CFS Research Brief (*FLRC 10-4*)
September 2010

Center for Financial Security
UNIVERSITY OF WISCONSIN-MADISON

THEORIES OF HUMAN BEHAVIOR AND EMOTIONS: WHAT THEY IMPLY ABOUT THE FINANCIAL BEHAVIOR OF VULNERABLE POPULATIONS

By Karen Holden

Financial decisions are compelled and constrained by non-financial factors. These include personality characteristics of individuals as well as of the social environment in which decisions are made. This study provides an overview of behavioral theories that have sought to explain how non-financial factors influence financial behavior: developmental psychology, culture of poverty, behavioral economics, and fluid intelligence. This literature documents the emotional aspect of financial decisions, which must be considered in developing effective financial literacy education.

Practitioners often develop financial education materials with the assumption that if individuals are presented with knowledge and financial tools, they will be better able to choose the option most likely to achieve their financial goals. However, financial education programs rarely reflect the role of emotions, family upbringing, genetics, and peers in shaping how financial decisions are made. This paper reviews (1) key insights from behavioral research about the emotional component of financial behavior and the implications for financial education interventions, and (2) three areas in which the measurement of cognition has advanced significantly.

Psychoanalysis Theory

Arguably, the major contribution of psychoanalysis is the explicit link between childhood experiences and adult financial behavior, which highlights the importance of increasing parents' ability to model good financial behavior and discuss financial information with their children. A second contribution is the assertion that the unconscious mind influences human behavior and emotion, including behaviors associated with financial transactions

Therefore, psychoanalysis implies that ignoring the role of emotional responses and symbolic meanings will reduce the likelihood of financial education changing financial behavior.

Psychosocial Theory

First proposed by Erik Erikson, psychosocial theory proposed eight stages through which personality develops, each characterized by a dominant conflict. Advocates argued that the way in which these early-life conflicts are resolved influences the eventual personality of the individual. Some of these conflicts, particularly trust vs. mistrust, autonomy vs. shame, initiative vs. guilt, and industry vs. inferiority, are quite relevant to financial behavior. Psychosocial theory supports financial literacy education for preadolescents who are in the process of developing self-regulation and self-confidence. Proponents view the role of primary caregiver, the social context of the individual's upbringing, and the social and cultural norms of the family and community as critical to successful development.

Learning Theory (Behaviorism)

Advanced primarily by B. F. Skinner, learning theory contends that once behavior is associated with a consequence, whether reinforcement or a punishment, the likelihood of the action continuing changes. This process has implications for financial behavior: money can promote a particular behavior, such as working, because it enables a higher standard of living (Skinner 1969); further, the potential to lose money can deter certain behaviors (Delgado et al. 2006). Behaviors with immediate rewards (spending money) are more likely to occur than those with delayed rewards (saving money). Therefore, breaking large tasks into separate skills that can be performed in sequence and reinforced will help individuals master complex behavior, such as paying down debt or investing in stock (Pavlov 1960; Skinner 1953, 1954).

Learning theory, intentionally or not, dominates financial transactions. Undesirable financial behavior is typically punished by additional fees (e.g., a bank fee for bouncing a check), while some programs reinforce good behavior (e.g., consumer points for fully paying credit card balances).

Cognitive Theory

The cognitive theory of Jean Piaget includes four development stages; in each stage cognitive ability becomes more sophisticated. In the third stage, the use of logic and the ability to follow rules, key capacities for making financially sound decisions, emerge. Only in the last stage can individuals think abstractly and manage hypothetical situations. The ability to plan ahead and consider all possibilities provides an advantage in financial decision making. Given this step-by-step advancement of cognitive abilities, cognitive theory highlights the importance of stage-appropriate financial education. Further, proponents caution that unless providers recognize prior knowledge, initially held inaccurate perceptions may be merged with new knowledge, leading to misunderstanding and irrational choices.

The Measurement of Cognition

The measurement of the mental processes involved in decision making (including financial decision making) and the examination of the contextual factors that influence these processes are enabled by advances in three areas of inquiry: the measurement of intelligence, behavioral economics, and neuroeconomics. The theory of fluid-crystallized intelligence (Horn and Cattell 1966) specifies distinct subcomponents of intelligence. Fluid intelligence is an individual's general reasoning ability, while crystallized intelligence represents the formal reasoning that is gained through education, experience, and acculturation. Crystallized intelligence is associated with the skills believed to enhance financial literacy (Horn and Cattell 1967).

Behavioral economics is another area that has provided advancements in the measurement of cognition and its effects on decision making. Behavioral economists begin with the observation that individuals in standard economic theory and individuals in real life are quite different (Mullainathan and Thaler 2000). In everyday life, individuals are constrained by bounded rationality (shortcomings in human cognition that lead to judgment biases), bounded willpower, and bounded self-interest (a result of attitudes toward fairness, equality, and altruism), and therefore do not always make the most objectively advantageous decision.

Neuroeconomics offers researchers a novel way of examining the decision-making process. Results indicate that many physical actions occur through brain processes that take place without conscious

awareness; thus, the brain can be trained to make certain responses more likely, easier, or even subconscious. The findings of neuroeconomic studies demonstrate the importance of emotions for abstract thinking and decision making, especially in conditions of uncertainty and risk. Neuroeconomic research has the potential to reveal important implications for financial education; however, given the infancy of the field and the small sample sizes of studies, further research is needed to augment the initial findings.

Finally, acculturation is gaining more attention as a factor influencing intelligence and behavior. Lewis (1961) argued for the idea of a self-perpetuating culture of poverty, which developed among poor individuals as an adaptation to and a reaction against their marginal status. Other scholars have found no evidence to support this phenomenon and have posited a variety of mechanisms underlying persistent poverty (see Gorski 2008, for a review of criticisms).

Certain community values, different from those in non-poor neighborhoods, are argued to arise through the adaptation to the conditions inhabitants face (e.g., absence of services, including financial and employment services). Whether or not generational poverty transforms these values into 'culture' is beyond the scope of this paper. However, research shows that poverty is more than an economic status; it is associated with feedback from the community that may be important to the effectiveness of financial education offers.

Conclusions

While the most advantageous financial decisions may be mechanistically evident, individuals bring values, misperceptions, fears, and shared goals to the decision-making process. Further, individuals make decisions in a context that includes early-life experiences. Each theory described above offers explanations of cognition and behavior that have important implications for financial education. Researchers in the field of financial literacy must assess these implications and utilize them to fashion effective financial education interventions.

Figure 1: Theoretical and Empirical Contributions to Financial Education Models/Research

Behavioral Theories	**Measures of Cognition**
Psychoanalysis	Intelligence (Fluid and Crystallized)
Psychosocial Theory	Behavioral Economics
Learning Theory (Behaviorism)	Neuroeconomics
Cognitive Theory	

References

Delgado, Mauricio R., C.D. Labouliere, and E.A. Phelps (2006). 'Fear of Losing Money? Aversive Conditioning with Secondary Reinforcers,' *Social Cognitive and Affective Neuroscience,* 1(3):250-259.

Gorski, Paul C. (2008). 'Peddling Poverty for Profit: Elements of Oppression in Ruby Payne's Framework,' *Equity & Excellence in Education,* 41(1):130-148.

Horn, John L. and Raymond B. Cattell (1966). 'Refinement and Test of the Theory of Fluid and Crystallized General Intelligences,' *Journal of Educational Psychology,* 57 (5):253-270.

Horn, John L. and Raymond B. Cattell (1967). 'Age Differences in Fluid and Crystallized Intelligence,' *Acta Psychologica,* 26:107-129.

Lewis, Oscar (1961). *The Children of Sanchez: Autobigraphy of a Mexican Family*. New York, NY: Random House.

Mullainathan, Sendhil and Richard H Thaler (2000). *Behavioral Economics*, NBER Working Paper No. 7948. Cambridge, MA: National Bureau of Economic Research.

Pavlov, Ivan P. (1960). *Conditioned Reflexes: An Investigation of the Physiological Activity of the Cerebral Cortex*, trans. Gleb V. Anrep. New York, NY: Dover Publications, Inc.

Skinner, Burrhus F. (1953). *Science and Human Behavior*. New York, NY: The MacMillan Company.

Skinner, Burrhus F. (1954). 'The Science of Learning and the Art of Teaching,' *Current Trends in Psychology and the Behavioral Sciences*.

Skinner, Burrhus F. (1969). *Contingencies of Reinforcement: A Theorical Analysis*. New York, NY: Appleton-Century-Crofts, Educational Division.

Acknowledgments

Karen Holden is Emeritus Professor of Consumer Science and Public Affairs at the University of Wisconsin-Madison.

The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Financial Literacy Research Consortium. The opinions and conclusions expressed are solely those of the author(s) and do not represent the opinions or policy of SSA, any agency of the Federal Government, or the Center for Financial Security at the University of Wisconsin-Madison.

The Financial Literacy Research Consortium

The Financial Literacy Research Consortium (FLRC) consists of three multidisciplinary research centers nationally supported by the Social Security Administration. The goal of this research is to develop innovative programs to help Americans plan for a secure retirement. The Center for Financial Security is one of three FLRC centers and focused on saving and credit management strategies at all stages of the life cycle, especially helping low and moderate income populations successfully plan and save for retirement and other life events, including the use of Social Security's programs.

The Center for Financial Security

The Center for Financial Security at the University of Wisconsin-Madison conducts applied research, develops programs and evaluates strategies that help policymakers and practitioners to engage vulnerable populations in efforts which build financial capacity. The CFS engages researchers and graduate students through inter-disciplinary partnerships with the goal of identifying the role of products, policies, advice and information on overcoming personal financial challenges.

For More Information:

Center for Financial Security
University of Wisconsin-Madison
Sterling Hall Mailroom B605
475 N Charter St.
Madison, WI 53706
(608) 262-6766
http://www.cfs.wisc.edu/