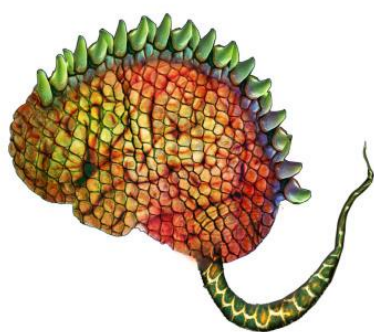


## Predisposed *Tabula Rasa*

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Studies of human behavior and psychology have received extensive attention in public policy. Economists, social theorists and philosophers have long analyzed the incentives of human actions, decision making, rationality, motivation, and other cognitive processes. More recently, the study of happiness furthered the debate in public policy, as many governments brought up the necessity for new measures of social progress. The discussion was bolstered when the UN passed a critical resolution in July 2011 inviting member countries to measure the happiness of their people as a tool to help guide public policies. It was also hoped that discussions about happiness would serve to refine the wider debate about the UN Sustainable Development Goals for 2015-2030 and the standards for measuring and understanding well-being. The World Happiness Report, a recent initiative, attempts to analyze and rate happiness as an indicator to track social progress.

These recent initiatives serve as reminders that sound public policies must evolve in strong connection with an understanding of human psychology, emotions and the sources of happiness and satisfaction. Nevertheless, there are further invaluable insights from neuroscience that have

remained less explored. Contemporary neuroscientific research and an understanding of the predispositions of our neurochemistry challenge classical thought on human nature and inform us of fundamental elements that must accompany good governance.

### Nature and Nurture

Are we intrinsically good or bad? Are we born with innate morality or with a blank slate? The question of the original endowments of human beings has intrigued philosophers since at least Plato's day. The notion of *anamnesis*, or recollection, is foregrounded in several of the *Dialogues*, and serves as a kind of digression in a number of others. The notion of innate ideas was subsequently popularized in Western philosophy and reemerged with thinkers as influential as Descartes.

At the other side of the spectrum, John Locke came to be known as the most ardent critic of these concepts, believing that there was no evidence for innate ideas whatsoever. Instead, he advocated a *tabula rasa*, or blank slate, image of the mind. The Lockean challenge to innate ideas represented a healthy exercise of philosophical parsimony and an important step forward but, at the same time, it led to another dichotomy between innate and acquired aspects of human nature more generally.

This debate, however, missed some crucial insights. While Locke was right to eschew particular innate ideas, his lack of familiarity with evolutionary theory and neurosciences prevented him from grasping aspects of human nature that are inherited and universal and grounded in our shared neurochemistry.

Famously, Locke discredited innate ideas by arguing that logical and mathematical truths, which make the best candidates for innate ideas, are by no means universally accepted. If such ideas were innate, there should be no obstacle to all human beings recognizing their truth immediately. Though he mostly confines his discussion to "children and idiots," similar themes have been expressed by those who advocate concepts and paradigms of cultural relativity.

Moral notions, in particular—which in contemporary times have been demonstrated to vary significantly from one culture to another—stand as evidence against the innateness of ideas. More generally, Locke intended to prove that there was no principled way to distinguish between innate ideas and those acquired through the process of reasoning (induction or deduction). Since the means to make such a distinction were missing, the defender of innate ideas will have to demonstrate that certain ideas could not have been acquired by reason.

Modern neurological studies have bolstered Locke's position, proving the plasticity of the brain and hence its susceptibility to influence. What Locke could not appreciate, however, was that the same neurochemistry that allows significant flexibility and makes human beings malleable to their environment also predisposes them in certain basic ways. Our neurochemistry is our lowest common denominator, and this brings a nuanced counterargument to Locke with an appeal to the universality of emotions: because emotions are neurochemically mediated, they are present across cultures as part of our genetic inheritance. This surely does not suggest that *specific* ideas are universal, too; in that regard, Locke's thesis remains largely intact.

Contemporary neuroscience does, however, point to an element of human nature that is naturally inherited, overturning the theory of a pure *tabula rasa* or any theory that resorts to explanations of nurture entirely to explain human nature. Moreover, more recent evidence of “genetic memory” also demonstrates the presence of readily inherited intuitions that we possess upon birth. The theory of our inborn “numerosity” explored by neuropsychologist Brian Butterworth further proves how numerical attributes are encoded in the human genome from our ancestors. Therefore, while distinct notions of right or wrong are largely absent from our genetic endowment, mounting evidence in neurosciences shows that some minimal inborn attributes do exist, and the most common and fundamental manifestation of these is the goal of survival.

### **Predispositions and Dispositions**

Our basic suite of emotions is oriented towards our survival and typically functions at a subconscious level, preempting our idiosyncratic cultural conditioning. At the very minimum, human beings are equipped with a set of basic instincts coded by our genetics, which inevitably and repeatedly guide us toward actions that will ensure our survival (or that we calculate as most beneficial for survival at a specific time).

Emotions have increasingly been studied as important in our decision-making processes and in our construction of principles. Importantly, these emotions are not entirely deterministic with regard to behavior. Rather, the complexity of human behavior results from the interplay between general inherited instincts and factors contingent on our individual existences in certain sociocultural settings. This is a central insight in my theory of a predisposed *tabula rasa*: our nature is highly malleable and readily “written upon” by experience, but it is also and most powerfully predisposed toward self-preservation. Emotions are at the core of this predisposition. This means that there is a certain fundamental emotional commonality in the predisposition with which we begin our lives.

At the same time, the malleability of our nature ensures that our dispositions will also be profoundly influenced by familial, social, and cultural exposure. This understanding has immediate political implications: given that human beings significantly become what they are as a consequence of their environment and their social contexts, creating conditions of good governance, support and fairness is critical. As I have written before, human beings are not born intrinsically good or bad but rather amoral: their moral compasses will vary and shift (to a large extent) in response to external conditions. In the same vein, the emotions that form part of our inheritance can be appealed for both good and ill throughout the course of our lives. The demagogue who would rally people toward violence or radical social destabilization is counting precisely on such emotional instincts to override rational thinking. Being cognizant of such vulnerabilities should make us both more vigilant against those who would use our emotional responses and more sympathetic to those acting predominately and unknowingly out of fear.

### **Emotionality, Rationality, and Morality**

The longstanding dichotomy between innate ideas and a blank slate parallels a related dichotomy between emotions and rationality. From what has already been hinted above, this dichotomy often leads to a distortion and oversimplification of emotions and their role. But, as we acquire a more nuanced appreciation of an inherited set of emotions as neurochemically mediated and material and instinct-oriented, it becomes clear that the strict division between emotions and rationality is equally misleading. This is in part because even “basic” emotions—long maligned as obstacles to clear rational thought—have more recently been demonstrated to be significantly inferential. Emotions need to be recognized as significant guides to our behavior, and this is also valid for those minimal emotions associated with survival.

The role conventionally given to rationality, on the other hand, has frequently been overestimated both in terms of its ubiquity and power. A strong tradition to glorify rationality has almost vilified anything pertaining to emotions as something precarious and menacing. Nevertheless, once emotions and their neurochemical underpinning are reevaluated properly a new picture emerges. Emotions have been our constant companions and, as evidenced by scientific research, rational reasoning is in fact less common than usually assumed. Many of our cognitive biases remain controversial, and modern psychology still has limited means to unlock all the unknowns of our brain. However, it is clear that emotions are critical, and the priority of emotions to reason in typical decision-making is increasingly considered a commonplace of psychology.

The theory of predisposed *tabula rasa* accommodates these results while providing grounds to understand morality as a higher reflective achievement, not inherent to our nature, and in clear correlation to the highly specific circumstances in which the individual lives. As already suggested, our common emotional background is best understood as amoral and capable of being developed for positive ends or manipulated for negative ones. We can thus arrive at a theory of human nature that both explains our inherited aspects in terms of natural selection and leaves sufficient scope for the agency of human beings to develop in relation to their circumstances.

Considering all these insights is also critical for public policy. An understanding of our minimal predispositions provides a guide for ensuring the basic conditions under which humans are most likely to acquire the interest in social cooperation and morality. The understanding of human nature as a predisposed *tabula rasa* informs us that survival is the most fundamental human instinct coded in our genetics and that, when imperiled, it is likely to trump everything else. Furthermore, the malleability of our neurochemistry is a powerful reminder that public policies must work towards preventing injustice, humiliation and insecurity, and more generally, any conditions that are likely to exacerbate our egoistic and survival-oriented behavior.