



# How do Relationship Stability and Quality Affect Wellbeing?: Romantic Relationship Trajectories, Depressive Symptoms, and Life Satisfaction across 30 Years

Patricia N. E. Roberson<sup>1</sup> · Jerika C. Norona<sup>2</sup> · Katherine A. Lenger<sup>2</sup> · Spencer B. Olmstead<sup>3</sup>

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## Abstract

Lifecourse theory scholars focus on how individuals traverse social roles, such as marriage, parenthood, and employment, in similar and different ways across their lives. This study examined one specific role trajectory: romantic relationships. This study examined men's and women's ( $N = 3617$ ) relationship status and quality across approximately 30 years. Using second-order latent class analysis, results showed four predominant relationship role trajectories: (a) *Multiple Transitions*, (b) *Stable Marriage with High Conflict*, (c) *Stable Marriage with High Satisfaction*, and (d) *Marriage to Divorce/cohabitation*. These relationship role trajectories differed on two aspects of quality of life: life satisfaction and depressive symptoms. Individuals in the *Multiple Transitions* trajectory consistently reported poorest quality of life; however, those in the *Multiple Transitions* and *Stable Marriage with High Conflict* trajectories were the only that reported decreases in depressive symptoms over 30 years. Relationship satisfaction poorly differentiated the trajectories compared to relationship conflict and stability.

**Keywords** Lifecourse theory · Role trajectories · Romantic relationships · Marriage

Romantic relationships, particularly among adults, are among the most influential social interactions (Kamp Dush et al. 2008; Lavner and Bradbury 2010; Whisman et al. 2000). Negative and positive characteristics of these relationships can influence individual and partner wellbeing (Antonucci et al. 2001; Fincham and Linfield 1997). Specifically, whereas undesirable relationship qualities (e.g., poor conflict skills) have been shown to negatively influence wellbeing outcomes, such as increased depressive symptoms and poor physical health outcomes (Bachman et al. 1997; Kamp Dush and Taylor 2012; Waite and Gallagher 2000; Wickrama et al. 1997), positive romantic

relationship qualities (e.g., effective communication, spousal support, positive attributions) positively influence individual wellbeing, such as increased self-esteem (Voss et al. 1999) and life satisfaction (Pateraki and Roussi 2013; Shek 1995).

Generally, relationship satisfaction decreases over time (Karney and Bradbury 1997; Kurdek 1998, 1999) and because of the associations between marital quality and individual wellbeing, one may conclude that individual wellbeing would similarly decline. Although this conclusion has not been examined directly, such a possibility is concerning as it would indicate a steady decrease in wellbeing over the lifecourse as associated with relationship quality. Thus, the association between relationship quality and individual wellbeing should be closely examined using longitudinal models. Importantly, average changes over time can be misleading and has produced inconsistent findings across studies due to differences in sample characteristics (for a review, see Hill and Needham 2013).

A large body of research has focused on the different types of romantic relationships and how they change over time (Fowers and Olson 1986; Heaton and Albrecht 1991; Johnson et al. 1986; Larsen and Olson 1989; Markman et al.

✉ Jerika C. Norona  
jnorona@vols.utk.edu

<sup>1</sup> Department of Human Ecology, University of California, Davis, Davis, CA 95616, USA

<sup>2</sup> Department of Psychology, University of Tennessee, 305 Austin Peay Building, Knoxville, TN 37996, USA

<sup>3</sup> Department of Child and Family Studies, University of Tennessee, Knoxville, TN 37996, USA

1993; Roberson et al. 2016). These studies have examined how relationship characteristics, such as communication style, relationship satisfaction, and contextual factors can vary across relationships producing classifications such as happily committed or happy with conflict (Roberson et al. 2016). Further, these categorizations of romantic relationship are predictive of later relationship quality and stability; for example, poor quality types (e.g., low satisfaction, and high conflict) are linked to a higher likelihood of divorce (e.g., Fowers and Olson 1986; Fowers et al. 1996). However, poor quality relationships are not entirely predictive of dissolution as a small percentage (7.2%) of individuals stay married despite being unhappy (Heaton and Albrecht 1991). Collectively, this literature indicates that there are multiple relationship types, that relationship type can partially predict future relationship quality and stability. What remains unclear is if and how these typologies change over time and whether different typology trajectories can differentially influence individual wellbeing and not just the wellbeing of the relationship. Such findings can inform intervention and policy practices.

Individual lifecourse theory (Elder 1985) assumes that there are multiple paths or trajectories that an individual's life can follow. Individual lifecourse theory focuses on how individuals traverse a variety of life stages or specific role configurations (Elder 1985). Some trajectories are normative, whereas others are considered atypical; classification of one's lifecourse trajectory is dependent on cultural context and an individual's wellbeing outcomes. Theoretically, individuals change and develop over time as they transition in and out of multiple social roles. Visually, this theory can be conceptualized as a branching tree, whereby each individual moves along his or her own lifecourse trajectory with each role transition constituting a unique divergence or convergence with other individuals' lifecourses (or tree branches). Such diversity is emphasized within lifecourse theory (Bengtson and Allen 1993).

Roles are the social expectation of an individual's behaviors in a given social position and may be evaluated subjectively (e.g., relationship satisfaction) or objectively (e.g., frequency of conflict). Individuals can occupy multiple roles such as spouse, parent, and worker simultaneously and the convergence of these roles at a single point in time is considered an individual's role configuration (Macmillan and Eliason 2003). A range of roles and role configurations exist within any given population (Jackson and Berkowitz 2005); it is important to empirically examine the within- and between-group differences so that an entire population is not reduced to the tendencies of the largest or most prominent role. Roles and role configurations are dynamic across time. Role configurations can shift during transitions, which are the life events that signal a change in one's role (s). Transitions tend to have a clear demarcation; for

romantic relationships these transitions often include marriage or divorce. The order and timing of social roles as well as the evaluation of these roles constitutes one's role trajectory.

Marital research has given much attention to different types of relationships using cross-sectional designs (Fowers 1990; Fowers and Olson 1986; Heaton and Albrecht 1991; Johnson et al. 1986; Larsen and Olson 1989; Markman et al. 1993). However, recent studies have examined typologies longitudinally and found that marriages can take one of several trajectories over the life course (James 2015b; Kamp Dush and Taylor 2012; Kamp Dush et al. 2008; Lavner et al. 2012; Lavner and Bradbury 2010). For example, Anderson et al. (2010) and Lavner and Bradbury (2010) found that different relationship satisfaction trajectories exist in newlyweds and long-term married spouses. Additionally, trajectories of marital satisfaction have been found to influence changes in wellbeing, such as life satisfaction and depressive symptoms (Kamp Dush et al. 2008). Specifically, individuals who were in happy marriages across time also reported lower levels of depressive symptoms, whereas those who reported less happy marriages reported higher levels of depressive symptoms (Kamp Dush et al. 2008). There are also different romantic relationship trajectories for marital communication and conflict over the span of 35 years for women, such that communication and conflict fluctuate throughout the lifespan in different ways for different couples (James 2015b). Individuals who experienced moderate conflict tended to have more children and higher job satisfaction compared to those who experienced low conflict. Additionally, individuals who lived together before marriage and reported a relatively low socioeconomic status experienced high conflict (Kamp Dush et al. 2008). In a study examining types of marriages, Kamp Dush and Taylor (2012) found three trajectories of marital conflict and three trajectories of marital satisfaction in separate models. These separate trajectories were examined in a cross tabulations showing that there may be more complex marital typologies over time because individuals were classified in each cell such as high satisfaction-low conflict and low satisfaction-low conflict. Therefore, there appears to be interactions in relationship characteristics, longitudinally (Kamp Dush and Taylor 2012), however, these types of multiple characteristic trajectories must be directly tested in one statistical model in order to effectively reduce Type II error. To the authors' knowledge, no known study has examined positive and negative relationship characteristics simultaneously while also examining relationship stability.

Relationship characteristics are commonly measured as the presence or absence of negative characteristics (i.e., relationship conflict) or general satisfaction with the relationship (e.g., relationship satisfaction). Less often are both

positive and negative characteristics examined in the same model (for an exception see Antonucci et al. 2001; Fincham and Linfield 1997). Empirical evidence suggests that positive and negative aspects of romantic relationships can influence individual wellbeing differently (Fincham and Beach 2010). For example, scholars have emphasized the importance of examining positive aspects of romantic relationships, such as social support for the relationship, marital satisfaction, and adaptive communication, in addition to negative aspects, such as intimate partner violence and environmental stress (Fincham and Beach 2010; Horwitz et al. 1998), and have encouraged more scholarship to include positive domains of romantic relationships (Fincham and Beach 2010; for a counter argument see Caughlin and Huston 2010). As suggested by the relationship typology literature, romantic relationships are multidimensional; therefore, it is important to consider how a combination of positive and negative relationship characteristics influence individual wellbeing over time.

From an empirical standpoint, examining both positive and negative aspects of romantic relationships seems to provide a better predictor of individual wellbeing. For example, Horwitz et al. (1998) found that when examining the association between wellbeing and relationship quality it is best to include both negative and positive characteristics because it improves the ability to predict wellbeing outcomes. Further, Reis and Gable (2003) noted that almost all psychological theories regarding psychological wellbeing include positive social relationships as a major component of healthy individual wellbeing. More recently, Proulx et al. (2009) found that spousal expressions of warmth moderated the positive relationship between spousal hostility and depressive symptoms. Therefore, the inclusion of both positive and negative romantic relationship characteristics would likely improve the predictive power of individual wellbeing. Because these two dimensions of romantic relationships appear to interact (O'Mara et al. 2011; Proulx et al. 2009), examining how characteristics change among individuals over time can improve our understanding of how changes in romantic relationships are associated with individual wellbeing.

There is a wealth of insight that relationship typologies provide regarding how to examine romantic relationship role configurations and trajectories (Anderson et al. 2010; James 2015b; Kamp Dush and Taylor 2012). Previous research indicates that relationship quality can influence individual wellbeing over time. For example, decreases in romantic relationship quality can negatively influence individual wellbeing (Davila et al. 1997; Hawkins and Booth 2005; Whisman 2007) and typologies of romantic relationships can predict later individual wellbeing, relationship quality, and relationship stability (Fowers et al. 1996; Lavee and Olson 1993). However, scholars have yet

to examine within-group variation regarding relationship role trajectories in terms of relationship status and both positive and negative aspects of relationship quality. The present study addressed the following questions: (a) What are the different relationship role trajectories when considering positive and negative relationship characteristics and relationship stability? And (b) How do the determined relationship role trajectories differ in their influence on positive and negative individual wellbeing outcomes (life satisfaction and depressive symptoms)?

## Method

### Participants

Participants were sampled using a multistage stratification of individuals 25 years of age or older within the continental US ( $N = 3617$ ). For the original sampling, African Americans were over sampled (the 1980 census reports on 11.7% of the population were African American) and individuals over age 60 were over-sampled. The stratification and oversampling are taken into account using complex sample option. For subsequent waves attempts were made to contact all respondents from previous waves: W2 = 2867; W3 = 2559; W4 = 785; W5 = 1313. Most attrition was due to participant mortality rather than nonresponse. At W5, 46.3% of participants were considered “missing deceased” and 17.4% were considered “missing nonresponders.” For the current study, participants were limited to those who reported being married or in a cohabiting relationship for one or more of the waves of data collection. This resulted in 34.6% of the study participants being removed and the final sample sizes for each wave of the study was: W1 = 2357, W2 = 1954, W3 = 1755, W4 = 1335, W5 = 1082.

The majority of participants were women (57.8%) and had an average age of 50 (Median = 49, range = 25–92) in Wave 1. According to self-report, 71% of the participants were White and 26% were Black. In addition, American Indian, Asian, and Hispanic participants each represented 1% of the sample. Socioeconomic status was more evenly distributed with 22% coded as low SES, 28% as lower-middle SES, 36% as high middle SES, and 14% as high SES. The total number of children per individual ranged from 0–11, with an average of 2 ( $SD = 1.94$ ) children. At W1, participants who were married reported an average of 27 years of marriage ( $SD = 5.20$ ) and ranged from <1 to 67 years. Also at W1, those who reported being in a cohabiting relationship had been so for an average of 5 years ( $SD = 5.20$ ), with a range of 1 to 30 years. For each wave of the study participants who reported being married ranged from 62.7 to 83.5%; participants who reported being divorced

ranged from 8.9 to 14.5%; participants who reported cohabitating ranged from 3.8 to 32.5%.

## Procedures

Data used for this study were drawn from a larger ongoing study, Americans' Changing Lives (ACL), conducted by the University of Michigan, Institute for Social Research, Survey Research Center (House 2014). The ACL consists of five waves of survey data (Wave 1 [W1] = 1986; Wave 2 [W2] = 1989; Wave 3 [W3] = 1994; Wave 4 [W4] = 2002; Wave 5 [W5] = 2011). The project examined how a range of activities, such as life events and social relationships, influence individual productivity and functioning. Data was collected using face-to-face survey interview methods by trained interviewers. More information about the data collection process can be found on the study website ([www.isr.umich.edu/acl/](http://www.isr.umich.edu/acl/)).

## Measures

### Relationship satisfaction

Relationship satisfaction was measured using a single item: "Taking all things together, how satisfied are you with your marriage/relationship?" Responses options ranged from (1) completely satisfied to (5) not at all satisfied; responses were recoded so higher scores indicated greater satisfaction. For the statistical analyses, scores were recoded into a single dichotomous item so that those who were less than satisfied with their relationships: (0) lower satisfaction ("somewhat," "not very," and "not at all satisfied") and (1) higher satisfaction ("completely" and "very satisfied") could be starkly captured; further, the data was not normally distributed and these dichotomizing cut-points were determined by examining the distribution of the variable. This measure was assessed at all five waves of the study. Individuals coded as 'higher satisfaction' had the following proportions in each wave of the study: W1 = 84.9%, W2 = 82.1%, W3 = 82.6%

%; W4 = 81.8%; and W5 = 82.2%. This single item has been used in previous research to measure relationship quality (Broman, 1993; Orbuch et al. 1996).

### Unpleasant conflict

Unpleasant conflict was measured using a single item: "How often would you say the two of you typically have unpleasant disagreements or conflicts?" Response options ranged from (1) daily or almost daily to (7) never. For the statistical analyses, responses were recoded into a single dichotomous item so those who were in conflictual relationships could be starkly captured. An appropriate cut-off was determined by unpleasant conflict more or less than once a month as the average frequency at Wave 1 was 5.01 (i.e., 5 = "about once a month"; therefore, at or greater than the means was coded as (0) infrequent unpleasant disagreement ("never," "less than once a month," and "about once a month") and below the mean was coded as (1) frequent unpleasant disagreement ("daily or almost daily," "2 or 3 times a week," "about once a week," and "2 or 3 times a month"). This variable was also not normally distributed and the cut-point was determined by examining the distribution of the variable. This measure was assessed at all five waves of the study. Using the same determinant at all waves, individuals coded as "frequent unpleasant disagreements" had the following proportions in each wave of the study: W1 = 29.6%, W2 = 33.6%, W3 = 38.6%, W4 = 37.1%, W5 = 34.1%. Distribution of the continuous measure of relationship satisfaction and unpleasant conflict are displayed in Table 1. This single item construct has been used in previous research to measure relationship quality (e.g., Kamp Dush and Taylor 2012; Umberson 1995).

### Relationship statuses

Three relationship statuses were also included when determining relationship role configurations: Divorced,

**Table 1** Distribution of relationship satisfaction and unpleasant conflict

	Mean (SD)	Median	Range	Skewness (S.E.)	Kurtosis (S.E.)
Relationship satisfaction W1	1.17 (0.19)	2.00	1–5	−1.02 (0.05)	0.79 (0.11)
Relationship satisfaction W2	1.79 (0.83)	2.00	1–5	−0.94 (0.06)	0.69 (0.12)
Relationship satisfaction W3	1.80 (0.82)	2.00	1–5	−1.00 (0.07)	1.02 (0.14)
Relationship satisfaction W4	1.81 (0.82)	2.00	1–5	−0.86 (0.08)	0.49 (0.17)
Relationship satisfaction W5	1.76 (0.88)	2.00	1–5	−1.21 (0.10)	1.56 (0.20)
Unpleasant conflict W1	5.01 (4.84)	6.00	1–7	0.87 (0.07)	−0.04 (0.11)
Unpleasant conflict W2	4.84 (1.60)	5.00	1–7	0.77 (0.06)	−0.35 (0.12)
Unpleasant conflict W3	4.69 (1.54)	5.00	1–7	0.55 (0.07)	−0.44 (0.14)
Unpleasant conflict W4	4.76 (1.53)	5.00	1–7	0.63 (0.08)	−0.36 (0.17)
Unpleasant conflict W5	4.78 (1.59)	5.00	1–7	0.71 (0.10)	−0.28 (0.20)

Cohabiting, and Married. Other statuses in the role configuration analyses were not included in order to focus on relationship shifts that were made more by individuals' choices and not terminal lifecourse events such as end of life. All relationship statuses were recoded from a single item: "Are you currently married, separated, divorced, widowed, never married?" *Divorced* was recoded into a dichotomous item: (0) *all else* and (1) *divorced/separated*. This measure was assessed at all five waves of the study. For each wave the proportions of individuals reporting divorce were: W1 = 8.9%, W2 = 10.3%, W3 = 11.0%, W4 = 12.0%, W5 = 14.5%. *Cohabiting* was coded as (0) *all else* and (1) *cohabitating*. This measure was assessed at all five waves of the study. For each wave, the proportions of individuals reported cohabitating were: W1 = 3.8%, W2 = 4.8%, W3 = 5.0%, W4 = 12.0%, W5 = 32.5%. *Married* was coded as: (0) *all else* and (1) *married*. This measure was assessed at all five waves of the study. For each wave the proportion of individuals reported being married were: W1 = 83.4%, W2 = 80.3%, W3 = 76.1%, W4 = 69.8%, W5 = 62.7%.

### Depressive symptoms

Depressive symptoms was measured using an 11-item scale based on the Center for Epidemiologic Studies Depression scale (CES-D; Radloff 1977). Participants' responses to items (e.g., "I felt sad" and "I felt that people disliked me") ranged from (0) never or hardly ever to (2) most of the time. All items were summed to create a single score (range = 0–22) where higher scores indicated more depressed feelings. The items were examined at all waves of the study with the following means: W1: M = 6.27 (SD = 3.75), W2: M = 6.03 (SD = 3.80), W3: M = 5.52 (SD = 3.66), W4: M = 5.44 (SD = 3.54), W5: M = 7.75 (SD = 3.97). Inter-item reliability was acceptable ranging from  $\alpha = 0.70$  to  $\alpha = 0.83$  across the five waves.

### Life satisfaction

Life satisfaction was measured using a single item: "Now please think about your life as a whole. How satisfied are you with it?" Response options ranged from (0) completely satisfied to (4) not at all satisfied (W1, W3, W4, and W5) and (0) completely satisfied to (6) not at all satisfied (W2). Items were recoded so that higher scores indicated greater life satisfaction and all waves were on the same scale. The final measure for each wave ranged from 0 to 4. The item was examined at all five waves of the study and had the following averages: W1: M = 2.12 (SD = 0.87), W2: M = 2.54 (SD = 1.40), W3: M = 2.26 (SD = 0.89), W4: M = 2.18 (SD = 0.88), W5: M = 2.15 (SD = 0.89).

### Control variables

To control for the initial length individuals were in their relationships, relationship duration was assessed at W1 to control for duration of the current relationship prior to the start of the study. The variable was measured using a single item: "For how many months or years have you been living with your partner?" Responses were coded as number of total months together.

Because children can influence relationship quality (Twenge et al. 2003), the number of children was measured at W1. The number children living inside and outside of the home were combined for total number of children. Responses ranged from (0) no children to (11) 11 or more children.

To account for SES differences, SES was included (constructed by ACL; House 2014) ranging from (1) low ses to (4) high ses. Age was measured at W1 to account for differences in relationship characteristics that might occur as a function of cohort (previously used by Carroll 2013). Finally, gender was reported by the interviewer as (1) male and (2) female. For this study gender was recoded as (0) man and (1) woman.

### Data Analyses

To determine relationship trajectories we replicated and extended the second order latent class analysis method (LCA; explained in detail in Roberson et al. 2016; Macmillan and Copher 2005) by moving beyond demographic characteristics (e.g., relationship status) and incorporating relationship quality into the statistical method. First, the authors assessed the number of role configurations at each wave of data collection using LCA. The appropriate number of classes was determined through goodness-of-fit measures such as Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC; Muthén and Muthén 2000) and functionality of the classes—how useful or interpretable classes were (Muthén and Muthén 2000). The authors also used statistical methods to determine the appropriate number of classes: the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test (VLMR-LRT) and Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (LMR-ALRT). For these tests, a non-significant p-value indicates that the model with one fewer classes is the optimal model (Muthén and Muthén 2000; Nylund et al. 2007). When there is disagreement among these methods, the class that made the most practical sense was selected. Sometimes, when examining a large number of classes simultaneously, the log-likelihood cannot be replicated because the data does not fit the model or there is not enough statistical power. In these instances subsequent numbers of classes are not examined. Once the appropriate number of classes in each wave of the study was determined the role configuration class assignments

was used as observed variables in the second LCA to determine the different relationship role trajectories.

To determine how change in wellbeing differed by trajectories the authors examined two growth mixture models with known classes in Mplus (life satisfaction and depressive symptoms); the known classes are the determined relationship role trajectories. The authors report and interpret the mean and standard error for the unstandardized intercept and slope for all trajectories. Then, the authors examined a series of Wald chi-square difference tests within the Mplus to determine if relationship role trajectories were significantly different. Being aware of parsimony, control variables which are not statistically significant were removed from the models.

### Missing data

Analyses were conducted using Mplus 7.0 using maximum likelihood estimation (Muthén and Muthén 1998). Missing values were handled using full information maximum likelihood estimation (FIMLE) which assumes data is missing at random. When the covariates related to the missing pattern are included in the model, FIMLE produces less biased and more reliable parameter estimates compared to conventional methods (e.g., list-wise deletion, multiple imputation; Allison 2000; Schafer and Graham 2002). The missingness patterns (i.e., missing nonresponders and missing deceased) differed on key demographic variables (e.g., socioeconomic status, race/ethnicity, age). Therefore, dummy coded variables for missingness type along with the previously mentioned control variables were included in all growth mixture models.

## Results

To establish bivariate associations among all of the trajectory variables and outcome variables at each wave of data collection, a correlation matrix is provided in Table 2. The correlation matrix indicated that all variables were associated across the multiple waves. Additionally, the significant association among relationship quality variables and wellbeing outcomes variables indicated that the single items have convergent validity as they are associated with the outcome variables in the expected direction.

### Relationship Role Configurations

Latent class analyses were conducted at each wave to determine the appropriate number of role configurations for each time point. Fit indices for all of the classes are reported in Table 3. For all waves, a model with three role configurations fit the data best.

Most of the participants in T1 were in the *happily married* role configuration (59%; married individuals with a high probability of being satisfied and a low probability of being conflictual) followed by those who were classified as being in a *conflicted marriage* (27%; married with a low probability of being satisfied and a high probability of being conflictual) and those who were classified as *not married* (14%; either divorced or cohabiting with a low probability of being satisfied or conflicted). In T2 the largest class was those *happily married* (75%), followed by those who were *not married* (16%) and those who were in a *conflicted marriage* (9%). In W3 the largest group was those who were *happily married* (48%) followed by those who were in a *conflicted marriage* (34%) and those who were *not married* (17%). Wave 4 had a similar structure with the largest class (80%) being those who were *happily married* (some cohabiting) followed by those who were *not married* (12%) and individuals in *conflicted marriages* (9%). Finally, in W5, participants in the largest class were considered *happily married* (47%) followed by those who were *not married* (29%) and those who were in *conflicted marriages* (24%).

### Relationship Role Trajectories

Using the assigned role configurations in each wave of the study as categorical variables, the relationship role trajectories were determined using second order LCA. After determining the appropriate number of classes of relationship role trajectories (Table 4), the probabilities from the first and second order LCAs to depict relationship lifecourse trajectories were combined (see Fig. 1). If a trajectory has a high likelihood of being married then that variable would be closer to 1. However, changes in the probability of being married would be depicted as a zig-zag line across the 5 waves.

Four relationship role trajectories (RRTs) were determined. RRT one ( $n = 166$ ; 10%) was classified as *Multiple Transitions*; RRT two was classified as *Married with High Conflict* ( $n = 418$ ; 25%); RRT three was classified as *Married with Low Conflict* ( $n = 978$ ; 59%); and Trajectory four was classified as *Married to Divorced/Cohabiting* ( $n = 86$ ; 6%).

### Life Satisfaction Outcome

To determine how relationship role trajectories (RRTs) differed on self-reported life satisfaction over time we tested a growth mixture model with the RRTs as known classes (see Table 5). The intercepts (wave 1; 1986) of life satisfaction were significant for each RRT (i.e., significantly different from zero). Next, we examined if the RRTs' intercepts were significant from each other and not just different from zero. In terms of significant differences,

**Table 2** Correlation matrix among the trajectory and outcome variables

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Wave 1</b>						
Unpleasant conflict (1)	–					
Relationship satisfaction (2)	–.26**	–				
Depression (3)	.22**	–.25**	–			
Life satisfaction (4)	–.17**	–.35**	–.38**	–		
Divorced (5)	.03	–.04**	.11**	–.10**	–	
Cohabitation (6)	.07**	.06*	.03	–.06**	.25**	–
Married (7)	–.07**	.06*	–.15**	.17**	–.70**	–.45**
<b>Wave 2</b>						
Unpleasant conflict (1)	–					
Relationship satisfaction (2)	–.29**	–				
Depression (3)	–.27**	–.33**	–			
Life satisfaction (4)	–.20**	.37**	–.44**	–		
Divorced (5)	.02	–.07**	.12**	–.19**	–	
Cohabitation (6)	–.07**	–.08**	.06**	–.06*	.35**	–
Married (7)	–.07**	.08**	–.18**	.20**	–.68**	–.45**
<b>Wave 3</b>						
Unpleasant conflict (1)	–					
Relationship satisfaction (2)	–.21**	–				
Depression (3)	.17**	–.29**	–			
Life satisfaction (4)	–.17**	.40**	–.38**	–		
Divorced (5)	.02	–.04	.15**	–.16**	–	
Cohabitation (6)	.003	–.05	.06*	–.03	.79**	–
Married (7)	–.003	.05	–.18**	.15**	–.63**	–.95**
<b>Wave 4</b>						
Unpleasant conflict (1)	–					
Relationship satisfaction (2)	–.25**	–				
Depression (3)	.18**	–.25**	–			
Life satisfaction (4)	–.15**	.38**	–.41**	–		
Divorced (5)	.02	–.04	.09**	–.15**	–	
Cohabitation (6)	Missing	Missing	–.04	–.02	–.20**	–
Married (7)	–.02	.04	–.15**	.14**	–.56**	Missing
<b>Wave 5</b>						
Unpleasant conflict (1)	–					
Relationship satisfaction (2)	–.34**	–				
Depression (3)	.18**	–.28**	–			
Life satisfaction (4)	–.20**	.45**	–.44**	–		
Divorced (5)	–.09*	–.06	.06	–.09**	–	
Cohabitation (6)	Missing	Missing	.19**	–.15**	.1**	–
Married (7)	.03	.10**	–.19**	.16**	–.53**	–.90**

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Because list-wise deletion was used to calculate correlations, some of the correlations with the cohabiting variables were not able to be compute and are noted as “Missing”

Multiple Transitions ( $\beta = 2.55$ ,  $SE = .05$ ) had significantly lower satisfaction compared to Stable Marriage with High Conflict ( $\beta = 2.82$ ,  $SE = .03$ ), Stable Marriage with Low Conflict ( $\beta = 2.95$ ,  $SE = .08$ ), and Marriage to Divorce/Cohabit ( $\beta = 3.13$ ,  $SE = .04$ ). Also, Marriage with High

Conflict ( $\beta = 2.82$ ,  $SE = .03$ ) had significantly lower satisfaction compared to Married to Divorce/Cohabit ( $\beta = 3.13$ ,  $SE = .04$ ).

Next, whether life satisfaction changed significantly for each RRT across the five waves of study. The results

**Table 3** Goodness-of-fit and statistical class indicators role configuration for Waves 1–5

Class #	AIC	BIC	VLMR-LRT	LMR-ALRT
Wave 1				
1	8388.20	8417.05	–	–
2	7195.38	7258.86	$p = 0.01$	$p = 0.01$
3	<b>7120.89</b>	<b>7218.97</b>	$p = 0.01$	$p = 0.01$
4	7115.20	7247.90	$p = 0.09$	$p = 0.09$
5	7124.32	7291.50	$p = 0.50$	$p = 0.50$
Wave 2				
Class #	AIC	BIC	VLMR-LRT	LMR-ALRT
1	7488.40	7516.31	–	–
2	6350.28	6411.67	$p < 0.001$	$p < 0.001$
3	<b>6223.97</b>	<b>6318.84</b>	$p < 0.001$	$p < 0.001$
4	Log-likelihood not replicated			
Wave 3				
Class #	AIC	BIC	VLMR-LRT	LMR-ALRT
1	6955.72	6983.30	–	–
2	5704.61	5765.27	$p < 0.001$	$p < 0.001$
3	<b>5649.22</b>	<b>5742.98</b>	$p < 0.001$	$p < 0.001$
4	Log-likelihood not replicated			
Wave 4				
Class #	AIC	BIC	VLMR-LRT	LMR-ALRT
1	5261.33	5287.64	–	–
2	4683.13	4740.79	$p < 0.001$	$p < 0.001$
3	<b>4619.84</b>	<b>4708.94</b>	$p < 0.001$	$p < 0.001$
4	Log-likelihood not replicated			
Wave 5				
Class #	AIC	BIC	VLMR-LRT	LMR-ALRT
1	5507.37	5532.66	–	–
2	4038.12	4093.76	$p < 0.001$	$p < 0.001$
3	<b>3951.64</b>	<b>4037.63</b>	$p < 0.001$	$p < 0.001$
4	3933.46	4049.80	$p < 0.001$	$p < 0.001$

Note: The bolded class is the one that fits the data best

**Table 4** Goodness-of-fit and statistical class indicators for relationship role trajectories

Class #	2nd LCA			
	AIC	BIC	VLMR-LRT	LMR-ALRT
1	16329.25	16386.95	–	–
2	15246.03	15367.20	$p < 0.001$	$p < 0.001$
3	14649.95	14834.58	$p < 0.001$	$p < 0.001$
4	<b>14449.79</b>	<b>14697.89</b>	$p = 0.38$	$p = 0.38$
5	Log-likelihood not replicated			

Note: The bolded class is the one that fits the data best

indicated that the only RRT which significantly changed was Married to Divorce/Cohabit ( $\beta = -.05$ ,  $SE = .02$ ) which experienced small declines in life satisfaction over

time; however, though the Married to Divorce/Cohabit's change in life satisfaction was different from zero, its change was not significantly different from the other RRTs.

## Depressive Symptom Outcome

For depressive symptoms, a growth mixture model with known classes along was also examined (see Table 5). The intercepts (wave 1; 1986) for depression symptoms were statistically significant for each RRT; meaning the each RRT's intercept was different from zero. In terms of statistical differences, Multiple Transitions ( $\beta = 7.70$ ,  $SE = .22$ ) had significantly higher depression compared to Stable Marriage with High Conflict ( $\beta = 6.51$ ,  $SE = .14$ ), Stable Marriage with Low Conflict ( $\beta = 6.21$ ,  $SE = .34$ ), and Married to Divorce/Cohabit ( $\beta = 5.62$ ,  $SE = .18$ ). Also, Stable Marriage with High Conflict ( $\beta = 6.51$ ,  $SE = .14$ ) had significantly more depressive symptoms compared to Married to Divorce/Cohabit ( $\beta = 5.62$ ,  $SE = .18$ ).

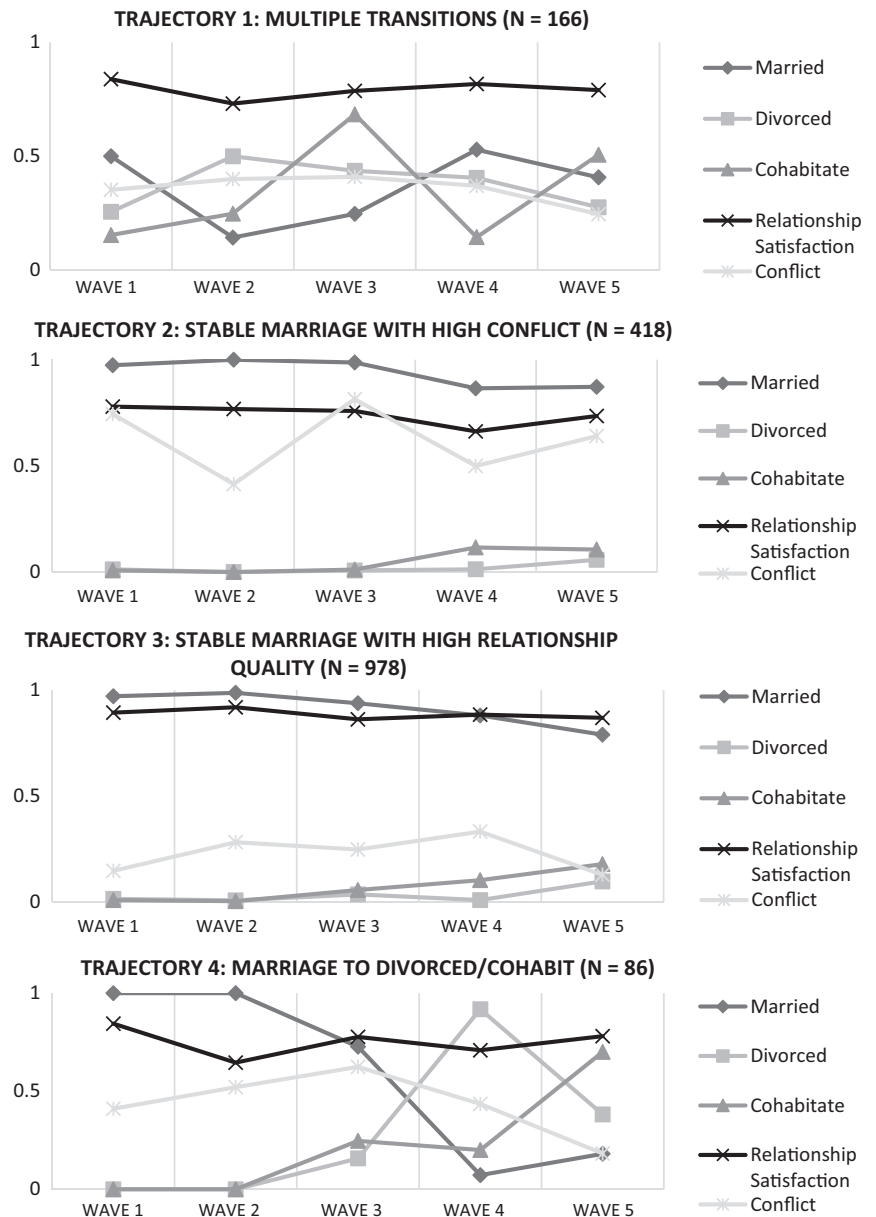
For the slopes, depressive symptoms significantly decreased across the 5 waves for Multiple Transition ( $\beta = -.26$ ,  $SE = .07$ ) and Stable Marriage with High Conflict ( $\beta = -.35$ ,  $SE = .04$ ). In terms of slopes being significantly different, individuals in Multiple Transition ( $\beta = -.26$ ,  $SE = .07$ ) experienced decreases in depressive symptoms more rapidly compared to individuals in Stable Marriage with Low Conflict ( $\beta = .11$ ,  $SE = .13$ ) and Married to Divorce/Cohabit ( $\beta = -.001$ ,  $SE = .06$ ) who did not experience significant change. Also, individuals in Stable Marriage and High Conflict ( $\beta = -.35$ ,  $SE = .04$ ) experienced decreases in depressive symptoms more rapidly compared to those in Stable Marriage and Low Conflict ( $\beta = .11$ ,  $SE = .13$ ) and Married to Divorce/Cohabit ( $\beta = -.001$ ,  $SE = .06$ ) who did not change significantly.

## Discussion

This paper sought to determine how relationship status and quality simultaneously changed over time by examining types of relationship trajectories. Previous studies used cross-sectional assessments of relationship types (Fowers 1990; Fowers and Olson 1986; Heaton and Albrecht 1991; Johnson et al. 1986; Larsen and Olson 1989; Markman et al. 1993), making it unclear as to whether these relationship typologies were stable. Further, previous examinations of relationship trajectories only examined relationships status (e.g., Roberson et al. 2015), making it unclear how both changes in relationship status and quality influence individual life quality. Using second order latent class analysis, results showed four types of relationship role trajectories. The two types of relationship role trajectories with the largest proportions were those who remained stable in their



**Fig. 1** Depictions of the four relationship role trajectories



relationship status over time: Married with High Conflict and Married with Low Conflict. The two other types of relationship role trajectories displayed more changes in relationship status and indicators of relationship quality. This may be an indication that more individuals experience the same relationship type regardless of the quality during their lifecourse whereas fewer shift from one relationship type to another. Previous research points to relationship problems remaining stable across early marriage (Lavner et al. 2014); as indicated here, relationship quality and stability also remained stable in later life for most of the individuals in our sample.

Those in the trajectories of Multiple Transitions or Stable Marriage with High Conflict appear to have the worst

quality of life as they reported the highest frequency of depressive symptoms and lowest life satisfaction. However, surprisingly, these trajectories are the only RRTs that decrease in depressive symptoms over the 30 year period. While this finding could be an indication of regression to the mean, this trend toward improved wellbeing could also be an indication that individuals can develop coping skills to reduce the negative impact adverse close relationships. In the case of Multiple Transition, these individuals may have dissolved a problematic relationship and experienced improved quality of life though singlehood or a new partnership (e.g., Wang and Amato 2000). While their earlier life circumstances may affect their wellbeing, individuals in these relationship role trajectories may be able to develop as

**Table 5** Means and standard errors (SE) of grown mixture modeling with known classes for life satisfaction (LS) and depression (D). ( $N = 3617$ )

	Means (S.E.)				Wald $\chi^2$ (df)					
	RRT1 (multiple transitions)	RRT2 (married & high conflict)	RRT3 (married & low conflict)	RRT4 (married to divorce/cohabit)	RRT1 vs. RRT2	RRT1 vs. RRT3	RRT1 vs. RRT4	RRT2 vs. RRT3	RRT2 vs. RRT4	RRT3 vs. RRT4
LS intercept	2.55 (.05)**	2.82 (.03)**	2.95 (.08)**	3.13 (.04)**	18.34 (1)**	16.12 (1)**	71.60 (1)**	2.07 (1)	33.2 (1)**	3.71 (1)
LS slope	-.003 (.02)	-.02 (.01)	.005 (.04)	-.05 (.02)*	.30 (1)	.04 (1)	3.54 (1)	.30 (1)	3.23 (1)	2.05 (1)
D intercept	7.70 (.22)**	6.51 (.14)**	6.21 (.34)**	5.62 (.18)**	20.94 (1)**	13.44 (1)**	54.00 (1)**	.67 (1)	15.90 (1)**	2.34 (1)
D slope	-.26 (.07)**	-.35 (.04)**	.11 (.13)	-.001 (.06)	1.12 (1)	5.95 (1)*	7.24 (1)**	10.85 (1)**	21.14 (1)**	.56 (1)
LS Wave 1	2.55 (.04)	2.77 (.02)	2.94 (.06)	3.05 (.03)	–	–	–	–	–	–
LS Wave 2	2.61 (.06)	2.92 (.03)	3.02 (.08)	3.13 (.04)	–	–	–	–	–	–
LS Wave 3	2.41 (.06)	2.68 (.85)	2.91 (.09)	2.92 (.86)	–	–	–	–	–	–
LS Wave 4	2.62 (.90)	2.79 (.03)	2.98 (.15)	2.95 (.06)	–	–	–	–	–	–
LS Wave 5	2.65 (.06)	2.87 (.03)	2.38 (.42)	2.80 (.11)	–	–	–	–	–	–
D Wave 1	7.37 (.19)	6.24 (.12)	6.36 (.26)	5.62 (.12)	–	–	–	–	–	–
D Wave 2	7.21 (.24)	5.77 (.24)	6.40 (.30)	5.64 (.15)	–	–	–	–	–	–
D Wave 3	7.03 (.24)	5.11 (.15)	6.43 (.37)	5.11 (.15)	–	–	–	–	–	–
D Wave 4	6.17 (.25)	5.22 (.12)	6.95 (.56)	5.23 (.20)	–	–	–	–	–	–
D Wave 5	9.17 (.28)	7.28 (.14)	10.00 (1.58)	7.68 (.40)	–	–	–	–	–	–

*Note:* A non-significant Wald  $\chi^2$  statistics means that you fail to reject the null hypothesis that the parameters are equal indicating that the parameters are not different. A significant Wald  $\chi^2$  statistics ( $p < .05$ ) means you can reject the null hypothesis that the parameters are equal indicating that the parameters are different

*RRT1* Relationship Role Trajectory 1 (multiple transitions), *RRT2* Relationship Role Trajectory 2 (married & high conflict), *RRT3* Relationship Role Trajectory 3 (married & low conflict), *RRT4* Relationship Role Trajectory 4 (married to divorce/cohabit), *LS* life satisfaction, *D* depression

adults in ways that allow them to not just cope with their life circumstances statically, but improve their quality of life over a 30-year period. Further, only one aspect of individual role configuration was examined, it is possible that other roles (e.g., parent, employee) improve across this 30-year time period and positively influence their wellbeing. Relatedly, those in the Marital Transitions trajectory reported the lowest life satisfaction and most depressive symptoms across all trajectories. Whereas the improvement in wellbeing is hopeful for those in poor quality romantic relationships earlier in their life, it is concerning that both multiple relationship transitions and poor relationship quality are associated with the poorest wellbeing at W1. Whether wellbeing for individuals in this group can improve over time to match that of the Stable Marriage with Low Conflict or Married to Divorce/Cohabiting trajectories has yet to be examined. Additionally, whether poor wellbeing or poor relationship quality is the antecedent has been debated (marital discord vs. stress generating model; Beach et al. 1990; Davila et al. 1997); however, it is clear that romantic relationship and individual wellbeing are linked in complex ways that may involve factors beyond the romantic relationship role and individual wellbeing.

Stable Marriage with Low Conflict and Stable Marriage with High Conflict did not appear to differ on any aspect of quality of life. Much of the literature points to the quality of the romantic relationship affecting quality of life just as much or more than the stability of the relationship (e.g., Hawkins and Booth 2005; Proulx et al. 2009). Another

body of literature emphasizes that the quality of the family of origin functioning is most influential to quality of life (Priest and Woods 2015; Roberson, Priest, Woods, under review). Based on this literature and findings from the present study, it is possible that the quality of family functioning and the stability of romantic relationship are the two predominant components of close social relationships which can adversely affect quality of life. The only difference between these two groups was that those in the Stable Marriage with High Conflict experienced a slight decline in depressive symptoms while Stable Marriage Low Conflict did not.

This is somewhat counter intuitive that Married with High Conflict and Married with Low conflict were so similar on the wellbeing outcomes. In fact, research and theory would suggest that the stress from a high conflict marriage would manifest as increasing depression (Wood 1993). This divergence could be explained in two ways: First, the two RRTs (Multiple Transitions and Stable Marriage High Conflict) which reported significant declines in depressive symptoms were also the two highest at wave 1 (the intercept). Therefore, the significantly observed decline may be because of a statistical phenomenon, regression to the mean. Second, the level of relationship satisfaction among Low Conflict and High Conflict marriages are consistently high across the 5 waves. Therefore, the high level of relationship satisfaction among those in Stable Marriages High Conflict may buffer against any negative impact on wellbeing. Similarly, the high level of

relationship satisfaction among those in Stable Marriages Low Conflict may have led to no significant change in depressive symptoms and life satisfaction. Future research should further examine how different marital characters interact and differentially influence an individual's wellbeing.

### Limitations

This study is not without limitations. First, the initial wave sampled a lower percentage of Latinos/as than are currently reflected in the population. Therefore, these results cannot be generalized to this segment of the U.S. population. Also, the majority of the sample reported high relationship satisfaction and relatively low conflict. The number and proportion of relationship role trajectories may have differed if there was a larger range of relationship quality variables. Third, the data was collected through face-to-face interviews. Although this method ensures less missing data, it may bias responses by increasing social desirability and helps to explain why there were, on average, higher scores on relationship quality. Additionally, when considering the association between wellbeing and relationship role trajectories, the direction of influence cannot be determined, but only that there is an association between specific relationship role trajectories and wellbeing outcomes.

This study examined how a group of individuals traversed relationship role trajectories across several decades. However, the study did not recruit individuals who were of the same age or lifecourse stage. Therefore, these relationship role trajectories should be understood as a type of relationship role trajectory during a segment of the lifecourse rather than the relationship role trajectories from entrance into that role (i.e., first marriage or cohabitation) until death. An additional limitation regarding the relationship role trajectories considered stable is how the data was collected. Time between data collection ranged from 5 to 9 years and during data collection only current relationship status was collected. It is plausible that, given the gap of time between collection, relationship status changed and was not accounted for in data collection and therefore the relationship role trajectories may be underreporting the frequency of relationship transitions and fluctuation in measure of relationship quality. The participants were an average age of 50 in the first wave of data collection; therefore, results may not be generalizable to the current cohort of Americans. Also, the relationship quality variables were only measured by single items variables. Multiple items may provide more variability and greater confidence in construct validity. Future research should replicate this study with multi-item measures of relationship quality.

### Future Research

There are multiple directions for future research. First, future studies should examine different and additional variables to gain a more complete picture of relationship role trajectories. Relationship status variables should include widowhood and singlehood, especially when examining an aging population. Relationship quality variables could include variables that measure the closeness of the couple by including relationship intimacy and trust. Further, studies should examine trajectories of relationship contextual events such as parenthood, infidelity, or retirement.

Another direction for future research is to examine demographic differences. For example, using the same variables, one could examine how trajectories differ by race and ethnicity, socioeconomic status, or gender. In a study of transition to early parenthood, race differences were found using second order latent class analyses (Macmillan and Copher 2005). Although mental health outcomes for these trajectories were examined, future studies should also examine physical health outcome variables such as cardiovascular health, hospital visits, and frequency of self-reported colds and influenza. Many of these health outcomes have been connected to relationship quality, particularly among older individuals (e.g., Umberson et al. 2006). Further, variables that moderate the relationship between relationship role trajectory and health and wellbeing outcomes should be examined. Possible moderators that have previously been found to be related to relationship quality and stability include socioeconomic status (Gibson-Davis et al. 2005), social support (Antonucci and Akiyama 1987), and individual personality characteristics (Zeidner and Kloda 2013). Relatedly, it will be important for future research to examine relationship trajectories for LGBTQIA+ individuals. Research on LGBT individuals suggests that different dating scripts and milestones are followed (Macapagal et al. 2015). Thus, it is reasonable to investigate the relationship trajectories across time for these relationships.

Finally, for this study we examined linear slopes for life satisfaction and depressive symptoms. However, when looking at the means of depressive symptoms across all of the waves, there appeared to be an up-tic in depressive symptoms in wave 5. For the present study, we had consistent attrition at each wave of the study and by wave 5 we had less than 50% of the original sample. While we were able to estimate the entire model and appropriately handle missing using full information maximum likelihood estimation in Mplus, the parameter estimates in wave 5 may be unstable. Therefore, we only discuss findings from the entire estimated model and we do not believe it is appropriate to extrapolate on or interpret isolated waves (wave 5) of the model. However, future research should attempt to

replicate this up-tic with a single cohort of individuals and examine if there are curvilinear change in depressive symptoms and life satisfaction.

**Author Contribution** P.N.E.R.: Project conceptualization, Data manager, statistical analyses, interpret results; J.C.N.: Wrote and contributed to the literature review and discussion; K.A.L.: Wrote and contributed to the literature review and discussion; A.B.O.: Mentor of the project.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethical Approval** This research protocol was approved by the University of Tennessee's Institutional Review Board as exempt. All procedures involving human participants were in accordance with the ethical standards of the institution and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all participants in the current study.

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