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To think like an economist is to think like a scientist: observe, experiment, collect facts, analyze the data, draw inferences, and formulate hypothesis and theories. An economist however is seldom an independent player in this endeavor. He or she makes critical assumptions and has premonitions in regards to rationality and selfishness—ideas which have been adopted from psychology and other behavioral disciplines. An economist may also weave in personal bias and psychological filters that distort reality. As Akerloff and Shillerⁱ testify, emotions and impulses, and not just rationality, are significant decision drivers. Psychological undercurrents such as confidence in the market, creates market bubbles. Conversely, a lack of such confidence may result in loss in wealth. Earlier, Shillerⁱⁱ expanded on Allen Greenspan’s term “irrational exuberance” and traced the role of overconfidence in stock market price gyrations and in the tripling of the Dow Jones Industrial Average during 1994-99.

Currently, foundational aspects of economics and psychology are called into question. This is because of recent economic events such as:

- a) excessive home mortgage foreclosures
- b) the financial meltdown attributed to human greed
- c) doubts about the invincibility of capitalism



- d) the rapid advance of China with the world's largest population and with a command political structure, but, paradoxically, with a relatively free market economy
- e) the simultaneous agreeable growth of India (otherwise notorious for "Hindu" rates of slow growth) with a democratic polity, but with somewhat of a restrictive economic setting, poor governance, and such other rather confounding phenomena.

Inadequacy of Economics

To better understand such phenomena there is a new awareness of the need to reconnect to one of the main wellsprings of the discipline's perceptions - psychology, and also pay more heed to behavioral prompts or signals that would help distinguish between constantly changing emotional rather than rational responses and choices. Cohen and Dickensⁱⁱⁱ conclude that "Behavioral economics suffers for lack of theoretical foundations, but the methods of evolutionary psychology may help provide a foundation." Psychologists such as Kahneman^{iv} have offered numerous examples of economists generally being addicted to the assumptions of rationality and selfishness. And yet, textbooks continue to build on the same suspect assumptions because this is the paradigm from which they have traditionally viewed data. It is our position that the sooner there is osmosis of more precise behavior patterns from psychology into economics, the more coherent, acceptable and credible our understanding will become of why people behave as they do given specific economic environments.

Examples of Irrationality

There is no dearth of irrational micro- and macro-economic decisions. For example, an analysis of war psychology makes it clear that people often have acted against their own long-term welfare (which is not rational), such as when during the Weimar elections, the Nazis and the Communists managed to obtain an overwhelming majority of the votes. Similarly, there was strong support in France and Germany to enter the First World War. In post-colonial America, the people of the North and the South supported the start of the Civil War. As Glaeser^v states, in such situations, if people were acting rationally, they would not have favored warfare. Raghuram Rajan^{vi} finds fault with scapegoating the financial sector for the purpose of taking advantage of government decency and taking irrational risks that converted banking activity into gaming at Las Vegas. Rajan thinks that rational choices of home borrowers, bankers and the Government that caused the 2008 financial crisis. Greed, the moral hazard from bank bailouts instigating wild risk-taking, social inequality, and so forth were not the only reasons.

It is accurate to state that psychology and economics alike are not an exact science. For instance, Freudian Oedipus complex is an aberration, as is the Freudian assertion that libido is the only driving force. In many ways economics too can influence psychology, but that is another research paper.

There are Free Lunches

Behavioral elucidation underlies numerous economic ideas and theoretical milestones such as indifference curves, price or income elasticity of demand, law of diminishing marginal productivity, the lazy monopolist problem, prisoner's dilemma, non-cooperative games, zero-sum game, Pareto optimality and scores of others. Psychological perceptions have helped economics to draw better inferences about human behavior vis-à-vis the dollar. Of late, such cognitive nourishment of economics has improved, thanks to the work of scholars such as Gary Becker, Kahneman and others. Ironically there lies the rub, because psychologists themselves are now questioning some of the theories that economics professionals accepted almost as axiomatic. Rational choice theory and conclusions based on it such as the lazy monopolist problem are at best like Rorschach Inkblot test, portraying different things to different people. Professionals are discovering that the sacred cows or conventional wisdom in economics are not always so. There are indeed free lunches, for instance, especially for free loaders, free riders and gate crashers, though not for the more conspicuous amongst them. Deviations from normal behavior impacting macro- and micro-economic activity such as buying, selling, investing, achieving equity, offering incentives and disincentives, and so forth need more convincing explanations. There have been dozens of pioneering studies, and even a quick survey of the literature would offer many examples of such new explanations. We counted 241 of studies of this nature in the *American Economic Review* alone in recent decades and some of them have been referred and quoted in this work.

Economic theories need to be fine-tuned in the light of innovative elucidation based on emotional and biochemical perceptions. Such changes could only help make them less inexact. Also, one should guard against magnifying such influence and drawing wrong conclusions. Bertrand, Mullainathan and Shafir^{vii} warn about such likelihood: "Standard economic-policy thinking attributes to people preferences and motivations that they often lack and ignores psychological factors that can be highly consequential." For instance, poor people may not sign up for welfare benefit programs just because of procrastination, rather than any stigma attached to them, or because of wishful thinking that they may be getting out of the rut of poverty soon.

By not exploiting its backward linkage with psychology to a greater extent, it is a moot point whether economics missed many an opportunity to be more insightful and less inaccurate in various hypotheses and even theories, and more particularly in their application to real life situations not just in Europe or America, but anywhere else. Meticulous studies would connect varying local behavioral settings found in emerging economies such as Brazil, Russia, India and China (BRIC) in order to make the inferences and conclusions more authentic and more valid even locally in such nations.

Behavioral Perspectives of Economic Growth

By way of an illustration of the significantly increasing role of behavior on macroeconomic affairs, let us refer to the life styles and the patterns of economic progress in the BRIC countries. For all practical purposes, in China, life styles, particularly in its numerous urban



areas, are perhaps increasingly trendy in a western way, and economic growth is fastest in China, followed by India, Brazil and then Russia. Russia broke through the “communist” system in 1990, but China continues with the same authoritarian management 62 years after it was put in place. The Soviet Union broke up some 73 years after it was introduced. Why did India and Brazil, stuck in the same grip of poverty, not stomach the “Communist” system in all their states or provinces, and instead opt for a democratic system complete with relatively free markets and tolerate seemingly endless arguments about even established facts about social inequality, population growth, preference for consumer goods, etc.? Do the social milieu and the social psychology of these peoples explain their political and economic systems at least in part? What explains China’s assertiveness, if not antagonistic relations with India, Vietnam, Indonesia, Russia and other contiguous nations and India’s relative docile and mild-mannered ways? What is the impact on macroeconomic decision-making in economic affairs of such varying behaviors rooted in culture?

Development and behavioral science

On the basis of empirical economic evidence of countries with authoritarian regimes, Acemoglu and Robinson (2008, 2009) state that while China was able to sustain a blistering rate of growth during the first 20 years after liberalization and may continue to enjoy high rates of economic growth during the next two decades, it will not be able to sustain high rates thereafter. They cite three reasons based on behavioral science that could hobble growth: a) increasing incentives for such regimes to become more authoritarian b) larger authoritarian power would lead to halting the Schumpeterian creative destruction, (or innovation rendering less inefficient systems, processes and things obsolete and thereby destroying them) essential for economic growth, and c) infighting in authoritarian regimes causing instability and uncertainty.^{viii} The other countries of the BRIC, India and Brazil in particular, apparently may not suffer from the same predicament. Their prospects for economic growth therefore appear rather steady, though not faster. This is the kind of new perspective in economic affairs based on human behavior patterns that make us sit up and take note of the frontiers of the discipline being pushed forward.

Self-Interest the Only Motive?

Another example of the increasingly stronger interdisciplinary links between microeconomics and psychology is with regard to happiness. What is the role of material consumption (MC) relative to one’s desire (D) in attaining “happiness (H)?” Happiness research itself has assumed considerable volume and here we envision happiness as Benthamian maximization of utility. In an older edition of Paul Samuelson’s *Economics* text there is a formula to explain the link between these three variables:

$$H = MC \div D \quad \dots\dots\dots (1)$$

The explanation is that in certain societies or communities the larger the material (conspicuous) consumption (MC) as a portion or percent of the denominator desire (D), the larger the happiness, and vice versa. Thus, if John desired a Mercedes car with a price tag of, say, \$60,000, but circumstances permit just a worn Ford Taurus costing \$6000, John’s

happiness, according to the formula above is, alas, just 10 percent. The formula marginalizes believers in Thoreuvian "simple living and high thinking." Believers in such a lifestyle would prefer to keep desire to a bare minimum, like the Buddha advised in order to avoid sorrow caused by not realizing the desired objective. In straight economics, inconspicuous consumption is passé. For someone starting economics with a clean slate and with universal uniform progress in mind, the equation for happiness could be different such as:

$$H = \Omega EP \leq R + T \dots\dots\dots (2)$$

This could be interpreted to mean: Happiness (H) is equivalent to maximum (Ω) Equitable Progress (EP) subject to Resource (R) and Time (T) constraints. It is sensible to keep in mind that happiness itself is not a standard construct. However, where all elements of a society have equal opportunity in terms of creature comforts and quality education, and where such opportunity increases with time in a longitudinal sense, there could be more happiness.

Self-Interest on Hold

Adam Smith, deemed the father of economics, unequivocally stated that self-interest, (or more matter-of-factly greed) is the driving force under the capitalist system. Smith^{ix} stated that the individual "...by pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it." This is an insightful observation a psychologist would accept as empirically verifiable. However, it cannot be assumed that self-interest is the sole motive for humans to undertake any activity, and that someone like Mother Theresa is a far outlier. It ignores noble intentions such as charity, pity, love, patriotism and others that could play a significant part in economic activity although they may or they may not motivate as powerfully as self-interest. Anatole Kaletsky^x recommends that self-interest needs to be held in check by natural phenomena, such as the business cycles, so that there is fear of a countervailing force, not unlike Yin-Yang in Chinese philosophy. Yang is associated with aggression and acquisition and Yin with contentment and redress. They are always interacting, and they are integral counterbalancing parts of the whole. Thus, China appears to have better understood how to counterbalance the recession. Is this the plausible reason why the Chinese formulated a much more potent stimulus package to break through the recession than Europe or America?

The idea that consumers could have an altruistic side to their personality could seem incongruent with traditional economic theory because a basic tenet of economics is that people always behave selfishly, or as the 18th century philosopher economist David Hume^{xi} put it, "every man ought to be supposed to be a knave." Bowles^{xii} refers to new experimental evidence that people do often act against their own personal self-interest in favor of the common good, and they do so in predictable, understandable ways. He claims that poorly-designed economic incentives fail to take advantage of intrinsic moral behavior and often undermine it by signaling that selfishness is an appropriate response. Allowing



this behavior to continue creates a learning environment that conditions people to adopt more self-interested motivations. Bowles claims this compromises the individual's sense of self-determination and degrades their intrinsic motivations. A message of distrust, disrespect, and unfair intent is, conveyed as a result. Many of these unintended effects of existing incentives occur because people act not only to acquire economic goods and services but also to constitute themselves as dignified, autonomous, and moral individuals.

Bounded Rationality and Rational Fools

The bounded rationality^{xiii} of Herbert Simon took into account the constraints of limited time, information and cognitive capability of the average human being. Even here rationality has a big role in decision making which is discounted considerably by the evidence our survey has produced. Bounded rationality complemented optimum rationality, but we propose that it is somewhat suboptimal on account of the numerous factors mentioned in our survey challenging the optimum. Not very different as a concept is Amartya Sen's term 'rational fools' stating that in the absence of a universally acceptable definition of rationality, even the best sub-optimally rational person is at best a rational fool.^{xiv} In the same genre of studies is the work of Vernon Smith^{xv} who speaks of two kinds of rationality: constructivist and ecological. The standard socioeconomic science model (SSSM) "requires, justifies and promotes selfish behavior." However because of limitations mentioned above, there is need for a "second concept of a rational order, as an *undesigned* ecological system that emerges out of cultural and biological evolutionary processes: homegrown principles of action, norms, traditions, and morality." In other words, rationality is elusive regardless of what adjective, bounded or otherwise, precedes it.

Behavioral heterogeneity cannot be ignored and economic decisions are often made with reference to textbook economic principles based on behavioral conformity. Nagin^{xvi} et al emphasize the need to contextualize decisions so that all behaviors are duly taken into account in the formulation of policy. The view of Gary Becker et al^{xvii} that individuals get habituated to rationality of choice is too farfetched, according to Kahneman^{xviii}.

Herd Instinct and Economic Policy

Behaviorists in psychology see human acts as determined by external reinforcements. The cognitive view, while recognizing the importance of internal mental processes, does not escape from the one-way, cause-and-effect view inherited from behaviorists.

According to Cziko^{xix} our behaviors are not determined by either evolution or the environment. This idea would fly in the face of the Hindu philosophical view of each person carrying the psychological baggage of karmas of even previous births. Instead, Cziko suggests they are affected by how we perceive our world and the opportunities our environments provide for satisfying our preferences. These two factors may vary in different cultures, but fundamental human preferences and goals are very similar. To remain

adaptive, however, our behaviors must continually vary to get desired results. The effect of context can vary in a multitude of ways. If you plan to buy a new car at the end of the year, but your car breaks down and is irreparable many months before the planned purchase, you will use very different criteria to assess which vehicle to buy in each situation.

Kim, Park, and Wyer^{xx} looked at the way consumers compare immediate purchases with future purchases. They discovered that when people consider purchases for future utilization, “desirability” is a prime consideration. In contrast, when a product is considered for immediate use, “feasibility” becomes most important. An example of a product purchased for feasibility would be a new piece of software. People who contemplate buying the product for future use appreciate quality-related features, whereas those who intend purchasing it for immediate use place greater importance in learning how easy it is to use.

Context Shapes Decisions

Economic decisions are also made within a social context. Kenneth Arrow^{xxi} found “social norms or social culture are reactions of the society to cope with market failure.” Thus solutions to market failure such as monopolies, deadweight loss to society of consumer surplus, irrational allocation of scarce resources, and similar cases vary from community to community.

Robert Frank^{xxii} observes that “context shapes evaluation.” He illustrates this with a decision about how much to spend on a suit for a job interview. What other candidates for the job interview would spend to be better dressed is the context, and not any other. In a macro contextual sense, what the developing BRIC countries need is equitable economic progress that ensures basic physiological needs and good educational opportunities. Such progress need not be in the form of the typical smoke emitting or environmentally polluting industrial complex, but anything that ensures incomes to people even without polluting and preferably labor-intensive given the background of such states: long on labor and short on capital. If only BRIC countries, China and India in particular, did not follow the herd instinct and opt for industries that have caused considerable ecological damage and have ignored the large labor force looking for work, arguably they would have improved their living standards even years earlier and would have extended the longevity of their people and also would have had more distributional justice.

Choice and Reality

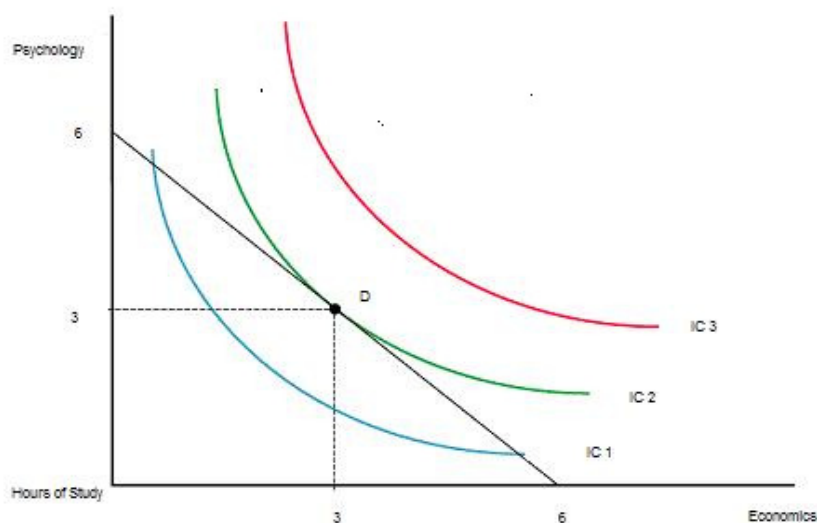
Behaviorists see human acts as determined by external reinforcements. The cognitive view, while recognizing the importance of internal mental processes, does not escape from the one-way, cause-and-effect view inherited from behaviorists.

There have been previous attempts to trace the inflow of ideas and insights from psychology. Camerer, Loewenstein, and Drazen^{xxiii} stated: “Human behavior, in general, and presumably, therefore, also in the market place, is not under the constant and detailed guidance of careful and accurate hedonic calculations, but is the product of an unstable and irrational reflex actions, impulses, instincts, habits, customs, fashions and hysteria.” In this

light we portray attempts to come up with a stimulating new discipline borrowing from neuroscience. In many ways, game theory and experimental economics draw a good deal from human interactions. This paper comes up with a few illustrations to verify if more correctness and precision are possible with a resort to psychosomatic elucidation of some human impulses as well as premeditated actions. How such underpinning would enrich economics is also demonstrated.

Economic choice is at the heart of economics. This is true in an individual as well as in a collective sense. Both individuals and groups of people apparently are comfortable only with choice in regard to spending their dollars. No two persons would have precisely the same behavior patterns in respect of dollar spending. Nor would their expenditure patterns, on account of the same reason, be identical. And so we are teased to infer that no generalization is possible in regard to behaviors as they relate to dollar expenditures. Based on such an inference, we have had the law of diminishing marginal utility and Francis Edgeworth's indifference curves.

Fig. 1: Indifference Curves and Utility Maximization with Budget Constraints



Given the budget (time) constraint of just six hours, Point D on IC_2 helps maximize utility or satisfaction. IC_1 is underachieving combination of psychology and economics study hours. IC_3 is beyond the pale of the budget constraint and there are no such combinations available. Such psychological underpinning of economics has helped advance the discipline. However, Kahneman and other psychologists have always been skeptical about the practical application of IC mapping because it does not answer the question at what point on the IC an individual is at any one time in as much as all points on the curve yield the same satisfaction.

Paradoxical as it may sound, rational behavior elicits that people act in their own best interest at least most of the time. With hardly an exception all hypothesis or generalizations in economics, such as the law of demand or law of supply, adaptive expectations, backward induction, models of competitive or monopoly or oligopoly conduct, dominant strategy or Nash equilibrium, extrapolative expectations, firm behavior, free rider problem, and scores of others are in fact statements and simplifications based on rational choice. And in this sense, such a basis or even bias, could at times be the Achilles heel of economics as we witnessed above.

Economics and Psychology: A Common Behavior Theory?

The embedding of psychological insights in mainstream economics appears to come in waves. After a thorough analysis of the activities in the interface area of the two disciplines, Kahneman^{xxiv} concluded that what was encouraging was that in the past there was more resistance in economics to psychological insights than currently, and as such there is hope for more inter-disciplinary transactions in the days to come. He however doubts if psychology and economics would ever share a common theory of human behavior.

How convincing is rational choice? How often is the utility maximizing rule indeed the rule, rather than the exception? How often does the wealth effect induce more buying? As noted earlier, you would expect rational choice to prescribe that there would be no wars, or no nation would instigate another to start a war or even sow the seeds of war hostility. A quick look at contemporary world would convince you that many a nation is twisting the rational choice theory around and indulging in provocations that could only invite militaristic interventions. This can hardly be portrayed as rational behavior. Then there is Terrance Watanabe^{xxv} who blows some \$127 million in gambling in Las Vegas and then has the chutzpah to sue the casinos for letting such a thing happen! What was the underlying principle on which he chose to go on a betting frenzy ignoring the losses that transpired one after another? Similarly, there is dearth of rational explanation for the “beggar thy neighbor” policy in world trade, or bait and switch sales strategies, or the pyramid schemes of the likes of Bernard Madoff. Let alone bounded rationality or suboptimal rationality or rational fools, there seem to be no dearth of irrational fools. There seems to be a plethora of them in all walks of life.

Overchoice for Buridan’s Ass



More startlingly, psychologists such as Barry Schwartz^{xxvi} are turning theory on its head by questioning conventional wisdom coming up with the “paradox of choice.” Schwartz refers to the thought embedded in our economic as well as political thinking that a free society ceases to be so if there is no choice. And so there should be many choices, in fact an overchoice whether you are talking of courses available to students in colleges or salad dressings at a buffet. More choice, consumers are persuaded to believe means more freedom and that means more happiness or welfare. We forget about Buridan’s ass which because of an overchoice of haystacks, could not decide on which bundle to go for and suffered! The metaphor may not apply to all, but it does open up new perspectives and does rock the boat of neatly arrayed economic ideas and theories. For instance, how wise is it to offer an overchoice of cereals to a kid that knows little about nutrition? It could discomfort and even lead to disease, such as eating disorders and obesity.

Overchoice can also so often mean bad choices whether in terms of marginal utility maximization such as a Cadillac medical treatment for sickness curable by an ordinary aspirin. Is it any wonder that many surgeries are done needlessly leading to further complications and ills?

Overchoice in such cases can even lead to hazards such as unwanted treatment for a health problem for which the patient even pays substantially even after the insurer has paid his share. The recent controversy about mammograms for ladies below fifty years of age is one such and is an archetypical case of moral hazard creation. In one particular study with the Department of Health, there were 200+ false positives out of a total of 1904 screenings with just one real case of cancer. The only beneficiaries were the radiologists that were able to bill the patients and recover their capital costs of big-ticket radiology equipment. The false positive ladies themselves suffered needless worries, lost their hard-earned dollars, and in many a case the mammogram procedures were extremely painful. The informed consumer can avoid these price shocks and physical pain and mental agony and anguish afforded in the name of overchoice by an ethically-challenged medical system. If overchoice causes suffering, can it be rational even sub-optimally? If the BRIC or other countries adopt the same mammogram algorithms and routines, it could only mean that the herd instinct got the better of rational judgment.

Choice after the Jam Study

The recent work of Sheena Iyengar on overchoice in market offerings for the average consumer is significant.^{xxvii} Unequivocally it is now clear that “.....when people are given a moderate number of options (4 to 6) rather than a large number (20 to 30) they are more likely to make a choice, are more confident in their decisions and are happier with what they chose.” While the larger number of jams attracted more customers, when it came to purchases just 3 percent of the jam tasters at this larger display actually bought the jam making use of the discount voucher. On the other hand, at the display stand where just six flavors were offered, some 30 percent of the jam tasters bought the product! This is a

surprisingly strong effect – and quite contrary to mainstream marketing theory egging on suppliers to offer more choice.

Consumerism versus Enoughism

Globally, there has been a boom in the purchase of goods and services in ever larger amounts as can be discerned in world output at \$58 Trillion which has been growing around 4-5 percent, except during 2009 when world GDP contracted due to recession. Assuming about 50 percent of the total output is for the consumers, that is a colossal amount. This is often referred to as consumerism which places emphasis on consumption, creating and fostering a desire to buy materials in excess of the basic needs of the consumer. The discipline that blends economics and consumerism is marketing, which according to the American Marketing Association^{xxviii} is a set of activities which create, communicate, deliver, and exchange value for customers, clients, partners, and society. Psychology is one of the common threads linking economics, consumerism, and marketing because it helps professionals understand the underlying thought processes driving human consumptive behaviors. In contrast to the discrete nature of each of these disciplines, behavioral economics is a fusion, which, according to Pirouz^{xxix} studies how human social cognition and emotions effect economic decisions. If such a fusion helps fix the connotation of rationality in a way acceptable to most professionals, then it is worth pursuing it.

Consumerism exists in most major economies, regardless of cultural order and geographical barriers, and behavioral economists are interested in the universal motives and influences that drive humans to consume. Globalization of economies, the cross cultural interactions or the demonstration effect, increases in lower-priced imports, and the choice of products available in each sector have all contributed to the growth of consumerism.

With this the question that comes to minds is: what makes us buy what we buy? It is difficult to judge how consumers estimate the value of any particular purchase; there are numerous factors, both perceptible and not so perceptible that contribute to decision-making. A decision to purchase is comprised of many more dimensions of value than functional and rational, and social imperatives. Good design, aesthetics, purchase convenience, and variety are among the factors in consumers' cost-benefit analysis. However, these factors are not easily quantifiable without significant research, though they are equally important contributors to a consumer's decision-making process. All are of extreme value to any person selling a product or service. Rationality alone cannot explain the rationale of human buying. There are definitely other factors that come into play such as:

1. Emotions
2. Personality type
3. Social influence
4. Disposable income of consumers



5. Access to the choice of products,

The effect of these factors varies depending on the products purchased. For instance, for many buyers, products such as CDs, cars, and sunglasses are associated with their social status; the consumer's rationale for buying these is not just the need for or prices of the products, but also the social status attached to them. Similarly, most people who buy flowers are driven by emotions to make the purchase and not because they need to buy. Other examples of emotional buying includes buying the breakfast food your mother used to make when you were a kid or buying shoes based on what one thinks is "fashionable" rather than based on comfort or sturdiness. Each consumer has his or her own priorities in buying.

Shopaholics

There is also, for some people, an inherent need to control and possess certain objects which could well replace or substitute other possessions. One example is of a woman undergoing divorce proceedings who suddenly develops an irresistible need to buy things continually in order to divert her attention away from the stress of her divorce. Another aspect of consumers' buying behavior is 'shopaholics,' whose behavior is unpredictable, random, and possibly even unhealthy. Their excessive buying or consumerism could indicate a kind of bipolar illness or addiction. They are also the ones to indulge in impulsive buying. Each of these examples provides a strong case to examine the rational as well as the emotional drive to consume. Consumerism has also been accelerated with the need of each class to live above their means in many societies. So, the upper middle class desires to achieve the standard of living of the elite class. The lower middle class has desires to live a lifestyle similar to the upper middle class and so forth. This want to project a higher status leads to consumerism and is an important decision-making factor when it comes to choices. Often this could drive a person towards materialism and is similar to the example of the woman undergoing divorce proceedings: the search for material goods to create happiness, real and perceived, is a diversion from an underlying psychological stress and unhappiness with the self.

When we add a psychological component to understanding economics, we enter a new realm of understanding purchasing decisions. The emotional component to consumerism opens the door to investigating subconscious motives of human behavior. As noted earlier, even though economics has been strongly founded on rationalism, we often bump into rationality's limits, and see a bigger picture which includes, but does not exclusively rely on, reason or common sense as a motive. Understanding consumers' rational, emotive and subconscious processes relating to economic activity from a universal perspective, as is apparent from the survey so far, is one of the focuses of this paper.

Consumerism - More Than Just an Act

The act of fostering the desire to purchase goods and creating economic policies that emphasize consumption, are both potential definitions for consumerism. For many people, consumerism is more than a simple act; instead, it is an identity-defining extension

of the self according to Adkins and Ozanne^{xxx}. "The findings [of our study] support a vision of buying behavior as a social practice of identity maintenance and management. Even in routine behaviors, such as ordering at a restaurant, buying is guided by a desire to preserve self-esteem and dignity," claim the authors. "Our findings suggest that consumer education must expand beyond disseminating information to include developing consumers' confidence and abilities to engage socially when their needs are being denied, thwarted, or opposed."

Taming the Urge to Buy

Some individuals are critical of over-consumption and its effect on the environment. Enoughism, considered the opposite of consumerism, is the theory that there is a point where consumers possess everything they need and buying more actually makes their lives worse off. Enoughism emphasizes less spending and more restraint in buying behavior of consumers, according to John Naish^{xxxix}. Thus there is a global "shopping on a diet" movement among working women "taming the urge to buy" and managing a whole month with just six items of clothing from the wardrobe.^{xxxix} There are also many others thinking along the same lines as Tammy Strobel and Logan Smith, winnowing their material possessions to just one hundred items as advised by a website.^{xxxix} When and if this movement acquires critical mass, and becomes trendy, such 'enoughism,' could have far-reaching consequence to business. More significantly, as something of a game-changer that goes against consumerism, would that be deemed rational by consumers and not so rational by businesses? Would it prolong or perpetuate the current recession in the USA or slow down the growth rate in India? This confusion in the current consumer trends which is one step forward and one step backward is brought home in a recent report^{xxxix}: "The current circumstances might be better described as the new abnormal, in which no one knows anything." What happens to new innovations such as the iPhone and the iPad and the call by Andy Grove^{xxxv} that such items should be made in America under protection from foreign competition?

The Power of Utility and Experiential Purchases

It is also important to address the economic concept of utility, or satisfaction. Some consumers strategically lower their expectations of a product or experience in order to try to increase their satisfaction with it, propose Kopalle, Lehmann, and Farley^{xxxvi} (in press). The researchers learned that people who believe in karma tend to have a more long-term orientation, which decreases the importance of momentary happiness. "Individuals with a long-term orientation are less inclined to lower expectations in the hope of temporarily feeling better," write the authors. "With a long-term orientation, even those individuals who are most unhappy when a product fails to live up to their expectations of it have a limited incentive to artificially lower their expectations and hence have higher (and more accurate/realistic) expectations."



The authors compared results in China with those in India and found that a significantly higher percentage of people in India believed in karma (64 percent versus 10.5 percent). It is important for companies to understand these types of cultural differences if they wish to reach consumers in a globalized marketplace, suggest Kopalke, Lehmann, and Farley.

Gilovich and Carter^{xxxvii} found that satisfaction with experiential purchases, such as a massage or family vacation, is greater than that derived from buying material goods like large-screen televisions. Consumers' satisfaction with "experiential purchases" starts high and increases over time. In contrast, spending money on material things feels good at first, but actually makes people less happy in the end. Buying experiences provides greater satisfaction as time goes on, in part because of selective memory and because a consumer's experience is highly subjective, making it much harder to make negative comparisons. Consumers also find it easier to decide on experiences, spending money on the first option that meets a set of expectations rather than painstakingly comparing all options. The experience of a fun holiday is more deeply encoded in our memory when we share our memories of what we did on our trip in a story format. Sharing memories in story form generates fewer negative moods and feelings according to West, Huber, and Min^{xxxviii} and may guide future purchasing decisions.

A study by Nicolao, Irwin, and Goodman^{xxxix} adds a further condition to the view that experiential purchases bring greater long-term satisfaction. These authors studied the effects of experiential purchases that went poorly, and confirmed that experiences do lead to more happiness when the purchase goes well. However, for negative purchases, bad experiences lead to more lasting unhappiness than do bad material purchases. Experiences are remembered far longer than material purchases, whether good or bad. They simply have more lasting power over our happiness.

The Effect of Culture on Purchasing Decisions

Even though the American individualistic culture venerates choice, having a large selection to choose from is not universal. According to Markus and Schwartz^{xl} (in press), about 95 per cent of the world's population does not have the vast selection offered to consumers in the United States, and that unlimited freedom of choice may diminish rather than enhance subjective well-being. Unlimited choice can paralyze consumer decision-making and generate less satisfaction with the final purchasing decision. Interestingly, too much choice can generate a lack of empathy by directing people to focus on their own preferences at the expense of other people and society as a whole. The jam study mentioned earlier very much goes along this finding.

The influence of consumers' self perception has also been linked to a modern-day take on an old adage: you are what you buy. A family-orientated person might seek products that expand the amount of quality time they spend with their loved ones, such as a board game, or Frisbee, according to Zhu and Meyers-Levy^{xli} (2007). Such individuals are named "promotion-focused," whereas those who seek out timesaving purchases, such as a

dishwasher, are “prevention-focused” and buy to avoid negative events. In two studies, consumer cognitive impulses were studied by looking at how promotion and prevention-focused individuals respond to advertisements. The researchers found that individuals who adopt a positive, promotion focus think more about the relationships among products. In contrast, prevention-focused consumers respond better to unambiguous advertising, pay more attention to specific pieces of data, and are more sensitive to detail.

Whether a business or nonprofit is selling a product also affects how a consumer perceives the supplier or retailer of that product or service. Three experiments conducted by Aaker, Vohs, and Mogilner^{xliii} (in press), indicates that consumers’ stereotypes or blanket assumptions about the business or nonprofit organization can predict whether they’ll buy a product from them. The authors observed that people perceive companies as being competent, but also lacking warmth, which causes people to rate the company less highly. In contrast, non-profit organizations are perceived as being warm, but not competent. When it comes to influencing purchasing decisions, focus group research by the Barnett, Cloke, Clarke, and Malpass^{xliiii} suggests that getting people to change what they buy is more successful when the consumer’s specific identities are appealed to - such as a member of a local community, mother, or parent - instead of targeting them as faceless shoppers.

Personality as a shaper of consumer decisions

For a long time, economists have used Game Theory, to mathematically capture behavior in strategic situations - such as auctions, bargaining, voting, and fair division of resources - where an individual’s success in making choices depends on the choices of others. Rationality is typically used to determine solutions in economic situations and the benefits are increased utility or satisfaction for the game players. However, as behavioral economics begins to understand the impact of emotions on purchasing decisions, it begs the question: what place do our rational, mental faculties have when deciding to buy goods or services?

When we use a mental shortcut to decide which product we want, we don't always end up with our ideal choice. When our minds are filled with other tasks, product choices become less likely to reflect our authentic goals and values, according to research by Drolet, Luce, and Simonson^{xliiv} (2009). Their work identified two factors that can lead consumers to use shortcuts (heuristics) when they make product choices. One is people's level of desire to think analytically about choices (NFC, or need for cognition) and the other is the cognitive load (whether the person is attending to other mental tasks at the same time). In the course of the study, the researchers asked participants to choose among different options of portable grills, stereo speakers, and tires. Participants who had previously scored high in need for cognition tended to focus more on their own goals and preferences, while those low in NFC were more likely to make compromise choices. But the effect reversed when high NFC people were asked to memorize 20 words for later recall. By remaining aware of their goals and their tendencies to juggle multiple tasks, consumers might end up making choices that more closely reflect their true preferences. According to Paul Albanese^{xliv}



shopping behavior can be classified into four levels of personality development: Normal, neurotic, primitive and psychotic. Normal consumers spend less than they earn and save for future purchases they cannot afford in the future, while neurotic shoppers spend an excessive amount of time shopping, often not buying anything,” says Albanese. In addition, he found that compulsive shoppers usually fall within the primitive personality type, while psychotic personalities go overboard in spending, usually resulting in serious financial and legal problems.

The Influence of Emotions on Consumer Decisions.

A proud consumer won't necessarily make the same purchase as a contented consumer, claim Griskevicius, Shiota, and Nowlis^{xlvi} (in press). “Previous research shows that positive feelings produce a 'rose-colored glasses effect,' leading products to appear more desirable. But we find that rose-colored glasses come in different shades," say the authors who studied how product preferences changed depending on whether a person was feeling pride, contentment, or a neutral emotional state. Some participants read a short story in which they imagined doing well on an exam, which is known to elicit pride. The researchers found that different positive emotions had drastically different effects, including making some products somewhat less appealing. Since participants in the authors' studies were not aware that emotions were affecting their preferences, the effects were largely unconscious. The findings suggest that shoppers are likely to want to buy different products depending on the specific emotions or intuitions that they are feeling.

Darke, Chattopadhyay, and Ashworth^{xlvii} claim that listening to your heart when shopping can make you happier in the long run. Their studies involved both real-life situations, where data was collected from people making actual purchases, and more controlled experiments in which emotions unrelated to the product were created artificially. In the experiments, subjects were asked to rate portable CD players, some loaded with positive music and others containing negative songs. The feelings generated by the music tend to be misattributed to the product, which led consumers to choose the player associated with the most positive feelings, in spite of information that suggested the other player was superior. The results of their series of studies suggest that people make "affective" purchases even when there is clear information suggesting an alternative product is better.

Neuro and Gene Economics

Brain scanning technology such as functional magnetic resonance imaging (fMRI) to investigate how people make decisions has added a new dimension to neuroeconomics. In the words of Vernon Smith^{xlviii} “New brain-imaging technologies have motivated neuroeconomic studies of the internal order of the mind and its links with the spectrum of human decision from choice among fixed gambles to choice mediated by market and other

institutional rules. We are only at the beginning of this enterprise, but its promise suggests a fundamental change in how we think, observe, and model decisions in all its contexts.”

According to Pirouz, neuro-economics examines decisions at a neuronal and biochemical level. Researchers seek to understand what makes consumers engage in happy, risk-taking, risk-averse, and trusting behaviors, and what drives preferences and choice. Brain imaging can tell us about:

- Game Theory
- Calculating Decisions
- Cooperation
- Fairness
- Reward and Loss
- Preferences

By having volunteers play simple games involving risk and reward while in a brain scanner, researchers have been able to see which areas of the brain are activated as people make economic decisions. Until now, economists have lacked a body of theory to connect what happens in the brain to wider economic theory. Another new area - endocrinological economics - has begun studying how hormones such as testosterone and estradiol affect economic behavior. Initial research (Zak, Stanton, & Ahmadi^{xlix} and Kosfeld, Heinrichs Zak, Fischbacher, & Fehr^l have determined that hormonal agents, such as oxytocin, increase levels of trust by modulating neural networks to enhance trusting behavior. New research shows that the level of dopamine in the brain can make some people impulsive buyers. There are thermostats for impulsiveness too in the midbrain and in highly impulsive persons such a thermostat is broken, letting excessive dopamine generation and accumulation.^{li}

Existing research with fMRI technology by Hedgcock and Rao^{lii} has indicated that when making a choice between only two, equally preferred options; subjects tended to display irritation because of the difficulty of the choice process.

Third Option Reduces Negative Emotion

The presence of the third option made the choice process easier and relatively more pleasurable. Rao explained clearly explained why: "When considering three options, our "buyers" displayed a decrease in activation of the amygdale, an area of the brain associated with negative emotions. Seemingly, subjects were using simple heuristics - short-cuts or decision rules - rather than a more complex evaluation process, when they were evaluating three-item choice sets." Irrelevant alternatives are routinely encountered in a variety of settings including web-based travel and vacation markets, cable deals, cell phone plans and even newspaper circulars. In these markets, the addition of irrelevant options is a strategy that ought to reduce negative emotion. "Retailers interested in helping ease the pain of consumer decision making may introduce decoys, loss leaders, or other products similar to



the ones they really want to market. It will make the focal product look more attractive," said Rao.

Economics and neuroscience join hands to study how the brain generates decisions involving dollars as well as in unselfish frames at the micro foundation level. Fehr et al^{liii} state "Perhaps, however, there are neural and affective mechanisms which allow preferences to influence beliefs and vice versa." Even though neuroeconomics is a fledgling field, other researchers have asked whether purchasing decisions differ because of genes. Kruger and Byker^{liv} claim that shopping styles, and therefore purchasing decisions, are all in our genes. From an evolutionary perspective, it all goes back to the skills that women used for gathering plant foods and the skills that men used for hunting meat. The contrast emerges because of the different foraging strategies for hunting and gathering used throughout human evolution. This study examined shopping through the framework of evolutionary psychology to understand why so many more women enjoy spending a day picking through racks of clothes with friends, while most men want to leave the mall as soon as possible. In modern terms, women are much more likely than men to know when a specific type of item will go on sale. Women also spend much more time choosing the perfect fabric, color and texture. Men, on the other hand, often have a specific item in mind and want to go in, buy it, and leave.

Conclusion

Our review of the interface area of economics and psychology indicates that the dust has not settled on the controversy about what is rational and that there can be no person or groups of persons that can always be rational thanks to a myriad of factors that impinge on any economic decision-making and activity. Rationality and selfishness cannot be assumed away as has been done since Adam Smith's inception of economics in 1776. It cannot be denied however, that it was such assumptions that enabled the progress of the discipline. The assumptions also hobbled its growth, and there came bounded rationality and later 'rational fools' to the rescue. The fine-tuning of economics with such terminology has also been inadequate because as we evidenced, there are more irrational than rational fools. There is no estimate yet as to what extent biochemistry, endocrines, genes and neuroscience contribute to economic decision-making. Also to confound the complexity, there could be regional and cultural diversity in all the factors mentioned above.

Behavioral economics is a fledgling field that is combining traditional laboratory scenario-style emotive research with cutting-edge fMRI technology. Concepts originated nearly two centuries ago by economists are being revisited and expanded upon as knowledge about the science of human behavior is used to provide greater insights into the functioning of the human brain. In economic decision-making there is no addiction to rationality like Gary Becker seemed to suggest. This is the first distinct change. Second, even within bounded rationality of Herbert Simon there could be regional variations in view of the heterogeneity of such rationality. A third vital change is that more research is needed as well, using experimental designs closely replicating real life decisions and environments in order to

expand this exciting new fusion of psychology and economics. The temptation to generalize and globalize a locally valid fact needs to be avoided. Having economics and psychology share a common set of beliefs is no longer adequate. There must be continuous interaction between the two disciplines and more cross-border research. Current economics texts are somewhat inattentive to new findings in neuro- and gene-economics and their effect on macro and micro economics. The most charitable thing that can be said is such texts are perhaps “satisficing” as Herbert Simon would say. An analytical review of textbooks might well show that such new findings in neuroeconomics research have yet to permeate into the economics texts. So it is time to rewrite the texts.

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