

Behavioral Economics for Smart People?

Behavioral Economics, the Rationality Assumption, and Public Policy

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● **Basic Thoughts**

- This paper extends from some of my previous research on Behavioral Economics, Rationality in Decision Making and 'Rational Inefficiency' in production and consumption.
- One issue not discussed in this paper is one of methodological credos of the new behavioral economics that it is largely involved in mathematically integrating psychological insights into contemporary economic theory.
- It also searches for unique and stable equalibria which are quasi-optimal (optimal given constraints)
- To be relevant then implies to be amenable to mathematization and to be modeling in terms of stable and unique equalibria.
- This approach can and need be critiqued (Ariel Rubenstein for example; more generally methodologically we have Critical Realisim (Tony Lawson); but prior to this Joan Robinson; the Austrians (Hayek).



- **Basic Thoughts**

- A methodological divide is emerging in the realm of behavioral economics with significant public policy consequences.
- Following in the tradition of Kahneman and Tversky, the case is being made that individual decision making is fundamentally and persistently biased and error prone and therefore lacking in intelligence and rationality for reasons of psychological wiring.

- **Basic Thoughts: some critical conclusions**
- I argue that this approach is fundamentally flawed.
- This approach to behavioral economics/economic psychology uses neoclassical theory as a reference point for defining rational behavioral which, in turn, is identified with intelligent behavior.
- This approach also convolutes errors in decision making, given the objective function of the individual and the individual's environment, with irrationality or lack of intelligence.
- My alternative approach is build upon the work of Berlin, Hayek, March and Simon, Von Mises and, more recently, Gigerenzer and Vernon Smith.

- **Basic Thoughts: some critical conclusions**
- As do the new behavioralists, our arguments applies to the realm of adults.
 - One can refer to the sociobiology literature here (Pinker, Wilson)—age correlates with physiological learning capacity.
- An alternative approach to the economic agent views rationality cum intelligence from the perspective of the economic agent and her or his environment.
- Rationality is distinguished from errors.
- Rationality is consistent with both efficiency and inefficiency in production and consumption.
- Rationality is also consistent with both good and evil in human action.



- **Basic Thoughts**

- One component of traditional irrationality relates to individuals behaving in a fashion which demonstrates logical inconsistency.
- Kahneman writes: (1997, p. 107): “...irrationality exists when individuals violate the principle variously referred to as extensionality, consequentialism, or invariance: when the same choice problems yields different preferences as a result of “inconsequential variations in the formulation of options or in the procedure used to elicit choices.”--some times referred to as the framing effect.



- **Basic Thoughts**

- Another component of irrationality more recently emphasized by Kahneman (1997, p. 107) relates to a substantive criteria for rationality which is external to individual preferences.

- **Basic Thoughts**
- **Here one asks, do individual choices serve to “maximize the (expected) utility of their consequences, as these consequences are actually experienced.”?**
 - **Kahneman (1997, p. 107) concludes:**
“Demonstrated deficiencies in the ability to predict future experiences and to learn from the past emerge as new challenges to the assumption of rationality...the observed deficiencies suggest the outline of a case in favor of some paternalistic interventions, when it is plausible that the state knows for about an individual’s future tastes than the individual knows presently.”



- **Basic Thoughts**

- The typical individual is therefore incapable of making key utility maximizing decisions on their own behalf thus requiring decisions to be made for them by some benevolent more intelligent individual or group of individuals (benevolent paternalism).

- This, I refer to as the ***Humans are Dumb and Unredeemable Lost Souls School of Behavioral Economics.***



- **Basic Thoughts**

- This worldview maintains that individuals are incapable of behaving intelligently in key dimensions of socioeconomic behavior given the constraints which they face.
-from the choice decisions in the product markets, to household decisions such as family planning and savings behavior, to whether to engage selfish or ethical behavior, to whether to engage acts of loving kindness or murder.



- **Basic Thoughts**

- From an analytical and public policy perspective it is critical to distinguish between the inability to make intelligent decisions from bad decisions made as a consequence of correctable errors, poor information, or coercion, etc.
- In this case, the individual fails to make her or his preferred choice and can be aided in the decision making process by institutional interventions.
- Some might refer to this as a very soft variation of soft paternalism (Loewenstein).
- Here it is not assumed that the individual is fundamentally irrational.

- **Basic Thoughts**
- **An Issiah Berlin Interlude**
- Berlin (1969, pp. 132-133) speaks to the notion of what Kahneman refers to as substantive rationality in terms of positive freedom where it is assumed there exists a superior self which is identified with reason, long run calculus of self interest, and the realization of what is objectively in the individual's best interest which can be contrasted with the inferior self of the "irrational impulse, uncontrolled desires, my 'lower' nature, the pursuit of immediate pleasures, my 'empirical' or 'heteronomous' self, swept by every gust of desire and passion, needing to be rigidly disciplined if it is ever to rise to the full height of its real nature.."

- **Basic Thoughts**
- **An Issiah Berlin Interlude**
- In this instance it is argued by those who recommend benevolent paternalism, that there exists an outside agent who knows, “what they [the people] truly need better than they know it themselves... Once I take this view, I am in a position to ignore the actual wishes of men and societies, to bully, oppress, torture them in the name, and on behalf, of the their ‘real’ selves, in the secure knowledge that whatever is the true goal of man.... must be identical with his freedom—free choice of his ‘true’, albeit often submerged and articulate, self.”



- **Basic Thoughts**

- These notions of irrationality as a fundamental characteristic of choice behavior runs contrary to the basic methodological tenants of neoclassical economics.
- The Kahneman-Tversky approach also runs contrary to the pioneering research in behavioral economics exemplified in the work of Simon and March.
- Simon and March argue that individual behavior is typically intelligent and rational even if it is inconsistent with the normative rules of neoclassical rationality.



- **Basic Thoughts**

- I argue, building upon in this tradition and extending the methodological work of Von Mises (consistent with Hayek, Gigerenzer, and Vernon Smith), that it is important to distinguish between rational, intelligent, purposeful behavior and errors in decision making.
- It is also important that the norms for correct behavior be based upon the imperfect cognitive wiring of decision makers and information imperfections (bounded rationality) as opposed the neoclassical norms.
- It is important to specify the institutional (inclusive of culture) in which individuals will behave 'rationally' broadly defined.



● **Basic Thoughts**

- We cannot expect intelligent decision makers to behave as neoclassical agents if such behavior is not possible given the reality of the psychological, physiological, and institutional constraints within which decision making takes place.
- Indeed, neoclassical agents would be irrational yielding sub-optimal results.
 - This point is raised in terms of procedural rationality in Simon and also in Gigerenzer.


● **Basic Thoughts**

- In this case, experimental evidence that purports to support the case for human irrationality is found wanting as is the case for benevolent paternalism (narrowly defined).
 - Rather individuals should be modeled as imperfect purposeful utility maximizers.
 - Individual and social welfare can be enhanced through learning and through corrections for market failures.
 - Institutions matter for the capability of individuals to maximize utility.
 - Individuals aren't dumb, but economic theory can be flawed and need be modified to reflect the realities of human decision making.



- **Behavioral Economics: PART I**

- Assumptions matter to the construction of economic theory from both a causative and predictive perspective.
- Neoclassical theory is often found erring from both a causative and predictive perspective.
- An empirical basis for behavioral assumptions need be developed.
- This is also true for the underlying institutional assumptions of economic models.

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- Behavioral Economics: PART I
 - Hebert Simon:
 - ***Bounded Rationality***—individual decision making is bounded by both psychological-neurological information constraints.
 - ***Satisficing***—individual decision makers do the best they can given the constraints which they face.
 - ***Behavioral deviations from neoclassical norms, therefore, should not be deemed as an indicator of irrationality or lack of intelligence.***

- **Behavioral Economics; PART I**
- March provides an example of the perspective of the humans aren't dumb school of behavioral economics (1978, p. 589):
- “Engineers of artificial intelligence have modified their perceptions of efficient problem solving procedures by studying the actual behavior of human problem solvers. Engineers of organizational decision making have modified their models of rationality on the basis of studies of actual organizational behavior...Modern students of human choice behavior frequently assume, at least implicitly, that actual human choice behavior in some way or other is likely to make sense. It can be understood as being the behavior of an intelligent being or group of intelligent beings...”

- **Behavioral Economics; PART I**
- **FOLLOWING FROM MARCH: Theory thus must be modified to incorporate behaviors which deviate from mainstream norms where that such behavior is found to be intelligent which, in the first instance, one should assume it is.**
- A critical point of departure for Simon and March is how individuals actually behave in the decision making process to achieve particular ends (procedural rationality).
- From such behaviors, in which one should attempt to locate intelligence, one builds theories of rational behavior of decision making which have both analytical-substantive and normative dimensions. And, there need not be any unique set of intelligent behaviors to realize any particular end.

- **Behavioral Economics; PART II**
- Kahneman and Tversky and colleagues have run experiments which demonstrate an array of behavior which they deviate from what are, in effect, quite strict and narrow neoclassical norms.
- Deviations include deviations from norms established by subjective expected utility theory, Bayesian updating, and knowledge of future consequences of current choice behavior. Related to this, individuals make choices that at times are inconsistent or lack coherence.

- **Behavioral Economics; PART II**
- Coherence is foundational to neoclassical normative behavior.
- Related to substantive rationality, Kahneman argues that conventional economics assumes that individual choice systematically serves to maximize experienced utility (net pleasure).
 - But experiments ‘demonstrate’ that individuals don’t maximize experienced utility.

- **Behavioral Economics; PART II**
- Kahneman and Tversky interpret these results to imply that neoclassical theory is a poor predictor human decision making.
- Thus a better foundational ‘theory’ for predicting human decision making is required.
- They offer Prospect Theory as an alternative to Subjective Expected Utility Theory, for example.

- **Behavioral Economics; PART II**
- **NOTE** that Vernon Smith's experiments (and that of his group) often generate contrary results to those of the Kahneman and Tversky group.
- Smith finds evidence for adaptive (expectations) bounded rationality as opposed rational expectations type behavior (learning is important).
- **Kahneman and Tversky break with traditional behavioral economics in using neoclassical norms as the criterion for judging what is intelligent or rational behavior.**
- **It is implicitly assumed that human decision makers can actually behave in all instances in a neoclassical manner.**

- **Errors Versus Irrationality in Human Decision Making**
- Von Mises (1949, pp. 16-17), argues that what distinguishes humans from non-human animals is that humans engage in purposeful choice, “arranging his wishes and desires into a scale, he chooses; in short he acts. What distinguishes man from beasts is precisely that he adjusts his behavior deliberately.”

- **Errors Versus Irrationality in Human Decision Making**
- Von Mises (1949, p. 19) argues that all human choice decisions (human action) are rational, “The ultimate end of action is always the satisfaction of some desires on the acting man. Since nobody is in a position to substitute his own value judgments for those of the acting individual, it is vain to pass judgment on other people’s aims and volitions. No man is qualified to declare what would make another man happier or less discontented. The critic either tells us what he believes he would aim at if he were in the place of his fellow; or, in dictatorial arrogance blithely disposing of his fellow’s will and aspirations, declares what conditions of this other man would better suit himself, the critic.”

- **Errors Versus Irrationality in Human Decision Making**
- On the basis of what the individual actor desires one cannot deem a particular decision as irrational simply because some external set of desires (goals or objectives) differs from those adhered to by the individual.
- Von Mises also argues (1949, p. 20): “It is a fact that human reason is not infallible and that man very often errs in selecting and applying means. An action unsuited to the end sought falls short of expectation. It is contrary to purpose, but it is rational, i.e., the outcome of a reasonable—although faulty—deliberation and attempt—although an ineffectual attempt—to attain a definite goal.”

- **Errors Versus Irrationality in Human Decision Making**
- Von Mises' modeling also allows one to construct a critique of one of the mainstays of the New Behavioral Economics, the Endowment Effect.
- He argues that Irrationality cannot be gleaned from inconsistency in choice where historical time is introduced into ones analysis.
- For Von Mises, if current preferences are not consistent with future preferences this does not signal irrationality. Nor, is it irrational if one's preferences are given by $A > B$; $B > C$; and $C > A$.
- This relates to the classic work on preference reversal pioneered by Jack Knetsch.

- **Errors Versus Irrationality in Human Decision Making**
- To ascribe irrationality and even inconsistency with such preferences, Von Mises maintains (1949, pp. 102-103): “...disregards the fact that two acts of an individual can never be synchronous.” Plans and values can change, yielding apparently inconsistent decisions.
- Von Mises continues: “A logical system must be consistent and free of contradictions because it implies the coexistence of all its parts and theorems. In acting, which is necessarily part of the temporal order, there cannot be any question of such consistency. Acting must be suited to purpose, and purposefulness requires adjustment to changing conditions.”

- **Errors Versus Irrationality in Human Decision Making**
- True inconsistency requires that one take into consideration the context and changing circumstances in which decision making takes place. Thus, it might be inconsistent for individuals to be characterized by what are traditionally consistent preferences, when context and circumstances change.

- **Errors Versus Irrationality in Human Decision Making**
- Thus inefficient, sub-optimal, or error prone behavior does not translate into irrationality as it does in Kahneman and Tversky.
- One can have rational decisions that are inefficient, sub-optimal, or error-prone.
- Contemporary economic theory assumes that individuals will not make errors—they will behave in a very particular fashion—and that their decisions yield efficiency and optimality in the economy.
- Errors and biases in decision making are not evidence of irrationality. Such errors are not intended and can be corrected.

- **Errors Versus Irrationality in Human Decision Making**
- With regards to substantive (utility maximizing) rationality, experienced utility may not be maximized for institutional reasons, related to educational or bargaining power variables, for example.
 - Do individuals have the capacity to develop and then exercise those preference which they prefer: those which maximize their net utility?
 - If this capacity is not in place then government intervention relates to providing such capacity, not in imposing preferences on 'irrational' individuals. Such intervention is not paternalism as per the conventional view and would be consistent with the world view of 'libertarians' such as Hayek and Berlin.

- **Errors Versus Irrationality in Human Decision Making**
- Substantively, Von Mises' views on rationality sit quite well with Simon's and March's perspective on rationality and intelligence in behavior.
- Von Mises, by defining sub-optimal behavior or outcome as a mistake as opposed to irrational, is able to present a clear distinction between intelligent purposeful behavior that is effective and purposeful behavior that is ineffective.


- **Errors Versus Irrationality in Human Decision Making**
- **What becomes of critical importance is the determination of the causes of inefficiencies and errors on the part of intelligent decision makers .**
 - ***(X-INEFFICIENCIES IN PRODUCTION AND CHOICE: Altman).***
 - **Speaks to the importance of institutional capabilities.**



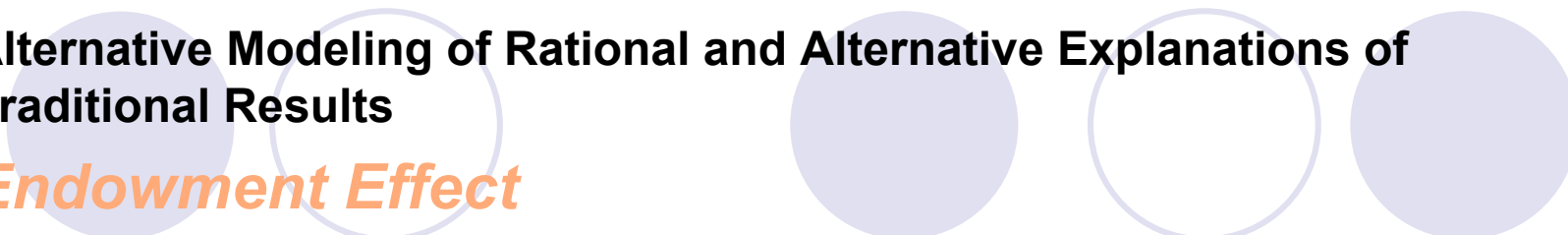
- **Errors Versus Irrationality in Human Decision Making**

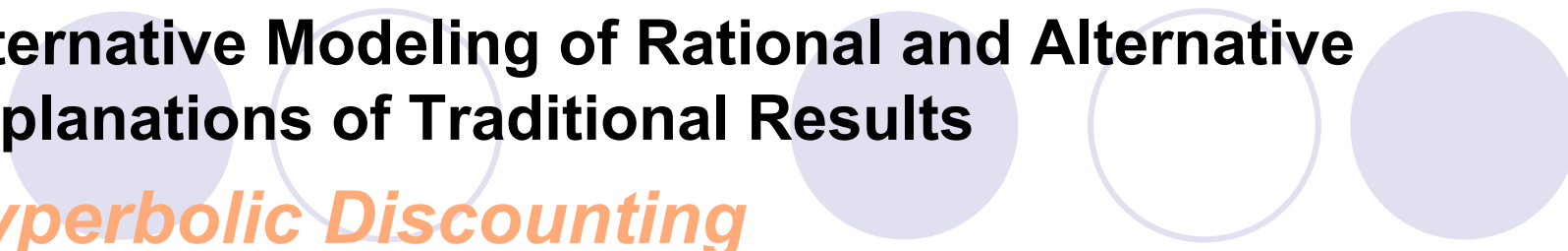
- **Moreover, given the cognitive wiring of the decision makers and information imperfections the standard for unbiased behavior **should not** be neoclassical norms.**


- ***FAST AND FRUGAL HEURISTICS:
Gigerenzer***


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- **Errors Versus Irrationality in Human Decision Making**
 - **The alternative approach suggests the importance of providing individuals with the tools (capabilities) so that they could make choice which would be optimal from their own perspective given that no externalities.**
 - **This is not related to trying to replicate the neoclassical world.**
 - **It rather speaks to providing individuals with capabilities given their bounded rationality.**

- **Errors Versus Irrationality in Human Decision Making**
- **Capabilities;**
 - **Information gathering and processing tools (speaks to lowering transaction costs).**
 - **Capacity to realize own true preferences (given no externalities).**
 - **Individuals will choose default option in many choice scenarios given bounded rationality.**
 - **Make the default option more consistent with individual preferences.**
 - **Facilitate individuals choosing different default options (a set of default options.**

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- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
 - ***Endowment Effect***
 - The endowment effect suggests that the indifference between two products changes into a preference for one once one purchases it. Initially $A = B$, but after one acquires A, $A > B$, and so indifference curves effectively cross.
 - This is evidence for inconsistency and irrationality in human decision making.
 - Alternative view: The endowment effect is not evidence of inconsistency but rather of preferences which are changed and affected by new information sets.

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- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
 - ***Hyperbolic Discounting***
 - **Discount rates change over time and are time inconsistent (heavy discount rate today and a much lower one towards some end year of a given period).**
 - **Evidence of irrationality in behavior over time.**

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- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
 - **Alternative view: The future self is different from the current self as information and needs change. Comparing preferences in the present and the future is not the same thing as comparing preferences of the individual in logical time.**
 - **This has implications for when and why government intervenes in the provision of public goods and the implications of this for choice and freedom.**
 - **Issues of intergenerational conflict (re heterogeneous preferences); social stability and cohesion—relates to economic efficiency**

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- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
 - *Ultimatum Games*
 - Individuals are willing to make material sacrifices for the sake of 'fairness.' (Proposer versus the responder)
 - Thus individual are not rational from a selfish material maximizing perspective.
 - Alternative view: Rationality should include non material maximizing behavior (Becker and Smith; elaborated and modeled in Altman).
 - Utility maximizing should not be confined to narrow selfish materially maximizing behavior, including weak and strong reciprocity.

- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
- **Ultimatum games results do not prove that agents are not interested in their own socio-economic wellbeing.**
- **Agents might be willing to engage in self-sacrificing behavior in the present so as to improve future socio-economic outcomes.**
 - **The latter can include and require ‘fairness’ in results from the perspective of the responder.**
 - **Equilibrium solutions are a function of context—large variation in results.**

- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
- *Overconsumption & Inappropriate Consumption*
- Individuals consume more than they should or objectively want or not what they want (Frank, George, Shor).
 - First (revealed) and second order preferences (preferred).
Individuals do not prefer what they want and do not want what they prefer.
- Alternative view: One should distinguish consumption behavior that is exogenously constrained and one which is derived from individual preferences.
 - Absent such constraints it is a moral question as to whether a preference is good or bad and under what conditions individuals should be free to choose.

- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**

- **Quasi-rationality and agency at the macro level.**

Akerlof: workers suffer from money illusion.

- **This is contrary to Keynes: Workers do not suffer from money illusion and will accept coordinated cuts to real wages in the expectation that this increases employment and employment**
- **Akerlof, et. al.: inflation yields the reduction in real wages required to generate higher levels of employment (workers suffer from money illusion are therefore quasi-rational).**
 - **Workers must be quasi-rational (irrational) for employment to increase.**

Evidence: inflation is positively correlated with increases in employment.

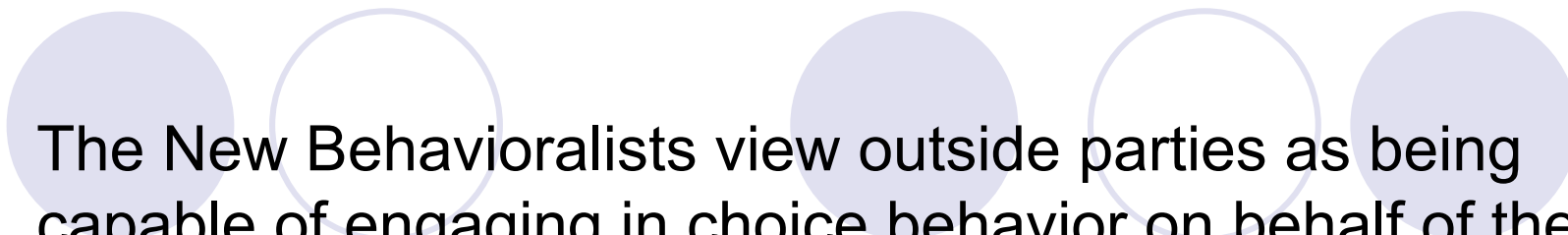
- **Alternative Modeling of Rational and Alternative Explanations of Traditional Results**
- **Quasi-rationality and agency at the macro level.**
- Alternative view: the positive correlation between inflation and employment is spurious with regards to movements in employment.
- **A x-efficiency behavioral model with rational individuals suggests that employment rises with increasing effective demand as long as increasing real wages is compensated for by increases in levels of x-efficiency.**
 - **In the behavioral model effort variability is introduced with some linearity in the relationship between effort and productivity.**
 - **In the neoclassical model effort variability does not exist.**


- A Question of Framing
- If two logically equivalent statements yield different responses, agents are said to be irrational in the New Behavioral Economics.
- Two options (population of 100):
- 1. Choose between taking or not a new medicine where 30 people will survive (no medicine means death).
- 2. Choose between taking or not a new medicine where the death rate is 70 individuals (no medicine means death).
- Most people choose (1)--risk adverse. Is this irrational?
- Or are individuals intuitively reading between the lines (Gigerenzer--framing as a signal)?
 - Negative frame suggests that there might be something wrong with an option.

Conclusion

- The New Behavioral Economics argues that individuals are fundamentally irrational in behavior.
- The New Behavioral Economics hypothesizes that individuals lack the capacity to make intelligent choices except for members of an intellectual elite.
- Their benchmark for rational behavior tends to be the neoclassical norm.
- This is contrary to the view presented by Simon and March.

- The latter challenge the narrow neoclassical definition of rationality and intelligence in behavior and the narrative that flows from this worldview suggests that:
 - Assumptions matter with regards to causal and normative analyses.
 - This speaks to the importance of behavioral processes and environmental and institutional constraints within which human action transpires.
 - Rationality does not imply optimality or even substantive utility maximization.
 - Economic theory must be reconstructed to be more 'realistic' or informed descriptively and analytically.
 - Individual choice is individual welfare superior to choices made by outside parties.
 - Individual choice can be improved (welfare enhancing) by providing individuals with the capabilities and information necessary to engage in choice predicated upon true preferences.

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- The New Behavioralists view outside parties as being capable of engaging in choice behavior on behalf of the individual which is superior to what an individual is capable of.
 - Positive Freedoms are more important than negative freedoms.
 - The New Behavioralist and the alternative perspective on behavioral economics, both of which differ from the narrow traditional neoclassical worldview, present significantly different implications for public policy and economic theory.

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- Overall, behavioral economists, economic psychologists, as well experimental economists (such as identified with Vernon Smith) have provided much evidence that human behavior typically deviates from neoclassical norms.
 - These are important stylized facts requiring analysis and modeling (which need not be mathematical; can be graphical or of the narrative type), especially given their importance for understanding individual behavior and society and their implications for public policy.
 - The evidence suggests that individuals tend behave rationally albeit this behavior deviates from neoclassical norms.
 - Moreover, such behavior need not be efficient contrary to the perspective of ecological efficiency.