

Can Humans and AI Coexist?

Jobs are disappearing because of AI. As a result, many people view the relationship between humans and AI as a "competition." However, if the question remains simply, "Can AI replace humans?", we cannot get to the heart of the issue. The real question is, "What kinds of people are replaced by AI, and why?" We must begin our inquiry with this question to see how AI may change human society.

Human education and social structures have, until now, been built around learning and acquiring existing knowledge to reach predetermined results. This includes solving problems with predetermined answers, carrying out work according to established workplace procedures, and finding answers to problems using professional knowledge accumulated over a long period of time. PonderEd Education defines this operation of the brain as "purpose-oriented brain function."

A purpose is an already known result. Something whose existence is not even known cannot become a purpose. Therefore, purpose-oriented brain function is the function of finding a way to reach a result while already knowing what that result is (or easily predictable). It is like being able to find a route to Vancouver because we know that Vancouver is a place that exists. In the end, purpose-oriented brain function operates on the premise of information and experience that already exist.

AI has entered precisely this domain. And in this domain, AI surpasses human ability.

The amount of information AI can store and handle exceeds human limitations. Although the amount of knowledge human brains can handle is limited, AI can quickly search and combine the information it needs from the vast amount of data it has stored. In fields such as law, accounting, translation, document writing, programming, and data analysis, it produces results based on enormous amounts of information. If humans try to compete with AI in terms of the amount of knowledge accumulated in the brain and the speed of information processing, the conditions of the competition themselves are unfavourable to humans.

Of course, AI also has limitations. As the amount of data increases, more energy is required, and systems are also needed to deal with the heat generated by that energy use. For this reason, some view the expansion of AI as an environmental issue rather than as competition with humans. Here, however, we will set this issue aside and focus on the ways humans and AI process information.

AI and the human brain differ from the very way they operate. Human neurons are not a single circuit directly attached to one another. Because they are separated, neurotransmitters are needed to transmit signals. This structure has two sides. A stimulus is needed to activate neurons to transmit a signal, but at the same time, there is room to select the direction in which the signal will flow.

Information entering through the five senses can also activate neurons. However, this activation needs to be distinguished between neural activation that depends on primal instinct and activation based on thinking ability. The key point is that, in the ~~W~~ thinking process, the human brain does not activate all neurons at once to process information. In contrast, AI, as a computer, can

activate vast amounts of data at the same time, select, and organize the information needed for a purpose.

There are also cases where many parts of the human brain are activated at once. The feelings of satisfaction and happiness that arise when primal desires are fulfilled are examples. Fulfillment of a desire maximizes emotion through a large-scale production of neurotransmitters and drives a person to move toward the same feeling again. When solving a mathematics problem, however, the feelings of satisfaction and happiness do not arise during the process, but after the result has been obtained.

This difference is important. AI, which is free from emotions, can quickly select and organize the information needed for a purpose from among activated information. In contrast, humans can struggle to think when many parts of the brain are activated, and strong emotions arise. Looking only this far, AI is superior to humans. But if we stop at that conclusion, we can't see another function of the human brain.

AI is strong at dealing with "information and results that already exist." But the situation changes in an unknown domain where the result itself does not yet exist.

Suppose that Vancouver, as a place, were completely unknown to the world. In that situation, could AI suggest a way to get to Vancouver? If the destination itself is unknown, it cannot suggest a route or method for getting there. PonderEd Education defines the brain function of independently exploring an unknown domain and creating a path when there is neither a result nor prior experience as "goal-oriented thinking."

Imagine climbing a peak of Mount Everest that no one has ever climbed. Can an answer for reaching the summit be created in advance using only past knowledge? Problems may reveal themselves only in the actual situation. When an unexpected variable appears, it may be necessary to turn back. To reach the goal, one must judge, try, revise, and find a path step by step without knowing the result. One must even accept the possibility of not obtaining the desired result.

At this point, AI becomes a tool rather than a competitor.

AI can be asked to analyze oxygen concentration by altitude, predict the weather, and organize the necessary information. But the human is the one who uses that information to decide where to go, when to stop, and what risks to take while moving toward the goal. For a human who explores toward a goal, AI is a powerful tool. In contrast, for a human who relies only on purpose-oriented brain function, AI becomes a competitor.

This difference determines the position of humans in the AI era.

Having a great deal of knowledge and skill allows a person to reach a predetermined purpose more quickly. Until now, that was a competitive advantage in society. But now the competitor is AI. AI has more information than humans and can search and organize it more quickly. If humans compete in the same way, their chances of winning continue to decrease.

Therefore, the disappearance of jobs because of AI cannot be viewed simply as a problem of "machines taking human jobs." The more fundamental issue is which brain function humans have relied on in their lives. If a person who depends on purpose-oriented brain function is pushed out of competition

with AI, where will that person move next? Will that person be able to set goals independently, explore unknown domains, and use AI as a tool?

The problem is education. Current education can transmit knowledge and skills. It can also teach methods for finding answers to problems that already exist. Although it is said to teach methods, those methods are delivered as knowledge, so in the end education remains the transmission of knowledge and skills. This kind of education cannot systematically teach "goal-oriented thinking": creating one's own goals when the result is unknown, asking questions, making judgments, going through trial and error, and finding a new path. This domain belongs to thinking ability, not memory.

The gap in the AI era is not simply a knowledge gap. It is the gap between "a brain that competes with AI" and "a brain that uses AI as a tool."

If humans remain only within purpose-oriented brain function, they must compete with AI in areas where AI is physically far superior. If, even after being pushed out of that competition, they fail to develop the ability to create their own goals and explore, they will ultimately have no choice but to depend on the information and results AI provides. When that happens, humans are no longer using AI; rather, human judgment and action become dependent on the results AI provides. It becomes a structure in which humans are slaves to AI.

Conversely, if goal-oriented thinking can be used, the relationship is reversed. Humans can set goals, have AI do the necessary tasks, judge the results, ask again, and create new paths. At that point, AI is not a competitor to humans. It is a tool used to achieve human goals.

Social structures inevitably transform because of AI. And that change

requires us to make a choice.

Will we compete with AI in the ways it does better, only to end up dependent on the results it produces? Or will we develop the power to set our own goals, think, and use AI as a tool? Humanity now stands at a crossroads. If we live as a slave of AI simply because brain development is difficult and demanding, life itself will become a difficult and painful process, and the price we must pay for growing social problems will not be small. Therefore, education must change. Education in the AI era should not aim to deliver more knowledge, but to develop the brain's ability to set its own goals, ask questions, make judgments, explore, and produce new results.

What determines the future of humanity is not the performance of AI. It is human thinking ability.

Methods for developing goal-oriented brain function, one form of thinking ability, can be found at PonderEd Education.