Brain chip turns thoughts into speech



Thoughts to words: Ann Johnson sits face to face with her digital avatar, through which she can speak out loud via a brain-chip implant.

Would it be great to read people's thoughts? An extraordinary new experiment has let a stroke victim speak again. Mind reading technology could soon follow.

What's happening?

Ann Johnson's life recently took a big turn, 18 years after the then teacher suffered a **stroke** which left her unable to move or speak.

Now that has changed. She has become the first person to test a new brain implant which turns her thoughts into speech. Johnson can move her head to type slowly.

Researchers believe it will help people without speech to gain lost parts of their identity.

Find out more

Brain data is not the same as thought, but these new developments open up the possibility that mind-reading is on its way.

Imagine if you could see other people's thoughts. You could find out what your teacher and friends really think of you.

It could make us all more honest. Everyone would have to be completely open with each other.

It could also be a nightmare: imagine being on a train surrounded by other people's thoughts. It could drive you to madness. We would lose our freedom of thought.

And what if a device fed your thoughts back to the highest bidder? What if a hacker gained control of it? Or if it stored your thoughts up for future use against you?

Would it be great to read people's thoughts?

Some say

Yes! We would be able to see people for who they really are, rather than the wall they put up to the world. We could become closer to others than ever before.

Others think

No! Thoughts define who we are. If we start listening to other people's thoughts about us it might disrupt our sense of self. It might also be awful to learn what others think of us.

Some people say

"Most people do not really want freedom, because freedom involves responsibility, and most people are frightened of responsibility."

Sigmund Freud (1856 – 1939), Austrian writer and psychologist

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What do you think?

How do you feel about this story? - Would you ever let someone read your mind?

2. Wonder

 $1. \ Connect \\$

What questions do you have? - For example: Why are some stroke victims unable to speak? Is speech a major part of your identity?

$3. \ Investigate$

What are the facts? - Pick out one thing we know for certain about this story and one thing we cannot say for sure.

4. Construct

What is your point of view? - You lose the ability to speak. Would you use a thought-to-speech device?

5. Express

What do others believe? - In groups come up with an idea for a new medical technology. Present your idea to the class.

6. Reflect

What might happen next? - Write a paragraph depicting a minute of your thoughts.

Glossary

Stroke - A medical emergency that occurs when the blood supply to a part of the brain is cut off. They can cause lasting brain damage if not treated quickly.