

Lab-grown brain cells learn to play
video game

實驗室培養出的腦細胞可玩電子遊戲

研究人員在實驗室裡培養出的腦細胞已經學會玩 20 世紀 70 年代類比乒乓球比賽的電子遊戲《乓》（Pong），研究人員表示，他們培養出的“迷你大腦”能感知並對周圍環境作出反應。

Pong was one of the very first computer games. **Released** in 1972, it involves keeping a dot in play by sliding a paddle on each side of the screen.

《乓》是最早問世的電子遊戲之一，這款遊戲於 1972 年發行，玩家通過滑動螢幕兩側的球拍擊球，使球保持在界內。

Researchers at Cortical Labs in Melbourne grew 800,000 **brain cells** from a mixture of mouse **neurons** and **stem cells**. They then connected them to a computer. With a little **coaxing**, the cells learnt how to play within five minutes.

澳大利亞墨爾本腦科學公司“Cortical Labs”的研究人員用小鼠神經元和幹細胞的混合物培養出了 80 萬個腦細胞，然後，他們將這些腦細胞連接到電腦上，在稍加引導後，“迷你大腦”在五分鐘內就學會了玩這個遊戲。

Mini-brains are currently being used to research brain development and to find new treatments for **disorders**. But this experiment has taken the technology a step further and could be used to develop a more flexible type of **artificial intelligence**.

“迷你大腦”技術一直被用於研究大腦發育和尋找疾病的新療法，但這個實驗將該技術向前推進了一步，使其有望用於研發更靈活的人工智慧類型。

1. 詞彙表

released	發行
brain cells	腦細胞
neurons	神經元
stem cells	幹細胞
coaxing	引導
disorders	疾病，（身心機能的）失調
artificial intelligence	人工智慧

2. 閱讀理解：請在讀完上文後，回答下列問題。（答案見下頁）

1. When was the computer game Pong first released?
2. What were these new artificial brain cells grown from?
3. How long did it take for the brain cells to learn how to play Pong?
4. True or false? *This experiment has had similar results to other research into brain development.*

3. 答案

1. When was the computer game Pong first released?

The game was first released in 1972.

2. What were these new artificial brain cells grown from?

They were grown from a mixture of mouse neurons and stem cells.

3. How long did it take for the brain cells to learn how to play Pong?

With a little coaxing, the cells learnt how to play within five minutes.

4. True or false? *This experiment has had similar results to other research into brain development.*

False. This experiment has taken the technology a step further and could be used to develop a more flexible type of artificial intelligence.