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Abstract: The continuous progress of the two technologies of bioengineering and artificial intelligence has further expanded the depth and breadth that can be achieved through technological integration between the two. Along with the bright prospects of new technologies come worries about the risks of technology applications, but as long as technology integration upholds certain practical principles, it will open up a new path for the future development of bioengineering and artificial intelligence. This will also provide new opportunities for the development of mankind and society.

Keywords: artificial intelligence; bioengineering; human development

1. Introduction

The integration of bioengineering and artificial intelligence not only provides a new path for the development of bioengineering and artificial intelligence, but also actively solves the difficulties encountered by the two in the development process. However, it is believed that the integration of these technologies may lead to the re-division of human boundaries, or that human thoughts may be invaded. Meanwhile, concerns that social inequality may increase cannot be ignored. If the integration of science and technology adheres to the original intention of human development, and adapts to historical development, taking into account technological progress and risk response, then these doubts brought about by the integration of science and technology will naturally disappear. Looking forward to the future, technological advancements in bioengineering and artificial intelligence provide new opportunities for higher-level technological integration, and will rejuvenate human confidence in science and technology. Moreover, their practice will surely bring a better life to human beings.

2. The Ethical Focus of the Integration of Bioengineering and Artificial Intelligence

Technological integration may redefine the boundaries of mankind. If the intervention of bioengineering on the human body is still within the scope of the biological field, the intervention of artificial intelligence has already transcended this scope. In contemporary times, as a technological intervention on humans, technological fusion is more difficult to accept than bioengineering alone. This brings about a new round of debates about Theseus’s paradox. The discussion of human boundaries will also center on humans and technology. A new, changed humanity unfolds. At the same time, this technological integration will correspondingly affect people’s re-statement of political and economic rights.

Technological integration may aggravate the worries regarding human intervention. The fusion of bioengineering and artificial intelligence will inevitably affect the existing biological systems of human beings. Artificial intelligence not only has potential value for the development of the human brain; the possibility of its realization can be foreseen by examining existing technical practices. The fear of human intervention thinking makes the
technology of brain research and development are cautious and conserved. A common concern is that technological integration may make intrusive thinking a reality. Although the application of technology integration can be restricted and regulated through legislation, the risk that these technologies may be abused still exists for the current technological environment and historical environment [1].

Technological integration may exacerbate social inequality. The integration of bioengineering and artificial intelligence can promote social justice by repairing and improving human abilities, but it may also have the opposite effect. If the development and use of technology are monopolized by private individuals, taking personal gains as the starting point for technology research and development, this will further widen the gap in human capabilities and exacerbate social inequality.

3. Practical Principles for the Integration of Bioengineering and Artificial Intelligence

Technology integration must adhere to a people-oriented approach. The fusion of technology is not fusion for the sake of fusion, but should have only one goal: the development of mankind. Human development and technological progress are not contradictory, but are unified in the fundamental goal of technology for human beings. This is the original intention and destination of technology integration. Human development is the free and comprehensive development of human beings. It is not a one-sided understanding of life maintenance, but a freer development of exploration, understanding and change in the world. It is the practice and development of mankind facing the material world and the information world at the same time. The results of technological integration should not be the privilege of certain groups, but should be the common technological wealth of mankind, and all mankind should be the beneficiaries.

Technological integration must adapt to historical developments. The ethical issues arising from the application of technology are a historical category, and the ethical disputes brought about by the integration of technology are based on the actual development of history. We should look at technological progress from the perspective of development, and use the further development of technology and society to solve problems in technological applications. At the same time, scientific and technological progress based on reality must not be too advanced, and must be adapted to the cultural, legal, political and other aspects of the social environment at that time in order to obtain long-term and stable development support. Advances in technology have promoted the further development of society. The development paths of the two technologies of bioengineering and artificial intelligence have also gone through a similar process. As the intersection of technological development, technological integration must also take into account the relationship between technological innovation, social development and social stability.

Technology integration must focus on risk response. The advancement of technology and risk follow closely. The long-term development of mankind requires technological progress, and the development of technology needs to deal with risks. The technological integration of life engineering and artificial intelligence can open a new chapter for human development, but there are also hidden risks that affect human survival. This puts forward new requirements for our technology applications. On the one hand, we must be more rigorous and scientific in technology research and development, and carefully carry out technology applications; on the other hand, we must improve the supervision of technology applications to prevent technology from being used incorrectly. After all, it is too costly to use a disaster like Chernobyl to overcome industry resistance and implement strict supervision [2].

4. Future Prospects of the Integration of Bioengineering and Artificial Intelligence

Advances in bioengineering and artificial intelligence technologies provide new opportunities for technological integration. Both bioengineering and artificial intelligence are in a stage of rapid development. A series of new achievements in this process will stimulate scientists to think about new possibilities for the integration of bioengineering
and artificial intelligence, and provide technical precipitation and technical support for the practice of technology integration. The more advanced the bioengineering and artificial intelligence technologies, the deeper and wider the field where the two technologies can be integrated, and the greater the possibility of bringing greater well-being through technological integration [3].

The results of the integration of bioengineering and artificial intelligence have rekindled a renewed confidence in science and technology. Technology integration has opened up new development space for bioengineering, allowing bioengineering technology applications to temporarily avoid the troubles stemming from technical and social factors. The positive effects of technology integration will help change the development trend of artificial intelligence as a tool, will alleviate people’s technical worries about “robots ruling humans”, and will help intelligent robots develop in a coordinated direction that is beneficial to humans. The successful practice of technology integration will surely reinvigorate people’s confidence in the development and application of technology, and make people more convinced that technology makes people better.

The practice of integrating bioengineering and artificial intelligence has opened up a new future for human development. As the originators of the fusion of bioengineering and artificial intelligence, mankind will achieve new progress through technological advancements brought about by this fusion. This improvement will change people, enabling them to adapt to a wider range of scenarios and more complex labor [4]. The efficiency of this kind of change is unmatched by natural evolution, and far exceeds that which humans might achieve within a limited natural environment alone. The path of mankind towards a new mankind may be contained within the future practice of the integration of bioengineering and artificial intelligence.

5. Conclusions

The impact of bioengineering and artificial intelligence technology on mankind is becoming greater and greater, and people’s worries about their creations are increasing day by day. It’s time to think about how technology can enhance mankind, so that mankind has enough strength to hold the handle of the knife, so that we are not afraid of sharpness.

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