Class Inequality and the Adult Attainment Project among Middle-Aged Men in the United States, 1980-2010.

Jeremy Pais
Department of Sociology
University of Connecticut
344 Mansfield Rd. Unit 2068
Storrs, CT 06269-2068
Phone: 860-486-0391
E-mail: j.pais@uconn.edu

Matt Ray
Department of Sociology
University of Connecticut
344 Mansfield Rd. Unit 2068
Storrs, CT 06269-2068

September 2014

Word count (including notes & references): 10,222
Number of Figures: 2
Number of Tables: 4

Running Head: *Class Inequality and the American Dream*

Key Words: inequality; latent construct; measurement invariance, social stratification; transition-to-adulthood;

Class Inequality and the Adult Attainment Project among Middle-Aged Men in the United States, 1980-2010.

Abstract

This study advances the concept of an adult attainment project (AAP). The idea of AAP builds on a literature that examines traditional milestones of adulthood as a series of status attainments: labor force activity, residential independence, marriage, parenthood, and homeownership. This study treats these status indicators as parts of a long-term project that is assessed in mid-adulthood (ages 35-45). Several hypotheses guide our expectations concerning class inequality and the changing nature of AAP. Divergence hypotheses maintain that the conditions and constraints have gotten disproportionately tougher for those at the bottom of the income distribution, thus creating greater class divergence in the rates of AAP success over time. Alternatively, convergence hypotheses posit that an increasing cultural tolerance for non-traditional family forms and more individualized pathways into adulthood have diminished class distinctions concerning AAP. This study uses factor analytic models on data from the Current Population Survey in conjunction with formal invariance testing to evaluate AAP as a latent construct, and to and provide evidence in support of divergence or convergence hypotheses. The results find some evidence of convergence via the increasing similarity across income groups in the relative importance given to resident parenthood for AAP success. However, descriptive analyses support the class divergence perspective, and factorial invariance models provide more support for the adaptive differentiation hypothesis, a close variant of the class divergence perspective.

Class Inequality and the Adult Attainment Project among Middle-Aged Men in the United States, 1980-2010.

Introduction

The pursuit of 'the American Dream' is the quintessential adult attainment project. The American Dream represents a powerful collective belief in an opportunity structure that is capable of providing individuals from modest beginnings an equal chance to earn a living, to own property, and to start a family. The roots of this opportunity structure lie in modernity—which, through public education, improvements to life expectancy, and economic growth—fostered a social environment that allowed a normative life course pattern to emerge (Shanahan 2000). Although the American Dream conjures fanciful notions of becoming rich and famous, it is the boilerplate version based on traditional milestones of adulthood—e.g., developing independence, establishing a reliable livelihood (however modest), family formation, and homeownership—that historically has been attainable, albeit at different rates, for the masses in a post-WWII era.

Perhaps more so today than any time in the recent past there is skepticism about whether economic prosperity is reaching lower and middle income families (Danziger and Ratner 2010; Duncan, Boisjoly, and Smeeding 1996; Kefalas 2003; Moen and Roehling 2005; Smith 2012). Increasing levels of income inequality (Autor, Katz and Kearney 2008; Piketty and Saez 2003) coupled with static or even decreasing rates of social mobility (Mishel et al. 2014: 163-173), the proliferation of precarious employment conditions (Kallenberg 2009), and the increasing importance of higher education in gaining access to 'good jobs' (Settersten and Ray 2010a) is raising concerns about equitable access to the opportunity structure. Many fear these structural conditions are jeopardizing the rates of successful adult transitions because the economic

independence needed to pursue an adult attainment project has become more elusive (Sironi and Furstenberg 2012; although cf. Danzinger and Rouse 2007). These developments suggest that the gap between lower income and upper income groups in their ability to fulfill their adult attainment projects has widened in recent decades.

This study advances the concept of an *adult attainment project* (AAP) to study this issue. The idea of AAP builds on a literature that examines traditional milestones of adulthood as a series of status attainments: education, employment, residential independence, marriage, parenting, etc. (Oesterle et al. 2010; Osgood et al. 2005; Sandefur, Eggerling-Boeck, and Park 2005). Instead of treating each status attainment individually during young adulthood, this study treats these status indicators as parts of a long-term project that is best assessed in middle adulthood. Several hypotheses guide our expectations concerning class inequality and the changing nature of AAP. Divergence hypotheses maintain that the conditions and constraints have gotten disproportionately tougher for those at the bottom of the income distribution, thus creating greater class divergence in the rates of AAP success over time. Alternatively, increasing cultural tolerance for different family forms (Cherlin 2004) and increasingly individualized pathways into adulthood (Elzinga and Liefbroer 2007) may render traditional components of the AAP antiquated in a way that makes the adult attainment project unrecognizable today compared to a generation ago. If AAP goals have become significantly more individualized (cf. Shanahan 2000) then we may expect AAP success to be less dependent on one's social class standing. Convergence hypotheses are informed by this perspective.

To examine these hypotheses in detail, we employ factor analytic models to evaluate AAP as a latent construct (e.g., Kamata and Bauer 2008). This evaluation treats the normative

existence of AAP as an empirical question. [1] To unpack the nature of change in AAP over time, a rigorous examination of the latent construct is conducted using formal invariance testing, as well as illustrations of the item-response difficulties and discriminations (i.e., two-parameter item characteristic curves; Harris 1989). The measurement invariance analysis helps us determine whether the nature of the AAP change is simply a difference in degree from one decade to the next or whether a more fundamental societal change has occurred making AAPs difficult to compare across time. A close assessment of the components that form the basis of the latent construct will provide a comprehensive assessment of the changes to the adult attainment project over the last thirty years, and provide evidence in support of divergence or convergence hypotheses.

Class Inequality and the Transition-to-adulthood

A normative adult attainment project is actualized by achieving social statuses that are typically associated with the transition-to-adulthood. Five socio-demographic markers have traditionally represented the transition-to-adulthood: completing school, entering the labor market, leaving the parental home, getting married, and having children (Danziger and Rouse 2007; Furstenberg, Rumbaut, and Settersten 2005; Hogan and Astone 1986; Sage and Johnson 2012; Shanahan 2000; Sironi and Furstenberg 2012; Tanner and Yabiku 1999; Waters et al 2011). The literature on the transition-to-adulthood focuses exclusively on the period of young adulthood (between late adolescence and mid-thirties) when most of the variation in the

[1] "Normative" is used throughout the article to convey mainstream beliefs, values, and ideas about typical status attainments over the life course. The use of the term should not be confused with any judgment made by the authors as to whether normative patterns are desirable or not, on either an individual or societal level. For us normative patterns simply reflects our understanding of what society at large views as mainstream.

transition process occurs. Today, young adults are considerably more likely to delay the transition into adulthood and there is more variability in the sequencing of adult milestones than in the recent past.

This study picks up where the transition-to-adulthood literature leaves off. Unlike young adulthood, by the time individuals reach their mid-thirties to early forties most will be self-sufficient, most will have gotten married, most will have had children, and a majority will have bought homes—an iconic status symbol of the American Dream. According to the 2010 American Community Survey, labor-force participation for men[2] between the ages of 35 and 45 is approximately 91%; about 65% of men between the ages of 35 and 45 are married; 57% are living with their children;[3] and the homeownership rate is 67% (author's calculations). Although the timing and sequencing of adult attainment markers have changed considerably over time, a large majority of middle-aged men eventually become self-sufficient and start their own families. When these outcomes are viewed separately as independent statuses, and without class or other socio-demographic distinctions, there seems to be little concern about whether or not middle-aged adults eventually attain traditional adult status markers.

However, if we look at these status outcomes as the key pieces of a larger attainment project—a project that is greater than the sum of its parts—then the prognosis may be quite different. In any era it is more difficult to attain and maintain multiple statuses than any one status, and this difficulty will inevitably cause some individuals to redefine their attainment

[2] We focus on men because the adult attainment project is more nuanced and complicated among women in ways that our data are unable to unearth, especially when examining trends over time by social class. For example, it is difficult to stratify women in the upper quintile that are stay at home mothers versus mothers with careers. Our data doesn't account for AAP preferences, and while this is true for men as well, the normative ideal over the duration of the study period (i.e., that men should be in the labor force) is a safer assumption for men.

[3] Census data identifies parents that have children living in the household. Normative AAP success is defined by having children that are living in the same household, as opposed to simply having children that may or may not be living in the same household. Comparatively, the rate of fatherhood, regardless of living situation, among men between the ages of 35 and 45 is approximately 71% (source: *General Social Survey*).

project while others will continue to strive toward fulfillment. Yet, today many believe that the normative attainment project has become less desirable and more difficult to fulfill and maintain than in the past. Whether these concerns are unique to young adults, or whether these concerns significantly impinge upon older age groups as well, is largely an open question. Thus, questions concerning the extent of AAP success, as well as the ways in which the attainment project itself may have changed over time and for whom, become more substantively interesting when the transition-to-adulthood statuses are viewed holistically among mature adults.

Social class differences in the transition-to-adulthood are sure to exist in stratified societies, and this is especially true in the United States (Furstenberg 2008). In Settersten and Ray's (2010a) assessment of the literature, they identify two modal groups. One group of young adults tends to delay marriage and parenthood, and even residential independence, while they pursue the education and training needed for entry into more lucrative career paths. They refer to this group as "swimmers" because they seem to be well positioned to pursue their adult attainment projects. The second group tends to have children much sooner in life and to prefer entry into the labor-force over having to take on college loan debt. They refer to this group as "treaders;" and, although treaders may be first to start their adult attainment projects they soon find their projects stalled as they struggle to stay afloat.

In a somewhat predictable fashion, swimmers are more likely to come from an advantaged background while treaders tend to have limited access to the financial, cultural, and social capital that is needed to advance their projects (although vocational training has historically been a viable pathway for some; cf. Staff and Mortimer 2008). During the transition-to-adulthood period, a substantial amount of material support for young adults comes from parents. Schoeni and Ross (2005) find parents spend an average of $38,000 (2001 dollars) in

housing, food, education, and discretionary cash on young adults between the ages of 18 and 34, and young adults in the top income quartile receive over three times as much assistance as those in the bottom quartile. In modeling the diverse kinds of pathways into adulthood, Sandefur, Eggerling-Boeck, and Park (2005) find those off to a "good start"—defined as delayed parenthood and attainment of a BA degree—are more likely to have parents with college degrees. Osgood (et al. 2005) finds young adults that are parents by age 24 who are without career opportunities or post-secondary education are more likely to come from poorer and less educated households. Oesterle (et al. 2010) finds unmarried young men with children, compared to men with post-secondary education and no children, are more likely to have done poorly in high school and to have been born to a teenage mother. Given the class-based disparities among young adults in the transition-to-adulthood, it is likely that these disparities carry forward to some extent to affect the adult attainment projects of mature adults. We address how these class-based disparities may have changed over time in the following section.

Class Inequality and the Changing Nature of the Adult Attainment Project

Two transition-to-adulthood perspectives shape our approach to studying the AAP socioeconomic gap over time: the standardization perspective and individualized perspective (for review see Shanahan 2000). Standardization perspectives credit modernity with providing an opportunity structure that fosters a normative set of values and goals for the transition-to-adulthood. From this perspective, self-sufficiency, family formation, and homeownership are assumed to be desired, not by all, but by a large majority. Conversely, individualized perspectives have emerged in late modernity as a way to explain heterogeneous pathways to adulthood. From an individualized perspective, changing social, cultural, and economic

conditions in contemporary society have weakened AAP norms, giving individuals more flexibility to adapt to changes and/or more freedom to define their individualized adult attainment projects.

Two empirical dimensions to the AAP socioeconomic gap overlap with these transition-to-adulthood perspectives. The first dimension involves the changing levels of AAP completion. This dimension must rely on the standardization assumption for reliable comparisons over time. That is, we must assume that the normative process of AAP is generally the same either within and/or between social classes over the duration of the study period. Logically the AAP gap between lower and upper classes when examined over a period of time can do one of three things: the gap can grow; the gap can narrow; or the gap can stay constant.

The second dimension deals with the changing configural composition of AAP. Changes to the configural composition of AAP evoke the individualized perspective. Over time particular adult status markers may become more or less desirable and/or easier or more difficult to attain (item difficulties), and particular adult status markers may also contribute more or less weight over time to what constitutes AAP success (item discriminations). Some statuses may be more significant than others in defining AAP success and their importance may have changed over time. We refer to item difficulties and item discriminations as the components that constitute the AAP configural profile. Here too, there are three potential outcomes: AAP profiles between lower and upper classes can become more similar, become more disparate, or stay constant. Along these two dimensions we have divergence hypotheses, convergence hypotheses, and null hypotheses.

Concerns about equitable access to the opportunity structure inform our initial expectation, the *class divergence hypothesis*. Divergence hypotheses point to significant macro-

level economic forces that have made it harder for lower and middle income individuals to pursue their adult attainment projects. The class divergence hypothesis maintains that the structure of the adult attainment project remains largely unchanged, irrespective of social class and time period. This presupposition evokes a strong version of the standardization assumption: That the nature of class inequality has changed, not the fundamental nature of the adult attainment project itself. The class divergence hypothesis anticipates declining rates of AAP completion especially among lower income groups.

An auxiliary divergence hypothesis that does not require as strong of a standardization assumption is the *adaptive differentiation hypothesis*. The adaptive differentiation hypothesis posits that members of different social classes have adapted to a different set of social conditions and constraints (e.g., Silva 2012). For example, working class communities finding it difficult to sustain a livelihood and homeownership might put more significance on family formation (being married and having children) in defining AAP success than upper-class individuals, or vice versa. These adaptations will affect the weight applied to each AAP component differently for upper class and lower class members. As a result, the configural profile of AAP will be different across socioeconomic classes, thus making assessments of AAP change over time only valid *within* social classes. From this perspective, it is also possible that within class levels of AAP completion will be relatively stable over time as each social class adapts in ways that should optimize their chances for AAP success. Therefore, there is likely to be less between class differences in the class specific levels of AAP completion over time than we would expect from the class divergence hypothesis. In accordance with the divergence perspective, however, we should still anticipate greater within class declines of AAP completion among the lower class groups.

The adaptive differentiation hypothesis partially relaxes the standardization assumption, but it does not fully relax this assumption because the adaptive process is held constant within each social class over time. This means that the within class configural profile should remain relatively unchanged over the duration of the study period. However, the possibly exists that the adaptive measures taken by each respective social class may be very different today than thirty years ago, hence calling into question this assumption. The *profile divergence hypothesis* accounts for this possibility. The profile divergence hypothesis anticipates a diverging configural profile over time as each social class responds in different ways to changing macro-economic and social conditions. Profile divergence is a noteworthy indicator of an increasing class divide as the components that constitute AAP will have become more distinctive by class. Unlike the adaptive differentiation hypothesis, however, diverging AAP profiles means that we will be unable to reliably compare the levels of AAP completion either within or between social classes.

An alternative perspective informs convergence hypotheses. The *profile convergence hypothesis* posits that the easing of social norms regarding parenthood and marriage across the social class spectrum has likely made social background less of a differentiating factor in defining AAP success. For example, upper-class professionals are taking longer than ever to marry and have children, (Furstenberg 2008), some are forgoing family formation entirely (Kasarda 1986); and women breadwinner households with stay-at-home fathers are becoming more common among professionals (Medved 2009). Working class households may also feel less normative pressure to get married, stay married, and perhaps to a lesser extent, have children. And although the motivations behind family formation decisions may differ between classes, we should expect to find growing class similarity in the development of non-normative attainment profiles. Accordingly, class specific AAP profiles (i.e., the weights applied to the item

difficulties and item discriminations that represent AAP components) should become more similar in their non-traditional AAP heterogeneity over time. Like the profile divergence perspective, support for profile convergence will preclude reliable assessments of AAP completion over time. There is no support in the literature for a class convergence hypothesis that relies on the standardization assumption (i.e., the converse of the class divergence hypothesis).

Data and Methods

Data for this study come from the Integrated Public Use Microdata Series (IPUMS) for the 1980, 1990, 2000, 2010 March Supplement of the Current Population Survey (King et al. 2010). The Current Population Survey (CPS) is conducted by the U.S. Census Bureau and the Bureau of Labor Statistics on randomly selected U.S. households. The CPS contains pertinent questions about demographic characteristics, as well as labor-force experiences. We focus on an age group of men between 35 and 45 that should be well positioned socially and economically to complete their adult attainment projects. Our primary interest, however, is the class-based changes in the status attainment profiles over a three decade period. CPS data (N=50,869) provide large enough sample sizes for adequate cell coverage across an array of achieved status combinations. These data are organized into pooled cross-sections which are standardized across time by IPUMS which greatly facilitates temporal comparisons. All analyses are done using CPS sampling weights.

Social class is measured using family-income quintiles, which include those with negative and/or zero family income.[4] Family-income quintiles provide a straightforward and

[4]Also note that adequate measures of wealth via alternative data sources (e.g., PSID) are unavailable for the duration of the study period.

temporally consistent proxy to study class-based outcomes over time. Although certainly not a comprehensive indicator of social class, income quintiles require fewer assumptions than the alternatives (e.g., education and/or occupational status based measures of class). Cross-sectional measures of social class have some obvious limitations. Most notably, we are unable to capture the association between social mobility and AAP fulfillment because we lack complete information about social class origins. This limits our ability to explore why social class profiles of AAP fulfillment have changed over time. However, a pooled cross-sectional research design is still quite useful in examining the nature of this change and in providing evidence in favor or against divergence and convergence hypotheses.

The focal adult attainment statuses for this study include: (1) homeownership; (2) children; (3) marital status; (4) labor-force activity; and (5) residential independence. It is the combination of these achieved statuses by mid-adulthood that serve as our metric for understanding changes to the adult attainment project.[5] All variables are dummy coded, 1 signifying a currently achieved status or 0 otherwise. *Homeownership* includes those living in an owner occupied dwelling (or are paying on a mortgage on the dwelling). *Children* include whether or not the respondent has one or more of their own children living in their household; if the respondent has no children or children living in a different household the code is 0. *Marital status* includes currently separated relationships, but codes widows, divorcees, and others as zeros.[6] *Labor-force activity* includes either being in the labor-force and/or engaged in some form of educational training. We incorporate educational training even if the respondent is not

[5] We are purposely not interested with the sequencing of these adult attainments. Sequencing is best studied under the preview of the transition to adulthood literature.
[6] Ideally we would have liked to incorporate cohabitating couples, but the data lacked that specificity over the duration of the study period.

working because it captures the process of striving to improve their labor market position.[7] The quality of employment, although important, is not considered essential for AAP success because of its connection to income. *Residential independence* is determined based on whether they are the head-of-household or the spouse of the head. Residential independence is distinct from homeownership as it includes those that are renting and excludes those living in an owner-occupied dwelling where they (or spouse) are not the householder (e.g., excludes those living with parents in a home owed by the parents). These five status indicators best capture the traditional nuclear family living situation with a productive father living with children and a spouse in a home they own.

Factor Analytic Models and Item Response Theory: Item response theory and factor analytic methods give researchers the tools to evaluate latent constructs. Latent constructs are measures of phenomena that cannot be observed directly (e.g., AAP) but rather must be inferred from manifest indicators that are directly observed (e.g., status attainment indicators). Factor analytic models with categorical variables (as is the case here) define probabilistic, nonlinear relationships between the latent construct and its manifest indicators. Manifest indicators typically contain random and/or systematic measurement error, and factor analytic methods take these errors into account. The estimated parameters from a factor analytic model, in combination with measurement invariance tests, can be used to better understand the characteristics of a latent construct, and specifically for our purposes, to better understand the temporal changes of the construct.

The first step is to establish factor unidimensionality via an exploratory factor analysis (EFA). This is done to ensure our adult attainment indicators (i.e., manifest indicators) only inform one version of an adult attainment project. That is, an EFA is done to ensure that we have

[7] The corollary in the transition to adulthood literature is Edelman et al. (2006).

one latent construct, not two or more different kinds of hypothetical constructs. The results affirm our expectation that the five status attainment indicators load into one primary latent construct: The eigenvalue for the first factor is 3.03, and the eigenvalues drop precipitously down to .0875 for the second factor (results not shown). Following the EFA, we conduct a confirmatory factor analysis (CFA) to get model fit statistics and to describe the modal patterns in the data. These findings are discussed in the results section.

The central aim for this paper is determine whether the AAP profile has changed, in what ways, and for which income groups. To examine these questions, we rely on factorial invariance testing within a multi-group framework (e.g., Gregorich 2006).[8] A multi-group factorial invariance analysis allows us to compare across income quintiles and across decades the *factor loadings* (item discriminations)—which tell us the strength of the association between a manifest indicator and the latent construct, the *thresholds* (item difficulties)—which tell us the probability of an affirmative status attainment at particular levels of the AAP construct; and the *mean values* of the latent construct—which tells us whether AAP has gotten easier or more difficult to complete over time. Taken together these components are used to determine if the AAP profiles have changed in ways that support either the divergence or convergence hypotheses.

Using either the normal ogive (probits) or the logistic ogive (logits) distribution, a CFA with dichotomous indicators and a two-parameter item response model are mathematically equivalent. The factor loadings from a CFA can be converted into IRT item discriminations and the CFA thresholds can be converted into IRT item difficulties (Glockner-Rist and Hoijtink.

[8] With continuous manifest indicators there is also metric invariance testing, but because of identification restrictions needed for categorical data analysis the thresholds and factor loading are tested together. As a result, the metric invariance test is an intractable and unnecessary step (See Mplus website for technical references, http://www.statmodel.com). We could also do invariance testing to determine differential item functioning (DIF) within a MIMIC framework (MacIntosh and Hashim 2003). In supplemental models the results are similar (AAP harder to fulfill especially for lower income quintiles). However, the multigroup approach is preferred because it is more transparent and provides more flexibility with regard to equality restrictions.

2003; Kamata and Bauer 2008; Muthén & Asparouhov 2013). This conversion is useful for several reasons. First, item difficulties and item discriminations can be used to plot "item characteristic curves" which will provide a visual representation of the AAP profile (Harris 1989) and its changes over time. Second, item difficulties and item discriminations provide an intuitive standardization of the factor loadings and thresholds that allow us to compare specific components of the AAP construct. Item discriminations and difficulties are presented for the unrestricted model (i.e., no invariance restrictions on the loadings or thresholds). Factor loadings and thresholds are presented for the factorial invariance models, so that the equality restrictions placed on the loadings and thresholds are clearly identified, as are the reference groups for the mean values and variances of AAP. Finally, it is important to note that comparisons of AAP mean values within and across income quintiles over time are invalid unless factorial invariance is met. If the AAP profile has changed radically over time then assessments of whether or not AAP is easier or more difficult to fulfill cannot be done by simply examining mean values of AAP.

Results

A preliminary inspection of the transition-to-adulthood indicators by family income quintile between 1980 and 2010 provides more initial support for divergence hypotheses than convergence hypotheses. Figure 1 illustrates a modest degree of class divergence over time for all five status components of AAP. For example, the downward trend in homeownership has occurred for all men in this age group regardless of income quintile, but men in the lowest two income quintiles have seen the greatest drop. In 1980 the homeownership rate for lowest income earning men was about 56% but by 2010 the rate had dropped to near 40%. A very similar

pattern emerges for the other status indicators: a slight decline in the rates among the upper income quintiles and a more precipitous decline in the rates among the bottom two quintiles. For example, having children living at home among 35-45 year old men in the bottom two quintiles has fallen below the rate of 50%, while the upper two income quintiles have seen only slight fluctuation.[9] The same pattern emerges for marital status: In 2010, men in the bottom two income quintiles have less than a 50% chance of being married. This is a drop of approximately 30 percentage points among those most likely to be earning working-class incomes. Labor-force activity remains high for all income groups except the bottom quintile, but here too we see increasing class divergence. The rates of residential independence have declined most notably among the bottom two income quintiles, while the rates remain above 90% among the top two quintiles. These temporal patterns support divergence hypotheses. The adult attainment project, however, is essentially about the combined fulfillment of adult status markers, thus further analyses are needed to examine the prevalence of AAP success.

[Figure 1 about here]

The model fit statistics from a one factor universal CFA (i.e., ignoring the multiple groups of decades and income quintiles) are the following: RMSEA = .034; CFI = .997; TLI = .993; and a $\chi^2 = 302.63$, df = 5, $p < .05$. With the exception of the χ^2 statistic, the model fit looks acceptable. Although the χ^2 rejection of the null hypothesis is evidence against AAP as a hypothetical construct, rejection of the χ^2 null is not unusual when using a large sample size (e.g., 50k). Table 1 provides substantive and methodological information that can be used to better

[9] Part of the growing income disparity could be from higher income families having children later in the lifecourse. While this is also true among lower income families, the age delay has not been as pronounced. Therefore, there will be more 40 to 45 year old men in lower income groups that would have adult children that have moved out of the house than is the case among high income families. Restricting the sample to just 35 year-old men does reduce the income disparity, but the general pattern remains: the lower two income quintiles have seen greater declines in children living at home.

assess the performance of the AAP construct. Substantively, we find 32 different status combinations. These status combinations are ranked from most common to least common. The most frequent pattern is full AAP completion because all five status indictors are met: Nearly 47% of all men between the ages of 35 and 45 are homeowners, have children living at home, are married, active in the labor-force, and have attained residential independence. The next most common pattern meets all the status markers except homeownership; the third pattern omits children; and the fourth most common pattern only satisfies the labor-force and residential independence criteria.

[Table 1 about here]

Methodologically, Table 1 compares the actual observed count of each status combination from the raw data to the expected count that is predicted using the latent AAP variable. If the observed count and the predicted count were near identical then the χ^2 null would not be rejected. There would be no statistical difference between the observed and the expected data. However, we observe some notable disparities between the observed and the predicted counts because the χ^2 null is rejected. The standardized residuals provide a metric to identify where the model fits poorly. For example, the latent AAP construct does a poor job of predicting who belongs in the fourth most common pattern (00011). There are a number of other status combinations where the model also does poorly. Any pattern with a z-score above 5 appears to slightly alter the monotonicity of the observed data. For the most part, however, the monotonic ranking from the most common pattern to the least common pattern is replicated using the predicted counts: Spearman's rho = .977 between the observed and expected counts. This strong correlation provides face validity for the AAP construct. On theoretical grounds, it is also worth noting that these adult status indicators can be seen as deterministic variables that do not require

robust measurement validation. That is, in mainstream American culture these status attainments are perceived as normative outcomes for middle-aged men, and from this perspective, the profile derived by studying these combined statuses is a scientifically valid enterprise in itself.

For analytic comparisons, income quintiles are collapsed into the upper two quintiles and the lower two quintiles. The middle income quintile is omitted (N = 50,869 - 10,305 = 40,564). Collapsing quintiles in this manner corresponds to the major cleavages observed in the descriptive analysis, and it makes the multi-group analysis below more parsimonious with no substantive downside to hypothesis testing. Supplemental analyses (not shown) demonstrate growing class disparities in the rates of full AAP completion over the study period. In 1980, the rates of AAP fulfillment for all five adult status indicators was 41% for the low income group and 75% for the high income group. The corresponding odds ratio in 1980 between low and high income groups was 4.29: Middle-aged high income men were over 4 times more likely to have satisfied all five status indicators relative to middle-aged low income men. By 2010, the rate of full AAP completion had dropped to 17% for the low income group (a 24 percentage point drop) and 63% for the high income group (a 12 percentage point drop). The corresponding odds ratio had just about doubled by 2010 to 8.15. Again, this is descriptive evidence in support the class divergence hypothesis.

Table 2 provides a more formal statistical analysis of these patterns via model fit statistics from a multi-group analysis. There are five different models that are used to test the profile similarities/differences of the AAP construct by decade and by income group. Using the collapsed income quintiles results in a total of 8 groups: 2 income groups (high vs. low) per decade with four decades (2*4 = 8). The first model in Table 2 is the unrestricted model that allows the factor loadings and thresholds to vary for each of the eight groups. This is the model

to which all other models will be compared. As with the universal CFA, the χ^2 tests fail to reject the null, but the CFI, TLI, and RMSEA all look acceptable, with the exception of Model 2 and perhaps Model 3. Again, the same methodological qualifications that apply above to the single group CFA apply in the multi-group context.

[Table 2 about here]

There are four main hypotheses postulated in this study: class divergence, adaptive differentiation, profile divergence, and profile convergence hypotheses. Models 2-4 in Table 2 assess these hypotheses. Models 2 and 3 assess whether the AAP profiles between income groups has become more or less similar over time. Model 2 tests the convergence hypothesis by constraining the factor loadings and thresholds between high and low income groups to be equal in 2010 (i.e., more similar in 2010 than at other times) but free in the other decades. Model 3 tests the profile divergence hypothesis by constraining the factor loading and thresholds between high and low income groups to be the same in 1980 (i.e., more similar in 1980 than at other times) but free in the other decades. If the AAP profile had become more similar between high and low income groups over time then Model 2 would be an improvement in fit over the unconstrained model. Conversely, if profile divergence was supported, we would expect the AAP profile to have become more dissimilar between high and low income groups over time, and Model 3 would be an improvement in fit over the unconstrained model. According to the χ^2 difference tests, the null hypothesis being the constrained model (model 2 or 3) is preferred over the unconstrained model (model 1), neither model is a statistical improvement over the unconstrained model. In fact, model 2 has the worse (absolute and relative) fit of any of the models (e.g., RMSEA = .167). There is little empirical support to suggest significant increases in

profile similarity or significant increases in profile divergence of adult status attainments among high income men and low income men between 1980 and 2010.

Models 4 and 5 evaluate potential support for the adaptive differentiation hypothesis and the class divergence hypothesis. The adaptive hypothesis posits that individuals weigh the components of AAP success differently depending on their class location; they adapt their expectations according to their circumstances and reference group comparisons (e.g., other high income or low income families). Conversely, the class divergence hypothesis maintains that a static set of goals and aspirations guide adults regardless of class location. According to the model fit statistics, Models 4 and 5 are better than Models 2 and 3; however, none of the models pass the χ^2 difference tests over the unconstrained model. The RMSEA is slightly lower for the class divergence model (.036) and the RMSEA is the lowest for the adaptive convergence model (.028). Thus, we must conclude that these two theoretical perspectives (class divergence and adaptive differentiation) cannot be statistically falsified here, but rather we must rely on a set of deterministic assumptions from which to gage changes to AAP completion (e.g., see Table 4).

[Table 3 about here]

Table 3 presents the item discriminations and the item difficulties from the unconstrained model: All factor loadings and thresholds are free to vary across decades and across income groups. The results in this table provide a descriptive assessment of how the components of AAP have changed over time by income group. Table 3 includes (a) the relative within income group ranking for each point estimate; (b) Spearman's rho correlations which is used to compare the relative ranking of components in each decade across income groups, and (c) the absolute difference in the point estimates across income groups within decade. The estimates from the unconstrained model are also used to create the item characteristic curves, which serve a visual

representation of AAP (Figure 2). Although the results of Table 3 do not provide a formal statistical test of our hypotheses, the descriptive patterns are nonetheless very informative in the following ways.

First, the rank order of the item discriminations and item thresholds are quite static within income groups over this thirty year period. For example, the rank order does not change at all for (i) the lower income group's item discriminations and for (ii) the upper income group's item difficulties. This means that (1) the relative weight of the adult attainment indictors in defining AAP completion has not changed among lower income men; and also that (2) the relative difficulty of attaining these adult statuses has not changed for upper income men. Second, there are three notable rank pattern changes (highlighted in grey). Among upper income men having children at home is a more defining status attainment in 2010 than it has been previously; the ranking moved from third to second (larger item discriminations λ reflect steeper slopes and thus greater influence in distinguishing AAP completion). The major change among lower income men involves the difficulty of homeownership (the larger the point estimate the more difficult the status is to attain). In 1980 homeownership was the fourth hardest status attainment for low income men, but by 2010 it had become the second hardest, and the change was gradual, dropping to the third spot in 1990 and 2000.[10]

Third, according to Spearman's rho, systematic AAP profile differences are moving in two opposing directions: the relative ranking among item discriminations are becoming more

[10] As conjecture, this finding likely signals the emergence of a pent up demand for housing among lower income men, and by extension, the rise of subprime mortgages as a means to fill the demand. With credit reports becoming a standard metric in which to gage mortgage worthiness in the 1980s, lower income families that once were able to secure conventional mortgages only a generation earlier likely found subprime instruments their only option. This interpretation is considerably different from the idea that subprime loans were being offered to *new undeserving segments* of society that were simply unqualified to own homes. The declining rate of homeownership among the lower income quintiles suggests that prior generations of low income earners maintained a relatively high rate of homeownership (in 1980 a majority in fact, see Figure 1).

similar between high and low income men (1980 rho = .700; 2010 rho = .900), but the item difficulties are becoming more dissimilar (1980 rho = 1.000; 2010 rho =.700). In other words, the relative weight of each status attainment in defining AAP success has become more similar, but the relative level of difficulty in fulfilling these status attainments has become more dissimilar. Current theoretical perspectives cannot fully account for this profile nuance, but these findings seem to suggest a modest degree of cultural diffusion—i.e., more class convergence, with high income men becoming more like low income men—in defining the relative importance of particular status attainments for AAP success; namely, living with their children. Yet, on the other hand, these findings seem to suggest diverging structural opportunities between high and low income men that produce different class-based capacities for status attainment, especially with regard to homeownership.

Fourth, and in contrast to rank comparisons, comparing the income group differences in the absolute magnitude of the estimates does more to support the profile divergence perspective than the profile convergence perspective. The most noticeable difference involves the influence of marital status in defining AAP success: In 1980 the class difference was essentially non-existent (.091), by 2010 the difference had increased 30 fold (2.556). Marital status has come to be more definitive of AAP fulfillment among high income men while it has come to be less definitive for low income men, although in relative terms, marriage still ranks high in both groups. Homeownership (1980 dif = 2.443 vs. 2010 dif. = 3.735) and labor-force activity (1980 dif = .884 vs. 2010 dif. = 2.025) are the two status indicators that have become increasingly more difficult for lower income men. Overall, the profile pattern of AAP appears to support divergence perspectives more than convergence perspectives; but because there is some, albeit

modest profile convergence, the profile divergence model did not demonstrate a statistically improved model fit (see Table 2).

[Figure 2 about here]

Figure 2 graphically illustrates the AAP profile for high and low income groups in each decade using the estimates from the unconstrained model in Table 3. On the x-axis the AAP scale ranges on a continuum from low AAP completion to high AAP completion. The steeper the logistic curve for a manifest indicator, the larger the factor loading/item discrimination, and thus the better the indicator is in distinguishing AAP success from non-success. The further right the logistic curve along the x-axis the greater the threshold/item difficulty, and thus the higher one's AAP score needs to be in order to fulfill that particular status indicator, on average. The major visual changes to these curves over time have been discussed above in reference to the relative and absolute pattern differences in Table 3.

The item characteristic curves provide two additional insights. First, both homeownership and labor-force activity poorly define AAP success (relatively flat slopes). According to item response theory, if these manifest indicators were test items they would be considered poor indicators of ability (Glockner-Rist and Hoijtink 2003). In this context, homeownership and labor-force activity are considered poor indicators of AAP success. This is somewhat understandable given the high rate of labor-force activity for both income groups in all decades; but for homeownership, the finding is unexpected given how iconic an image homeownership is for the American Dream. Among men it appears that the status indicators that require forming personal social relations—marriage and children—are more definitive of AAP success than the economic-based achievements of homeownership and labor-force activity.[11]

[11] An interesting future study would be to compare AAP profiles to see if the family formation indicators carry the same weight for men and women.

Second, Figure 2 makes it clear that the thresholds have shifted to the right, especially for low income men; this means that middle-aged men, on average, need higher AAP scores today to fulfill the same status achievements. This finding is consistent with the downward sloping trends presented in Figure 1. However, it is also important to note that the AAP profile within income groups appears to fluctuate only to a modest degree while the overall profile difference between high and low income groups is visually more or less constant. This consistency explains why the adaptive differentiation model (Model 4, Table 2) has the best model fit statistics (e.g., lowest RMSEA). Based on this evidence, it appears more statistically appropriate to compare changes to AAP scores within income groups than between groups. However, to honor a deterministic interpretation of the status indicators, we present the findings for mean changes to AAP both within and between income groups.

Table 4 presents the mean changes to AAP scores. The top half of the table presents the findings from the class divergence model (Model 5, Table 1). The class divergence model constrains factor loadings and thresholds across decades for high and low income groups. The exception is for the marital status indicator. Freeing this parameter addresses the negative error variance that results when the parameter is constrained. Given how much the item discrimination for marital status changed for low income men, it is not surprising that constraining this parameter across income groups creates model convergence issues. The reference category for the class divergence model is high income men in 1980, which are assigned a mean AAP score of zero. According to the class divergence model, we find increasing declines of average AAP scores for both high and low income men; the declines are the greatest between 1980 and 1990 (e.g., -.17 and -.30) and then level off between 2000 and 2010 (e.g., -.20 vs. -.22 and -.50 vs. -

.51). In support of the class divergence hypothesis, we find that the decline of AAP scores are notably greater for low income men (e.g., -.17 vs. -.30; -.22 vs. -.51, etc.).

The bottom half of Table 4 presents the findings from the adaptive differentiation model (Model 4, Table 1). The adaptive convergence model constrains factor loadings and thresholds within income groups. According to the adaptive convergence perspective, we expect changes to men's AAP scores within income groups to be similar across income groups because each income group is adapting to circumstances in ways that optimize their AAP completion. We find only partial support for this expectation. For Model 4, there are two separate reference groups, one for high income men and one for low income men, and we observe declining AAP scores for both high and low income men, although the declines are less pronounced compared to Model 5. The adaptive differentiation hypothesis is supported in two ways. First, the within-class declines of AAP scores are more pronounced among low income men than high income men (-.07 vs. -.10; -.09 vs. -.18; -.12 vs. -.19), and second, the magnitude of the decline is less pronounced compared to the model that evokes the full standardization assumption (i.e., Model 5). Thus, regardless of the analysis (descriptive or factor analytical) and regardless of the comparison group (within or across income groups), this study finds that it has gotten harder for lower income men to complete their normative adult attainment projects.

Conclusion

This study uses the idea of an adult attainment project to examine the social reach of 'the American Dream.' Hypotheses linking the changing nature of the adult attainment project to the opportunity structure are developed from the social inequality and the transition-to-adulthood literatures. At the beginning of the twenty-first century, these literatures largely indicate mounting challenges for stable family formation and munificent employment, particularly for

lower-middle and working class families (e.g., Danziger and Ratner 2010; Silva 2012). However, there are two key limitations with this area of research that raise questions about an uncritical symbiosis between increasing levels of social inequality and contemporary pathways to adulthood. This study overcomes these limitations in a way that provides a transparent and comprehensive assessment of the class inequality effect on traditional milestones of adulthood.

The first limitation is the transition-to-adulthood literature's exclusive focus on the limited age range between the 18 and 34 years old. This age range does not provide adequate coverage of the finish line. The contemporary journey to attain traditional milestones of adulthood could take longer, be more difficult, and be more individualized than in the recent past. This is true, but the end result could still be the same: Individuals eventually find steady employment, settle down, get married, and start and maintain families of their own. When studying older men between the ages of 35 and 45, we indeed find that the majority is able to attain at least four of the five focal milestones. This finding provides a more optimistic viewpoint than what is typically given when nostalgia for the 1950s is in our rearview mirror.

The second limitation is analytically more problematic as it challenges the scientific validity of temporally comparing adult attainment projects. This challenge is both conceptual and methodological. Conceptually, there is much to be critical about using the 1950s template of adulthood to gage the status of contemporary adults. Methodologically, there is no recourse to the conceptual shortcomings unless proper steps are taken when evaluating adult status indicators. We do not overcome this limitation; we treat it as an aspect of the research question. Understanding temporal variation of the adult attainment project is central to our study, both in terms of mean outcomes and measurement consistency. We are able to unpack this issue by employing modern factor analytic techniques with measurement invariance testing (Gregorich

2006; Muthén and Asparouhov 2013). This analytic approach allows us to carefully evaluate changes to the measurement construct of AAP over time, and in the process we have come to several conclusions about the relationship between class inequality and the adult attainment project.

Descriptive trends of our five status indicators (homeownership, resident parenthood, marital status, labor-force activity, and residential independence) all support the *class divergence hypothesis:* Changing societal conditions have made the attainment of traditional adult milestones less common for all middle-aged men, but the decline is more pronounced among lower class men. When these status indicators are viewed together, instead of separately, our assessment of the growing class disparity is stark. In 1980, 75% of men in the high income group were able to satisfy all five milestones compared to 41% of men in the lower income group. By 2010, 63% of men in the high income group satisfied all five milestones compared to only 17% of men in the lower income group. The difference in the odds of satisfying these adult milestones between high income men and low income men doubled over a thirty year period.

Descriptive findings are informative, but require strong standardization assumptions—the desired attainment of traditional adult milestones are assumed to be invariant over the study period—that are potentially problematic as society may have changed in ways that complicate simple mean comparisons of these status indicators. Three of the four key hypotheses in this study take social change into account by anticipating differences in the measurement construct of AAP across time and class. For example, *the adaptive differentiation hypothesis* recognizes how social class location will subject individuals to different circumstances, and these difference circumstances have implications for how individual attainment projects are defined. The expectation from this perspective is of a measurement construct that is similar within social

classes but different in fundamental ways between social classes. The *profile divergence hypothesis* posits differential adaptation by class as well, but also recognizes that the adaptive process may have become even more distinct over time. Accordingly, the AAP measurement construct should be different across social classes and that difference should have become more distinct over time. Conversely, *the profile convergence hypothesis* suggests that social norms anchored in the 1950 ideal of the nuclear family have weakened in ways that make social class distinctions in the formation of individual adult attainment projects less salient. Accordingly, the AAP measurement construct should become more similar between social classes over time. These varied perspectives make it clear that an analysis of the measurement components (item difficulties and item discriminations) themselves over time is critical to assessing class differences in the formation and completion of individual adult attainment projects.

In an empirical test of these perspectives, this study finds the strongest support for the adaptive differentiation hypothesis. The model representing the adaptive differentiation hypothesis constrains item difficulties and item discriminations to be the same within income groups over time but different between income groups. Of the four competing models, this model provides the best overall statistical performance (e.g., lowest REMSA, Table 2). The adaptive differentiation hypothesis is a more conservative version of the class divergence hypothesis. Starting in the 1980s, both models find that over a thirty year period it has gotten disproportionately more difficult for lower class men to complete their adult attainment projects. The evidence from the adaptive differentiation model in support of this conclusion is qualitatively more conservative because the focus is on within class change. That is, more recent cohorts of low income men are finding it more difficult to complete their attainment projects relative to later cohorts of low income men, and this within class difference among low earners is

greater than the within class difference among high income men over the same time period. Overall, evidence supporting growing class inequality with regard to traditional milestones of adulthood is true whether we simply compare descriptive trends or impose conservative restrictions on the measurement construct that neutralize exogenous class differences.

Unfortunately, this conclusion must be qualified for the following reasons. First, according to a failed chi-square test of model fit from a global confirmatory factor analysis, the measurement construct of an adult attainment project that combines all five status indicators is quantitatively imperfect. In Table 1 we show exactly where the measurement construct performs poorly. This misfit does not greatly alter the monotonicity between the observed and expected patterns in the data, and therefore we judge the degree of misfit to be modest. However, this is our conjecture, and we recognize this misfit could be significant enough to warrant a more deterministic stance regarding the conceptual validity of these five status indicators than what is provided in this study. Second, none of the hypothesized models outperform the fully unrestricted model, which allows all the measurement components to vary freely across class and time (i.e., the baseline model). Although the relative model fit is better for the adaptive differentiation model, and although standardization assumption within income groups appears visually sound (e.g., Figure 2), the rejected chi-square difference tests questions the validity of the standardization assumption.

We suspect that future research using large samples and employing factor analytic approaches to capture individual attainment projects could also be challenged by the chi-square tests. We suspect that better measurement specificity of individual status indicators would help on this matter. For example, having more detailed relationship indicators that provide temporally consistent measurement of cohabitation would improve the reliability and validity of the overall

construct. Incorporating more information about employment security and job satisfaction we suspect would also be beneficial. The Current Population Survey and other Census data products have limited temporal and substantive scope regarding these details, and researchers will likely need to turn to longitudinal data in order to provide a more detailed assessment of the formation and development of individual attainment projects. This is the next logical step, but caution must be taken to ensure adequate subgroup variation across each individual status indicator. Data with large samples may lack status indicator specificity but these data ensure sufficient variation among independent status indicators that are nearly universally affirmative (e.g., labor-force active and residential independence). Lastly, future research should empirically examine why the class gap in AAP has increased. In this study we have assumed that economic and cultural factors are the leading reasons for the hypothesized changes. In addition to these possibilities, researchers should also consider compositional changes to the population, changing gender dynamics, and increasing racial and ethnic diversity as worthy avenues of consideration when contemplating social change, class inequality, and the adult attainment project.

References

Autor, David H., Lawrence F. Katz, and Melissa S. Kearney. 2008. "Trends in U.S. Wage Inequality: Revising the Revisionists." *Review of Economics and Statistics* 90(2):300–323.

Cherlin, Andrew J. 2004. "The Deinstitutionalization of American Marriage." *Journal of Marriage and Family* 66(4):848-861.

Danziger, Sheldon, and David Ratner. 2010. "Labor Market Outcomes and the Transition to Adulthood." *The Future of Children* 20(1):133-158.

Danziger, Sheldon, and Cecilia E. Rouse. 2007. "Introduction: The Price of Independence: The Economics of Early Adulthood." Pp. 1-23 in *The Price of Independence: The Economics of Early Adulthood.* edited by S. Danziger and C. E. Rouse. New York: Russell Sage Foundation.

Duncan, Greg J., Johanne Boisjoly, and Timothy Smeeding. 1996. "Economic mobility of young workers in the 1970s and 1980s." *Demography* 33(4):497-509.

Edelman, Peter B., Harry J. Holzer, and Paul Offner. 2006. *Reconnecting Disadvantaged Young Men*. The Urban Institute.

Elzinga, Cees H., and Aart C. Liefbroer. 2007. "De-standardization of family-life trajectories of young adults: A cross-national comparison using sequence analysis." *European Journal of Population/Revue européenne de Démographie* 23(3-4):225–250.

Furstenberg, Frank F. 2008. "The Intersections of Social Class and the Transition-to-adulthood." *Social Class and Transitions to Adulthood. New Directions for Child and Adolescent Development* 2008(119):1–10.

Furstenberg, Jr., Frank F., Rubén G. Rumbaut and Richard A. Settersten, Jr. 2005. "On the Frontier of Adulthood: Emerging Themes and New Directions." Pp. 3-25 in *On the Frontier of Adulthood: Theory, Research, and Public Policy.* edited by R. A. Settersten Jr., F. F. Furstenberg Jr., and Rubén G. Rumbaut. Chicago: University of Chicago Press.

Glockner-Rist, Angelika, and Herbert Hoijtink. 2003. "The Best of Both Worlds: Factor Analysis of Dichotomous Data Using Item Response Theory and Structural Equation Modeling." *Structural Equation Modeling* 10(4):544–65.

Gregorich, Steven E. 2006. "Do Self-Report Instruments Allow Meaningful Comparisons across Diverse Population Groups? Testing Measurement Invariance Using the Confirmatory Factor Analysis Framework." *Medical care* 44(11 Suppl 3):S78.

Harris, Deborah. 1989. "Comparison of 1-, 2-, and 3-Parameter IRT Models." *Educational Measurement: Issues and Practice* 8(1):35–41.

Hogan, D. P., and N. M. Astone. 1986. "The Transition-to-Adulthood." *Annual Review of Sociology* 12:109-30.

Kasarda, John D., John O. Billy, and Kirsten West. 1986. *Status Enhancement and Fertility: Reproductive Responses to Social Mobility and Educational Opportunity.* Academic Press.

Kalleberg, Arne L. 2009. "Precarious Work, Insecure Workers: Employment Relations in Transition." *American Sociological Review* 74(1):1-22.

Kamata, Akihito, and Daniel J. Bauer. 2008. "A Note on the Relation between Factor Analytic and Item Response Theory Models." *Structural Equation Modeling* 15(1):136–53.

Kefalas, Maria. 2003. *Working-Class Heroes: Protecting Home, Community, and Nation in a Chicago Neighborhood*. University of California Press.

King, Miriam, Steven Ruggles, J. Trent Alexander, Sarah Flood, Katie Genadek, Matthew B. Schroeder, Brandon Trampe, and Rebecca Vick. *Integrated Public Use Microdata Series, Current Population Survey: Version 3.0*. [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

MacIntosh, R. & Hashim, S. 2003. "Converting MIMIC model parameters to IRT parameters in DIF analysis." *Applied Psyhological Measurement,* 27, 372-379.

Medved, Caryn E. 2009. "Constructing Breadwinning-Mother Identities: Moral, Personal, and Political Positioning." *Women's Studies Quarterly* 37(3-4):140-156.

Mishel, Lawrence, Josh Bivens, Elise Gould, and Heidi Shierholz. *The State of Working America,* 12th Edition. A forthcoming Economic Policy Institute book. Ithaca, N.Y.: Cornell University Press.

Moen, Phyllis, and Patricia Roehling. 2005. *The Career Mystique: Cracks in the American Dream*. Rowman & Littlefield.

Mouw, Ted. 2005. "Sequences of Early Adult Transitions: A Look at Variability and Consequences." Pp. 256-291 in *On the Frontier of Adulthood: Theory, Research, and Public Policy*. edited by R. A. Settersten Jr., F. F. Furstenberg Jr., and Rubén G. Rumbaut. Chicago: University of Chicago Press.

Muthén and Asparouhov 2013. "Item response modeling in Mplus: A multi-dimensional, multi-level, and multi-timepoint example." Forthcoming in Linden & Hambleton (2013). Handbook of item response theory: Models, statistical tools, and applications.

Oesterle, S., J. D. Hawkins, K. G. Hill, and J. A. Bailey. 2010. "Men's and Women's Pathways to Adulthood and Their Adolescent Precursors." *Journal of Marriage and Family* 72:1436-1453.

Osgood, D. W., Gretchen Ruth, Jacquelynne S. Eccles, Janis E. Jacobs, and Bonnie L. Barber. 2005. "Six Paths to Adulthood: Fast Starters, Parents without Careers, Educated Partners, Educated Singles, Working Singles, and Slow Starters." Pp. 320-355 in *On the Frontier of Adulthood: Theory, Research, and Public Policy.* edited by R. A. Settersten Jr., F. F. Furstenberg Jr., and Rubén G. Rumbaut. Chicago: University of Chicago Press.

Piketty, Thomas, and Emmanuel Saez. 2003. "Income Inequality in the United States, 1913–1998." *The Quarterly Journal of Economics* 118(1):1–41.

Ruggles, J. Steven, Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

Sage, Rayna A., and Monica K. Johnson. 2012. "Extending and Expanding Parenthood: Parental Support to Young Adult Children." *Sociology Compass* 6(3):256-270.

Sandefur, Gary D., Jennifer Eggerling-Boeck, and Hyunjoon Park. 2005. "Off to a Good Start? Postsecondary Education and Early Adult Life." Pp. 292-319 in *On the Frontier of Adulthood: Theory, Research, and Public Policy.* edited by R. A. Settersten Jr., F. F. Furstenberg Jr., and Rubén G. Rumbaut. Chicago: University of Chicago Press.

Schoeni, Robert F., and Karen E. Ross. 2005. "Material Assistance from Families during the Transition-to-adulthood." Pp. 396-416 in *On the Frontier of Adulthood: Theory, Research, and Public Policy.* edited by R. A. Settersten Jr., F. F. Furstenberg Jr., and Rubén G. Rumbaut. Chicago: University of Chicago Press.

Settersten, Richard A. and Barbara Ray. 2010a. *Not Quite Adults: Why 20-Somethings are Choosing a Slower Path to Adulthood, and Why it's Good for Everyone.* New York: Delacorte Press.

Settersten Jr, Richard A., and Barbara Ray. 2010b. "What's Going on with Young People Today? The Long and Twisting Path to Adulthood." *The Future of Children* 20(1):19–41.

Shanahan, Michael J. 2000. "Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective." *Annual Review of Sociology* 26:667-692.

Silva, Jennifer M. 2012. "Constructing Adulthood in an Age of Uncertainty." *American Sociological Review* 77:505-522.

Sironi, M. and F. F. Furstenberg. 2012. "Trends in the Economic Independence of Young Adults in the United States: 1973-2007." *Population and Development Review* 38:609-630.

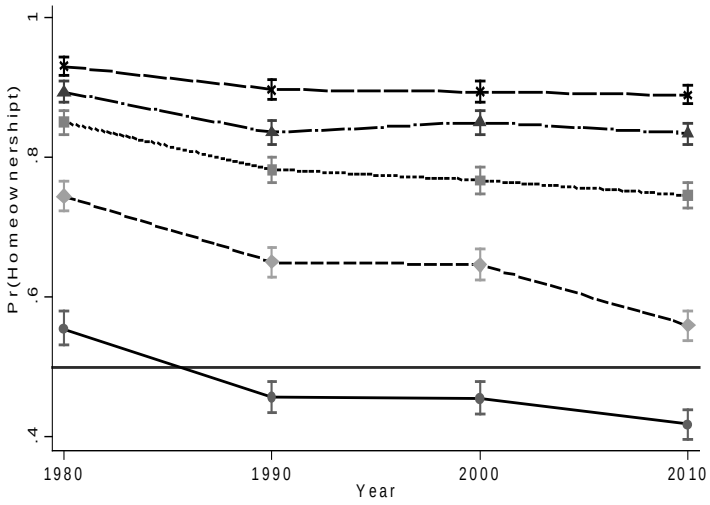
Smith, Hedrick. 2012. *Who Stole the American Dream?* New York, NY: Random House LLC.

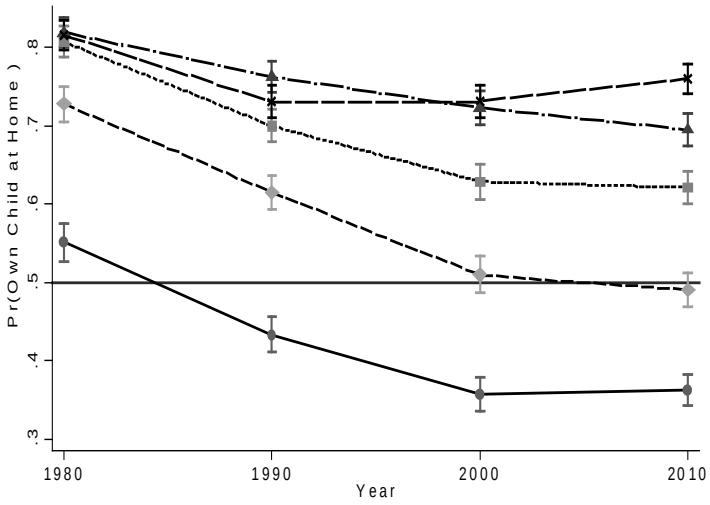
Staff, Jeremy, and Jeylan T. Mortimer. 2008. "Social Class Background and the School-to-Work Transition." *Social Class and Transitions to Adulthood. New Directions for Child and Adolescent Development* 2008(119):55–69.

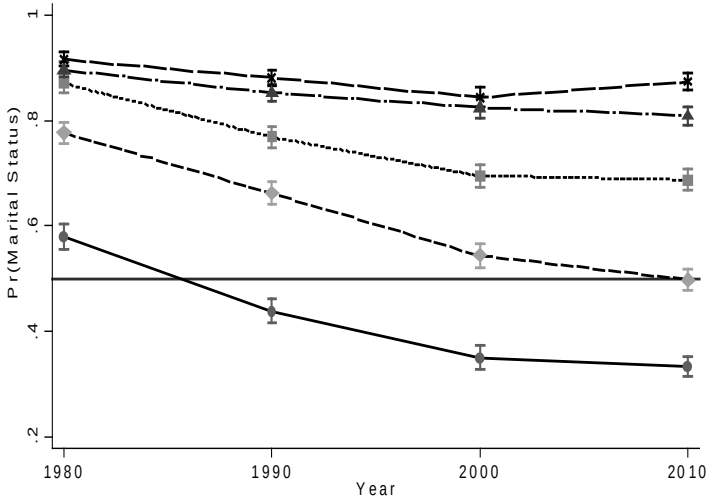
Tanner, Jennifer, and Scott Yabiku. 1999. "Conclusion: The Economies of Young Adulthood – One Future or Two?" Pp. 254-268 in *Transitions to Adulthood in a Changing Economy: No Work, No Family, No Future?* edited by A. Booth, A. C. Crouter, and M. J. Shanahan. Westport, CT: Praeger Publications.

Waters, Mary C., Patrick J. Carr, Maria J. Kefalas, and J. Holdaway. 2011. *Coming of Age in America: The Transition-to-adulthood in the Twenty-First Century.* Berkeley: University of California Press.

Figure 1: Probability of Adult Status Attainments among Middle-Aged Men (ages 35-45), Current Population Survey, 1980-2010







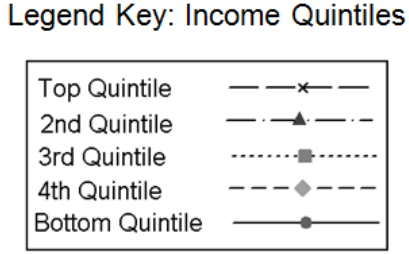
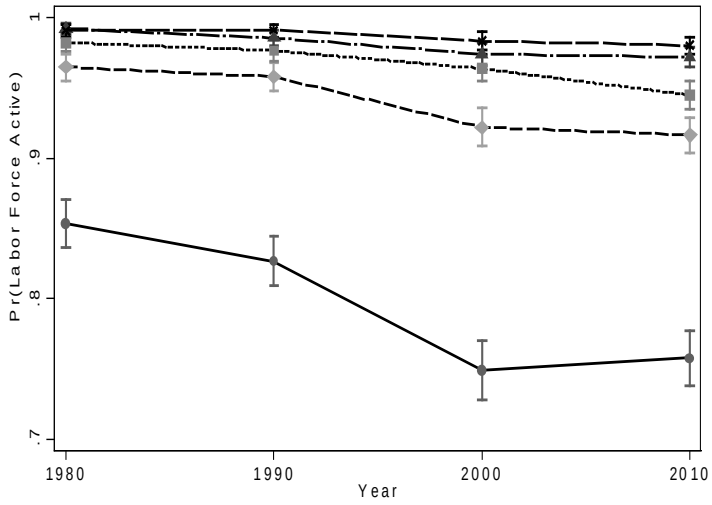


Figure 1 Continued: Probability of Adult Status Attainments among Middle-Aged Men, Current Population Survey, 1980-2010



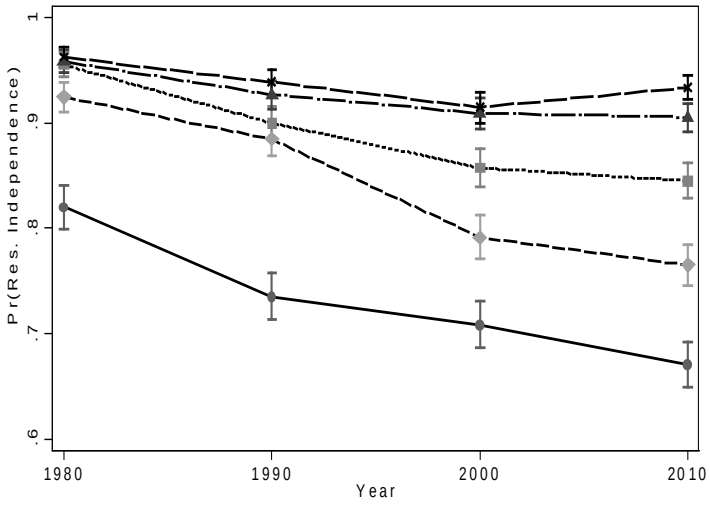
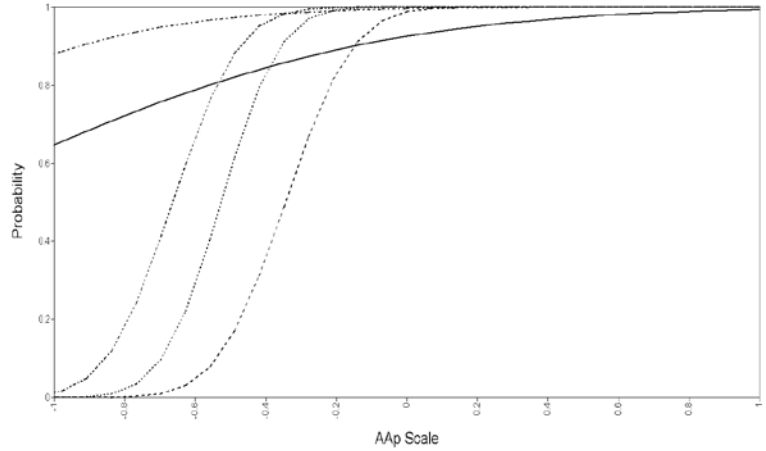
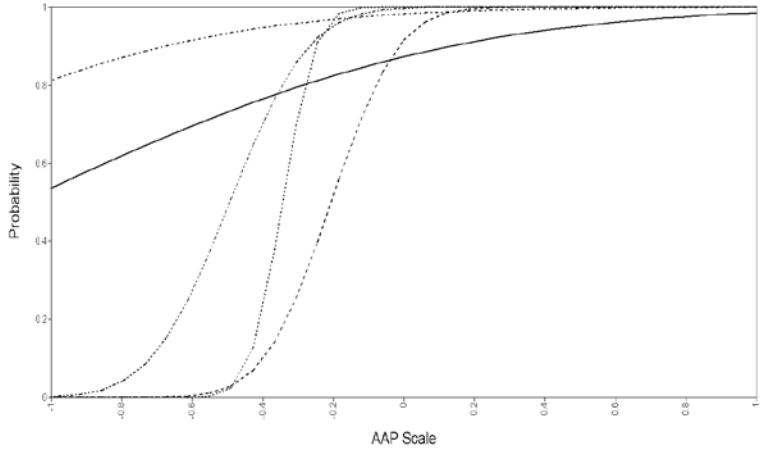


Figure 2: Item Characteristic Curves of the Adult Attainment Project for Middle-Aged Men in Low Income and High Income Categories, Current Population Survey 1980-2010.

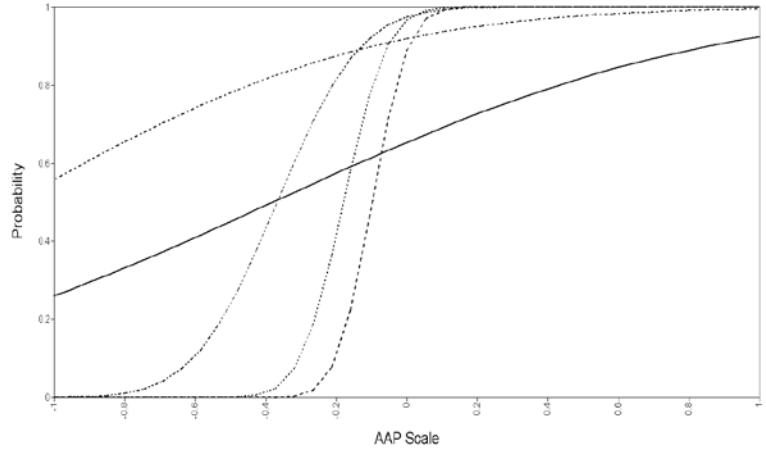
(a) High Income, 1980



(b) High Income, 2010



(c) Low Income, 1980



(d) Low Income, 2010

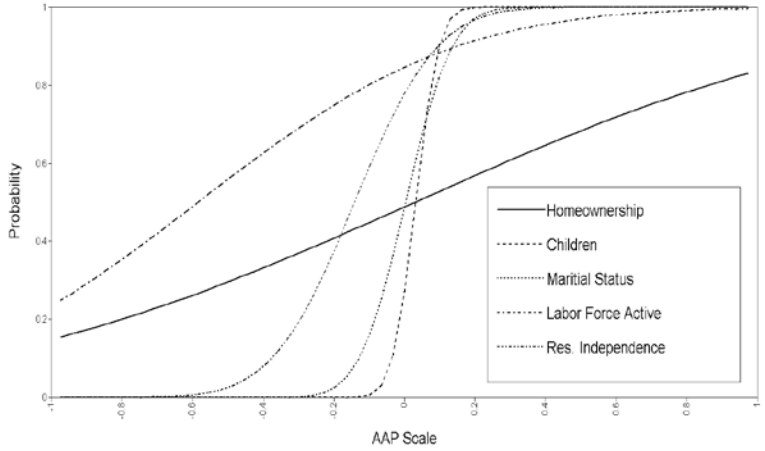


Table 1: Predictive Results from a Confirmatory Factor Analysis of the Adult Attainment Project: Current Population Survey, 1980-2010

Rank	Pattern	Observed Count	CFA Predicted Count	Observed Percentage	Standardized Residual (z-score)
1	11111	23765	23424	46.72%	2.45
2	01111	5118	5618	10.06%	-5.69
3	10111	3858	3752	7.58%	1.45
4	00011	2930	2208	5.76%	12.66
5	10011	2837	3416	5.58%	-8.26
6	10010	2758	2277	5.42%	8.31
7	00111	1711	1703	3.36%	.16
8	00010	1589	2114	3.12%	-9.39
9	10000	780	525	1.53%	9.01
10	11011	773	866	1.52%	-2.57
11	11101	619	725	1.22%	-3.19
12	01011	502	417	.99%	3.36
13	10110	438	511	.86%	-2.61
14	00000	397	592	.78%	-6.49
15	00110	395	282	.78%	5.41
16	00001	393	324	.77%	3.11
17	01101	360	217	.71%	7.86
18	11110	300	388	.59%	-3.60
19	10101	232	290	.46%	-2.76
20	10001	230	449	.45%	-8.38
21	00101	193	144	.38%	3.27
22	11010	155	143	.31%	.86
23	01110	153	148	.30%	.33
24	01010	65	82	.13%	-1.54
25	10100	59	53	.12%	.76
26	01001	58	38	.11%	2.64
27	00100	53	31	.10%	3.19
28	11001	49	73	.10%	-2.28
29	11000	37	16	.07%	4.37
30	11100	24	23	.05%	.16
31	01100	18	10	.04%	2.13
32	01000	17	10	.03%	1.84
Total N		50869	50869		

Pattern Positioning: 1. Homeownership; 2. Children; 3. Marital Status; 4. Labor-Force Active; 5. Residential Independence

Table 2: Model Fit Statistics for a Profile Analysis of the Adult Attainment Project for High and Low Income Quintiles: Current Population Survey, 1980-2010.

Factor Analytic/2-PL IRT Models	N	# para-meters	χ^2	χ^2 df	χ^2 p-value	χ^2 dif. test[a]	χ^2 dif. df	χ^2 dif. p-value	CFI	TLI	RMSEA
1. Unconstrained Model (free loadings and thresholds)	40564	80	340.3	40	.000				.995	.990	.038
2. Profile Convergence: (equality constraints in 2010)	40564	66	7691.1	54	.000	4917.6	14	.000	.876	.816	.167
3. Profile Divergence: (equality constraints in 1980)	40564	66	2465.7	54	.000	1458.0	14	.000	.961	.942	.094
4. Adaptive Differentiation: (within class factorial invariance)	40564	62	284.2	58	.000	44.7	18	.001	.996	.995	.028
5. Class Divergence: (full factorial invariance)	40564	59	470.9	61	.000	184.2	21	.000	.993	.991	.036

a) WLSMV is the Mplus estimator for a multigroup non-linear IRT analysis. However, the chi-square values from multiple WLSMV models are not directly comparable; the DIFFTEST function is used to properly conduct the chi-square difference test (See Mplus website). The null model is the constrained model; the alternative is the unconstrained model. A significant p-value means that the constraints did not significantly improve model fit over the unconstrained model.

Table 3: IRT Parameter Estimates from the Unconstrained Model in Table 1.

	Item Discriminations					***Item Difficulties***				
	Income Quintiles					**Income Quintiles**				
	Top		**Bottom**			**Top**		**Bottom**		
	Rk	λ_j	Rk	λ_j	Dif.	Rk	δ_j	Rk	δ_j	Dif.
1980										
Homeownership	5	.372	5	.276	**-.096**	4	-3.876	4	-1.433	**2.443**
Children	3	2.309	1	3.304	**.995**	1	-.988	1	-.371	**.617**
Marital Status	1	2.652	2	2.743	**.091**	2	-1.511	2	-.675	**.836**
Labor Force Active	4	.529	4	.334	**-.195**	5	-5.088	5	-4.204	**.884**
Res. Independence	2	2.365	3	1.428	**-.937**	3	-1.905	3	-1.385	**.520**
	Spearman's rho =.700					Spearman's rho = 1.000				
1990										
Homeownership	5	.292	5	.208	**-.084**	4	-3.959	3	-.660	**3.299**
Children	3	1.918	1	5.003	**3.085**	1	-.749	1	-.062	**.687**
Marital Status	1	3.313	2	1.933	**-1.380**	2	-1.240	2	-.331	**.909**
Labor Force Active	4	.548	4	.324	**-.224**	5	-4.710	5	-4.016	**.694**
Res. Independence	2	3.060	3	1.180	**-1.880**	3	-1.574	4	-1.150	**.424**
	Spearman's rho = .700					Spearman's rho = .900				
2000										
Homeownership	5	.288	5	.170	**-.118**	4	-4.097	3	-.761	**3.336**
Children	3	2.047	1	3.073	**1.026**	1	-.673	1	.176	**.849**
Marital Status	1	3.179	2	1.966	**-1.213**	2	-1.113	2	-.038	**1.075**
Labor Force Active	4	.554	4	.324	**-.230**	5	-4.181	5	-3.165	**1.016**
Res. Independence	2	2.264	3	1.002	**-1.262**	3	-1.480	4	-.953	**.527**
	Spearman's rho = .700					Spearman's rho = .900				
2010										
Homeownership	5	.321	5	.164	**-.157**	4	-3.557	2	.178	**3.735**
Children	2	2.042	1	3.136	**1.094**	1	-.675	1	.194	**.869**
Marital Status	1	4.134	2	1.578	**-2.556**	2	-1.125	3	.021	**1.146**
Labor Force Active	4	.376	4	.283	**-.093**	5	-5.631	5	-3.606	**2.025**
Res. Independence	3	1.747	3	.884	**-.863**	3	-1.615	4	-.870	**.745**
	Spearman's rho = .900					Spearman's rho = .700				

Table 4: Estimated AAP Mean Differences[a] from two Factorial Invariant Models: Class Divergence and Adaptive Convergence Models

Model 5:	**Top Income Quintiles**				**Bottom Income Quintiles**			
Class Divergence	1980	1990	2000	2010	1980	1990	2000	2010
Loadings								
Homeownership	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Children	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13
Marital Status	2.26	2.26	2.26	2.26	2.50[b]	2.60[b]	2.69[b]	2.71[b]
Labor Force Active	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Res. Independence	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21
Thresholds								
Homeownership	-1.33	-1.33	-1.33	-1.33	-1.33	-1.33	-1.33	-1.33
Children	-.95	-.95	-.95	-.95	-.95	-.95	-.95	-.95
Marital Status	-1.38	-1.38	-1.38	-1.38	-1.38	-1.38	-1.38	-1.38
Labor Force Active	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35	-2.35
Res. Independence	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75
Means	.00	-.17	-.20	-.22	-.30	-.42	-.50	-.51
Variances	.18	.14	.14	.12	.14	.12	.11	.10

Model 4:	**Top Income Quintiles**				**Bottom Income Quintiles**			
Adaptive Differentiation	1980	1990	2000	2010	1980	1990	2000	2010
Loadings								
Homeownership	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Children	2.80	2.80	2.80	2.80	3.10	3.10	3.10	3.10
Marital Status	2.91	2.91	2.91	2.91	3.13	3.13	3.13	3.13
Labor Force Active	1.41	1.41	1.41	1.41	1.07	1.07	1.07	1.07
Res. Independence	2.84	2.84	2.84	2.84	2.64	2.64	2.64	2.64
Thresholds								
Homeownership	-1.36	-1.36	-1.36	-1.36	-.34	-.34	-.34	-.34
Children	-.92	-.92	-.92	-.92	-.38	-.38	-.38	-.38
Marital Status	-1.40	-1.40	-1.40	-1.40	-.60	-.60	-.60	-.60
Labor Force Active	-2.39	-2.39	-2.39	-2.39	-1.33	-1.33	-1.33	-1.33
Res. Independence	-1.75	-1.75	-1.75	-1.75	-1.18	-1.18	-1.18	-1.18
Means	.00	-.07	-.09	-.12	.00	-.10	-.18	-.19
Variances	.11	.12	.12	.10	.09	.09	.09	.09

(a) All point-estimates (including mean differences) in Table 4 are statistically different from zero at the $p < .001$ level. (b) Model A is technically a partial measurement invariance model because the factor loading for marital status is free for those in the bottom quintiles. Freeing this parameter address the negative error variance that results otherwise.