Explaining well-being over the life cycle: A look at life transitions during young adulthood

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Abstract

Early adulthood is a time of important transitions that shape the future of young adults. How do these transitions affect well-being, and to what degree can they account for the life satisfaction path followed during young adulthood? To answer these questions, longitudinal data from the Swedish Young Adult Panel Study are used for three cohorts interviewed in 1999, 2003, and 2009. Four age intervals covering ages 22 through 40 are constructed. The well-being changes and the main transitions undergone during each age interval are examined. Life satisfaction at ages 22 to 40 follows a slight inverse U-shape peaking around age 30/32 and declining thereafter. The common transition pattern during this time is represented by young adults ages 22 through 30/32 going mainly through partnership (marriage or cohabitation) formation, the school-to-work transition, and the early years of parenting. After age 30 parenting continues as an important life transition, and is joined by an increase in partnership dissolution. This set of transitions alone is found to account for the inverse U-shape of overall life satisfaction. Partnership formation, the school-to-work transition, and parenting younger children are all associated with increasing life satisfaction, mainly through their positive relationship with the financial, and family domains of well-being. After age 30, the monetary burdens, and strains on relationship with partner associated with parenting older children start to set in, and life satisfaction begins to decline.

1. Introduction

Young adulthood is a time of change. Leaving the parental household, finishing education, getting a job, forming a relationship, becoming a parent – these are important life transitions that most young adults go through between the late teens and early thirties. With all these life shifting events occurring in just over a ten-year period, it shouldn't be surprising that well-being will also go through important changes during young adult years. This paper's main objective is to analyze the association between the major life transitions occurring during young adulthood and the overall life satisfaction cycle observed in those years. The transitions analyzed are the school-to-work transition (the end of the formal education), changes in partnership status (the formation and dissolution of relationships), and the parenting transition. The analysis is based on a panel of young adults from Sweden interviewed three times between the years 1999 and 2009.

In studying the association between life transitions and life satisfaction two main questions are addressed. First, what is the path followed by life satisfaction during the young adult years? Second, what is the standard pattern of life transitions undergone in those years, and to what extent can these transitions account for the overall life satisfaction changes? To answer these questions, changes in overall satisfaction with life are analyzed for various age intervals to define the life satisfaction cycle followed between ages 22 and 40. Subsequently, an analysis of the timing and sequence of the school-to-work transition, partnership formation, parenting, and partnership dissolution, is carried out, and the relationship between the observed transition pattern and life satisfaction is assessed. The last part of the study provides an introductory exploration of the possible life domains (such as the financial, job, or family domains) mediating the association between the transitions and life satisfaction by analyzing the association between each transition and changes in these domains.

Previous work has considered life satisfaction over the life cycle and the relationship between individual life transitions and changes in well-being. But a link between the satisfaction cycle and the transitions followed over the young adult years has rarely been drawn. The present study contributes to the current knowledge on well-being by illustrating the degree to which the life satisfaction cycle may be explained by the pattern of transitions followed during young adulthood. The analysis also provides important information on the association between life satisfaction and the school-to-work transition, partnership formation, the birth of the first child, and partnership dissolution. While previous studies have considered the relationship between

such individual transitions and satisfaction, given their typically close timing, the effect attributed to one of these transitions considered alone may be confused by the effects of the others. To avoid this bias, the present analysis considers the school-to-work transition, partnership formation, birth of a child, and partnership dissolution jointly. This joint analysis aims to capture the association with life satisfaction of each of these transitions controlling for the effects of the others, providing more accurate information on how transitions during young adulthood relate to overall life satisfaction.

2. Literature Review

The analysis of well-being and its association with young adult transitions is at the intersection of literature in demography and economics. In demography, studies discussing the transition into adulthood are generally situated in the context of life course analysis. This literature provides a detailed description of events characterizing the young adult years, as well as their association with cultural and social surroundings (Elder 1998, Shanahan 2000, Vogel 2002, Elder et al 2003). Analysis of the standardization, and later individualization of the life course suggests that the transition into adulthood, while following common patterns, has become more variable in recent years with frequent deviations from the standard sequence (Shanahan 2000).

Given that the interest of the present paper is mostly on the life satisfaction cycle during young adulthood, a comprehensive analysis of the timing and sequence of the transitions undergone by young adults (such as the one undertaken by demographic research) is beyond the scope of the present analysis. Still, the methods used here borrow on the demographer's findings in two important ways. First, research from demography is used to identify the main transitions undergone by young individuals in the process of becoming an adult. These transitions typically include five life events – leaving the parental household, completion of education, labor force entry, partnership formation, and the birth of the first child (Marini 1984, Hogan and Aston 1986, Billari 2001). Second, in the spirit of the life course literature, a holistic approach is taken in analyzing the transitions occurring during young adulthood, considering their timing, interactions, and the resulting impact of the common transition pattern on life satisfaction. While recognizing that important variability may exist in transitions occurring during young adulthood, this study focuses on the standard patterns of these transitions, leaving further exploration of individual deviations from these patterns and their effects on well-being for future analysis.

In economics, recent interest in subjective well-being as a measure of human progress (Stiglitz et al 2009), has been accompanied by an increasing amount of research analyzing the relationship between various socio-economic events and life satisfaction. Studies in this area that are most closely related to the present paper are those tracking life satisfaction over the life cycle (Mroczek and Spiro 2005, Easterlin 2006, Baird et al 2010), and those analyzing the effects of critical life transitions – such as partnership formation or parenting – on life satisfaction (Lucas et al 2003, Zimmermann and Easterlin 2006, Myrskyla and Margolis 2012). Regarding the former line of research, an important distinction must be made between studies that take a ceteris-paribus approach (holding factors other than age – such as health – constant), and those that describe a general path of life satisfaction over life cycle without controlling for the influence of other variables on well-being. The findings of these two lines of research differ considerably, with the former finding a U-shaped association between life satisfaction and age (Clark and Oswald 1994, Blanchflower and Oswald 2008), and the latter generally finding the opposite, inverse U-shape association (Mroczek and Spiro 2005, Easterlin 2006). These differences are likely due to the potentially negative effects on well-being of the deterioration of health and economic conditions at older ages. The ceteris-paribus approach holds these negative effects constant, obtaining a positive association of well-being with age. The studies looking at the general pattern of life satisfaction over the life cycle do not control for the negative changes that accompany ageing, and capture the actual deterioration in life satisfaction experienced by the older population.

The analysis in the current paper follows the approach of the latter line of studies, considering the evolution of satisfaction over the young adult years without additional control variables. Presently, not much economic research exists in this area. For the United States, Mroczek and Spiro[1] (2005) and Easterlin (2006) observe a mostly flat path of life satisfaction over the life cycle, displaying a slight inverse-U shape with a decline at older ages. Specifically, in the United States happiness seems to increase slightly during the midlife reaching a maximum around the age of 50, and declines thereafter. Using a similar approach with data from Germany and Great Britain, Baird et al. (2010) find that the life satisfaction trajectories over the life cycle are somewhat different for these two countries. In Germany, life satisfaction is generally flat until the age of 74, and declines strongly after this point. In Great Britain, life satisfaction

[1]The sample used by Mroczek and Spiro is limited to veteran men after the age of 40.

declines slightly from young adulthood until the mid-40s, after which it increases until the age of 70, and again declines sharply after this point. Combining the findings from the three studies described, one gets a picture of a generally flat trajectory of life satisfaction throughout a long part of the adult life cycle, with trends in the mid-life that may depend on country-specific circumstances, and a sharp decline at older ages, especially after the age of 70. The specific trends of life satisfaction during the young adult years, however, are not addressed in detail by the existing work.

In the area of economics analyzing the young adult transitions and life satisfaction, a considerable amount of research has been carried out studying the well-being effects of events such as marriage, divorce, and parenting. The school-to-work transition has been studied less extensively in the subjective well-being literature (though its economic outcomes have been addressed by previous work). Most of the studies dealing with these transitions focus on a single life event considering, for example, marriage but not parenting, or vice-versa. Their results are therefore relevant in creating expectations as to what relationship may exist between each transition and life satisfaction, but not in determining the life satisfaction cycle over the young adulthood, since to do that a joint analysis of the transitions is necessary.

There exists a general consensus in the literature on subjective well-being that marriage is associated with an increase in life satisfaction (Lucas et al 2003, Zimmermann and Easterlin 2006, Clark et al. 2008). Though some disagreement exists on whether this positive association is, or not, permanent, the general picture is that life satisfaction for married couples remains above the baseline as measured prior to both marriage and cohabitation (Zimmermann and Easterlin 2006). This general picture is reinforced by further findings that cohabitation, as well as marriage, are associated with an increase in life satisfaction, and that in the long run the effects of both types of partnerships are very similar (Musick and Bumpass 2012). Conversely, divorce and partnership dissolution have been found to be accompanied by a decrease in life satisfaction (Lucas 2005, Clark et al. 2008).

On the association between parenting and subjective well-being a very extensive literature has been developed using cross-sectional analyses. Its findings have been mixed, though generally paint a bleak picture of the effects of parenthood with results showing a predominantly negative association between having children and various well-being measures, including life satisfaction (McLanahan and Adams 1987, Aassve et al 2012, Hansen et al 2009,

Hansen 2012). Recently, longitudinal studies have challenged these findings arguing that the negative association between having children and life satisfaction in the cross-sectional analyses is due to a self-selection bias. These longitudinal analyses find that an increase in life satisfaction takes place right before the birth of the first child (Clark et al 2008). This increase, while dissipating over time, has been found to persist for at least two years following the birth of the child (Baranowska and Matysiak 2011, Myrskyla and Margolis 2012).

As previously mentioned, the life satisfaction changes during the school-to-work transition have not been studied extensively. Perhaps most relevant to this topic is the analysis carried out by Creed and co-authors (2003), who study the changes in well-being for young adults in Australia during the transition from high-school to both, work, and post-secondary education. Their findings indicate that life satisfaction declines for those who enter post-secondary education as well as for those who enter the labor market but are unable to obtain full-time employment. For those who enter the labor market and become fully employed, life satisfaction remains constant. A related study of the Australian youth with post-secondary education (Dockery 2005) also finds that employment status affects life satisfaction, with the effects of unemployment being negative and of job quality being positive.

To summarize, while the trends in well-being that accompany marriage (or partnership formation) and divorce (or partnership dissolution) seem clear – positive in the first case, and negative in the second –life satisfaction changes after becoming a parent and the school-to-work transition appear more complex. In the case of parenting, a short-term increase in life satisfaction is observed after the birth of the first child, but this increase may not persist over time. This finding suggest that in the analysis of well-being changes parents should be divided into those for whom the parenting transition took place recently, and those for whom it took place several years earlier. As to the life satisfaction trends associated with the school-to-work transition, these may depend on the type of occupation obtained after the transition, which should also be considered in the analysis of well-being. What the above literature does not answer, however, is what overall life satisfaction pattern would emerge for young adults given the variety of transitions typically undergone in this period of life. This question is addressed in the present analysis.

3. Data description

The main source of data used is the Young Adult Panel Study (YAPS) carried out by demographer Eva Bernhardt from Stockholm University. The YAPS is a longitudinal survey of three cohorts of Swedish young adults (born in 1968, 1972, and 1976), that were interviewed at three points in time corresponding to the years 1999, 2003, and 2009. Survey responses were linked with the Swedish Register record by researchers in charge of data collection to complement the socio-demographic information provided by the respondents. This final dataset includes a comprehensive set of variables related to a person's family life, and various demographic and economic characteristics. For the purpose of the present analysis the sample from YAPS is restricted to those answering the main questions of interest in all three survey years.

The main dependent variable of the study, life satisfaction, is measured as the answer to the question: "Are you satisfied or dissatisfied with life in general right now?". Response categories are given on a scale from 1 to 5, with 1 meaning very dissatisfied and 5 very satisfied. The additional dependent variables are satisfaction with different life domains. Domains for which specific satisfaction questions were asked include the financial, job, and housing domains. For each domain, the question asked measures how satisfied a person is with their economic situation, what they are currently doing, and their housing, respectively with responses ranging from 1 (very dissatisfied) to 5 (very satisfied). In addition, questions on satisfaction with the relationship with partner, mother, and father are used to approximate changes in family satisfaction.

The domain measures used are subject to several limitations. First, satisfaction with what the person is currently doing may represent an imperfect measure of the job domain as it measures satisfaction with any activity that the person is doing, which should most often, but not always, be interpreted as occupation. At the same time the analysis is unable to provide an accurate assessment of changes in the family domain as a specific question on family satisfaction was not asked. The questions used to approximate this domain, satisfaction with relationship with partner, mother, and father, are insufficient as they do not capture one of the main changes in the family situation experienced by young adults: satisfaction with children. Moreover, these questions are subject to a serious problem of missing values, as a number of respondents (most likely those single or whose parents had deceased) did not respond these questions. Given these

limitations, the domain analysis presented should be interpreted as introductory rather than conclusive.

The main independent variables are those identifying people as going through the school-to-work, partnership formation, parenting, and partnership dissolution transitions in each of the periods under analysis (1999-2003 and 2003-2009). While leaving the parental household may be an equally important transition, when the respondents are first observed they are already 22 years of age and 93% of them are no longer living with their parents. The small sample of young adults leaving the parental household observed makes the analysis of the association of this transition with life satisfaction impossible.

Young adult are identified as going through the school-to-work transition if they attain their highest level of education in between any two surveys. Those who interrupt their education at any point, either due to spells of employment or inactivity, are considered to go through the school-to-work transition only after they re-enter education and graduate with their highest degree attained.[2] Partnership formation is defined as entering a new marriage or cohabitation[3] during any of the two periods under analysis. The parenting transition is considered to take place with the arrival of the first child (either biological or adopted) into the respondent's household. Finally, partnership dissolution takes place if a person reports to be in a partnership (marriage or cohabitation) during either 1999 or 2003, and to be single or divorced/widowed in the following survey (2003 or 2009 respectively). For more information on these variables (including the exact survey questions used in their construction), see Appendix A, Table A1.

Other variables used in the analysis include work income, occupation, and the child's age. Income is provided at the individual level and adjusted for inflation. Given that the data was collected in between March and May of each year, the satisfaction levels reported during the survey are most likely to reflect past years' income. Because of this, the work income from the year previous to each survey is used. Occupational categories are constructed by combining two survey questions: main activity, defining the person's employment status; and main occupation,

[2] This definition was used because of the high rates of young adults in Sweden that briefly interrupt their education soon after high-school to engage in either work or leisure activities before re-entering education at the post-secondary level (Cook and Furstenberg 2002).
[3] Given the similar positive effects of both marriage and cohabitation on life satisfaction (Appendix B, Table B1), the two partnership states were combined to increase the number of observations.

defining the person's production sector. The final occupation categories used are: student, unemployed, inactive, goods production, service production, assistant non-manual, intermediate non-manual, farmer/self-employed, and professional/higher non-manual/executive. Child's age was calculated using the year of birth of each child as reported by the respondent. For more information, see Appendix A.

As mentioned above, the analysis restricts the sample of YAPS respondents to those answering all three surveys. This reduces the number of observations to approximately 1,385 of the 2,820 young adults originally interviewed in 1999, some of whom were dropped in the analysis due to missing data in one or more of the main questions of interest (life satisfaction and the questions defining the transitions). Such high attrition rates (of around 50%) are not uncommon in developed countries (Becketti et al 1988, Abraham et al 2006). Attrition in the YAPS survey could represent a problem to the present study if the non-responses were systematically related to both the change in life satisfaction, and any of the specific life transitions under analysis. That is, the results may be biased if a specific sub-group of the people going through a life transition was both more likely to attrit and to experience a specific change in life satisfaction (either an increase or a decrease).

While it is impossible to test whether or not attrition is associated with an increase (or decrease) in life satisfaction for the people who leave the survey – as, by definition, their life satisfaction levels are not observed after they leave – it is possible is to check whether the life satisfaction change of people interviewed between 1999 and 2003 is associated with their future attrition in the 2009 survey. Using information on life satisfaction changes in 1999-2003, and on future attrition in 2009, a test of the significance of attrition suggested by previous literature is used (Fitzgerald et al. 1998). This test consists of regressing the main dependent variable (in this case, life satisfaction change) on subsequent attrition. If attrition is in fact a problem, then its coefficient in such a regression should be significant. Performing this test using the YAPS data shows that attrition is not a significant determinant of life satisfaction changes (Appendix B, Table B2). Repeating the same analysis for the other dependent variables (changes in the domain satisfaction variables), shows that attrition is not a significant determinant of any of these. The results of this simple test are reassuring in that the attrition bias should not represent a major problem for the present analysis.

A brief statistical description of the four age intervals constructed is provided in Table 1. As could be expected, the younger age groups have a lower income, and are less likely to hold high status occupations, such as being a professional, high level non-manual worker, or an executive. At the same time they are more likely to be studying and to be single. By the age 30/32 the percent of respondents still studying and not married or cohabiting drops, and the percent of people parenting starts to increase (Table 1). As will be further discussed in the results section, these changes roughly outline the evolution undergone by young adults between ages 22 and 40: from mostly single, non-parenting students at age 22, to predominantly married (or cohabiting) parents with completed final education levels by age 40.

4. Methods

To identify the average life satisfaction path followed during young adulthood the analysis focuses on changes in satisfaction over specific age intervals. The four intervals considered cover ages 22 to 26, 26 to 30/32, 30 to 34/46, and 34 to 40. These intervals are constructed pooling observations for different cohorts interviewed around the same age at least twice. For example, respondents born in 1972 interviewed in 1999 and 2003 (at ages 26 and 30) were pooled with those born in 1976 interviewed in 2003 and 2009 (at ages 26 and 32) to construct the 26 to 30/32 age interval. Since a first difference analysis is used throughout the study, the main criterion to select the cohorts pooled is that observations for that cohort have to be available both at the beginning and end of the age interval considered. (For more information on the age interval construction, see Appendix C.)

Life satisfaction of individual i at age a could be represented by the following:

$$(1)\ LS_{ia} = \alpha_a + \delta_i + \beta X_{ia} + \varepsilon_{ia}$$

Where, α_a is the effect of age, δ_i is an individual fixed effect, X_{ia} is a vector of covariates that are allowed to change over age, and ε_{ia} is an error term. The individual fixed effect in (1) includes all personal characteristics that are time-invariant, including personality and cohort effects, among others. Applying a first difference to (1) provides:

$$(2)\ \Delta LS_i = \Delta\alpha_{a1-a0} + \beta\Delta X_i + \Delta\varepsilon_i$$

where $\Delta\alpha_{a1-a0} = (\alpha_{a1} - \alpha_{a0})$. In specification (2) δ_i, representing all time invariant traits, is automatically subtracted from the equation. Previous studies have recognized the importance of controlling for cohort effects – such as being born during a war or a recession – when studying

life satisfaction over the life cycle (Easterlin 2006, Blanchflower and Oswald 2008). By using first differences, the present paper goes a step further and eliminates not only the effects of the year of birth, but also those of any personal time invariant traits – such as being an optimist – on life satisfaction.

In equation (2), $\Delta\alpha_{a1-a0}$ captures the association between the age interval starting at 0 and ending at 1 and overall life satisfaction. Notice that $\Delta\alpha_{a1-a0}$ is age-specific, which implies that different age intervals may have a different association with life satisfaction. To capture the general path of life satisfaction during young adulthood, a regression is run with individual life satisfaction change as the dependent variable, and four age interval dummies as explanatory variables. The regression is run using an OLS first-difference model without a constant[4]. This is methodologically equivalent to an OLS first-difference regression that includes a constant but omits one of the age intervals from the estimation[5]. Since no socio-economic control variables are used, the coefficient on each age interval dummy represents the total life satisfaction change for the average young adult over that interval.

The previous estimation is based on two assumptions. First, the change in life satisfaction is assumed to depend only on characteristics related to a person's age, but not on external time trends. This is a sensible supposition as long as the socio-economic conditions of the country under analysis remain stable. In the case of Sweden, while GDP growth in the periods 1999 to 2003 and 2003 to 2009 was reasonably stable, the unemployment rate did experience important

[4] Given the grouping into four age intervals, it may be econometrically appealing to cluster the standard errors at the age interval level. This was not done in the main part of the analysis as it creates a problem of estimation with few clusters (for a discussion see Cameron and Miller 2011). As a robustness check, the main regressions of the analysis were re-run using standard errors clustered by age interval, and applying the standard adjustment for few clusters implemented by Stata, which uses a T distribution (instead of the normal) for inference. All the coefficients significant in the original results remained significant after the clustering (results available upon request).

[5] The model used was preferred for three reasons. First, from a theoretical perspective, a change in life satisfaction holding age (and through it, time) perfectly constant, is implausible. Second, the model used makes the interpretation of the results easier: the average change in life satisfaction undergone during each age interval is captured by the coefficient of that specific interval. Finally, the econometric controversy about using OLS without a constant revolves around the diagnostic measures, such as the R squared, which are not the main interest of this study (Eisenhaur 2003). For robustness, all analyses were repeated using the alternative specification with a constant, which was found to have little effect on the R squared and (as expected) none on the coefficients (results available upon request).

fluctuations. To check for the importance of time trends in influencing the main findings, a robustness test is carried out where a control variable for the 2003 to 2009 time period is included into the regressions. Doing so does not affect the results (Appendix B, Table B3). The second assumption is that all cohort effects are fixed and therefore disappear in the first difference equation. To assure that the results do not depend on time-variant cohort effects, life satisfaction change for each age interval is analyzed separately by cohort before running the pooled regression in the results section. Additionally, pooled regressions are re-run using control dummies for birth cohort (Appendix C, Table B3). The results of both tests support the assumption of fixed cohort effects.

Following the description of the life satisfaction path, the main transition pattern for young adults ages 22 to 40 is identified. Four transitions that characterize young adulthood are considered: partnership formation, school-to-work transition, parenting, and partnership dissolution. For the parenting transition, the long time span (four to six years) between surveys implies a considerable variance in the age of the child born over a given interval at the time of the second survey. Because a child's age may influence the parenting experience, the new parents are sub-divided into those whose child is less than two years old and those whose child is two years or older at the time of the survey. Partnership dissolution may also represent a different process depending on whether a child is involved or not, and therefore respondents going through this transition are sub-divided into those with and without a child. Finally, young adults not going through any transition at a given age interval are divided into those who have already gone through the school-to-work and parenting transitions, and those who have not[6]. This is done to capture the lasting effects of some transitions (such as parenting) on the life satisfaction of young adults. To identify the common transition pattern, the percent of respondents going through each transition is calculated for every age interval.

To estimate the degree to which transitions typical to young adults account for their life satisfaction changes, regression (2) is run including the transitions undergone by each individual as explanatory variables. Doing so leads to:

$$(3)\ \Delta LS_i = \Delta\alpha_{a1-a0} + \beta_T' T_i + \Delta\varepsilon_{a1-a0}$$

[6] Since the proportion of young adults going through parenting before partnership formation is very small (Table 1), it is assumed that all those that have gone through parenting have also gone through partnership formation.

where T_i is a matrix of bivariate variables with value 1 if person i has gone through transition T in the age interval from $a0$ to $a1$ and 0 otherwise. Matrix T_i includes partnership formation, the school-to-work transition, parenting (with child below age 2 at time of interview), parenting (with child 2 years or older at time of interview), partnership dissolution (with a child), and partnership dissolution (without a child), as well as a dummy variable for those not currently going through any transitions but who have already completed their school-to-work and parenting transitions. In this specification, the age interval coefficients capture the association between change in age and life satisfaction for the omitted category (those not going through any transition and who have not yet completed the school-to-work and parenting transitions). Since all transitions are included simultaneously, the coefficients β_T capture the pure association between each transition and life satisfaction, controlling for the effects of all other transitions. This allows to separately identify the associations with life satisfaction for transitions that may occur jointly, such as partnership formation and parenting. Notice, again, that no socio-economic control variables (other than the transitions themselves) are included in the model.

To assess whether the common transition pattern experienced by young adults can account for their overall life satisfaction path, the life satisfaction change for each person is predicted using only its association with the transitions occurring in that person's life (that is, using coefficients β_T to predict the change in life satisfaction at the individual level). Using these estimates, the average life satisfaction change for every age interval is obtained. This average represents the change in life satisfaction that could be expected to take place for a given age interval based only on the transitions common to that age. Using these predictions allows to construct the estimated life satisfaction path over ages 22 to 40 as projected exclusively by the common young adult transition pattern. If the estimated path accurately approximates the actual path followed by life satisfaction, this result could be taken to imply that young adult transitions are an important determinant of overall life satisfaction during this part of the life cycle.

The final step of the analysis aims to identify the impact of the four young adult transitions on several aspects of a person's life (commonly referred to as life domains). The domains considered include the financial, work, and housing domains, as measured by the financial, occupation and housing satisfaction respectively. Additionally, changes in a respondents' satisfaction with their relationships with partner, mother, and father, are also analyzed. The impact of the young adult transitions on each domain is approximated by the

association between a given transition and each of the five satisfaction variables estimated using specification (3) for all age intervals pooled. Though this analysis provides some information on the relationship between young adult transitions and life domains, its extent is limited as several domains of interest (such as family satisfaction) are not available in the YAPS survey. Additionally, the question on satisfaction with partner might not have been answered if the person was not currently in a stable relationship. A more precise evaluation of the impact of young adult transitions on different life domains is left for future analysis.

5. Results

5.1 Life satisfaction path during ages 22 to 40

The life satisfaction path followed between ages 22 and 40 displays a slight inverse U-shape, with overall satisfaction increasing until 30/32 and decreasing thereafter. The average change in life satisfaction for each age interval is captured by the coefficient of the age interval's dummy in a regression with observations for all cohorts pooled and with change in life satisfaction as the dependent variable (Table 2, Column 4). Life satisfaction increases between age 22 and 30/32, with the increase being steepest in the second part of the decade, and decreases steadily in the following ten years.

The initial increase in life satisfaction between ages 22 to 26 and 26 to 30/32, and the consequent decrease between 30 to 34/36 and 34 to 40, hold for all cohorts for which observations at those ages are available (Table 2, Columns 1-3). The actual path of life satisfaction observed for each cohort during the decade between the first and last surveys is shown in the left panel of Figure 1. Though some cohort level differences are clear, with the 1972 cohort appearing on average more satisfied than either the 1976 or the 1968 cohorts, the trends followed during overlapping age intervals are similar for all cohorts (Figure 1). Additionally, the difference in the interval coefficients between cohorts with overlapping age intervals is small and not significant, suggesting that the general trends in life satisfaction by age do not differ depending on the cohort of birth (Table 2, Columns 1-3).

Using the coefficients from the pooled regression, and adjusting life satisfaction at age 22 to 0 to avoid cohort level effects, the average path of life satisfaction for young adults ages 22 to 40 is illustrated in the right panel of Figure 1. Each life satisfaction point of this path can be interpreted as the difference in life satisfaction from age 22 expected at a given age for an

average person[7]. Adding the first two segments of the path, the overall increase in life satisfaction for the upward trend from 22 to 30/32 is approximately 0.09 (Table 2, Column 4). Though this may seem small given the satisfaction scale (1 to 5), previous findings indicate that over 30 year spans covering ages 18 to 51 and 40 to 70 respectively average life satisfaction changes by about 0.1 points on a scale of 1-3 in the first case, and 1 point on a scale of 1-11 in the second (findings for the American population, Easterlin 2006 and Mroczek and Spiro 2005). Given that the time span used here is a decade, one third of that analyzed for the American population, the change in life satisfaction between ages 22 and 30/32, though small, may be considered relevant. During the following decade covering ages 30 to 40 life satisfaction shifts directions decreasing steadily by about 0.066 overall points (Table 2, Column 4). Though small, this decrease is consistent for both the 1972 and the 1968 birth cohorts.

5.2 Common transition pattern and its association with life satisfaction

The main transition pattern between ages 22 and 40 is characterized by young adults typically going through partnership formation and the school-to-work transition before age 30/32, and then through parenting between ages 26 and 34/36 (Table 3). Though partnership dissolution does not represent a common transition for the majority of young adults at any age before 40, after 30 the proportion of couples that dissolve their partnership starts to steadily increase. Most young adults go through only one transition (if any) at a time, with partnership formation and the school-to-work transition between ages 22 and 26 being the only transitions that occur jointly for more than 10% of the sample (Table 3). A visual representation of the main transitions undergone, by age interval, is given in Figure 2. During the youngest age interval, 22 to 26, over 50% of the young adults observed go through either partnership formation or the school-to-work transition, or both. After age 26 and before 30/32 parenting represents the most common transition, with 32% of the respondents having a first child born in this age interval. Partnership formation and the school-to-work transition between ages 26 and 30/32 are also observed for important proportions of the sample (22% and 25% respectively). After the age of 30/32, parenting remains as the only transition that still occurs for over 15% of all young adults,

[7] Notice that, since life satisfaction is adjusted to 0 at age 22, the right panel of Figure 1 says nothing about satisfaction levels, which should be set by personal fixed circumstances, such as birth cohort or personality traits. Regardless of the level, this figure illustrates the life satisfaction path expected over the ages 22 to 40 for the average young adult.

and by the final age interval, 34 through 40, most young adults are no longer undergoing any transitions.

While at younger ages, partnership dissolution generally occurs for those without children, by ages 34 to 40 almost 75% of those going through partnership dissolution do so after having a child (Table 3). By age 30 a shift also occurs for those not going through any transitions: while at younger ages this group is mostly composed by childless people who are still studying, after age 30 the majority of this group has completed the main young adult transitions, such as school-to-work and parenting. Finally, those who become new parents are more likely to have children two years or older (rather than one years or younger) at all age intervals, except for the youngest – 22 through 26 – when parenting is still uncommon.

To summarize, the common transition pattern is that of young adults going through partnership formation and school-to-work transitions before age 30/32, parenting (mostly with children two years or older at time of interview) between 26 and 34/36, and no more transitions, having completed the main ones, between ages 34 and 40. Partnership dissolution after having children, though still uncommon, increases after the age of 34. As a caveat, it is important to mention that though this pattern represents the most common transitions as followed by the majority of young adults in the sample, important deviations from it may exist. Although the analysis of these individual variations in the patterns followed is beyond the scope of the present study, it represents an area of interest for future exploration.

How does the common transition pattern relate to the life satisfaction path during ages 22 to 40? To address this question, the association between each transition and life satisfaction is assessed using regression analysis (Table 4). The transition coefficients in these regressions may be interpreted as the change in life satisfaction for those going through a given transition relative to those not going through any transitions and who have not yet completed the major life transitions such as school-to-work and parenting. Since all transitions are included simultaneously, the associations with life satisfaction for transitions that may occur jointly are identified separately.

As could be expected, partnership formation is accompanied by an increase in life satisfaction that is significant for all age intervals pooled, as well as for most of the age intervals

during which partnership formation is common[8]. The school-to-work transition, however, does not display a significant association with life satisfaction change for any of the age intervals, nor for all pooled (Table 4). Previous literature has shown that the effects of the school-to-work transition on well-being may depend on personal circumstances. Given this, additional specifications were run in which those going through the school-to-work transition were divided by type of occupation after education completion, and by level of final education. Since no significant association with life satisfaction change was found for any of the groups considered (Appendix B, Tables B4 and B5), the original specification (using only one group for the school-to-work transition) is used in the main analysis.

The association of parenting with life satisfaction clearly depends on the age of the child during the time of the interview. For the new parents whose child is one year old or younger parenting shows a clear positive and significant association with life satisfaction change for all age intervals pooled, and for each interval separately (though losing its significance in some cases, probably due to low number of observations) (Table 4). On the contrary, for the parents with children two years or older, this association is negative, though only significant for the pooled regression and for the last age interval. This finding is in accordance with previous literature, which has shown positive but decreasing changes in well-being in the years following the birth of a first child. The negative coefficients on parenting for those with children two years or older may imply that the positive association between the birth of a first child and well-being may not only be short lived, but in fact, may become reversed in the long run.

Partnership dissolution is always accompanied by a decrease in life satisfaction. This decrease, however, is only significant for those going through partnership dissolution with children for all age intervals pooled and for the older age intervals, when this transition becomes more common (Table 4). The negative coefficient for partnership dissolution without children is never significant, though this may be due to the small number of people going through this transition before age 40. The stronger decrease in life satisfaction for those going through partnership dissolution with, rather than without children, confirms the study's expectations and shows the importance of considering personal circumstances during this transition. Finally, those

[8] The lack of a significant association of partnership formation with change in life satisfaction during the first age interval could be representative of that partnerships formed earlier in life are perceived as less important. Though further exploration may represent an area of interest, due to data limitations, such an exploration is left for future studies.

who have already completed their parenting and school-to-work transitions and are not going through any more transitions at a given age interval usually experience a decrease in life satisfaction. This negative association holds for all age intervals but the first (during which this is group is very small), but is only significant for all intervals pooled and for those ages 30 to 34/36 (Table 4). This finding could be indicative of mounting pressures, possibly related to parenting, during the later stages of young adulthood.

Can the common transition pattern transitions account for the well-being path during young adulthood? Recall that life satisfaction displays a slight inverse U-shape, increasing in the age intervals 22 through 26, and 26 through 30/32, and decreasing in the two consecutive intervals – 30 through 34/36 and 34 through 40. In the first part of this cycle while life satisfaction is increasing, people are mostly going through partnership formation and the school-to-work transition at ages 22 to 26, and through parenting in addition to the previous two transitions at ages 26 to 30/32. Given the positive relationship with life satisfaction of partnership formation and of parenting young children, and the lack of significance of the school-to-work transition, these transitions could potentially explain the increasing life satisfaction trend. After the age of 30, people go through parenting with mostly older children, or through no transitions, having no more transitions pending. A slight proportion of the sample also goes through partnership dissolution after having a child. All of these transitions undergone after 30 have a negative (though not always significant) association with life satisfaction and so could possibly account for the slight downward trend in life satisfaction between ages 30 and 40.

To formalize this reasoning, a prediction of life satisfaction change is estimated using the coefficients of the regression for all age intervals pooled (Table 4, Column 1). The average of this prediction for each age interval represents the change in life satisfaction that could be expected during that interval based only on the proportion of people going through each of the transitions considered. Comparing these average predictions to the actual life satisfaction changes taking place during each age interval, it is found that the transitions can in fact predict the slight inverse U-shape of the overall life satisfaction path (bottom two rows of Table 4). The predicted path displays slightly bigger changes in life satisfaction, especially at the beginning and end of the period, but the age at which the maximum is reached and life satisfaction starts decreasing is predicted correctly by the transitions alone (Figure 3). Taking into account that this prediction excludes all of the variables typically considered as associated with a person's life

satisfaction trend – such as changes in income, health or job status – the capacity of the transitions alone to predict the well-being path is striking. Young adult transitions are clearly important factors contributing to the life satisfaction path followed during this part of the life cycle.

5.3 A glimpse into the life domain changes between ages 22 and 40

What are the life domains mediating the association between young adult transitions and life satisfaction? To answer this question, ideally a comprehensive analysis of changes in the various life domains impacting well-being should be carried out. Due to data restrictions, however, the present analysis is limited to three life domains, representing satisfaction with the financial, housing, and job situation. The association between the change in each of these three domains and young adult transitions is analyzed. Additionally, measures of satisfaction with relationships with one's partner, mother, and father are used as auxiliary variables to approximate satisfaction in the family domain. Still, since satisfaction with children is not measured, this family domain analysis is incomplete. Recall also that the job domain is measured with satisfaction with what the person is currently doing, which may not always correspond to one's job, and that the measures on satisfaction with one's relationships are imperfect due to high non-response rates (probably by those who do not have a partner, or whose parents have deceased). Given these limitations, the present analysis is very preliminary, and its findings should be interpreted as suggestive, not conclusive.

The domains most affected by the young adult transitions are the financial, and family domains. Before age 30, transitions such as partnership formation, school-to-work, and parenting younger children are associated with positive changes in the financial, housing, and family domains. After 30, transitions such as partnership dissolution and parenting older children are accompanied by financial pressures, strains on relationships with family members, and a general decrease in satisfaction with what the person is doing.

Not surprisingly, partnership formation has a strong positive association with satisfaction with partner. Interestingly, forming a partnership is also related positively with financial satisfaction, and negatively with satisfaction with occupation. The positive relationship for the financial domain could be due to the effects marriage and cohabitation may have on increasing household income (Korenman and Neumark 1991, Waite 1995). The negative association in the

job domain is more of a puzzle, but could possibly be explained if for some (especially women) forming a partnership requires an occupational shift that is perceived as unpleasant.[9]

As one might expect, the school-to-work transition has a strong positive relationship with financial satisfaction (Table 5). However, its association with the job domain is negative and also significant. This finding may be due to the way the question was asked, which aims to reflect satisfaction with what the person is currently doing, rather than with a job itself.

Life domain changes following the transition into parenting depend on the age of the child at the time of the survey. New parents with children one year or younger report a significant increase in satisfaction with housing, and a decrease in satisfaction with their mothers (Table 5). The decrease in satisfaction with mothers, however, is likely to be counteracted by a strong increase in satisfaction with children following the recent birth of a first child, leading to a likely increase in overall family satisfaction. New parents with children two years or older represent a different case, experiencing a significant decrease in financial satisfaction, as well as satisfaction with all family members (partner, mother, and father) in general (Table 5). Combined, these findings suggest that after an initial period of increased satisfaction of having a new child, the economic burdens and strains on the relationship associated with having older children may become strong enough to outweigh the pleasures of parenting[10].

Partnership dissolution for those with a child is accompanied by strong negative changes in the financial, and job domains, that are much weaker, or not significant, than for those without a child (Table 5). Though the negative relationship between partnership dissolution and partner satisfaction is only significant for those going through this transition without a child, this should be interpreted cautiously as it is likely due to the limited number of respondents reporting satisfaction with partner following partnership dissolution (when divorced or single). Finally, those not going through any transitions after having completed the school-to-work and parenting transitions experience a decrease in satisfaction with what they are currently doing and insignificant changes in other life domains (Table 5).

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[9] A separate analysis for men and women is left for future research. Such an analysis could potentially reveal important gender differences in the association of young adult transitions with changes in occupational and other domains. To assure that gender differences do not affect the main results of the study, life satisfaction regressions were run separately for men and women revealing no major gender differences (results available upon request).

[10] The possibility of children having a negative impact on financial satisfaction has been previously suggested by Zimmermann and Easterlin, 2006.

The results of the domain analysis suggests an explanation for the increase, and subsequent decrease in life satisfaction between ages 22 and 40. The transitions most common to the younger age intervals (partnership formation, the school-to-work transition, and parenting younger children) are accompanied by positive changes in the financial, housing, and family domains, which may explain the increase in life satisfaction before age 30. Conversely, transitions more common after the age of 30 (partnership dissolution and parenting older children) are accompanied by financial and family burdens, leading to a decrease in overall life satisfaction. Still, as previously mentioned, due to its numerous limitations this analysis is very preliminary, and further exploration of the life domain changes that accompany young adult transitions is needed to obtain more conclusive results.

6. Conclusions

During young adulthood a number of important changes affecting well-being are experienced. This study focused on the life satisfaction path followed between ages 22 and 40, and on its association with the main young adult transitions, such as partnership formation, school-to-work transition, parenting, and partnership dissolution. For the Swedish young adults analyzed, life satisfaction follows a slight inverse U-shape increasing between ages 22 and 30/32, and decreasing after 30. At the same time, these young adults experience various life transitions that take them from being predominantly single students at age 22, to being in a marriage or cohabitation, working, and parenting by the age of 40. The common transition pattern observed starts with partnership formation and the school-to-work transition before the age of 30/32. Parenting begins to be common between ages 26 and 30/32, and becomes the most common transition during the age interval from 30 to 34/36. After the age of 34, the majority of young adults no longer go through any of the transitions described, having completed all of them. A small but growing proportion of the sample also begins to experience partnership dissolution.

This common transition pattern is found to account in large part for the life satisfaction path. The early young adult transitions exert positive effects on life satisfaction mostly through the strong and positive association between partnership formation and life satisfaction. Later in life, parenting of older children and partnership dissolution, both of which are accompanied by negative (though not always significant) changes in life satisfaction, are partially responsible for the downward trend in well-being. Predicting life satisfaction changes with only the transitions

undergone at each age interval produces an estimated life satisfaction path that recreates the inverse U-shape actually observed between ages 22 and 40. The close resemblance between the life satisfaction path as predicted by the transitions alone, and as actually observed, is especially striking given that none of the variables typically associated with well-being – such as income – are included in the prediction.

To explain the strong association between young adult transitions and life satisfaction changes, a domain analysis is used. Though the domains available are limited, the findings suggest a possible explanation for the increase, and subsequent decrease in well-being. The initial upward trend in life satisfaction is accompanied by positive changes in financial and partner satisfaction associated with the school-to-work transition and partnership formation. The later downward trend in life satisfaction comes with strains to the financial conditions and to the relationship with partner associated with parenting older children and partnership dissolution. Future exploration of life domain changes following young adult transitions could include assessment of gender differences, and a detailed analysis of how family pressures interact with the job and financial domains.

The present results imply that the life satisfaction path followed during young adulthood is to a big extent a reflection of the transitions undergone. Helping young adults handle the pressures created by these transitions may therefore have important well-being effects. In particular, this analysis suggests that even in a country with a strong welfare support system such as Sweden, young parents are exposed to accumulating financial strains that lead to a decrease in overall life satisfaction. These strains become especially taxing for single parents following partnership dissolution. Policies aimed at aiding new parents with older children, such as extended day care programs, could be used to alleviate these pressures leading to potential well-being improvements. In designing these policies results from a further life domains analysis may be used to identify the life aspects associated with each transition.

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Figures

Figure 1. Life Satisfaction by age, by cohort and pooling cohorts by age interval

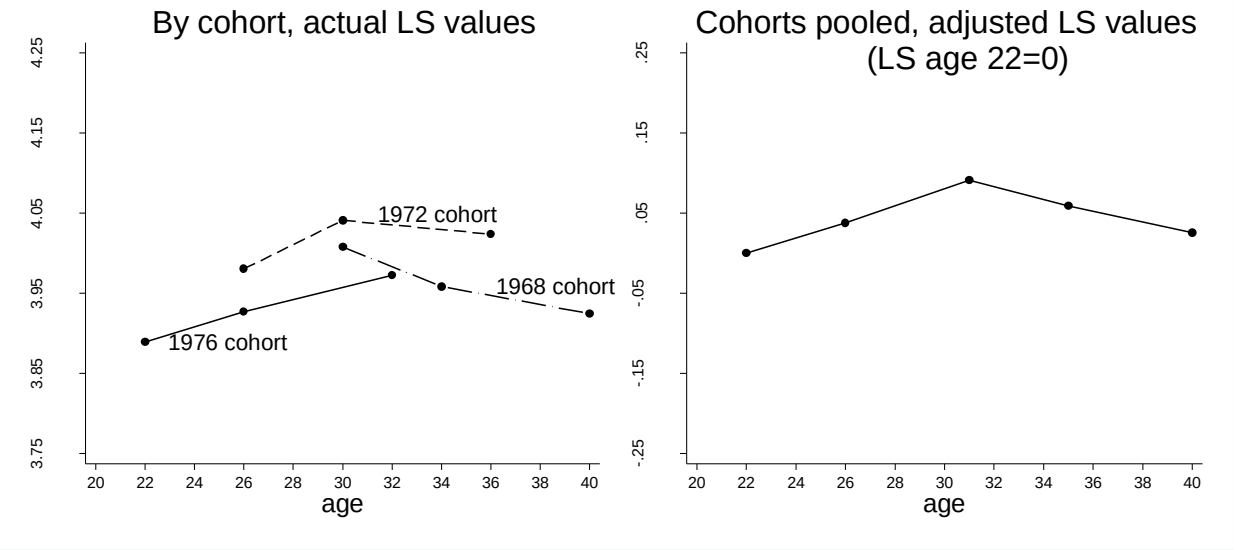
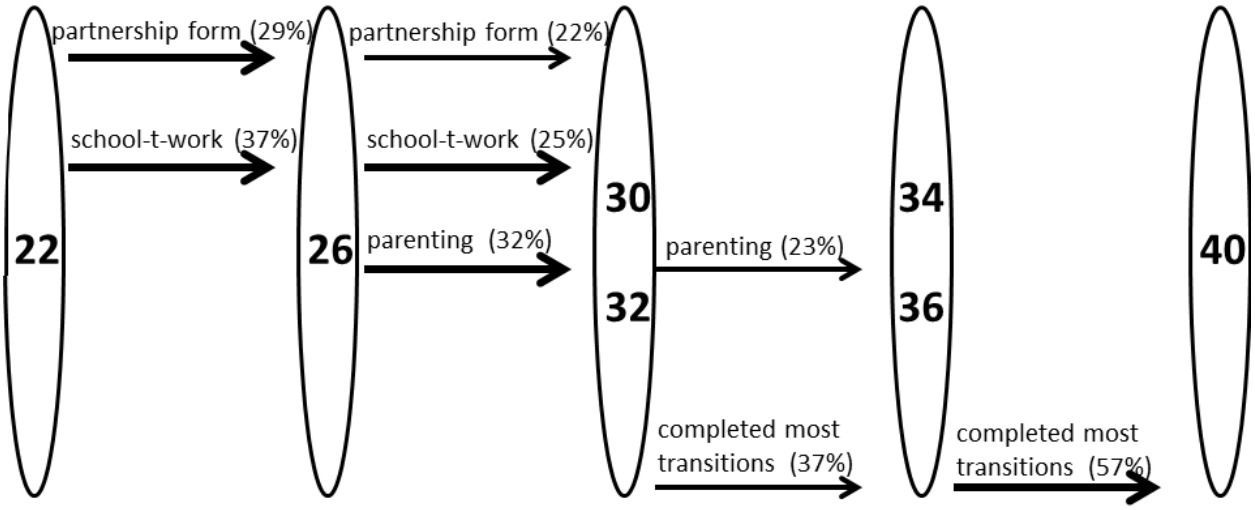


Figure 2. Main life transitions, by age interval, age 22 to 40



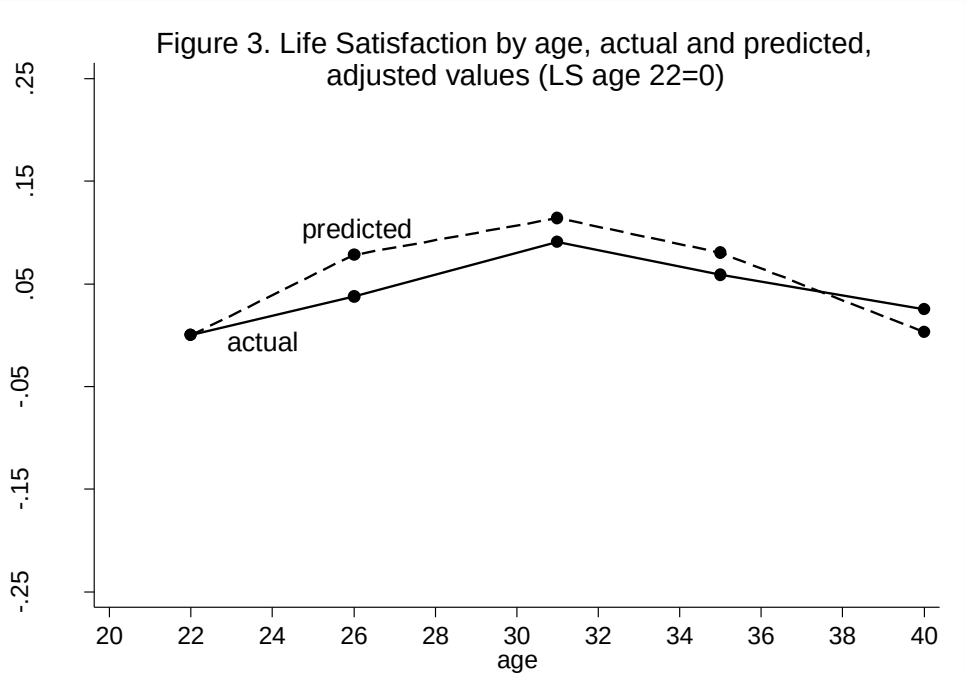


Figure 3. Life Satisfaction by age, actual and predicted,
adjusted values (LS age 22=0)
.25
.15
.05
-.05
-.15
-.25
predicted
actual
20
22
24
26
28
30
32
34
36
38
40
age

Tables

Table 1. Descriptive statistics, by age, beginning and end of each age interval								
	Age interval: 22-26		Age interval: 26-30/32		Age interval: 30-34/36		Age interval: 34-40	
	Age 22	Age 26	Age 26	Age 30/32	Age 30	Age 34/36	Age 34	Age 40
Work income ('000 SEK)	69.27	140.78	134.79	198.21	177.29	222.52	211.28	270.67
Prof/higher nm/exec	1.1%	12.7%	11.7%	20.5%	15.16%	20.29%	16.45%	25.90%
Active in labor force*	42.2%	66.5%	66.0%	79.6%	74.11%	86.71%	80.16%	96.69%
Student	48.4%	21.8%	20.5%	6.5%	8.02%	4.48%	6.75%	1.04%
Single	61.6%	39.6%	40.1%	22.4%	25.12%	16.51%	20.78%	15.84%
Cohabiting/Married	38.2%	59.7%	59.3%	75.5%	72.52%	78.30%	74.81%	76.62%
Divorced/Widowed	0.2%	0.6%	0.6%	2.0%	2.36%	5.19%	4.42%	7.53%
Parenting (in a partnership)	4.0%	17.4%	20.0%	50.5%	46.23%	65.80%	62.34%	66.75%
Parenting (alone)	0.8%	1.3%	1.7%	3.9%	4.48%	8.14%	9.09%	13.51%
N children	0.07	0.24	0.31	0.87	0.83	1.37	1.28	1.49
Final educ = postsecondary	64.99%		60.32%		52.48%		48.83%	
Male	41.93%		40.96%		41.86%		44.16%	
Cohort 76	100.00%		50.75%		0.00%		0.00%	
Cohort 72	0.00%		49.26%		54.60%		0.00%	
Cohort 68	0.00%		0.00%		45.40%		100.00%	
N observations	477		940		848		385	
*Includes all those actively employed, excluding students, and those unemployed, in participating labor market programs (such as adult learning), on parent leave, and inactive								

Table 2. OLS regressions, change in LS as dependent variable, age intervals as explanatory variables				
	LS change			
	1976 cohort	1972 cohort	1968 cohort	all cohorts
Age 22 to 26	0.038			0.038
	(0.83)			(0.82)
Age 26 to 30/32	0.046	0.060		0.053
	(1.02)	(1.31)		(1.62)
Age 30 to 34/36		-0.017	-0.049	-0.032
		(0.38)	(0.93)	(0.92)
Age 34 to 40			-0.34	-0.034
			(0.64)	(0.66)
observations	954	926	770	2650
R-squared	0.002	0.002	0.002	0.002
Absolute value of t statistics in parentheses; + significant at 10%; * significant at 5%; ** significant at 1%				

Table 3. Life transitions undergone, by age group								
	Age group: 22-26		Age group: 26-30/32		Age group: 30-34/36		Age group: 34-40	
Transitions occuring individually:	N	% age group	N	% age group	N	% age group	N	% age group
Partnership formation	61	12.8%	88	9.4%	56	6.6%	22	5.7%
School-work	100	21.0%	113	12.0%	65	7.7%	30	7.8%
Parenting (all)	31	6.5%	183	19.5%	128	15.1%	19	4.9%
Parenting (child 1 year less)	18	3.8%	66	7.0%	45	5.3%	4	1.0%
Parenting (child 2 yrs more)	13	2.7%	117	12.4%	83	9.8%	15	3.9%
Partnership dissolution (all)	23	4.8%	34	3.6%	46	5.4%	27	7.0%
Partnership diss (with child)	2	0.4%	19	2.0%	27	3.2%	21	5.5%
Partnership diss (without child)	21	4.4%	15	1.6%	19	2.2%	6	1.6%
Transitions occuring jointly:								
Partnership form + school-work	54	11.3%	44	4.7%	11	1.3%	3	0.8%
Partnership form + parenting	19	4.0%	56	6.0%	35	4.1%	12	3.1%
School-work + parenting	11	2.3%	43	4.6%	12	1.4%	1	0.3%
Partnership diss + school-work	11	2.3%	12	1.3%	11	1.3%	3	0.8%
Partnership diss + parenting	0	0.0%	6	0.6%	9	1.1%	1	0.3%
Partnership form+school-work+parenting	4	0.8%	18	1.9%	12	1.4%	1	0.3%
Partnership diss+school-work+parenting	1	0.2%	2	0.2%	1	0.1%	0	0.0%
No transition (all)	162	34.0%	341	36.3%	462	54.5%	266	69.1%
No trans (stw and parenting incomplete)	151	31.7%	217	23.1%	151	17.8%	46	11.9%
No trans (completed major transitions)	11	2.3%	124	13.2%	311	36.7%	220	57.1%
Total age group	477	100.0%	940	100.0%	848	100.0%	385	100.0%

Table 4. OLS regressions: Change in life satisfaction as dependent variable, main life transitions and age intervals as explanatory variables					
	All age intervals pooled	Age interval 22-26	Age interval 26-30/32	Age interval 30-34/36	Age interval 34-40
Partnership formation	0.292	0.142	0.273	0.474	0.33
	(5.58)**	(1.37)	(3.41)**	(4.50)**	(1.62)
School-to-work	-0.023	-0.088	0.071	-0.066	-0.181
	(0.45)	(0.91)	(0.92)	(0.62)	(0.89)
Parenting (child 1yr-)	0.245	0.282	0.268	0.169	0.296
	(3.49)**	(1.71)+	(2.73)**	(1.27)	(0.76)
Parenting (child 2yrs+)	-0.129	-0.244	-0.09	-0.081	-0.582
	(2.13)*	(1.17)	(1.05)	(0.78)	(2.52)*
Partnership diss (with child)	-0.343	-0.59	-0.075	-0.292	-0.75
	(3.25)**	(1.01)	(0.4)	(1.82)+	(3.06)**
Partnership diss (without child)	-0.099	-0.254	-0.12	0.029	0.005
	(0.9)	(1.35)	(0.59)	(0.14)	(0.01)
No trans (major completed)	-0.135	0.153	-0.068	-0.167	-0.232
	(2.38)*	(0.59)	(0.65)	(1.89)+	(1.51)
Age 22-26	-0.041	0.034			
	(0.75)	(0.46)			
Age 26-30/32	0.018		-0.029		
	(0.39)		(0.5)		
Age 30-34/36	0.002			-0.013	
	(0.04)			(0.19)	
Age 34-40	0.044				0.164
	(0.68)				(1.2)
Observations	2650	477	940	848	385
R-squared	0.03	0.03	0.03	0.05	0.06

Table 5. OLS regressions: Change in financial satisfaction, satisfaction with occupation, housing satisfaction, and satisfaction with relatives (partner, mother, and father) as dependent variables, main life transitions as explanatory variables - all age intervals pooled

	Financial satisfaction	Satisfaction with occupation	Housing satisfaction	Satisfaction with partner	Satisfaction with mother	Satisfaction with father
Partnership formation	0.222	-0.166	0.148	0.38	0.103	0.113
	(3.65)**	(2.41)*	(2.24)*	(5.73)**	(2.19)*	(2.04)*
School-to-work	0.599	-0.195	0.028	0.083	-0.049	-0.01
	(10.24)**	(2.94)**	(0.43)	(1.36)	(1.09)	(0.18)
Parenting (child 1yr-)	-0.069	0.093	0.15	-0.029	-0.137	-0.034
	(0.85)	(1.01)	(1.70)+	(0.38)	(2.20)*	(0.46)
Parenting (child 2yrs+)	-0.171	0.027	-0.073	-0.181	-0.161	-0.141
	(2.43)*	-0.34	(0.96)	(2.64)**	(2.93)**	(2.17)*
Partnership diss (with child)	-0.443	-0.297	-0.208	-0.157	0.059	0.202
	(3.62)**	(2.15)*	(1.55)	(1.28)	(0.63)	(1.76)+
Partnership diss (without child)	-0.216	-0.085	-0.221	-0.403	0.065	-0.023
	(1.69)+	(0.59)	(1.6)	(2.89)**	(0.66)	(0.2)
No trans (major completed)	0.099	-0.204	-0.01	0.008	-0.045	-0.015
	(1.51)	(2.75)**	(0.15)	(0.12)	(0.87)	(0.25)
Age 22-26	-0.108	0.127	0.012	-0.065	-0.108	-0.113
	(1.74)+	(1.81)+	(0.17)	(0.92)	(2.25)*	(2.02)*
Age 26-30/32	0.133	0.137	0.233	-0.09	-0.056	-0.127
	(2.57)*	(2.34)*	(4.15)**	(1.61)	(1.42)	(2.69)**
Age 30-34/36	0.111	0.236	0.115	-0.161	-0.091	-0.124
	(1.99)*	(3.74)**	(1.89)+	(2.72)**	(2.10)*	(2.38)*
Age 34-40	0.113	0.284	0.12	-0.246	-0.059	-0.03
	(1.52)	(3.36)**	(1.48)	(3.24)**	(1)	(0.42)
Observations	2632	2579	2629	1933	2500	2301
R-squared	0.09	0.01	0.03	0.05	0.02	0.02

Absolute value of t statistics in parentheses;
+ significant at 10%; * significant at 5%; ** significant at 1%

Appendix A – Variable Description

Table A1. Description of all variables used in the analysis		
Variable	**Question asked**	**Response categories**
Satisfaction variables		
life satisfaction	Answer to the question: "Are you satisfied or dissatisfied with life in general right now?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
financial satisfaction	Answer to the question: "Are you satisfied or dissatisfied with economic situation in general right now?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
satisfaction with occupation	Answer to the question: "Are you satisfied or dissatisfied with what you are currently doing?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
satisfaction with housing	Answer to the question: "Are you satisfied or dissatisfied with your housing situation?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
satisfaction with partner	Answer to the question: "Are you satisfied or dissatisfied with your relationship with your partner?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
satisfaction with mother	Answer to the question: "Are you satisfied or dissatisfied with your relationship with your mother?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
satisfaction with father	Answer to the question: "Are you satisfied or dissatisfied with your relationship with your father?"	scale 1 - 5 with 1 - very dissatisfied, and5 = very satisfied
Transition variables and variables used for their construction		
school-to-work transition 99-03 (03-09)	Dummy variable taking the value 1 if the respondent achieved his or her highest level of education in between 1999 and 2003 (2003 and 2009)	0 - other 1 - completed school-to-work transition in 99-03 (03-09)
partnership formation 99-03 (03-09)	Dummy variable taking the value 1 if the respondent went from being single living alone in 1999 (2003) to being in a marriage or cohabitation in 2003 (2009)	0 - other 1 - experienced partnership formation in 99-03 (03-09)
parenting transition 99-03 (03-09)	Dummy variable taking the value 1 if the respondent had the first biological or adoptive child born in 1999-2003 (2003-2009) (see below for parent status construction); and 0 otherwise	0 - other 1 - completed parenting transition in 99-03 (03-09)
partnership dissolution 99-03 (03-09)	Dummy variable taking the value 1 if the respondent went from being in a marriage or cohabitation in 1999 (2003) to being single living alone, divorced or widowed (including divorced/widowed cohabiting) in 2003 (2009)	0 - other 1 - experienced partnership dissolution in 99-03 (03-09)
marital status	Marital status from Swedish register which classifies people as single, married, divorced or widowed, combined with self-reported information on cohabiting.	1. single living alone; 2. single cohabiting; 3. married; 4. divorced or widowed living alone; 5. divorced or widowed cohabiting
education level	Education level from the Swedish register data	compulsory 9 years; secondary <3 years secondary 3 years; post-secondary <3 years post-secondary >=3 years/postgraduate

Table A1 continued		
parent status	1999 Survey: Q36a_1-Q36c_1: Year of birth, biological child 1-3 Q36a_4-Q36c_4: Year of birth, other child 1-3 2003 Survey: Q37a_1-Q37d_1: Year of birth, child 1-4 living in household Q37a_4-Q37d_4: Child 1-4 is: respondent's and partner's child, respondent's but not partner's child, partner's but not respondent's child, adoptive child, foster-child 2009 Survey: F20a1_ar_IP-F20a5_ar_IP: Year of birth, biological or adoptive child 1-5 F20d1_IP-F20d5_IP: Does the child live with you?	Based on the answers to the YAPS questions respondents were classified in the following parent categories: 1. Non-parents (no children born by 2009) 2. Parents in 2009 (first child born in 2003-2009) 3. Parents in 2003 and 2009 (first child born in 1999-2003, more children born in 2003-2009) 4. Parents in 2003 not 2009 (first child born in 1999-2003, no children born in 2003-2009)
Other variables		
cohort	Register data for year person was born	1968, 1972, or 1976
gender	Register data for gender of person surveyed	male or female
work income	Register information on "income from work before tax" for the years 1998, 2002, and 2008 (in thousands of SEK)	Real thousands of SEK, adjusted for inflation in 2002 and 2008 using the CPI index from Sweden Statistics
occupation	Classification constructed from two questions asked in the YAPS survey: 1 - What is your main occupation? What are your main tasks at work? 2 - What is your current main activity?	Occupation categories used in the paper are divided into following groups: 1) Student 2) Unemployed 3) Inactive (including military service, parental leave, housekeeping and those participating in an active labor market program such as adult learning) 4) Goods production 5) Service production 6) Assistant non-manual 7) Intermediate non-manual 8)Farmer/self-employed non-professional 9) Professional/higher manual/executive
partner's occupation	What is your partner's occupation at the moment?	1) Permanent work; 2) Casual work; 3) Own business; 4) Studies; 5) Adult learning; 6) Employment measures; 7) Unemployed >6months; 8) Unemployed <6months; 9) Parental leave 10) Housekeeping; 11) Military service 12) Other

Table A1 continued		
child's age	Constructed based on the YAPS questions about the year in which each child was born. The child's age was classified as follows: In 2003: 1 year or less: If child was born in 2003 or 2002 2 years or more: if child was born in 2001 or earlier In 2009: 1 year or less: If child was born in 2009 or 2008 2 years or more: if child was born in 2007 or earlier	Child age categories used: 1 year or less, 2 years or more
parental leave	Dummy variable taking the value 1 if the respondent reported his or her main activity to be "parental leave" during the time of the survey	0 - other 1 - person currently on parental leave
respondent's age	Age based on the register data for birth cohort and on the year survey was conducted	Age assigned as follows for each birth cohort: 1968 cohort: 30 in 1999, 34 in 2003, 40 in 2009 1972 cohort: 26 in 1999, 30 in 2003, 36 in 2009 1976 cohort: 22 in 1999, 26 in 2003, 30 in 2009

Appendix B – Additional analysis

Table B1. Life satisfaction changes associated with cohabitation and marriage formation, by age group								
	Age 22-26				Age 26-(30/32)			
Type of partnership formed:	N	LS at age 22	LS at age 26	Change in LS	N	LS at age 26	LS at age 30/32	Change in LS
Cohabitation formation	53	3.79	3.91	0.11	69	3.64	4.01	0.38
Marriage formation	8	4.13	3.75	-0.38	20	4.15	4.20	0.05
	Age 30-(34/36)				Age 34-40			
Type of partnership formed:	N	LS at age 30	LS at age 34/36	Change in LS	N	LS at age 34	LS at age 40	Change in LS
Cohabitation formation	46	3.41	3.87	0.46	16	3.69	4.38	0.69
Marriage formation	11	3.82	4.00	0.18	6	4.00	4.17	0.17

Table B2. Indirect test for attrition bias - OLS regressions of variables of interest (in 99-03 changes) on subsequent attrition in 2009							
	Life sat change 99-03	Sat econ change 99-03	Sat house change 99-03	Sat occup change 99-03	Sat partner change 99-03	Sat mother change 99-03	Sat father change 99-03
Attrition 09	-0.05	0.043	-0.065	0.067	-0.057	0.038	0.032
	(1.06)	(0.75)	(1.07)	(1.06)	(0.97)	(0.93)	(0.66)
Constant	0.023	0.122	0.103	-0.003	-0.048	-0.115	-0.147
	-0.83	(3.70)**	(2.94)**	-0.08	-1.4	(4.82)**	(5.23)**
Observations	2049	2052	2046	2004	1414	1983	1857
R-squared	0	0	0	0	0	0	0
Absolute value of t statistics in parentheses							
+ significant at 10%; * significant at 5%; ** significant at 1%							

Table B3. OLS regressions: Change in life satisfaction as dependent variable, main life transitions and age intervals as explanatory variables, all age intervals/cohorts included				
	Including time trend for 2003 to 2009		Including cohort dummies	
	1	2	3	4
Age 22-26	0.038	-0.04	0.038	-0.041
	(0.82)	(1.2)	(0.82)	(1.2)
Age 26-30/32	0.049	0.013	0.046	0.01
	(1.21)	(0.48)	(1)	(0.29)
Age 30-34/36	-0.036	-0.003	-0.032	0.004
	(0.83)	(0.13)	(0.39)	(0.1)
Age 34-40	-0.041	0.034	-0.016	0.066
	(0.59)	(2.19)	(0.15)	(1.61)
Partnership formation		0.292		0.292
		(4.24)*		(4.24)*
School-to-work		-0.023		-0.022
		(0.44)		(0.43)
Parenting (child 1yr-)		0.245		0.246
		(8.56)**		(8.74)**
Parenting (child 2yrs+)		-0.131		-0.13
		(2.61)+		(2.56)+
Partnership diss (with child)		-0.343		-0.344
		(2.46)+		(2.48)+
Partnership diss (without child)		-0.099		-0.097
		(1.4)		(1.35)
No trans (major completed)		-0.135		-0.135
		(3.29)*		(3.29)*
2003-2009 time trend	0.008	0.01		
	(0.16)	(0.48)		
1976 birth cohort			0.014	0.015
			(0.22)	(1.86)
1968 birth cohort			-0.018	-0.022
			(0.19)	(1.59)
Observations	2650	2650	2650	2650
R-squared	0	0.03	0	0.03
Absolute value of t statistics in parentheses; + significant at 10%; * significant at 5%; ** significant at 1%				

Table B4. OLS regressions: Change in life satisfaction as dependent variable, main life transitions as explanatory variables. Dividing those going through school-to-work transition by occupation type after education completion					
	All age intervals pooled	Age interval 22-26	Age interval 26-30/32	Age interval 30-34/36	Age interval 34-40
Partnership formation	0.298	0.128	0.28	0.468	0.418
	(5.66)**	(1.23)	(3.47)**	(4.42)**	(2.03)*
School-to-work (low level occup)	-0.11	-0.304	0.062	-0.357	no obs.
	(0.82)	(1.23)	(0.34)	(1.07)	
School-to-work (med level occup)	0.008	0.188	0.15	-0.217	-0.349
	(0.08)	(1.07)	(0.91)	(1.08)	(1.25)
School-to-work (high level occup)	-0.023	-0.135	0.04	0.011	0.078
	(0.38)	(1.22)	(0.45)	(0.09)	(0.29)
Parenting (child 1yr-)	0.255	0.336	0.27	0.173	0.285
	(3.56)**	(1.93)+	(2.69)**	(1.3)	(0.74)
Parenting (child 2yrs+)	-0.132	-0.231	-0.095	-0.093	-0.584
	(2.16)*	(1.11)	(1.09)	(0.9)	(2.54)*
Partnership diss (with child)	-0.342	-0.58	-0.074	-0.295	-0.702
	(3.24)**	(0.99)	(0.39)	(1.83)+	(2.86)**
Partnership diss (without child)	-0.1	-0.304	-0.121	0.015	0.062
	(0.91)	(1.6)	(0.59)	(0.07)	(0.15)
No trans (major completed)	-0.133	0.152	-0.067	-0.172	-0.199
	(2.34)*	(0.59)	(0.64)	(1.94)+	(1.3)
Age 22-26	-0.041	0.035			
	(0.77)	(0.48)			
Age 26-30/32	0.014		-0.029		
	(0.32)		(0.51)		
Age 30-34/36	-0.001			-0.008	
	(0.02)			(0.12)	
Age 34-40	0.044				0.131
	(0.68)				(0.96)
Observations	2637	476	935	845	381
R-squared	0.03	0.03	0.03	0.05	0.07
Absolute value of t statistics in parentheses; + significant at 10%; * significant at 5%; ** significant at 1%					

Table B5. OLS regressions: Change in life satisfaction as dependent variable, main life transitions as explanatory variables. Dividing those going through school-to-work transition by level of final education (postsecondary, or secondary and less)

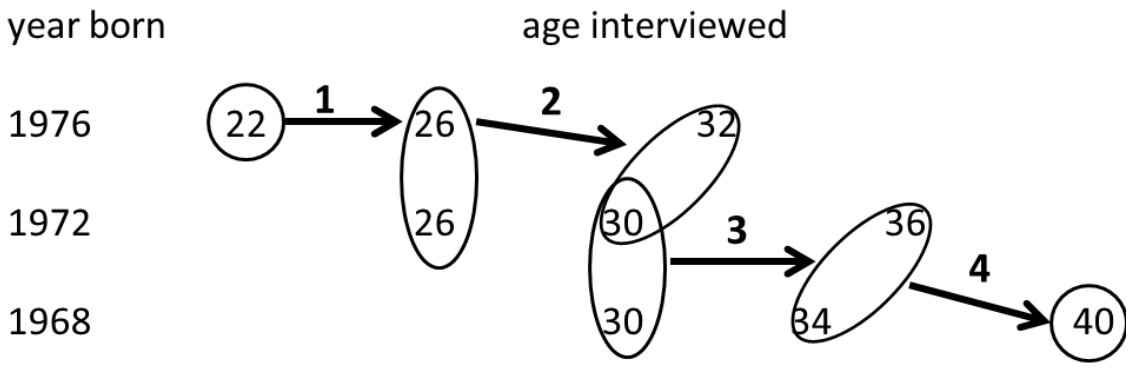
	All age intervals pooled	Age interval 22-26	Age interval 26-30/32	Age interval 30-34/36	Age interval 34-40
Partnership formation	0.293	0.14	0.274	0.478	0.33
	(5.60)**	(1.35)	(3.42)**	(4.53)**	(1.62)
School-to-work (sec or less)	0.144	0.128	0.245	0.102	-0.125
	(1.33)	(0.58)	(1.47)	(0.45)	(0.38)
School-to-work (postsec)	-0.055	-0.118	0.038	-0.101	-0.204
	(1.02)	(1.17)	(0.47)	(0.89)	(0.89)
Parenting (child 1yr-)	0.249	0.279	0.272	0.173	0.296
	(3.54)**	(1.68)+	(2.78)**	(1.3)	(0.76)
Parenting (child 2yrs+)	-0.127	-0.238	-0.091	-0.078	-0.579
	(2.09)*	(1.14)	(1.05)	(0.75)	(2.50)*
Partnership diss (with child)	-0.345	-0.583	-0.078	-0.295	-0.751
	(3.27)**	(1)	(0.41)	(1.84)+	(3.06)**
Partnership diss (without child)	-0.102	-0.252	-0.131	0.023	0.008
	(0.93)	(1.34)	(0.65)	(0.11)	(0.02)
No trans (major completed)	-0.132	0.153	-0.068	-0.165	-0.232
	(2.33)*	(0.59)	(0.65)	(1.87)+	(1.51)
Age 22-26	-0.038	0.034			
	(0.71)	(0.47)			
Age 26-30/32	0.016		-0.029		
	(0.37)		(0.51)		
Age 30-34/36	-0.0002			-0.015	
	(0)			(0.21)	
Age 34-40	0.04				0.164
	(0.61)				(1.2)
Observations	2650	477	940	848	385
R-squared	0.03	0.03	0.03	0.05	0.06

Absolute value of t statistics in parentheses;
+ significant at 10%; * significant at 5%; ** significant at 1%

Appendix C – Further details on age interval construction

Given the focus on changes in life satisfaction and life transitions over time, the first step of the analysis is to identify the age intervals for which these changes are described. This is done using observations for young adults from three different cohorts at three points in time and pooling respondents from different cohorts observed at the same (or similar) age (Figure C1). Since a first difference analysis is used throughout the study, the main criterion used to pool the cohorts in constructing the age intervals is that observations have to be available both at the beginning and end of each age period. Given this criterion four age intervals are constructed: age 22-26 (1976 cohort in 99 and 03), age 26-30/32 (1976 cohort in 03 and 09 and 1972 cohort in 99 and 03), age 30-34/36 (1972 cohort in 03 and 09, and 1968 cohort in 99 and 03), and age 34-40 (1968 cohort in 03 and 09). In Figure C1, these age intervals correspond to arrows numbered one (22-26), two (26-30/32), three (30-34/36), and four (34-40), respectively. Notice that while the 1968 cohort is observed at age 30, it is not included in the age interval 26-30/32, because observations at the beginning of this period are not available. Because the young adults were surveyed at three point in time, each respondent is included in two consecutive age intervals, covering periods 99 through 03, and 03 through 09 respectively. This implies that the respondents born in 1976, for example, are included first in the 22 through 26 age span (covering 99-03), and second in the 26 through 30/32 period (covering 03-09) (Figure C1).

Figure C1. Pooling of cohorts for age interval creation



Notes:
- each circle represents a group pooled together;
- arrows represent age intervals during which changes are studied