

# Extended early adulthoods

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## Abstract

Young adulthood is consistently identified as a “formative period” in the life course when people have heightened probability of attitude change. This probability has often been attributed to cognitive factors like brain plasticity as well as the social conditions of adolescence. Over the past 70 years, changes in the timing of major life course events such as marriage have transformed and extended this life stage. We leverage these changes to explore whether these life course changes, as well as broader social changes, have affected how likely people are to make durable changes of attitudes. We find strikingly little difference in the opinion behaviors among young people in different eras. People under 30 are similarly different from people over 30 in all eras, with slightly less stable attitudes. The overall pattern suggests either that social conditions are not strongly related to attitude stability or that different social shifts have had counter-vailing effects that produce aggregate stability in rates.

## Introduction

Adolescence and young adulthood are typically identified in social science literature as “impressionable years” – a stage of the life course in which people are more susceptible to broad social currents, when their opinions are more malleable, and when peoples’ core ideas and attitudes are formed []. Research regularly finds that people are more likely to change their attitudes and opinions in these life stages than other life stages, with opinions becoming

more stable once these life stages have passed []. This pattern, in which young people are open to attitude change and become resistant over time, underpins dynamics around cohortization that are frequently invoked in larger models of social change (ryder1965?; mannheim1952?; vaisey2016?).

However, why people in these life stages appear to show more frequent opinion change relative to older people is unclear. Work in biology, psychology, and cultural evolution shows that peoples’ cognition changes in ways that might make them more resistant to new information as they age []. Explanations in social sciences, in contrast, tend to highlight the unique social features of these life stages – high rates of mobility between social contexts, participation in educational institutions, and cultural expectations about pursuing “new experiences” – that shape how people are exposed to new sources of information or their ability to update opinions in the face of this information []. While both mechanisms likely play a role in facilitating opinion change in this life stage, the relative contributions of each are unclear.

Clarifying the mechanism that drives the frequency of opinion change during this formative period is important for understanding the broader process of social change and cultural evolution. If openness to change in early adulthood is principally a function of the social structure of life in that time period, changes in the timing and ubiquity of life course events like marriage and childbearing can have significant impacts on the broader process of social and cultural change []. Similarly, social changes such as the deinstitutionalization of marriage (cherlin2004?; cherlin2020?; robbins2022?) that decrease distinctions between life course stages might make older people more open to change in more recent eras than in previous eras, diminishing the importance of “cohorts” for social change. If the mechanisms are principally cognitive and biological, rather than social, then these changes are unlikely to affect rates of social and cultural change in the same way.

Over the course of the 20th century, the timing of life-course transitions such as completing schooling, entering the workforce, getting married, leaving one’s parents’ home, and having

48 children, have changed dramatically, with most of these event occurring later in the life course  
49 in more recent cohorts (**buchmann1989?**; **bruckner2005?**). Similarly, this stage of life has  
50 become more detached from family and other role obligations, giving people more freedom to  
51 explore new ideas and lifestyle choices (**rosenfeld2007?**). This suggests both a lengthening  
52 and a intensification of this stage of the life course in ways that should increase the rates  
53 at which people make changes of opinion. In this paper, we attempt to clarify the relative  
54 contributions of these different mechanisms by exploring how these changes have affected  
55 rates of change in political attitudes over time, especially differences in rates of opinion change  
56 between young adults and the rest of the population. We compare rates of opinion change in  
57 comparable general political attitudes across four eras – 1956-1960; 1972-1976; 1992-1996;  
58 and 2006-2010 – and between young people and old people in these eras to evaluate a range  
59 of competing hypotheses about what accounts for the divergence in attitude behaviors over  
60 the life course.

61 Broadly, we find that the probability of political opinion change in people under 30, relative to  
62 the rest of the population, has not increased as the “early adulthood” window has lengthened  
63 and the conditions of this life stage have changed. Across eras, both young people and older  
64 people make political opinion changes at remarkably similar rates, with social transitions  
65 such as marriage, having children, and completing education playing little role in the rates at  
66 which these opinion changes happen. While these findings do not provide conclusive evidence  
67 of one mechanism over the other, they confine the range of potential theories of attitude  
68 development and the nature of political opinions. They either suggest that there is something  
69 relatively timeless – potentially biological and cognitive factors – that accounts for increased  
70 opinion variance in young people or that countervailing forces, some increasing stability in  
71 young people and some decreasing it, have produced aggregate stability over seven decades.

## Impressionable Years / Opinion Change and Stability

The idea that the early stages of the life course are especially influential in the process of attitudinal formation is dominant across contemporary accounts of socialization (**dinas2014?**; **guhin2021?**). The argument – at times implicit – is that the circumstances in which people are brought up leave an enduring and traceable mark on their worldviews (Gerber and Green 1998). In the study of political socialization, this perspective enjoys a longstanding history. “Generational effects” are used to explain the development of political preferences, longitudinal shifts in attitudes, and differences across age-groups (**mannheim1952?**; **bartels2014?**). However, the notion of “impressionable years” is more general. The literature on cohort effects rests on the assumption that our early years play key role in shaping not just political opinions, but peoples’ cognition on many dimensions (Elder 2018). Peoples’ early years will leave a mark that will be predictive of their life outcomes, well beyond when those impressionable years have passed. Thus, the notion of a formative period – at the early stages of the life-course – underpins diverse and longstanding lines of research.

The “impressionable years” hypothesis – that people demonstrate more opinion change early in life followed by a period of relative stability, especially in middle age – has often been tested against other theories of opinion change over the life course. The most common are an aging stability or increasing persistence hypothesis that argues that openness to change gradually declines over time and a life stages hypothesis, in which people are open to attitude change both early in life and later in life, with stability principally happening in middle ages (**visser2004a?**). While different attitudes occasionally follow slightly different patterns, the impressionable years hypothesis or aging stability hypothesis has generally been shown to be true for broad political ideology, partisan identification, and specific policy preferences (**krosnick1989?**; Alwin and Krosnick 1991; **sears1999?**); social attitudes (**danigelis2007?**); and interest in politics (**prior2010?**); as well as things like personality (**wagner2019?**). More generally, recent research has found that, with a couple notable exceptions of high-

salience events such as national shifts around gay rights, durable change of social opinion is quite rare among U.S. adults (**kiley2020?**), and Vaisey and Lizardo (**vaisey2016?**) find that cohort explains much more variance than period for most items in the General Social Survey, suggesting a strong impressionable years pattern.

In recent years, researchers have used new approaches to quantify “openness” to social influence across the life course, especially around politics (**bartels2014?**; Ghitza, Gelman, and Auerbach 2022). This work has produced remarkably similar patterns, with openness peaking from a person’s mid-teens through age 25 and declining quickly after that, lending more credence to the “impressionable years” hypothesis. However, this work tends to assume a constant age-based rate of openness across cohorts – that 20-year-olds in 1950 are open to influence at the same rate as 20-year-olds in 2010 – which has not been clearly tested.

## **Theoretical Models**

Why is it research consistently finds the period of time between 14 and 25 to be distinctly “impressionable years?” Changing one’s mind involves at least two distinct processes that can be difficult to disentangle: exposure to new ideas and changing one’s opinion conditional on exposure to new ideas. For example, it could be the case that people of all ages are exposed to new ideas at similar rates, with acceptance of a new idea being a function of age, which would account for age-based patterns in opinion change. Conversely, it could be the case that rates of exposure to new ideas changes over the life course, while openness to changing one’s mind as a function of exposure does not, producing the same pattern. It could also be the case that both change as a function of age. In this section we outline theoretical mechanisms that have been suggested to contribute to one or both of these processes.

## **Biological Mechanisms**

The first potential mechanism for changes in attitude stability over the life course is biological: that the development of the of human brain as people age makes it more difficult for people to

123 make changes of opinions after some point in their life. This approach tends to suggest that  
124 human cognition works similar to Bayesian updating (Bartels and Jackman 2014; Sherratt  
125 and Morand-Ferron 2018; Gopnik 2020). In this framework, humans weight information  
126 equally, whether they encounter it during adolescence or middle age. However, given that  
127 by the time people reach adulthood they have already encountered a lot of information,  
128 each new piece will have less of an impact (Bartels and Jackman 2014). In this thinking,  
129 the distinctive thing about our early years is simply that they happen early. They prove so  
130 influential because the incremental effect of new information diminishes as we age.

131 It is also possible that there is something unique about human cognition during these periods:  
132 that agents ascribe more weight to the information acquired within them. Maturational  
133 arguments about the increased plasticity of the human brain during our early years are  
134 consistent with this position (Mata and von Helversen 2015). Our brains exhibit more  
135 malleability during childhood and adolescence (Mata and von Helversen 2015). This is  
136 consistent with the fact that these early formative periods have been observed across species  
137 and contexts. It is not only human children that exhibit a heightened capacity to adapt. In  
138 a study of social learning among birds, for instance, Aplin et al (2017) show that younger  
139 individuals – unlike their older counterparts – were consistently able to retool their habits in  
140 light of new information.

141 Though the Bayesian updating explanation is simple and elegant, research across different  
142 disciplines has produced evidence that supports the existence of periods of heightened  
143 sensitivity. In light of empirical evidence about these sensitive windows, there has been  
144 extensive modeling work to understand how they might have developed through evolution.  
145 This line of research seeks to understand why periods of heightened sensitivity would emerge  
146 and what contexts would facilitate their emergence (Fawcett and Frankenhuys 2015). The  
147 central argument is that the emergence and timing of these sensitive windows depends on the  
148 interaction between the access to information, the reliability of information, and the stability

of the environment (Frankenhuis and Walasek 2020). Early formative periods are likely to evolve in specific configurations: when environments are unstable, and information is plentiful yet unreliable (Frankenhuis and Walasek 2020). In these circumstances, it makes sense for agents to explore early on, to find something that works and then to stick to strategies that have worked well in the past. Access to different types of information might vary across time and this might explain the emergence of sensitive periods at later stages of the life-course (Walasek, Frankenhuis, and Panchanathan 2021). For example, the importance of musical tastes and fashion choices becomes important around adolescence, and, at this stage, we are awash with – at best contradictory – information about what one should or should not like, should or should not wear. Sensitive periods around the development of these tastes might peak around this period, when there are more signals and when the payoffs are more salient. Regardless of the underlying reasons, the thrust of the biological arguments is that millennia of evolution have shaped human cognitive architecture in ways that makes humans relatively open to changing dispositions at younger ages and relatively resistant at older ages. However, while biological mechanisms can shape how individuals respond to new information when they encounter it, these processes cannot dictate the rate at which individuals are exposed to new information, which might also matter for rates of opinion change in this window of time. For that, we must turn attention to the structuring of the social world.

### **Life Course // Social Role Mechanisms:**

Humans’ early years might be distinct in terms of cognitive plasticity, but they are also socially distinct: they are characterized by sustained social learning and punctuated with constant changes of social contexts. Here we briefly consider some of the ways that the “impressionable years” differ in ways that might expose people to new information at higher rates and also affect their willingness to update beliefs, beyond what cognition might allow. First, people in this age group tend to move through social contexts much more quickly than people in other age groups. In the 11-year window from ages 14 to 25, in which people seem

to show the highest rates of opinion updating, young people move from middle school to high school to either higher education or the workforce or both, with each year in these contexts potentially exposing people to new classmates, teachers, role models, peers, and sources of information. People in this age window also show the highest rates of residential mobility, moving for educational and occupational reasons (**geist2008?**) . Assuming that new social contexts shape exposure to new information, and that exposure to new information affects the rate at which people change their opinions, this heightened contextual mobility might explain part of the difference in rates of opinion change between age groups.

Second, people in the “impressionable years” window spend their time in different social contexts than people in middle age. Data from the American Time Use Study shows that people under age 25 spend a larger portion of the day on leisure time and educational activities and a smaller part of the day doing work and work-related activities than people between the ages of 25 and 55. These contexts, especially education, are explicitly designed to expose people to new information in ways that can lead to updated opinions. For example, there is some evidence that college attendance leads to changes in opinions about civil liberties, gender egalitarianism, and racial inequality (**campbell2016?**; **wodtke2018?**). Social networks also differ in this time period. Previous work has found that young peoples’ networks tend to be larger and include more friends than kin, for example (**marsden1987?**). It could be the case that larger “weak tie” networks expose younger people to more new information that drives opinion change (**granovetter1975?**; **burt2005?**).

Third, these are periods in which exploration and self-discovery are expected and encouraged; something that should not be taken for granted given social variation in norms around when maturity is reached (**cunningham2012?**; **elder1994?**). One reason young people might be exposed to new information at higher rates is that they are implicitly asked to do it by the broader culture, while older people are implicitly asked not to.

For all these reasons, young people might encounter new information at higher rates than



201 older people, which might account for higher rates of opinion updating during this window.  
202 And changes in the norms around geographic and social mobility during the life course might  
203 affect the rates at which these changes happen at different life stages.

204 The social conditions of early adulthood might also influence the rate at which young people  
205 demonstrate attitude change by making it easier for young people to act on new sources of  
206 information in ways that facilitate opinion change. Previous work on stability of attitudes  
207 over the life course suggests that people tend to value stability in figures of authority. As  
208 people move into roles with more authority in mid-life, both in family and occupational  
209 contexts, they feel this expectation from others and act accordingly, closing themselves off to  
210 updating beliefs (**eaton2009?**). This potentially explains another phenomenon with some  
211 evidence behind it: that people appear to open up to changing their minds again as they enter  
212 post-retirement (**danigelis2007?**). At this point, peoples' authority diminishes, potentially  
213 opening them up to change later in life.

214 Similarly, mid-life is associated with more homogeneous networks (**marsden1985?;**  
215 **diprete2011?**), which experimental research suggests reduces the propensity to adopt new  
216 beliefs (**vissermirible?**). If young people exist in less dense, more heterogeneous social  
217 networks, they might it easier to update their networks to reflect new beliefs rather than  
218 constrain their beliefs to their social networks [], or close off parts of their lives to people  
219 who might not be supportive of new attitudes.

220 Given the distinct social conditions of the early-adult phase of life, there are significant  
221 reasons to believe that the “impressionable years” are principally an effect of how we have  
222 chosen to structure the life course, or the interaction between these life course stages and  
223 biological mechanisms, rather than simply a function of how the human brain works.

## 224 Changing Life Course

225 Contemporary historical trends offer the opportunity to evaluate the role of socio-cultural  
226 and biological factors in explaining why we observe “impressionable years” in adolescence  
227 and early adulthood. In the U.S., the last seven decades have seen considerable changes  
228 around adolescence and young adulthood (Buchmann 1989; Rosenfeld 2007; Rosenfeld and  
229 Kim 2005). The expansion of higher education and increased possibilities for geographic  
230 mobility are among the many social processes that have led to changing expectations for  
231 the trajectories that young adults should follow (Rosenfeld 2007). In general, as Buchmann  
232 (1989) notes, life trajectories have become less predictable. The “script” of young adulthood  
233 has become less rigid: it might involve prolonged higher education (and movement between  
234 the workforce and education), moving to a different city, or dating without a stable romantic  
235 partner. The routes that people are taking into adulthood are increasingly diverse. For the  
236 purposes of this paper, there are two trends that are particularly important: the elongation  
237 of young adulthood and the intensification of young adulthood.

## 238 Timing

239 The period between adolescence and “settling down” seems to be getting longer, and this  
240 might affect the patterns of attitudinal updating we expect to see for the same age groups  
241 in different cohorts. Buchmann (1989) notes that the diversification of life-trajectories has  
242 been accompanied by the postponement of the rituals associated with adulthood. In the  
243 U.S., the median age at first marriage has risen consistently since the middle of the 20th  
244 Century, from about 20 for women and 22 for men in the mid-1950s to 26.5 for women  
245 and 28.7 for men in 2011 (Manning, Brown, and Payne 2014). The median age of womens’  
246 first birth also increased a comparable amount, from 21.4 years in 1970 to 26.8 years in  
247 2017 (eickmeyer2017?). We also see higher rates of non-marital childbearing across all  
248 demographic groups (cherlin2004?). Thus, the markers of the transition into adulthood  
249 seem to be occurring later in the life-course and potentially in different orders. Therefore, the

definition of what counts as our “impressionable years” might be extending. This, in turn, could have an effect in how long exploration lasts throughout the life-course.

Adolescents are taking longer to move through the rituals of adulthood, and this might in turn elongate the period in which exploration and self-discovery are expected. If this is the case, we should expect to see more attitudinal updating among individuals in age-ranges that, in previous cohorts, had displayed mainly stability. In other words, people who were born say in the mid 20th century would have displayed mainly attitudinal stability by the time they reached their mid-twenties while more contemporary counterparts might still exhibit attitudinal updating when they reach that age.

### **Changing Impressionable Years**

A second trend relates to just how much exploration young adults can engage in during these “impressionable years.” In his work, Rosenfeld (2007) explores the rapid rise in same-sex and interracial marriages in the U.S. His argument is that one of the processes underlying these changes is that young adults are increasingly escaping the controlling gaze of their parents. When young people live with – or are financially dependent on – their parents, the latter have more say about their children’s choice of acquaintances, how they spend their time, and even the things they can believe. The increased independence and mobility that young adults have enjoyed since the mid 20th century means that they have been able to engage in courtship outside the gaze of their parents, thus making choices that would not have been sanctioned by them. Rosenfeld’s (2007) work highlights an important insight: exploration might not be only a product of how sensitive we are to novel information but also how – and whether – we can act upon such information. The social institutions where we spend our impressionable years might shape how much exploration we can engage in. An increase in independence then might entail more exploration.

This assertion in turn engenders a prediction: we should see more attitudinal updating among contemporary young adults than their older counterparts, who tended to be closer to the grip

of familial control, even if they have met similar life course milestones. The contemporary social organization of young adulthood, which has been developing for the last few decades, might give rise to more meaningful attitudinal changes by providing more leeway to deviate from established social norms.

This approach suggests that it is not the timing of life events that is important for rates of change, but the broader social conditions of early adulthood that might make people more malleable in recent cohorts even net of changes. In other words, unmarried, childless 25-year-old men and women in 1956 might have experienced a set of social constraints that unmarried, childless 25-year-old men and women in 2008 do not experience, leaving the latter much more open to developing new opinions than their predecessors.

## Hypotheses

Sociological work then suggests principled reasons to believe that the length and intensity of formative periods – the ages at which we observe heightened rates of attitude change, and the difference between these ages and other ages – have been affected by social factors over the past 70 years. We’re principally interested in the age range from about 20, when many of these life stage transitions were completed in the 1950s, to about 30, the age at which many of these life stage transitions are completed now. We refer to people in this group as “young people” for simplicity.

First, consistent with previous work, we expect young people to be more likely to make changes of attitudes than older individuals across all years. Biological arguments suggest that humans’ cognition is still developing in this window, and, even in the mid-20th Century, young people were still less likely to be married, less likely to have children, and most likely to still be enrolled in education.

H1:

Second, we expect that if social conditions are the principal drivers of rates of attitude change

over the life course, then the sum of changes in the life course will produce higher rates of change in more recent cohorts. Both the extension of early adulthood and the intensification of early adulthood suggest that young people will make changes in attitudes at higher rates than they did in previous eras.<sup>[extension]</sup>

H2: The rate at which young people make attitude changes, relative to older people, will have increased since the 1950s.

Third, we can distinguish between the “elongation of young adulthood” and the “intensification of young adulthood” arguments by exploring the association of life-course transitions and opinion change across cohorts. The elongation of young adulthood argument principally suggests that delaying the life course transitions is what would explain heightened rates of attitudinal updating in young people in recent cohorts. In contrast, the “intensification of young adulthood” argument suggests that attitudinal updating may be occurring at heightened rates in recent cohorts net of these life course transitions.

H3a: Heightened rates of attitudinal updating will go away when we control for life course transitions.

H3b: Heightened rates of attitudinal updating will persist when we control for life course transitions.

In contrast, finding similar patterns of attitudinal updating across widely different social contexts would lend further credence to the idea that our early years are “impressionable” either because we weight information more heavily during these periods or because we are cementing our opinions, regardless of the social contexts we happen to find ourselves in.

Finally, it could be case that an explanation for overall change in rates of the population are explained by factors that we have not explicitly considered here. It could be the case that rates of opinion change are tied to things like racial and ethnic identity, religious identity, or geographic region, all of which have changed significantly in the same window. If we identify

broad shifts in attitude change that are not explained by age groups, or life course transitions,  
it is possible that further exploration of demographic changes is necessary.

## Data

To test the hypotheses outlined above, we require data on within-individual change in  
comparable attitudes over a stable window of time across eras within the same general  
population. To do this, we focus on general political beliefs, including views on the role of  
government, political ideology, and partisan identification, that have been asked in a variety  
of panel surveys. This is in part a practical matter, as these are the kinds of questions that  
have been included in panel studies that date back to the mid-1950s, giving us the largest  
window of cohorts to explore across comparable issues. However, these kinds of questions  
have frequently been used to identify the “impressionable years” (Alwin and Krosnick 1991;  
Ghitza, Gelman, and Auerbach 2022), so using these questions helps our results speak to  
these previous findings more directly.

We draw on data from four different survey panels: the 1956-60, 1972-76, and 1992-96  
American National Election Study panels, and the 2006-10 General Social Survey Panels. All  
four surveys are nationally representative samples of non-institutionalized adults in the United  
States. All four panels survey respondents three times over a four-year window, making the  
duration comparable. And all four panels include a variety of comparable questions about  
general sentiments toward government action, as well as measures of life course transitions.

## Political Opinions

We sought to identify questions that tapped general political sentiments that were echoed in  
at least one other survey. We avoided questions that asked about specific policies or political  
figures, such as the president, since they were often not replicated across panels. We also  
focused principally on questions asking about the role of the federal government in domestic  
affairs, rather than international concerns. Questions about international affairs were common

in the early panels, but more recent panels do not contain comparable questions.

The only question that is replicated across all the panels is a question about partisan identification on a seven-point scale. No other questions are directly comparable across all of the panels, though some are asked in comparable ways across several. For this reason, we include a broad range of questions in hopes of establishing general patterns. Table XXX outlines the questions used in this analysis, their specific wording, and response options. We discuss decisions regarding coding strategies below.

## Life Course Events

To evaluate changes in the life course, and their relationship to attitude stability, we focus on a set of events that are traditionally accepted as marking the transition to adulthood. First, we include a measure of respondents' ages. In our analyses below, we use an indicator for whether respondents were 30 years old or younger in the first wave of the survey. In the 1956-60 ANES panel, 205 of the 1153 respondents (18 percent) who completed all waves were under 30. In the 1972-76 panel, 339 respondents out of about 1300 respondents (26 percent) who completed all three waves were under 30. In the 1992-96 panel, 144 of the 713 respondents (20 percent) who responded in each wave were under 30. And in the GSS panel, 156 of the 840 respondents (19 percent) who responded in each wave were under 30. In all samples, the total number of respondents under 30 is relatively small, which might pose a problem for evaluating statistical differences.

Other life course measures are less comparable across all panel surveys. While question wording differs slightly across surveys, all surveys include a measure of marital status. We recode this into indicators for either never being married, currently married, or previously married but not currently (divorced, separated, or widowed). The 1956-60 ANES panel did not distinguish between "single" and "never married" as more recent surveys do, so there are likely some cases that should fall into the "previously married" category that are coded as "never married." We code respondents based on their response in the first wave of the panel,

ignoring transitions that happen during the course of the panel.

The four panels were highly inconsistent in how they measured whether people had children. The 1956-60 panel of the ANES asked respondents how many children under 18 years old they had in the household. We coded individuals as having children in the first wave of the panel if they answered at least one to this question. The 1970s panel of the ANES asked respondents in the first wave if they had any school-aged children. In the second wave, they asked respondents if they ever had children, how many, and the ages of all children in the household. We code respondents as “having children in the first wave of the panel if they reported having at least one child older than one in the second wave of the panel. Because some of these questions focus on ever having children while others focus on children in the household, we caution readers from making any significant judgments about these coefficients. Finally, we include a measure of educational attainment. Rather than focus on whether a person was currently enrolled in an educational program, we code respondents by their highest level of education completed, either less than a high school degree, a high school degree, or at least a bachelor’s degree. Even in more recent panels, the proportion of respondents enrolled in education is too small to generate a good estimate of its association with attitude change.

## Analytic Strategy

The broadest challenge for our analysis is that it is not obvious what it means for a person to demonstrate opinion change in a survey. Debates about how much “change” we see in opinions often focus on differences in the approach to measurement (**converse1965?**; **achen1975?**; Ansolabehere, Rodden, and Snyder 2008). The kinds of questions we seek to examine, general political dispositions, tend to be asked on five- or seven-point ordinal scales, either from strongly agree to strongly disagree, or from one policy position (“government should help minority groups”) to another (“minority groups should help themselves”). These kinds of scales support a wide range of different measures of opinion change and stability. Rather than



adopt a single approach to quantify the rates of change across questions, we use a variety of approaches with different assumptions about what “change” entails and attempt to identify patterns that are robust across a range of assumptions. When these approaches disagree, having multiple measures allows us to more clearly evaluate what forms of change might be driving differences between groups.

The first approach we pursue is to simply measure whether people change their opinions at all during the course of the panel. In this approach, we use an indicator variable if they change at all from their first position. This imposes an extremely strong definition of what it means to hold a “stable” opinion, and does not distinguish between changes of opinion that might be due to measurement error and changes that reflect substantive shifts in positions.

The second approach to measuring change in political opinions is to assume that numbering of the ordinal scale of the response options is approximately correct and that all change is meaningful. Under these assumptions, we measure the total “distance” people move across a scale during the time period in question, adding the absolute change from wave 1 and 2 to the absolute change from wave 2 and 3. This approach does not distinguish directional change (ending with a new opinion) from reversion (changing opinion at time 2 and reverting at time 3). This approach also has the downside of not being comparable across questions that are on different scales. A one-unit change on a five-point scale might be more substantial than a one-point change on a seven-point scale.

A third approach we use is to define a priori what kinds of opinion behavior count as “change” and compare the prevalence of this kind of behavior across age groups and panels. In this case, we count any response pattern in which people stay on the same side of a midpoint (“agree”-“strongly agree”-“agree”) as a stable opinion and any response option that crosses the midpoint (“agree”-“disagree”-“disagree”) as representing a change of opinion. In this approach, we code people as “changing” if they cross the scale midpoint.<sup>1</sup> Like the previous

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<sup>1</sup>Coding people as changing if they simply “touch” the midpoint (“agree”-“neither”-“agree”) compared to crossing the midpoint (“agree”-“disagree”-“agree”) produces substantively similar results.

approach, this approach counts directional change the same as reversion.

A fourth and related approach is to classify people who change their responses within a specified range of the scale, such as changing less than two scale points (e.g., “agree”-“neither”-“agree”), as expressing stability while counting other respondents as making changes of opinion. This allows people who are stably in the middle of the scale (somewhere between agreeing and neither agreeing nor disagreeing, for example) to count as holding a stable opinion, but as changing if they shift too far in either direction. In principle, this approach should account for measurement error better than other approaches, as “true” changes of opinion should, on average, be larger than those driven by measurement error.

Fifth, we try to distinguish change that reflects moving from one side of the scale to the other from what might be “random” change. To do this, we classify people as making a durable change if they cross the scale midpoint once and only once over the course of the panel.<sup>2</sup> This is potentially the most stringent definition of “true” opinion change.

Sixth, in an attempt to deal with measurement error, we generate an issue scale of all general political questions in each year (Ansolabehere, Rodden, and Snyder 2008). In these scales, all domestic policy issues (excluding partisan identification) are recoded on a 1 to 7 scale so that higher values are associated with more conservative positions. Responses are then averaged to generate a single value for each respondent. We calculate the standard deviation of this scale as a measure of overall change, as well as the overall change from time 1 to time 3. These scales should not be assumed to be comparable across panels. Since some have more items than others, they are likely to have lower measurement error, resulting in lower standard deviations over time. However, we are able to compare young and old people on these metrics in each panel.

For every definition of change, we regress the outcome measure on an indicator variable for whether people are aged 30 or less. For the continuous outcomes, we use ordinary

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<sup>2</sup>This approach has a fundamental problem. As the proportion of people answering the question at random increases, the proportion of people demonstrating this pattern will also increase.

least squares regression. For the dichotomous outcomes, we use logistic regression. This produces an extremely large number of models for each of many questions, and will likely produce statistically significant coefficients at the  $p < .05$  level for a substantial proportion of coefficients simply by chance. Our goal is not to interpret any single coefficient but to interpret overall patterns if they emerge. Comparing logistic regression coefficients across models presents a number of challenges (Allison 1999). Instead, we principally compare the predicted rates of opinion change generated by these models over time visually.

### **Strict and Loose Coding**

Many of the questions have response categories like “Don’t Know” and “Haven’t thought about it.” These are usually coded towards the end of the scale, so taking their coding at face value would imply that moving from these answers to one end of the scale is “easier” (at least in terms of distance). We consider two ways of handling these response options.

The first is to accept that we cannot categorize how far “now knowing” is from say “extremely liberal” and “extremely conservative,” or whether these kinds of responses represent a qualitative shift from previous responses. Moreover, we might say that this kind of response is qualitatively not the same as being in the middle of the scale as an “moderate.” Therefore, we get rid of these cases in all models, and only attempt to make inferences for the kinds of people who select other options in all waves of a survey. We call this approach “strict filtering.”

The second approach is to code these responses as falling at the middle of the opinion scale; that there is no difference between someone saying they “neither agree nor disagree,” for example, and saying they “do not know” their position on an issue. Recoding these people allows us to have a much larger sample size and draw clearer distinctions between cases. There are substantial justifications for this decision for many of the questions we explore here. First, many Likert scales explicitly label the scale midpoint with “no opinion,” which suggests that respondents might perceive it this way too, even if it is labeled something like, “neither

agree nor disagree.” Second, people who report “Don’t know” in one wave tend to report an opinion near the scale midpoint in subsequent waves (**kinder2017?**). This suggests that they view these positions as substantively similar as well.

Each of these approaches might be more or less valid for different questions, so we consider all models under each approach.

## Results

Figure XXX presents either the average expected change (for continuous outcomes) or the predicted probability of people over 30 making a “change” of opinion (for categorical outcomes) as defined by the various metrics we outline above.

There are several takeaways from the figure. First, change as defined by most of the metrics we outline above is incredibly common. On almost all items, the majority of respondents change their response more than two scale points and cross the midpoint of the scale over the course of the survey window. At the same time, this tends not to manifest as “durable change” – defined as starting on one side of the scale and ending on the other. This kind of opinion behavior is rare across panels, being observed in fewer than 10 percent of all cases for almost every question.

Substantively, there is little difference across the panels in the average rates of opinion change. All panels tend to have a very similar level of each kind of change, with one or two questions showing more or less change in each panel. Partisan identification is a clear outlier in all panels. It is the least likely to show change from one side of the scale to the other and the least likely to show changes of greater than 2 points on the scale in almost every panel. This finding agrees with previous work in this domain suggesting that partisan identification is a substantively different kind of response than the other responses here (Alwin and Krosnick 1991). Partisan identification is registered externally to an individual, has the clearest support from social institutions, and is the most likely to be reinforced in media representations.

Self-placement on a liberal-conservative scale also shows a somewhat different pattern than other opinion questions. For most questions, the rates of change greater than 2 points and change across the scale midpoint are relatively similar. However, self-placement on the liberal-conservative scale shows high rates of people switching sides or crossing the midpoint over the course of the scale, but much lower rates (relatively) of people changing by more than two points during the course of the panel. This suggests that many respondents hover around the middle of the scale (identifying as moderate), while on other questions they spread responses more widely, vacillating between ends of the scale over time.

These rates provide a baseline against which we can compare young people. We now turn to exploring the differences between young (under 30) and older respondents across the panels. Figure XXX plots predicted differences between young and old people generated from the regression models outlined above. These are presented in logodds for the dichotomous outcomes and scalar differences for the continuous (total change/standard deviation) outcomes.

*#Alterantive measures plot here.*

In general, there are very few statistically significant coefficients in the plot, suggesting that young peoples' opinion behavior is not substantially different than that of older people for the issues examined here across all eras. This is not to say that young people do not have substantively different opinions (they likely do), just that they are not any more or less stable by the metrics we outlined above. There are only a handful of issues where we observe a consistent pattern across most measures of attitude change: partisan identification in most panels, the issue of busing in the 1970s, and general views on government spending in the 1990 panel.

One concern might be that young people are changing at notably different rates than older respondents, but that the models explored here are under-powered and not able to identify true differences. However, it is hard to observe how narrower standard errors would produce a clearer pattern. For both standard deviation and total distance changed, coefficients for

young people in all waves are equally likely to be positive and negative, suggesting no clear pattern over time. In all eras, across all measures, there are issues where young people are more stable and issues where young people are less stable. On the two issues that are asked across multiple panels – partisan identification, asked in all panels, and position on a liberal to conservative scale, asked since the 1970s panel – coefficients look remarkably stable across panels.

Comparing coefficient estimates across logistic regression models can be misleading (Allison 1999). We can further confirm the patterns observed in the above plot by plotting the predicted probability of old and young people making each kind of change in each panel, or the predicted difference in overall change.

*#Figure out a way to put the predicted probability plot in here.*

Predicted probabilities reinforce previous statements: there is not a clear change over time in the difference between respondents under 30 and those over 30. It might be reasonable to suggest that there is a general tendency of young people to change opinions at higher rates than older people that might be detectable with larger samples, but the difference is probably on the order of less than 5 percentage points, with the exception of a few questions like partisan identification, where we see a substantial difference. This difference, to the extent that it exists, principally manifests as inconsistent change, rather than a switch from one side of the scale to the other.

## Life Course Stages

We have to now explored the relationship between age and attitude change and observed no clear pattern, but we suggested earlier that features of the life course, such as whether people are married or whether they graduated college, might matter as well. Because the samples of young people are already quite small, we focus on each life stage separately.

Figure XXX plots the partial association between measures of marital status and change, net

of the coefficient for young people. Contrary to expectations, there is no clear pattern in the effect of marital status on the probability of change, especially never having been married. Almost none of these coefficients show statistical significance, and are equally likely to be positive and negative, suggesting no substantial difference between married respondents and other respondents. Having been previously married appears to be associated with slightly higher rates of attitude change over time, especially in more recent panels, where this group shows up in higher rates.

*#marital coef plot hereyeyeye*

Figure XXX plots the coefficient estimates for the association of education level and various measures of change, with high school degree holders serving at the reference category. Broadly speaking, prior to since the 1970s, higher levels of education are associated with a decreased likelihood of attitude change on most measures.

*#ed coef plot herehey*

Including either education or marital status in the model does not affect the overall pattern of change over time. These covariates have almost no effect on the covariate for “youth” in any model. This suggests that changes these life course factors are not affecting the relationship between youth and attitude change over time.

## Discussion

This paper set out to evaluate whether social and cultural changes in the length and intensity of young adulthood have produced changes in the rates at which young people hold stable political opinions or change their political opinions over time. Considering a wide range of definitions about what constitutes “opinion change,” and comparing young and old people on these measures across general measures of political opinion in four panel data sets spanning 60 years, we find remarkably little change in opinion dynamics, either in the population as a

whole or among young people specifically.

Broadly, in line with previous work on the topic (much of which uses the same data), survey measures designed to tap general political dispositions produce highly inconsistent responses from the public (**converse1965?**; **zaller1992?**; **hout2016?**). On many of the questions explored here, more than 60 percent of the sample places themselves on either side of a scale over the three-wave, four-year panel. The outlier to this pattern is partisan identification, which demonstrates much less within-person variance than the other questions, a finding that is also in line with previous work (**hout2016?**; Alwin and Krosnick 1991). We strongly caution other researchers from using partisan identification to draw inferences about political attitudes in general.

In general, young people are more inconsistent opinion holders than older people, demonstrating more change or inconsistency over time across a variety of metrics than their older counterparts. However, this difference is not pronounced. When it does manifest, young people are probably about 5 percentage points more likely to demonstrate an inconsistent opinion than older people, and on many issues younger people and older people are indistinguishable in their opinion behavior.

In addressing our central question, we find that there has not been a obvious, significant shift in the difference between younger and older respondents across the four panels. Young people have not diverged from older individuals in their likelihood of opinion instability or opinion change. People under 30 today make opinion changes at roughly the same rate as people under 30 in 1950 or 1970, despite being much less likely to be married, and much less likely to have a child. The overall takeaway must be that the extension and changes of early adulthood has not had profound effects on the rate at which young people update their beliefs. We suggest two explanations for this pattern.

First, it might be the case that countervailing forces have produced aggregate stability in the differences between young and old people. While more young adults are putting off marriage



and having children, which might make them more inconsistent opinion holders for longer periods of time, they are also attending higher education at higher rates, which might make them more consistent opinion holders. In more recent panels, having attended college is associated with more stable opinions, even controlling for age. This was not the case in the early panels. However, these factors – rates of marriage and rates of education – do not explain or obscure any differences over time. When we include these factors in a regression model with youth, the differences in opinion behavior between young people and old people stay the same.

The alternative explanation is that changes in the social conditions around early adulthood have not had substantial effects on the rates at which young people make opinion changes because it is biological and cognitive processes, rather than the social conditions of young adulthood, that explain the heightened rate at which young people make opinion changes. The remarkable consistency of the patterns of opinion behavior despite monumental shifts in the nature of information access, political polarization, and the organization of work, as well as the entrance of women into the workforce in large numbers, the dramatic expansion of higher education, and dramatic changes in the demographic composition of the United States in the same time period suggests that these patterns might be rooted in something other than social structure.

## **Limitations**

There are several important limitations of our analysis. First, the high degree of opinion instability in general makes it difficult to distinguish “real” change from the kind of inconsistent change that seems to be captured in most of our measures. While we attempted to control for this by using composite scales of multiple items, these scales themselves still have relatively high inconsistency.

Second, while all the questions generally touch on the role of the federal government in addressing different issues, the substantive topics asked in each panel are quite different. Early

panels focus on questions about the government’s role in managing public utilities, questions of the government’s role in racial integration, and the federal role in local school construction. Later panels focus on questions of redistribution of wealth, and the government’s role in the health care and the broader economy. Because we cannot hold constant the topics under investigation, and because the topics do not themselves represent a random sample of opinions, it is not clear whether the lack of change over time is due to this turnover in topics. It could be the case that the overall pattern we observe – high rates of instability, with instability higher in young people – is only applicable to highly salient issues in the general public.

## Conclusions

Despite significant shifts in the timing of life course events and the broad social structure of early adulthood from the mid-1950s to today, there is little change in the rates at which people between the ages of 18 and 30 undergo major changes of political opinions. The patterns observed in this analysis broadly suggest that there is something timeless – such as how the human brain develops over time – that explains broad patterns in attitude instability early in the life course. It could also suggest that the features that explain stability are still social in nature, but are rooted in factors that have not undergone significant changes since the 1950s, though it is unclear what those might be.

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