"That’s what I call a very strange person... He constantly has nightmares!"
Attitudes Toward Risk

How we respond to risk depends on our physiological endowment and psychological attitudes.
What’s Rationality Got to Do With It?

FINANCIAL
DERIVATIVES

Robert W. Kolb

STEVEN
PINKER

the blank slate
The Modern Denial of Human Nature
Our Neurological Endowment

Figure 2.1: The human brain is of hybrid construction and best understood through the lens of evolution. The ancient reptilian core of the brain contains the basic machinery that sustains life, while the early layers of cortex, the paleomammalian cortex that is wrapped around this primitive core, are associated with the evolution of social behavior. In the human brain the most striking feature is the growth of the new cortex, comprising approximately 80 percent of brain volume.
Neurological Wiring Shapes Our Decisions
Figure 4.1: The perception-action cycle: Perceiving and sorting information that is incoming from the senses is the fundamental activity of the brain. Following assessment, based on the demands and opportunities of the immediate situation, and tempered by the memory of past experience, action is then taken. Initially these processes are driven by inherited, instinctual (phyletic) templates. These templates are rapidly enhanced by interactive experience during the years of brain maturation and the development of imagination. Ultimately it is the perception-action cycle that enables conceptual and abstract thought, the capacity that exemplifies human behavior. (Illustration based on the work of Joaquin Fuster and presented here with permission)
Decisions Can Be Rational With Limited Government

Figure 3.1: Adam Smith’s concept of a free market economy is best understood as a dynamic open system that self-regulates. In this ideal conception, the engines of market activity—self-interest, curiosity, and social ambition—are tempered by the desire to be loved and socially accepted. These latter sentiments, in Smith’s model, are the brakes that curb greed and excess.
Figure S.1: Risk, debt, and the perception-action cycle: Easy credit, tolerance of debt, and a focus on short-term financial gain distort the natural balance of risk and reward that is integral to the brain’s perception-action cycle. In the language of dynamic systems, it fosters a positive feedback loop that is unsustainable, leading ultimately to implosion and systemic collapse. The 2008 fiscal crisis is an example of such implosion.
However, We May Be More “Primitive” and Irrational Than We Wish to Acknowledge
Can Markets Aggregate Consistent Preferences that Lead to Rational Outcomes?
States and Markets May Display Irrational Behavior in the Presence of Informational Asymmetries
Common Axioms May Fail to Produce Democratic Majority Outcomes

Arrow’s Impossibility Theorem Derives From Common Axioms

1. Universal, or unrestricted, domain ordering of preferences
2. Independence of irrelevant alternatives
3. Pareto ranking of alternatives fulfills transitivity requirement
4. A non-dictatorship of governance
Common Biases in Decision-Making

1. Anchoring  - small sample bias
2. Availability Heuristic  - Magnitude and Time memory Effect
3. Availability Cascade  - Repetition of beliefs creates alternative reality
4. Ambiguity effect  - Avoiding options where missing information prevails
5. Bandwagon Effect  - Interdependence of preferences
6. Berkson paradox  - misinterpret statistical experiments containing conditional probabilities
7. Confirmation bias  - selective reading of evidence to support pre-conceived beliefs
8. Conservatism bias  - insufficient revision of beliefs when presented with new evidence
9. Continued influence effect  - Failure to correct previously held misinformation
10. Courtesy bias  - avoiding offending someone even if different from own opinion
11. Curse of knowledge  - better-informed people find it difficult to think about problems from perspective of lesser-informed people
12. Declinism  - Past glory, bleak future
13. Denomination effect  - spend more money in small denominations rather than large amounts
14. Disposition effect  - Sell an asset that has accumulated in value and resist selling an asset that has declined in value
15. Dunning-Kruger effect  - unskilled individuals overestimate their own ability and experts to underestimate their own ability
16. Endowment Effect  - Demand much more to give up an object than they would be willing to pay to acquire it
17. Framing bias  - drawing different conclusions from the same information depending on how the information is presented
18. Gambler’s fallacy  - thinking that future probabilities are altered by past events
19. Hindsight bias
20. Hot-hand fallacy  - exaggerated belief in one’s success with a random event
21. Hyperbolic discounting  - Tendency for stronger preference for more immediate payoffs relative to later payoffs. Dynamic inconsistency
22. IKEA effect  - Disproportionate value on things personally assembled regardless of the end result quality
23. Illusion of control  - Overestimate one’s degree of influence regardless of the probabilities
24. Information bias  - seeking information even when it cannot affect action
25. Risk compensation (moral hazard)
Under any System We may Stumble into Non-democratic Outcomes. Irrational Choices in Both Markets and In States May Drive This Process.
Does the Presence of Irrational Decision-Making Lead to the Breakdown of Democratic Institutions?
Elitism and Equality Still Populate Political Discourse
And they are with us still
One Result is Political Divisions That Democratic Institutions May Not Be Capable of Resolving