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Youth and Inexperience: Dynamic Inconsistency Among Emerging Adults

Brian Gibbons and Julia Paxton

Abstract
Why do some people think they will behave differently in the future? Building on research on dynamic inconsistency and age related preferences, this paper introduces the concept that inconsistent intertemporal preferences are directly related to age. In previous studies, standard socioeconomic variables such as age have had mixed results in predicting hyperbolic discounting (a behavior that consists of impatience now but projected patience in the future). By incorporating both demographic and behavioral variables, a clearer picture emerges. The findings from observations of a large sample of college graduates indicate that emerging adults are more likely to exhibit hyperbolic discounting behavior than adults over the age of 30. Among emerging adult respondents, lower incomes and more naïve self-assessments are determinants of hyperbolic discounting behavior. Recognizing demographic trends is critical since studies show that hyperbolic discounting affects financial and planning decisions and that specially designed tools may help hyperbolic discounters follow through with plans (Ashraf et. al., *Tying Odysseus to the mast: Evidence from a commitment savings product in the Philippines*, 2006).

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Keywords Hyperbolic discounting, Emerging adults, Generation Y, Dynamic inconsistency, Intertemporal preferences

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"There is nothing constant in this world but inconsistency." -- Jonathan Swift

I. INTRODUCTION

Do we become more consistent in our behavior and decision making as we age? Dynamic inconsistency occurs when individuals exhibit preference reversals in their intertemporal decision-making. In recent years, behavioral economists have been intrigued by dynamic inconsistencies and have offered a number of explanations for their presence. Hyperbolic discounting assumes that dynamic inconsistency is observed when individuals have a hyperbolic, rather than an exponential or linear, discount curve resulting in individuals' preference to engage in actions that their future self would not choose. The hyperbolic discounting model was introduced by Phelps and Pollak (1968) as they described time preferences and the national savings rate. The concept of hyperbolic discounting, although disputed in its definition and its functional form (Rubinstein 2003), has been applied to a multitude of topics. Other explanations of time inconsistency focus more on future uncertainty and theories of temptations or self-control (Gul and Pesendorder, 2004; Thaler and Shefrin, 1981).

Although intertemporal inconsistency has been a fertile area of research, a gap in the literature exists with respect to the impact of age on dynamic inconsistency. The relationship between age and dynamic inconsistency has not been well researched and the few studies that do exist have conflicting findings. Ashraf, et. al. (2006) find no relationship between the two variables while other studies find adults under the age of 30 are much more likely to exhibit intertemporal dynamic inconsistency than their older counterparts (Eisenhauer and Ventura, 2006). The present study aims to fill this gap by attempting to establish a relationship between the characteristics of the emerging adults and their effect on the intertemporal preferences of the cohort. This research introduces a new dataset of 1205 college graduates surveyed about their financial behavior and dynamic inconsistency. In addition to establishing a causal link between age and dynamic inconsistency, this paper contributes to the literature by introducing a series of behavioral variables that help shed light on the interaction between dynamic inconsistency and emerging adults. The paper highlights how determinants of hyperbolic discounting differ between emerging adults and mature adults.

II. Characteristics of Today's Emerging Adults

Age related preferences can be divided into age effects and cohort effects. While this study does not attempt to disaggregate these two interrelated effects given that it utilizes cross-sectional data, it is important to highlight how both age and cohort effects can impact the dynamic inconsistency of emerging adults.

AGE RELATED CHARACTERISTICS

A growing literature has emerged regarding the characteristics of "emerging adults" who do not classify themselves as adults. Age effects related to risk preferences, financial behavior, and time preferences have been explored in the life cycle savings literature (Deaton, 1992). Precautionary savings models predict that poor and young households with uncertainty have a high rate of time preference and have a motive for creating a buffer stock of savings to be used to smooth consumption (Deaton, 1992; Carroll, 1997). Despite the theoretical predictions, age cohorts do not always act as predicted. Hubbard, Skinner, and Zeldes (1994) ask why there are so many U.S. consumers who have accumulated so little near retirement. They offer several explanations including myopia, failure to enforce "mental accounting" (Thaler, 2008), and high individual rates of time preference.

Emerging adults are often identified as individuals between the ages of 18 and 30. Arnett (2001) finds that emerging adults have less stable financial situations, interpersonal relationships, living arrangements, cognitive and emotional development, and religious beliefs. In a recent study, a correlation between sensation-seeking scores and problematic financial behavior among emerging adults is established (Worthy, et al., 2010). Robb (2011) presents similar findings showing that increasing financial knowledge has a direct impact on prudent debt management through credit card use in college students. The findings of these two studies are solidified through a national survey that controlled for demographic and financial backgrounds (Gutter and Copur 2011). The survey and resulting study present the idea that time orientation towards the future and risk aversion can increase social and economic welfare, and that higher levels of financial knowledge and risk aversion are positively related to financial welfare among emerging adults. The findings show that emerging adults often times have difficulty making accurate intertemporal choices, especially regarding financial decisions and credit card use.

COHORT-RELATED CHARACTERISTICS

Today's set of emerging adults would fall under the generational title of Generation Y. Generation Y (Gen Y), loosely defined by those with birthdates between the early 1980's and the early 2000's, has been described as culturally diverse, technologically savvy, socially conscious, narcissistic, well-educated, and eager for instant gratification (Robb, 2011; Gutter and Copur, 2011; Worthy, et. al., 2010; Nelson and Barry, 2005).

Comparable experiences such as economic, political and social events among age groups form similar characteristics, values, and opinions among generational cohorts. Petroulas et. al (2010) contend that Gen Y has a lack of organizational loyalty and a short term goal focus. This categorization is reinforced by Southard and Lewis (2004) who state that the cohort prefers instant gratification rather than the long-term investment of time and effort. Tulgan (2009) submits that Gen Y harbors a sense of immediacy as a result of growing up with a never before seen amount of technology.

Twenge and Campbell (2008) find that members of Gen Y are higher in narcissism, higher in self-esteem, have less need for social approval, and have a higher external locus of control. The members of Gen Y are known as the most educated and culturally diverse

generation in history. This generation is exceptionally tolerant toward a variety of different diverse lifestyles.

A recent study shows that emerging adults in their 20's and 30's have 40 percent less real accrued wealth than their parents did at the same age, despite the fact that income has doubled in the past 25 years (Steuerle, et. al., 2013). With easy access to credit and college loans, recent college graduates are struggling to pay off debt and are delaying the purchase of homes and cars (Van Horn, 2012). Psuedo-panel data has shown that the members of Gen Y have been found to rely on credit more heavily and repay less of their balance than members of older generations (Jiang and Dunn 2013).

Taking in to consideration all of these characteristics, it is clear that Gen Y has entered early adulthood in a world much different from that of previous generations. Experiences during their development have caused them to form distinct characteristics that could potentially have some effect on time preference. The academic observations of Gen Y from the literature concerning their mounting debt repayments, their short term goal focus, their higher external locus of control, and their experiences growing up with technology influenced the current study by providing a rationale behind why Gen Y might potentially have different intertemporal preferences than mature adults.

In so much as can be observed through the literature, recent research has failed to explain if these present-biased trends have had an effect on the intertemporal discount preferences of emerging adults or generational cohorts. Nelson and Barry (2005) establish that those who self-classify as "adults" engage in less risk-taking behaviors compared to their "emerging adult" peers who are self-classified using the same criteria. Given both the literature on age effects and cohort effects, it is reasonable to hypothesize that emerging adults may be impatient, but it is not clear whether their choices will exhibit dynamic inconsistency.

III. DYNAMIC INCONSISTENCY

The literature surrounding hyperbolic discounting is particularly broad in scope and application. Early literature regarding intertemporal choice was largely centered on field studies to estimate individual discount rates. However, it was found that it is difficult to draw inferences between an individual's savings behavior and discount rate. The concept of hyperbolic discounting, although disputed in its definition and its functional form (Rubinstein 2003), has been applied to a multitude of topics. Traditional models of time consistent financial behavior assume an exponential discount function. The exponential discount factor is given by:

$$D^E(t) = \frac{1}{(1+\delta)^t} \qquad (1)$$

where δ is the discount rate. Dynamic inconsistencies illustrated by intertemporal preference reversals have been mathematically defined by a plethora of hyperbolic and quasi-hyperbolic discount functions (Anderson, et.al, 2011). In its simpest form, the hyperbolic discount function assumes a discount factor that can be written as:

$$D^H(t) = \frac{1}{t} \quad (2)$$

with a discount rate defined as:

$$d^H(t) = t^{(\frac{1}{t})} - 1 \quad (3)$$

While numerous functional forms exist to define declining discount rates, quasi-hyperbolic discounting (Loewenstein and Prelec, 1992; Laibson, 1997) is relevant to empirical tests of dynamic inconsistencies since it allows for a discrete time-value function. The quasi-hyperbolic discount factor is defined as:

$$D^{QH}(t) = 1 \qquad if\ t = 0 \quad (4)$$

$$D^{QH}(t) = \frac{\beta}{(1+\delta)^t} \qquad if\ t > 0 \quad (5)$$

with a discount rate of

$$d^{QH}(t) = \left\lfloor \frac{\beta}{(1+\delta)^t} \right\rfloor^{(\frac{-1}{t})} - 1 \quad (6)$$

for t>0 (Anderson, et.al, 2011). Consistent with discrete preference reversals, a rapidly decreasing discount rate occurs when $\beta<1$ in the short run and then approach δ asymptotically as the initial drop in the discount factor decreases.

In their study, Ashraf, et. al. (2006) employ hypothetical survey questions such as, "Would you prefer to receive P200 (Philippine pesos) guaranteed today, or P300 guaranteed in 1 month?" and "Would you prefer to receive P200 guaranteed in 6 months, or P300 guaranteed in 7 months?" in order to measure time-preferences, as well as time preference reversals. Using this survey the researchers are able to measure three characteristics among their sample set: impatience, present-biased time inconsistency (hyperbolic discounting), and future-biased time inconsistency. The authors found no relationship between socioeconomic indicators, including age, and hyperbolic discounting, although they did find that those who were less satisfied with their current savings habits were more likely to be hyperbolic discounters. After identifying those among the sample who display time inconsistent preferences, a savings commitment device was marketed to a trial group. A

significant effect for the adoption of the product was found among women who were classified as hyperbolic discounters.

In contrast to Ashraf, et. al. (2006), Eisenhauer and Ventura (2006) do find that certain demographic characteristics are determinants of hyperbolic discounting using European household data which contain observations of differing educational levels. In their study, an astonishing 38.1 percent of emerging adults are hyperbolic discounters compared to approximately 20 percent for individuals in their thirties and forties and 23 percent for individuals above fifty years of age. They also find a strong educational effect. Only 16 percent of college graduates are hyperbolic discounters compared to 27 percent who have only elementary school education. There is an endogeneity effect between education and hyperbolic discounting since a lack of education may contribute to time inconsistent behavior, but that hyperbolic discounters may drop out of school. Because of this dual causality, it is hypothesized that the percentage of hyperbolic discounters in a sample of college graduates would be smaller than in other samples. The sample provides a unique opportunity to isolate the age effect while keeping the educational effect constant.

IV. DATA AND METHODOLOGY

In order to find evidence of dynamic inconsistency and its relationship to age, a short email survey was sent to graduates of Ohio University and 1,205 completed responses were recorded. The data were collected by the Ohio University Office of Advancement and are proprietary to the university. The sample is not representative of all Ohio University graduates, but just those graduates willing and able to participate in the email survey. The data were stratified into two categories with 485 observations between the ages of 21 to 29 making up the emerging adult category and 720 observations making up the adult 30+ category (Table 1). While roughly half of the adult respondents were male, more females in the emerging adult group answered the survey (63%). Not surprisingly, the emerging adults had a lower household income compared to adults.

Included in the survey were questions used to establish intertemporal preferences among the sample similar to those established previously in the literature by Ashraf et al. (2006). The dependent variable measured in this study, time inconsistent impatience (hyperbolic discounting), is defined as someone who would choose to receive $100 immediately over $110 in one month, but would reverse their decision and choose to wait for the $110 dollars in seven months instead of $100 in six months. The other possible outcomes for intertemporal preference were time consistent impatient (immediate reception in both time scenarios), time consistent patient (delayed reception in both time scenarios), and time inconsistent patient.

T-tests (Table 1) show that the emerging adult group has a statistically higher prevalence of time inconsistent impatient behavior (19.2 percent) compared to older adults (14.3 percent). Figure 1 highlights the divergence in behavior between emerging adults and adults in time preference. The contrast is the most pronounced in impatient behavior. Interestingly, the full sample percentage of time inconsistent impatient respondents (hyperbolic discounters) is 16.3 percent which is nearly identical to the finding of 16.1 percent in the cohort of college graduates in Europe (Eisenhauer and Ventura, 2006). As suspected due to the

endogeneity of hyperbolic discounting and staying in school, this study finds only 19.2 percent of emerging adults to exhibit dynamic inconsistency compared to 38 percent in the European data. Even with the sample bias of using only college graduates, the difference between emerging adults and adults is still striking.

TABLE 1

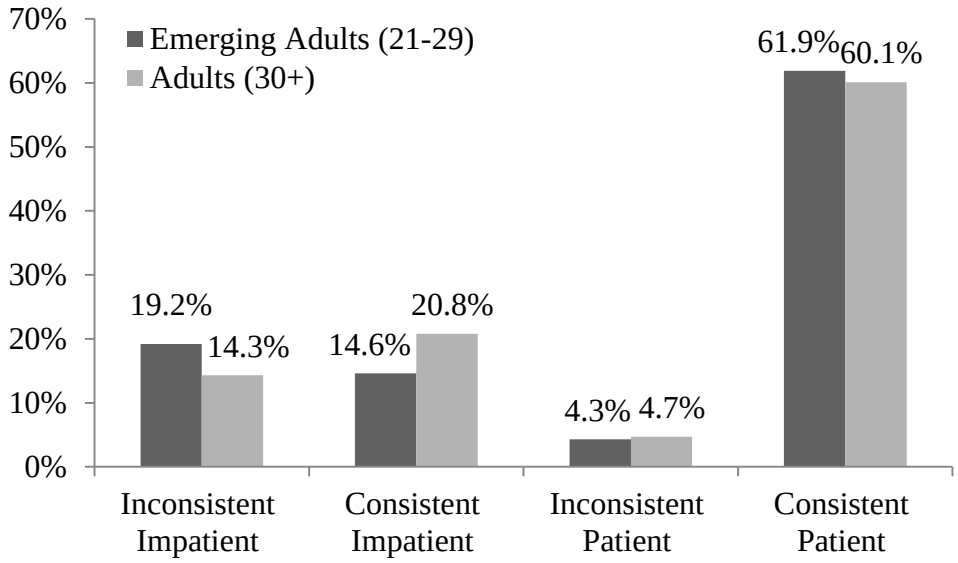
Descriptive Statistics and T-Tests

	Generation Y (21-29)				Mature Adults (30+)				Full Sample			
	Mean	$\sigma_{\bar{x}}$	Min	Max	Mean	$\sigma_{\bar{x}}$	Min	Max	Mean	$\sigma_{\bar{x}}$	Min	Max
Age	26.214***	2.016	21	29	38.161***	8.824	30	79	33.352***	9.082	21	79
Male	0.373***	0.484	0	1	0.456***	0.498	0	1	0.422***	0.494	0	1
Household Income	59790***	35591	0	200000	105793.9***	71835	0	750000	87277.73***	64033	0	750000
Number of days to complete survey	1.505	5.241	0	54.00	1.415	4.811	0	56.00	1.451	4.986	0	56
Number of economics classes	1.821	1.867	0	11.00	1.756	1.755	0	10.00	1.782	1.801	0	11
Naïve Optimist	0.206	0.405	0	1	0.183	0.387	0	1	0.193	0.394	0	1
Naïve Pessimist	0.179	0.384	0	1	0.154	0.361	0	1	0.164	0.371	0	1
Naïve	0.386*	0.487	0	1	0.338*	0.473	0	1	0.357*	0.479	0	1
Sophisticated	0.614*	0.487	0	1	0.6625*	0.473	0	1	0.643*	0.479	0	1
Time inconsistent impatient	0.192**	0.394	0	1	0.143**	0.350	0	1	0.163**	0.369	0	1
Time consistent impatient	0.146***	0.354	0	1	0.208***	0.406	0	1	0.183***	0.387	0	1
Time inconsistent patient	0.043	0.204	0	1	0.047	0.212	0	1	0.046	0.209	0	1
Time consistent patient	0.619	0.486	0	1	0.601	0.490	0	1	0.608	0.488	0	1
Observations	485				720				1205			

Significant at 1% level ***
Significant at 5% level **
Significant at 10% level *

FIGURE 1

Mean Time Preference by Age



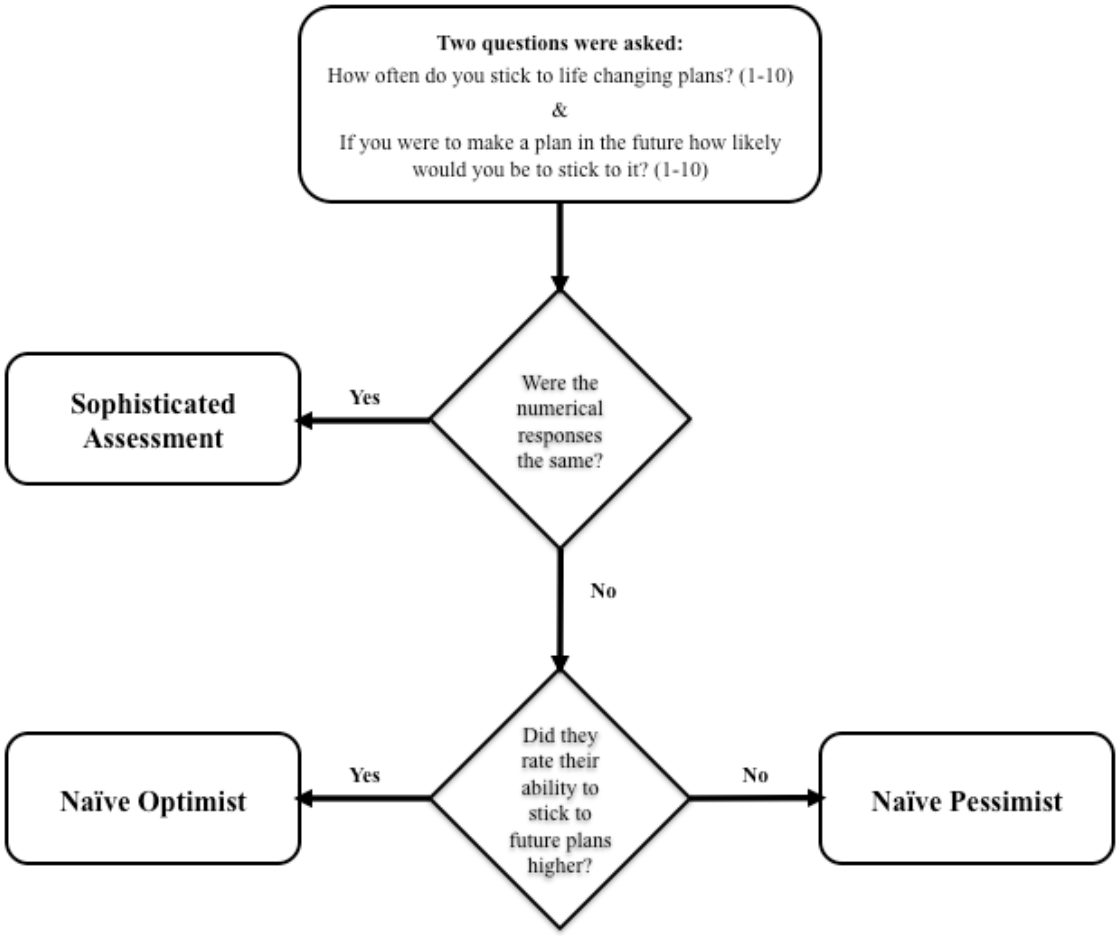
In addition to standard demographic and time preference variables, this research includes behavioral self-assessment variables. In order to capture consistency in non-financial activities, the following questions were asked: "When you make plans, (saving, weight loss, gym, vacation, etc.) how often do you stick to them?" and "If you were to make a lifestyle changing plan today (saving, weight loss, gym, vacation, etc.), how likely would you be to stick to it?" If a respondent used past behavior to predict their future success in sticking to goals, they were classified as sophisticated. However, if the two answers diverged, respondents were labeled naïve. Those who expected to stick to their plans better than they had in the past were labeled naïve optimists while those who expected to be less likely to stick to plans than they had in the past were considered to be naïve pessimists. This distinction can be visualized in Figure 2 below.

A number of interesting statistical divergences were found from the t-tests. At the 10% significance level it was found that emerging adults were less likely to be sophisticated self-assessors and they were more likely to make a naïve self-assessment. At the 1% significance level it was found that income and time consistent impatience were significantly different and at the 5% significance level time inconsistent impatience was found to be different between the two groups.

A variable measuring the days to complete the survey was introduced as a final behavioral variable since the hyperbolic discounting literature has one strand of literature that links the time-inconsistent behavior to procrastination (Akerlof, 1991). There were no obvious differences between emerging adults and adults as both groups took an average of one and a half days to respond to the survey.

FIGURE 2

Sophisticated vs. Naïve Explanatory Figure



V. RESULTS

In order to test the determinants of hyperbolic discounting, a probit regression model was estimated. Test results detected conditional heteroskedasticity in the independent variable economics courses, thus a heteroskedastic probit model was estimated (Table 2). For the whole sample, age was found to be a significant determinant of hyperbolic discounting, with younger respondents being more likely to be hyperbolic discounters. However, once the sample was split into emerging adults and mature adults, the age effect disappeared within age cohorts. In addition, the number of economics classes and the ability to consistently self-assess behavior were significant determinants of time inconsistent impatience.

TABLE 2

Heteroskedastic Probit Results: Time Inconsistent Impatient Behavior by Age

Dependent Varible: Time inconsistent impatient	Generation Y (21-29)	Mature Adults (30+)	Full Sample
Age	0.0368 (0.0393)	-0.0074 (0.0089)	-0.0102 (0.0062) *
Male	-0.2556 (0.1787)	0.0709 (0.1565)	-0.0815 (0.1111)
Household Income (in thousands)	-0.0051 (0.0000) **	0.0001 (0.0000)	-0.0006 (0.0000)
Number of days to complete survey	0.0031 (0.0142)	0.0168 (0.0127)	0.0107 (0.0091)
Number of economics classes	-0.1310 (0.1358)	-0.4949 (0.2006) ***	-0.2607 (0.1196) **
Naïve Optimist	0.3894 (0.1901) **	0.3777 (0.1952) *	0.3776 (0.1347) ***
Naïve Pessimist	0.3639 (0.1974) *	0.0282 (0.2097)	0.2100 (0.1390)
Constant	-1.5395 (0.9978)	-0.7044 (0.3805) *	-0.5387 (0.2205) **
Observations	485	720	1205

Significant at 1% level ***
Significant at 5% level **
Significant at 10% level *

For the emerging adults, income was a statistically significant determinant of hyperbolic discounting. The data showed that for every increase in $1,000 in household income reduced the likelihood of hyperbolic discounting by 0.51% for those under 30. Hyperbolic discounters may be more likely to have a present-based time bias because they have less income than the average for their peer group. Among emerging adults, hyperbolic discounting was also a function of naïve self-assessments. Both naively optimistic and naively pessimistic self-assessments were linked to hyperbolic discounting compared to respondents who had a sophisticated assessment of their follow-through in making plans.

Among adults aged 30+, only naïve optimists were linked to hyperbolic discounting. Thinking you stick to plans when you actually do not was a significant contributor to falling into this category. Being naively optimistic about future success makes sense in light of hyperbolic discounting as there is hope that one's future self will be more patient. For the full sample, naïve optimism was the most statistically significant predictor of hyperbolic discounting. In addition, economics education significantly reduced the likelihood of time inconsistent behavior. By having taken just one more economics class, an adult reduced the likelihood of being time inconsistent impatient by 49.4%. Neither gender nor procrastination were found to be statistically significant determinants of dynamic inconsistency in any of the samples.

VI. DISCUSSION

The results of this study introduce three interesting findings: 1.) The incorporation of behavioral variables is critical to understanding the determinants of hyperbolic discounting including demographic variables 2.) There is a higher prevalence for time inconsistent impatience among emerging adults and 3.) There are statistically significant differences in the determinants for hyperbolic discounting among the two groups. Understanding why emerging adults are deeply discounting the near future is an important empirical question.

We have shown that two reasons for this preference reversal are that they are inaccurate self-assessors and that they have lower incomes. These effects may be age related or cohort related, but without panel data, it is impossible to disaggregate these two effects.

It certainly appears that unsophisticated self-assessments may be a function of an age effect, rather than a cohort effect. It would be logical to assume that as people mature, they become more familiar with their own time preferences and can more accurately self-assess. The fact that the naïve optimist effect is less significant for adults and the naïve pessimist effect vanishes entirely, confirms this point. As previously mentioned Arnett (2001) finds less stable life situations and less cognitive and emotional development are both part of being classified as an emerging adult.

Having established that age has a definite effect on time inconsistent preferences, it is also possible that there is a concurrent effect existing in regards to the Generation Y cohort. The emerging adults of Generation Y do indeed have unique behavioral characteristics that indicate that they might have a higher proclivity towards dynamic inconsistency than emerging adults of other generational cohorts. First of all, they have grown up experiencing life where events occur with a much higher speed of information. Now that they are entering adulthood the speed of information is practically instantaneous. Technological advancements could certainly be affecting the time preferences and discount rates of Generation Y and subsequent cohorts. Secondly, access to credit and an increasing reliance on debt to fund higher education may contribute to impatience in the current time period. The hypothesis that Generation Y's financial struggles have contributed to their inconsistent preferences is supported by Van Horn's (2012) assertion that the members of this generation are struggling to pay off debt and finance large purchases.

In order to better understand the behavior of emerging adults and adults, this study has introduced new behavioral variables which shed light on hyperbolic discounting behavior. The variables naïve optimist and naïve pessimist, as previously explained in Figure 1, have not been used previously in the literature to measure a person's individual ability to stick to plans they have made. These new variables established in this study were found to be significant determinants of time inconsistent impatient behavior for emerging adults, mature adults, and the sample as a whole. In contrast, the procrastination variable was not found to be a statistically significant determinant of preference reversals. Simple self-assessment questions are relevant measures of dynamic inconsistency and could be used in future research.

This study has shown that determinates of hyperbolic discounting tendencies differ, even among college graduates with emerging adults having a significantly higher propensity towards hyperbolic discounting than mature adults. One implication for a practical application of the findings of this study would be for financial institutions to develop and market commitment products, similar to ones used in the Ashraf et al. (2006) experiment, to existing emerging adult customers. Doing so would not only help emerging adults meet their financial goals like getting out of debt or increasing savings for large purchases, for example, but it would also benefit financial institutions as they expand their products and services to cater to the demand of their clientele. Charitable causes or non-profits could use similar methods to fight dynamic inconsistencies and increase donation levels among emerging adults. For example, a charity could employ a commitment device that would

allow an individual with time inconsistent preferences to start donating a small amount of money in the present that then increased to a target donation amount, as established by the donor, sometime in the future.

The insights and behavioral variables introduced in this study can help guide future research and contribute to the discussion of dynamic inconsistency among generational cohorts. While there is a clear age component to hyperbolic discounting, the extent to which it is an age effect or a cohort effect remains unanswered. Future longitudinal studies may shed light on which effect dominates. In addition, testing commitment devices for hyperbolic discounters remains a largely untapped area of research.

APPENDIX A. ECONOMIC BEHAVIOR SURVEY

This 3-minute survey is being used for research by Honors Tutorial students for an Ohio University economics class. This is not a commitment or a request to donate any money to Ohio University. There are no right or wrong answers and all information will be kept confidential.

The purpose of the survey is to better understand economic behavior and preferences regarding the timing of financial decisions. Thank you for your participation!

1. Please enter the ID survey code listed in the email sent to you.

2. Given the choice, would you rather receive $100 today or $110 in one month?

3. Given the choice, would you prefer to donate $50 to a good cause today or $55 in one month?

4. When you make plans, (saving, weight loss, gym, vacation, etc.) how often do you stick to them? Use the scale of 1 to 10, with 1 being never sticking to plans and 10 being always sticking to plans.

5. Age:

6. Sex:

7. Approximate household income:

8. If you were to make a lifestyle changing plan today (saving, weight loss, gym, vacation, etc.), how likely would you be to stick to it? Use the scale of 1 to 10, with 1 being definitely would not stick to the plan and 10 being definitely would stick to the plan.

9. Given the choice, would you rather receive $100 in 6 months or $110 in seven months?

10. Given the choice would you prefer to donate $50 to a good cause in 6 months or $55 in seven months?

11. How much do you plan on donating to Ohio University in 2013? This is a non-binding, hypothetical question.

12. To the best of your recollection, how many college economics classes did you take?

APPENDIX B. DEFINITIONS OF KEY VARIABLES

Impatient now	Responded that they would rather receive $100 now than $110 in one month
Impatient in future	Responded that they would rather receive $100 in six months than $110 in seven months
Time consistent impatient	Responded that they would receive $100 now and $100 in six months rather than waiting a month during both scenarios to receive the $110
Time inconsistent impatient	Responded that they would prefer to receive $100 now but six months in the future they would rather wait one month to receive the $110
Patient now	Responded that they would rather wait to receive $110 in one month than $100 now
Patient in future	Responded that they would rather wait to receive $110 in seven months than $100 in six months
Time consistent patient	Responded that they would wait to receive $110 in a month and $110 in seven months rather than receiving the $100 immediately and in six months
Time inconsistent patient	Responded that they would wait to receive $110 in a month but six months in the future they change their mind and prefer to receive the $100 immediately over the $110 in seven months
Stick to plans	How often a respondent sticks to plans in the present on a scale of 1-10
Future stick to plans	How often a respondent believes they will stick to plans in the future on a scale of 1-10
Naïve optimist	A respondent who classified himself or herself as a person who thinks they will stick to plans then they do not actually do so.
Naïve pessimist	A respondent who classified himself or herself as a person who thinks they will not stick to plans then they do actually stick to them
Sophisticated assessment	A respondent who is able to accurately assess his or her ability to stick to plans they have made.

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