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Exploring the Relationship between Personality and Money Scripts while Controlling for Demography, Ideology, and Self-Esteem

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A.F: Visualisation, Analysis; Writing - review & editing

S.C: Data analysis, Proofing

Abstract

Financial planners seek to learn more about their clients' personalities and money scripts due to the significant influence these factors have on financial behavior and decision-making. This study surveyed 288 adults with a personality assessment (HPTI: High Potential Trait Indicator), and their money scripts (KMSI-R: Klontz Money Script Inventory) while controlling for demography (sex, age, education), ideology (religious, political beliefs, and optimism) and self-esteem (measurements of personal ratings on a variety of scales). The results indicated that each of the six traits measured by the HPTI (Conscientiousness, Adjustment, Curiosity, Risk Approach, Ambiguity Acceptance, and Competitiveness) related to the four money scripts measured by the KMSI-R (avoidant, worship, status, and vigilance). Self-rated Ambitiousness and Hard-Work were most closely related to the different scripts. More Adjustable individuals were less likely to have Money Avoidance scripts, whereas more Competitive people had higher Money Worship and Money Status scripts. The study underlined the role of personality variables in understanding money beliefs.

Keywords: Money scripts; money attitudes; personality; political beliefs

Exploring the Relationship between Personality and Money Scripts while Controlling for Demography, Ideology, and Self-Esteem

The study of attitudes to, beliefs about, and uses of money continues to attract research attention (de Almeida et al, 2021; Fenton-O’Creevy & Furnham, 2020ab, 2021; 2023; Furnham & Grover 2020; 2022; Kappes et al., 2021; Kelley et al., 2022; Kim, 2021; Kraemer et al., 2022; Lozza et al., 2022; Ong et al., 2021; Sholin et al., 2021; Slecicka et al., 2020). This research is driven by financial advisers interested in better understanding their clients, as well as finance and personality psychologists who use money attitudes to test various theories in their respective sub-disciplines. The literature has recently been reviewed by Sesini and Lozza, (2023) who concluded that the relationship between money attitudes and key correlates are complex and that various overlooked topics deserve further examination including the investigation of emotional underpinnings of money, antecedents of money attitudes and their relationship with unsound behaviors.

This study focuses on four sets of correlates of an established money-attitude typology called money scripts (Klontz et al., 2012): demography (sex, age, education), ideology (political and religious beliefs), self-esteem (self-ratings on a variety of scales), and personality traits (HPTI: High Potential Trait Indicator). Prior studies have already found a link between money attitudes, demography, ideology (Baker & Hagedorn, 2008; Britt et al., 2015; Burgess, 2005; Christopher et al., 2004; Engelberg & Sjoberg, 2006; Furnham et al., 2012; 2014ab; Khare, 2014; Klontz et al., 2011; 2014). Our particular interest was in the *incremental validity* of personality over demography, ideology, self-esteem in understanding very specific money beliefs like being hyper-vigilant about personal money affairs.

Literature Review

Money Scripts

There is no shortage in the number of measures and concepts to assess attitudes to money (Furnham & Horne, 2021; Furnham & Murphy, 2019). There is however a great deal of overlap between them suggesting there are around four to six identifiable and distinct money-related attitudes. Recently Jackler and Furnham (2023) identified over 40 studies in this area using a range of different measures. Perhaps the best-known and most researched include the *Money Attitudes Scale* (Yamauchi & Templer, 1982) and the *Money Beliefs and Behaviour Scale* (MBBS) (Furnham, 1984), both devised around 40 years ago. Many of these measures and those related suggest that attitudes to money are often a-rational and linked to emotions, associating money with Security, Power, Love and Freedom (Furnham, 2014). Hence the literature has a clinical feel as it aims to help and understand people with money problems. Thus, a key reason for assessing money attitudes is to help people be more sensible with their money and learn better money-management techniques (Klontz et al., 2021; 2023).

The present research uses the well-established Klontz Money Script Inventory (KMSI-R) measure, which has been validated in a number of papers (Lawson et al., 2015; Taylor et al., 2015ab, 2017). There is an overlap between the KMSI-R categories and those identified in other measures described below.

According to the KSRI-R model, *Money Avoiders* believe that money is about greed and corruption or that they do not deserve money. This notion often incites fear, anxiety, or disgust; Avoiders get worried about abusing credit cards or overdrafts. Some may self-sabotage their financial success, avoid spending money on reasonable or necessary purchases, or unconsciously spend or give money away. *Money Worshipers* believe more money allows for freedom,

happiness and overall amelioration. Individuals who subscribe to this notion believe that an increase in income and/or financial windfall would solve their problems.

Money Status people associate self-worth with net worth. They have a competitive stance of wanting to acquire more than those around them. *Money Vigilant* people often feel money is a deep source of shame and secrecy and should be saved. It is linked to alertness, watchfulness, concern about money, and the sense that one must be heedful of pending financial trouble or danger.

Klontz et al., (2011) originally argued that money scripts (beliefs individuals hold about money) are developed in childhood, and often passed down from generation to generation in family systems. Typically, money scripts are unconscious, contextually bound, and, more importantly, “manage” much of our financial behaviours (Klontz & Britt, 2012). In their original paper, 72 money concepts were identified and grouped into eight hypothesized money script factors: money worship, anti-rich, money is bad, money mistrust/openness, frugality/fiscal responsibility, money anxiety, money status and money is unimportant. They then identified four distinct money belief patterns (money avoidance, money worship, money status and money vigilance). Results revealed younger, non-White, non-married participants with lower levels of education, income, and net worth had higher *Money Avoidance* scripts and *Money Worship* scripts scores. Those with high *Money Avoidance* scripts scores were more likely to be younger, non-White, and non-married with lower levels of education, income, and a lower socioeconomic status as a child. There were no gender differences in the data.

The KMSI-R has been used in a number of studies (Taylor et al., 2015ab; Klontz et al., 2015, 2019). For instance, Taylor et al., (2015a) examined the technical adequacy of the KMSI-R and found high reliability as well as weak-to-moderate positive correlations when compared to

the Money Attitude Scale (Yamauchi & Templer, 1982). It has also used to help financial advisers and planners to help understand and educate their clients (Klontz et al., 2023).

Personality

Several studies have revealed that a person's overall wealth is positively correlated with personality. For example, the trait Conscientiousness has been linked to increased levels of wealth (Duckworth et al., 2012; Exley et al., 2021; 2022; Letkiewicz & Fox, 2014; Motika, 2019; Nabeshima & Seay, 2015). This is conceivable as Conscientious people are more planful, organized and hard-working, and thus are likely to yield better educational outcomes and higher-paying job opportunities. In a UK study with 3240 adults, Fenton-O'Creevy and Furnham (2023) showed Conscientiousness was positively associated with savings and investments, while Agreeableness, Neuroticism and Extraversion were negatively associated. As in other studies, data clearly identifies Conscientiousness as the most significant personality trait in wealth accumulation.

Most of these studies used personality and dark-side (disordered) personality trait measures based on the Big Five model (Furnham & Grover, 2020). For example, Furnham (2019) found individuals were more likely to associate money with *Achievement and Success* when they scored higher on Avoidance, Narcissism and Sadism and lower on Antisocialism and Self-Defeating personality disorders. Those who were more likely to view money as *Power and Prestige* were higher on Dependent, Histrionic, Narcissistic and Sadistic but lower on Depressive traits. Regarding the *Mindful and Responsible* money attitude, individuals who tended to endorse this were more likely to score higher on Obsessive-Compulsive and lower on Anti-Social traits. Depressive participants were more inclined to maintain *Savings Concerns*. Finally, *Financial*

Literacy Worries were typically held by those who scored higher on Avoidant, Borderline and Narcissistic traits.

There are, however, a number of other traits that have been linked to money behaviours, such as Trait Ambitiousness (Furnham, 2014). This study uses the High Potential Trait Inventory, which is a comparatively new measure closely related to the Big Five framework, designed to assess personality at work (MacRae & Furnham, 2020; Teodoresc et al., 2017). The HPTI helps identify and understand these traits to assess an individual's potential for success in various contexts. It has been used in a number of studies (Furnham & Treglown, 2018; Teodorescu et al., 2017). Below is a summary of each personality type included in the HPTI:

- **Conscientiousness:** Individuals high in conscientiousness are focused on their goals and self-motivated. They tend to be organized and planful, taking a structured approach to tasks and responsibilities.
- **Adjustment:** This personality type reflects individuals who experience few feelings of stress and remain calm under pressure. They are not easily anxious and are able to handle challenging situations with composure.
- **Curiosity:** People with high curiosity enjoy novelty, learning, and variety. They are open to new experiences and tend to seek out opportunities for growth and exploration.
- **Risk Approach:** This personality type describes individuals who are proactive in confronting challenging situations and difficult conversations. They are willing to take risks and embrace the uncertainties that come with them.
- **Ambiguity Acceptance:** Those who exhibit ambiguity acceptance thrive in uncertain and complex environments. They can tolerate a lack of clarity and structure

without experiencing undue stress. They are comfortable navigating ambiguous situations.

- **Competitiveness:** This personality type pertains to individuals who enjoy positions of power, influence, and recognition. They are driven by competition and strive to excel in their endeavors.

Demography

Although there is an evident relationship between personality factors and money beliefs and behaviours, other factors like an individual's demography (sex, age, education) also play a role. For instance, males on average still seem to earn more than females, as do better-educated individuals over those less-educated. The literature on gender differences in pay, earning and money usage is however both changing rapidly and very nuanced (Lozza et al., 2022). Similarly, older people earn more than those younger. Further, education is often linked to seniority in occupations, particularly well paid jobs. Hence it appears that demographic factors are associated with healthy and adaptive money beliefs and behaviours.

Ideology

Individuals' political and religious beliefs have been shown to be related to their money-related behaviours (Furnham, 2014; Tang, 2010). There are many religious texts across multiple faiths that refer directly to money, most giving warnings about the dangers of materialism (Furnham, 2014; Pong, 2022). The same is true, but less so, of religious and political beliefs; research suggests that such beliefs relate to how, when and why people save and spend money (Furnham, 2014). Indeed, most religions offer clear guidelines about the use of money (Tang, 2010). Our interest in this study is the relative contribution (incremental validity) of personality

traits over demography and personal ideology, namely religious and political beliefs which have been shown to be closely related to money beliefs and behaviours.

Similarly, all political parties are deeply concerned with the accumulation and distribution of wealth (Arnulf et al., 2022). A limited number of studies have explored religious and political belief correlates of money. Furnham et al., (2022a) found equivocal evidence that religious and political beliefs were related to being either a spender or a saver. The data suggests that those who are conservative and traditional in their beliefs tend to be more disapproving of materialism in any form (Tang, 2010). In this research, we investigated personal ideology and money scripts.

From the literature we predict that the more religious people are the more likely they are to score low on Money Worship and high on money vigilance as most religions have many warnings about the love of money. This theme has been explored extensively by Tang (2010).

Similarly, we predict that more politically conservative people would associate money with freedom and power and hence score more highly on money worship. We recognize however that political beliefs are complex and often self-proclaimed politically conservative people can be liberal in their social attitudes (Furnham, 2014)

Self-Esteem

There is some existing literature on the relationship between self-concept/esteem and money (Ozgen & Bayoglu, 2005). Zhang (2009) and Verplanken and Sato (2011) observed a significant correlation between money attitudes and (spiritual) well-being (e.g., self-esteem, the joy of life and self-identity). Verplanken and Sato (2011) showed that low self-esteem was strongly associated with impulse purchase decisions, which are associated with a lack of self-control and self-management of money skills. In this study, we also asked participants to rate

themselves on a number of variables like their attractiveness and intelligence to see if these related to money scripts. In this study we combine four personal ratings (attractiveness, health, emotional intelligence and intelligence/cognitive ability) to form a single score which has been used in previous studies and which has acceptable internal reliability (Furnham et al., 2022ab).

Personality and attitudes to money

This Study

Our primary interest centered around how personality trait correlates with four money scripts, which formed our independent/criterion variables. We used a new measure (HPTI) to assess Tolerance of Ambiguity and Approach to Risk in addition to four of the Big Five traits. The HPTI was shown to add incremental validity over alternative measures, like the Big Five Inventory (Furnham & Impellizzeri, 2021). This measure has not been used to look at money beliefs but because of the overlap with some Big Five traits we expect Conscientiousness to be related to Mindful and Responsible behaviour, while poor adjustment would be related to both Savings Concerns and other Worries.

We aimed to explore demographic, ideological, self-esteem and personality trait correlates of money scripts. Because our interest was in the incremental validity of personality traits over demography, ideology, and self-esteem, these factors were considered “control” variables. Based on previous literature regarding personality, we formulated the following hypotheses:

H1: Money Avoidance scripts would negatively correlate with all personality traits, particularly Conscientiousness, Adjustment, and Risk Approach.

H2: Money Worship scripts would be positively associated with Risk Tolerance and Competitiveness.

H3: Money Status scripts would be positively associated with Competitiveness but negatively correlated with Conscientiousness.

H4: Money Vigilance scripts would be positively associated with Conscientiousness and negatively with Competitiveness.

Method

Participants

In total, 288 adult participants took part in the study: 145 stated they were women, and 143 were men. The youngest participant was 19, and the oldest was 69 years ($M = 46.06$, $SD = 11.22$). In total, 18% were single, 61% were married, 17% cohabited, and the remaining were widowed or divorced. Of the group, 36% had no children, 17% had one, 28% had two and 12% had three children. Participants were from a variety of countries: 51% from Great Britain; 22% from North America; 12% from South Africa; 4% from Ireland; 4% from India; 3% from Australia, and the remaining were mostly from European countries. In all, 69% were graduates.

Participants rated their beliefs on three scales: Religiousness (1 = Not at all to 9 = Very, $M = 3.39$, $SD = 2.53$), and Politics (1 = Conservative to 9 = Liberal, $M = 5.33$, $SD = 1.94$). These simple ratings have been used in a number of studies and shown to construct validity (Furnham et al., 2022a). Given the binary question, 122 respondents said they were Savers and 167 were Spenders. In all, 174 said they had, and 115 had not invested in the stock market. Most were employed in a variety of skilled and professional jobs. In total, 62% were British, 25% from North America, 12% from South Africa, and the rest from a variety of countries including India, Ireland and Germany. All participants were employed and working in industries like manufacturing, health and education, IT and Finance. They were all fluent in English.

Measures

1. *High Potential Trait Indicator (HPTI)* (MacRae & Furnham, 2020). The inventory includes 78 items to measure Conscientiousness, Adjustment, Curiosity, Risk Approach, Ambiguity Acceptance, and Competitiveness. Each trait was converted into a standardized score.
2. *Money Scripts: Klontz Money Behavior Inventory* (Klontz et al., 2012). This is a 51-item money-related beliefs questionnaire. It identifies four distinct money belief patterns with the following alphas: Money Avoidance (.81), Money worship, (.75) Money Status, (.74) and Money vigilance (.62).
3. *Self-Esteem*. Participants rated their beliefs on various dimensions used before in this research programme (Furnham et al., 2022a). All were rated on a 100-point scale. They rated themselves on Physical Attractiveness, Physical Health, IQ and EQ which were combined into a single variable considered as a measure of self-esteem, These had an alpha of .67.

Procedure

Participants were recruited from a pool of individuals who had volunteered to partake in psychology research by test publisher Thomas International. Participants were incentivized with the option to receive brief feedback on their results. Information regarding the study was distributed via email alongside a link to voluntarily complete. The study was conducted on an online survey platform. Approval was received by the research and ethics committee under the reference LSA/TI/2022. Finally, participants were debriefed, thanked for their time, and provided feedback on their scores. The anonymized data set was analysed by the first author.

Results

Table 1 shows the correlations between all major variables of interest. The results reveal one correlation between religious beliefs and Money Worship, one between Self-esteem and Money Avoidance and two between political beliefs and money scripts (Money Avoidance and Worship). Overall, Ambiguity Tolerance was significantly associated with all four money scripts, while Conscientiousness, Adjustment and Competitiveness correlated with three. Evidently, the measured individual differences were more related to the Money Worship and Money Avoidance scripts than the Money Status and Money Vigilance scripts.

Insert Table 1 here

Table 2 displays a series of regressions, with the four money beliefs as the criterion variable and demography, ideology, personality traits and self-esteem as the predictor variables. The first regression showed two variables that predicted Money Avoidance: more Conservative and less Adjusted people were avoidant. The hierarchical regression indicated that personality accounted for 6% of the variance above the demographic, ideological and self-rating variables. The second regression identified three variables that predicted Money Worship: more Curious and Competitive, but less Ambiguity Accepting people were worshipers. The hierarchical regression suggests that personality accounted for 14% of the variance above demographic, ideological and self-rating variables. The third regression depicted four variables that predicted Money Status: more Competitive but less Ambiguity Tolerant, Conscientious and politically left-wing people were interested in money status. The hierarchical regression indicated that personality accounted for 15% of the variance above the demographic, ideological and self-rating variables. The fourth regression revealed four variables that predicted Money Vigilance: more Conscientious but less Ambiguity Tolerant, Risk Approaching and politically left-wing

people were money vigilant. The hierarchical regression demonstrated that personality accounted for 15% of the variance above demographic, ideological and self-rating variables.

Insert Table 2 here

Discussion

As hypothesized, the results of this study revealed that personality traits are indeed related to money attitudes/scripts above and beyond demographic and ideological factors. With few exceptions the hypotheses were confirmed, demonstrating that trait Conscientiousness was strongly associated with Money Vigilance and trait Competitiveness with both Money Worship and Status.

Our results indicate that some of the features we measured were only marginally related to the money scripts. In the regressions, money scripts were *not related* to sex, age, education (degree status), nor religious beliefs. However, using an American sample, Klontz et al., (2012) found both age and education, but not sex, related to a number of the scripts. Perhaps, if we had had a larger and more representative sample we may have found more demographic correlates of the money-scripts.

An interesting outcome is that each of the six personality traits correlated with the four scripts differently. The regressions indicate that between 6 and 15% of the variance could be accounted for by these traits, over and above the other variables measured. The results show that political liberals, low on Adjustment tended to be Money Avoiders. Similarly, three personality traits were related to the Money Worship Script, indicating that those who were Competitive and Curious (Low Agreeableness and High Openness) but low Ambiguity Tolerant tended to associate money with freedom and happiness. Whereas those with Money Status scripts, tended to be Competitive, right-wing (politically conservative), and low on both Ambiguity Tolerance

and Conscientiousness. Finally, people with Money Vigilant scripts were often high on Conscientiousness and right-wing but low on Tolerance for Ambiguity and Approach to Risk.

The literature on trait correlates of work success suggests that high scores on all these traits, particularly Conscientiousness and Adjustment, are correlated with work success (Teodorescu et al., 2017). It is interesting to note that, with only three exceptions, the regression displayed that all significant associations between personality and money scripts were negative. This was especially surprising given that high scores in the money scripts are usually associated with poor money management. It is of further intrigue that those who were most competitive (i.e., low Agreeable) tended towards Money Worship and Status. Yet, it is not difficult to see why Conscientiousness is associated with Money Vigilance as both concepts are associated with the work ethic.

It is possible to argue that extreme scores, particularly very high scores, on any of these scripts are unhealthy: Avoiders will not confront important money issues; Worshippers over-emphasize the power of money to solve their problems; Status believers rely too much on money to give themselves feelings of self-worth; while those over Vigilant may be obsessed by their wealth (Klontz et al., 2011; 2012).

This paper highlighted a neglected fact in the research field of money attitudes: political beliefs. Money is a highly political issue concerning concepts like fair pay, taxation and government interventions (Arnulf et al, 2022). It is apparent that a person's wealth is related to their political beliefs, though it is unclear which leads to what, that is; do political beliefs shape how one thinks about and uses money, or does the latter shape political beliefs and orientation? Alternatively, literature on the relationship between personality and political beliefs suggests that personal wealth may be a possible mediating or moderating variable (Furnham & Cheng, 2019).

Individuals with careers in financial planning and therapy quickly become aware that personal money scripts have a powerful influence over financial behaviour (Klontz et al., 2021; 2023). As such, it is vital to understand the causes and consequences of these scripts but more imperative to try and moderate them if dysfunctional. This paper gives some insight into personality trait correlates of these scripts and what function money plays in individual lives.

Like all others, this study retained limitations. Respondents tended to be more middle-aged and middle class which may have restricted the range of answers to some questions, such as self-rating and socio-political beliefs. Furthermore, it would have been most interesting to gain further insight into each participant's current economic circumstances and history, such as their assets, as well as financial plans and concerns.

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Table 1*Means, SDs and Correlations between all the variables*

	Mean	SD	1	2	3	4	5	6	7	8	9	10
(1)Sex	1.51	.50										
(2)Age	46.08	11.22	-.02									
(3)Degree	1.29	.46	-.09	.08								
(4)Politics	5.98	2.86	.07	.02	-.12							
(5)Religious	5.77	3.24	.00	-.11	-.10	.57***						
(6)SE	286.39	46.28	-.11	-.04	-.21***	.03	.03					
(7)Conscient.	70.92	8.88	.06	.14*	-.08	-.11	-.09	.18**				
(8)Adjust.	65.91	12.18	-.08	.21***	.05	-.09	-.12*	.25***	.18**			
(9)Curious.	68.14	8.81	-.02	-.05	-.08	.08	.01	.28***	.29***	.10		
(10)RiskApp.	65.70	10.16	-.12*	.16**	.03	-.09	-.13*	.30***	.55***	.46***	.54***	
(11)AmbAcc.	52.33	9.83	.02	.18**	-.07	.02	-.12*	.14*	.27***	.41***	.39***	.50***
(12)Compet.	49.00	12.69	-.24***	-.14*	-.03	.03	.10	.20***	.27***	-.08	.10	.26***
(13)MoneyAv.	21.58	6.83	.07	-.09	-.04	.15**	-.04	-.15*	-.21***	-.30***	-.06	-.26***
(14)MoneyWor.	25.17	6.26	-.09	-.23***	-.01	.15*	.17**	-.01	-.15*	-.28***	.02	-.17**
(15)MoneyStat.	13.50	4.51	-.19***	-.11	.06	.01	.08	-.02	-.10	-.13*	-.06	-.05
(16)MoneyVig.	32.40	5.22	-.08	.10	.04	-.04	.02	-.07	.24***	-.07	-.09	-.04

Note:***p<.001 **p<.01 *p<.05

Table 2

Regressions with the four types as the criterion variable

	Money Avoidance				Money Worship				Money Status		
	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>
Sex	-.05	.80	.00	-0.07	-.31	.71	-.03	-0.43	-.58	.49	-.07
Age	-.01	.04	-.01	-0.17	-.05	.03	-.09	-1.53	.00	.02	-.01
Degree	-.45	.87	-.03	-0.52	.10	.77	.01	0.13	.23	.53	.02
Religious	-.09	.15	-.03	-0.57	-.14	.14	-.06	-1.03	.09	.09	.05
Politics	.87	.20	.25	4.28***	.06	.18	.02	0.35	-.43	.13	-.19
SE	-.01	.01	-.07	-1.10	.00	.01	.01	0.19	-.01	.01	-.05
Conscient.	-.06	.05	-.08	-1.17	-.09	.05	-.13	-1.92	-.08	.03	-.17
Adjust.	-.09	.04	-.17	-2.36*	-.06	.04	-.11	-1.61	-.01	.02	-.02
Curious.	.02	.06	.03	0.38	.10	.05	.14	2.07*	.03	.03	.06
RiskApp.	-.04	.06	-.05	-0.59	-.08	.05	-.14	-1.56	.02	.04	.04
AmbAcc.	-.08	.05	-.11	-1.59	-.09	.04	-.15	-2.18*	-.10	.03	-.23
Compet.	-.01	.03	-.02	-0.34	.16	.03	.33	5.28***	.13	.02	.37
Adjusted <i>R</i> ²			.155				.194				.235
<i>F</i>			5.362				6.727				8.330
<i>p</i>			.000				.000				.000

Note :****p*<.001 ***p*<.01 **p*<.05

