Increased Retirement Savings Through the Proteus Effect

Non-Honors Research Thesis

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Abstract

Researchers are trying to discover what obstacles people encounter when saving for retirement. There is a conflict between the wants of today and the concerns of tomorrow when it comes to retirement savings. Some people are not very closely connected to their future self and therefore are less concerned with their wellbeing. The perspective of the present self is that the future self is a distinct person. This research seeks to make the two one by using the Proteus Effect and question framing that leads to the desired saving action. The Proteus Effect is the tendency of individuals to closely identify with their online avatar and how that affects their real world behaviors. The Proteus Effect in this experiment is assuming another's identity and creating the desire for the present to become the future self. The way a question is asked or information is presented can influence the retirement decisions people make in a positive way for their future self. The purpose of this study is to understand why Americans are not saving enough for retirement. MTurk experiments were used to test whether e-mails from someone else or from their future self would increase retirement savings. Additionally the e-mail's framing affect and whether adding a picture would enhance the effect were tested. The results were inconclusive due to insignificant t-tests for all hypotheses. However, the differences in means indicate positive correlation between savings rates and receiving a negatively framed e-mail with a picture of and from their future self. The intended action of increasing savings resulted from employing a low cost, low tech, low participation technique that could reduce the number of individuals that will not be "retirement ready."

Introduction

In the United States we have a retirement savings crisis. The number of U.S. workers, as measured from 1983 to 2010, that will have insufficient nest eggs to maintain their pre-retirement standard of living has grown from 31% to 53% (Benartzi & Thaler, 2013). Nearly half of all U.S. workers (78 million) do not have access to a retirement plans at work. And, for those that do, the participation rate is 39.4%, according to EBRI Databook on Employee Benefits (July, 2014); Why is the participation rate less than half?

One possible reason is, when a person is given a choice to deprive themselves today for gain in the future, they will generally choose today (Kessler and Zhang, 2016). This is an example of present bias, when consumption today is more important than saving for tomorrow. I noticed that the savings was seen as a negative and the gain was seen as a positive, but the negative outcome outweighed the positive. So, I need to frame savings in terms of two negatives and ask people to choose the lesser of two evils, which are depriving yourself today or really depriving yourself in the future. The greater loss will win.

In addition, the further away a future reward is, the more it is discounted by individuals, adding to the unattractiveness of saving for retirement (Hershey and Mowen, 2000). This distance creates a disconnect between the present self and the future reward and the future person who receives the reward. This made me realize the importance of connecting the present self with the future self and present saving with the future reward. In this study, I want to see if these connections can be enhanced using my treatments.

The research on present bias is performed from the perspective of the present self, however it should be performed from the combined perspectives of present and future selves.

Research has shown that individuals see themselves as two different people at two different points in time (Bryan and Hershfield, 2012). The present self needs to be introduced to their future self to develop a relationship that causes them to care for, and be motivated to save for their retirement. This can only happen after the realization that the future self is a real person that will be affected by the decisions the present self makes today (Hershfield, 2011). This introduction can happen by using a message with a picture from their future self to use Proteus Effect. Researchers Nick Yee and Jeremy Bailenson, of Stanford University first introduced the Proteus Effect in June of 2007. The Proteus Effect identifies how the behavior of individuals in the real world is influenced by their connectedness with their digital representation through avatars. The Proteus effect is about becoming someone else and seeing the world through their eyes. Can the present self see the world through the future self's eyes?

Research on the Proteus Effect and retirement saving finds that individuals' actions are influenced by their digital representations, such as avatars (Hershfield, Goldstein, Sharpe, Yeykelis, Carstensen, & Bailenson, 2011). In this study, participants who had face-to-face interactions with their avatar (an aged-progressed rendering of their future self) were found to make more future bias decisions. Several questions arise from these results. First, could the participants connect with their future self through less-costly and less-technologically intensive methods? And secondly, can other cognitive biases be used with these methods to further improve savings habits?

One cognitive bias is framing. People naturally frame saving as a loss (Benartzi, n.d.), initiating loss aversion within themselves. Framing retirement decision in terms of gains or losses even though the outcomes are the same has shown to produce different results (Card, & Ransom, 2011). Risky choice-framing presents information in a way to use loss aversion in a

positive way that leads to an optimal retirement savings decision. An example is a person is told that they can spend $80 and save $20 and they will have an additional $300 in retirement income. Or, they can spend $80 and not save $20 and will lose an additional $300 in retirement income. In retirement saving, this type of framing has had the greatest impact. The willingness to take on risk is dependent upon whether the outcomes are positively or negatively framed (Levin, Gaeth, Schreiber, Lauriola, 2002). I will test whether using positive or negative framing can impact the effectiveness of the Proteus Effect.

An e-mail from the future can be an agent of change because it elicits an examination of the present in order to reach a desired future (Kress, Hoffman, & Thomas, 2008). Based on this assumption, the experiment will test whether retirement participation and savings can be increased by having individuals identify with their future selves through the use of e-mails. Next, we will observe how the framing of e-mails affect results. Then I will add a picture of the future self to the framing and finally observe the effects of receiving an e-mail from someone other than self. To conclude respondents will be asked questions to measure how connected they feel to their future self, if they are willing to start saving for retirement or increase their saving percentage.

In my test of self versus planner, I expect to see a higher effect when an individual receives a message from their self. People have a closer connection to themselves than someone else. I expect to see a higher effect when someone sees a picture of themselves compared to not seeing a picture. The picture helps them to see the person as real and aids in building a connection between the two. I expect to see a higher effect when the message is framed negatively. The message is framed as a loss in the future. I expect the present self to have a

greater fear they will lose more in the future by not acting than they will lose by acting now. I will attempt to answer the following research questions and test the following hypotheses.

Research Questions:

1. Can an e-mail from the future self make a person save more for retirement?
2. Can a negatively framed e-mail make a person save more for retirement?
3. Can a negatively framed e-mail with a picture from the future self make person save more for retirement?
4. Can a negatively framed e-mail with a picture from the future self make person believe they are their future self (Proteus Effect) and save more for retirement?

Hypotheses:

All Future Self E-mails v All Planner E-mails

H1: People who receive a message from their future self will increase their saving rate when compared to receiving a message from their financial planner.

Future Self with a Picture v Future Self without a Picture

H2: People who receive a message and a picture from their future self will increase their saving rate when compared to receiving a message without a picture.

Negative Future Self w/o Picture v Positive Self w/o Picture

H3: People who receive a negative message will increase their saving rate when compared to receiving a positive message.

Negative Future Self w/ Picture v Negative Future Self w/o Picture

H4: People who receive a negative message and a picture from their future self will increase their saving rate when compared to receiving a positive message and a picture.

Methods

A. Research Design

This study is designed to empirically test the relationship between retirement saving, and present and future self connectedness, positive and negative framing, and the Proteus Effect through an experimental design. We will be using a 2 (negative vs positive framing) X 2 (letter from future self vs. letter from planner) X 2 (photo vs no photo) design. Participants will randomly receive one of the six e-mail treatments followed by dependent variable survey questions. The treatment e-mails can be found in the appendix. The dependent variable is saving rates. A comparison of the means within treatment group and a comparison across treatment groups will be used to determine an effect. The collection of data will be gathered via Amazon Mechanical Turk using a scenario-based Qualtrics survey, which can be found in the appendix.

B. Sample

The target population is U.S. based adults 25 to 55 years of age. The sample was collected through Amazon Mechanical Turk. The randomness of our sample frame is limited to their database which may not be a true representation of the population. The individuals who take surveys for Amazon Mechanical Turk are called Turkers. Turkers opt-in to Mechanical Turk creating a selection bias. To encourage participation we offered a $0.50 incentive which may have affected whether people volunteered or not. The value turkers place on their time will determine their participation and affect our sample. However, from the available sample we took precautions to ensure it was a representative sample by making the survey available to turkers that have a completion success rate of 95% or higher. Realizing there is a potential difference in the representativeness of the sample between weekday and weekend turkers we distributed the survey over the weekend. As turkers chose to participated in the Qualtrics survey they were randomly placed into one of six treatment groups. Working within these constraints our sample is as random as possible to ensure both the internal and external validity of the results.

A target sample of 600 usable responses will fulfill the requirement for an acceptable effect size, where participants are equally distributed across groups (100 participants per group). According to the EBRI Databook on Employee Benefits (July, 2014) only about 39% of employees participate in their workplace retirement plans. We have rounded this figure up 40% to use as our baseline results. Prior research has shown a 20% increase in retirement plan participation (Hershfield, Goldstein, Sharpe, Yeykelis, Carstensen, & Bailenson, 2011) and this is the minimum detectable effect size we used to identify the desired sample size. Also, in prior research the average saving rate is 5% (Purcell, P. J., 2009). The Hershfield and Goldstein

(2011) study observed a doubling of the saving rate after the treatment, which is the basis for our effect size on saving rates.

In order to conduct the experiment I had to apply for IRB approval. My study qualified for exempt status because we were not manipulating the subject but observing their response to the survey questions. Participation in the study was completely voluntary and personally identifiable information was not collected. Participants were recruited using Amazon Mechanical Turk's notification system and were paid $0.50 upon completion.

Measurement/Instrumentation

Measurements adapted from previous studies will be utilized to capture the variables of interest. These variables are the saving rate of individuals in retirement plans. Participants who pass the two screening questions will review a hypothetical scenario which will ask them to imagine that they received an e-mail from their future self, describing their state of retirement positively or negatively. Some participants will receive an e-mail from their financial planner describing how their retirement could be positive or negative if they pursue saving versus not. In the final step, participants will complete a questionnaire measuring positive/negative framing, future orientation, the Proteus effect, and saving rate**.**

Data Analysis

I used means comparisons in excel to test the hypotheses. Some of the survey takers did not respond to every question. In those cases, they were not included in the data analysis. This caused the sample size for groups and test variables to be different. Each group mean and test variable mean were figured individually and then compared. Turkers who chose not to give consent, did not meet the age requirement, or incorrectly answered any of the two attention

questions were excluded from the data analysis. This left a total sample of 526 participants with varying question sample sizes depending on whether surveyors opted out of questions.

The overall balancing of the sample between treatment groups is adequate and results are shown in Table 1. The mean age is 36.5 with a standard deviation (SD) of 1.1 with a gender balance of almost 50% with a SD of 3.6%. The race category showed a disproportionate representation with whites accounting for 80.8% of the respondents, followed by Asians at 9.7% and blacks at 6.1%. Full-time workers dominated the employment category with 77.5% and followed next by part-time workers at 15.6%. The average household income is consistent across the groups was $62,874. This is compared to the input value of average weekly take-home pay of $1,251 equivalent to a yearly salary of $64,570. The similarities between the selected household income and the manually entered weekly income shows that the respondents were consistent in their entries, except for the positive e-mail group with a picture. The average monthly debt for all treatments is $1,337 or $16,042 yearly and is 24.7% of the yearly income. I do not know what a turker considers a debt payment, for instance, do they consider a utility payment the same as mortgage or car note. For this reason and for simplicity, I am using a modified a front-end mortgage qualification ratio which suggests that debt payments not exceed 28% of income. Using this rationale it seems reasonable that our sample has the means to save for retirement since the overall sample is below the 28% threshold (Grable, 2016).

Table 1

Balance Table

	Treatment Groups						
	Positive Future Self E-mail	**Negative Future Self E-mail**	**Positive Future Self E-mail Plus Picture**	**Negative Future Self E-mail Plus Picture**	**Positive Planner E-mail**	**Negative Planner E-mail**	**All Treatment Goups**
Age	36.3	38.7	34.9	36.1	36.4	36.5	36.5
Male	48.2%	49.4%	51.1%	49.4%	57.0%	52.2%	51.50%
Female	51.8%	50.6%	48.9%	50.6%	43.0%	47.8%	48.50%
White	74.4%	86.5%	77.8%	83.5%	88.4%	74.4%	80.8%
Black or African American	3.5%	7.9%	6.7%	4.7%	3.5%	10.0%	6.1%
Asian	20.9%	4.5%	7.8%	8.2%	4.7%	12.2%	9.7%
Native Hawaiian or Pacific Islander	1.2%	1.1%	6.7%	3.5%	3.5%	2.2%	3.0%
Work part-time	16.5%	14.8%	12.4%	17.6%	15.3%	16.9%	15.5%
Work full-time	78.8%	72.7%	83.1%	78.8%	76.5%	75.3%	77.5%
In school	2.4%	5.7%	1.1%	0.0%	1.2%	0.0%	1.7%
Caretaker	2.4%	6.8%	3.4%	3.5%	7.1%	7.9%	5.2%
Average Household Income	$59,881	$60,227	$68,483	$59,000	$63,837	$65,444	$62,874
Average of Weekly Take home	$1,074	$976	$2,014	$987	$1,116	$1,301	$1,251
Average of Weekly Take Home Pay as Yearly Income	$55,863	$50,158	$104,747	$50,722	$57,381	$66,916	$64,570
Average Monthly Debt Payments	$849	$1,085	$1,752	$1,046	$2,265	$1,019	$1,337

I asked participants how they felt about their financial situation on a scale of 0 to 10 with 0 being very weak and 10 being very strong and the results are shown in Table 2. The average score of the all treatment groups was 4.6, which is representative of a neutral feeling across all treatment of the groups toward their financial situation. This correlates to the measure of their responses being average for other variables. The way an individual feels about their financial status will affect their savings. It would seem that if they are in the middle of the road about how confident they are about their financial situation that they may be in the middle of the road in their actual savings. The answer choices for desired retirement age were given in age ranges. In order to calculate the mean, I found the midpoint value of the range and used that to calculate the mean age for each group. In Table 2 the mean age for each treatment group compares closely to the full retirement age for social security.

Table 2

Feelings Table

	Treatment Groups						
	Positive Future Self E-mail	**Negative Future Self E-mail**	**Positive Future Self E-mail Plus Picture**	**Negative Future Self E-mail Plus Picture**	**Positive Planner E-mail**	**Negative Planner E-mail**	**All Treatment Groups**
Mean Feeling about financial situation on a scale of 0 to 10, 0 = weak and 10 = strong	4.7	4.4	4.6	4.5	4.3	5.0	4.6
Mean Desired Retirement Age	68.5	68.5	68.1	67.1	67.6	67.8	67.9

Results

Table 3 shows the pre- and post-test savings rate for each treatment group. The pretest savings rate ranges between 5.5% to 6.6% and the posttest savings rate ranges between 6.8% to 7.6%. In chart 1 the highest rates are shown among e-mails that include a picture but followed closely by the negatively framed e-mails.

Table 3

Savings Rate Data

	Treatment Groups						
	Positive Future Self E-mail	**Negative Future Self E-mail**	**Positive Future Self E-mail Plus Picture**	**Negative Future Self E-mail Plus Picture**	**Positive Planner E-mail**	**Negative Planner E-mail**	**All Treatment Groups**
Mean of Pretest % of Salary Saved	6.6%	5.8%	6.3%	6.3%	5.5%	6.6%	6.2%
Mean of Posttest % of Salary Saved	6.8%	7.5%	7.5%	7.6%	6.7%	7.0%	7.2%
Post-minus Pretest Percent of Salary Saved	0.2%	1.7%	1.2%	1.2%	1.1%	0.4%	1.0%

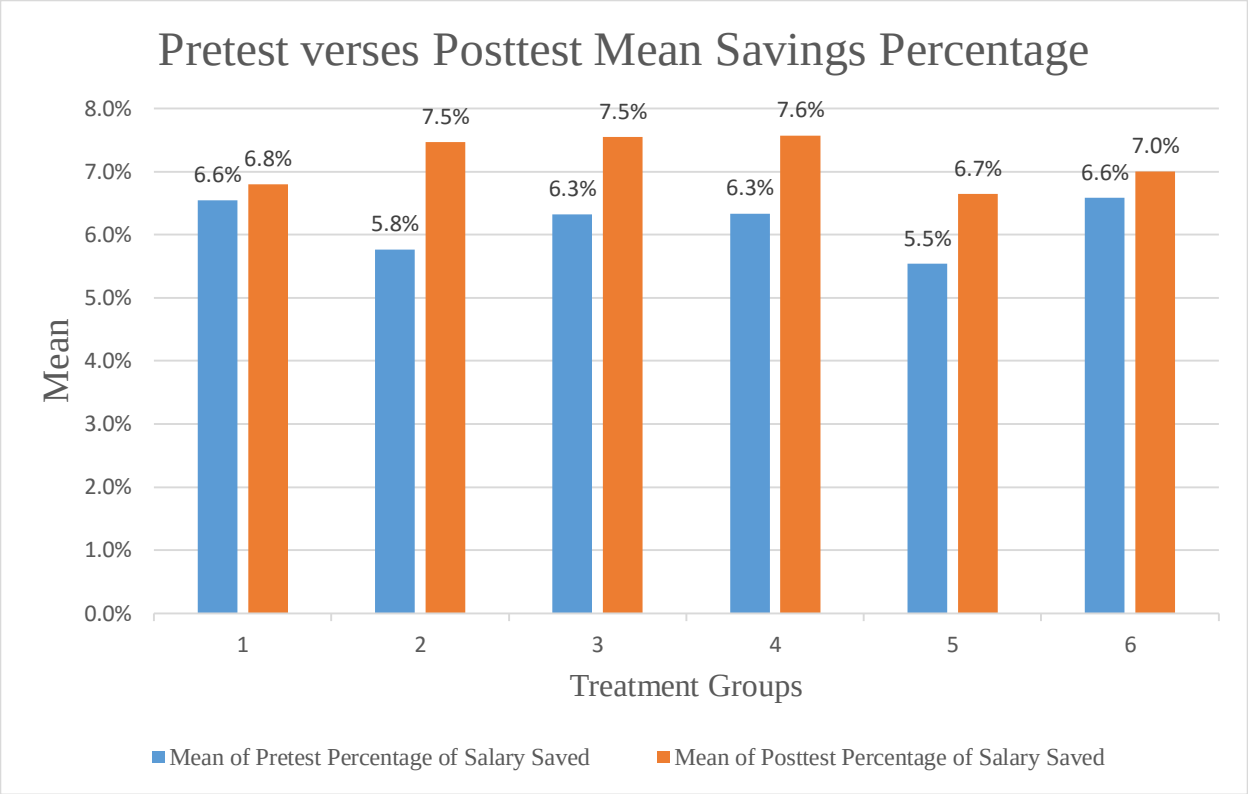

Chart 1

Table 4 shows the data that addresses the first research question: will a person save more if they receive an e-mail from their future self compared to receiving one from someone else, like a financial planner. The difference in the means is higher for e-mails from self. A t-test revealed that we do not have sufficient power to identify a significant difference. The result, however, suggest that respondents prefer messages from self rather than someone else.

Table 4 All Future Self verses All Planner E-mails		
t-Test: Two-Sample Assuming Unequal Variances		
	All Self	All Planner
	Posttest Percentage of Salary Saved	*Posttest Percentage of Salary Saved*
Mean	0.071	0.068
Variance	0.001	0.001
Observations	171.000	170.000
Hypothesized Mean Difference	0.000	
df	339.000	
t Stat	0.895	
P(T<=t) one-tail	0.186	
t Critical one-tail	1.649	
P(T<=t) two-tail	0.372	
t Critical two-tail	1.967	

Table 5 shows data that will help answer the Proteus Effect question: Can a person identify with and care for their future self enough to save more for retirement when a photo helps them imagine their future self? The difference in means was minimal, but the negative e-mail without a picture had a higher posttest savings rate. The t-test proved there was not sufficient evidence to answer my research question about the Proteus Effect or substantiate hypothesis two.

Table 5 Neg Pic v Neg No Pic E-mails		
t-Test: Two-Sample Assuming Unequal Variances		
	Negative Self Picture	Negative Self No Pic
	Posttest Percentage of Salary Saved	*Posttest Percentage of Salary Saved*
Mean	0.076	0.075
Variance	0.001	0.001
Observations	84.000	86.000
Hypothesized Mean Difference	0.000	
df	168.000	
t Stat	0.234	
P(T<=t) one-tail	0.408	
t Critical one-tail	1.654	
P(T<=t) two-tail	0.815	
t Critical two-tail	1.974	

Table 6 shows results of the effectiveness of framing without a picture. The groups being tested are the negative self verses the positive self. In these groups the e-mails are negatively framed and positively framed from the future self and examples of the e-mails are included in the appendix. The negative framing result is over a half of a percentage point higher than the positive framing result. This shows a correlation between negative messaging and higher savings rates. However, the t-test has proved there was not enough power from my experiment to answer the question, will a negatively framed e-mail make a person save more for retirement? In table 6 the negative self e-mail (without a picture) has a higher savings rate than the positive self savings rate. The same comparison is made in table 7 but includes a picture of the future self, but the results are similar between the negative and positive e-mails. However, comparing the positive messages in table 6 and table 7, with the only difference being a picture, there is

approximately a 0.5 higher saving rate when a picture is used. I feel this demonstrates the effectiveness of using a picture (which is employing the Proteus Effect).

Table 6 Neg Self v Pos Self E-mails		
t-Test: Two-Sample Assuming Unequal Variances		
	Negative Self	Positive Self
	Posttest Percentage of Salary Saved	*Posttest Percentage of Salary Saved*
Mean	0.075	0.068
Variance	0.001	0.001
Observations	86.000	85.000
Hypothesized Mean Difference	0.000	
df	167.000	
t Stat	1.431	
P(T<=t) one-tail	0.077	
t Critical one-tail	1.654	
P(T<=t) two-tail	0.154	
t Critical two-tail	1.974	

Table 7 Neg Self Pic v Pos Self Pic E-mails		
t-Test: Two-Sample Assuming Unequal Variances		
	Negative Self Picture	Positive Self Picture
	Posttest Percentage of Salary Saved	*Posttest Percentage of Salary Saved*
Mean	0.076	0.075
Variance	0.001	0.001
Observations	84.000	87.000
Hypothesized Mean Difference	0.000	
df	169.000	
t Stat	0.056	
P(T<=t) one-tail	0.478	
t Critical one-tail	1.654	
P(T<=t) two-tail	0.955	
t Critical two-tail	1.974	

Table 8 combines all future self, future self plus picture, and all planners into negative e-mails and positive e-mails and computes the results using a t-test. The negative e-mails have a higher savings rate, but the t-test failed. There is not enough power to substantiate the framing hypothesis.

Table 8 All Neg v All Pos E-mails		
t-Test: Two-Sample Assuming Unequal Variances		
	All Negative E-mails	All Positive E-mails
	Posttest Percentage of Salary Saved	*Posttest Percentage of Salary Saved*
Mean	0.073	0.070
Variance	0.001	0.001
Observations	257.000	255.000
Hypothesized Mean Difference	0.000	
df	510.000	
t Stat	1.261	
P(T<=t) one-tail	0.104	
t Critical one-tail	1.648	
P(T<=t) two-tail	0.208	
t Critical two-tail	1.965	

Conclusions

It is recognized through research that certain obstacles exist to retirement planning which are present bias, a disconnect between present and future self, and framing. The results of the t-tests revealed that there was not enough power to prove my hypotheses, however, the differences in the means suggest that further testing is warranted. The differences in means show a correlation between the intended action of increasing savings after the treatment due to receiving

an e-mail from their future self rather than someone else, receiving a negatively framed e-mail, and receiving an e-mail with a picture of their future self.

In the results, negative framing stands out as having the ability to help people increase their savings for retirement. I think the framing makes the person consider how their future reality is going to be based on their savings decisions toady. I think this expands their focus to include the future.

The use of a picture to help a person identify with their future self showed higher savings rates than not using a picture and was much higher when negative framing was used. The pictures may have limited the results because they were only of white males and females. The male and female pictures could only be presented together. This choice may have prevented some survey takers from being able to fully image themselves as or in the likeness of the pictures.

Research has shown that if you ask a person to imagine their birthday party in a year, they view the scene through their eyes. If you ask them to imagine their birthday in 30 years they view the scene outside of their body (Hershfield, 2014). At the financial planning table both the present and future self need to be present. The present self needs to go beyond just seeing their future self at the retirement planning table, but to view the retirement scene through their future self's eyes. In this way the two can become one.

References

Benartzi, S., & Thaler, R. H. (2013). Economics. Behavioral economics and the retirement savings crisis. *Science (New York, N.Y.), 339*(6124), 1152-1153. doi:10.1126/science.1231320

Benartzi, S. (n.d.). Transcript of "Saving for tomorrow, tomorrow". Retrieved April 16, 2017, from https://www.ted.com/talks/shlomo_benartzi_saving_more_tomorrow/transcript?language=en

Bryan, C. J., & Hershfield, H. E. (2012). You owe it to yourself: Boosting retirement saving with a responsibility-based appeal. Decision, 1(S), 2-7. doi:10.1037/2325-9965.1.S.2

Card, D., & Ransom, M. (2011). Pension Plan Characteristics and Framing Effects in Employee Savings Behavior. *Review Of Economics And Statistics*, *93*(1), 228-243.

Grable, j. E. (2016). Case approach to financial planning: bridging the gap between theory and practice. S.l.: *Natl Underwriters*.

Hershfield, H. E. (2011). Future self-continuity: how conceptions of the future self transform intertemporal choice. Annals of the New York Academy of Sciences, 1235(1), 30-43. doi:10.1111/j.1749-6632.2011.06201.x

Hershfield, H. E., Goldstein, D. G., Sharpe, W. F., Fox, J., Yeykelis, L., Carstensen, L. L., & Bailenson, J. N. (2011). Increasing Saving Behavior Through Age-Progressed Renderings of the Future Self. *Journal Of Marketing Research (JMR), 48S23-S37*. doi:10.1509/jmkr.48.SPL.S23

Hershfield, H. (2014, July 31). You Make Better Decisions If You. Retrieved April 16, 2017, from https://hbr.org/2013/06/you-make-better-decisions-if-you-see-your-senior-self

Jackson, R. (2002). The Global Retirement Crisis. *Geneva Papers On Risk & Insurance - Issues & Practice*, *27*(4), 486-511.

Kessler, J.B., and Zhang, C. Y., (2014). "Behavioral Economics and Health." *Paper for Oxford Textbook of Public Health*. Available at: http://assets.wharton.upenn.edu/~czhan/KesslerZhang_BehavioralEconomicsHealth.pdf

Kress, V. E., Hoffman, R., & Thomas, A. M. (2008). Letters From the Future: The Use of Therapeutic Letter Writing in Counseling Sexual Abuse Survivors. *Journal Of Creativity In Mental Health*, *3*(2), 105-118. doi:10.1080/15401380802226497

Levin, I. P., Gaeth, G. J., Schreiber, J., & Lauriola, M. (2002). A new look at framing effects: Distribution of effect sizes, individual differences, and independence of types of effects. *Organizational Behavior And Human Decision Processes*, *88*(1), 411-429. doi:10.1006/obhd.2001.2983

Purcell, P. J. (2009). Retirement Plan Participation and Contributions: Trends from 1998 to 2006. *Journal Of Deferred Compensation*, *14*(4), 58-71.

Thaler, R. H., & Sunstein, C. R. (2009). Nudge: improving decisions about health, wealth, and happiness. London: Penguin Books.

Yee, N., & Bailenson, J. (2007). The Proteus Effect: The Effect of Transformed Self-Representation on Behavior. *Human Communication Research*, *33*(3), 271-290.

Appendix

Treatment E-mails

Positive E-mail from future self

In the next part of survey, please imagine that you have received an e-mail from your future self in retirement. Read the email carefully and answer the questions that follow.

I am **so glad you** thought of me and made retirement planning a priority. **Because of your discipline,** my standard of living is as high as it was when we were working. That has **enabled us** to live comfortably and independently**.** We **have enough income** to live where we want and drive what we want—we have a nice house and drive a nice car. Thanks for thinking of me when you were planning for retirement.

Love, Future You

Negative E-mail from future self

In the next part of survey, please imagine that you have received an e-mail from your future self in retirement. Read the email carefully and answer the questions that follow.

I wish you would have thought of me and made retirement planning a priority. **Because of your lack of discipline** my standard of living is lower than it was when we were working. This has caused us to live uncomfortably and dependent on assistance. We **do not have enough income** to live where we want or drive what we want—we live in a horrible house and drive a horrible car. I wish you would have thought of me more when you were planning for retirement.

Love, Future You

Positive Email from Future Self with Picture

In the next part of survey, please imagine that you have received an e-mail from your future self in retirement which includes a picture of your future self. Please use your imagination to make the generic picture represent you in the future. Read the email carefully and answer the questions that follow.

I am **so glad you** thought of me and made retirement planning a priority. **Because of your discipline**, my standard of living is as high as it was when we were working. That has **enabled us** to live comfortably and independently**.** We **have enough income** to live where we want and drive what we want—we have a nice house and drive a nice car. Thanks for thinking of me when you were planning for retirement.

Love, Future You

Negative Email from Future Self with Picture

In the next part of survey, please imagine that you have received an e-mail from your future self in retirement which includes a picture of your future self. Please use your imagination to make the generic picture represent you in the future. Read the email carefully and answer the questions that follow.

I wish you would have thought of me and made retirement planning a priority. **Because of your lack of discipline** my standard of living is lower than it was when we were working. This has caused us to live uncomfortably and dependent on assistance. We **do not have enough income** to live where we want or drive what we want—we live in a horrible house and drive a horrible car. I wish you would have thought of me more when you were planning for retirement.

Love, Future You

Positive Email from Planner

In the next part of the survey, please imagine that you have received an e-mail from your financial planner. Read the email carefully and answer the questions that follow.

I am glad that you have decided to move forward with your retirement planning. When you plan for retirement, you are storing up future benefits. Individuals who plan for retirement usually end up independent of others and the government. This independence means you gain control of a lot of life choices, because you do not have to meet other's requirements.

The average social security check in for a retired worker is $1,355 per month, as of Nov. 2016. Is this an amount you **can see yourself living on** for 25 plus years in retirement? – **fortunately, you won't have, too.**

Sincerely,

Financial Planner

Negative Email from Planner

In the next part of the survey, please imagine that you have received an e-mail from your financial planner. Read the email carefully and answer the questions that follow.

I am disappointed that you have decided to not move forward with your retirement planning. When you don't plan for retirement, you are giving up future benefits. Individuals who don't plan for retirement usually end up dependent on others or the government. This dependency means you give up control of a lot of life choices, because you have to meet other's requirements.

The average social security check in for a retired worker is $1,355 per month, as of Nov. 2016. Is this an amount you **can see yourself living on** for 25 plus years in retirement? – **unfortunately, you may have, too.**

Sincerely,

Financial Planner