

《人机撕X斗棋对决开战：李世石VS阿尔法》



You would be nervous if you were representing the human race against a very clever machine. Lee Se-dol, the world champion at Go is due to play a computer with a programme devised by Google.

??

Mr Lee is the reigning human champion of the planet. "Playing against a machine is very different from an actual human opponent," the world's Number 1 told the BBC. "Normally, you can sense your opponent's breathing, their energy. And lots of times you make decisions which are dependent on the physical reactions of the person you're playing against. "

????????????????"????????????????"????????BBC?????"??"

At the opening move in chess there are 20 possible moves. In Go, the first player has 361 possible moves. This wide latitude of choice continues throughout the game. At each move the opposing player must rethink his own plan of attack. Self-discipline is a major factor in success at this game.

????????????????????????361??

The number of permutations in a game of Go is greater than the number of atoms in the universe, so it can't be

solved by algorithms that search exhaustively for the best move. For this reason, it's not just a matter of the cold calculus of a computer working out permutations.

??

Go was invented by the Chinese 2,500 years ago or thereabouts. It's about controlling territory (on the board) as opposed to chess which is about capturing the king. Both are too complex for a computer to predict every move with utter certainty, through the force of computing power. Computers - like humans - have to assess.

??2500??

AlphaGo worked out which positions were likely to be winning ones, and then - and this is the master-stroke - it played itself repeatedly to improve its own play. So, this tournament between man and machine feels like a contest for the supremacy of the future.

??

??????“??????”??!!!!

????

????????????5??????3?9??3?10??3?12??3?13??3?15??

????????????????????????????3-0?3-1????????????5????AlphaGo??????????

????????????7.5????????????????????????3?60?????

????????????????????1?(??????12?)????????????????????4?5????

????????????????????????????AlphaGo?AlphaGo????????????????????

????????????????100????????AlphaGo????????????????????????

????????????YouTube??DeepMind????????????????????????????