BEHAVIORAL ECONOMICS – ACRITICAL ANALYSIS

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INTRODUCTION

A study of the history of economic thought reveals that new ideas succeed only when the time is ripe. There have been many ideas that were either lost or did not have much impact because the circumstances were not favorable at the time. Conversely, we find instances where new ideas were warmly received and went on to have significant impact as Schools of Thought. For example, the use of mathematical tools and models did not begin in the late nineteenth century. However, before the 1870s, attempts at mathematical applications in economics failed to generate much interest. Around the1870, the writings of Jevons, Walrus and Menger produced a critical mass that had great influence on the methodology of economics. Similarly, the idea of insufficient demand as a cause of economic recession precedes Keynes. The great depression of 1930s, however, provided the perfect setting and environment for Keynes theory to have a significant impact on the discipline.

Today, we may be witnessing the flowering of a new School of Thought in economics – the behavioral economics. The writers in this tradition are to be found in the top economic departments in the best universities in the world. Their writings have been published in the top tier journals of the profession. These ideas have received wide coverage in the popular media, something unusual with academic ideas. This paper makes a first attempt to answer the following questions: What is behavioral economics? Who is writing in the field? What are the important ideas? What are the causes of their success?

The editorial policy of *Economic Psychology journal*, a new journal in the area of behavioral economics, provides a good description of the new school of thought: "The Journal aims to present research that will improve understanding of behavioral, especially socio-psychological, aspects of economic phenomena and processes. The Journal seeks to be a channel for the increased interest in using behavioral science methods for the study of economic behavior and so to contribute to better solutions of societal problems, by stimulating new approaches and new theorizing about economic affairs. Economic psychology as a discipline studies the psychological mechanisms that underlie consumption and other economic behavior. It deals with preferences, choices, decisions, and factors influencing these, as well as the consequences of decisions and choices with respect to the satisfaction of needs. This includes the impact of external economic phenomena upon human behavior and well-being. Studies in economic psychology may relate to different levels of aggregation, from the household and the individual consumer to the macro level of whole nations. Economic behavior in connection with inflation, unemployment, taxation, economic development, as well as consumer information and economic behavior in the market place are thus the major fields of interest." (*Economic Psychology Journal*, Editorial Policy)

This editorial statement is a good condensed introduction to behavioral economics. Another good description of the new field comes from a paper by Mullainathan and Thaler, two of the leading authorities in the field:

> Behavioral Economics is the combination of psychology and economics that investigates what happens in markets in which some of the agents display human limitations and complications. We begin with a preliminary question about relevance. Does some combination of market forces, learning and evolution render these human qualities irrelevant? No. Because of limits of arbitrage less than perfect agents survive and influence market outcomes. We then discuss three important ways in which humans deviate from the standard economic model. Bounded rationality reflects the limited cognitive abilities that constrain human problem solving. Bounded willpower captures the fact that people sometimes make choices that are not in their long-run interest. Bounded self-interest incorporates the comforting fact that humans are often willing to sacrifice their own interests to help others. We then illustrate how these concepts can be applied in two settings: finance and savings. Financial markets have greater arbitrage opportunities than other markets, so behavioral factors might be thought to be less important here, but we show that even here the

limits of arbitrage create anomalies that the psychology of decision making helps explain. Since saving for retirement requires both complex calculations and willpower, behavioral factors are essential elements of any complete descriptive theory. (Sendhil Mullainathan, Richard H. Thaler, 2000)

It becomes clear from these definitions and descriptions that behavioral economics is concerned with human limitations and variance in circumstances other than those normally assumed in neoclassical models, the established paradigm in contemporary academic economics. Although, they do not reject the assumption of rationality and maximization, they consider what happens to market efficiency and prices when everyone does not behave rationally, or when the available information is incomplete. One reason why these economists have made an impact both inside and outside the academic economic community is their use of the language of modern neoclassical economics. They are not shy in employing mathematical tools, essential for gaining respect from the editors and referees of the top tier journals, and yet give voice to the legions of critics who for years have complained about the lack of diversity and narrowness of the basic models and assumptions employed in contemporary economic discourse. Concepts such as "bounded willpower" and "bounded self-interest" are new terms coined by these writers. At first glance it seems they are simply tinkering with the basic model instead of presenting new and revolutionary ideas, but this impression is deceptive. Their results and conclusions have been remarkable in insights and policy implications. In many cases these have severely undermined the conventional wisdom.

This paper would further investigate behavioral economics. What are its main ideas? How are these ideas impacting the discourse in the mainstream economics? Why has this new field generated so much discussion in the media and has succeeded in getting the attention of the ruling paradigm? How original is this tradition and the ideas? What are the future prospects for this group?

HOW DO WE MEASURE THE SUCCESS OF BEHAVIORAL ECONOMICS?

How do you measure the success and impact of a new School of Thought? There are several measures we can use. By many of these counts, behavioral economics is already an influential school of thought.

Just in the past year, there has been extensive media coverage of these writers in the New York Times and other popular media. This is rare and gives these academic stars status at a relatively young age. It will go a long way in boasting the new school and its ideas. Doctoral students would become aware of this school and more of them would decide this is a good area to write their dissertation. The future supply of PhDs in a certain area is critical since that will help produce further research and new students. There is a virtuous cycle in this. This is not unlike what happened with the rational expectations School of Thought in macroeconomics.

According to Maclay (2001), Behavioral economics has attracted some of the best minds among the younger generation of economists. This past year, the prestigious John Bates Clark Medal, given biennially to an American economist under the age of 40 credited with making a significant contribution to economic thought and knowledge, was awarded to Matthew Rabin, a UC Berkeley behavioral economist. According to the committee Rabin "has gone further than anyone in demonstrating the explanatory power of a new genre of rigorous economic analysis based on psychological evidence."

Another measure of success and influence would be the number of articles published in top journals, or the number of new journals or the number of faculty hired in that area in the top graduate programs, and finally membership and attendance in organizations devoted to that field. A bibliography of the field by Matthew Rabin comprises more than two thousand "significant" articles and books, a good measure of growth of the field. As Cooper (2001) points out, another measure would be the number of scholars who consider themselves "behavioralists" hired by the top graduate programs (University of Chicago, Yale, Harvard, M.I.T., Stanford and the University of California-Berkeley). To date, each of the top economics and business programs have been willing to hire these specialists.

What about media attention? Again, the field passes this test. To mark the field's progress and promise, the *New York Times* ran two feature-length articles on the discipline and the writers in early 2001.

WHAT ARE THE MAIN TENETS OF BEHAVIORAL ECONOMICS (BE)?

In general the ideas that fall into this school are not entirely novel. Why is this so? We find in the earliest writings or Classical writers a heavy emphasis on cross-disciplinary ideas. For example Adam Smith wrote extensively on the problem of grain shortages. He analyzed the issues by looking at how different groups on the demand and supply side of the grain market behave.

He concluded that it is impossible to corner such markets and the criticism of speculators and traders in the popular press is unwarranted. In the earlier writings of Classical economists, ideas from outside of what is called economics today were common. The Marginal revolution of the 1870s played a major role in isolating economics from other social science in an attempt to make it more "scientific" and specialized. Behavioral economists in this sense are simply going back to the Classical roots of economics and asking if we are worse of in trying to answer the important questions in economics ignoring the work done in other social sciences.

Some of the issues that interest modern behavioral economists may seem trivial compared to what concerned the Classical economists (what creates the wealth of a nation?). However, these are important issues of the day that conventional models in the neoclassical traditions have failed to provide satisfactory answers. According to Cooper (2001), behavioral economics focuses on the area where psychology and economics interface. The breath of ideas that this genre of writers has pursued is remarkable. Many of them have chosen to use mathematical models but have addressed issues that are considered somewhat of a puzzle in the literature. Invariably these issues have practical real world applications.

Research topics in the behavioral economics include the "seemingly irrational aversion" to certain types of risks by economic agents (Rabin works in this area). "Why do consumers shop for hours to save pennies but make snap decisions on big-ticket items? And, why do people accumulate large sums of credit-card debts when other less costly borrowing options are available? How do addiction and self-control affect economic decisions (Cooper 2001)?" Finally, there are many topics in finance that have attracted the attention of these researchers. In many cases, as Cooper points out their research has evolved beyond theory to practical applications in the private and public sector. Richard Thaler of the University of Chicago is developing real world plans to help citizens successfully increase their retirement savings.

Writers in this tradition are trying to explain how booms and busts persist. Their research sheds light on why identity — the traits people assign to themselves and to others — plays a huge and often damaging role in the economy. Many economists including Gunnar Myrdal have believed that racism plays a major part in the economy. In his classic book, The American Dilemma, he made the point that this is a serious problem that Americans will have to deal with. Further, if behaviorists are correct, shares of companies on the New York Stock Exchange despite recent declines are still overvalued. Finally, according to these writers, the neoclassical view of a rational, self-regulating economy may be a myth. This has all sorts of policy implications. Should public policy be used to control irrational, sometimes destructive behavior (herd instinct)? This may be a further blow to the cause of deregulation.

Professor Laibson wrote of an "anomaly" that he had described about people and money. When people expect money but have not yet received it, they are capable of planning, quite rationally, how much of it to spend immediately and how much to save. That squares with mainstream theory, which argues that for a modest incentive, people are willing to save and put off spending. But when the money actually arrives, willpower breaks down and — barring locked-in paycheck deductions — income is often spent wastefully. This is sometimes called "hyperbolic discounting," an economist's way of saying that a bird in hand is worth not two in the bush, but more like six or seven." [1]

The U.S has suffered for many years from low rates of personal savings. What is the cause of this "under" savings? Mainstream economist's have grappled with the problem and have provided several explanations such as the presence of social security and the disincentives built into the tax system. Many mainstream economists have argued that people save as much as they can, and that if there were a tax cut (especially if the marginal rates are cut) a substantial portion of the windfall would be saved. The behavioral economists would disagree. They argue that despite their best intentions, most people cannot fully control their spending habits. Some spend almost all of any income that comes their way. Instead of rationally balancing spending and saving over a lifetime, people are indebted because they cannot control their impulsive buying habits. Thaler has also written that personal savings rates in the country may improve dramatically provided private sector pension plans were appropriately designed. (Lowenstein 2001)

However, it is important to remember that instead of rejecting the mainstream theory entirely, the behaviorists have taken the approach of generally embracing rational, self-interested behavior. They insist that the mainstream should be open to amendments to their models and to their cherished worldview. They argue that people often respond to skewed reasoning, self-indulgence, self-destructive behavior and a host of other human frailties and strengths. If this view is taken seriously, then it makes sense for economists to cast aside

[1] Uchitelle (2001)

their traditional aversion to looking outside economics for facts and ideas to enrich their own theories and models. A few behavioralists have ventured beyond psychology into sociology, anthropology, history and political science to help explain the dynamics of the economy.

Uchitelle (2001) writes, "Three of the main writers in the field — George Lowenstein at Carnegie Mellon Institute, Colin F. Camerer at the California Institute of Technology, and Matthew Rabin at Berkeley — write in the introduction to a collection of essays on behavioral economics to be published this year: 'Our vision is that all economics will be seen as behavioral economics.' Clearly, in this vision, the strict rationality hypothesis that forms the bedrock of many mainstream economists would one day be considered as an unrealistic and special case." The literature in labor economics presents a few puzzles that have attracted behavioral economics. Wage setting in many ways reflects the complexities of human psychology. Wages should fall when unemployment is high and idle workers are eager to land jobs. However, it is not common to find employers cutting wages. They might not raise them by enough to keep up with inflation, but reducing wages is rare. Labor economists have wondered why wages are sticky. Do employers behave in this manner from a sense of fairness, loyalty or friendship? Perhaps it comes from a realization by the managers that if wages are reduced, workers would reciprocate by dragging their feet or shirking on the job. In fact, wages are often kept above what the market requires, to raise morale and to motivate workers. The unemployed may offer to work for less, but they are not hired at a lower wage. This reasoning, known as the efficiency wage hypothesis, was first described by George A. Akerlof, a pioneer in behavioral economics. (Uchitelle 2001)

Another topic that has attracted attention is the concept of cueing. According to Laibson, the principle of cueing helps explain why advertising works. It refers to the stimuli that would draw a cured addict back to his addiction. For example, mini-bars in hotel rooms provide considerable stimuli to an addict or an ex-addict. Alcohol in that setting can be a very powerful cue. Professor Laibson believes regulation may be in order to prevent firms from using cues to sell products. For example, it may be inappropriate for a recovering alcoholic to endure the experience of a having a minibar in the room. (Uchitell 2001)

What motivates these writers? According to one observer:

> At last there's good news for economists who are unhappy with this nickname, and oddly, it's the fact that economics fails to explain some pretty basic behaviors. For example, you might shovel the snow from your own driveway to save fifteen dollars, but it is less likely you would shovel your neighbors' driveway for the same amount. Such behavioral findings challenge what economists have long maintained -- that you either value your time or your money; you can't have it both ways. Economists also traditionally believe that you're always better off with more choices. But have you ever wished that after dinner you weren't offered a whole dessert assortment so you didn't have to battle the temptation to indulge in some or all of these choices? Or, finally, imagine that you have plans to go to the school dance, but the weather turns ugly; nonetheless, you trundle out in the sleet since you already bought the tickets, even though you would much rather stay home. Economists would call the tickets you bought a "sunk cost," and since you've already paid, it shouldn't affect whether or not you brave the storm. The observation that people don't behave rationally all the time has given economists an opportunity to explore areas of thought that contest long-held precepts. (*The Dismal Science*, 2001)

TOPICS IN FINANCE: "MYOPIC" RISK AVERSION

Richard Thaler and Robert P. Gwinn and other behaviorists have explained that investors sometime seem to suffer from "myopic risk aversion." This aversion is characterized by a tendency to continually reevaluate performances with a greater sensitivity to loss rather than gain. Thaler working with colleagues (Amos Tversky, Daniel Kahneman, and Alan Schwartz) in psychology have empirically found that those investors who evaluated their portfolio most often had the lowest average equity exposure. Frequent checkers not only reduced their stock exposure immediately after a loss, but also had lower average equity exposures during all subsequent months, the research found. (Uchitelle 2001)

What about destabilizing speculation and price bubbles? Nothing gets more support from the behaviorists than the view that the stock market responds not to corporate reality, but to the moods of investors — their herd behavior, their overestimation of their investing skills, their reluctance to sell a falling stock and

acknowledge a loss, and their gambler's view that stock-market gains are like "house money:" it can be left on the table for more action. Some, like Robert Shiller of Yale, go further to make the argument that stock trading is irrational. Shiller argues that investors become overconfident and their egos become involved as they are overcome by hindsight bias. Using hindsight, he explained, "they think it must have been obvious to people in the 1920's that a stock market crash was coming." (Shiller 2001)

A novel point behaviorist make and one that is applicable to all economic models is that people are lazy in their analysis of economic choices. They believe standard theory fails to recognize that people take shortcuts in thinking, in effect bypassing rational analysis. Individuals have a propensity for "representative" thinking and "categorization," that often leads to incorrect conclusions and poor choices.

What is categorization? This is a term used to represent stereotyping. Many people see a black woman walking with young children and think she is a single mother who is or has been on welfare. That shortcut in thinking helps to explain why black people constantly confront irrational barriers to jobs or good pay. The effects of such lazy thinking can lead to herd mentality and proof very harm full to the society. According to Professor Mullainathan, "When people do differentiate between middle-class blacks and poor blacks, then the poor blacks get pushed further down in the eyes of people who might employ them. Mainstream economics says that a strong economy makes all boats rise. But categorization gives a different slant."[2]

What is representation? In the form of irrational thinking the present becomes representative of the future. The economy booms for several years and people conclude that the good times will continue indefinitely. When an unexpected recession arrives, the unchecked borrowing and spending haunts them. The memory of the recession becomes important. It becomes the yardstick for viewing the future. The result is excessive caution that can very well prolong the downturn. (Lowenstein 2001)

IMPACT ON OTHER SCHOOLS

Uchitelle (2001) writes that the success of the behavioral economics in gradually chipping away at the foundations of the neoclassical paradigm. This has not gone unnoticed by critics of the neoclassical school. For example, radical economists such as Samuel Bowles and Herbert Gintis of the University of Massachusetts at Amherst are excited about the potential of the behaviorists in bringing diversity to the pool of ideas. As graduate students at Harvard in the late 1960's, they had turned to Marxism, away from mainstream since the dominant paradigm in economics took too an excessively narrow a view of human behavior.[3]

According to Uchitelle (2001), although Bowles and Gintis remain skeptical that behavioral economics differs greatly from the mainstream, they are intrigued by its success. For example, they maintain that behavioral economist's have not challenged the foundational concept in economics, that selfishness is an important motive. In their view, the motive of selfishness is important, but it is not the only motive. Their own work on fairness depends on the idea that sharing and reciprocity are significant in the human psyche. On taxes, for example, people are willingly to pay their fair share, unless they perceive that others are cheating with success. Now they reciprocate by also cheating.

Have members of the neoclassical school reacted to the ideas presented by behavioral economists? It would seem that they have. Perhaps, the strategy that seems to be working in getting the attention of the mainstream school is using the models and methodology used and respected by the establishment. Presently, even diehard rationalists like Robert E. Lucas, a Nobel laureate at the University of Chicago, have publicly agreed that there are enough puzzles in economics to justify alternate ways of thinking. For example, if hyperbolic discounting thesis can better explain the low savings rate, it should be seriously considered. However, Professor Lucas is quick to add that the neoclassical economic theory answers most questions in economics better than any alternate set of ideas. "For the price of gasoline, the model we have is sufficient," he said. "If the price goes up, people rationally use less. The psychological processes involved when people alter their behavior are not something we have to think about."[4]

Uchitelle (2001) quotes Kevin Murphy, a University of Chicago economist who believes that behavioral economics might provide better explanations than mainstream theory for some phenomena. However, what the behaviorists see as irrational can often be explained with conventional models. He gives the example of eating greasy, high-fat hamburgers. Is this behavioral irrational? According to professor Murphy, "If people accustom their taste so that they enjoy hamburgers, then trading health for taste is a rational preference."[5] The same argument applies to smoking and other high-risk

[2] Lowenstein (2001)

[3] Uchitelle (2001)

[4] Uchitelle (2001)

[5] Uchitelle (2001)

type of behavior. One of the harshest critics, also at Chicago, is Eugene Fama, a longtime advocate of the efficient-market school. According to Fama, "What Thaler does is basically a curiosity item. Would you be surprised that every shopper doesn't shop at the lowest prices? Not really. Does that mean that prices aren't competitive?" [6]

However, this does not mean the two sides are not engaged in a positive debate that will influence both sides. Professor Thaler periodically invites Fama to his classes to present the neoclassical version of the models. However, Professor Fama has not reciprocated and is bitter that behavioral finance is getting so much attention. He seems surprised that these papers are being accepted in top tier mainstream outlets. Fama responds if markets are inefficient why don't we see more investors, professional and otherwise, beat the market and make a killing?[7]

HOW ORIGINAL ARE THE IDEAS OF BEHAVIORAL ECONOMISTS?

Students of History of Economic Thought are not surprised to find that the ideas of behavioral economics are not terribly original. Many of these concepts have roots in other older traditions and other contemporary branches of economics. For example, Game Theory, developed by the mathematician Johnny Von Neuman and the economist Oscar Morgenstern, has been a rich source of ideas for Behavioral Economists. Similarly, Public Choice theory developed by James Buchanan and his collaborators in the 1960s has influenced these economists. (Cooper 2001)

What about the influence of earlier economists? Certainly among 20th century writers, the most famous economist is John Maynard Keynes. Keynes was an astute student of stock markets and highly successful speculator himself. In his most important book*, The General Theory,* Keynes devoted many sections to discussing how psychology affects economic decisions. The most well known is the description how "animal instincts" a term used to describe why it is difficult to anticipate changes in investment decisions. Keynes was also the originator of the term "herd mentality" to describe irrational decisions in investing. (Cooper 2001)

The Austrian School is known for being grounded in psychological theories. The behaviorists ought to recognize their debt to Austrians in this regard. The idea that human psychology interacts with economic actions is certainly not new. The Classical Economists and many of the pre-classical writers were distinctively behavioral as the definition is used today. In that sense, modern BE is firmly grounded in Classical tradition of taking a multi-disciplinary approach to economic analysis.

According to one observer: "Critics both inside and outside of economics like to point out that there's not a whole lot new in the behaviorists' approach. Famous economists from Adam Smith to Karl Marx to John Maynard Keynes all included complex psychological elements in their economic theorizing. But the psychological elements Marx or Keynes made a part of their economics were not easily translated into the math that became important in economics in the last fifty years. Political scientists, sociologists, and psychologists point out that they have long studied the nonrational motivations for people's actions, and they wonder why there's so much fuss; from their point of view, economists are latecomers to these ideas. It may be simply that economists' mathematic techniques have finally grown sophisticated enough to include altruism, prejudice, and the like in their models for human behavior. Whatever the reason, the behaviorists' contribution to economics is likely to spell big changes for how we understand the power of the economy in our daily lives. (My Road, 2001)

WHAT IS THE POTENTIAL IMPACT OF BEHAVIORAL ECONOMICS ON PUBLIC POLICY?

According to some, the success of behavioral economics could have far-reaching policy prescriptions. An article in The New York Times states, "If the behaviorists prevail, the mainstream view of a rational, self-regulating economy may well be amended and policies adopted to control irrational, sometimes destructive behavior."[8] The article goes on to predict the likely policy prescriptions from these views would include maintaining regulations in certain industries in order to protect economic agents from their so-called irrational actions. Cooper (2001) writes, "One can imagine such policies as more regulations on the stock market (to curb investors' impulses), greater controls on the sale of alcohol, tobacco and other drugs (to lower addiction rates), changes in the tax code with additional incentives and disincentives built-in (to guide citizens into socially desirable spending and investment behavior)."

Cooper (2001) writes that most modern Schools of Thought in economics, from the Keynesians to the

[6] Lowenstein (2001)
[7] Lowenstein (2001)
[8] Uchitelle (2001)

Austrians, have been interested in public policy (how government's can influence economic activities?). However, economists by and large agree that people are better able to recognize their preferences and act to attain them than public officials. This is where lies the perceived danger in the success of behavioral economics. Though these writers personally tend to be cautious regarding the use of their ideas for public policy, in the hands of politicians these theories and conclusions could be used as fodder to stall deregulation or to impose further regulations. Cooper writes, "If some men act in a way that the behavioralists argue is irrational—as in the case of succumbing to certain temptations or plunging into foolhardy investment strategies—politicians will feel justified in having government infantilize all citizens by subjecting them to regulations designed to protect the few from their own misbehavior."[9]

The collapse of Enron and the disastrous experience with electricity deregulation in California this past summer are exactly the kind of events that could provide politicians opposed to deregulation, the fodder to slowdown or reverse deregulation. Some of the theories of the behavioral economists and their conclusions could certainly provide the intellectual support for these efforts.

WHO ARE THE IMPORTANT WRITERS IN BEHAVIORAL ECONOMICS?

In the area of finance, Robert Shiller of Yale is a leading economist writing in this tradition. Shiller is the Stanley B. Resor Professor of Economics, Cowles Foundation for Research in Economics, at Yale University. Shiller received his doctoral degree in economics from the Massachusetts Institute of Technology in 1972. He is a research associate of the National Bureau of Economic Research, a fellow of the American Academy of Arts and Sciences, a fellow of the Econometric Society, a member of the Academic Advisory Panel for the Federal Reserve Bank of New York and a recipient of a Guggenheim fellowship. Shiller, in this book, *Irrational Exuberance* analyses the stock market boom since 1982 and affirms that equity markets can be destabilized by excessive and irrational speculations. The book was on New York Times bestseller list for nonfiction. Shiller has written on macroeconomics, real estate, statistical methods, and public attitudes, opinions and moral judgments regarding markets. His 1989 book *Market Volatility* was a behavioral analysis of price fluctuations in speculative markets. His 1993 book, *Macro Markets: Creating Institutions for Managing Society's Largest Econon-tic Risks,* proposed a variety of new risk-management contracts, such as futures contracts in national incomes or in real estate that would revolutionize the management of risks to standards of living. That book won the 1996 Paul A. Samuelson Award, TIAA-CREF. His recent book is his important claim to being a behavioral economist.[10]

Matthew Rabin is the 2001 winner of the John Bates Clark medal in economics. Rabin earned his BA in economics and mathematics from the University of Wisconsin in 1984, and received his PhD from the Massachusetts Institute of Technology in 1989. The press release from the award committee points out that Rabin has been at the forefront of research that has advanced economic theory by incorporating the findings of psychologists and other social scientists. According to Professor Avanish Dixit, "Rabin's theoretical modeling, grounded in deep study of the psychology literature, has enabled him to build many bridges between the disciplines, and his work has inspired others."[11] A committee statement called Rabin "an outstanding and strikingly original theorist" who has gone further than anyone in demonstrating the explanatory power of a new genre of rigorous economic analysis based on psychological evidence. He explores such territory as how to explain risky behavior, how people trade off well-being from one day to the next, and the different ways people evaluate their gains and losses. His research has applications to credit card debt and stock market behavior, savings, asset prices, employee/employer relations, addiction and dieting, impulse shopping and choices in health care coverage. Rabin's papers on the implications of people's concern for fairness, on procrastination and immediate gratification, and on drawing inferences from a small number of observations, are likely to prove important milestones on the way to a richer and more useful economic theory. (Maclay 2001)

Richard Thaler is the father figure in behavioral economics. Readers of the Journal of Economic Perspectives would recognize him as a frequent contributor to the "anomaly" section in the journal. Thaler, a 55 years old professor at the University of Chicago teamed up with two psychologists in the 1970's; out of their collaboration came the early findings of behavioral economics. According to an article in the popular media, "Thaler spearheaded a simple but devastating dissent. Rejecting the narrow, mechanical *homo economicus* that serves as a basis for neoclassical theory, Thaler proposed that most people actually behave like . . .

[9] Cooper (2001)

[10] Based on Various Sources on the Internet.

[11] Maclay (2001)

people! They are prone to error, irrationality and emotion, and act in ways inconsistent with maximizing their own financial well-being. So serious was Thaler's challenge that Merton Miller, the late Nobelist and neoclassical deity, refused to talk to him; Thaler's own thesis adviser lamented that he had wasted a promising career on trivialities like cashews. Most economists simply ignored him."[12]

Harvard hired David Laibson in spring of 1994. Now 25 years old, David wrote a thesis about willpower and money that drew as much on psychology and quirky behavior as on standard economics. By hiring Laibson, Harvard became the first top University to recruit an economist trained in behavioral economics. After growing up near Haverford, in the suburbs of Philadelphia, Laibson went to Harvard with only a vague interest in economics. The principles of economics courses left more questions unanswered in his mind. Why do economists assume perfect rationality and perfect information? He took course on behavioral economics offered by Peter Diamond and psychologist Drazen Prelec at MIT. These courses answered many of his earlier questions and now he was really interested in the discipline. He realized that economics was not about saving the world but about asking and answering fascinating questions that impact the everyday lives. (Lowenstein 2001, Uchitelle 2001)

Sendhil Mullainathan earned his Ph.D. from MIT and was quickly hired by his alma mater. Unlike most other doctoral students in economics, Mullainathan was steeped in both economics and economics. How did he come to study economics? Mullainathan had memories of an impoverished childhood. In 1984 his father an immigrant engineer from India lost his job at Rockwell International. This experience led him to think about social issues such as homelessness and poverty and eventually led to the study of economics at Harvard. He was also influenced by memories of an impoverished early childhood in rural India. At 27, Mullainathan is a leading figure in behavioral economics. His co-authors range from economists to psychologists at Harvard, Chicago, Stanford and other prestigious institutions. (Lowenstein 2001, Uchitelle 2001)

George Akerlof is considered a pioneer in behavioral economics. Akerlof's collaborated with Joseph Stiglitz, a recent Nobel Laureate, to write on the implications of market imperfections. His most famous article is a 1970 paper, "The Market for 'Lemons' " where he analyzed the market for used cars to show that the standard assumption of full and complete information set is incorrect. The used car sales person knows more about the quality of the cars than the buyer. This information edge enables the sales person to take advantage of the buyer. The article is considered a classic in the field of information economics. In the neoclassical model, buyers and sellers have identical information and the agreed-upon price is "efficient." Akerlof showed what happens when information is incomplete or asymmetric. This was an important first step towards giving birth to behavioral economics that we see today. Now, at 60, Akerlof is pushing behavioral economics into sociology and anthropology. From studies of black children in inner-city schools, he and Rachel E. Kranton of the University of Maryland have described the concept of "group identity" that settles on the children, giving them a sense of self that is linked to what they perceive as their social category. The "categorization" confines many of them for their lifetime, so they end up behaving as they are expected to. Like Gunnar Myrdal, Akerlof believes that race relations and issues of disparity and discrimination are some of the most important issues for the American society and economy that mainstream economist largely ignore. He was active in the civil rights movement and spent a year in India. The experience ultimately led him to ask questions "outside the box" that led to behavioral economics. (Uchitelle 2001)

CONCLUDING REMARKS

This paper attempts to give an overview of behavioral economics, a relatively new field of inquiry in contemporary academic economics. It becomes clear from the survey that the new writings classified as behavioral economics bring a refreshing set of ideas to the prevailing discourse in academic economics. These ideas have given voice to many of the critics who have pointed out rightly that the hegemony of the neoclassical school or any School of Thought is unhealthy for the discipline. The growth of behavioral economics is, therefore, a welcome development. In general, behavioral economics is concerned with human limitations and variance in circumstances other than those normally assumed in neoclassical models, the established paradigm in contemporary academic economics. Although, behaviorists do not reject the assumption of rationality and maximization, they consider what happens to market efficiency and prices when not everyone behaves rationally, or when the information available is asymmetric.

One reason why these economists have made an impact on the academic economic community is their liberal use of mathematical techniques, the language of contemporary academic economics. They are not shy in

[12] Lowenstein (2001)

employing mathematical tools for gaining respect from the editors and referees of the top tier journals. These writers have played by the rules of the publication game as it is played today. Yet they have given voice to the legions of critics who for years have complained about the lack of diversity and narrowness of the basic models and assumptions employed in contemporary economic discourse. Concepts such as "bounded willpower" and "bounded self-interest" are new terms coined by these writers. At first glance it seems they are simply tinkering with the basic model instead of presenting new and revolutionary ideas, but his impression is deceptive. Their results and conclusions have been remarkable in insights and policy implications. In many cases these have severely undermined the conventional wisdom. We watch with interest the future evolution and impact of this new school of ideas in economics. This is a welcome development that would enrich the discipline.

What are the Major Tenets of Modern Behavioral Economics?

First, economic agents are less than perfect. Economic agents display human limitations and complications not assumed in the neoclassical model. Second, behaviorists have introduced concepts such as bounded rationality, bounded willpower, bonded self-interest to differentiate their assumptions from those of the neoclassical economists. Third, behavioral factors are essential elements of any complete descriptive theory. Fourth, when these factors are incorporated into the basic neoclassical perfect competition and perfect information model, the results differ in important ways. Fifth, there are substantive policy implications of behavioral factors enriched economic models.

Whom does the behaviorists seek to benefit?

These views, theories and doctrines will help save the discipline of academic economists. The hegemony of the establishment school (neoclassical) has become oppressive and stifling. It has led to a situation that students, policymakers and common citizens have come to mock the "dismal science" and have led to erosion of interest and influence in public policy debates. By building in more real world assumptions, the behaviorists are helping integrate the social sciences. Their theories may lead to more regulation or a stalling of the deregulation train. If this happens, they would benefit the consumer and also stabilize the make the private sector.

How is this School useful, valid and correct?

The new theorists are careful to used formal models and testable hypothesis. These are the foundations of methodology of contemporary academic economics. They have tested many of the theories and proved that their assumptions and models are more sensible then the existing models that assume perfect competition. Although, they are perceived to be critics by the extreme defenders of the neoclassical paradigm, they have themselves used the models and methodology of the neoclassical school instead of throwing these away. They have therefore taken the best of the existing economics, theories that according to one author explains well 80% of the real world and tweaked the neoclassical models to explain the other 20%.

Which tenets of this School are likely to become lasting contributions?

This is a difficult question to answer. The influence of any school or idea cannot be predicted as many variables and forces are at work. However, given the writers in this tradition, given where they have published, given their fame in the popular media, it is safe to say that these ideas are here to stay and would have lasting impact on the reigning neoclassical tradition. Whether or not, the influence would be only academic or also in terms of policy changes, is another difficult prediction to make. My own belief is that politicians would jump at some of the conclusions, especially, if these writers take the time to write for the popular media. For this the new School would need talented writers in the genre of Milton Friedman, J. K. Galbraith and Paul Krugman.

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