



New Science and Mystery of Human Nature – *Whiteboard* by Steven Pink

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Abstract: *The research of contemporary cognitive psychology and cognitive neuroscience is quietly changing our concept of mind and human nature. New research results make our cognition of human nature from simple acquisition to complex composition. Based on the perspective of contemporary cognitive science, Mr. Pinker reshapes our understanding of human nature, so that we can have a more reasonable explanation of the formation of mind.*

Keywords: Steven Pinker; Humanity; Mind; Cognitive psychology.

Many things in life are very accidental, sometimes accidentally meet a person on campus you think impossible to meet, may be a classmate in primary school, may also be a friend who has not been contacted for many years, there will always be some sadness and sigh, sigh the world is unpredictable, time is passing, if we talk about the past people or things, some people have changed beyond our imagination, "Year after year flowers are similar, year after year people are different", flowers are in the same environment, according to the same season, and although people are the same person, in different environments, there are different thoughts and actions, and even due to some accidental factors and changes, there will be very different changes from before. Some of these changes are what we can expect, and some are what we can't expect, and the constants and variables here are related to all aspects of people, not only in sociology, but also in psychology and cognitive neuroscience. Last semester, a chance to chat with a friend, and talked about cognitive psychology and social class psychological identity and other issues, she recommended Steven Pinker's "White Board", out of trust to friends, immediately placed an order online. I bought four books by Steven Pinker, "The Blank SLATE," "The Language Instinct," "The Nature of Thought," and "The Mystery of the Mind."

Steven Pinker (born September 18, 1954) is a best-selling author of contemporary psychology and a major figure in Canadian and American psychology who has long conducted experimental psychology research because he claims that the evolution of the human mind does not conform to traditional theories of mental composition. At the same time, he constructed the computational theory of mind, which is well known to the psychological academia and the general public, and is even considered to be the most important thinker and linguist of our time, and an important TED speaker. Get Mr. Pinker's four great books, each of which has a large volume. After a rough reading, you can read Mr. Pinker's academic system and writing logic from the books. All four books explore the source of human mind and the specific content that constitutes the mind, which can be called the compilation of human mind composition. However, it is indeed an important book in contemporary experimental psychology,

cognitive psychology and linguistics. From the formation of children's minds, the book studies the source and approach of human minds, and looks for the future possibilities of artificial intelligence. *The Nature of Thought and the Instinct of Language* study the source of human language, explain the nature of language in social culture, and seek the new direction of the development of contemporary linguistics. *The Whiteboard* itself is full of metaphors, exploring the path of psychological science to guide contemporary cognitive science, re-constructing the research predicament of contemporary psychology through philosophical thinking, and trying to find new research methods and theories of contemporary psychology, analyzing "the mysteries of human nature revealed by science and common sense". It is worth noting that in 2002, after the English edition of "White Board" was published, it won the Pulitzer Prize and the Royal Society Science Book Award that year, and with the passage of time, "White Board" did not withdraw from the bestseller list, on the contrary, more and more sought after by scholars and readers, and it has not ended today. *The Blank Board* is the final epilogue of the series "Speech and Humanity". When I got the book, I still had some fear, thick 4 books, each book should be more than 500,000 words from the volume point of view, and finally chose to read from the "white board", because the word "white board" itself has a great implicit color, very attractive to me, at the same time "white board" as a very famous theoretical system. Although I have not studied it completely, it has really affected my cognition in some aspects, and there are shadows of this theory in my cognitive system.

Originally prepared to finish reading this big book "Whiteboard" for about 1 week, in fact, I overestimated my own time state, and finally looked at stop stop, from the beginning to read, a count of time, has passed most of the year, the real world is unpredictable, time is fleeting. I've probably been reading longer than Mr. Pinker has been writing a book! When reading "White Board", I often like to take a seat and compare and verify my life status and life changes with the theories in the book. Of course, in addition to reflecting on the source of my own psychological formation and the reliability of my thinking paradigm in reading, I also comb out Steven Pinker's "human nature" theory through self-confirmation, in order to find the logical path and framework of his "human nature" theory. Through intermittent reading and confirmation, I have gained an understanding of Mr. Pinker's academic theory system and description mode. For "The Blank Board", it seems more like a popular science and general reading. In such a vast reading of 500,000 words, the existing knowledge system is interpreted in a limited way and the theoretical reflection is entered into. And narrated the formation and possibility of "human nature". Along with Mr. Pinker's narration, I also had a Pinker's tour of the contemporary academic system and social phenomena.

The book, as the middle part of Steven Pinker's "Language and Human Nature" series, with more than 500,000 words, starts with the theories of cognitive neuroscience, genetics, evolution, psychology and other contemporary cutting-edge disciplines, and puts forward the proposition of "human mind = nature + upbringing", and then starts with the "blank SLATE" theory of British materialist philosopher John Locke. John Locke believes that people are born with a "blank SLATE", and the newly born have no special structure and differences, so the acquired emotional and mental structures are not determined by the innate brain structure, and these seemingly complex mental structures are brought by social and acquired education, just like language and spiritual temperament come from the social environment and education. This theory was championed by the behavioral psychologist John Watson, who, guided by Locke's "blank SLATE" theory, concluded that human nature and mind are not determined by nature, but the human mind is the result of nurture, and proposed: Give me a dozen babies, and I can mold them into what I want them to be: doctors, teachers, lawyers, dunghouls, waiters. This doctrine is highly praised by social builders and provides a theoretical basis for anti-racism, which in turn gives rise to the utopian ideal, which imagines a beautiful new world, free from competition and full of peace, by shaping human behavior. But Mr Pinker disputes this theory,

and the truth does not seem so simple.

In his book *The Blank SLATE*, Mr. Pinker listed a large number of experiments between identical twins, fraternal twins, children raised in the same family environment and adopted children, and detailed descriptions of politics, violence, gender, children, and art. By describing and explaining the motives, processes, and results of the experiments, The source of "human nature" is analyzed from the perspective of new science.

First of all, in the first part of *Whiteboard: The rise and challenge of whiteboard theory*, the author believes that: Human cognition and behavior are not only acquired education and environmental determination, but also closely related to innate genes and structures. If we do not recognize this point, we may ignore children's innate instincts in the process of organizing children's education, which will lead to terrible consequences, and even bring rude behaviors and consequences contrary to the complete human civilization. In modern society popular with Locke's "blank SLATE" theory, there are also two other related human nature theories. One is Rousseau's "noble barbarian" theory, which holds that people are inherently good, and all evil behaviors are brought about by the acquired society, and the social environment is the root of evil. On the contrary, Hobbes firmly believes that human nature is inherently evil, and human society needs a mechanism to maintain social peace and stability and maintain the normal order of society. The other is Descartes' theory of human nature - the "ghost in the machine", which holds that the mind or mental structure is a congenital existence that cannot be doubted, and that the human body should be questioned, and believes that the history of the human mind is not affected and governed by the laws of physics. The important events that Descartes' theory has influenced the academic world are: The Bush administration issued a government decree prohibiting the extraction of stem cells from embryos, they believe that the embryonic period is already a complete person, this period has a human soul, so killing the follicle is equivalent to killing a person, which is an unquestionable murder. Both Descartes and Rousseau opposed Hobbes' academic theory, but in fact their theories of human nature seemed to be opposite, but the underlying principle was the same.

These theories are similar to the ancient Chinese "good" and "evil" theories, each of which will bring scientific and ethical debates, and then influence the formulation of political and legal systems. Mr. Pinker uses the four Bridges of new science: Contemporary research in cognitive neuroscience, cognitive psychology, evolutionary psychology, and behavioral genetics has enabled us to reinterpret and construct the source of the human mind, allowing for a contemporary academic examination of "human nature" - the composition of the human mind structure - and to recognize culture as an important component of the mind, and culture as a design of human civilization. This kind of design is conducive to survival and life, culture is the acquired environmental factor in the mental structure, is the important source of the mind. At the same time, we recognize that the mind has an innate capacity to imitate the actions of others and to recognize the minds of others. That is to say, "Genes matter, so does the environment." From the perspective of the existence of genes, the number of genes is not the only aspect that determines the complexity of an organism, but the ability of genes to interact with each other is also the most important aspect. For example, Pinker says that humans have twice as many genes as roundworms, but add in the interactions and the complexity is $2^{16,000}$ times that of roundworms. We can also see that the complexity of gene and protein synthesis is also a very important factor. The 34,000 genes identified at this stage only account for 3% of the human genome, and we have chosen to ignore other genes that do not code for proteins, but the actual significance of these proteins for living individuals is unknown. Neural network is the most important psychological carrier of the complexity theory of human nature, and is the key to the connection between the psychological recognition structure of biological significance and culture. However, neural network in

the general sense cannot directly reach human language and thinking, so neural network is not the direct source of human mind. The innate partitioning and specialization of the brain does provide material preparation for the human mind, and from a certain point of view, even the neural network is a component of the human mind. Therefore the human mind should be natural and cultivated.

The third part of "Whiteboard" analyzes the modern theory of human nature. The influence of cognitive theory of human nature on the world is not only a problem of cognitive psychology, but also a theoretical basis for many modern events, and then influences people's various concerns about human nature. On the surface, scientific research has confirmed the shortcomings of human nature. And these shortcomings just bring people great worries: the inherent inequality of human nature, the many imperfections of human nature, and even a lot of defects, the causal law brought by determinism, and the meaningless negation of human existence. Pinker refuted the emptiness of these anxieties by discussing the innate possibility and the acquired education of the origin of human nature. In the fourth part of the Blank SLATE, Pinker discusses the self-cognition of human mind, mainly through the interpretation of concepts, starting from language and image, and analyzes the problems brought by relativism one by one. He believes that the main point of relativism is that reality is only through the use of language to construct a seemingly reasonable society. This society seems more "human" and easier to explain in terms of human nature. With such relativism, the "blank SLATE theory" has a full of imaginative market, so scholars who hold this concept believe that the brain is a blank SLATE, congenital does not have any preset structure and mechanism, and the environment and learning after tomorrow make us gradually different, forming different mental structures. Mr. Pinker explains that we should have insight into our perception of ourselves, be more aware of the biases of language and mental imagery, and be vigilant that our actions are being manipulated by others. Reflecting on the source of our minds is a relatively reliable method.

In the final section of the Blank SLATE, Steven Pinker says affectionately: "In the field of human nature, politics, violence, gender, children, and art are all sensitive topics. "Social psychologists have found that even in the most intense ideological battles, there are values that are shared by both sides of the argument, and they simply disagree about which values should be emphasized when those values are in conflict." This gives us some comfort for the "mind" and the future of society, we know and insight into the structure of the mind, explore the source of the structure of the mind, the innate structure of human nature and the source of the upbringing of the human nature, unconsciously bring the academic path to the present art.

The reading of Mr. Pinker's "Blank SLATE" is not so much the contemporary academic science of cognitive psychology, but rather the realistic consideration of contemporary cognitive psychology and sociology. I like the fact that Mr. Pinker puts art in the last part of the book, and I prefer the conclusion that "human nature exists in the artist's words", "art is part of our nature." Whether art is a product of human adaptation or a byproduct of evolution, or a mixture of the two, it is deeply embedded in our psyche."

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