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The Life Course in the Making: Gender and the Development of Adolescents' Expected Timing of Adult Role Transitions

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Adolescents' expectations about the timing of adult role transitions have the potential to shape their actual transitions, setting the stage for their adult lives. Although expectations about timing emerge by early adolescence, little is known about how these expectations develop across adolescence. This longitudinal study examined developmental trajectories of adolescents' anticipated ages of school completion, job entry, marriage, and parenthood over the high school years, focusing on gender differences. Latent growth curve analysis of data from 411 rural youths followed from Grades 9 through 12 (age at Grade 9: $M = 14.35$, $SD = 0.77$) indicated a significant increase in adolescents' anticipated ages of entry into work and parenthood as well as gender differences in the trajectory of the expected age of marriage. Gender role attitudes, school performance, romantic relationships, and expected educational and occupational attainment were associated with the anticipated timing of role transitions, with significant variations by gender. Adolescents' expected ages of entry into adult family roles predicted their educational attainment and family role transitions in early adulthood. The findings provide insights into the process through which adolescent boys and girls construct their expectations regarding the transition to adulthood and, in turn, their future life course.

Keywords: expectations, expected timing, adolescence, adult transitions, gender

Adolescence is a period of preparation for adulthood during which young people make decisions that affect their future lives. One driving force in these decisions is young people's expectations regarding the future. To date, research has focused primarily on adolescents' expectations for education and occupation and has shown that such aspirations predict subsequent educational and occupational attainment (Beal & Crockett, 2010; Mello, 2008). However, expectations for the future entail more than educational and occupational aspirations: Adult life involves multiple intersecting and interdependent roles, with competing demands that must be negotiated (Elder & Shanahan, 2006). Accordingly, expectations about the timing of entry into these roles make up a second set of influential cognitions, distinct from expected role content, which could guide adolescents' choices and shape their adult lives. Furthermore, adolescents' expectations about the timing of adult role transitions may provide insight into processes contributing to gender differences in the life course.

Expected timing pertains to multiple roles and, thus, seems especially relevant for understanding how young people construct a coherent picture of their future lives (Elder, 1998). However, only a few studies have examined adolescents' expected timing of adult role transitions (Crockett & Bingham, 2000; Hogan, 1985; Nurmi, 1989), and no longitudinal investigations have focused on developmental change in the expected timing of these transitions. The present study extends the literature by estimating developmental trajectories of adolescents' expected ages of school completion, job entry, marriage, and parenthood from Grades 9 through 12, with attention to variations by gender. Furthermore, we examined the effects of psychological factors and role-related experiences in predicting these trajectories and investigated the relations between expected timing and actual role status in early adulthood.

Expected Timing of Adult Role Transitions

Adolescents' expectations regarding adult role transitions develop in a cultural and developmental context. On a societal level, linkages among social institutions create institutional pathways (or role sequences) and contingencies (e.g., the need to complete high school before attending college; Shanahan, 2000). Furthermore, expectations regarding the timing of adult role transitions are believed to follow culturally based timetables or *cultural prototypes* of the life course (Elder, 1998; Nurmi, 1992). Consistent with this premise, two studies have shown that adolescents' expected ages for making major life transitions are largely in line with national data on the ages for these transitions (Crockett & Bingham, 2000; Nurmi, Poole, & Kalakoski, 1996).

Moreover, adolescents' expectations for their own futures should develop with age, in response to situational constraints and

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barriers, culturally based opportunities, and personal experiences (Erikson, 1968; Gottfredson, 1981). Empirical data on adolescents' educational and occupational goals provide some evidence of age-related changes in these kinds of cognitions (e.g., Armstrong & Crombie, 2000; Mello, 2008). However, to our knowledge, no studies have examined the development of expectations regarding the timing of adult role transitions.

Values, Aspirations, and Experiences

Theoretical models of achievement-related choices posit that values, interests, and self-perceptions affect people's decisions about occupational and family roles (Eccles, 1994, 2009). By extension, adolescents' aspirations, values, and experiences are likely to influence their *expected timing* of adult role transitions. Higher educational aspirations should be associated with expectations for delayed role transitions because more years of education are needed for higher attainment. Furthermore, values regarding gender roles should be associated with expected timing because more egalitarian attitudes would support higher aspirations and delayed role transitions, particularly for women. Prior studies provide some evidence supporting these links, where ambitious educational goals and egalitarian gender role attitudes are associated with anticipating delayed timing of role transitions (Crockett & Bingham, 2000; S. N. Davis & Pearce, 2007). However, the effects of these factors on trajectories of expected timing are unknown.

Theoretical models also suggest that experiences during adolescence shape youths' expectations regarding future career paths and identity (Erikson, 1968; Gottfredson, 1981; Nurmi, 2004). Accordingly, course grades, which provide feedback regarding one's academic performance and abilities, should influence expectations regarding the timing of school and work transitions. Furthermore, involvement in romantic relationships might increase the desire to marry and have children early, with implications for the timing of other transitions as well.

Gender and the Development of Expected Timing

The life course differs for men and women, as reflected in gender differences in the timing of particular role transitions and resulting role configurations (Schoon, 2010). Women generally marry and have children at younger ages than men (Marini, 1985; Moen, 2001). Women are more likely than men to be married and have children by age 30 and more likely to live with children without being married (Oesterle, Hawkins, Hill, & Bailey, 2010). Such realities are reflected in girls' expectations to finish school, marry, and have children at younger ages than boys do (Crockett & Bingham, 2000; Malmberg, 1996; Schoon, Martin, & Ross, 2007).

It has also been suggested that women's work and family roles are more interdependent than men's because women retain primary responsibility for housework and child care even when they are in the work force (Ross, Schoon, Martin, & Sacker, 2009), and women often adjust their employment to accommodate family responsibilities. There is evidence that women and adolescent girls are aware of the competing demands of and potential tradeoffs between work and family roles (Konrad, 2003; Phillips & Imhoff, 1997; Stevens, Puchtell, Ryu, & Mortimer, 1992) and that adoles-

cent girls value occupational sacrifices for one's family more than boys do (Eccles, 2009). Trajectories for boys and girls might diverge over adolescence, as young people gain more detailed knowledge of adult roles and as girls weigh the competing demands of work and family roles. Furthermore, the impact of aspirations, gender role attitudes, and related experiences might be stronger for girls than boys owing to greater interdependence of women's work and family roles.

Gender, Expected Timing, and Subsequent Role Transitions

A final issue is whether adolescents' expected timing of transitions impacts their actual role transitions in early adulthood. The timing of role transitions has implications for achievement and adaptation in adulthood (Hogan & Astone, 1986; Schoon, 2010). For example, early entry into parenthood interferes with further education (Upchurch, 1993), and continued education is associated with delays in marriage and parenthood (Mortimer & Staff, 2004; Rindfuss, Swicegood, & Rosenfeld, 1987). Such contingencies may be stronger among women than men, because women's work and family roles are more interdependent.

Researchers have identified multiple factors that influence the actual timing of role transitions (Marini, 1985; Oesterle et al., 2010; Schoon et al., 2007), but there has been little attention paid to the impact of expected timing. The interdependence of adult roles may mean that an adolescent's expectations regarding work or family roles affect not only the timing of the corresponding role transition but the timing of other transitions as well. Furthermore, the strength of associations may differ by gender. A recent study of occupational expectations found that boys' (but not girls') expectations were predictive of their adult attainment (Mello, 2008). If expected timing predicts the actual timing of role transitions, it would provide further evidence of the importance of adolescents' cognitions in shaping the life course.

Present Study

This study provides an initial investigation of developmental trajectories of expected timing over the high school years, examining variations by gender and the role of gender attitudes, aspirations, and relevant experiences in shaping these trajectories. We also explored the influence of expected timing on the life course by examining the relations between expected timing in adolescence and actual role transitions in early adulthood. We hypothesized that anticipated ages would increase with grade level as adolescents learn about the contingencies among roles and the importance of extended education for many occupations. Additionally, we explored whether gender moderates the developmental trajectories of anticipated timing. We further predicted that educational and occupational expectations, egalitarian gender role attitudes, and adolescents' experiences would influence expected timing, especially for girls. Finally, anticipated timing was expected to predict subsequent role transitions in early adulthood.

Method

Sample

This study was based on data from the Rural Adolescent Development and Rural Young Adult Transitions studies, which were

collected from 1985 to 1995. The target population for the original 5-year study included all junior high students in a rural school district in the Eastern United States. All students in Grades 7, 8, and 9 at the outset were invited to participate, following a cohort-sequential design. Participants in these three cohorts were surveyed annually through 12th grade (from 1985 to 1990) and followed up in 1995 when they were young adults between the ages of 21 and 26 (age: $M = 23.27$, $SD = 1.01$). For the present study, the adolescents' data were restructured by grade, so that Time 1 corresponds to Grade 9 for all participants. Thus, the assessment timeline for the present analysis included Grades 9, 10, 11, and 12 plus the young adult follow-up. At the 12th-grade assessment, 64% of mothers had not completed high school, 14% of mothers had finished high school, and 22% of mothers had completed some education beyond high school; for fathers, 55% had not completed high school, 15% had finished high school, and 30% had completed some education beyond high school. To focus on expected timing during the high school years, we excluded any adolescents who reported an adult transition (e.g., school completion) by Grade 12 ($n = 75$).

To examine attrition effects, we compared those in the sample at Grade 9 with the 43 youths who had already dropped out of the study; the only difference was a higher proportion of boys in the attrition group, $F(1, 655) = 4.21$, $p = .04$. In early adulthood, 88% of those present in the 12th-grade assessment were still in the study. Compared with participants who attrited, those in the adult sample were younger and more likely to be female, and in Grade 12 they reported more egalitarian attitudes and better grades, expected higher levels of educational attainment, and anticipated earlier ages of marriage and parenthood (all $ps < .05$); however, these effects were small (all $\eta^2s \leq .05$). Maximum likelihood estimation with first-order derivatives was used to handle missing data from Grades 9 through 12.

Community Context

The sample was recruited from a school district serving a geographically contained rural area in the Mid-Atlantic region of the Eastern United States (Crockett & Bingham, 2000). The area comprised small boroughs and townships located approximately 3 hr (130 miles) from the nearest major city and 45 min (25 miles) from the nearest urbanized area. The primary town had a population of approximately 3,500 people in 1980. According to 1980 census data, the residents had middle-to-low incomes and were primarily White (96%). Approximately 25% of the area's adults had completed only grade school, 44% had completed high school, and 7% had completed college. Educational attainment was low compared with that for rural residents in the state as a whole, where approximately 84% of adults had completed high school and 10% had completed college (U.S. Bureau of the Census, 1983). Primary occupational categories were laborers and technical/clerical, and the median annual household income was \$14,500, substantially lower than the median U.S. household income of \$17,710 (U.S. Bureau of the Census, 1982). About 12% of families had incomes below the poverty level. Extracting industries (e.g., mining and lumbering) were the primary employers, although there were also small manufacturing plants, including a cigar factory and several garment and textile factories. During the course of this study, the area experienced severe economic dis-

stress, with employment loss in every sector, especially mining and manufacturing. Over 45 businesses closed, and by 1987 the unemployment rate was 19.6%. Although socioeconomic status (SES) varied, the community as a whole was considered economically disadvantaged.

Measures

In adolescence (Grades 9–12), participants completed a written survey each fall during regular school hours. The survey was administered by project staff, and school personnel were not involved in data collection. In early adulthood, data were collected through mailed surveys.

Gender and SES. Adolescents reported their gender (female = 0, male = 1), age in years, and mother's and father's level of education (a proxy for SES) coded from 1 (*grade school only*) to 7 (*beyond college*). Parents' educational attainment was included as a control because parent education and SES have been found to predict expected timing of adult transitions as well as actual timing (Crockett & Bingham, 2000; Hogan, 1985; Schoon, 2010).

Anticipated timing of role transitions. In Grades 9 through 12, adolescents reported when they expected to complete their schooling, get their first regular job, get married, and have their first child. For these questions, the stem was "Some people have an idea about when they expect to do certain things. At about what age do you expect to, or did you, if it's already occurred . . ." The stem was followed by a list of adult role transitions including "finish your full-time education"; "have your first regular full-time job"; "get married"; and "have your first child." Questions about anticipated timing of transitions were included beginning in the second wave of data collection. As a result, the first cohort is not represented in Grade 9 for these variables. Outliers reflecting improbable expectations (e.g., first child at age 40) were excluded as were participants who reported they had already experienced a transition (previously described).

Predictors of anticipated timing of transitions (Grade 9). Gender role attitudes were assessed with the 12-item Attitudes Toward Women Scale for Adolescents ($\alpha = .79$; Galambos, Petersen, Richards, & Gitelson, 1985). Items included "It is all right for a girl to ask a boy out on a date," with a response range from 1 (*strongly agree*) to 4 (*strongly disagree*). Items were averaged such that higher scores indicated more egalitarian attitudes. Adolescents' expected educational attainment was measured using the question "How far do you plan to go in school?" Responses could range from 1 (*some high school*) to 6 (*completing a professional degree*). For occupational expectations, adolescents were asked, "Do you plan to work when you are older/finished school?" This question was followed by an open-ended question: "What work do you think you will probably do?" Responses were coded using occupational prestige scores provided by the National Opinion Research Center (J. A. Davis, Smith, & Marsden, 2007; Nakao & Treas, 1994). These scores are based on U.S. respondents' estimation of the social standing of diverse occupations. Originally designed to be used with 1960 U.S. Census occupational codes, they were adapted for use with the 1970 codes and further updated and extended in 1989 (J. A. Davis et al., 2007). Scores could range from 10 (*low prestige*) to 100 (*high prestige*). Academic grades were based on a single question, "What are your marks in school?"

Possible responses ranged from 1 (*mostly Fs*) to 10 (*mostly As*). Finally, romantic relationship experience was based on a question about whether the adolescent currently had a steady boyfriend or girlfriend.

Young adult role transitions. In early adulthood, participants were asked about their transitions in four domains: education, work, marriage, and parenting. To assess educational attainment, participants were asked, "How much education have you completed?" Responses could range from 1 (*some high school*) to 6 (*completed a professional degree*). Participants were also asked whether they were currently enrolled in an educational program, coded as 0 (*no*) or 1 (*yes*). To assess the transition into work, participants were asked the open-ended question, "How old were you when you got your first job after you left high school?" Participants also responded to the question, "What is your current work situation?" This question was coded as 0 (*not working*) or 1 (*working part time or full time*). Timing of marriage was assessed with two questions: "Are you currently or have you ever been married?" with responses coded as 0 (*no*) or 1 (*yes*), and "How old were you when you first got married?" (open-ended). Finally, the transition to parenthood was assessed using two questions: "Do you have any biological children?" with responses coded as 0 (*no*) or 1 (*yes*), and the open-ended question "How old were you at the birth of your first child?" Unlikely ages (e.g., first becoming a parent at age 40) were excluded.

Analytic Plan

Three sets of analyses were conducted. First, to explore how adolescents' anticipated timing of adult transitions changed across high school, we estimated unconditional latent growth curve trajectories of the anticipated timing of school completion, entry into the workforce, and entry into marriage and parenting across Grades 9 through 12. Then, gender was tested as a moderator of each trajectory. Second, adolescents' gender role attitudes, expected educational and occupational attainment, grades, and romantic relationship experiences in Grade 9 were included in separate models as predictors of each anticipated timing trajectory. We also tested for interactions between gender and each predictor. Third, we estimated logistic and linear regression models to predict entry into adult roles and the age of role transitions in early adulthood from anticipated timing of transitions in Grade 12.

The growth curve models took both planned and unintended missing data from Grades 9 through 12 into account. Planned missingness occurred because some of the focal measures in our analysis were added to the study after certain cohorts had completed Grade 9. Thus, we had data from one cohort in Grade 9 ($N = 161$), two cohorts in Grade 10 ($N = 295$), and all three cohorts in Grades 11 and 12 ($N = 411$). Given that cohorts were missing by design, it was safe to assume unbiased missingness and to use data from all three cohorts. However, to be sure, we tested for cohort differences in study variables at Grade 12 and included cohort as a control variable in analyses. The only significant cohort difference was in age: At Grade 12, youths in the second cohort were slightly older than youths in the first cohort (M difference = .13, $SE = .06$, least significant difference $p = .02$). There were also unintentional missing data, as is typical in longitudinal research. This was not simple attrition, because youths might miss

one assessment (e.g., Grade 10) but be back the following year (Grade 11). There were 87.5% of eligible students present in Grade 9, 77% in Grade 10, and 70.6% in Grades 11 and 12. In the growth curve analyses, maximum likelihood estimation with standard errors approximated by first-order derivatives was used to minimize bias associated with the missing data. This approach uses all available data at each time point and does not assume data are missing completely at random (Muthén & Muthén, 2007). Using all available data results in less bias compared with listwise deletion (Hofer & Hoffman, 2007).

Results

Preliminary Analyses

Univariate and bivariate statistics for adolescent predictors and expected ages of transitions at 12th grade are provided in Table 1. The average level of expected educational attainment ($M = 4.12$) indicated plans to attend junior college. Similarly, the average prestige score for expected type of work was approximately 54, which is on the cusp between lower level and technical jobs and professional jobs. Regarding anticipated timing of transitions, on average adolescents expected to finish their education and enter the work force at age 21, get married at age 23, and have children at age 25. Higher educational and occupational expectations as well as higher levels of maternal and paternal education were associated with later anticipated timing for completing school, entering the workforce, getting married, and parenting. Analyses of variance revealed that in Grade 12, boys expected to marry and become parents later than girls did. For marriage, the mean expected age for boys was 24.35 ($SD = 3.12$), and for girls the mean expected age was 22.97 ($SD = 2.91$); $F(1, 376) = 17.93, p < .01$. For parenthood, the mean expected age for boys was 25.39 ($SD = 3.13$), and the mean expected age for girls was 24.67 ($SD = 2.99$); $F(1, 326) = 4.25, p = .04$. Compared with boys, girls also had better grades, were more likely to have a current steady relationship, and reported more egalitarian gender role attitudes ($ps < .01$) and higher educational expectations ($p < .05$).

Statistics for actual transitions in young adulthood are provided in Table 2. The correlations indicate that adolescents' anticipated ages of all four transitions were positively associated with how far they went in school and whether they were enrolled at the time of the follow-up. Additionally, anticipated ages of school completion, marriage, and parenthood were negatively associated with having made the transition to marriage and parenthood and positively associated with the actual ages of marriage among those who had entered these roles. Thus, adolescents who expected to marry and become parents at older ages were less likely to have married and to have become parents by the follow-up and, if they had entered these roles, were likely to have done so at older ages. For each domain (e.g., school completion), we also tested the stability of expectations over time (not shown). Within each domain, expected ages were significantly correlated between adjacent grades, indicating moderate stability. The year-to-year cross-time correlations ranged from .45 to .58 for school completion, from .47 to .54 for work, from .53 to .63 for marriage, and from .40 to .59 for parenting (all $ps < .01$).

Table 1
Univariate and Bivariate Statistics for Predictors of Anticipated Timing of Transitions (Grade 12)

Grade 12 variable	Gender	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	.02	—											
2. Mother's education	-.01	-.05	—										
3. Father's education	-.58**	-.01	.42**	—									
4. Attitudes toward women	-.13	-.14**	.06	.11*	—								
5. Educational expectations	.03	-.21**	.19**	.26**	.27**	—							
6. Occupational expectations	-.22**	-.08	.04	.10*	.00	.33**	—						
7. Grades in school	-.19**	-.17**	.09	.11*	.27**	.47**	.14**	—					
8. Dating status	.02	-.01	-.05	-.08	.09	-.06	.00	.11*	—				
9. Expected age: School	.07	-.01	.19**	.26**	.12*	.55**	.22**	.31**	-.05	—			
10. Expected age: Work	.22**	-.06	.11*	.24**	.11*	.61**	.31**	.30**	-.07	.64**	—		
11. Expected age: Marriage	.11*	.00	.15**	.20**	.02	.20**	.12*	.03	-.16**	.36**	.37**	—	
12. Expected age: Parenthood	.02	-.05	.18**	.18**	.15**	.24**	.14**	.16**	-.06	.36**	.41**	.86**	—
<i>M</i>		17.14	2.62	2.98	3.20	4.12	53.49	7.80	0.53	21.04	21.07	23.63	25.00
<i>SD</i>		0.50	1.39	1.73	0.47	1.25	15.07	1.74	0.50	2.52	2.50	3.05	3.05
<i>N</i>	455	411	407	405	406	411	376	410	411	398	402	378	368

* $p < .05$. ** $p < .01$.

Developmental Change in Anticipated Timing of Role Transitions

The first set of analyses examined developmental changes in the expected timing of adult role transitions from Grades 9 through 12. Using Mplus 5.0, growth curve models were estimated separately for each of the four role transitions. For all models, we estimated a latent intercept and slope. Model fit was assessed using significance values for chi-square significance tests and cutoff values of .95 and above for comparative fit index (CFI) and .06 or below for root-mean-square error of approximation (RMSEA; Hu & Bentler, 1995). The unconditional models for all four transitions fit well, $\chi^2(5) = 2.88$ to 9.27 , $ps > .10$, CFIs $> .97$, RMSEA $< .05$, standardized root-mean-square residual (SRMR) $< .07$. The growth curves for the four transitions are depicted in Figure 1.

As shown in Figure 1, expected age of school completion did not change significantly from Grades 9 through 12 (slope: $B_S = .13$, $p > .05$). On average, adolescents expected to complete their full-time education between ages 20 and 21 (intercept: $B_I = 20.49$, $p < .01$). The expected age of job entry increased significantly with grade level ($B_S = .20$, $p < .01$). At Grade 9, adolescents expected to get their first full-time job between ages 20 and 21 on average ($B_I = 20.36$, $p < .01$). The curve for expected age of marriage was relatively flat, staying around age 23 ($B_I = 23.28$, $p < .01$; $B_S = .09$, $p > .05$). However, the expected age of parenthood increased significantly, from slightly below age 24 in Grade 9 to slightly below age 25 by Grade 12 ($B_I = 23.93$, $p < .01$; $B_S = .32$, $p < .01$). Because significant amounts of variance remained in all four models, we proceeded to test the effects of gender on the trajectories.

Differences by gender. To examine gender differences in the trajectories, we estimated conditional growth curve models, including gender as a predictor of the latent intercept and slope, and controlling the effects of cohort and parent education in Grade 9. Parents' education was centered to represent someone who had completed some high school. The models estimated for the anticipated age of school completion and job entry yielded similar results. Each model fit the data well, $\chi^2(13) = 7.56$, $p = .87$, CFI = .99, RMSEA = .01, SRMR = .02, for school; $\chi^2(13) = 17.36$, $p = .18$, CFI = .98, RMSEA = .04, SRMR = .07, for job entry. There were no significant gender differences in trajectories for either expected age of school completion or job entry. Only father's education significantly predicted the latent intercepts ($B = .41$, $p < .01$, for school; $B = .45$, $p < .01$, for job), such that higher levels of father's education predicted a delay in anticipated school completion and job entry.

The model for the anticipated age of marriage also fit well, $\chi^2(13) = 12.19$, $p = .51$, CFI = .99, RMSEA = .01, SRMR = .09. There was a negative slope ($B_S = -.15$, $p > .05$), with a significant effect of gender on the slope ($B = .42$, $p < .01$). This pattern reflects an increase in anticipated age of marriage for boys, with a nonsignificant decrease for girls (see Figure 1). Finally, the model for the anticipated age of parenthood had good fit, $\chi^2(13) = 12.17$, $p = .51$, CFI = .99, RMSEA = .01, SRMR = .07. Maternal and paternal educational attainment predicted the latent intercept ($B = -.41$, $p < .05$, for mothers' education; $B = .55$, $p < .05$, for fathers' education), but no other effects on the intercept or slope were significant.

Table 2

Univariate and Bivariate Statistics for Anticipated Timing (Grade 12) and Actual Transitions (Early Adulthood)

Grade 12 variable	Educational attainment	Still in school	Age started work	Currently working	Age married	Ever married	Age parent	Ever had a child
Gender ^a	.04	.13*	-.04	.15*	.10	-.22**	.14	-.19**
Mother's education	-.22**	.00	.16*	-.02	.10	-.03	.04	.05
Father's education	.24**	.13*	.01	.07	.11	-.08	.10	-.16**
Age (young adult)	-.19**	-.25**	.06	-.01	.18*	.07	.31**	.10
Expected age: School	.34**	.13*	.01	.02	.24*	-.18**	.18	-.24**
Expected age: Work	.40**	.13*	.05	.04	.23*	-.18**	.18	-.21**
Expected age: Marriage	.52**	.24**	.06	.11	.24*	-.20**	.14	-.21**
Expected age: Parenthood	.30**	.20**	.00	.08	.34**	-.30**	.10	-.35**
<i>M</i>	4.28		18.19		20.81		20.30	
<i>SD</i>	1.55		1.10		1.89		1.99	
<i>N</i>	362	363	346	362	129	364	97	356
% transitioned	—	77	—	77	—	64	—	26

^a Female = 0, male = 1.* $p < .05$. ** $p < .01$.

Predictors of Individual Differences in Anticipated Timing

To identify sources of individual differences in the trajectories of anticipated timing, we added the hypothesized predictors as covariates in the latent growth curve models. Predictors included gender role attitudes, expected educational and occupational attainment, academic grades, and romantic relationships. Each predictor was tested in a separate model, along with its interaction with gender. All models also included gender, cohort, and parents' educational attainment as controls. We initially tested the impact of each predictor on the latent intercept and slope of each expected timing trajectory. However, none of the individual predictors significantly impacted slope; thus, for parsimony, we reduced the models by dropping the terms predicting slope. Accordingly, each predictor and its interaction with gender were used to predict the latent intercept of the trajectory but not the latent slope, and control variables were used to predict both latent intercept and slope. All of the models had good fit. Results are summarized in Table 3.

For expected age of school completion, gender role attitudes, occupational and educational expectations, and grades were positively associated with the latent intercept. Thus, adolescents who

reported more egalitarian gender attitudes, higher expected attainment, and better grades anticipated later ages of school completion across the four times of measurement. Mother's education was significant in several models, indicating that youths with more highly educated mothers anticipated later timing of school completion. There were no significant interactions with gender. For the expected age of job entry, gender role attitudes, educational expectations, and grades were positively associated with the latent intercept, whereas having a romantic relationship was negatively related. Thus, adolescents with more egalitarian gender values, higher educational expectations, and better grades anticipated later ages of job entry, but those with a current romantic relationship anticipated an earlier transition to work. Moreover, the interaction between gender role attitudes and gender was significant and negative, indicating that the relation between egalitarian values and anticipated age of job entry was stronger for girls than for boys. Gender was also significant, with boys expecting a later timing of job entry than girls.

For anticipated age of marriage, gender role attitudes, expected educational attainment, and grades were significant predictors of the latent intercept, indicating that youths with more egalitarian values, higher educational expectations, and better grades anticipated later ages of marriage. In addition, there was a significant interaction between grades and gender. As shown in Figure 2, the association between grades and anticipated timing was stronger for girls than for boys. Gender was also significant in this model, indicating that boys anticipated a later age of marriage. Cohort was significant in several of the models, with youths in older cohorts anticipating later marriage than those in younger cohorts. Finally, regarding the anticipated age of becoming a parent, egalitarian gender role values, higher educational expectations, and better grades predicted later anticipated ages of parenthood. There were also significant interactions between gender and expected occupational attainment, expected educational attainment, and grades, respectively. The interactions between gender and both educational and occupational expectations are shown in Figure 3; for the interaction between grades and gender, see Figure 2. In each case, the association was stronger or more positive for girls than for boys.

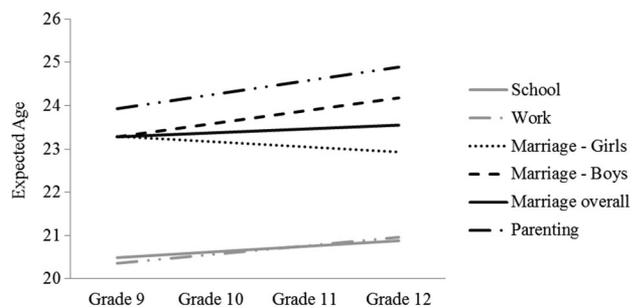


Figure 1. Change in the anticipated ages of adult role transitions from Grades 9 to 12. (For school, work, marriage overall, and parenting, lines are based on the unconditional growth curve models. The separate lines for boys and girls for marriage are based on a conditional model that included gender as a covariate.)

Table 3
Latent Growth Curve Models Predicting Developmental Trajectories of Expected Timing of Four Adult Role Transitions

Model statistics and predictors	Expected age of school completion					Expected age of work				
	1	2	3	4	5	1	2	3	4	5
Model fit										
χ^2	7.54	18.70	18.06	8.93	10.87	18.54	23.47	36.05**	17.43	23.18
<i>df</i>	19	19	19	19	19	19	19	19	19	19
CFI	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.95	0.99	0.99
RMSEA	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.04	0.01	0.02
SRMR	0.02	0.04	0.03	0.02	0.06	0.18	0.18	0.23	0.20	0.17
Intercept										
Cohort	11.21**	17.48**	16.61**	14.23**	18.61**	9.71**	18.00**	16.39**	14.59**	19.15**
Mother's education	-1.73**	-1.52	-0.54	-0.72	0.25	0.35	0.07	1.13**	0.99**	0.08
Father's education	0.46*	0.47*	0.26	0.36	0.54**	0.30	0.28	0.14	0.15	0.30
Gender	0.24	0.19	0.13	0.13	0.22	0.24	0.25	0.14	0.16	0.26
Attitudes toward women	3.96	0.87	-0.49	2.25	-0.40	10.51**	0.15	-0.14	1.14	-0.41
Attitudes × Gender	2.49**	—	—	—	—	2.70**	—	—	—	—
Occupation expectations	-1.04	—	—	—	—	-3.25*	—	—	—	—
Occupation × Gender	—	0.03*	—	—	—	—	0.02	—	—	—
Education expectations	—	-0.02	—	—	—	—	-0.01	—	—	—
Education × Gender	—	—	0.78**	—	—	—	—	0.86**	—	—
Grades	—	—	—	0.66**	—	—	—	—	—	0.65**
Grades × Gender	—	—	—	-0.30	—	—	—	—	-0.15	—
Romantic relationships	—	—	—	—	-0.04	—	—	—	—	-0.55*
Relationships × Gender	—	—	—	—	0.13	—	—	—	—	0.47
Slope										
Cohort	0.02	0.01	-0.12	-0.16	-0.03	0.21	-0.05	-0.07	-0.11	-0.04
Mother's education	0.98	0.78	0.96	0.79	0.06	0.04	0.04	0.06	0.06	0.04
Father's education	-0.08	-0.10	-0.05	-0.04	-0.07	-0.03	-0.02	-0.02	-0.01	-0.02
Gender	0.06	0.09	0.06	0.08	0.07	0.05	0.05	0.05	0.05	0.05
Gender	0.19	0.06	0.05	0.09	0.08	0.21	0.20	0.20	0.20	0.18

Model statistics and predictors	Expected age of marriage					Expected age of parenthood				
	1	2	3	4	5	1	2	3	4	5
Model fit										
χ^2	20.31	28.39	36.16**	31.43*	21.62	29.23	19.59	27.37	29.09	19.60
<i>df</i>	19	19	19	19	19	19	19	19	19	19
CFI	0.99	0.97	0.95	0.97	0.99	0.96	0.99	0.97	0.96	0.99
RMSEA	0.01	0.03	0.04	0.03	0.02	0.03	0.01	0.03	0.03	0.01
SRMR	0.20	0.22	0.20	0.19	0.21	0.07	0.08	0.7	0.08	0.08
Intercept										
Cohort	14.67**	21.57**	20.58**	17.76**	22.74**	14.40**	21.91**	20.54**	17.61**	23.67**
Mother's education	1.07**	0.56	1.09**	1.09**	0.59	0.33	-0.04	0.68	0.57	-0.01
Father's education	0.20	0.15	0.09	0.06	0.13	0.13	0.11	-0.01	-0.08	0.03
Gender	-0.01	0.04	-0.02	0.02	0.06	0.05	0.10	0.04	0.10	0.14
Attitudes toward women	2.58	1.04	1.47	6.19**	-0.15	1.60	2.79	2.80*	7.37**	-0.38
Attitudes × Gender	2.28*	—	—	—	—	2.62*	—	—	—	—
Occupation expectations	-0.25	—	—	—	—	0.21	—	—	—	—
Occupation × Gender	—	0.02	—	—	—	—	0.03	—	—	—
Education expectations	—	-0.02	—	—	—	—	-0.05*	—	—	—
Education × Gender	—	—	0.61**	—	—	—	—	0.88**	—	—
Grades	—	—	-0.40	—	—	—	—	-0.77*	—	—
Grades × Gender	—	—	—	0.66**	—	—	—	—	0.81**	—
Romantic relationships	—	—	—	-0.08**	—	—	—	—	-0.97**	—
Relationships × Gender	—	—	—	—	-0.68	—	—	—	—	-0.66
Slope										
Cohort	-0.32	-0.33	-0.34	-0.37	-0.33	0.03	-0.01	-0.03	-0.05	0.01
Mother's education	-0.11	-0.10	-0.09	-0.08	-0.10	0.08	0.09	0.10	0.11	0.09
Father's education	-0.01	0.01	0.01	0.02	0.01	0.03	0.04	0.05	0.06	0.04
Gender	0.07	0.07	0.07	0.07	0.07	0.02	0.02	0.02	0.01	0.02
Gender	0.42**	0.42**	0.43**	0.43**	0.40**	0.22	0.23	0.24	0.25	0.21

Note. All weights are unstandardized coefficients. CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.

* $p < .05$. ** $p < .01$.

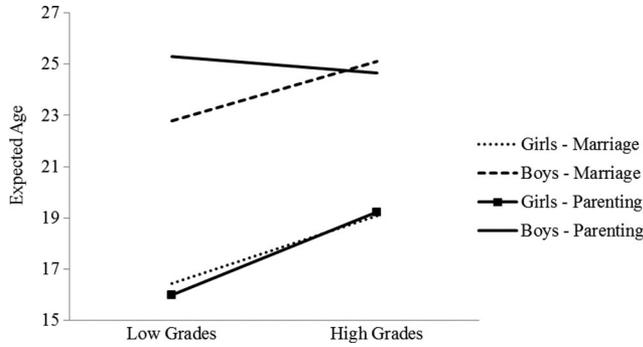


Figure 2. Effect of grades on the anticipated age of marriage and parenthood for girls and boys. Low grades = 1 SD below the mean; high grades = 1 SD above the mean.

Associations Between Expected Timing and Actual Timing

To examine the relations between expected timing and actual adult transitions, we conducted multiple regressions. To assess the relative importance of career versus family orientation in guiding the timing of adult transitions, we included expected timing of roles in both domains in each model (i.e., we included anticipated age of parenthood in the model predicting educational attainment and included anticipated age of job entry in the models predicting marriage and parenting transitions). Gender, parents' education, and participant's age at follow-up were included as controls in all models (participant's age was included to adjust for the age differences among cohorts). We also included the interaction between gender and each expected timing variable to determine whether the relation between expected timing and actual events differed for boys and girls. Linear regression models were estimated to predict educational attainment and ages of work, marriage, and parenthood, whereas logistic regression was used to predict current school enrollment, employment status, ever being married, and having children. Results are summarized in Table 4.

The linear regression model predicting educational attainment was significant, and father's education, age, expected age of school completion, and expected age of parenthood were significant predictors (see Table 4). Higher paternal educational attainment, younger age, and later anticipated timing of school completion and parenthood predicted higher educational attainment. In the logistic regression model predicting current enrollment in school, the model was significant, but no predictors significantly contributed to the model. The models predicting age of transition into work and currently working were nonsignificant (not shown).

In the linear regression model predicting age of first marriage, the model was significant. The main effects of gender and the expected age of marriage were significant: Men and youths who had anticipated a later age of marriage tended to marry later (Table 4). The interaction between gender and expected age was also significant. Follow-up analyses indicate that the slope for girls was significant ($\beta = .47, p < .01$), whereas the slope for boys was not ($\beta = -.18, p = .31$). Thus, for girls only, there was a positive linear relationship between anticipated age of marriage and actual age of marriage. In the logistic regression model predicting having ever been married, expected timing in Grade 12 was significant,

where expecting to marry at a later age in Grade 12 was associated with lower odds of being married at the time of follow-up.

Finally, in the linear regression model predicting age of transition into parenting, the overall model was not significant, and none of the predictors significantly contributed to the model. However, in the logistic regression model predicting whether participants would have children by the young adult follow-up, the overall model and anticipated timing of entry into parenting were significant, where expecting to transition into parenting at an earlier age was associated with an increased likelihood of having children in the young adult follow-up (see Table 4).

Discussion

This study provides an initial investigation of developmental change in adolescents' anticipated timing of adult role transitions over the high school years, with particular attention to gender differences in developmental trajectories and in the processes shaping them. The results indicate that the anticipated ages of three of the four role transitions increased over the high school years for one or both genders. Furthermore, individual-level predictors (gender role attitudes, educational and occupational expectations, and role-relevant experiences) predicted the intercept of each trajectory. Finally, the anticipated timing of role transitions predicted multiple outcomes in early adulthood, including educational attainment, age at first marriage, getting married, and becoming a parent. In most cases, the trajectories of expected timing were similar for boys and girls; however, there were gender differences in the impact of several individual factors on the trajectories and in the relation between expected age and actual age of marriage. In each case, the association was stronger for girls than for boys.

Developmental Trajectories of Anticipated Timing

The anticipated ages of three role transitions showed significant increases over time for at least one gender. As boys and girls progressed through high school, they anticipated progressively older ages of finishing their full-time education and becoming a parent. Among boys, the projected age of marriage followed a similar upward trajectory. One explanation for the progressive postponement of school completion is a growing recognition of the amount of education required to obtain good jobs, a recognition

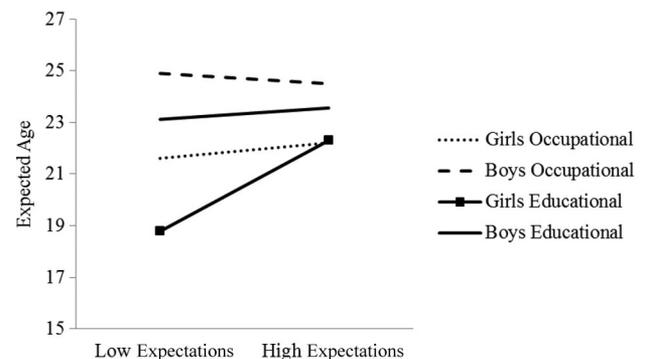


Figure 3. Effects of occupational and educational expectations on the anticipated age of parenthood for girls and boys. Low expectations = 1 SD below the mean; high expectations = 1 SD above the mean.

Table 4
Regressions Predicting Actual Transitions From Adolescent Anticipated Timing in Grade 12

Grade 12 variables	Educational attainment (β)	Current enrollment (OR)	Marriage age (β)	Ever married (OR)	Parenting age (β)	Ever parent (OR)
Father's education	.34**	1.08	.03	0.82	.41*	0.90
Mother's education	.03	1.06	-.01	1.08	-.04	0.92
Age	-.14*	1.25	.01	0.90	.05	1.09
Gender	.02	0.19	.61*	1.45	.09	4.67
Expected age: School	.16*	1.18	—	—	—	—
Gender × School	.01	0.86	—	—	—	—
Expected age: Work	—	—	.21	0.94	.14	0.89
Gender × Work	—	—	-.20	0.98	-.08	1.12
Expected age: Marriage	—	—	.48**	0.84*	—	—
Gender × Marriage	—	—	-.69**	0.96	—	—
Expected age: Parenthood	.12*	0.99	—	—	-.17	0.72**
Gender × Parenthood	-.03	0.01	—	—	.01	1.12
R ²	.22**	.07*	.19*	.12**	.17	.15**
F/χ ²	7.70	16.59	2.55	29.18	1.04	29.18

Note. For educational attainment, *N* = 248; for age of marriage, *N* = 102; for ever having been married, *N* = 275; for ever having a child, *N* = 259. OR = odds ratio.

* *p* ≤ .05. ** *p* ≤ .01.

that may have been especially salient given the downturn in the local economy during the study period. Further, the extension of schooling may lead to the postponement of parenthood, because full-time schooling is typically incompatible with the demands of parenthood (Upchurch, 1993).

Furthermore, the expected ages of role transitions (Figure 1) largely reproduce the typical sequence of role transitions in the United States, where school completion occurs first, followed closely by job entry, and then by marriage and parenthood. The average expected age of school completion (ages 20 to 21) corresponded well to the expected level of educational attainment, which fell between obtaining technical training and attending some college (see Table 1). Moreover, the youths in our study expected to finish school and start work at about the same age, suggesting that they expected to move directly from school to work. Perhaps most interesting, boys in our study began with somewhat younger anticipated ages of marriage than girls did but ended up with slightly older anticipated ages, with the crossover occurring at Grade 11. The increase in boys' anticipated age of marriage created a gender divergence that echoes national data on the age of marriage, where women marry at younger ages than men (Marini, 1985; Moen, 2001). Taken together, the results suggest that adolescents' expectations tend to mirror the normative sequence well before role entry occurs, and the correspondence increases with age. This is consistent with theoretical notions that normative timelines from the broader society are internalized by youths and shape their expectations for their own lives (Elder, 1998; Nurmi, 1991).

Predictors of Anticipated Timing

The present study also provides novel information about the linkages between anticipated timing of role transitions and individual differences in gender role attitudes, educational and occupational expectations, and personal experiences. As hypothesized, adolescents with higher educational expectations and better grades in school reported later anticipated ages of all four role transitions,

even with parental education controlled. This makes sense in a sociohistorical context in which education is increasingly important for high-status careers and where full-time education tends to precede the transition to adult work and family roles in the normative sequence (Greene, 1990; Schoon, 2010). Furthermore, youths with higher occupational expectations tended to anticipate later ages of school completion, consistent with the notion that one's desired occupation helps drive educational plans (Gottfredson, 1981). Finally, adolescents with more egalitarian gender role attitudes tended to anticipate later role transitions in all four domains, extending recent findings of an association between egalitarian views of work and family roles and adolescents' plans for continued education (S. N. Davis & Pearce, 2007). Taken together, the findings suggest that egalitarian gender role values are associated with plans for extended education, leading adolescents to envision a later entry into adult roles. In contrast, having a steady dating relationship predicted only the anticipated age of job entry, with youths in steady relationships expecting to enter the labor market at younger ages.

The finding that adolescents' grades and expected attainment predict the expected timing of role transitions suggests a possible link in the processes leading to adult role transitions and related outcomes. Studies have shown that higher educational and occupational plans and better grades predict higher levels of educational and occupational attainment (Beal & Crockett, 2010; Mello, 2008; Messersmith & Schulenberg, 2008) and that extended education is associated with delays in marriage and parenthood (Mortimer & Staff, 2004; Osgood, Ruth, Eccles, Jacobs, & Barber, 2005; Rindfuss et al., 1987). The present results raise the possibility that academic performance and expected attainment operate through anticipated timing to affect adult role transitions.

It is interesting that we were much more successful in predicting intercepts than slopes of trajectories for the anticipated timing variables. One possibility is that the effects of such variables are already in place by Grade 9 and do not have significant additional impact over the high school years. If so,

studies with younger children would be needed to capture the effects. It is also possible that other individual variables would have predicted individual differences in slope. Finally, perhaps adolescents changed their expected ages in diverse ways that did not form a consistent pattern. In future studies, it would be useful to determine whether such variability could be captured by identifying subgroups of youths with distinct developmental trajectories.

Anticipated Timing and Adult Role Transitions

The present results also document an association between adolescents' anticipated ages of role transitions and their actual role transitions in early adulthood. The expected age of marriage predicted both being married and the actual age of marriage at the young adult follow-up, and the expected age of parenthood predicted having children by the follow-up. These results are consistent with an earlier study documenting an association between expected timing and subsequent behaviors, particularly in the family domain (Hogan, 1985). We also considered crossover effects, in which expected ages in one domain (e.g., work) predicted outcomes in a different domain (e.g., parenthood), and we found one instance of this. The expected age of parenthood predicted subsequent educational attainment, congruent with previous research showing that early entry into parenthood is associated with lower educational attainment (Osgood et al., 2005; Upchurch, 1993). However, for the most part, anticipated timing was predictive of role transitions within the same domain. Taken together, the results suggest that adolescents' expectations about the timing of adult transitions influence their transitions to adult roles, complementing the literature on aspirations and adult outcomes (Mello, 2008).

Gender Differences

One goal of this study was to identify gender differences that might shed light on the precursors of differences in men's and women's lives. Gender differences were found in each set of results. At a descriptive level, boys tended to report older expected ages of marriage than girls, consistent with previous findings showing that girls, on average, expect to find a partner and marry at younger ages than boys (Crockett & Bingham, 2000; Malmberg, 1996) and that women tend to marry and become parents earlier than men (Schoon, 2010). Furthermore, the trajectory of anticipated age of marriage differed for boys and girls, showing a significant increase for boys only. Thus, boys but not girls increasingly expected to postpone marriage. Perhaps boys' anticipated ages were influenced by their perceived need to be prepared to provide for a wife and future children. Alternatively, it could simply reflect a desire to remain single a bit longer.

We expected that the effects of values, aspirations, and experiences might have somewhat stronger effects for girls than boys, owing to the greater interdependence between women's work and family roles (e.g., Ross et al., 2009; Schoon, 2010). Five interactions with gender were found, mostly involving the expected age of parenthood. In each case, the association between the predictor and anticipated timing was stronger for women than for men. Specifically, higher occupational expectations, educational expectations, and academic grades were more strongly associated with

the expected age of parenthood for girls than for boys. Thus, ambitious goals and high academic performance lead girls in particular to anticipate delaying parenthood, presumably to realize their aspirations for work and education. This finding supports the notion that young women recognize potential conflicts between the demands of work and family (e.g., Eccles, 2009; Phillips & Imhoff, 1997) and often adjust their occupational aspirations to allow more flexibility for family responsibilities (Frome, Alfeld, Eccles, & Barber, 2006). The present findings suggest that adolescent girls integrate an understanding of the challenges of balancing family and career into their personal plans for the future.

The association between gender role values and the anticipated age of starting work was also stronger for girls than for boys. Other work has shown a similar gender effect, where the relation between egalitarian values and plans for postsecondary education was stronger for adolescent girls than boys (S. N. Davis & Pearce, 2007). Egalitarian attitudes may be especially important for girls because they broaden the scope of possible futures and spur consideration of higher levels of adult attainment beyond the traditional roles of wife and mother.

Finally, the association between anticipated timing of marriage and getting married was stronger for girls than for boys. Girls may have greater foresight regarding marriage (or exercise greater agency in this domain), owing to its greater salience for them. Consistent with this notion, research on identity development indicates that adolescent girls explore more family-related issues than boys do (Kalakoski & Nurmi, 1998). Overall, the present findings provide evidence of gender differences in the anticipated timing of future role transitions, the impact of expectations and values on these expected timings, and the extent to which expectations foreshadow actual behavior. However, these differences were mainly in magnitude rather than in kind, suggesting that similar processes affect boys' and girls' expectations about adult role transitions as well as their actual transitions.

Limitations and Future Directions

Although our data extended from adolescence into adulthood, the present study has several limitations. The sample was mainly White and from a single rural community that was undergoing economic stress at the time of the study. The unique features of the community context could have affected adolescents' expectations regarding the future. Hence, the findings need replication in more diverse samples and in other social contexts. However, there is little reason to expect that the basic process of constructing expectations regarding adult role transitions would differ dramatically in contemporary cohorts of U.S. youths. Another limitation concerns the timing of the young adult follow-up. Examination of actual timing of parenthood was limited because only a third of the participants were parents at the time of the follow-up, and there are similar issues with some of the other measures of adult transitions, although to a lesser extent. Future research that follows adolescents further into adulthood would be valuable. Additionally, the fact that those who participated in the young adult follow-up earned better grades and had higher educational expectations in 12th grade suggests that the findings on actual transitions may be more applicable to academically oriented youths.

The present findings suggest that high school is a time when normative adult timetables in the broader society are internalized

in young people's expectations for their own lives. It has been argued that adolescence sets the stage for adulthood (Clausen, 1991). Our results indicate that this process is not simply a matter of making choices or engaging in behaviors that constrain or expand future options; rather such choices are accompanied by, and likely informed by, psychological processes through which adolescents translate their knowledge of the broader society into internal templates that serve as a frame of reference in thinking about their own lives (Nurmi, 2004). Indeed, this process may capture one aspect of identity development, where young people align socially and culturally based opportunities with their own interests and abilities to construct their personal plans (Erikson, 1968). The findings also extend the literature on gender differences in the life course, providing evidence that some of these differences are foreshadowed by cognitions in the form of expected ages of adult role transitions.

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