

DYAD TO TRIAD: A LONGITUDINAL ANALYSIS OF HOW HUMOR AND PREGNANCY
INTENTION AFFECT COUPLES TRANSITIONING TO PARENTHOOD

BY

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THESIS

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Abstract

The transition to parenthood is a stressful transition that can lead to decreases in relationship satisfaction; however, not all individuals experience these decreases. According to the Vulnerability-Stress-Adaptation (VSA) Model, the vulnerabilities individuals bring and the adaptive behaviors individuals use can diminish or enhance the effects of a stressful experience on an individual's relationship satisfaction. Thus, guided by the VSA model, our study examined how pregnancy intention and humor use affected relationship satisfaction during the stressful transition to parenthood. The goals of the study were to examine the within-time association of pregnancy intention, humor, and relationship satisfaction, and then to investigate how humor and pregnancy intention were associated with changes in relationship satisfaction over time. Results showed that for men and women there was a positive association within-time for their own use of affiliative humor and their own relationship satisfaction. Further, within-time analyses indicated a positive association between men's use of aggressive humor and their own relationship satisfaction, and when men reported an unplanned pregnancy, using higher than average levels of aggressive humor was related to higher relationship satisfaction. Over time there were no significant effects for women, but we did find a significant interaction between men's use of affiliative humor and pregnancy intention with change in men's relationship satisfaction. When men reported unplanned pregnancies, their own use of affiliative humor buffered declines in their own relationship satisfaction. These results indicate that, for men, the use of humor may have served as a buffer during the stressful transition to parenthood, but that for women it may take a combination of adaptive behaviors to alleviate the impact of parenthood on their own relationship satisfaction.

Keywords: parenthood, humor, pregnancy intention, relationship satisfaction, couples

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Chapter One: Introduction

The transition to parenthood is one of the most critical changes a couple can go through and it is the point at which the dyad turns into a triad (Doss, Rhoades, Stanley, & Markman, 2009). Becoming parents means individuals have additional concerns outside of the couple relationship such as the 24-hour needs of the infant (Simpson, Rhoades, Campbell, Wilson, & Tran, 2002), extra housework (Gjerdingen & Center, 2005), and the division of childcare (Fillo, Simpson, Rhoades, & Kohn, 2015). The additional tasks brought on during parenthood are reasons individuals may experience increased stress (Doss et al., 2009; Lawrence, Nylene, & Cobb, 2007). Researchers have found the increased stress to be related to decreases in relationship satisfaction (Belsky, Spanier, & Rovine, 1983; Doss et al., 2009; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008). In a meta-analysis of cross-sectional studies comparing parents to non-parents it was found that parents had significantly lower relationship satisfaction than non-parents (Twenge, Campbell, & Foster, 2003). Further, several longitudinal studies have found significant drops in relationship satisfaction over time for couples who became parents (Cowan & Cowan, 1995; Gottman, Driver, Tabares, Gurman, & Jacobson, 2002). In addition, research by Cowan and Cowan (2000) found that within the first 18 months after the birth of a child, one third of individuals in their sample had marital distress ratings that fell into the clinical range. Findings from these early studies suggested that parenthood was what led to decreased satisfaction over time; however, the study by Doss and colleagues (2009) evidenced the impact of the transition to parenthood. Specifically, they found that when comparing parents to non-parents that although all individuals declined in relationship satisfaction over time, couples who transitioned to parenthood had more sudden and steeper declines in relationship satisfaction (Doss et al., 2009; Lawrence et al., 2008). Findings from Doss and colleagues' (2009) study suggested that there was something about the experience of becoming parents that led to more abrupt changes in satisfaction over time for individuals.

Several studies have documented declines in relationship satisfaction for first-time parents (e.g., Lawrence et al., 2008; Mitnick, Heyman, & Smith Slep, 2009). For example, Tomlinson (1987) found both parents reported decreased satisfaction from 3 months pre-birth to 3 months post-partum. In a study from about 14-16 weeks of pregnancy until 30 months post-partum, it was found that men and women declined moderately in relationship satisfaction (Trillingsgaard, Baucom, & Heyman, 2014). Another study, focused on mothers, found that over a 2-year period starting at 6 months pre-birth women had greater declines in relationship satisfaction (Mortensen, Torsheim, Melkevik, & Thuen, 2012). Most studies have found significant declines in relationship satisfaction throughout the transition to parenthood (e.g., Lawrence et al., 2008), but not all couples experienced decreased relationship satisfaction. Some couples even experienced the transition as an enhancement in their relationship (Cox, Paley, Burchinal, & Payne, 1999; Doss et al., 2009). The variability in how couples experienced the transition has led

researchers to question why there was variability and what factors, individual or dyadic, account for the variation in relationship satisfaction. Declines in first-time parents' relationship satisfaction have been found to be related to the stress new parenthood placed on a relationship (Lavee, Sharlin, & Katz, 1996), but researchers have found that individuals' outcomes may vary depending on the adaptability individuals have during this stressful transition (Cowan & Cowan, 2000). Further, although studies have focused on either one individual (e.g., Dew & Wilcox, 2011) or couples separately (e.g., Nomaguchi & Milkie, 2003), it is important to examine dyadic influences during this transition, because one individual's behavior and experiences can influence the other individual's outcomes (Keizer & Schenk, 2012; Thibaut & Kelley, 1959).

The Vulnerability-Stress-Adaptation (VSA) model suggests that when a stressful event occurs it can impact relationship satisfaction, but that enduring vulnerabilities and adaptive processes can impact the experience the stressful situation has on an individual (Karney & Bradbury, 1995). According to the model, vulnerabilities are characteristics or behaviors that make it harder to deal with stressful situations in relationships. An unplanned pregnancy, for example, could be a vulnerability during the transition to parenthood because the decision to become parents may have been less intentional. Adaptive processes are behaviors and strategies that individuals can employ, especially during stressful periods in relationships, to help attenuate the impact of stress. Humor could be used as an adaptive process because the function of positive humor is to alleviate distress (Abel, 2008). The VSA model provides a framework for examining why relationship satisfaction changes over time and it suggests that stressful experiences such as the transition to parenthood can negatively affect relationship satisfaction. Thus, the purpose of this study is to examine how humor and pregnancy intention influence satisfaction during the stressful transition to parenthood.

Chapter Two: Literature Review

Humor

Humor plays a vital role in the formation, maintenance, and regulation of romantic relationships and can be used as a maintenance behavior to help adapt to stressful situations in relationships (Lefcourt, 2001; Shiota, Campos, Keltner, & Hertenstein, 2004; Ziv & Gadish, 1989). When under distress, an individual can use affiliative humor, which is meant to enhance interpersonal cohesiveness (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003). Individuals can use affiliative humor to amuse others, put them at ease, and to improve the relationship (Hampes, 2006). Affiliative humor meant to amuse a partner could be an individual's strategy to make his/her partner feel better, especially if the partner has been stressed or was experiencing negative emotions. Affiliative humor involves telling funny stories, making witty remarks, and telling jokes, and can be enacted by telling a funny story that does not belittle. Thus, the use of affiliative humor can not only reduce stress but also tension. Researchers have found higher levels of affiliative humor to have a positive impact on relationships. Individuals' affiliative humor was positively associated with social support, intimacy, and relationship satisfaction (Campbell, Martin, & Ward, 2008; Dozois, Martin, & Faulkner, 2013; Martin, 2007). Humor may be beneficial to relationships; however, not all humor is adaptive and some types of humor are used with the intent of hurting others.

Aggressive humor is an interpersonal form of humor that is maladaptive; it hurts others through derision, sarcasm, and hostility (Hampes, 2006; Martin et al., 2003). Aggressive humor involves ridiculing, disparaging, teasing, intimidation, and manipulation. Humor that is aggressive is intended to tear the other person down, criticize, and hurt the other without consideration of the impact, consequences, or feelings of that person (Kowalski, Howerton, & McKenzie, 2001; Long, & Graesser, 1988; Martin et al., 2003). Research has found higher levels of aggressive humor to be harmful to relationships (Bippus, 2000). Individuals' aggressive humor has been negatively correlated with interpersonal competence, conscientiousness, agreeableness, and relationship satisfaction (Butzer, & Kuiper, 2008; Campbell et al., 2008; Derks, & Berkowitz, 1989; Driver & Gottman, 2004). In addition, aggressive humor has been positively correlated with hostility and neuroticism (Martin, 2007).

Campbell and colleagues (2008) explored the role of humor in conflict interactions in order to examine post-interaction influences of humor. They found that a partner's use of humor in communication was associated with an individual's current relationship satisfaction. Other researchers have found that individuals who were more satisfied in a relationship may have been more likely to use affiliative humor, whereas those who were less satisfied may have been more likely to use aggressive humor (Alberts, 1990; Ting-Toomey, 1983). These studies demonstrated the cross-sectional association between humor and relationship satisfaction, and showed support for both actor and partner effects of humor on relationship satisfaction.

Several studies have found a link between romantic partners' humor use and relationship satisfaction (e.g., Butzer & Kuiper, 2008; Campbell et al., 2008; Cann, Zapata, & Davis, 2011; Carstensen, Gottman, & Levenson, 1995), however, no study has looked at the buffering role of humor in association with relationship satisfaction during the stressful transition to parenthood. Given the cross-sectional findings that showed that humor was associated with relationship satisfaction, these findings should hold for individuals transitioning to parenthood. We expect humor to be related to satisfaction during parenthood because based on past research and the VSA model, humor can reduce the impact of stress on satisfaction, and parenthood is a period in which stress is prevalent. Humor, however, is not always positive and instead could be detrimental to a relationship. Understanding the role humor plays is important because negative humor could exacerbate the negative effects of becoming parents.

Few studies have examined humor longitudinally; however, past research found humor helped maintain satisfying relationships (Weisfield et al., 2011; Ziv, 1988). The use of humor then could be associated with satisfaction over time. Caird and Martin (2014), explored the daily effects of affiliative and aggressive humor on relationship satisfaction. They found low levels of affiliative humor significantly predicted relationship dissatisfaction. Satisfaction fluctuated from day to day, and having used more affiliative humor was related to higher satisfaction whereas using more aggressive humor was associated with relationship dissatisfaction. Further, although the only study that established a link of humor over time was over a one-month period, the goals of humor, to communicate, express affection, and reduce conflict have all been linked to the continuation of satisfaction in romantic relationships (Alberts, 1990; Bippus, 2000; La France & Hall, 2012). For example, constructive communication has been found to be related to more satisfaction (Litzinger & Gordon, 2005). Thus, we expected that using more affiliative humor and less aggressive humor would be more beneficial to current satisfaction and could potentially predict changes in satisfaction.

Pregnancy Intention and Desire to Have Children

Deciding to become parents was something that, when openly discussed, made the transition easier (Stamp, 1994). If the pregnancy was planned, couples could take time to prepare themselves, but couples with unplanned pregnancies may not have had a chance to discuss issues relevant to becoming parents and could struggle to communicate about the impending birth (Schwerdtfeger, Todd, Oliver, & Hubler, 2013). Researchers have found that individuals with planned pregnancies had more positive interactions, whereas individuals with unplanned pregnancies showed more negative interactions (Cox et al., 1999). Researchers have found pregnancy planning to be a buffer for couples transitioning to parenthood such that pregnancy planning helped attenuate the impact of the stressful transition and its effects on marital satisfaction (Belsky & Rovine, 1990; Shapiro, Gottman, & Carrère, 2000). Specifically, couples with planned pregnancies had more stable relationship satisfaction, whereas those who did not

plan their pregnancies experienced steep declines in relationship satisfaction (Lawrence et al., 2008). Thus, we expect couples who reported having planned pregnancies to be more satisfied than couples with unplanned pregnancies, and over time couples who had reported planned pregnancies would experience less pronounced declines in relationship satisfaction. However, the desire to have children has also been found to be related to relationship satisfaction. Rholes, Simpson, and Friedman (2006) found that individuals who had less desire to have children found parenting to be more stressful and were less satisfied 6 months post-partum. Based on past literature that has found pregnancy desire to relate to relationship satisfaction we controlled for pregnancy desire (Sipsma, Divney, Niccolai, Gordon, Magriples, & Kershaw, 2012).

Current Study

The current study explored the use of humor in interactions between partners who were transitioning to parenthood, and whether affiliative and aggressive humor predicted relationship satisfaction. Additionally, we examined pregnancy intention as a moderator of the association between humor use and relationship satisfaction. Based on past literature, we expected that unplanned pregnancies would be related to less satisfaction, especially for individuals and partners who used aggressive humor. First, we analyzed cross-sectional data in order to determine the within-time associations between pregnancy intention, humor, and relationship satisfaction. After conducting the within-time analyses, we then carried out growth curve analyses to determine how humor and pregnancy intention, independently and together, were associated with changes in satisfaction over time.

Based on previous research and theory, we hypothesized that:

Hypothesis 1a: Self and partner use of affiliative humor would be related to higher relationship satisfaction, but relationship satisfaction would be more pronounced for couples who reported planned pregnancies and less pronounced for those who report unplanned pregnancies.

Hypothesis 1b: Self and partner aggressive humor would be related to lower relationship satisfaction and this negative association would be stronger for couples who reported unplanned pregnancies, but would be attenuated for couples who reported planned pregnancies.

Hypothesis 2a: Relationship satisfaction would decrease over time for all individuals, but decreases would be more pronounced for individuals and partners who used more aggressive humor and reported unplanned pregnancies.

Hypothesis 2b: Relationship satisfaction would decrease over time, but self and partner use of affiliative humor and planned pregnancies would be associated with less steep declines in relationship satisfaction for individuals and partners.

Chapter Three: Methodology

Participants

The current study was a longitudinal examination of couples over the transition to parenthood. The baseline sample consisted of 192 heterosexual couples from the southwestern United States. All couples were living together and expecting their first child. Couples received a packet of questionnaires 6 months prior to their expected due date and were followed up postnatally at 6 months ($n = 165$), 12 months ($n = 153$), 18 months ($n = 151$), and 24 months ($n = 137$). Also, 2 weeks postnatally, individuals were asked about labor and delivery experiences and how close they felt to the new child.

The couples were recruited through childbirth classes at local hospitals. Of couples approached, approximately 45% agreed to participate. The majority of the sample was Caucasian (82%), with the remaining participants split evenly between Asian (9%) and Hispanic (9%) backgrounds. Of the participants, 94% had some college education. For the annual household income, 6% earned more than \$100,000, 38% percent earned more than \$55,000, 46% earned \$25,000 to \$55,000, and 16% earned below \$25,000. The mean age of the women was 26.70 years old ($SD = 4.1$), and the mean age of the men was 28.42 years old ($SD = 4.4$). Of the couples, only 5% were living together and unmarried, the remaining 95% were living together and married. The couples who were cohabitating had been living together for an average of 1.85 years ($SD = 2.2$) whereas the married couples had been married for 3.3 years, on average ($SD = 2.6$).

Procedure

During a meeting at one of the first childbirth classes, an experimenter explained the study. For participants to qualify they needed to have been married or living with their partner and both partners had to be expecting their first child. Six weeks before the expected due date (Time 1) each partner was separately mailed a set of self-report questionnaires. The participants were instructed to complete the questionnaires separately and return them to the study coordinator. Then postnatally at 6 months (Time 2), 12 months (Time 3), 18 months (Time 4), and 24 months (Time 5) participants completed self-report measures. At six months post-partum (Time 2) couples were invited into the laboratory for two support and two conflict discussions (the support discussion task will be discussed in further detail below, the conflict discussions were not used in this study). Couples filled out the questionnaires after the laboratory tasks. During all measurement times, the couples were instructed to complete the questionnaires separately and privately. At Times 1, 2, and 3, couples were paid \$50 for completing their questionnaires. To minimize attrition, payment was increased to \$75 dollars for the Time 4 and 5 questionnaires. For each phase of the study, couples in which both partners completed and returned their questionnaires were entered into a random drawing for two \$500 cash awards.

Participants were invited into the laboratory six months post-partum (Time 2). During this time each participant acted once as the support provider and once as the support recipient in two support discussions that each lasted eight minutes. Participants were informed that their discussion would be videotaped. Participants were instructed to think of topics related to how they wanted to change something about themselves as a new parent. Then in the laboratory each partner was randomly assigned to be either the support provider or the support recipient. After roles were designated by the experimenter, the participants were each prompted by the experimenter. The support recipient was prompted “we’d like you to start the first interaction with the topic you generated. Please discuss something you would like to change about yourself as a new parent.” The support provider was prompted “please be involved in the discussion and respond to your partner however you wish.” The couples were then instructed to begin their discussion after the experimenter left the room. When one minute remained, the experimenter instructed the couples from a microphone in the other room to wrap up their discussion before the end of the session. The couples then switched roles as support provider and support recipient and the same procedure was repeated.

Measures

Relationship satisfaction. To measure relationship satisfaction at each time point, a 10-item subscale of the Dyadic Adjustment Scale was used (Spanier, 1976). Eight-items used a 6-point scale, anchored 0 (*never*) to 5 (*all the time*) and one-item used a 4-point scale, anchored 0 (*never*) to 4 (*everyday*). Sample items were “In general, how often do you think that things between you and your partner/spouse are going well?” and “How often do you and your partner/spouse quarrel?” (reverse-scored). Participants also rated one-item for overall happiness with their relationship on a 7-point scale, anchored 0 (*extremely unhappy*) to 6 (*perfect*). Items were reverse-scored and summed resulting in a maximum score for relationship satisfaction of 50; higher scores indicated greater relationship satisfaction.

Pregnancy intention. Prior to the birth, each partner was asked privately and separately to report on pregnancy intention. They were asked specifically if their pregnancy was planned (they intended to get pregnant) or unplanned (they were not trying to get pregnant). Pregnancy planning tends to be highly consistent across partners with only a small proportion that are in disagreement, (Cox et al., 1999). In our sample, only 7 couples disagreed on pregnancy intention so we treated pregnancy intention as a couple level variable. When partners disagreed, we used the mother’s report as recommended in past research (e.g., Cox et al., 1999).

Observer-rated aggressive and affiliative humor. Eleven trained coders independently watched and rated each couple’s discussion for the provider’s use of aggressive and affiliative humor in the support discussions. We used the adapted version of the humor scale by Howland and Simpson

(2014), which is based on the humor measures developed by Campbell and colleagues (2008). Aggressive humor was defined as humor that put down, disparaged, or criticized the partner. Affiliative humor was defined as humor designed to enhance the relationship by telling funny stories, laughing, and joking with one's partner. The exact definitions of aggressive and affiliative humor are given in Table 1. Each coder rated the provider's use of humor and the extent to which they used aggressive (or affiliative) humor in their interactions with their partner. Ratings were made on a 7-point scale anchored 1 (*none*) to 7 (*a lot*).

Table 1

Coding Definitions of Humor

Affiliative Humor	Aggressive Humor
<ul style="list-style-type: none"> ▪ Uses humor to enhance his/her relationship with the partner and reduce interpersonal tension. ▪ Tells funny stories about him/herself to make the partner laugh (s/he don't take her/himself too seriously), but still maintains a sense of self-acceptance. ▪ Easily and spontaneously thinks of witty comments when talking with the partner. ▪ Laughs and jokes often in the interaction. ▪ Doesn't seem to be working hard to make the partner laugh. ▪ Seems to enjoy making the partner laugh. 	<ul style="list-style-type: none"> ▪ Uses humor to put down, disparage, or criticize the partner. ▪ Uses humor in sarcastic or ridiculing ways. ▪ Uses humor to tease the partner in an offensive manner. ▪ Uses humor in an offensive way. ▪ Is oblivious to or doesn't seem to care about the detrimental effects of his/her humor. ▪ Uses humor that seems inappropriate to the situation. ▪ Uses humor to manipulate his/her partner by implying a threat to ridicule him or her. ▪ Uses humor in a way to make him/herself appear superior to the partner.

All coders were trained on both the affiliative and aggressive humor scales. During training we addressed any discrepancies between coders. After coders felt confident we randomly assigned half to code the men and half to code the women as support providers. Each coder was instructed to fill out the coding sheets for both affiliative and aggressive humor use for the support provider. These scales were separate and were both anchored at 1 (*not at all*) to 7 (*all the time*). Scores were computed by taking the average score from the coder's ratings. The raters showed high interrater agreement, $\alpha = .83$ for men's use of affiliative humor, $\alpha = .85$ for women's use of affiliative humor, $\alpha = .83$ for men's use of aggressive humor, and $\alpha = .84$ for women's use of aggressive humor.

Control Variables

Desire to have children. Prenatally, the desire to have children was measured using the Desire to Have Children Scale (Rholes, Simpson, Blakely, Lanigan, & Allen, 1997). There were 12-items on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items were "I have a strong desire to have

children” and “Without children, I would feel unfulfilled.” Items were averaged, with higher scores indicating a higher desire for children.

Analysis Plan

Preliminary analyses. We evaluated whether there were any differences between participants who completed the entire study versus those who dropped out. Individuals who dropped out by wave 5 were compared to those who remained. Independent samples t-tests showed no differences on study variables except on pregnancy intention. Individuals who reported unplanned pregnancies were more likely to dropout ($X^2 = 17.08, p < 0.001$) than those who reported planned pregnancies. Demographic variables, however, varied in that individuals who dropped out had less education ($M = 4.13, SD = 1.52$ vs. $M = 4.95, SD = 1.17, t = 5.07, p < 0.001$), lower income ($M = 2.84, SD = 1.45$ vs. $M = 3.41, SD = 1.68, t = 3.27, p = 0.001$), were younger ($M = 26.19, SD = 4.27$ vs. $M = 28.08, SD = 4.22, t = 3.96, p < 0.001$), and had been married for fewer years ($M = 2.34, SD = 2.71$ vs. $M = 3.01, SD = 2.58, t = 2.14, p = 0.03$) than those who remained in the study.

Data analytic models. All hypotheses were tested in models constructed using hierarchical linear modeling (HLM; Kenny, Kashy, & Bolger, 1998). In order to examine the dyadic data, we used the Actor-Partner Interdependence Model (APIM; Kashy & Kenny, 2000; Kenny, Kashy, & Cook, 2006). The APIM is a method used to measure dyadic data in which actor and partner effects are modeled simultaneously. Actor effects reflect the association between the independent and dependent scores on the variable for the actor, whereas partner effects reflect the association between the actor’s independent variable scores and the partner’s dependent variable score. The two-intercept model was used so we could examine the unique effects of women and men simultaneously (Raudenbush, Brennan, & Barnett, 1995).

All independent variables were group-mean centered to reduce multicollinearity. For Hypothesis 1, we entered affiliative humor, aggressive humor, and desire to have children for each partner into the Level 1 equation. Pregnancy intention was entered into each of the Level 2 equations for the estimated main effects and interactions. The Level 1 equation for the first model was:

$$\begin{aligned} \text{Actor Satisfaction}_{ij} = & \beta_{1j} * (\text{Female}) + \beta_{2j} * (\text{Male}_{ij}) + \beta_{3j} * (\text{Female Desire to have Children}_{ij}) \\ & + \beta_{4j} * (\text{Male Desire to have Children}_{ij}) \\ & + \beta_{5j} * (\text{Female Actor Affiliative Humor}_{ij}) \\ & + \beta_{6j} * (\text{Male Actor Affiliative Humor}_{ij}) \\ & + \beta_{7j} * (\text{Female Actor Aggressive Humor}_{ij}) \\ & + \beta_{8j} * (\text{Male Actor Aggressive Humor}_{ij}) \\ & + \beta_{9j} * (\text{Female Partner Affiliative Humor}_{ij}) \\ & + \beta_{10j} * (\text{Male Partner Affiliative Humor}_{ij}) \\ & + \beta_{11j} * (\text{Female Partner Aggressive Humor}_{ij}) \\ & + \beta_{12j} * (\text{Male Partner Aggressive Humor}_{ij}) \end{aligned}$$

In the next step of the analysis we tested Hypothesis 2, our longitudinal hypothesis. In order to examine the changes in relationship satisfaction over the 2-year timespan we obtained the slopes for satisfaction over time, which were calculated with a growth curve analysis. The first step involved running an unconditional growth model with Time as the only predictor of relationship satisfaction, once for men and once for women. From the unconditional growth models, residual scores were extracted to measure change in relationship satisfaction. These scores showed the change in satisfaction for each individual from Time 1 until Time 5. To test the longitudinal model, we repeated the same model as in Hypothesis 1 with change in satisfaction as the outcome variable. Interactions were decomposed using standard procedures (Aiken & West, 1991).

Chapter Four: Findings

The means and standard deviations of the study variables are presented in Table 2. Due to the nonindependence inherent in dyadic data, the bivariate correlations are used for descriptive purposes only, and are displayed in Table 3.

Table 2

Means, Standard Deviations, Minimum, and Maximum Values for the Study Variables

	Men				Women				t (df)	p
	M	SD	Min.	Max.	M	SD	Min.	Max.		
Satisfaction Time 1	42.41	5.29	6.00	50.00	42.88	4.99	15.00	50.00	-1.48 (191)	0.14
Satisfaction Time 2	42.29	4.99	21.00	49.00	42.29	4.73	26.00	50.00	0.03 (163)	0.97
Satisfaction Time 3	41.59	6.84	10.00	50.00	42.50	4.88	26.00	50.00	-1.55 (148)	0.12
Satisfaction Time 4	41.30	6.53	11.00	49.00	42.42	5.65	14.00	50.00	-2.54 (145)	0.01
Satisfaction Time 5	40.96	6.86	1.00	49.00	41.54	6.77	0.00	50.00	-2.41 (134)	0.01
Change in Satisfaction	-.50	0.91	-5.65	1.17	-0.38	0.87	-5.29	1.29	1.70 (165)	0.09
Aggressive Humor	2.33	1.12	1.00	6.83	2.98	1.39	1.00	6.80	-6.99 (165)	0.0001
Affiliative Humor	3.87	1.15	1.00	6.67	4.05	1.23	1.00	6.40	-1.98 (165)	0.05
Desire to Have Children	5.38	0.99	2.67	7.00	5.71	0.90	2.00	7.00	-4.50 (190)	0.0001
Pregnancy Intention	0.73	0.45	0.00	1.00	0.73	0.44	0.00	1.00	-0.38 (185)	0.71

Table 3

Bivariate Correlations Between Study Variables

Study Variables	Study Variables					
	1	2	3	4	5	6
1. Satisfaction T1	0.57***	0.04	0.31***	-0.28***	0.27***	0.17*
2. Change in Satisfaction	0.13	0.46***	0.10	-0.09	0.10	0.09
3. Affiliative Humor	0.12	0.17*	0.54***	-0.51***	-0.24**	-0.001
4. Aggressive Humor	-0.10	-0.17*	-0.31***	0.56***	0.07	-0.14
5. Desire to Have Children	0.20**	0.14	-0.01	-0.04	0.46***	0.04
6. Pregnancy Intention	0.19**	0.24**	0.01	-0.07	0.16*	0.90***

Note. The correlations for women appear above the diagonal, the correlations for men appear below the diagonal, and the correlations between partners appear along the diagonal in bold. *** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$

H1: Within-time Associations

Hypothesis 1 examined the interaction of pregnancy intention and humor at Time 2 predicting relationship satisfaction while controlling for desire to have children. There were two significant main effects of actor affiliative humor for women ($B = 1.83, p < 0.05$) and men ($B = 2.35, p < 0.05$) on relationship satisfaction. These effects support our hypothesis that actor's own affiliative humor was related to higher relationship satisfaction. The main effects for partner affiliative humor, however, were not significant (see Table 4). In addition, there was no significant interaction of affiliative humor with pregnancy intention. There was a significant main effect for men with actor aggressive humor ($B = 1.85, p < 0.05$) predicting satisfaction, and a significant interaction for men between actor aggressive humor and pregnancy intention predicting satisfaction (see Figure 1). The interaction in Figure 1 shows the decomposition of the simple slopes. Men's Time 2 relationship satisfaction did not significantly differ for men who reported planned pregnancies based on level of aggressive humor. However, contrary to our hypothesis, we found men's Time 2 relationship satisfaction was higher for men who reported unplanned pregnancies under conditions of higher than average aggressive humor. Men who reported unplanned pregnancies and used lower than average aggressive humor were less satisfied.

Table 4

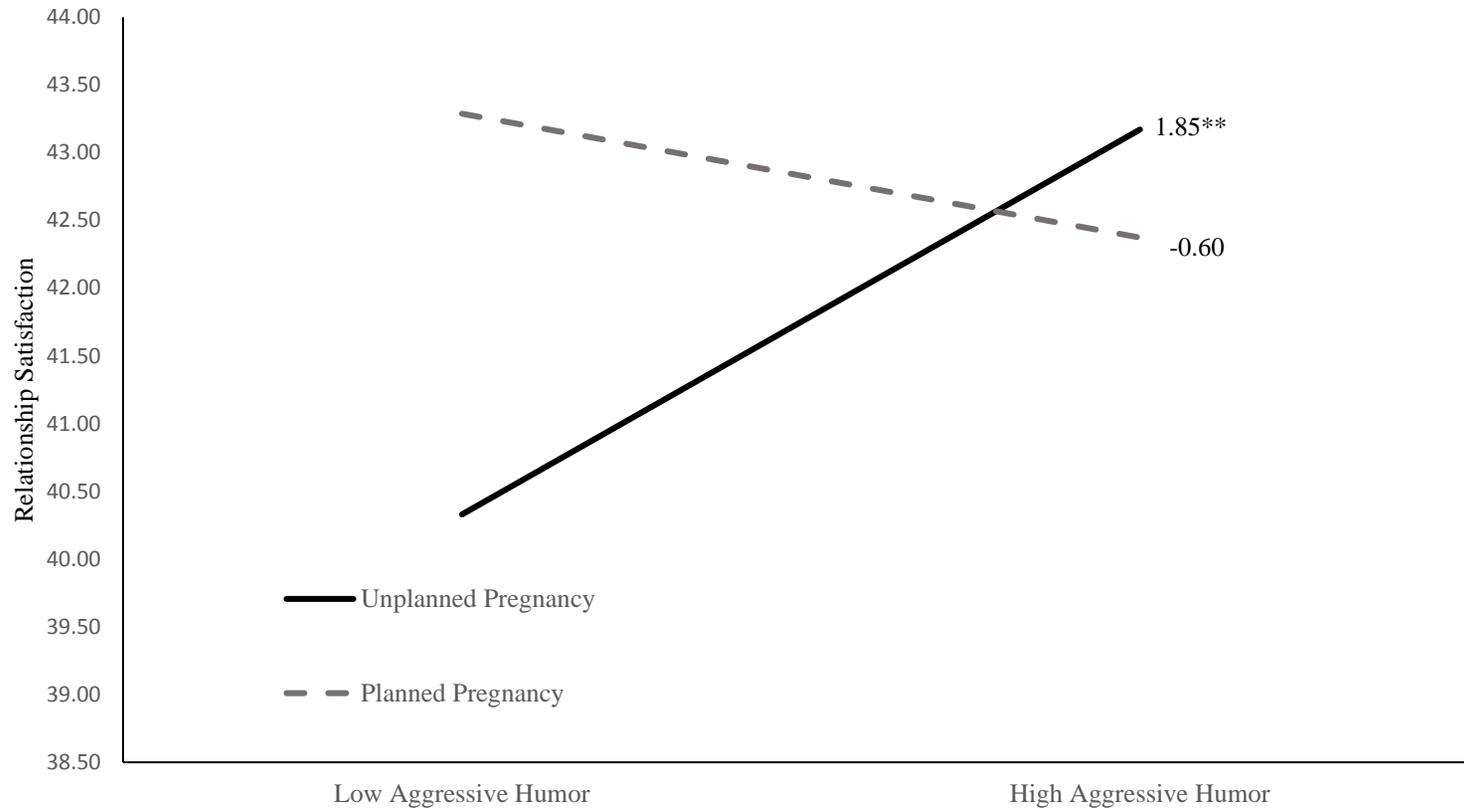
Mens' and Womens' Affiliative Humor, Aggressive Humor, and Pregnancy Intention Predicting T2 Relationship Satisfaction

Predictor	Men				Women			
	Coefficient	SE	<i>t</i>	<i>p</i>	Coefficient	SE	<i>t</i>	<i>p</i>
Intercept	41.75	1.14	36.49	0.001	40.64	1.01	40.08	0.001
Pregnancy Intention	1.08	1.25	0.87	0.13	1.68	1.11	1.51	0.13
Actor Affiliative Humor	2.35	1.09	2.17	0.03	1.83	0.91	2.02	0.05
Affiliative X Pregnancy Intention	-1.92	1.18	-1.63	0.10	-0.78	1.00	-0.78	0.44
Partner Affiliative Humor	-0.69	1.05	-0.66	0.51	0.12	0.99	0.12	0.90
Affiliative X Pregnancy Intention	0.77	1.15	0.67	0.50	-0.01	1.07	-0.01	0.99
Actor Aggressive Humor	1.85	0.93	1.99	0.05	-0.49	0.74	-0.67	0.51
Aggressive X Pregnancy Intention	-2.44	1.06	-2.32	0.02	0.46	0.84	0.55	0.59
Partner Aggressive Humor	-0.80	0.85	-0.94	0.35	0.06	0.81	0.07	0.94
Aggressive X Pregnancy Intention	0.33	0.95	0.34	0.73	-0.58	0.93	-0.62	0.54
Desire to Have Children	0.58	0.36	1.62	0.12	1.24	0.35	3.56	0.001

df = 155.

Figure 1

Interaction Between Men's Aggressive Humor and Pregnancy Intention in the Prediction of Relationship Satisfaction Using Cross-Sectional Data at Time 2



**p < 0.01

H2: Growth Curve Analysis

Hypothesis 2 examined the interaction between pregnancy intention and humor in predicting changes in relationship satisfaction. There were no significant effects for women (see Table 5), but there was a significant actor effect for men's affiliative humor use ($B = 0.48, p < 0.01$), and a partner effect for aggressive humor ($B = -0.36, p < 0.01$) predicting change in satisfaction. For men, affiliative humor was positively associated with their own relationship satisfaction, but when their partner used aggressive humor it was negatively associated with men's relationship satisfaction. Further, for men there was an interaction of their own affiliative humor use and pregnancy intention on their own relationship satisfaction (see Figure 2). Figure 2 shows the decomposition of the simple slopes, which was consistent with our predictions in hypothesis 2. When men reported planned pregnancies, affiliative humor did not affect their own change in relationship satisfaction. However, for men who reported unplanned pregnancies, their own use of affiliative humor impacted how relationship satisfaction changed. Specifically, over time men who reported unplanned pregnancies who also used lower than average levels of affiliative humor had more significant declines in relationship satisfaction than men who used higher than average levels of affiliative humor. Men who used higher than average levels of affiliative humor and reported unplanned pregnancies, however, were buffered from the decline of relationship satisfaction.

Table 5

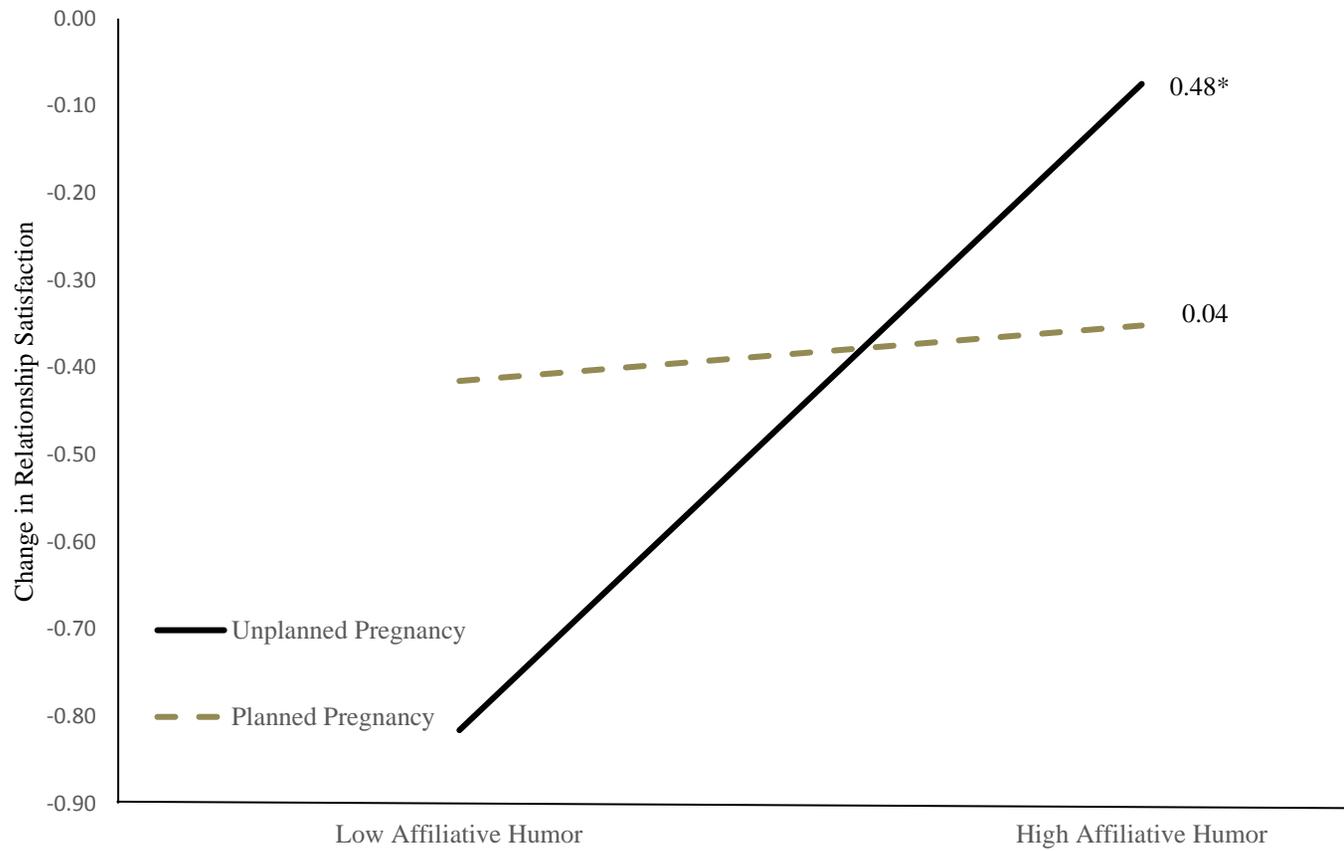
Mens' and Womens' Affiliative Humor, Aggressive Humor, and Pregnancy Intention Predicting Relationship Satisfaction Over Time

Predictor	Men				Women			
	Coefficient	SE	<i>t</i>	<i>p</i>	Coefficient	SE	<i>t</i>	<i>p</i>
Intercept	-0.45	0.20	-2.24	0.03	-0.69	0.20	-3.46	0.001
Pregnancy Intention	0.06	0.21	0.28	0.78	0.34	0.22	1.57	0.12
Actor Affiliative Humor	0.48	0.18	2.62	0.01	0.29	0.17	1.70	0.09
Affiliative X Pregnancy Intention	-0.44	0.20	-2.18	0.03	-0.29	0.19	-1.53	0.12
Partner Affiliative Humor	-0.27	0.17	-1.56	0.12	-0.12	0.18	-0.68	0.50
Affiliative X Pregnancy Intention	0.30	0.19	1.55	0.12	0.15	0.20	0.75	0.45
Actor Aggressive Humor	0.20	0.16	1.30	0.20	0.17	0.15	1.13	0.26
Aggressive X Pregnancy Intention	-0.24	0.18	-1.34	0.18	-0.20	0.17	-1.23	0.22
Partner Aggressive Humor	-0.36	0.15	-2.46	0.01	-0.15	0.16	-0.97	0.33
Aggressive X Pregnancy Intention	0.29	0.17	1.76	0.08	0.09	0.18	0.50	0.62
Desire to Have Children	0.06	0.06	0.99	0.33	0.06	0.07	0.83	0.41

df = 161.

Figure 2

The Interaction Between Men's Affiliative Humor Use and Pregnancy Intention in the Prediction of Change in Relationship Satisfaction Over Time



* $p < 0.05$

Chapter Five: Discussion

The purpose of the study was to examine first-time parents' relationship satisfaction over the transition to parenthood, and there were two aims. The first aim was to examine the within-time associations of humor and pregnancy intention on relationship satisfaction, and the second aim used growth curve analyses to determine how humor and pregnancy intention were associated with changes in relationship satisfaction over time. Past research on humor in romantic relationships has focused on humor in the initiation of romantic relationships, during conflictual interactions, as an emotion regulation strategy, or the general use of humor. We extended the research on humor in romantic relationships by focusing on the use of humor during a stressful transition, the transition to parenthood. Parenthood is a unique experience for couples and the first-time couples become parents has been cited by several researchers as a highly stressful experience (Doss, Cicila, Hsueh, Morrison, & Carhart, 2014). Thus, we examined the role of humor in a stressful context for romantic partners' relationship satisfaction. In addition, past research on the transition to parenthood has found that how couples approach parenthood and the vulnerabilities individuals bring (e.g., pregnancy intention) can influence how the individuals endure the transition (e.g., Simpson, Rholes, Campbell, Tran, & Wilson, 2003).

The within-time analyses showed positive associations of men's use of affiliative and aggressive humor with their own relationship satisfaction. Regardless of the valence of humor, the use of humor was positive for men. Research by Campbell and colleagues (2008) supports the positive within-time association of affiliative humor and relationship satisfaction; however, our findings related to aggressive humor are inconsistent with what has been previously found in the literature. Past research has found aggressive humor to be negatively associated with relationship satisfaction, but we found aggressive humor to be positively associated with relationship satisfaction (e.g., Campbell et al., 2008). Although aggressive humor is negative, research has suggested that the intended use of humor is to achieve a communicative goal (Hall, 2013). In romantic relationships, the influence of humor depends on how it can help partners communicate an attitude, emotion, or a relational goal (Hall, 2017). For men, during the transition to parenthood, humor, whether affiliative or aggressive, may have helped communicate their attitudes or emotions about the experience of parenthood. Further, we found that when men reported unplanned pregnancies the level of their own use of aggressive humor influenced their own relationship satisfaction. Specifically, men's relationship satisfaction was higher when they used more aggressive humor when they had reported unplanned pregnancies. When a pregnancy is reported as unplanned, the transition for couples may be less intentional, which could make the experience more stressful. In stressful situations, adaptive behaviors are able to mitigate the negative impact of the stressful experience on an individuals' relationship satisfaction (Karney & Bradbury, 1995). Aggressive humor may have been used by men as one such adaptive behavior. Men using more aggressive humor during an unplanned

pregnancies may have higher relationship satisfaction because they were able to express their own emotions about parenthood (Hall, 2017). Research has suggested the use of humor is to release tension and stress (Thorson & Powell, 1993). Aggressive humor may have been a mechanism in which men could communicate how they were feeling about parenthood such that the use of aggressive humor helped alleviate the stress inherent in becoming a parent.

Although aggressive humor had short-term benefits, relatively long-term change in satisfaction was influenced by the positive use of humor during couple interactions. Within-time associations for aggressive humor may have allowed men to express their emotions about parenthood. Although expressing emotions allows men to communicate what they are feeling, being able to positively express or deal with a stressful experience may be more adaptive over the long-term. Thus, we found that for men, using affiliative humor prevented declines in relationship satisfaction. This finding aligns with other research that has found that individuals who use more affiliative humor are more satisfied in their romantic relationships (Campbell et al., 2008). We specifically find that for men affiliative humor is beneficial for relationship satisfaction and may serve as a stress-buffering communicative factor during the transition to parenthood. Our finding for men's affiliative humor aligns with the VSA model, suggesting that affiliative humor alleviates distress and promotes relationship satisfaction. Also, we found that at higher than average levels of affiliative humor use, satisfaction increases. Research has found that the use of benign humor (e.g., affiliative humor) in problem-solving discussions improves relationship satisfaction (Carstensen et al., 1995). Thus, the use of affiliative humor is a buffer to the stressful experience induced by parenthood and for men who use higher than average levels it can be a mechanism that promotes the improvement of relationship satisfaction. These findings align with the VSA model and suggest that humor is an adaptive behavior that in the long-term can protect relationship satisfaction from decreasing. When men used low levels of affiliative humor and reported unplanned pregnancies they had fairly pronounced declines in relationship satisfaction. Using humor can help create a positive social environment for the relationship, and when the couple is transitioning through a stressful period, this positive social environment can be even more vital (Aune & Wong, 2002). Further, greater use of affiliative humor is related to more intimacy in romantic relationships and it is affirming to the self and others (Martin et al., 2003). When men use more affiliative humor they may feel more connected to their partner. These findings show the importance of using humor in positive ways for relationship satisfaction outcomes.

Men, regardless of the type of humor being communicated, reported being satisfied in their relationships and had positive within-time and over time effects, but this was not true of women. Previous studies have found affiliative humor to be positively related to satisfaction for both men and women (Campbell et al., 2008; Cann et al., 2011). However, we find the effects are pronounced in men and

minimal for women. Hall (2013) also finds the same pattern in which affiliative humor has a positive effect on relationships for men only. However, our results showed one significant within-time effect such that women's use of affiliative humor was positively associated with their own relationship satisfaction. Women's use of affiliative humor may be a coping strategy to deal with the stress of parenthood and the additional demands (Caird & Martin, 2014; Thorson & Powell, 1993). Further, we found no differences for women who reported planned or unplanned pregnancies. Women, regardless of the intention of the pregnancy, are often expected to perform their new parenting role with immediate competence (Cowan & Cowan, 2000; Riina & Feinberg, 2012). Mothers tend to experience greater parenting stress and the increased stress may be irrelevant to the intention of the pregnancy given the disproportionate demands women experience with parenthood (Wall & Arnold, 2007). In addition, for women, their partner's use of humor had no effect on their relationship satisfaction. The transition to parenthood is stressful because it disrupts the couple's interaction as a pair and the couple moves from a dyad to a triad (LeMasters, 1957). Partners may feel displaced within the dyadic relationship because the focus moves from their own romantic relationship to the addition of a third member, which adds the responsibilities related to childcare (Cowan & Cowan, 1988). The role conflicts women experience, as well as workload, have been found to be major reasons for relationship dissatisfaction (Coltrane, 2000; Twenge et al., 2003). There are steeper declines in relationship satisfaction for women over the transition to parenthood (Shapiro, Gottman, & Carrère, 2000). Women tend to report more life stress and less satisfaction with support received after having a child (Goldstein, Diener, & Mangelsdorf, 1996). Women tend to experience the largest proportion of responsibility when becoming a parent (Dempsey, 2002). The division of childcare is inequitable and women experience increased responsibilities (Bianchi, Sayer, Milkie, & Robinson, 2012). Mothers, in particular, thus face changes in the demands on their time with more focus on family work (e.g., Belsky, Lang, & Huston, 1986; Hackel & Ruble, 1992; Ruble, Fleming, Hackel, & Stangor, 1988) and less with their romantic partner (Claxton & Perry-Jenkins, 2008; Huston & Vangelisti, 1995; MacDermid, Huston, & MacHale, 1990). Humor use and pregnancy intention may be related to relationship satisfaction, but for women it may be a combination of factors that influences their satisfaction. Therefore, the additional focus on childcare and the needs of the new member of the family may be more pertinent to mother's relationship satisfaction. Women's experiences of parenthood involve a greater burden, which is why it may take more to help alleviate the stress of the transition on their relationship satisfaction. More studies are needed to disentangle the nature of these associations for men and women.

Limitations and Implications

This study had some limitations. The sample was largely Caucasian, highly educated, and highly satisfied in their relationships. Given the sample characteristics, these results may not be generalizable to

all individuals. Participants were also recruited through childbirth classes, and individuals who attended childbirth classes may differ from individuals who did not in terms of having prepared and educated themselves on the impending birth of their first child. Most data were collected through self-reports, which could have been biased as well as subject to faulty recall. The humor measures were observer rated, which could have resulted in human error in the interpretation of behaviors. Further, the data were correlational so no causal inferences could be made. Lastly, we did not have a group of nonparents to compare to our sample of parents because it may be that over time all individuals would decline in satisfaction regardless of the transition to parenthood.

Despite the limitations of this study, there were several important implications. Previous research has found the transition to parenthood was associated with declines in relationship satisfaction (e.g., Lawrence et al., 2008); however, we found that adaptive behaviors could buffer the effects of the stressful transition for men's relationship satisfaction. Specifically, we found that for men the use of affiliative humor prevented declines in relationship satisfaction. Humor may have helped foster relationship satisfaction for men during this stressful transition and could serve as a communicative outlet. Understanding the role humor could play is important and practitioners, marriage and family therapists, and educators can use this knowledge to inform couples about the importance of using humor and other strategies to communicate attitudes, emotions, and relational goals. Further, humor, regardless of the valence, could be related to higher satisfaction. Acknowledging the use, role, and intention humor plays in romantic relationships may be important for understanding the communicative patterns of romantic partners. Thus, future research should explore affiliative and aggressive humor with the intent of understanding the purpose and function of each in various contexts.

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