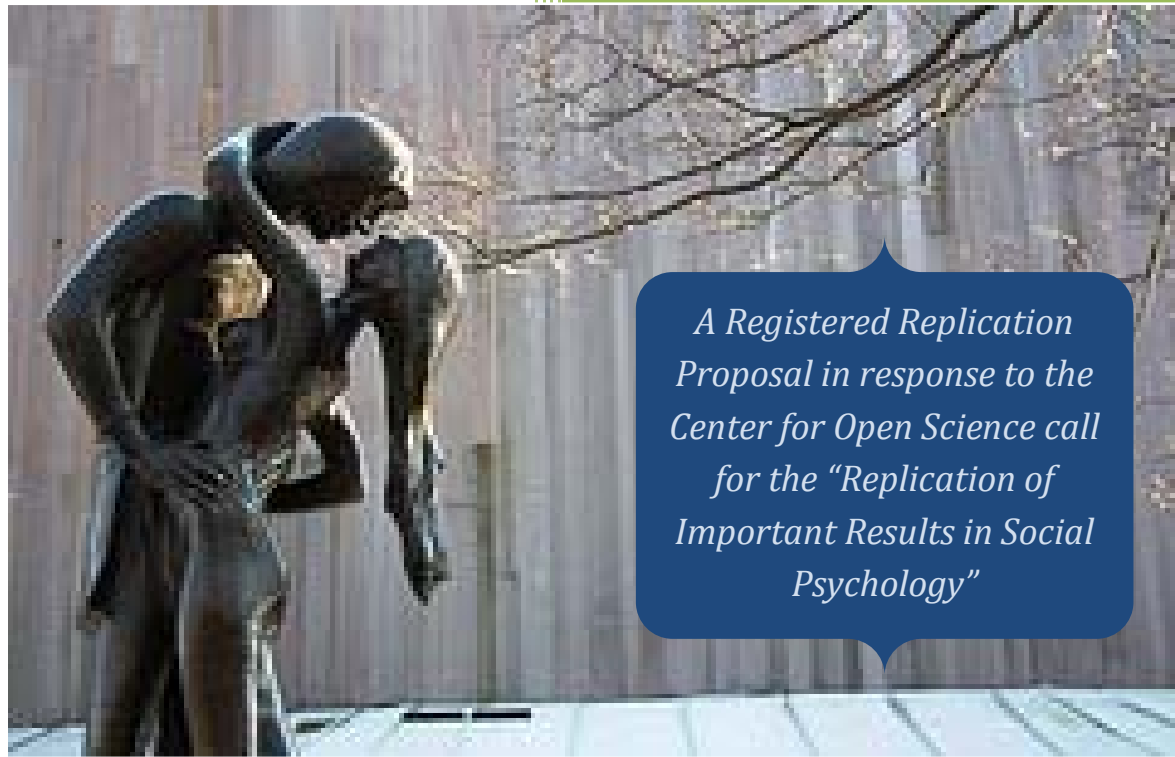


# 2013

## Revisiting Romeo & Juliet



*A Registered Replication  
Proposal in response to the  
Center for Open Science call  
for the “Replication of  
Important Results in Social  
Psychology”*

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## Registered Replication Proposal: REVISITING ROMEO AND JULIET

### INTRODUCTION

#### The Original Effect

The “Romeo and Juliet effect” was coined by Driscoll and colleagues (1972) when they discovered that dating couples who reported an increase in negative parental interference in their romantic relationship also evidenced an increase in love over the same 6-month period. Since the original study, replications of the effect have been elusive. Few studies find support for anything approximating the effect (e.g., Felmlee, 2001; Parks et al., 1983; Sprecher, 2011). Instead, most find the “social network effect” (Felmlee, 2001) whereby disapproval from one’s social network leads to *declines* in romantic relationship quality (see Allan, 2006; Parks, 2007 for reviews).

Nonetheless, much like the story, the lore of the Romeo and Juliet effect persists, and the finding continues to be cited in popular culture, blogs, textbooks, and papers today (e.g., DeWall, et al., 2011; Fisher, 2004; Miller, 2011; a google search for “Romeo and Juliet effect” will yield over 100,000 hits, and discussion of the effect was even mentioned on the recent February 27<sup>th</sup> episode of Law and Order SVU). It is no surprise that Reis (2011), in his recent review of the history of relationships research, touted the effect as “ever-popular” (pg. 219). After all, none of the studies claiming to refute the Romeo and Juliet effect have been exact replications. There is wide variability in the measurement of social network disapproval as well as diversity in the measures used to assess relationship outcomes. As such, a replication is needed.

In the present proposal, we will include the original scales outlined in the Driscoll et al. (1972) study. We will also administer an additional updated and validated measures for the constructs initially measured by Driscoll and colleagues. At the time they conducted their survey, measures of romantic relationship quality (e.g., commitment, trust, love) were in their infancy. Thus, the measures they included were created for their study and have not been used since. Including the original measures in one survey and running a second survey with contemporary scales should allow us to address one of the central questions about the effect. Namely, was the effect a measurement artifact?

### METHOD

#### Participants

The original study included 140 heterosexual couples (49 dating and 91 married couples). The effect was primarily evident in the dating couples. We will aim for a substantially larger sample of individuals in dating and marital relationships. We will be using individuals instead of couples as we plan to run the study with an online sample using Amazon’s Mechanical Turk crowdsourcing pool and thus obtaining verifiable data from both members of a couple would be a challenge. Importantly, in the original paper no differences were found in the effect for one couple member versus another and as such, the couple data had simply been combined into a single average. Thus, given that couple data was not essential to finding the original effect, we trust that using individual data will suffice.

The original analyzes used correlations to assess the Romeo and Juliet effect hence we plan to replicate these analyses. The G-Power software package (Buchner, Erdfelder, & Faul, 1997) was used to calculate power when conducting correlational analyses. The calculations based on the G-Power software suggested that the estimated number of participants needed to detect a medium effect at an alpha of .05 is 134 per group (dating and married individuals). In addition to the correlation analyses, we will also

conduct a latent variable cross-lagged panel analysis for each group. The general rule of thumb for latent variable designs is to have at least 10-15 participants per parameter (Kline, 2011). Using this general rule, the minimum sample size needed would be approximately 450 per group or 900 total participants. Thus, to account for attrition between administrations, we will aim to recruit 600 individuals in dating relationships and 600 married individuals. Participants who respond to our recruitment advertisements will be screened to ensure they have been dating the requisite minimum of six weeks, that their social network members are aware of their romantic relationship, and that they anticipate being available for a follow-up 4-6 months later.

The only demographics provided in the original study were the length of the relationships. Thus, anticipated sample characteristics will likely match the demographics typical of MTurk samples (Mason & Suri, 2012). However, we will be limiting the sample to American respondents who have been dating at least 6 weeks.

Originally participants had been a part of the longitudinal “Marital Relations Project” who were “volunteers interested in learning more about their relationships” (pg. 3, Driscoll et al., 1972). Some married couples were recruited from portions of the study focused on marital therapy, and dating couples were recruited from a variety of courses, but the authors assured that there were relationships of all levels of satisfaction represented in their sample. Accordingly, participants will be recruited from Amazon’s Mechanical Turk website to participate in a “Romantic Relationships Project” for individuals interested in learning more about their relationships. Referrals will be provided to online and offline relationships resources, such as the Science of Relationships website and contact information for Healthy Marriage Initiatives in their area, upon the study’s conclusion.

### **Pre-Screening Survey Materials**

We will have a preliminary survey to create our pool of respondents. The screening survey will ask first if the participants are currently involved in a romantic relationship. Participants who answer no will be forced to exit the survey. Participants who respond yes will proceed to complete basic demographics about both the participant and his/her romantic partner: including gender, age, ethnicity, race, SES, level of education, state of residence, and state in which they were raised (16 items). These variables will be used to describe our sample. We will also ask about relationship descriptives, including: relationship length, relationship status (married, engaged, dating exclusively, dating casually), cohabitation status, number of children, and frequency of contact with the partner (via electronic messaging, telephone, and in-person) (7 items).

For the purposes of screening, we will also ask participants if they would be available for a follow-up survey in 4-6 months and if 1) their parents know about their romantic partner and 2) if their friends know about their romantic partner. Further, we will inquire as to whether they have 1) discussed their romantic partner with their parents or 2) discussed their romantic partner with their friends. Plus we will ask if their romantic partner have 1) met their parents and 2) met their friends. Responses will be yes/no. We will only be including those participants who anticipate being available and whose friends and family know about their romantic partner and thus could possibly have an opinion. (7 items)

For the purpose of potentially developing a future pool of participants, not for the present study, who might be able to have their partner complete the survey also we will ask whether their romantic partner would be willing to complete a separate survey. Also, to ensure that participants who do not complete the follow-up are not different from those who do on relationship satisfaction, we use an item from Hendrick’s Relationship Assessment Scale “In general, how satisfied are you with your relationship?” to

which participants can respond on a 5-point Likert scale where 1 = very unsatisfied, and 5 = very satisfied.

Participants will then be asked for their contact information (first name, e-mail, and phone) for the follow-up surveys and to facilitate tracking. Conducting the pre-screen will allow us to also screen for lazy respondents who do not pay attention to the items in the questionnaire and build our pool of participants willing to return.

Thus the total pre-screening questionnaire will include 36 items plus two quality control items.

### **Longitudinal Survey: Time 1 and Time 2 Materials**

#### ***Screening Items***

*A week after pre-screen, participants will be invited to partake in the Time 1 survey. Before individuals can access the survey, they must meet a few screening requirements.* The screening survey will ask first if the participants are currently involved in a romantic relationship. Participants who answer no will be forced to exit the survey. If participants respond yes, they will also be asked if their parents know about their romantic relationship, if their friends know about the relationship and if they would be available for a follow-up survey in 4-6 months. If participants answer no to any of these questions, they will also be forced to exit the survey. If participants answer yes to all of the above questions, they will then proceed to the remainder of the survey.

#### ***Parental Interference***

The key predictor variable of interest was the Parental Interference scale which, to date, has yet to be used in any subsequent studies. Rather, most researchers employ a single item to ask participants directly whether their friends/parents/social network approves of their relationship. In contrast, the original authors asked six questions in a rather unique fashion. Instead of asking individuals directly whether their parents (dis)approved of their relationship, Driscoll and colleagues asked if one partner (e.g., the husband) had communicated to the reporting partner (e.g., the wife) that 1) her parents interfere, 2) were a bad influence, 3) were hurting the relationship, 4) were taking advantage of her, 5) didn't accept him, or 6) tried to make him look bad. Participants responded on a 5-point scale (*0 = not at all, 4 = very much*). Scores were summed. Further, because the positive, significant correlation between interference from parents and love was found regardless of whether the parental interference measure referred to own parents or to partner's parents couple reports were combined. Couples were then classified into categories of no interference (score of 0), slight interference (scores between 1-5), mild interference (6-12), moderate interference (13-24), and severe interference (25+). Reliability was  $\alpha = .86$  for dating couples and  $\alpha = .82$  for married couples.

As we will not have couple data, we will also ask participants if they have communicated to their partner that his parents interfere, are a bad influence, hurt the relationship, etc. Thus we can ascertain if the reporting partner has trouble with the "in-laws" as well. We will average these scores with the original parental interference items for an overall index of parental interference that approximates the combined couple reports used in the original study.

We will include this original scale and will include additional questions compiled from an array of studies using primarily single indices to assess parental opinions of one's romantic relationship. We have used our Social Network Opinion Scale (SNOS) in a number of our past studies. It includes 8 items which have been compiled from an array of studies allegedly all examining the same issue – social network opinions – but often asking the questions in different way. Thus, the scale has 4 items asking about approval:

- “How supportive are your parents of your relationship,” – from Bryant & Conger, 1999 and Parks et al., 1983;
- “How much do your parents like your partner,” – from Leslie et al., 1986;
- “To what extent do your parents include your partner in things (e.g., family events)” – from Lewis, 1973;
- “How much do your parents encourage you to continue your relationship?” – from Felmlee, 2001.

And there are 4 items reverse-scored items assessing disapproval:

- “How much do your parents disapprove of your relationship,” – from Felmlee, 2001, Lehmiller and Agnew, 2006, Parks et al., 1983, Sprecher and Felmlee, 1992;
- “How much do your friends/family encourage you to ‘keep your options open’ (e.g., see other people, consider alternatives other than getting invested in the relationship),” – from Leslie, et al., 1986;
- “To what extent do your parents say negative things about your partner,” – from Leslie et al., 1986; and
- “To what extent do your parents feel you should spend less time with your partner” – from Johnson and Milardo, 1984.

We will keep the same 5-point Likert response format as the original parental interference scale. Reliability for the SNOS has consistently been above .80 in multiple samples. Including both measures would allow us to determine whether the difference in measurements might contribute to differences in findings.

Further, Felmlee (2001) found some evidence for the Romeo and Juliet effect when she found that couples were more likely to stay together over a six month period when they faced parental disapproval. However, she only found this effect when the couples had approval from their friends. Driscoll and colleagues (1972) never asked about the opinions of friends. Thus, it could have been that the effect was being driven by a subset of participants, such that only those who had the support of their friends evinced greater affection for their partner when parental interference escalated. Accordingly, it seems important to duplicate the questions to assess friend opinion in addition to parental opinion.

### *Relationship Quality Indices*

**LOVE.** Love is the essential relationship quality variable in the Romeo and Juliet effect. Thus, the operationalization of this variable is central to examining the effect. In the original Driscoll et al. (1972) study they included four items to assess love. They asked participants how much they love, care about, and need their romantic partner as well as whether they felt their relationship was more important than anything else. Participants responded to an item such as “I love my partner” on a 6-point scale with 1 = *not at all* and 6 = *extremely*. Reliability was  $\alpha = .88$  for dating couples and  $\alpha = .90$  for married couples.

Since the original study, a number of love scales have been developed and validated (see Fehr, 2003; Hatfield et al., 2012 for reviews). Driscoll and colleagues advocated for Rubin’s (1970) love scale and said it was Rubin’s theory upon which they had developed their four items. Thus, we will also include the Rubin love scale that was refined to 10 items by Braiker and Kelley (1979). Reliability consistently falls in the .80 range across multiple studies (e.g., Sprecher, 1999). Items are responded to on a 9-point Likert scale with 1 = *not at all true* and 9 = *definitely true*. Sample love item: “I would do almost anything for my partner.”

Note, however, that many consider the Rubin (and thus the Braiker & Kelley) love scale to be more of a measure of companionate love. Yet, when people conventionally think of the Romeo and Juliet effect, they emphasize that it increases romantic or passionate love. Even Driscoll and colleagues argued for the importance of differentiating conjugal and romantic love. Thus, it seems important to include a measure of passionate love. The 15-item Hatfield and Sprecher (1986) Passionate Love Scale is perhaps the most commonly used measure to assess this aspect of love and has been validated in studies of the neuroscience of love (Hatfield et al., 2012). This scale also employs a 9-point Likert scale.

**COMMITMENT.** The single item – How committed are you to your marriage (or to marrying you current partner)? – was positively correlated with levels of parental interference in the original study. There were four response options: *1 – not at all, 4 – completely*.

Currently, there are numerous scales of commitment in a romantic relationship. Some ask about feelings of commitment towards the partner (e.g., Sternberg's 1997 Commitment scale: "I am certain of my love for my partner"; Rusbult et al.'s 1998 Commitment scale: "I feel completely attached to my partner and our relationship") others ask one to make concrete predictions of the relationship's likelihood to last (Lund's 1985 Commitment scale: "How likely is it that you and your partner will be together six months from now?"). The former scales correlate strongly with other measures of relationship affect (e.g., love, satisfaction). The latter are related but distinct. We believe the 9-item Lund (1985) Commitment scale will allow us to measure commitment in a way that is distinct from affect so that it isn't redundant with measures of love and trust. Reliability for the Lund Commitment scale is consistently above  $\alpha = .90$ .

**TRUST.** Trust was one relationship quality index included in the original study on which participants experiencing network interference showed decreases over time. The original study included five items using the same 6-point Likert scale asking the extent to which trusted and were able to count on their romantic partner, felt that s/he was considerate, dependable, and concerned for his/her welfare. Response format was the same 6-point Likert scale used for the love items. Reliability was  $\alpha = .80$  for dating couples and  $\alpha = .89$  for married couples.

Again, there are now validated measures of interpersonal trust (Larzelere & Huston, 1980; Rempel et al., 1985). Of these scales, the Rempel et al. scale is the most cited. It includes 17 items, including "I can rely on my partner to react in a positive way when I expose my weaknesses to him/her." Reliabilities range from .70 to .86 for the sub-scales within the over-arching measure of trust.

**CRITICISM.** In the original study, criticism (or "criticalness" as it was called originally) was also more likely to increase over the course of the relationship if parental interference increased. This variable was assessed with five items, assessing how critical and disappointed one was with one's partner, as well as whether the partner was seen as uninteresting, not developing, or too dependent. Response format was the same 6-point Likert scale used for the love items. Reliability was  $\alpha = .74$  for dating couples and  $\alpha = .84$  for married couples.

Although other studies simply use the 2-item Perceived Criticism Measure (Hooley & Teasdale, 1989) which simply asks "How critical is your spouse of you?" and "How critical are you of your spouse?" These items seem to overlap, largely, with the first item from the original criticism inventory. Measurement of criticism beyond this index is less developed than that of the other relationship quality indices (Peterson and Smith, 2010) and is usually assessed by observing and coding a couple's

interaction. Thus, as self-report measures are less available, we will stick with solely the original measure.

**RESPONDENT AND RELATIONSHIP DESCRIPTIVES.** We will revisit the demographic and relationship descriptors included in the pre-screen. In addition, we will inquire whether their romantic partner has possibly completed the survey. And lastly, for the purposes of future exploratory analyses should the Romeo and Juliet effect only be evident with certain subsamples, we will also inquire as to whether: 1) either member of the couple has sought couples or relationship therapy for the present relationship? 2) if they are currently experiencing conflict with their parents about their current romantic relationship? 3) if they are currently experiencing conflict with their friends about their current romantic relationship? 4) if they are currently experiencing conflict with their partners' parents about their current romantic relationship? 5) if they are currently experiencing conflict with their partner's friends about their current romantic relationship? Response format will be 0 – *not at all*, 1 – *slightly*, 2 – *somewhat*, 3 – *definitely*. These will not be screening questions but used if we cannot replicate the effect with the overall sample and thus might have to explore subsamples (e.g., those seeking relationship advice who are experiencing conflict with their social network).

#### *Quality Control*

As we are administering the survey electronically, we will include quality control questions to check that participants are not absent-mindedly completing the survey. There will be one quality control question per section. Quality control questions include items to verify that the participant is paying attention by asking simple math questions (e.g., “4 + 5 =”), factual questions, (e.g., “The present year is \_\_\_\_\_”), and general attention items (e.g., “For quality control purposes, please select the number “4” from the list below”). Also, the Qualtrics survey administration system will allow us to notify participants if they have entered the wrong answer on these items to encourage attention. Plus, it will track the speed at which participants are completing the survey. Participants who complete the survey too quickly will be eliminated from analyses. We will base this elimination decision on looking for outliers on the tracked survey duration.

#### **Procedure**

Recruitment will be conducted via Mechanical Turk. The screening survey will be listed first. Participants will be told that we are seeking participants to help us with understanding how romantic relationships progress and will advertise the project as helping people learn about their relationships. It will also be advertised as a longitudinal study thus we will request that participants be willing and able to attend both portions of the study (4-6 months apart). Participants will be compensated for their time. Mechanical Turk compensation rates vary, but we will offer 25 cents for the pre-screen, .75 cents for the Time 1 survey and \$2.00 for the Time 2 survey. We will add the extra incentive of being entered for a drawing for one of four \$25 Amazon gift cards to participants returning for Time 2. The original study included two waves wherein scales were administered approximately 6-10 months apart (8 months on average). Identical surveys were administered at both points. Thus, we would likewise administer identical surveys at both Time 1 and Time 2. However, we are shortening the follow-up window to 4-6 months instead of 6-10. We made this change for a number of reasons. First, due to time constraints for the replication special issue we wanted to start and conclude data in a more timely manner. Further based on concerns about maintaining our respondent pool, we think a shorter follow-up window will improve our Time 2 response rate. Also, the feedback from Dr. Driscoll seems to indicate that the effect occurs in a “limited window,” and thus have a shorter time might actually mean we are more likely to find the effect.

Both Time 1 and Time 2 administrations would include all of the original measures from Driscoll et al.'s study as well as the newer validated instruments and questions regarding friend opinions in addition to those of parents. In total, there will be a total of 145 items for participants to complete that will be spread across 10 sections (item order randomized within each section). Based on past online surveys of similar types administered at Mississippi State University, participants tend to complete 4-6 questions per minute, putting completion time around 30 minutes. Thus, we do not anticipate that the administration of both surveys to the same participants will result in serious survey fatigue. The advantage is then that we will save time and money but also be able to, in direct comparisons, see if the original items yield different patterns of results than the contemporary items which would provide insight as to whether the alleged follow-ups to the original Romeo and Juliet effect are in fact yielding findings that could be compared to the original.

The listing on Mechanical Turk will link to our Qualtrics survey administration system. Thus, all data will be stored on a secure server to which Amazon will not have access.

As the method is fairly straightforward, no elaborate scripts or supervision of the participants should be needed. The contact e-mail for the lab at Mississippi State University will be provided. This is also the e-mail from which reminders about follow-up studies will be sent. The consent form will indicate that we are interested in studying how relationships develop and that they will be asked to complete a series of measures about their feelings about and behaviors toward their romantic partner. Additional questions will be posed that ask about their relationship with their own and their partner's family members. Further, they will be instructed that although some questions may seem redundant, that part of the goal of the present project is to develop measures of key variables relevant to assessing relationship well-being. We will note that different measures for similar constructs have been used across studies and we are trying to determine which are best.

## **Analysis Plan**

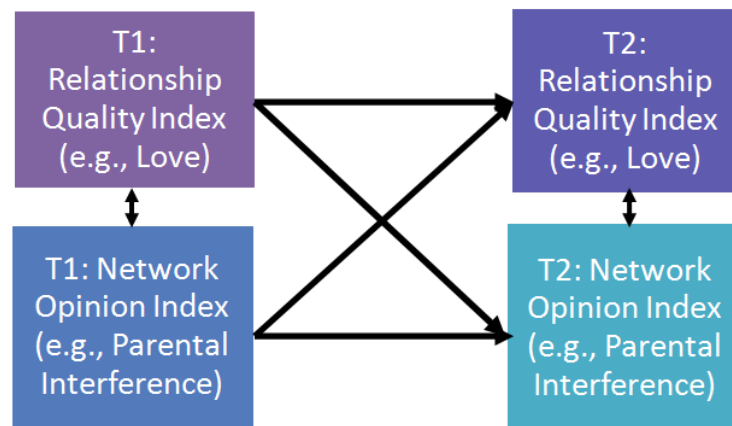
### **Confirmatory analyses**

The principal aim of this study is to conduct a replication of the Romeo and Juliet effect as outlined in Driscoll et al., 1972. To do this, we will use the same scales and analysis plan outlined in the article. In the original study, a parental interference difference score was computed for each couple by averaging scores across partners - at Time 1 and 2. This score was then correlated with the difference scores computed for each of relationship quality indices (also averaged across partner). Additional analyses involved running simple correlations between measures of parental interference and relationship quality at each stage of the study. These analyses will be replicated in the current study, with the exception of computation of difference scores (we are collecting data from one member of the couple) and comparisons to the original correlations identified in the paper will be assessed. We will also replicate these original analyses using the friend interference measures.

In order to see whether the differences in results may be due to measurement, we also aim to replicate the Romeo and Juliet effect using updated and validated measures for the constructs initially measured by Driscoll and colleagues. Using the same analysis plan, we will assess the relation between parental and friend interference and relationship quality using the Social Network Opinion Scale for parental and friend interference, the Rubin Love Scale and the Passionate Love Scale for assessments of love, the Lund Commitment Scale for assessments of commitment, and the Perceived Criticism Measure for assessments of criticalness.



We will also run additional analyses that take into account advancements in statistical analysis for data in longitudinal studies. Thus we will run latent variable cross-lagged panel analyses to examine whether perceptions of parental interference are associated with increases in relationship quality among dating and married participants, using the original measures and the updated measures separately. Thus, we will include two cross-lagged panel analyses using the original measures (one for married and one for dating persons) and two cross-lagged panel analyses using the contemporary measures. Should the Romeo and Juliet effect not be evident when the relationship quality indices are combined then we will separate out the parental opinion/interference and love variables and rerun analyses with parental opinion and love alone given the original effect was predominantly found for parental interference and love among dating couples.



*Figure 1: Cross-lagged panel analysis of Time 1 and Time 2 variables*

It is important to run both sets of analyses, because again, alleged replication attempts of the Romeo and Juliet effect never duplicated the analyses outlined in the original report. Analyses in subsequent papers have varied widely. Conducting both original and revised analyses will allow us to see whether the finding is a result of type of analysis chosen. Additional exploratory regressions including both contemporary and original measures may also be conducted (one for each relationship quality index) to compare the operationalizations of social network interference vs. social network opinion.

### **Assessment of Replication: Meta-analytic Plan**

Following the replications, we will conduct a meta-analysis to find support for the Romeo and Juliet effect. The objectives of this meta-analysis is twofold: (1) to provide an accurate estimate of the relationship between parental interference and relationship quality and (2) to investigate potential sources of inconsistencies between study findings by analyzing the effect of contextual factors (Cooper, Hedges, & Valentine, 2009). We plan to conduct a systematic review of published and unpublished literature on parental interference and relationship quality. Database searches will include Academic Search Premier, Educational Resources Information Center, PsycInfo, Google Scholar, Social Science Index, MEDLINE, PubMed, and Scopus. In addition, we will examine reference lists of published articles, technical reports, and conference presentations as well as post messages on listservs and contact experts in the field for unpublished or in press material. Inconsistencies in the current literature support the use of a meta-analysis to establish whether parental interference leads to the Romeo and Juliet effect or the “Social Network effect” (disapproval leads to declines in relationship quality).

### **Known Differences from the Original Study**

The present study is an online survey of individuals in 2013 which is different than an in-person study of couples in Boulder, Colorado in the 1970's. Also, the proposed study is not a part of an on-going longitudinal marital intervention initiative. Thus, the primary difference between the two studies is likely to be due to sample.

It is, of course, impossible for us to travel back in time. However, it is worth noting that even contemporary attempts to replicate the Romeo and Juliet effect (e.g., Lewis, 1973) found evidence instead for the social network effect. Thus, it may not be that time frame is a pertinent consideration.

With regard to region, we acknowledge that there are cultural regional differences throughout the United States (e.g., Vandello & Cohen, 1999). However, if the Romeo and Juliet effect is robust, one would hope to see it emerge across regions. Instead, what has been a more robust – found across regions of the country – has been the social network effect. Conducting the study across the United States could allow us to at least see that the effects – or lack thereof – are not limited to one sample.

As for the individual versus dyadic data, it is important to note that the original authors found no differences by couple member regarding the existence of the effect. In fact, the couple scores were simply combined into a single index of parental interference based on this rationale (and evidence of intracouple homogeneity on indices). Accordingly, as the dyadic nature of the data was not integral to the effect being found initially we do not think the lack of dyadic data threatens the comparison.

Next, we will be using an online survey administration system instead of a paper and pencil survey administration system. Although these two means are different, the online administration system has a number of advantages. First the Qualtrics administration system has a number of options for quality control (outlined above) that add to the value of this survey administration method. Second, the online sample will be more diverse than an in-lab study would permit. Third, the sample will be considerably larger. Fourth, we will be able to collect participants across the United States rather than having our conclusions limited to the region in which the data was collected. Fifth, using Mechanical Turk will allow us to initiate and conclude data collection in a more expedient and cost-effective manner.

Additional variation are that although we are administering many of the same measures used by the original authors, the paper only presented a subset of the instruments administered to the couples while apart of the study (e.g., there were measures assessing “36 key aspects of the relationship” and “113 potentially bothersome and disruptive behaviors”) we cannot be sure that questions being answered in the context of this larger battery of inventories would be influenced by these other items.

We will be including the most popular means of assessing the same constructs assessed by Driscoll and colleagues (1972). Doing so will allow us to compare whether differences between the original study and subsequent studies – none of which ever used the same measures as the original – might be due to differences in instrumentation. However, we will set scale order such that the original Driscoll et al. measures come first so that their administration is not influenced by the contemporary measures. Order of the scales subsequent to the 24 original items will be randomized.

### **Provisions for Quality Control**

The researchers involved in the present project will take every attempt to ensure the highest quality of data collection and reporting. We will use electronic survey administration to reduce data entry error. We will include quality control items within the survey to check for negligent responding.

**Budget and Justification**

We seek \$2000 to facilitate the payment of participants for the present study. As noted above, we plan to pay participants for pre-screen, Time 1, and Time 2 survey completion (added incentive for returning is why there is a difference in payment amounts between administrations). To increase returns for part two of the survey, we added financial as well as lottery incentive.

We will be seeking additional funds from additional sources to add to our subject payment to cover the anticipated sample. For instance, we will be applying for internal funds at the University of Texas at Austin and Mississippi State University available through various interdisciplinary research funding initiatives and foundation programs.

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