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## Convergence and Non-convergence in the Quality of Adolescent Relationships and its Association with Adolescent Adjustment and Young Adult Relationship Quality

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### Abstract

With the aim of identifying and examining both converging (matched relationship quality across one's set of relationships) and non-converging (mixed relationship quality across one's set of relationships), the present study used a pattern-centered approach to examine the different ways adolescent relationships pattern together among a large, national sample of U.S. adolescents (aged 13–19). The study also examined how adolescent adjustment and young adult relationship quality varied across the different relationship patterns or constellations. The current study used latent class analysis and data from Add Health ( $n = 4,233$ ), a national U.S. longitudinal study that spans adolescence and young adulthood, to uncover heterogeneity in adolescent relations with parents, friends, romantic partners, peers, and teachers. As predicted, patterns of both convergence and non-convergence were found, though patterns of non-convergence were more common than expected. Some patterns of non-convergence appear more stable (i.e., similar pattern found during both adolescence and young adulthood) than others. Also, no “high” converging pattern was found, indicating that few adolescents have “first-rate” relations in every relational domain.

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According to Bourdieu (1986), much like financial investments, interpersonal relationships, by virtue of the socialization, resources, and supports they provide, have a form of “Social Capital” that yield interpersonal dividends. Like financial investments, some interpersonal relationships, and the social capital embedded in them, are more “profitable” than others (e.g., a loving, supportive relationship with a parent has more social capital than an abusive, inflammatory relationship with a sibling), and a diverse portfolio or “Breadth” of relationships is important because different relationships provide different forms of social capital. From Bourdieu's perspective, social relationships and their importance to development are best understood at the aggregate, and given the value of both quality (i.e., depth) and breadth of relationships, the focus should be on one's collection of relationships (opposed to an isolated relationship).

During adolescence relations with parents, friends, and romantic partners are particularly influential as each provide unique forms of socialization or social capital vital to adolescent development. However, how exactly these important relationships pattern together or operate at the aggregate remains poorly understood. Variable-centered research indicates that during adolescence relationship quality is highly correlated across these relational domains (Connolly & Johnson, 1996; Furman, Simon, Shaffer, & Bouchey, 2002; Kuttler & Greca, 2004; Laursen, Furman, & Mooney, 2006; Taradash, Connolly, Pepler, Craig, & Costa, 2001). Though the norm, this “convergence” in relationship quality is almost

assuredly not true for all as it is not necessarily the case that positive relationships beget other positive relationships and vice-versa. At no point might this be truer than during adolescence when the balance among these relationships is transformed over time as relations with friends and romantic partners take on increasing importance (Collins, 1995; Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). In fact, learning to balance and juggle these relationships is a key developmental task of adolescence (Brown, 2004; Connolly & McIsaac, 2008).

Unlike a variable-centered approach, which assumes population-level homogeneity in the relations between variables, a pattern-centered approach can identify the different types of adolescent relationship constellations – both those characterized by convergence and non-convergence. Though recent research has used pattern-centered approaches to explore heterogeneity in adolescent relationship constellations (Laursen et al., 2006; Laursen & Mooney, 2008; Rosenfeld et al., 2000; Scholte et al., 2001), this emerging research has its limitations: none of the studies included indicators for friends, romantic partners, and *both* parents; none extended into young adulthood (leaving questions of stability unanswered); and most relied on median-splits, a limited methodology that fails to differentiate among gradients of those above or below the median. The current study uses Latent Class Analysis (LCA) and data from Add Health, a national U.S. longitudinal study that includes indicators of parent, friend, romantic, peer, and teacher relationship quality, to examine (1) heterogeneity in adolescent relationship constellations, (2) its relation to adolescent adjustment, and (3) its relation to young adult relationship quality.

### Examples of (Non) Convergence

Like variable-centered research, pattern-centered research indicates that convergence in adolescent relationship quality is common. Using cluster analysis to explore heterogeneity in relations with parents, friends, and siblings, Scholte et al. (2001) found that 84% of respondents fell within either a consistently high or consistently low cluster. Based on median splits, Laursen et al. (2006) found that 55% of the sample was either consistently below or consistently above the median on relations with mother, best-friend, and romantic partner; focusing on social support from parents, friends, and teachers, Rosenfeld et al. (2000) found that 43% of the sample similarly “converged”; and Laursen and Mooney (2008) found that 49% of the sample “converged” on relations with mother, father, and best-friend.

These pattern-centered studies also found instances of non-convergence. Though the sizes of the non-convergent groups were small (typically 5–10% of the sample) and there were inconsistencies in the amount and patterns of non-convergence across the studies, one pattern of non-convergence that emerged across the studies was relationship constellations characterized by high relationship quality with parents and low relationship quality with friends, and vice-versa. Because none of the studies extended beyond adolescence, it is unclear if these patterns of non-convergence are temporary or more permanent. Non-convergent patterns could be due to the difficulties that some adolescents have with balancing multiple relational domains, difficulties that most adolescents eventually overcome. Additionally, some adolescents are more likely than others to have initial difficulties navigating a particular relational domain (e.g., later developing boys often delay romantic relations). Then again, patterns of non-convergence could be the result of stable deficits in social competence or profound problems in a particular relationship (i.e., an abusive parent), the effects of which could be long lasting.

Another consistent finding across these pattern-centered studies was that though the “consistently high” and “consistently low” constellations reported the highest and lowest adjustment (i.e., academic achievement, internalizing, and externalizing) respectively,

among the non-convergent constellations, those who had above average relations with parents (but not friends) were better adjusted than those who had above average relations with friends (but not parents) (Rosenfeld et al., 2000; Scholte et al., 2002). Providing evidence for the importance of breadth and depth of relationships, these findings indicate that the greater number of positive or “deep” relationships an adolescent has the better adjusted he or she is. They also suggest that among adolescents with a reduced set of positive relationships, all relationships are not equal and positive relations with parents may be paramount. This is an intriguing finding that we seek to replicate among a national sample and a more expansive set of adolescent relationships.

### **Expected patterns of non-convergence**

The patterns of “non-convergence” across the parent and friend domains found by existing pattern-centered research is consistent with variable-centered research indicating “competition” and “compensation” between the parent and peer relational domains during adolescence. Adolescents have a finite amount of time and resources to devote to relationships, and as the time and energy devoted to and the importance placed on relations with friends and peers increases, relations with parents may in turn decrease (Larson et al., 1996; Youniss, 1980). This inverse relation or “competition” between adolescent relational domains has also been found between romantic partners and parents (Connolly & Johnson, 1996; Laursen & Williams, 1997), and romantic partners and friends (Connolly et al., 1996; Roth & Parker, 2001; Laursen & Williams, 1997). In contrast to “competition”, certain adolescents actively seek out connections with peers and romantic partners to “compensate” for inadequacies in the parent-child relationship. For example, adolescents with insecure or otherwise unsatisfying relationships with parents initiate dating and sexual activity earlier (Collins & Steinberg, 2006; Copper, Shaver, & Collins, 1998), and are more likely to turn to friends to fulfill attachment needs (Markiewicz, Lawford, Doyle, & Haggart, 2006; Furman et al., 2002; Gauze, Bukowski, Aquan-Assee, & Sippola, 1996). Together, examples of non-convergence from existing pattern-centered research as well as instances of “competition” and “compensation” from variable-centered research are useful for the prediction of non-convergence among the particular set of adolescent relationships examined in the current study

### **Key aims and hypotheses**

The current study uses data from Add Health, a national U.S. longitudinal study that spans adolescence and young adulthood and includes indicators of parent, friend, romantic, peer, and teacher relationship quality, to examine (1) heterogeneity in adolescent relationship constellations, (2) its relation to adolescent adjustment, and (3) its relation to young adult relationship quality. It is expected that convergence will be the most common pattern, and patterns of non-convergence will reflect mixed relationship quality across the parent/friend, parent/romantic partner, and/or friend/romantic partner relational domains. Those in non-convergent patterns are expected to show intermediate levels of adjustment. Among those with non-convergent patterns, those with positive relations with parents are expected to be the most well-adjusted. Though exploratory, patterns of non-convergence are expected to be adolescent-limited. LCA is used, which unlike median-splits, can differentiate between gradients of high and low relationship quality. Finally, relations with teachers are included because of the unique and important forms of support and socialization that they provide (Blum & Rinehart, 2000).

## Methods

### Sample

The data for this study came from Add Health (Bearman, Jones, & Udry, 1997), a multi-wave, nationally representative sample of American adolescents. Using a clustered sampling design, 80 high schools were recruited for participation. At the point of initial assessment (Wave 1), the total sample was 20,745 7<sup>th</sup>–12<sup>th</sup> graders. Two additional waves of data are available, each taking place approximately one (Wave 2) and six (Wave 3) years later. For the present study, only those who were randomly selected at Wave 1 to complete a more detailed inventory of current friendships and had two parents residing in the household were included in the study ( $N = 4,233$ ). Among those included, the average amount of missing data was low: .1% at Wave 1, 26.0% at Wave 2, and 25.5% at Wave 3. In order to maximize the data and include all possible cases, Full Information Maximum Likelihood (FIML) estimation was used.

### Procedure

The first wave of data was collected during 1994 and 1995 via in-home questionnaires. The questionnaires covered a range of topics: mental health, peer networks, family composition and dynamics, romantic partnerships, sexual partnerships, and risk behavior. Approximately one year later, respondents completed a second in-home questionnaire. Approximately six to seven years after initial assessment, respondents completed a third in-home questionnaire that was similar in content to the first two but also covered family formation and employment histories.

### Measures

**Wave 1 relationship indicators**—Regarding platonic relationships with peers, two measures focused on same-sex friendships, two measures focused on opposite-sex friendships, and one measure focused on peer relations in general. Each respondent was asked to nominate up to 5 friends of each gender. Based on these nominations, each respondent's *number of same-sex friends* and *number of opposite-sex friends* was calculated (measures ranged from 0 to 5). For each friend nominated, respondents answered 5 yes/no questions that assessed relationship quality over the last week: (1) Go to friend's house?; (2) Meet friend after school to hang out?; (3) Spend time with friend during the past weekend?; (4) Talk to friend about a problem?; (5) Talk to friend on the phone? *Quality of same-sex friendships* was based on the average number of "yes" answers per nominated same-sex friend (measure ranged from 0 to 5). *Quality of opposite-sex friendships* was calculated using the same procedure. *Quality of relations with peers* was based on a single measure: "During the school year, how often have you had trouble getting along with other students?" Possible responses ranged from 0 (everyday) to 4 (never).

*Quality of relationship with mom* was based on the mean response to four items: (1) How close do you feel towards your mother; (2) How much do you think your mother cares about you?; (3) Most of the time your mother is warm and loving towards you?; and (4) Overall, you are satisfied with your relationship with your mother?. Possible responses ranged from 0 (not at all) to 4 (very much). *Quality of relationship with dad* was based on the same 4 items, except "mother" was replaced by "father". Both scales had good reliability (mother  $\alpha = .85$ ; father  $\alpha = .80$ ). Respondents answered these questions about residential parents only, whether natural-, adoptive-, or step-parents.

*Relation with teachers* was based on a single item: "During the school year, how often have you had trouble getting along with teachers?" Possible responses ranged from 0 (everyday) to 4 (never).

Each respondent was asked to nominate up to 3 romantic relationships. Based on these nominations, each respondent's *number of romantic relationships* was calculated (measure ranged from 0 to 3). For each relationship nominated, respondents' answered 4 yes/no questions that assessed relationship quality: (1) Went out together alone; (2) Told my partner that I love him/her; (3) Partner told me that he/she loves me?; (4) We thought of ourselves as a couple? *Quality of romantic relationships* was based on the average number of "yes" answers per nominated relationship (measure ranged from 0 to 4).

**Adolescent correlates and young adult relationship quality**—Wave 1 (adolescent; age  $M = 15.60$ ,  $SD = 1.73$ ) correlates (Table 1) included demographic factors and indicators of child adjustment. Wave 3 (young adult; age  $M = 21.43$ ,  $SD = 1.67$ ) relationship indicators included measures (Table 2) of relationship quality with friends, parents, and romantic partner, as well as marital status and cohabiting status.

## Results

All analyses were conducted within Mplus, Version 5.2 (Muthen & Muthen, 1998–2009). In order to account for Add Health's sampling design, all analyses included a stratification variable and used a maximum likelihood estimator robust to the estimate of standard errors, as suggested by the administrators of Add Health when using Mplus (Chantala, 2003). All multi-group model comparisons involving non-categorical dependent variables were based on  $X^2$  differences tests (Kline, 1998). Because  $\chi^2$  values are not provided for models with categorical dependent variables, multi-group model comparisons involving categorical dependent variables are based on log likelihood ratio tests (Johnson & Wichern, 2002).

### Aim 1: Documenting heterogeneity in adolescent relationship constellations

The optimal number of latent profiles was determined in a systematic fashion, and was based upon three criteria as outlined by Nylund, Asparouhov, & Muthen (2007): (1) The Bayesian information criterion (BIC) statistic (The lower the value the better the fit of the model); (2) The classification quality, which can be determined by examining both the posterior probabilities and entropy values (higher values indicate greater distinctiveness among the latent classes); and (3) The Lo-Mendell-Rubin likelihood ratio test (LMR-LRT) of model fit (Lo, Mendell, & Rubin, 2001), which compares the estimated model with  $c$  classes to a model with  $c-1$  classes. Collectively, the different decision criteria indicated that the optimal number of relationship constellations (i.e., latent profiles) was five (Table 3). Across the 1- through 6-class solutions the BIC values decreased, but increased the least between the 5- and 6-class solutions. Entropy increased across the 1- and 5-class solutions and then decreased between the 5- and the 6-class solutions. The average posterior probabilities increased across the 3- through 5-class solutions, but then dropped between the 5-class and 6-class solutions. Finally, the LMR-LRT comparing the 5-class model to the 6-class model was the first non-significant test ( $p = .160$ ), indicating that the null model (i.e., the 5-class model) failed to be rejected.

In order to test for mean differences between the five sub-types, the indicator of latent profile membership was saved, using the "Save data" command within Mplus, and used as a grouping variable in subsequent multi-group analyses. The weighted mean estimates for each of the five sub-types are depicted graphically in Figure 1. In Figure 1 (as well as all subsequent tables and figures) superscripted letters indicate rank order mean differences in each relationship indicator across the five sub-types. Rank order differences ( $\alpha = .05$ ) were determined via model comparisons (results not tabled). To facilitate comparisons across the sub-types, each mean estimate in Figure 1 is standardized and population mean-centered. The first three subtypes were characterized by non-convergent relationship quality as

evidenced by diverging relationship quality in select relationship domains. The first sub-type (“High Romance; Intermediate Other”; 7.1% of the sample), reported by a wide margin the highest number of romantic relationships and the highest quality romantic relationships, but generally reported intermediate levels on the remaining relationship indicators. The second sub-type (“High Friends, Romance; Low Parents”; 19.2% of the sample) reported (1) by a wide margin the highest frequency and quality of both same-sex and opposite-sex friendships, and (2) a frequency and quality of romantic relationships that were also well above average. However, this subtype also reported the lowest overall relationship quality with parents. The third subtype (“High Parents; Low Romance”; 36.6% of the sample) reported by a wide margin the highest relationship quality with parents, but also reported a frequency and quality of romantic relationships that was well below average. The fourth and fifth groups were characterized by convergent relationship quality and were generally near average to below average on every indicator. The fourth group (“Low Get Along; Intermediate Other”; 7.1% the sample) was near average on most indicators, though by a wide-margin got along the worst with peers and teachers. Though the fifth sub-type (Low Overall; 30.07% of the sample) got along well with teachers and peers, they were the lowest overall on the most indicators (including all friendship and romantic relationship indicators), and were also well below average on the parent relationship indicators.

## **Aim 2: Correlates of Adolescent Relationship Constellations**

Subtype differences in demographic factors are listed in Table 4. Relative to the other subtypes, those in the two “High” romance sub-types (“High Romance; Intermediate Other”, and “High Friends, Romance; Low Parents”) were older and at an advanced stage of pubertal development. Educational level of the most educated parent was highest among “High Friends, Romance; Low Parents”, second highest among “High Parents; Low Romance”, and the lowest among the two “Low” subtypes (“Low Get-along; Intermediate Other” and “Low Overall”). The two “Low” subtypes were also the most likely to be Black or a member of an “Other” race (i.e., race other than White or Black). “High Parents; Low Romance” were the least likely to have a stepparent in the household, and the two “High” romance subtypes were the most likely. Finally, the two “Low” subtypes were the least likely to be female, and “High Friends, Romance; Low Parents” was the most likely.

Subtype differences in adolescent (concurrent) adjustment are listed in Table 5. All estimates include controls for the demographic factors listed in Table 4. Overall, “High Parents; Low Romance” reported the highest well-being. This subtype had the lowest overall depressive affect and the highest overall self-image and GPA. “Low Overall” reported the next highest overall well-being (one of the second highest in self-concept, the second lowest on depressive affect, and the second highest on GPA). The two “High” romance subtypes reported the next highest well-being and reported levels that were equivalent to one another. Well-being among these two subtypes was equivalent to “Low Overall”, except the two “High” romance subtypes reported worse (higher) depressive affect. Finally, “Low Get-along; Intermediate Other” reported the lowest overall well-being. This subtype reported equivalent well-being to the two “High” romance subtypes, except “Low Get-along; Intermediate Other” reported a lower GPA (and the lowest overall GPA).

Overall, “Low Overall” reported the lowest problem behaviors and was one of the lowest in delinquent behavior, binge drinking, and marijuana use, and the lowest overall in number of sexual partners. “High Parents; Low Romance” reported the next lowest problem behaviors, and reported levels equivalent to “Low Overall”, except “High Parents; Low Romance” reported more sexual partners. “High Romance; Intermediate Other” reported the next lowest problem behaviors, and relative to “High Parents; Low Romance” reported equivalent delinquent behavior, but reported more binge drinking and marijuana use, and a higher number of sexual partners. Next, “Low Get-along; Intermediate Other” and “High

Romance; Intermediate Other” reported equivalent problem behaviors, except “Low Get-along; Intermediate Other” reported more delinquent behavior. Finally, “High Friends, Romance; Low Parents” reported the highest problem behaviors overall, and reported equivalent levels to “Low Get-along; Intermediate Other” except “High Friends, Romance; Low Parents” reported more marijuana use.

### **Aim 3: Adolescent relationship constellations and young adult relationships**

Subtype differences in young adult relations with friends, parents, and romantic partners are depicted graphically in Figure 2. As was the case during adolescence, the two high romance subtypes were among the highest and the two low subtypes were among the lowest on the friendship indicators (popularity with friends and frequency hanging out with friends). Unlike adolescence, “High Parents, Low Romance” was also among the highest on the friendship indicators.

Subtype differences in relations with parents were pretty similar across adolescence and young adulthood. Like adolescence, “High Parents; Low Romance” had the best overall relations with both parents and “High Friends, Romance; Low Parents” had relatively poor relations with both parents. Though “High Friends, Romance; Low Parents” no longer had the worst overall relations with parents, “Low get-along; Intermediate other” did.

During adolescence, the two “High” romance subtypes reported the largest number of romantic relationships and the highest quality relationships, while “High Parents; Low Romance” was the second lowest on both indicators. Consistent with these adolescent patterns, during young adulthood the two “High” romance subtypes were among the highest in rates of marriage and cohabitation and “High Parents; Low Romance” was among the lowest in rate of cohabitation. However, in a reverse from adolescence, the two “High” romance subtypes were among the lowest in romantic relationship satisfaction and “High parents; Low Romance” was among the highest in both rate of marriage and romantic relationship satisfaction. Also unlike adolescence, “Low get along; Intermediate other” was among the highest in certain romantic relationship indicators (romantic relationship satisfaction and rate of cohabitation). Like adolescence, “Low overall” was among the lowest on all of the romantic relationship indicators.

## **Discussion**

With the aim of identifying and examining both converging and non-converging relationship patterns, the present study used a pattern-centered approach to examine the different ways adolescent relationships pattern together among a large, national sample of U.S adolescents (aged 13–19). The study also examined how adolescent adjustment and young adult relationship quality varied across the different relationship patterns or constellations. Although some of the study’s findings overlap with existing research (Laursen et al., 2006, 2008; Rosenfeld et al., 2000; Scholte et al., 2001), this study’s inclusion of more adolescent relational domains, its use of latent-class analysis, and its longitudinal focus provide a more nuanced picture of heterogeneity in adolescent relationship patterns and its association with relationship quality during young adulthood.

### **Prevalence and patterns of (non)convergence**

The only subtype characterized by complete convergence was “Low Get Along; Intermediate Other”, which was below average on all relationship indicators. Arguably, “Low Overall” was also characterized by convergence. Aside from “getting along well” with teachers and peers, which is more an indication of a lack of relational problems than an indication of positive relations, this subtype was well-below average on friend and romantic

relationship indicators and slightly below average on parent indicators. Combined, these two subtypes accounted for just over 37% of the sample, a rate somewhat lower than that found in previous research, where convergence ranged from 43% to 84%. One possible reason for the relatively low rate of convergence is that the present study included a larger number of relational domains, which could make convergence less likely. Second, unlike median splits, which places artificial constraints on heterogeneity (i.e., high versus low), this study used LCA which can identify more subtle (and accurate) sub-group distinctions. Among the three remaining non-converging subtypes (“High Romance; Intermediate Other”; “High Friends, Romance: Low Parents”; and “High Parents; Low Romance”) there was “near” convergence: convergence across most but not all relational domains (usually all but one). Regularity of “near” convergence may explain why parent, friend, and romantic relationship quality are often found to highly correlate at the population level even though complete convergence is the exception.

Consistent with variable-centered research documenting “competition” (e.g., Connolly & Johnson, 1996; Laursen et al., 1997), and “compensation” (e.g., Gauze et al. 1996) between the parent and romantic relational domains, “High Friends, Romance; Low Parents” were well-above average on friend and romance indicators and well below average on parent indicators, and “High Parents; Low Romance” were highest on parent indicators but well below average on romantic indicators. Additionally, “High Romance; Intermediate Other” was especially high on romance indicators, but was below average on the number and quality of same-sex friends. This pattern consistent with Roth and Parker (2001) and Kuttler and La Greca (2004), who found that romantic involvement can be a source of strain in adolescent same-sex friendships. Additional research is necessary to determine if these patterns of non-convergence are actually the result of (opposed to just being consistent with) “competition” or “compensation”.

The lack of a “High” convergent group may indicate that that it is rare for an adolescent to have high quality relationships in every relational domain, rare enough at least that no such group emerged from the LCA. The lack of a “High” convergent pattern is consistent with “competition” and the notion that an adolescent has a finite amount of energy, time, and resources to devote to his or her set of relationships. It is also consistent with the notion that most adolescents lack the social tools necessary to successfully balance and manage a diverse set of social relationships. Learning to balance and juggle different relationships is a key developmental task of adolescence (Connolly & McIsaac, 2008). While honing this skill, it may be that few adolescents are successful at balancing all of their relationships. Analogous to a governor on a gasoline engine, this may limit the amount of social capital an adolescent can take advantage of or “invest” in. Therefore, while breadth and depth of social capital are thought to be important, these findings suggest that the number of “deep” or high quality relationships an adolescent can manage is finite, in effect placing a ceiling on the breadth of “deep” adolescent relationships.

### **Adolescent (non)convergence and concurrent adjustment**

As expected one of the two consistently “Low” subtypes (“Low get along; Intermediate Other”) reported the worst overall well-being as well as elevated problem behaviors (second highest overall). Unexpectedly, the other consistently “Low” subtype (Low Overall), who were lowest overall in problem behaviors and second highest in well-being, were relatively well-adjusted. Because this constellation “got along” the best with teachers and peers and reported near-average relations with parents, this constellation may capture those who are “shy”, which is only weakly associated with internalizing (Prior, Smart, Sanson, & Oberklaid, 2000) and negatively associated with externalizing (Abad & Forms, 2008).



Also as expected, out of the non-converging sub-types, “High Parent; Low Romance”, which had the highest parent-child relations, was by far the most well-adjusted. Well-being was equivalent among the remaining two non-converging subtypes (“High Romance; Intermediate Other” and “High Friends, Romance; Low Parents”). However, problem behaviors were markedly higher among “High Friends, Romance; Low Parents”, who had the lowest overall parent-child relations. These findings contribute to an ongoing debate (see Harris, 1998, Steinberg, 2001) regarding the relative contribution of parents and peers to adolescent adjustment. Parent and peer relationships (both platonic and romantic) each provide unique forms of support and socialization (Collins & Steinberg, 2006; Furman et al., 2002), and each contributes uniquely to adolescent adjustment. However, the present study’s findings suggest that relations with parents, and the forms of social capital embedded in them, are paramount. Possible reasons for parents’ prominent role is that their influence extends into more areas of the adolescent’s day-to-day life (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Laursen & Collins, 2009), and that more so than peer relations, quality relations with parents offer a stable base that helps buffer adolescents from the everyday stressors of adolescence (Garber & Little, 1999).

### **Adolescent (non)convergence and young adult relationship quality**

By young adulthood “High Parents; Low Romance” converged for the better (above average relations remained so, below average relations flipped to above average). “High Romance; Intermediate Other” and “High Friends, Romance; Low Parents” converged to a much lesser extent, and converged for the worse (above average relations flipped to below average, below average relations remained so). Findings suggest that adolescent non-convergence isn’t necessarily adaptive or maladaptive. For example, “High Parents; Low Romance” were the most well-adjusted during adolescence, non-convergence was temporary or “adolescent-limited”, and by young adulthood they “had it all” (i.e., one of the highest on friendship indicators, highest overall on relations with parents, and one of the highest in romantic relation satisfaction and rate of marriage). To the contrary, non-convergence among the two high “Romance” groups was more stable and associated with poorer adolescent adjustment and young adult relations. As mentioned earlier our findings suggest that few adolescents have high quality relations in every relational domain. If there is a ceiling to the breadth of deep adolescent relationships and adolescents “can’t have it all”, then it appears that the most optimal pattern (both in the short- and long-term) is quality relations with parents and friends at the expense of romantic relations. This pattern is consistent with literature indicating that the early initiation of romantic relations is associated with higher adolescent internalizing and externalizing (Davila, 2008; Davies & Windle, 2000), poorer academic performance (Connolly & McIsaac, 2008), and lower quality romantic relations during young adulthood (Seiffge-Krenke, Shulman, & Klessinger, 2001).

### **Final conclusions and limitations**

The study’s biggest limitation is that the young adult and adolescent relationship indicators differ, making it difficult to make firm statements regarding stability in relationship quality across time. Another limitation is that all models are correlational, making causal inferences difficult. Despite these limitations, the study yields several important findings that enhance our understanding of social relations, how they pattern together, and their importance during adolescence and beyond. First, perhaps reflecting inexperience at balancing multiple relationships, few adolescents appear to have above average relations in every relational domain. Second, depending on the exact pattern, non-convergence can be adaptive or maladaptive over the short- and long-term. Third, unlike peer and romantic relations, quality relations with parents during adolescence appear to be a pre-requisite for well-rounded, positive adjustment during both adolescence and young adulthood.

## Acknowledgments

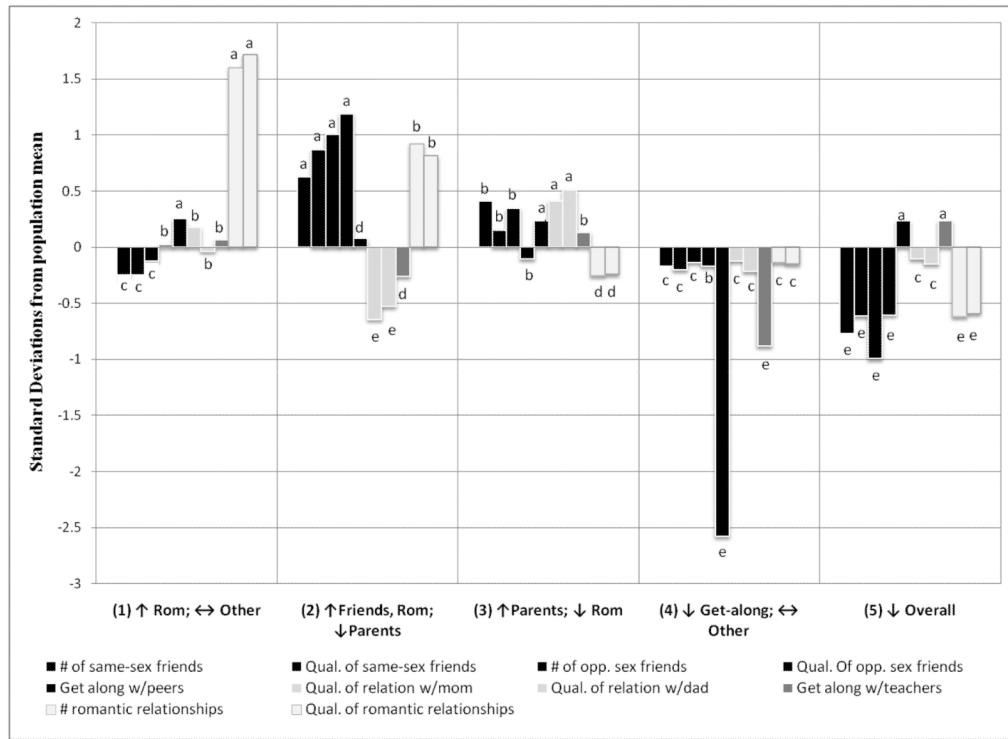
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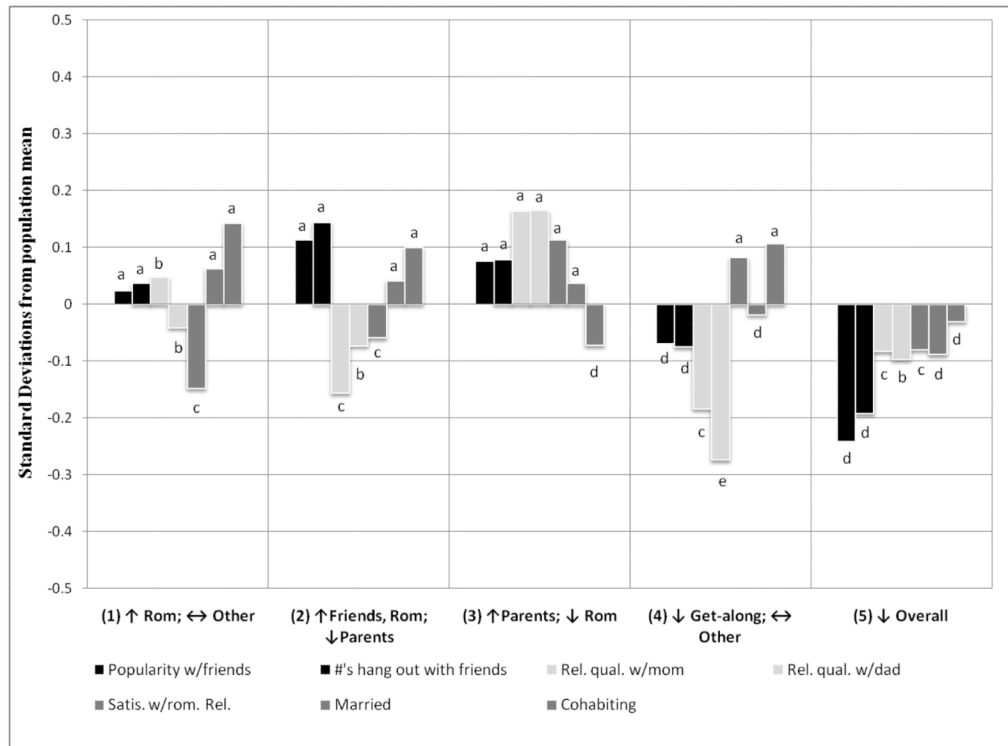
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**Figure 1.** Standard deviations of adolescent relationship indicators from overall sample means, by constellation sub-type



**Figure 2.** Standard deviations of young adult relationship indicators from overall sample means, by constellation sub-type

Table 1

## Wave 1 correlates of relationship constellation subtypes

<b>Demographics</b>	
Age (in years)	Self-report. Range: 13 to 19.
Pubertal timing	"How advanced is your physical development compared to boys/girls your age?" Ranges from 0 (younger than most) to 4 (older than most).
Parent education	Educational attainment of highest educated parent. Ranges from 0 (never went to school) to 9 (graduate degree)
% Black	Self-report. Black = 1, all others = 0.
% "Other"	Self-report. White or Black = 1, all others = 0.
% with stepparent in household	Based on household roster. Those in an intact, two parent household = 1. Those in an intact, two parent household = 0.
% female	Females = 1, males = 0.
<b>General Well-being</b>	
Self image	4 items (e.g., "You like yourself just the way you are"). Ranges from 0 (strongly disagree) to 4 (strongly agree). $\alpha = .80$ . (Regnerus & Elder, 2003)
Depressive affect	9 items (e.g., "During the past week you felt depressed"). Truncated version of CES-D (Radloff, 1977). Range: 0 (never/rarely) to 3 (most/all the time). $\alpha = .80$
General Health	"In general how is your health?" Range: 0 (poor) to 4 (excellent)
Grade Point Average	Average of most recent English, math, history, and science grades. Range: 1 ("D or lower") to 4 ("A").
<b>Problem Behaviors</b>	
Delinquent Behavior	15 items (e.g., "In the past 12 months, how often did you deliberately damage property that did not belong to you?"). Range: 0 (never) to 3 (5 or more times). $\alpha = .86$ . (Brumbach, B.H., Figueredo, A.J., & Ellis, B.J., 2009)
Binge drinking	"Over the past 12 months, how many days did you drink five or more drinks in a row?" Range: 0 (never) to 6 (every day or almost every day).
30-day marijuana use	"Over the past 30 days, how many times did you use marijuana?" Range: 0 (never) to 6 (40+ times)
Number of sexual partners	"With how many people have you had a sexual relationship?" Ranges from 0 (zero) to 4 (10+)

Table 2

## Wave 3 (Young adult) relationship indicators

Perceived Popularity	"How popular are you" Range: 0 (not at all popular) to 3 (very popular)
Freq. of contact w/friends	"In the past seven days, how many times did you just hang out with friends or talk on het phone for more than five minutes? Range: 0 (not at all) to 7 (7 or more times)
Relationship with mom	3 items (e.g., "You enjoy doing things with mom", "She is warm and loving towards you", and "You feel close to her". Range: 0 (strongly disagree) to 4 (strongly agree). $\alpha = .79$
Relationship with dad	3 items (e.g., "You enjoy doing things with dad", "He is warm and loving towards you", and "You feel close to him". Range: 0 (strongly disagree) to 4 (strongly agree). $\alpha = .82$
Satis. w/current rom. relationship	"In general, how satisfied are you with your relationship with romantic partner". Ranges from 0 (very dissatisfied) to 4 (very satisfied).
% Married	Self-report, Married = 1, non married = 0.
% Cohabiting	Self-report, Cohabiting = 1, not cohabiting = 0.



**Table 3**

Statistics for LPA decision criteria, by number of classes extracted

	# of latent profiles extracted					
	1	2	3	4	5	6
BIC	133,168	126,945	124,422	123,048	122,106	121,566
Avg. Post. Prob	NA	0.922	0.881	0.896	0.902	0.889
Entropy	NA	.740	.734	.807	.824	.814
<i>p</i> -value of LMR-LRT	NA	.000	.2110	.000	.0038	.1599

Note: Statistics for the optimal solution are shaded

Table 4

Demographic Wave 1 Correlates, by relationship constellation subtype

	Estimates by sub-type						
	Whole Sample	(1) ↑ Rom, ↔ Other	(2) ↑ Friends, Rom; ↓ Parents	(3) ↑ Parents; ↓ Rom	(4) ↓ Get-along; ↔ Other	(5) ↓ Overall	Notable Group Comparisons
Age	15.669 (1.774)	16.127 (1.665) <sup>b</sup>	15.934 (1.488) <sup>a</sup>	15.536 (1.814) <sup>c</sup>	15.631 (1.835) <sup>e</sup>	15.562 (1.865) <sup>e</sup>	1,2 > 3,4,5 <sup>f</sup> ; 1=2 <sup>g</sup> ; 3=4=5 <sup>h</sup>
Pubertal timing	2.184 (1.130)	2.334 (1.100) <sup>a</sup>	2.367 (1.088) <sup>a</sup>	2.210 (1.091) <sup>c</sup>	2.078 (1.214) <sup>d</sup>	2.018 (1.162) <sup>d</sup>	1,2 > 3 <sup>4</sup> ; 1 = 2 <sup>5</sup> ; 3 > 4,5 <sup>6</sup> ; 4 = 5 <sup>7</sup>
Parent Education	6.204 (2.294)	6.200 (2.324) <sup>c</sup>	6.699 (2.164) <sup>a</sup>	6.367 (2.161) <sup>b</sup>	5.681 (2.117) <sup>d</sup>	5.726 (2.466) <sup>d</sup>	2 > 3 <sup>8</sup> ; 3 > 1 <sup>9</sup> ; 1 > 4,5 <sup>10</sup> ; 4 = 5 <sup>11</sup>
Odds Black	.083 <sup>***</sup>	.056 <sup>***c</sup>	.067 <sup>***c</sup>	.074 <sup>***c</sup>	.109 <sup>***a</sup>	.104 <sup>***a</sup>	4,5 > 1,2,3 <sup>12</sup> ; 4=5 <sup>13</sup> ; 1=2=3 <sup>14</sup>
Odds Other	.225 <sup>***</sup>	.221 <sup>**c</sup>	.166 <sup>***c</sup>	.182 <sup>**c</sup>	.266 <sup>***a</sup>	.312 <sup>**a</sup>	4,5 > 1,2,3 <sup>15</sup> ; 4=5 <sup>16</sup> ; 1=2=3 <sup>17</sup>
Odds Step parent	.214 <sup>***</sup>	.305 <sup>***a</sup>	.310 <sup>***a</sup>	.146 <sup>***e</sup>	.327 <sup>***a</sup>	.193 <sup>***d</sup>	1=2=4 <sup>18</sup> ; 1,2,4 > 5 <sup>19</sup> ; 5 > 3 <sup>20</sup>
Odds female	.884 <sup>*</sup>	.989 <sup>b</sup>	1.519 <sup>**a</sup>	.884 <sup>*b</sup>	.669 <sup>**d</sup>	.784 <sup>**d</sup>	2 > 1,3 <sup>21</sup> ; 1=3 <sup>22</sup> ; 1,3 > 5,4,2 <sup>3</sup> ; 5=4 <sup>24</sup>

Note:

\* p < .05,

\*\* p < .01,

\*\*\* p < .001,

superscripted letters indicate rank order subtype differences in descending order (i.e., <sup>a</sup> = highest).

<sup>1</sup> Δχ<sup>2</sup>(1) = 25.27, p > .01

<sup>2</sup> Δχ<sup>2</sup>(1) = 2.24, p = .13

<sup>3</sup> Δχ<sup>2</sup>(2) = .08, p = .78

<sup>4</sup> Δχ<sup>2</sup>(1) = 6.97, p < .01

<sup>5</sup> Δχ<sup>2</sup>(1) = .15, p = .69

<sup>6</sup> Δχ<sup>2</sup>(1) = 62.20, p < .01

<sup>7</sup> Δχ<sup>2</sup>(1) = .52, p = .47

<sup>8</sup> Δχ<sup>2</sup>(1) = 247.91, p < .01

<sup>9</sup> Δχ<sup>2</sup>(1) = 4.67, p < .05

<sup>10</sup> Δχ<sup>2</sup>(1) = 397.46, p < .01

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- $I1_{\Delta\eta^2(1)} = .08, p = .78$   
 $I2_{2\Delta LL(1)} = 8.69, p < .01$   
 $I3_{2\Delta LL(1)} = .05, p = .83$   
 $I4_{2\Delta LL(2)} = .89, p = .64$   
 $I5_{2\Delta LL(1)} = 39.15, p < .01$   
 $I6_{2\Delta LL(1)} = 1.06, p = .30$   
 $I7_{2\Delta LL(2)} = 2.23, p = .33$   
 $I8_{2\Delta LL(2)} = .16, p = .92$   
 $I9_{2\Delta LL(1)} = 23.70, p < .01$   
 $20_{\Delta LL(1)} = 5.84, p < .05$   
 $21_{2\Delta LL(1)} = 48.48, p < .01$   
 $22_{\Delta LL(1)} = 1.02, p = .31$   
 $23_{2\Delta LL(1)} = 7.58, p < .01$   
 $24_{2\Delta LL(1)} = 1.89, p = .17$

**Table 5**  
Adolescent Adjustment, by relationship constellation sub-type, controlling for demographic characteristics

	Whole Sample	Estimates by sub-type					Notable Group Comparisons
		(1) ↑ Rom, ↔ Other	(2) ↑ Friends, Rom; ↓ Parents	(3) ↑ Parents; ↓ Rom	(4) ↓ Get-along; ↔ Other	(5) ↓ Overall	
<u>Well-Being</u>							
Self-image	3.073 (.623)	2.948 (.630) <sup>b</sup>	2.898 (.668) <sup>b</sup>	3.209 (.564) <sup>a</sup>	3.019 (.681) <sup>b</sup>	3.045 (.614) <sup>b</sup>	3>1,2,4,5 <sup>f</sup> ; 1=2=4=5 <sup>2</sup>
Depressive affect	0.748 (.454)	.882 (.507) <sup>a</sup>	.854 (.485) <sup>a</sup>	.597 (.367) <sup>e</sup>	.985 (.517) <sup>a</sup>	.736 (.453) <sup>d</sup>	1,2,4>5 <sup>3</sup> ; 1=2=4 <sup>f</sup> ; 5>3 <sup>5</sup>
General Health	2.807 (.896)	2.816 (.876) <sup>a</sup>	2.701 (.850) <sup>a</sup>	2.882 (.884) <sup>a</sup>	2.821 (.946) <sup>a</sup>	2.798 (.923) <sup>a</sup>	1=2=3=4=5 <sup>6</sup>
Grade Point Average	2.68 (.781)	2.695 (.740) <sup>b</sup>	2.610 (.814) <sup>b</sup>	2.804 (.721) <sup>a</sup>	2.309 (.775) <sup>e</sup>	2.679 (.803) <sup>b</sup>	3>1,2,5 <sup>7</sup> ; 1=2=5 <sup>8</sup> ; 1,2,5>4 <sup>9</sup>
<u>Problem Behaviors</u>							
Delinquent Behavior	0.305 (.322)	.294 (.284) <sup>c</sup>	.458 (.403) <sup>a</sup>	.249 (.269) <sup>c</sup>	.381 (.362) <sup>a</sup>	.273 (.286) <sup>c</sup>	2,4>1,3,5 <sup>10</sup> ; 2=4 <sup>f</sup> ; 1=3=5 <sup>12</sup>
Binge drinking	6.406 (1.344)	6.270 (1.482) <sup>a</sup>	6.213 (1.531) <sup>a</sup>	6.490 (1.175) <sup>c</sup>	6.287 (1.668) <sup>a</sup>	6.519 (1.194) <sup>c</sup>	1,2,4>3,5 <sup>13</sup> ; 1=2=4 <sup>f</sup> ; 3=5 <sup>15</sup>
Marijuana use	0.456 (1.056)	.579 (.963) <sup>b</sup>	.764 (1.466) <sup>a</sup>	.310 (.765) <sup>d</sup>	.574 (1.259) <sup>b</sup>	.360 (.945) <sup>d</sup>	2>1,4 <sup>16</sup> ; 1=4 <sup>17</sup> ; 1,4>3,5 <sup>18</sup> ; 3=5 <sup>19</sup>
Number of sexual partners	0.758 (1.001)	1.284 (1.347) <sup>a</sup>	.928 (1.166) <sup>a</sup>	.672 (.809) <sup>d</sup>	1.067 (1.317) <sup>a</sup>	.564 (.829) <sup>e</sup>	1,2,4>3 <sup>20</sup> ; 1=2=4 <sup>f</sup> ; 3>5 <sup>22</sup>

Note: Standard deviations in parentheses, superscripted letters indicate rank order subtype differences in descending order (i.e., <sup>a</sup> = highest).

All estimates include controls for age, pubertal timing, parent education, race, family structure, and gender.

- <sup>1</sup>  $\Delta\chi^2(1) = 14.36, p > .01$
- <sup>2</sup>  $\Delta\chi^2(3) = 4.52, p = .21$
- <sup>3</sup>  $\Delta\chi^2(1) = 5.16, p < .05$
- <sup>4</sup>  $\Delta\chi^2(1) = 1.57, p = .46$
- <sup>5</sup>  $\Delta\chi^2(1) = 8.81, p < .01$
- <sup>6</sup>  $\Delta\chi^2(4) = 4.13, p = .39$
- <sup>7</sup>  $\Delta\chi^2(1) = 8.41, p < .01$
- <sup>8</sup>  $\Delta\chi^2(2) = .48, p = .79$
- <sup>9</sup>  $\Delta\chi^2(1) = 14.25, p < .01$
- <sup>10</sup>  $\Delta\chi^2(1) = 16.77, p < .01$

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- 11  $\Delta\chi^2(1) = .86, p = .35$
- 12  $\Delta\chi^2(1) = 1.33, p = .52$
- 13  $\Delta\chi^2(1) = 8.11, p < .01$
- 14  $\Delta\chi^2(1) = .12, p = .94$
- 15  $\Delta\chi^2(1) = .04, p = .84$
- 16  $\Delta\chi^2(1) = 5.78, p < .01$
- 17  $\Delta\chi^2(1) = .01, p = .97$
- 18  $\Delta\chi^2(1) = 7.32, p < .01$
- 19  $\Delta\chi^2(2) = .22, p = .64$
- 20  $\Delta\chi^2(1) = 16.32, p < .01$
- 21  $\Delta\chi^2(3) = .90, p = .64$
- 22  $\Delta\chi^2(1) = 16.01, p < .01$