],” “I feel happy when I’m with [Friend].” Each item was rated 5-point Likert ranging from “Not at all true” (0) to “Really true” (4). The four items formed an internally reliable scale at Time 1 ( $\alpha = .84$ ). and at Time 2 ( $\alpha = .90$ ). Closeness scores were the mean of the four items.

## Results

### Data Analytic Approach

Adolescents were nested in friend dyads. Consequently, each youth could not be treated as an independent observation. In fact, friends’ scores were similar to each other for the number of Friend-Problem Statements, Own-Problem Statements, and Non-Problem Statements that they produced (ICCs = .28, .40, .60,  $ps < .001$ ). Friends’ scores also were similar for the ten friend response scores (ICCs from .07 to .53,  $ps < .05$ ). The friends’ reports of closeness were related at both the initial assessment (ICC = .63,  $p < .001$ ) and the follow up (ICC = .59,  $p < .001$ ).

Because individual adolescents could not be treated as independent observations, traditional analytic approaches were not appropriate. Therefore, multi-level models (with adolescents nested in dyads) were computed to test mean-level gender and grade differences in each variable. All multi-level models were tested using Proc Mixed in SAS.

For analyses in which emotional closeness was predicted from the Problem Talk variables, a particular type of multi-level model, the Actor-Partner Interdependence Model (Kenny, 1996) was used. The Actor-Partner Interdependence Model investigates effects of each person's predictor variables on their own outcomes (actor effects) and on their partner's outcomes (partner effects) while controlling for similarity between dyad members. Because the individuals within each dyad were indistinguishable (i.e., dyad members did not differ from one another on a variable of interest, such as gender), the parameters for the two friends within each dyad were constrained to be equal (Olsen & Kenny, 2006). A separate model was computed for each variable derived from the Problem Talk task. The dependent variable in each model was Time 2 closeness. Time 1 closeness was controlled in each model so that effects of the problem talk variables on changes in emotional closeness over time were tested.

### Gender and Grade Differences

To test gender and grade differences, multi-level models were computed for Friend-Problem Statements, Own-Problem Statements, and Non-Problem Statements. A model also was tested for each of the 10 response variables. In each model, the predictor variables were gender, grade, and their interaction. The results are summarized in Tables 1 and 2.

Gender and grade effects were significant for Friend-Problem Statements and Own-Problem Statements. Girls produced more Friend-Problem Statements and Own-Problem Statements than boys. Tenth graders produced more Friend-Problem Statements and Own-Problem Statements than seventh graders. For the Non-Problem Statements, the gender effect was not significant. The grade effect was significant with seventh graders producing more Non-Problem Statements than tenth graders. The Gender X Grade interaction was not significant for Friend-Problem Statements, Own-Problem Statements, or Non-Problem Statements.

For five of the six positive engaged responses, the gender effect was significant. Compared to boys, girls produced more thought units of the following responses: Support/Agree, Question, Related Experience, Information/Opinion, and Acknowledge/Prompt. There was no gender difference for Advice Giving. Grade effects also emerged for five of the six engaged responses. Compared to seventh graders, tenth graders produced more thought units for: Support/Agree, Question, Information/Opinion, Acknowledge/Prompt, and Advice Giving. There was no grade difference for Related Experience. None of the Gender X Grade interactions were significant.

For the three negative responses, only one gender effect emerged. Unexpectedly, girls produced more Changing Subject responses than boys. The other gender effects, the grade effects, and the Gender X Grade interactions were not significant.

For Humor, the effect of gender was significant with boys producing more Humor thought units than girls. There was no grade difference for Humor, but the Gender X Grade interaction was significant,  $F(1, 310) = 17.97, p < .001$ . In seventh grade, girls produced more Humor than boys. However, by tenth grade, boys produced more Humor than girls. Boys produced more Humor than girls by the tenth grade because Humor increased among boys between the seventh and tenth grades but not among girls.

## Problem Talk and Emotional Closeness: Prospective Analyses

Actor-Partner Interdependence Models were next tested to examine the impact of the Problem Talk variables on changes in emotional closeness from Times 1 to 2. The actor and partner effects are presented in Table 3.

**Participating in problem talk**—Actor and partner effects were considered for the number of Friend-Problem Statements and Own-Problem Statements. For comparison purposes, a model also was tested for the number of Non-Problem Statements. For Friend-Problem Statements, the actor effect was not significant. This finding indicated that adolescents' talking about their friends' problems did not predict changes in their own feelings of closeness. However, the partner effect was significant, indicating that adolescents talking about their friends' problems did predict their friends' feeling closer to them over time. For Own-Problem Statements, the actor effect was significant, indicating that adolescents talking to friends about their own problems was related to their feeling greater closeness over time. The partner effect was not significant. For Non-Problem Statements, neither the actor nor partner effect was significant.

Analyses next examined whether any of the actor or partner effects differed by gender or grade. Each of models described above was recomputed with the addition of three interactions for the actor effect (Actor Effect X Gender, Actor Effect X Grade, Actor Effect X Gender X Grade) and three interactions for the partner effect (Partner Effect X Gender, Partner Effect X Grade, Partner Effect X Gender X Grade; the Gender X Grade term also was included to facilitate testing higher-order interactions). Given that there were three models (for Friend-Problem Statements, Own-Problem Statements, and Non-Problem Statements), 18 interaction terms with the partner or actor effect were tested. None were significant.

**Positive engaged responses**—Relations between adolescents' responses to friends' problem statements and Time 2 emotional closeness were examined next. For the positive engaged responses (Support/Agree, Question, Related Experience, Information/Opinion, Acknowledge/Prompt, Advice Giving), no actor effects were significant. However, three partner effects were significant. Adolescents who responded to friends' problem statements with Support/Agree, Question, and Information/Opinion responses had friends who felt closer to them over time.

For each engaged response, the model was recomputed with three interactions for the actor effect (Actor Effect X Gender, Actor Effect X Grade, Actor Effect X Gender X Grade) and three for the partner effect (Partner Effect X Gender, Partner Effect X Grade, Partner Effect X Gender X Grade; plus the Gender X Grade interaction). Of the 36 interactions with actor or partner effects (six models with six interactions each), one was significant. For Acknowledge/ Prompt, the interaction between grade and the partner effect was significant,  $F(1, 305) = 5.95, p = .015$ . Simple slope analyses (Aiken & West, 1991; Holmbeck, 2002) indicated that the effect was significant for tenth graders, SPE (standardized parameter estimate) = .10,  $F(1, 305) = 4.34, p = .038$ , but non-significant for seventh graders, SPE = -.11,  $F(1, 305) = 2.32, p = .129$ .

**Negative responses**—The three models tested for the negative responses (Changing Subject, Minimization/Non-Support, Silence/No Response) indicated no significant partner effects. However, the actor effect was significant for Changing Subject. Adolescents who produced Changing Subject responses felt less close to friends over time.

The three models were then recomputed with the addition of the interactions with gender and grade (i.e., Actor Effect X Gender, Actor Effect X Grade, Actor Effect X Gender X Grade; Partner Effect X Gender, Partner Effect X Grade, Partner Effect X Gender X Grade; the Gender X Grade interaction also was included). None of the interactions were significant.

**Humor responses**—For Humor, neither the actor effect nor the partner effect was significant. However, when the model was re-computed with the interactions (Actor Effect X Gender, Actor Effect X Grade, Actor Effect X Gender X Grade; Partner Effect X Gender, Partner Effect X Grade, Partner Effect X Gender X Grade; and the Gender X Grade interaction), three of the six interactions with actor or partner effects were significant.

The partner effect was qualified by a two-way interaction with gender,  $F(1, 305) = 5.01, p = .026$ . This interaction was graphed (see Figure 1, panel 1) and was probed with simple slope analyses. The partner effect was non-significant and negative for girls,  $SPE = -.08, F(1, 305) = 1.18, p = .279$ , but positive for boys,  $SPE = .29, F(1, 305) = 3.85, p = .050$ . Boys who responded to friends' problem statements with Humor had friends who felt closer to them over time.

The actor effect was qualified by a two-way interaction with grade,  $F(1, 305) = 15.57, p < .001$ , and a three-way interaction with gender and grade,  $F(1, 305) = 8.95, p = .003$  (see Figure 1, panel 2). The actor effect was negative and significant for tenth-grade girls,  $SPE = -.40, F(1, 305) = 23.83, p < .001$ . Tenth-grade girls who produced Humor responses felt less close to their friends over time. The actor effects were not significant for seventh-grade girls or seventh- or tenth-grade boys (all  $F$  values  $< 1.00$ ).

## Discussion

The current study extends our understanding of the role of gender in the context of problem talk. Results revealed mean-level gender differences. However, the functional significance of problem talk was generally similar for girls and boys. That is, even when girls and boys engaged in problem talk behaviors at different rates, the implications of the behaviors for friendship closeness generally were consistent across genders. One noteworthy exception was humor, which may be especially important for boys' friendships.

In terms of problem talk participation and positive engaged responses, mean-level gender differences were expected. Consistent with previous work (Glick & Rose, 2011; Rose, 2002; Rose & Asher, 2004; Rose et al., 2012), girls talked about problems more than boys. However, boys produced as many statements that were not about problems as did girls. This meant that girls were not simply more talkative, but rather that they talked specifically about problems more than boys.

Mean-level gender differences also were found for the positive engaged responses. Girls made more Support/Agree, Question, Related Experience, Information/Opinion, and Acknowledge/Prompt responses than boys. The only exception was that boys gave as much advice to their friends as did girls. The advice giving response is more solution oriented than the other positive engaged strategies. In addition, depending on how the advice is given, advice giving could be perceived as critical. In fact, young adults report relatively negative emotional reactions to friends' advice giving (Michaud & Warner, 1997). Girls may inhibit how much advice they give if they are concerned that advice giving will not be perceived as supportive.

In terms of associations with emotional closeness, the effects of participating in problem talk depended on whose problem was the focus at the time. An actor effect emerged for Own-Problem Statements; when adolescents talked about their own problems, they felt closer to their friends. A partner effect emerged for Friend-Problem Statements; when adolescents talked about the friends' problems, the friends felt closer to them. These effects speak to the salience of one's own problems in that adolescents talking about their own problems or hearing friends talk about their own problems fostered feelings of closeness. The results also fit with theories of friendship (Sullivan, 1953) and disclosure (Derlega, Metts, Petronio, & Margulis, 1993) that highlight friendship as a valued context for voicing one's own worries and concerns. In contrast, adolescents talking about friends' problems did not predict their own feelings of closeness and adolescents talking about their own problems did not predict friends' feelings of closeness.

In terms of the positive engaged responses, the results were consistent with the hypothesis that partner effects would be stronger than actor effects. That is, *hearing* positive engaged responses from friends was hypothesized to impact feelings of closeness more strongly than *producing* positive engaged responses for friends. In fact, none of the actor effects were significant, indicating that adolescents producing positive engaged responses to friends' problem statements did not predict their own feelings of closeness. However, partner effects were significant for four of the six positive engaged responses. Adolescents who produced Support/Agree, Question, Information/Opinion, and Acknowledge/Prompt (tenth grade only) responses had friends who felt closer to them over time.

The other positive engaged responses, Related Experience and Advice Giving, did not predict changes in friends' feelings of closeness. In terms of Related Experience, adolescents' sharing their own experiences may not predict increased closeness for friends because the response at least temporarily shifts the focus of the conversation from the friends' experiences to the adolescents' own experiences. Advice giving may not predict increased closeness for friends because it is not always perceived positively (Michaud & Warner, 1997).

Notably, the significant effects for engaging in problem talk and for the positive engaged responses were not moderated by gender. That is, despite mean-level gender differences, the functional significance of engaging in problem talk and of friends' producing positive engaged responses did not differ by gender. In other words, boys benefited just as much as girls from these aspects of problem talk.

For the negative responses, some unexpected findings emerged. Boys were expected to produce more negative responses than girls. However, only one gender difference emerged, in which girls produced more Changing Subject responses than boys. Also, although the negative responses were hypothesized to predict decreased closeness over time and partner effects were expected to be stronger than actor effects, none of the partner effects were significant. The only significant effect was an actor effect indicating that adolescents who produced Changing Subject responses felt less close to friends over time. Perhaps adolescents who produced disinterested or distracting responses to friends' problem statements already were on a trajectory towards disengaging from the friendship. Despite this interesting possibility, the unexpected results for the gender differences and the null results for partner effects deserve note. One possibility is that these effects were influenced by the low base rates of the negative responses. A different task, such as a conflict task, might elicit more negative responses and provide a better context for testing gender differences and relations with closeness.

Some of the most interesting findings of the study involved Humor. Past work had not considered friends' Humor responses to problem statements. Unexpectedly, in the seventh grade, girls produced more Humor responses than boys. However, for boys, Humor increased with age, and, by tenth grade, boys produced more Humor than girls. In fact, tenth-grade boys produced more Humor responses than adolescents in any other gender/grade group.

Importantly, the data further indicated a gender difference in the functional significance of Humor. For boys, but not girls, responding to friends' problem statements with Humor was related to friends feeling closer to them over time. Just as research indicates cultural differences in individuals' reactions to humor (Robert & Yan, 2007; Wyer & Collins, 1992), girls and boys may develop different perceptions of when humor is appropriate. For girls, problem talk may be a serious context, and friends may perceive humor as an indication that the problem is not taken seriously. In contrast, boys may interpret humor during problem talk more positively.

Research now is needed to replicate and explain this finding. For instance, studies should test whether boys' closeness results from shared positive affect (an outcome of well-received humor; Robert & Wilbanks, 2012) or whether there is something specific about humor in the context of problem talk that fosters closeness between boys. As an example, boys may appreciate friends making light of the problem rather than focusing on problem-related distress if that allows them to "save face." Future work also could consider whether this result helps to explain the greater use of humor among middle- than early-adolescent boys. Humor during problem talk may increase in boys' friendships with age if it is positively reinforced by feelings of closeness.

Interestingly, the actor effect for humor also differed by gender, and was further qualified by grade. A significant effect emerged only for tenth-grade girls. Tenth-grade girls who responded to friends' problem statements with humor reported feeling less close to the friends over time. An interpretation proposed for the significant actor effect for the Changing Subject responses was that adolescents who respond in a disengaged manner to

friends' problem statements may already be on a trajectory toward detaching from the friendship. If tenth-grade girls perceive humor to be inappropriate or dismissive during problem talk, their humor use in this context may function similarly to the use of the Changing Subject responses in the broader sample. Moreover, it is interesting that this humor effect was significant for girls only in the tenth grade. Across the transition from early to middle adolescence very different processes may be at work among girls and boys such that humor during problem talk is seen as increasingly aversive among girls, while, at the same time, humor becomes increasingly frequent in boys' friendships in which it also is well-received.

In addition to the grade effects for humor, several other mean-level grade effects emerged. As expected, tenth graders engaged in more problem talk and produced more positive engaged responses than seventh graders. This fits with past work indicating that disclosure to friends increases with age (e.g., McNelles & Connolly, 1999) and that social perspective taking increases with age (Selman, 1980). However, with the exception of humor, grade did not moderate any of the mean-level gender differences and moderated only one relation with friendship closeness (Acknowledge/Prompt predicted closeness for tenth graders only). The age range considered in the present research was relatively narrow; perhaps more grade effects would emerge in a sample with a broader age range.

The limitations of the current study also should be acknowledged and addressed in future work. First, every method has drawbacks, and ecological validity can be a concern with laboratory observations. Corroborating the results using other methods would further boost confidence in the current findings. Using a different assessment of problem talk, such as an experience sampling assessment, would be especially useful for capturing friends' discussions of everyday problems.

In addition, the current study examined only one direction of effect. The results indicate that how friends talk about problems predicts changes in feelings of closeness over time. However, feelings of closeness also may influence how friends talk about problems. Moreover, the possibility cannot be ruled out that a third factor (in the friendship or the broader context) influenced both friends' initial interactions and the changes in closeness over time.

Future work also would benefit from an even more detailed and nuanced assessment of friendship processes. Although the current coding system captured considerable information regarding friends' problem talk, some aspects of problem talk remain unexplored. For instance, within a single response type (e.g., Support/Agree), there was variation in tone and content of the responses that could be further examined. Also, although the friends' intentions often seemed clear, intent can only be inferred using behavioral observation. For example, there may have been instances in which a response that was coded Support/Agree was intended to be sarcastic or a Changing Subject response was intended to be a positive distraction rather than dismissive. The video recall method could be an effective approach for examining friends' intentions during the interactions.

Finally, the scope of the current research could be broadened to explore additional pathways to positive friendship outcomes for girls and boys. Problem talk is only one aspect of friendships. Other important aspects include companionship, helping, managing conflict, and many more. Surprisingly little is known about the detailed ways in which girls and boys manage these aspects of friendship and the implications for their relationships. Moreover, friendship outcomes other than closeness should be considered as well. Affective outcomes such as loyalty or commitment to the friend and enjoyment of the friendship may be particularly important to boys' satisfaction in friendships.

Despite the limitations of the research and important future directions, the present study offers a promising start toward better understanding friends' problem talk. Results indicated that even a "snapshot" of problem talk in the laboratory predicted changes in feelings of closeness nine months later. The assessment provided a conservative test as there was not shared method variance (observations predicted reports), partner effects were tested (adolescents' behavior predicted not only their own but also their friends' reports of closeness) and prospective effects were considered (initial closeness was controlled when predicting later closeness). The fact that significant results emerged with this stringent test speaks to the critical nature of problem talk for adolescents' friendships.

The results further highlight the central role of gender for understanding friends' problem talk. Despite mean-level gender differences for participating in problem talk and producing positive engaged responses, gender differences were not found for the functional significance of these behaviors. Therefore, a major implication of the findings is that boys' friendships benefited as much as girls' friendships from problem talk and positive engaged responses. Based on these results, increasing positive engaged responses among boys may seem advisable. However, such attempts could be met with resistance if boys see less utility in talking about problems as compared to girls (Rose et al., 2012).

Instead, the findings suggest that there may be alternative paths to closeness for boys. For boys only, humor during problem talk increased friends' feelings of closeness. The appropriate use of humor in this context may prove to be a social skill that, if fostered among boys, could increase their experience of friendship closeness. More generally, the finding underscores the importance of not assuming that the same behaviors contribute to positive friendships for boys and girls and of identifying understudied pathways to friendship closeness for boys.

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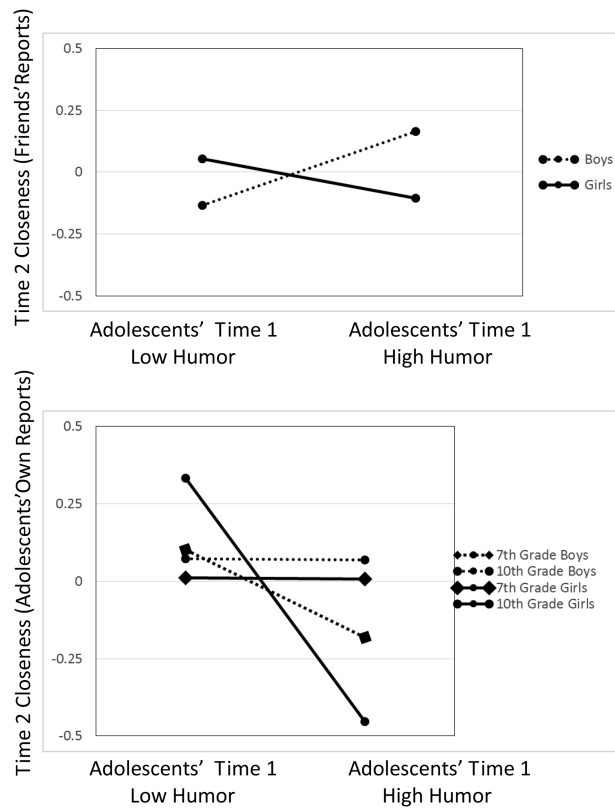
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**Figure 1.**  
*Panel 1.* Association between adolescents' Time 1 Humor responses to friends' problem statements and the friends' reports of emotional closeness at Time 2 (partner effect: controlling for Time 1 emotional closeness). High humor = 1 SD above the mean; Low humor = 1 SD below the mean. *Panel 2.* Association between adolescents' Time 1 Humor responses to friends' problem statements and their own reports of emotional closeness at Time 2 (actor effect; controlling for Time 1 emotional closeness). High humor = 1 SD above the mean; Low humor = 1 SD below the mean.

Scores for Non-Problem and Problem Talk and Responses to Friends' Problem Statements for Girls and Boys

Table 1

	Girls		Boys		F Value	Effect Size
	M (SD)	Range	M (SD)	Range		
Friend-Problem Statements	27.21 (23.63)	1-138	16.96 (17.40)	0-134	11.69***	.49
Own-Problem Statements	51.50 (47.14)	1-418	28.99 (25.90)	0-130	17.31***	.59
Non-Problem Statements	139.13 (56.80)	6-288	152.96 (50.09)	24-303	0.26	-.26
<u>Engaged Responses</u>						
Support/Agree	5.84 (7.09)	0-41	3.45 (5.36)	0-41	6.65*	.38
Question	4.56 (5.00)	0-39	2.96 (3.69)	0-20	11.67***	.36
Related Experience	2.03 (3.77)	0-27	1.17 (3.44)	0-51	7.33**	.24
Information/opinion	7.50 (8.34)	0-49	4.61 (6.58)	0-52	11.51***	.38
Acknowledge/Prompt	3.02 (3.57)	0-21	1.81 (2.14)	0-12	4.46*	.41
Advice Giving	1.10 (3.21)	0-36	.82 (2.23)	0-17	.15	.10
<u>Negative Responses</u>						
Changing Subject	5.13 (7.57)	0-81	3.17 (3.56)	0-20	3.95*	.33
Minimize/Non-support	.83 (2.25)	0-20	.85 (3.15)	0-36	.98	-.01
Silence/No Response	.17 (.57)	0-5	.12 (.52)	0-5	1.03	.09
<u>Humor Response</u>						
Humor	.47 (1.07)	0-8	.59 (1.38)	0-9	4.37*	-.10
Seventh Grade	.51 (1.15)	0-7	.22 (.57)	0-4	7.58**	.32
Tenth Grade	.43 (.98)	0-8	.97 (1.80)	0-9	10.70**	-.38

Notes.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

Table 2  
Scores for Non-Problem and Problem Talk and Responses to Friends' Problem Statements for Seventh and Tenth Graders

	Seventh Graders		Tenth Graders		F Value	Effect Size
	M (SD)	Range	M (SD)	Range		
Friend-Problem Statements	15.46 (13.86)	0-85	29.10 (25.27)	1-138	41.93***	.67
Own-Problem Statements	29.89 (31.86)	0-217	51.46 (44.24)	1-418	24.95***	.56
Non-Problem Statements	158.83 (48.05)	34-303	132.73 (56.63)	6-288	23.52***	-.50
<u>Engaged Responses</u>						
Support/Agree	2.92 (4.53)	0-32	6.46 (7.47)	0-41	21.60***	.57
Question	2.87 (3.63)	0-27	4.72 (5.03)	0-39	12.36***	.42
Related Experience	1.07 (2.34)	0-15	2.15 (4.53)	0-51	2.87	.30
Information/opinion	4.23 (6.07)	0-40	7.99 (8.61)	0-52	15.86***	.50
Acknowledge/Prompt	1.95 (2.53)	0-18	2.92 (3.40)	0-21	16.48***	.32
Advice Giving	.62 (1.64)	0-17	1.31 (3.55)	0-36	6.28*	.25
<u>Negative Responses</u>						
Changing Subject	3.85 (5.08)	0-39	4.52 (6.89)	0-81	1.60	.11
Minimize/Non-support	.68 (1.86)	0-14	.99 (3.36)	0-36	.05	.11
Silence/No Response	.14 (.52)	0-5	.16 (.57)	0-5	.00	.04
<u>Humor Responses</u>						
Humor	.37 (.93)	0-7	.68 (1.45)	0-9	.38	.25
Girls	.51 (1.15)	0-7	.43 (.98)	0-8	.49	-.07
Boys	.22 (.57)	0-4	.97 (1.80)	0-9	22.61***	.57

Notes.

\*  
 $p < .05$ .\*\*\*  
 $p < .001$ .

**Table 3**

Prospective Associations of Friends' Engagement in Non-Problem Talk and Problem Talk and Responses to Friends' Problem Statements with Later Emotional Closeness

	DV = Time 2 Emotional Closeness			
	Actor Effect		Partner Effect	
	SPE	F value	SPE	F value
<u>Participation in Non-Problem and Problem Talk</u>				
Friend-Problem Statements	-.01	0.07	.09	6.66*
Own-Problem Statements	.07	4.34*	.01	0.15
Non-Problem Statements	-.04	0.94	-.04	1.25
<u>Engaged Responses</u>				
Support/Agree	.05	2.24	.09	5.97*
Question	-.01	0.05	.10	8.70**
Related Experience	-.00	0.01	.03	0.69
Information/Opinion	.03	0.66	.10	8.99**
Acknowledge/Prompt	.02	0.28	.04	1.31
Advice Giving	.03	0.57	.05	2.23
<u>Negative Responses</u>				
Changing Subject	-.07	4.20*	.04	1.11
Minimization/Non-Support	-.03	.85	-.03	0.85
Silence/No Response	-.03	.78	.01	0.06
<u>Humor Responses</u>				
Humor	-.06	2.83	-.01	0.05

Notes. Time 1 Emotional Closeness is controlled in all analyses. SPE = Standardized Parameter Estimate.

\*  $p < .05$ .

\*\*  $p < .01$ .