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In 2022, artificial intelligence reached a milestone that had eluded it for decades – it defeated eight world champions at a key aspect of the card game bridge

This 100-year-old card game could save us from over-reliance on AI

Originally published in The Herald (Scotland). Reprinted with permission of the author, Professor Samantha Punch, Bridge: A MindSport for All, University of Stirling. You can contact Samantha Punch at s.v.punch@stir.ac.uk.

IN 2022, artificial intelligence reached a milestone that had eluded it for decades – it defeated eight world champions at a key aspect of the card game bridge. Whilst a significant leap for AI, it passed almost unnoticed by many; after all, computers beating humans at games is hardly new. Chess fell in 1997.

Bridge, however, was different. One of the last holdouts, not for lack of computing power, but because it demands reasoning under uncertainty, partnership and human judgement.

While AI can now excel in playing the hand, it still falls short in bidding and defence. It calculates and approximates, but it does not truly think as we do. That distinction matters, because at the very moment AI is becoming more capable of thinking for us, we are at risk of doing less thinking ourselves.

In my work with young people and students, I am struck by a shift towards use of AI as a substitute for thinking, rather than in support of it.

Students are no longer grappling with problems in the same way, they are not doing the intellectual “graft” that builds understanding.

A 2025 study found that higher use of AI tools is associated with lower critical thinking ability, with researchers pointing to “cognitive offloading” – the outsourcing of mental effort – as the underlying cause. When answers are readily available, the incentive to wrestle with a problem disappears.

Studies in education warn that heavy reliance on AI can reduce independent reasoning and critical evaluation, while neuroscientific work from MIT’s Media Lab found that people using AI tools show lower levels of brain

activity associated with memory, creativity and decision-making.

Their outputs may be faster, but they are often more formulaic, and the thinking behind them is thinner.

If we outsource the thinking process too readily, we risk losing the ability to hold complex problems in our minds, to reason through uncertainty, and to make decisions independently. These are the foundations of judgment, creativity and resilience.

Bridge, perhaps surprisingly, offers a powerful counterbalance. Each hand lasts around seven or eight minutes, and in a typical session you might play 20 hands – 20 separate problems, each demanding a different solution.

Players work with incomplete information, under time pressure, in partnership, while trying to outmanoeuvre two opponents doing the same.

There are no shortcuts or algorithms to rely on, you must engage your brain fully every time.

This is what makes bridge such a compelling form of mental fitness. While we prioritise physical health, far less attention is given to maintaining cognitive sharpness. Bridge develops logical reasoning, strategic planning and probabilistic thinking.

As a partnership game, it also demands communication, empathy and trust. You must interpret not only the cards, but your partner's intentions and your opponents' behaviour.

It is, at its core, a profoundly human game.

At the University of Stirling, Bridge: A MindSport for All (BAMSA) research supports what many players instinctively feel. In a study comparing 7,000 bridge players with 10,000 non-players, they found that those who play bridge report higher levels of wellbeing and are more optimistic about the future. They also cite improvements in concentration, memory, sociability and overall life satisfaction.

Bridge develops three critical domains: mathematical thinking, strategic reasoning and social co-operation. When young people play, teachers consistently report improvements in mental arithmetic and abstract thinking – skills not always prioritised in traditional education.

Yet despite this, bridge remains under-appreciated, largely due to perception. In the UK, it is still unfairly seen as a game for older generations, and many young people have never even held a pack of cards. However, when they are introduced to it, the response is overwhelmingly positive.

At a recent youth bridge summer camp, 93% of participants said the game was fun and 86% said they wanted to return.

In China, bridge is actively promoted in schools as a tool for developing cognitive and social skills, free from cultural baggage. The result is a growing base of young players and a strong pipeline of talent.

In contrast, the UK has relied heavily on generational learning – children picking up card games at home – and that pipeline has weakened. If we want bridge to thrive, we need to be far more intentional in how we introduce it, particularly in education.

The benefits of bridge extend beyond widening access to a game, they lie in preserving a way of thinking. We live in an age of speed, convenience and instant answers, yet many of life's most important decisions come without clear instructions or complete information. They demand judgment, patience and the ability to navigate uncertainty – precisely the skills bridge develops.

Socially, a third of young people in the UK report loneliness linked to screen use. Bridge offers what digital entertainment cannot – face-to-face interaction, shared problem-solving and genuine connection. It is, in many ways, an antidote to modern isolation.

None of this is to dismiss AI, which can be a powerful tool, but it cannot think for us. As an academic, the most pressing risk posed by AI is not that machines become more intelligent than humans, but that we become less so.

Bridge reminds us what it means to think, actively, collaboratively and under pressure. It challenges us, frustrates us, and ultimately rewards us with a deeper understanding of both the game and ourselves.

Bridge is not a silver bullet, but it is a reminder of something fundamental – that thinking is an active process, one that requires effort, engagement and interaction.

In an age where artificial intelligence is learning to think, the real question may not be what machines can do – but what we choose to keep doing.

Once we lose the habit of thinking for ourselves, it is far from clear how easily we get it back.

Professor Samantha Punch is a sociologist at the University of Stirling, a Scottish International Bridge Player, founder of BAMSA, and a representative of Scottish Bridge. She is speaking ahead of a Scottish Bridge Youth Camp on June 19. For those who are curious to learn how to play contact youthconvenor@sbu.org.uk