



# THE BLANK SLATE

by Stephen Pinker

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*Reviewed by David W. Shantz*

Recall for a moment the recent controversy over Harvard president Larry Summers' suggestion that innate differences in men's and women's talents, abilities, and/or interests may play a role in accounting for the fact women are under-represented among math and hard-science university faculties. The storm of protest these comments evoked is an example of the kinds of discourse and public commentary Steve Pinker says illustrates the need for this book. He was not bothered by the many complaints that Summers, by focusing attention on a minor reason for this gender discrepancy, was drawing attention away from its major causes. What did trouble him were the number of critics who vilified Summers for daring to even suggest such an hypothesis! He wondered why so many among the intellectual elite seem to view as "taboo" the idea that human psychological/behavioral characteristics may be caused, even in part, by innate genetic factors.

His answer, as presented in this volume, is that such behavior results from the fact that the intellectual elite views human nature and its relation to society in terms of three outmoded philosophical belief systems which are inconsistent with current scientific findings: Locke's assumption that human nature begins as a "blank slate"; Rousseau's view of humans as "noble savages" prior to the development of civilization; and, Descartes's dualistic position concerning human on-

tology. The elite cling to these views, he suggests, because they fear acceptance of a more scientific view of human nature and society would threaten cherished ideological and moral commitments. He hopes this book will enlighten such folks, allay their fears, and help bring their views more in line with those held by researchers in such relevant disciplines as biology, behavioral genetics, cognitive neuroscience, and artificial intelligence. Pinker believes this is an important task because these outmoded views of human nature distort both public policy and private decision-making. A more valid appreciation of our human nature, he believes, would facilitate our ability to deal with the pressing issues confronting us.

To begin, Pinker suggests incidents like the Summers controversy illustrate the degree to which many intellectuals implicitly endorse a rigid, rather extreme version of the Lockean “blank slate” view of the development of human nature. This view asserts that, as far as psychological/behavior characteristics are concerned, one comes into the world with no innate predispositions influencing development in any particular direction. If one child becomes a hostile-aggressive sadist whereas another becomes a gentle, compassionate helper-of-others, it must be due entirely to differences in their personal experiences since conception.

Nurture is all, and nature counts for nothing! Holders of this view also appear to believe the only alternative to this position is the extreme opposite: differences in the psychological makeup of people are due solely to differences in their innate genetic features at conception, and personal experiences are irrelevant. Thus, any attempt to criticize an exclusively “nurture” view elicits the accusation one must necessarily be attempting to advance an exclusively “nature” view of the causes of psychological development.

Pinker, along with most researchers, finds the “blank slate” view simplistic and unduly dichotomous. Back in the 1950’s, Anne Anastasi pointed out that, with respect to the nature/nurture debate, it is the task of scientists to identify which specific genes *interact* with which other genes and with

which personal experiences to influence the development of specific psychological/behavioral characteristics. The truly voluminous review of research presented in Pinker's book indicates that over the past fifty years researchers have pursued Anastasi's task with considerable success. Scientists can now specify much more clearly than in the past just how genetic and experiential information *interacts* to shape the development of a growing number of psychological/ behavioral characteristics. To continue to assume that any psychological characteristic is formed exclusively by either genetic or experiential factors is thus inconsistent with current scientific understanding.

So why do so many of the intellectual elite appear to deny this moderate interactionist view of the influence of nature and nurture? Pinker suggests that, for some, their antipathy toward giving any role to innate factors is based on strong moral objections to the racist, sexist, and imperialistic practices and attitudes displayed in western societies over the past few hundred years. The fear is that accepting any role for a genetic contribution to human characteristics will be used to justify and restore or sustain such abhorrent practices. Such fears are both illogical and unfounded, in Pinker's opinion, and he devotes a chapter to examining and refuting such concerns. He shows that decisions as to how we should treat one another can be grounded in moral and philosophical considerations, and that whether human differences are caused by genetic or experiential processes are irrelevant.

For others, particularly on the political left, Pinker suggests their opposition to the idea of innate predispositions is based on a strong commitment to the importance of using social interventions of various sorts to improve both the human condition and the nature of humans: to reduce the competitive/aggressive behavior of boys; to increase the assertiveness of girls; to improve levels of intellectual functioning of the disadvantaged; to reduce the selfishness of members of "individualistic" societies and so on. If they were to acknowledge that some of these features may be caused by innate predisposi-

tions, they fear it would undermine public support for such benevolent efforts.

Again, Pinker devotes a chapter to addressing these concerns. He points out the more we learn as to just how genes influence development and the specific experiences they interact with during development, the better able we will be to prevent and/or modify unfavorable outcomes. For example, the data indicate that improving the nutrition and pre-natal care of pregnant women results in greater long-lasting gains in intellectual ability than does watching Sesame Street and playing with “educational” toys during the preschool years.

Another problem Pinker has with the views of some intellectuals is illustrated by the following statement by former attorney general Ramsey Clark as to how violent criminals should be treated:

“The theory of rehabilitation is based on the belief that healthy, rational people will not injure others, that they will understand that the individual and his society are best served by conduct that does not inflict injury, and that a just society has the ability to provide health and purpose and opportunity for all its citizens. Rehabilitated, an individual will not have the capacity and cannot bring himself to injure another or take or destroy property.”

This and similar pronouncements appear to be based on a commitment to Rousseau’s view of humans as “noble savages,” says Pinker. According to this view, if humans do have innate dispositions, they are exclusively pro-social in nature. Anti-social tendencies, in contrast, are not innate. Characteristics such as greed, aggression, and violence are caused by an abusive, intrusive, and constrictive society which warps benign psychological development. In short, people are not born bad; they are made bad by their personal experiences of life. According to those adopting Rousseau’s position, if we create a society which treats everyone with fairness and respect, and

provides ample freedom to pursue the unfolding of one's own genetic blue print, all will be well.

Again, Pinker finds this sunny, optimistic view of the nature of humans and society inconsistent with scientific data. Again, he presents a wealth of evidence from developmental biology, evolutionary psychology, and behavioral genetics which supports a more complex view of human nature, indicating we are born with innate dispositions of both a pro-social and an anti-social nature. On the one hand, human infants do appear naturally inclined to seek and nurture positive relations with others, aided by a variety of innate skills and abilities. On the other hand, they also come into the world equipped with the desire to pursue their own selfish goals and interests, together with the innate ability to learn that, under various conditions, treating others badly can lead to a variety of positive outcomes such as increased resources, status, and approval.

So what are the social/political implications of ignoring or denying this "darker" view of human nature? Pinker suggests that failure to appreciate the capacity that normal human beings have for displaying a wide variety of anti-social behavior leads many contemporary intellectuals to significantly underestimate the need for punishment as a major weapon against inappropriate behavior, whether it be within a family, a social community or group of nation-states. Pinker argues that Hobbes was essentially correct: the main reason normal people inhibit certain behavioral displays is because they fear the consequences of not inhibiting them. Eliminate or reduce social sanctions, and expect an increase in bad behavior. Pinker presents an abundance of data supporting this view. To reject these data in favor of policies and practices based on the "noble savage" position, he argues, constitutes the pursuit of a utopian fantasy which will lead to an increase, not a decrease, in anti-social behavior.

The final inaccurate belief system Pinker addresses is reflected in the frequency with which commentators report, with great astonishment, that a genetic and/or biological fea-

ture has been discovered which is actually associated with some psychological or behavioral characteristic! For example, neglect and abuse in childhood can negatively impact brain development, or becoming a violin virtuoso causes actual biological changes in certain areas of the brain.

Such astonishment may reflect, Pinker proposes, the fact these folks are Cartesian dualists at heart. They assume, with Descartes, that humans are made of two kinds of “stuff”: physical stuff which controls biological processes, and “immaterial stuff” which is independent of the body, can’t be measured by empirical methods, and is responsible for regulating and controlling all psychological processes. These assumptions, Pinker thinks, are incompatible with an emerging science-based view which supports a monistic position regarding human nature. According to this view, humans consist solely of biological material. Thus, all psychological and behavioral states and events are produced by nothing but material stuff. Again, he presents an abundance of data from a wide variety of research areas which are consistent with this position. Monists, in contrast to dualists, are pleased, but not surprised, as evidence accumulates showing how an every-increasing number of psychological states and events can be associated with states and events occurring on a physical level. So, says Pinker, there is no “ghost in the machine.” As one wag has put it, “there is nothing inside our heads but meat.”

Although the material summarized above would constitute a complex, lengthy and weighty book in and of itself, it is merely the first half of Pinker’s volume. Five of the remaining chapters provide additional information as to how people work psychologically: how we perceive and interpret reality; the role unconscious processes play in influencing psychological/behavioral events; the various ways in which human suffering is an inevitable consequence of our complex human natures, etc.

And finally, he devotes a number of chapters to addressing the implications he feels the previous evidence presented has for what he refers to as “hot button” issues. For example,

one chapter on politics discusses the “tragic” vs. “utopian” vision that some have suggested underlies conservative and liberal political views, respectively, and makes the case that “the new sciences of human nature really do vindicate some version of the tragic vision and undermine the utopian outlook that until recently dominated large segments of intellectual life.”

Another chapter expands and elaborates on current findings on the nature and cause of gender differences. In it, he argues it is possible both to acknowledge the validity of these data and to treat people in a just and compassionate way regardless of gender. He opposes “a feminism which requires a blank slate and/or a noble savage and has become a powerful impetus for spreading disinformation.” Other “hot topics” addressed are educating and rearing children, causes of violence, development of moral systems, and reasons for public disaffection with some areas of “the arts.”

With this book, Pinker has done an excellent job of describing some of the complex ways genes and experiences interact to influence the development of a variety of psychological characteristics, including those of an anti-social nature. Will it succeed, however, in persuading the intellectual elite to abandon their “blank slate” and “noble savage” views and adopt a more scientific position regarding human nature? I think not.

Many of the folks Pinker is critical of would deny, I suspect, the extreme views he attributes to them. Many would say they do, in fact, accept the general point that genes and experience interact to influence psychological development. However, where they would disagree is over the precise magnitude of the influence genetic factors have on a specific phenotypic characteristic. For example, they may well be persuaded the data indicate genetic factors play a large role in creating taste preferences for salt, sugar, and fat and thus a fondness for “junk food.” At the same time, they may fail, for a variety of reasons, to be persuaded of a large genetic role in causing such things as male promiscuity, the differential representa-

tion of women in some scientific disciplines, and the creation of serial killers.

One of the reasons for resistance to such claims, and one to which Pinker gives little attention, involves the nature of the supporting evidence. The most compelling arguments science can offer for claims of causality are based on the results of valid experiments using appropriate subjects, and this kind of evidence is in short supply here. To conduct valid experimental studies of human subjects concerning the roles genes and experiences play in causing specific developmental outcomes would be, for the most part, both impractical and unethical. What science can offer concerning such issues is a pattern of correlational findings with humans, together with the results of experiments with animals, all of which are consistent with a specific causal hypothesis.

Pinker does, in fact, present such patterns of evidence. Unfortunately, these types of data offer many opportunities for skeptics to question the relevance and/or interpretation of the fact being presented. They can say, with some justification, their resistance to a particular causal claim is based on the inadequacy of the evidence, not on prior philosophical, moral, and/or ideological commitments, as Pinker suggests. With respect to the nature/nurture issue then, I suspect the intellectual elite will give ground to science in a gradual, piece-by-piece fashion, accepting a role for both genes and experience one psychological characteristic at a time.

Will the book be more successful persuading “dualists” to become “monists” and adopt the materialistic view that humans are nothing more than “physical stuff” and there is no “ghost in the machine”? Again, I think not. Researchers may eventually be successful in persuading all but the most obtuse that biological processes are necessary for the production of all psychological states and events; but they will never prove they are sufficient. In order to do this, the evidence must prove no “immaterial” factors are involved. This, unfortunately, involves “proving a negative,” a task beyond the reach



of the scientific method. Thus “dualists’ will be with us for some time to come!

Finally, I conclude with some general reactions to this volume. There are a growing number of books which do an excellent job of summarizing, for a lay audience, recent findings in one or another of the research domains covered by Pinker. It has few rivals, however, among those that deal with as many topics in as much detail. This book is not a light read. It requires careful and probably repeated reading to fully integrate. The presentation and characterization of scientific findings is generally mainstream, at least among those working in the various disciplines. The implications Pinker draws from the material and the applications he suggests, however, are another matter! The book contains many criticisms of current cultural, intellectual, and political opinions. It should provoke heated and, one would hope, useful debate and discussion as we all grapple, on both a personal and societal level, with the complex policy issues raised.