Theme: Knowledge and Technology

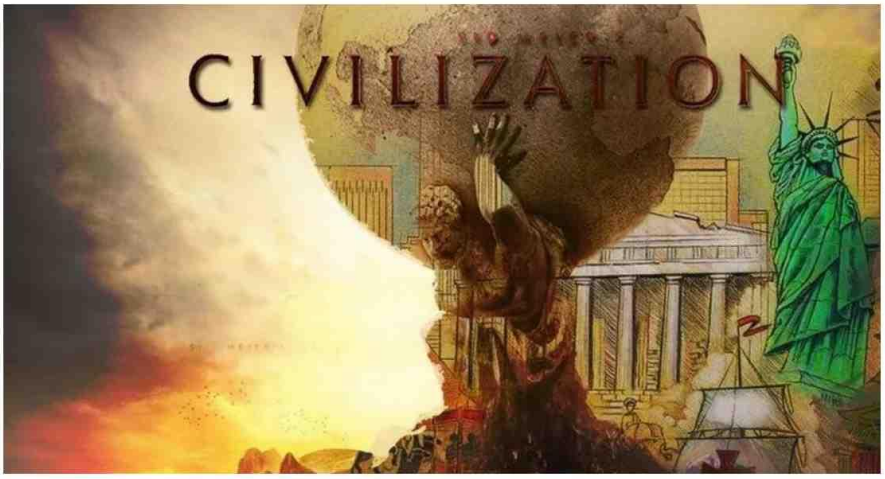
Prompt: Is bias inevitable in the production of knowledge?

Answer to prompt: Bias is inevitable because it is developed through prior knowledge which creates prejudice towards the production of knowledge.



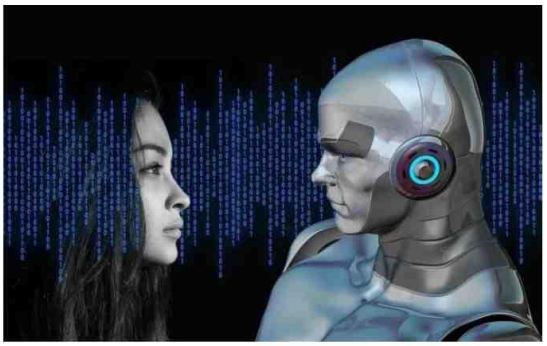
Any body of knowledge is designed to make sense of what is currently observable. Therefore, subject to the limitations and relativity of observational phenomena, any knowledge system is incomplete and fallible. Over time, it has become common for a new system to overturn the old one that preceded it. Karl Popper believes that scientific theories are unverifiable and must be treated as hypotheses and falsified. As long as it is not falsified, it is tentatively considered true. The question is: How can a universal truth be confirmed with discrete observations? This is Pope's greatest contribution to the philosophy of science. Human cognition is inherently imperfect, for man himself is a part of reality, and the part cannot fully understand the whole. Science is essentially an ideology, but because it cannot be falsified, it cannot refute either religious or secular beliefs. I clearly remember that when I was in middle school, my physics teacher said that Newtonian mechanics was the approximation of quantum mechanics under conventional conditions, and it had not been eliminated or overturned. It still played a wide role. Then the physics teacher said, science is like this, every new theory is built on the basis of the old theory, the achievements of the predecessors is the beginning of the research of the future, just as Newton said, he saw further, because he stood on the shoulders of giants. But Kuhn says: Wrong! Science doesn't work this way, and it can't work this way. There are so many things missing from the history of science that if we could find those missing details, we would find a very different picture, just as if we could return to the actual context of Newton's remarks, which were merely a scathing satire on his opponent's short stature.

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Bias is inevitable because it is developed through prior knowledge which creates prejudice towards the production of knowledge. Huntington, a professor of Harvard University, put forward the "clash of civilizations" theory in the last century, in which the view that "the root of world conflicts lies in the differences of civilizations" has been controversial. "Four hundred years ago, Italian missionary Matteo Ricci made a very important conclusion in his Notes on China, which he completed in his later years after studying China's '4,000 years of history' and conducting research for 30 years: Chinese people really do not have the ambition to expand their borders and attempt to invade distant places. "Yu Qiuyu said that Matteo Ricci today is to break stereotypes and misread China caused by imagination. In his view, it is not between civilizations but between civilizations and savagery that is likely to clash today and in the future. The main argument against conflict is from the origin of civilization. For example, civilizations have similarities in different regions, which can be traced back to the history of human development. Human beings have the same roots and homology, so the superficial conflicts of civilizations brought by human beings are actually unique, and the commonalities outweigh the differences. In addition, civilizations and conflicts can be solved from the perspective of postmodernism. These are ideological constructs, not facts, or subjective suppositions. Of course, the theory of community or world convergence can be used to refute the clash of civilizations. Therefore, the generation of prejudice is an important step for human beings to create knowledge, and the beginning of knowledge is overturned and proved by different people.

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Science or scientific theories cannot be purely objective. Science has inevitable subjectivity, and this subjectivity or subjective factor is even irreducible or indestructible in science, and may be an inherent attribute of science in a sense. However, due to the dominant position and absolute superiority of scientific objectivity in science, science appears in the appearance of objectivity. Subjectivity is often ignored and ignored intentionally or unintentionally. But the subjectivity of science exists "objectively," or is a kind of "objectively." It is not only reflected in scientific inquiry activities and social institutions, but also permeated in the structure of scientific theories. Only by clearly recognizing this point and treating it appropriately, can we deeply understand the nature of science, reduce the negative influence of subjectivity, gradually achieve a more correct and comprehensive understanding of reality, and form a correct scientific theory or objective truth. At the same time, we should recognize and make use of the positive role of subjectivity in science, give full play to the subjective initiative of scientists, stimulate their imagination and creativity, and promote the breadth and depth of science. Moreover, the subjectivity of science can be transformed into an opportunity and adhesive to promote the fusion and confluence of scientific culture and humanistic culture.Whatever we may think of the status of subjectivity, it is an indisputable fact in science that subjectivity exists and is frankly acknowledged by almost all scientists and philosophers. Einstein concisely affirmed the involvement of subjectivity in the pursuit and creation of science: "Science, as an existing thing, is the most objective and impersonal thing known to man. But science, as a work in progress, as an end to be pursued, is as subjective and subject to psychological conditions as any other human enterprise." "We cannot escape the subjective nature of science," Concludes Thanet. Whether you think of the scientific process as the observation of an independent noumenon of knowledge, or as group activity on some objective reality of nature, the subjective element is never completely diminished. In the interpretation of facts, there must be an element of semantics -- theories must account for the world -- in the way we understand it. But there is no straight Cartesian duality between the scientist and the world." I. G. Barber tries to correct the popular misconception that scientific research is considered objective because it is determined by the cognitive object rather than by the cognitive subject.

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