Cultural, Motivational, and Attentional Considerations
in Predicting Propensity to Plan

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Defense Date April 5, 2017

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Abstract

Propensity to plan is an important predictor of the success of financial decision making. Individual differences in propensity to plan reflect differences in goal setting and goal striving behaviors. The current study measures individual differences in personality, culture, motivational characteristics, and thought patterns to further understanding of propensity to plan. Survey data was collected from 1299 American participants representing a "general population" sample. The results of multiple regression analysis suggest that individuals who are higher in openness, locomotion, individualism, and attention to the future are likely to display a high propensity to plan. Previous research on propensity to plan has focused on predicting outcomes, the current study's focus in on predicting propensity to plan.

Engaging in planning behaviors is an ordinary activity that aids individuals in navigating their environment. From planning a vacation to planning for retirement, this behavior provides individuals a clear path to reaching desired outcomes. However, across populations some individuals plan much more than others. This propensity to plan is reflected by "individual differences in (a) frequency of forming planning goals, (b) frequency and depth of thinking through means of implementing subgoals, (c) use of activities and props to serve as reminders and to help see the big picture and constraints, and (d) personal preference to plan" (Lynch, Netemeyer, Spiller, & Zammit, 2010).

Individual differences in propensity to plan predict differences in financial decision making and subsequent outcomes. As propensity to plan increases, financial literacy (Lusardi & Mitchell, 2007), net worth (Lusardi & Mitchell, 2007), wealth accumulation (Ameriks, Caplan, & Leahy, 2003; Khwaja, Silverman, Sloan & Wang, 2006), and FICO credit scores (Lynch et al., 2010) increase. Additionally, individuals higher in propensity to plan noticed and corrected overspending patterns sooner and more readily (Ameriks et al., 2003). Retirement planning activities are also associated with higher expected comfort (Anderson et al., 2000) and subsequent satisfaction in retirement (Elder & Rudolph, 1999). Furthermore, in their research Lee and Kim (2016) found that both retirement savings and net worth increased as the level of propensity to plan increased.

Previous research has utilized propensity to plan as a predictive measure. The current study aims to identify individual differences that may predict propensity to plan. What are the types of people who are more likely to show high (vs low) propensity to plan? Measures of personality, culture, motivational characteristics, and thought patterns from a broad national sample reveal planning patterns of different kinds of people.

Literature Review

Propensity to Plan

The conceptual base of propensity to plan is the Theory of Planned Behavior (TPB) that highlights the importance of intention in behavioral performance (Ajzen, 1991). Intention is influenced by attitudes towards behaviors, subjective norms, and perceived behavioral control. Propensity to plan builds on the TPB by asserting that individual differences in intentions create individual differences in goal setting and goal striving behaviors. In this context, planning is defined as "the predetermination of a course of action aimed at achieving some goal" (Hayes-Roth & Hayes-Roth, 1979). Setting subgoals clarifies goal intentions and aids in implementation intentions. The use of tools and reminders such as notes, lists, and mobile phone applications further clarify goal intentions. Additionally, propensity to plan adds the dimension of personal preference to the understanding of planned behavior.

To effectively predict behavior, propensity to plan also takes time and subject constraints into consideration. Literature on intertemporal choice and construal level theory suggests that individuals think in fundamentally different ways about events in the short run (the next few days) versus events in the long run (weeks, months, or years) (O'Donoghue & Rabin, 2001; Trope & Liberman, 2003; Zauberman & Lynch, 2005). Lynch et al. (2010) developed four scales to serve as generalizable measures of propensity to plan: Propensity to Plan for Time - Short Run, Propensity to Plan for Time - Long Run, Propensity to Plan for Money - Short Run, and Propensity to Plan for Money - Long Run. Each of these scales predicts important consumer behaviors from procrastination to the use of coupons. To better understand planning for financial matters, this study will focus on planning for money in the next 1-2 months, utilizing the Propensity to Plan for Money - Long Run Scale (Lynch, et al., 2010).

Personality and Culture

The Big Five Inventory was constructed in the late 1980s to measure individual differences in personality in five dimensions (Rammstedt & John, 2007). The Big 5 traits - neuroticism, extroversion, openness, agreeableness, and conscientiousness - have since been utilized as reliable cross-cultural measures to predict various behaviors (e.g. Ispas, Iliescu, Ilie, & Johnson, 2014). To further understanding of the Big 5 traits Pytlik-Zillig, Hemenover, and Dienstbier (2002) determined distinct differences in the relative importance of affective, behavior and cognitive components to each trait. They found that the relative importance of affect was highest for neuroticism and lowest for conscientiousness. For behavior, conscientiousness was ranked at the top followed by extroversion and agreeableness with neuroticism and openness ranked at the bottom. Openness was ranked highest in respect to the cognitive component while extroversion and neuroticism was ranked lowest (Figure 1). In predicting propensity to plan, I expect affect to be relatively unimportant, behavior to be somewhat important and cognitive components to be very important. Cognitive components play an important role in all aspects of propensity to plan, specifically, forming planning goals and implementing subgoals. Behavioral components are important to the use of activities and props while affective components may only be important in personal preference to plan. Therefore, I expect that conscientiousness, extroversion and openness will all be significant predictors.

The prevailing constructs used to explain and predict cultural differences are individualism and collectivism. The main differences between individualism and collectivism are seen in how individuals perceive themselves, how they relate to others, the goals they follow, and what concerns drive their behavior (Fischer et al., 2009). Strong agreement to statements such as "I enjoy being unique and different from others in many respects" and "If I make my

own choices, I will be happier than if I listen to others" indicate a high level of individualism. Conversely, strong agreement to statements such as "I will sacrifice my self-interest for the benefit of the group I am in" and "It is important to me to respect decisions made by my family" indicate a high level of collectivism (Kim, Sherman, & Updegraff, 2016). Individuals who have a stronger individualist identity may also have higher propensity to plan because they feel the need to set personal goals and individually think about their future. Whereas individuals with a stronger collectivist identity may rely on the plans that are created by their family and less on creating personal plans.

Motivational Characteristics

To understand individual differences in motivational characteristics the self-regulatory constructs of assessment and locomotion were used (Kruglanski et al., 2000). Assessment involves considering alternative goals and deciding which are best to pursue, whereas locomotion involves commitment of psychological resources to initiate and maintain goal-related movement. Components of assessment include a strong focus on self-evaluation as well as concern for the value or importance of a goal. Locomotion is strongly related to decisiveness and persistence as well as concern for goal expectancy. Task motivation is relatively more intrinsic and autonomous in locomotion than in assessment. Individuals that hold strong identities of a "workaholic," "doer," and "go-getter" are considered to be high in locomotion. Individuals high in assessment feel they are often evaluative, self-critical and self-conscious. I expect that both locomotion and assessment are needed to properly form and implement plans. However, in the extreme, assessment may hinder planning due to extensive consideration of multiple alternatives. Therefore, I expect locomotion will be a strong predictor of propensity to plan while assessment will only be a weak predictor.

Temporally Oriented Thought Patterns

In this study thought patterns were assessed through the Consideration of Future Consequences scale (CFC) and attention to the past, present and future. The CFC measures the extent to which individuals consider the potential distant outcomes of their current behaviors and the extent to which they are influenced by these potential outcomes (Strathman, Gleicher, Boninger, & Edwards, 1994). The statements "Often I engage in a particular behavior in order to achieve outcomes that may not result for many years" and "I only act to satisfy immediate concerns, figuring the future will take care of itself" display the differences in CFC. The CFC is predictive of several environmental and health behaviors such as recycling and cigarette smoking (Strathman et al., 1994). Given these results and the nature of the CFC, I expect that the CFC can also be predictive of financial behaviors, such as the choice between immediate consumption or saving. Therefore, CFC should be highly positively correlated and a strong positive predictor of propensity to plan.

Time-orientation research has found that those who have a future-oriented mindset tend to make more positive financial decisions (e.g. Rabinovich & Webley, 2007; Howlett, Kees, & Kemp, 2008). Rutledge and Deshpande (2014) found low future orientation to be associated with increased levels of debt, low present orientation to be associated with increased levels of savings, and that younger people tended to be more present-oriented. Baumeister, Vohs, and Oettingen's (2016) theory of pragmatic prospection defines future-oriented thinking as a means to guide actions to bring about desirable outcomes. Therefore, I expect that higher attention to the future will positively predict propensity to plan, higher attention to the past will negatively predict propensity to plan and attention to the present will not be a significant predictor.

Hypotheses

In their analysis, Lynch et. al (2010) found that propensity to plan was weakly related to income (B = .038, $F(1, 1,289)$ = 4.82, p = .028) and education (B = .051, $F(1, 1,289)$ = 5.44, p = .020), and unrelated to age, gender and ethnicity (p's > .3). I hypothesize that these results will be replicated in our study. Additionally, various demographic characteristics that reflect individual identity, such as, being foreign born or native born, living in an urban or rural area, marital status and political party identification, are hypothesized to be weakly related to propensity to plan. Taken together these characteristics reflect differences in background experiences, culture, and individual beliefs and preferences – all potentially important differences in propensity to plan.

In regards to personality, I expect differences in the Big 5 traits to appear as important predictors in propensity to plan. I predict that agreeableness and neuroticism will be unrelated while conscientiousness, extroversion and openness will be strongly related because these three traits relate to goal pursuit.

I predict that cultural differences will play a large role in propensity to plan. Collectivistic cultures display a strong focus on following prescribed plans (e.g. your parents' wishes or the community traditions) while individualistic cultures focus on forging a unique path and forming individual plans. Therefore, collectivism will have a weak, negative relationship with propensity to plan and individualism will have a strong, positive relationship.

I also hypothesize that the motivational characteristics of locomotion and assessment will be related to propensity to plan. I expect that both characteristics are needed to engage in planning but that locomotion will be strongly related while assessment will only be weakly related.

Lastly, I hypothesize that thought patterns will be related to individual differences in propensity to plan. I expect that consideration of future consequences will be strongly related to propensity to plan because of the strong future orientation needed for both. Similarly, I hypothesize that higher attention to the future will positively predict propensity to plan, higher attention to the past will negatively predict propensity to plan and attention to the present will not be a significant predictor.

Summary Table of Hypotheses

Hypothesis (Propensity to Plan = PTP)	Supported? (Y/N)	Observations
1. Income will be weakly related to PTP	N	Income was unrelated
2. Education will be weakly related to PTP	N	Education was unrelated
3. Age will be unrelated to PTP	N	Age was weakly related
4. Gender will be unrelated to PTP	Y	
5. Race will be unrelated to PTP	N	African American was related
6. Foreign born individuals will have a higher PTP than native born individuals	N	No significant difference
7. Location: Rural individuals will have the highest PTP	N	No significant difference
8. Marital Status: Married compared to unmarried will have higher PTP	Y (Partial)	Observed a weak negative relationship between PTP and Single
9. Political Party ID: Democrats will have highest PTP	N	No significant difference
10. Agreeableness will be unrelated to PTP	Y	
11. Neuroticism will be unrelated to PTP	Y	
12. Conscientiousness will be strongly related to PTP	N	Conscientiousness was unrelated
13. Extroversion will be strongly related to PTP	Y (Partial)	Extroversion was only weakly related
14. Openness will be strongly related to PTP	Y	
15. Collectivism will have a weak, negative relationship with PTP	N	Observed a strong, positive relationship with PTP
16. Individualism will be strongly related to PTP	Y	
17. Locomotion will be strongly related to PTP	Y	

18. Assessment will be weakly related to PTP	N	Assessment was unrelated
19. Consideration of future consequences will be strongly related to PTP	Y (Partial)	Observed a strong, negative relationship with PTP
20. Attention to the future will be strongly related to PTP	Y	
21. Attention to the past will have a strong, negative relationship with PTP	N	Attention to the past was unrelated
22. Attention to the present will be unrelated to PTP	N	Observed a strong, positive relationship with PTP

Method

Sample

Participants were recruited from ROI Rocket's proprietary market research panel in two separate samples, a "general population" sample that resulted in online survey completions for 1,059 American adults (age 18+) and an oversample of 240 Asian American participants. The purpose of the oversample population was to test predictions unrelated to the present study. The general population sample was drawn using stratified sampling procedures that were updated daily to achieve a demographically varied sample that approximates national demographic representation. "Soft" benchmarks for stratification were developed in collaboration with ROI Rocket from census data (http://factfinder.census.gov) and, for political party affiliation, estimates from the Pew Research Center (http://www.people-press.org/2016/09/13/2016-party-identification-detailed-tables/). The Asian American oversample was drawn from among panel members who reported their race or ethnicity as Asian; the sample was drawn in such a way to prioritize panel members of East Asian descent. Several participants in the Asian American oversample were accidentally included, and completed surveys, as part of both the general population sample and oversample; using time-stamps, we excluded their responses from whichever survey was completed second. All participants completed their survey between October 27th and November 8th, 2016. Participants who failed the attention check or were

"speeding" through the survey were dropped from the sample and not included in the final count of 1299.

Materials and procedure

The data was collected through an online survey method distributed through ROI Rocket. The survey took approximately 25 minutes to complete. Participants were asked questions about their personal characteristics, beliefs and preferences as well as demographic questions. The data used in this thesis is only a small subset of the larger survey data.

Participants answered 71 questions about individual differences and nine demographic questions. The individual difference measures were all answered on either a 5 or a 7 point Likert scale. These questions assessed each participants' propensity to plan, personality inventory, individualist identity, collectivist identity, locomotion score, assessment score, consideration of future consequences score, and attentional patterns. The demographic questions assessed political identity, gender identity, age, race, foreign or native (U.S.) born status, education level, marital status, location (measured as urban, suburban or rural), and annual household income.

Lynch et. al.'s (2010) "Propensity to Plan for Money—Long Run" scale was utilized to assess propensity to plan. Participants were asked to indicate whether or not the statements presented are characteristic of them on a 5 point Likert scale. The scale ranged from "1 = Extremely Uncharacteristic" to "5 = Extremely Characteristic." The statements referred specifically to financial planning activities in the next 1-2 months such as "I actively consider the steps I need to take to stick to my budget in the next 1-2 months" and "It makes me feel better to have my finances planned out in the next 1-2 months." The six statements were presented together in a single table.

Rammstedt and John's (2007) "Big Five Inventory-10 (BFI-10)" was used to measure personality in terms of the Big 5 traits. Participants were asked to indicate how strongly they agreed or disagreed with the personality measures presented on a scale ranging from "1 = Strongly Disagree" to "7 = Strongly Agree." The ten statements were all presented as an ending to the sentence "I see myself as someone who…," such as "…is outgoing, sociable" or "….is generally trusting."

Kim et. al.'s (2016) "Individualism-Collectivism Scale" was used to measure cultural identity. The scale was presented with the six individualist statements and eight collectivistic statements interspersed over four separate tables (each containing three to four statements). Participants were asked to indicate how much they agree or disagree with each statement at the beginning of each table. Examples of statements measuring individualist identity (or lack thereof) are: "It is better for me to follow my own ideas than to follow those of anyone else" and "I enjoy being unique and different from others in many respects." Conversely, examples of collectivist statements are: "I will sacrifice my self-interest for the benefit of the group I am in" and "It is important to me to respect decisions made by my family."

Kruglanski et al.'s (2000) locomotion and assessment scales were used to assess differences in self-regulation. The twelve locomotion and twelve assessment statements were randomly combined in a single table along with six "faking" items (such as "I have never been late for work or for an appointment"). Participants were asked to read each statement and indicate how much they agree or disagree with them according to their beliefs and experiences. Locomotion statements included, "I enjoy actively doing things, more than just watching and observing" and "Most of the time my thoughts are occupied with the task I wish to accomplish." Statements measuring assessment included, "I spend a great deal of time taking inventory of my

positive and negative characteristics" and "When I meet a new person I usually evaluate how

well he or she is doing on various dimensions (e.g., looks, achievements, social status, clothes)."

The eight-item measure used to assess consideration of future consequences was adapted

from Strathman et al.'s (1994) twelve item "Consideration of Future Consequences Scale."

Participants were asked to indicate whether or not the statements are characteristic of them for

statements such as "Often I engage in a particular behavior in order to achieve outcomes that

may not result for many years" and "I only act to satisfy immediate concerns, figuring that I will

take care of future problems that may occur at a later date."

Finally, to assess attentional patterns participants were asked three similar questions

presented in a single table. On a scale from 1 = Not at all to 7 = A great deal, participants were

asked to indicate "On a given day, how much time do you typically spend thinking about the

future (past, or present)?"

Results

To begin analysis, simple correlations between variable pairs were calculated. The results

of these correlations revealed that all the individual difference measures were significantly

correlated with propensity to plan and one other (Table 1, p<.01). The highest correlation (0.61)

was observed between locomotion and individualism. Locomotion was also notably correlated

with extroversion (0.48) and propensity to plan (0.42). Correlations of propensity to plan with

individualism (0.37) and attention to the future (0.35) were also among the highest correlations.

Surprisingly, the correlations of propensity to plan with consideration of future consequences

and consciousness were both below 0.10.

Among the demographic variables the correlations were smaller and less significant

(Table 2). The race demographic of African American was significantly correlated (p<.01) with

locomotion (0.11), attention to the future (0.14), and propensity to plan (0.099). Compared to the other race demographics, African American individuals displayed the highest correlations with any measure and the only significant correlation with propensity to plan. These initial results suggest that African Americans display stronger relationships with locomotion, attention to the future and propensity to plan than other races. Also, the correlations between age and attention to the future, attention to the past, and consideration of future consequences were all significant and negative, suggesting that the older the respondents were the less they engaged in mental time travel. Education and income were both non-significantly correlated with propensity to plan.

To further identify the independent relationships multiple linear regression analysis was used (Table 3). The regression analysis was split into three initial models and a forth follow-up model. These models build from broad individual difference characteristics to increasingly more confined characteristics. In Model 1 the regression analysis was calculated using only the demographic variables including various subcategories for race, location and marital status. Model 1 establishes baseline demographic predictors and allows for the observation of patterns before incorporation of any psychological factors. The reference category of a Caucasian, Suburban, Married Male was used because the most number of people fell into each of these categories respectively.

Disconfirming the original hypothesis, the weak negative relationship between age and propensity to plan (B=-0.0053, SEB=0.0021, p<0.05) suggests that as an individual ages their propensity to plan diminishes. The time and effort involved in extensive planning may be allocated elsewhere in the later years of life because this behavior may become seemingly less useful. Also, disconfirming the hypothesis, the strong positive relationship between African American and propensity to plan (B=0.34, SEB=0.10, p<0.01) suggests that compared to

Caucasians, African Americans display a higher propensity to plan. Providing partial support for

the hypothesis, the weak negative relationship between being single and propensity to plan (B=-

0.16, SEB=0.074, p<0.05) suggests that married individuals plan more than single individuals.

Propensity to plan could be contributing to marital status such that higher planners tend to be

married more than low or non-planners. Conversely, single individuals may feel a lesser need,

and therefore lesser preference, to plan than a married individual who is planning a future with a

spouse and possibly children.

Model 2 included the Big 5 personality traits and the culture variables to observe patterns

in these broad psychological differences. The weak relationship between age and propensity to

plan (B=-0.0044, SEB=0.0020, p<0.05) observed in Model 1 held when the additional variables

were added. Providing partial support for the hypothesis, the weak relationship between

extroversion and propensity to plan (B=0.062, SEB=0.029, p<0.05) suggests that the unique

blend of affective, behavioral and cognitive components found in extroversion are useful in

planning (see Figure 1). Extroversion is characterized by being active and outgoing, both

important components in goal striving behaviors. The strong relationship between openness and

propensity to plan (B=0.093, SEB=0.024, p<0.01) suggests that the high importance of cognitive

components observed in openness are very useful in planning, confirming the hypothesis. Both

collectivism (B=0.11, SEB=0.030, p<0.01) and individualism (B=0.27. SEB=0.032, p<0.01)

have a strong relationship with propensity to plan suggesting that culture itself is important.

Finally, Model 3 included all of the variables measured (Table 3). In Model 3, none of

the demographic variables appeared significant. However, Model 3 captures the differences in

thought patterns in age; age is significantly correlated with consideration of future consequences,

attention to the future and attention to the past. Additionally, the weak relationship between

extroversion and propensity to plan did not hold in Model 3. Locomotion and extroversion are significantly correlated at 0.48 (p<0.01), therefore, the inclusion of locomotion in Model 3 could have resulted in extroversion becoming a non-significant predictor. These results suggest that the tendency for extroverts to have a higher propensity to plan could be mediated by the tendency for extroverts to have higher locomotion.

The strong relationship between openness and propensity to plan held in Model 3 (B=0.065, SEB=0.024, p<0.01), further suggesting the importance of cognitive components to propensity to plan. Similarly, collectivism (B=0.083, SEB=0.029, p<0.01) and individualism (B=0.14, SEB=0.034, p<0.01) remain as significant predictors. When considering motivational characteristics locomotion (B=0.21, SEB=0.043, p<0.01) appeared significant but assessment did not, suggesting that the self-critical and evaluative nature of assessment does not aid in planning. In terms of attentional patterns attention to the future (B=0.14, SEB=0.019, p<0.01) and attention to the present (B=0.061, SEB=0.018, p<0.01) were significant predictors of propensity to plan. The results of attention to the future were anticipated, however, the results of attention to the present were unexpected. Given that Rutledge and Deshpande (2014) found low present orientation to be associated with increased levels of savings, it seems attention to the present would not predict the budgeting behaviors asked about in the propensity to plan measure. The pattern observed in this study could be a result of assessing present orientation in a single question opposed to a more extensive scale. Additionally, the previous finding is related specifically to saving behaviors whereas the present finding is associated with broader planning and budgeting behaviors.

Surprisingly, consideration of future consequences (B=-0.14, SEB=0.040, p<0.01) appears to have a negative relationship with propensity to plan, refuting initial expectations.

Furthermore, the correlation between consideration of future consequences (CFC) and propensity

to plan is only 0.077 (p<0.01). The regression analysis and simple correlation suggest that CFC

and propensity to plan are two distinct forms of future oriented behavior. These results can be

partially attributed to the survey method. The propensity to plan questions asked participants

specifically about financial planning behavior. Conversational norms advise that the surveyor

would not ask the same question twice, therefore, when answering the CFC questions

participants may have excluded consideration of financial consequences such as inadequate rainy

day or retirement savings.

To further investigate this unexpected relationship a follow-up regression model was

calculated (Table 4). In the previous models propensity to plan was used as the dependent

variable. In Model 4, propensity to plan was entered as an independent variable and CFC was

made the dependent variable. Unlike Model 3 four of the demographic variables appeared as

significant predictors of CFC. As compared to being male, being female is weakly associated

with lower CFC (B=-0.080, SEB=0.034, p<0.05). The relationship between income and CFC is

negative (B=-0.0011, SEB=0.00038, p<0.01), suggesting higher income earners consider future

consequences less than lower earners. Lastly, two of the race categories, Asian (B=0.16,

SEB=0.052, p<0.01) and Hispanic (B=0.14, SEB=0.059, p<0.05), appear to be significant

predictors of CFC. Cross-culturally, these races tend to be more collectivistic. In Model 4,

collectivism (B=0.14, SEB=0.021, p<0.01) is significant while individualism is not. This

emphasis on collectivism could explain why being Asian or Hispanic (compared to being

Caucasian) is related to higher CFC.

The two personality characteristics of agreeableness (B=0.049, SEB=0.021, p<0.05) and

neuroticism (B=0.099, SEB=0.022, p<0.01), that appeared as non-significant in Model 3, appear

significant in Model 4. These differences display that different personality traits are useful in CFC than in propensity to plan. CFC predicts environmental behaviors, therefore, the generous and trusting nature of someone high in agreeableness and the anxious and tense nature of someone high in neuroticism could predict a behavior such as recycling. These individuals must be willing to engage in behaviors that help the planet and be worried enough about the planet to feel the need to engage.

Locomotion (B=-0.086, SEB=0.031, p<0.01) and assessment (B=0.29, SEB=0.029, p<0.01) are both significant predictors of CFC. The negative relationship between locomotion and CFC suggests that either the constant forward movement associated with locomotion hinders CFC or that someone high in CFC may be less focused on locomotion. Conversely, the evaluative components of assessment aid in CFC. CFC greatly holds doing the right thing as dominant behavior over the mindset of "just do it" (Kruglanski et al., 2000).

Lastly, as further evidence that propensity to plan and CFC are different, the attentional patterns are opposite. In Model 3 attention to the future and attention to the present were significant, in Model 4 only attention to the past (B=0.027, SEB=0.021, p<0.05) is significant. This result suggests that retrospection is important to CFC. This makes sense in the context of health behaviors - that CFC predicts - for example, an individual would have to consider how how much alcohol they consumed in the past to appropriately consider the consequences of their next drink. Model 4 varies widely from the previous models in demographics, personality, culture, motivational characteristics and thought patterns. These results further suggest that the original expectation that CFC would predict financial behaviors in the same manner as propensity to plan is incorrect.

Discussion

The regression analysis attempted to answer the question of "who plans?" The results suggest that demographics and personality are relatively unimportant while culture, motivation, and thought patterns are relatively important. Focusing specifically on Model 3, openness, collectivism, individualism, locomotion, consideration of future consequences, attention to the future and attention to the present are the only significant predictors of propensity to plan. In comparison with some of the other variables measured, zero of the nine demographic variables are significant and only one of the five personality traits are significant.

Theoretical Implications

Previous literature has focused on the consequences of propensity to plan but left virtually unexamined what types of people demonstrate higher propensity to plan. In an effort to examine these patterns, Lynch et al. (2010) regressed propensity to plan on income, education, gender, and ethnicity. However, this study reveals that these demographics alone are insufficient to explain differences in propensity to plan. Contrary to their findings socioeconomic status was not found to be an important predictor of propensity to plan. Thus, the current results suggest a need to incorporate psychological factors when determining these important differences.

Broader Implications

Previous research has shown that propensity to plan can predict important financial outcomes such as retirement savings, FICO credit scores, and net worth. This study has shown that there are patterns in individual differences that can predict propensity to plan. The current question is: how can this information be used? More widespread use of these scales and measurements, even colloquially, could be useful. For example, an individual who is low in locomotion could be targeted to receive an intervention that assists them with budgeting

behaviors. Conversely, an individual who is high in locomotion would not be targeted for this intervention.

More broadly, financial institutions could add some of these measures to their loan applications. For example, measures of motivation and thought patterns could be included alongside credit histories to determine if a loan is granted and at what interest rate. These psychological measures are simple, take little time to answer, and may be more informative than the other information available.

Limitations

One potential limitation is in consideration of effect sizes; the sample size is large enough that even the smallest of effects appear statistically significant. With a smaller sample these effects would potentially not appear as significant predictors in propensity to plan. Another limitation to consider is fatigue effects because participants provided responses for nearly half an hour. Additionally, the scope of our survey was very broad resulting in the use of shortened versions of measurement scales. While these scales have been proven to be reliable they are lacking in detail. Narrowing the scope of the survey would have allowed for the use of scales with more items. Finally, the results were obtained from correlational data, not a controlled experimental manipulation.

Figure 1
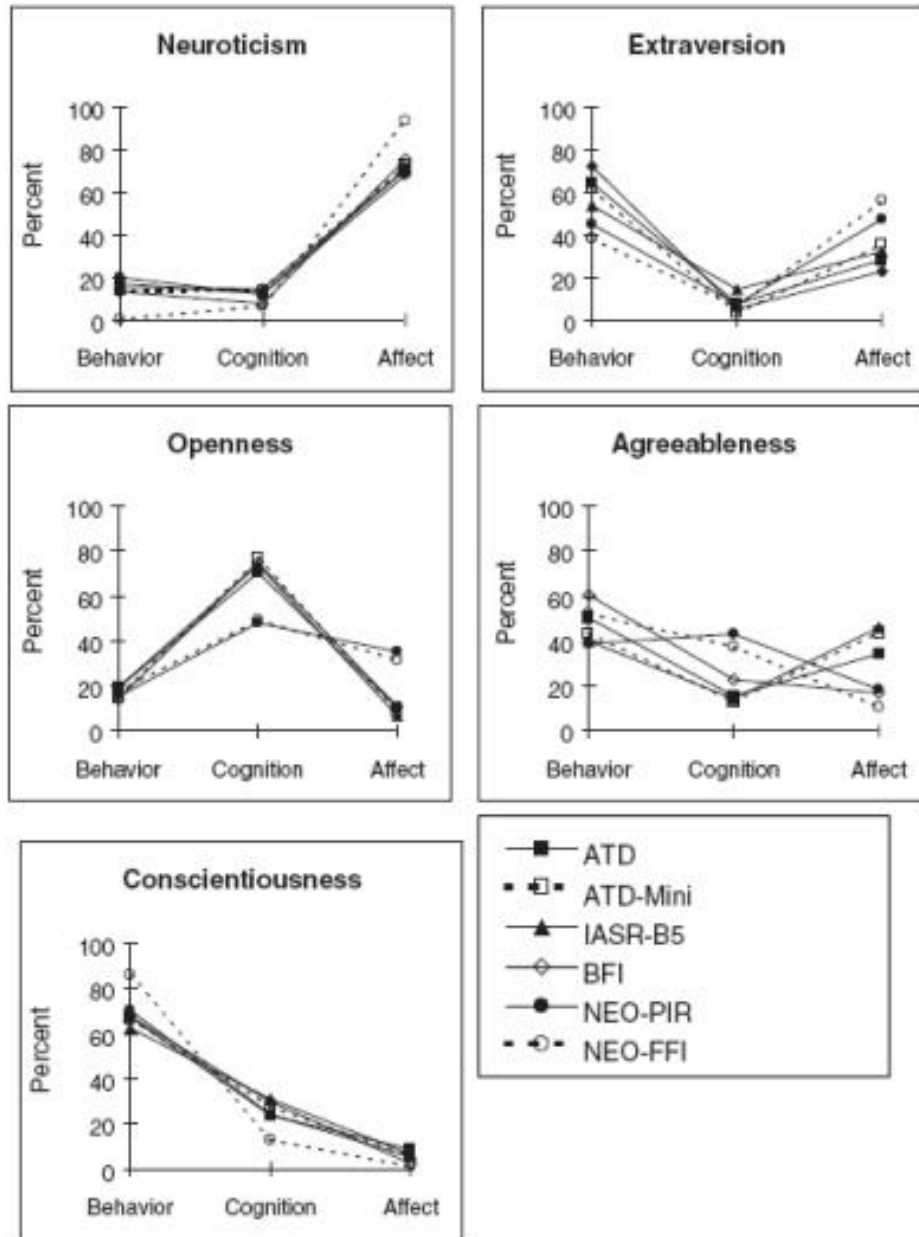
Figure 1   The relative importance of affective, behavioral, and cognitive components to each of the Big 5 traits, as determined by primary expert
          ratings of inventory items.
NOTE: ATD = Unipolar Adjective Trait Descriptors, ATD-Mini = the Mini-Markers scales, IASR-B5 = Revised Interpersonal Adjective Scales, BFI =
Big Five Inventory, NEO-FFI = the short form of the NEO-PI-R.

Adapted from Pytlik-Zillig, Hemenover, and Dienstbier (2002)

Table 1

Individual Differences Correlation Table

		M	SD	PtP	EX	C	A	OtE	N	COL	IND	LMT	AST	CFC	ATF	APAST
PtP	Propensity to Plan	3.51	0.95	-												
EX	Extroversion	4.65	1.01	0.24	-											
C	Conscientiousness	4.53	0.92	0.080	0.24	-										
A	Agreeableness	4.54	0.99	0.14	0.30	0.35	-									
OtE	Openness to experience	4.72	1.12	0.22	0.31	0.24	0.28	-								
N	Neuroticism	4.31	0.95	0.18	0.37	0.38	0.35	0.26	-							
COL	Collectivism	4.67	1.02	0.31	0.35	0.14	0.29	0.26	0.30	-						
IND	Individualism	5.28	0.92	0.37	0.32	0.20	0.24	0.26	0.22	0.46	-					
LMT	Locomotion	4.78	0.81	0.42	0.48	0.22	0.34	0.36	0.32	0.48	0.61	-				
AST	Assessment	4.17	0.86	0.22	0.35	0.39	0.49	0.34	0.46	0.36	0.27	0.48	-			
CFC	Consideration of Future Consequences	3.01	0.73	0.077	0.27	0.22	0.34	0.20	0.36	0.36	0.18	0.24	0.51	-		
AtF	Attention to Future	4.89	1.52	0.35	0.21	0.14	0.15	0.17	0.21	0.23	0.25	0.28	0.31	0.17	-	
APAST	Attention to Past	4.05	1.64	0.086	0.12	0.17	0.17	0.16	0.19	0.16	0.074	0.14	0.36	0.26	0.33	-
ATP	Attention to Present	4.98	1.45	0.25	0.20	0.09	0.080	0.12	0.10	0.19	0.25	0.25	0.12	0.10	0.34	0.16

Note: every correlation is significant at the $p < .01$ level

Table 2

Demographic Correlation Table

	M /%	SD	PtP	COL	IND	LMT	AST	CFC	ATF	APAST	ATP
Propensity to Plan	3.51	0.95	-	0.31	0.37	0.42	0.22	0.077	0.35	0.086	0.25
Gender (Female)	51.2%		-0.056	-0.086	0.018	-0.024	-0.038	-0.067	0.025	0.041	0.031
Age	45.04	16.12	-0.058	0.018	0.0082	-0.041	-0.32	-0.21	-0.24	-0.20	-0.036
Education			0.015	0.040	0.069	0.081	0.10	-0.013	0.031	-0.048	-0.0058
Income (thousands)	78.62	56.06	0.012	0.056	0.069	0.094	0.0091	-0.10	0.023	-0.083	0.051
Asian	20.4%		-0.032	0.017	-0.073	0.012	0.085	0.095	-0.026	0.032	-0.077
African American	10.0%		0.099	0.048	0.097	0.11	0.058	0.041	0.14	0.0094	0.063
Hispanic	12.0%		0.023	0.040	0.040	-0.0094	0.082	0.10	0.073	0.070	0.0083
Native American	0.54%		-0.011	-0.0050	0.0075	-0.025	-0.0066	0.032	-0.0087	-0.015	-0.0062
Native Pacific Islander	0.54%		-0.011	0.023	-0.023	-0.029	0.0097	0.039	-0.0018	0.017	0.0010
Other	1.30%		0.018	0.012	0.027	0.019	-0.019	-0.044	-0.00085	-0.020	0.010
Foreign Born	13.8%		-0.021	0.030	0.00017	0.024	0.072	0.043	-0.033	0.0059	-0.054
Urban	35.0%		0.035	0.0075	0.040	0.047	0.14	0.10	0.055	0.035	0.018
Rural	17.6%		-0.012	-0.00098	-0.0071	-0.036	-0.11	-0.065	-0.050	-0.042	-0.0013
Divorced	9.26%		-0.00084	-0.055	0.029	-0.046	-0.10	-0.071	-0.060	-0.036	-0.071
Living with Another	7.12%		0.015	-0.033	0.028	0.0082	0.037	0.018	0.041	0.027	0.016
Separated	0.84%		0.019	-0.0068	-0.012	-0.0013	-0.013	0.011	0.034	0.038	0.018
Single	28.8%		-0.023	-0.13	-0.068	-0.035	0.11	0.086	0.047	0.078	-0.030
Widowed	3.37%		-0.013	-0.0081	-0.016	-0.0082	-0.099	-0.068	-0.049	0.0069	0.023
Party Identification*	-0.18	2.11	-0.027	0.040	-0.027	-0.041	-0.13	-0.088	-0.062	-0.067	-0.031

Light Blue p < .05. Dark Blue p < .01.

*Party Identification was coded on a -3 to 3 scale: -3=Strong Democrat Identity, 3=Strong Republican Identity. Mean indicates slight democrat (left) lean.

Table 3: Linear Regression Models

Variable	Model 1			Model 2			Model 3		
	B	SE B	t-value	B	SE B	t-value	B	SE B	t-value
Gender (Female)	-0.054	0.054	-1.01	-0.050	0.050	-1.00	-0.086	0.047	-1.82
Age	-0.0053	0.0021	-2.47	-0.0044	0.0020	-2.20	-0.0016	0.0020	-0.832
Education	0.014	0.020	0.683	0.0036	0.019	0.192	-0.0026	0.018	-0.144
Income	0.00015	0.00060	0.253	-0.00021	0.00055	-0.372	-0.00068	0.00053	-1.29
Asian	-0.030	0.082	-0.361	-0.011	0.076	-0.144	0.037	0.073	0.509
African American	0.34	0.10	3.33	0.12	0.096	1.22	0.023	0.091	0.257
Hispanic	0.11	0.093	1.13	-0.011	0.086	-0.127	0.012	0.082	0.153
Native American	-0.044	0.39	-0.114	-0.32	0.36	-0.895	-0.20	0.34	-0.579
Native Pacific Islander	-0.11	0.42	-0.249	-0.24	0.39	-0.623	0.024	0.37	0.066
Other	0.11	0.24	0.444	-0.020	0.22	-0.093	-0.059	0.21	-0.284
Foreign Born	-0.13	0.087	-1.48	-0.13	0.080	-1.63	-0.090	0.076	-1.19
Urban	0.0077	0.063	0.121	-0.0046	0.058	-0.080	0.0066	0.055	0.120
Rural	0.036	0.077	0.469	0.032	0.071	0.456	0.031	0.068	0.455
Divorced	-0.0078	0.10	-0.077	0.020	0.093	0.214	0.041	0.089	0.466
Living with Another	-0.051	0.12	-0.446	-0.0055	0.11	-0.052	0.014	0.10	0.139
Separated	0.18	0.29	0.629	0.26	0.26	0.987	0.16	0.25	0.626
Single	-0.16	0.074	-2.12	-0.037	0.069	-0.536	-0.0083	0.066	-0.126
Widowed	0.062	0.16	0.395	0.085	0.14	0.592	0.026	0.14	0.188
Party Identification	-0.00040	0.014	-0.029	-0.0011	0.013	-0.083	-0.0015	0.012	-0.124
Extroversion				0.062	0.029	2.13	0.0089	0.028	0.313
Conscientiousness				-0.034	0.032	-1.072	-0.039	0.030	-1.28
Agreeableness				-0.010	0.029	-0.362	-0.0090	0.029	-0.316
Openness to Experience				0.093	0.024	3.80	0.065	0.024	2.74
Neuroticism				0.037	0.032	1.17	0.026	0.031	0.859
Collectivism				0.11	0.030	3.74	0.083	0.029	2.82
Individualism				0.27	0.032	8.43	0.14	0.034	4.12
Locomotion							0.21	0.043	4.98
Assessment							0.041	0.041	0.990
Consideration of Future Consequences							-0.14	0.040	-3.50
Attention to Future							0.14	0.019	7.61
Attention to Past							-0.027	0.016	-1.66
Attention to Present							0.061	0.018	3.38

(Caucasian, Suburban, Married Male as reference category – coded as 0 for Race, Location, and Marital Status)

Light Blue p < .05. Dark Blue p < .01.

Table 4

Linear Regression Model 4: Consideration of Future Consequences as Dependent Variable

		Model 4	
Variable	B	SE B	t-value
Gender (Female)	-0.080	0.034	-2.31
Age	-0.0016	0.0014	-1.11
Education	-0.022	0.013	-1.71
Income	-0.0011	0.00038	-3.10
Asian	0.16	0.052	3.01
African American	0.041	0.066	0.614
Hispanic	0.14	0.059	2.32
Native American	0.29	0.25	1.19
Native Pacific Islander	0.39	0.27	1.48
Other	-0.16	0.15	-1.04
Foreign Born	-0.059	0.055	-1.07
Urban	0.034	0.040	0.857
Rural	0.025	0.049	0.510
Divorced	-0.044	0.064	-0.689
Living with Another	-0.00023	0.073	-0.003
Separated	0.033	0.18	0.181
Single	-0.012	0.048	-0.247
Widowed	-0.047	0.099	-0.474
Party Identification	-0.0064	0.0088	-0.722
Extroversion	0.037	0.021	1.82
Conscientiousness	-0.034	0.022	-1.53
Agreeableness	0.049	0.021	2.39
Openness to Experience	-0.012	0.017	-0.696
Neuroticism	0.099	0.022	4.46
Collectivism	0.14	0.021	6.55
Individualism	0.031	0.025	1.26
Locomotion	-0.086	0.031	-2.71
Assessment	0.29	0.029	10.27
Propensity to Plan	-0.074	0.021	-3.50
Attention to Future	-0.013	0.014	-0.919
Attention to Past	0.027	0.012	2.35
Attention to Present	0.020	0.013	1.51

(Caucasian, Suburban, Married Male as reference category – coded as 0 for Race, Location, and Marital Status)

Light Blue p < .05. Dark Blue p < .01.

Appendix

Propensity to Plan for Money—Long Run

For each of the statements below, please indicate whether or not the statement is characteristic of you. (1 = Extremely Uncharacteristic, 5 = Extremely Characteristic)
1. I set financial goals for the next 1–2 months for what I want to achieve with my money.
2. I decide beforehand how my money will be used in the next 1-2 months.
3. I actively consider the steps I need to take to stick to my budget in the next 1-2 months.
4. I consult my budget to see how much money I have left for the next 1-2 months.
5. I like to look to my budget for the next 1–2 months in order to get a better view of my spending in the future.
6. It makes me feel better to have my finances planned out in the next 1-2 months.

Big Five Inventory-10 (BFI-10)

Please indicate how strongly you agree or disagree with the following personality measures. (1=Strongly Disagree, 7=Strongly Agree)
I see myself as someone who...
1. ...is reserved.
2. ...is generally trusting.
3. ...tends to be lazy.
4. ...is relaxed, handles stress well.
5. ...has few artistic interests.
6. ...is outgoing, sociable.
7. ...tends to find fault with others.
8. ...does a thorough job.
9. ...gets nervous easily.
10. ...has an active imagination.

Individualism Scale

Please indicate how much you agree or disagree with each statement.
(1=Strongly Disagree, 7=Strongly Agree)
1. It is important to me to develop my own personal style.
2. It is better for me to follow my own ideas than to follow those of anyone else.
3. For me, hard work and personal determination are the keys to success in life.
4. I enjoy being unique and different from others in many respects.
5. My personal achievements and accomplishments are very important to who I am.
6. If I make my own choices, I will be happier than if I listen to others.

Collectivism Scale

Please indicate how much you agree or disagree with each statement.
(1=Strongly Disagree, 7=Strongly Agree)
1. It is important to me to think of myself as a member of my religious, national, or ethnic group.
2. Learning about the traditions, customs, values, and beliefs of my family is important to me.
3. I will sacrifice my self-interest for the benefit of the group I am in.
4. In the end, a person feels closest to members of his/her own religious, national, or ethnic group.
5. It is important to me to respect decisions made by my family.
6. My happiness depends on the happiness of those around me.
7. When I hear about an event I automatically wonder whether it will be good or bad for my religious, national, or ethnic group.
8. Family is more important to me than almost anything else.

Locomotion Scale

Please read the following statements and indicate how much you agree or disagree with them according to your beliefs and experiences. (1=Strongly Disagree, 7=Strongly Agree)
1. I don't mind doing things even if they involve extra effort.
2. I am a "workaholic."
3. I feel excited just before I am about to reach a goal.
4. I enjoy actively doing things, more than just watching and observing.
5. I am a "doer."
6. When I finish one project, I often wait awhile before getting started on a new one. (reverse-scored)
7. When I decide to do something, I can't wait to get started.
8. By the time I accomplish a task, I already have the next one in mind.
9. I am a "low energy" person. (reverse-scored)
10. Most of the time my thoughts are occupied with the task I wish to accomplish.
11. When I get started on something, I usually persevere until I finish it.
12. I am a "go-getter."

Assessment Scale

Please read the following statements and indicate how much you agree or disagree with them according to your beliefs and experiences. (1=Strongly Disagree, 7=Strongly Agree)
1. I never evaluate my social interactions with others after they occur. (reverse-scored)
2. I spend a great deal of time taking inventory of my positive and negative characteristics.
3. I like evaluating other people's plans.
4. I often compare myself with other people.
5. I don't spend much time thinking about ways others could improve themselves. (reverse-scored)
6. I often critique work done by myself or others.
7. I often feel that I am being evaluated by others.
8. I am a critical person.
9. I am very self-critical and self-conscious about what I am saying.
10. I often think that other people's choices and decisions are wrong.
11. I rarely analyze the conversations I have had with others after they occur. (reverse-scored)
12. When I meet a new person I usually evaluate how well he or she is doing on various dimensions (e.g., looks, achievements, social status, clothes).

Consideration of Future Consequences Scale

For each of the statements below, please indicate whether or not the statement is characteristic of you. (1 = Extremely Uncharacteristic, 5 = Extremely Characteristic)
1. Often I engage in a particular behavior in order to achieve outcomes that may not result for many years.
2. I only act to satisfy immediate concerns, figuring the future will take care of itself.
3. My behavior is only influenced by the immediate (i.e., a matter of days or weeks).
4. My convenience is a big factor in the decisions I make or the actions I take.
5. I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level.
6. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time.
7. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date.
8. Since my day to day work has specific outcomes, it is more important to me than behavior that has distant outcomes.

Attention Scale

Please indicate how much you think about each of the following statements.
(1=Not at all, 7=A great deal)
1. On a given day, how much time do you typically spend thinking about the future?
2. On a given day, how much time do you typically spend thinking about the past?
3. On a given day, how much time do you typically spend thinking about the present?

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