

Scientists say they can read dreams

8th April, 2013



Japanese scientists say they have found a way to "read" people's dreams. Researchers at the ATR Computational Neuroscience Laboratories used

magnetic resonance imaging (MRI) for what they say is, "the world's first decoding" of night-time visions. Their research is published in the journal "Science". The researchers wrote: "Visual imagery during sleep has long been a topic of persistent speculation, but its private nature has hampered objective analysis. Here, we present a neural decoding approach in which machine learning models predict the contents of visual imagery during sleep." They were able to predict what images their volunteers had seen with a 60 per cent accuracy rate.

The research is a part of a wider programme aimed at studying the brain. It hopes to unlock the secrets of the unconscious mind to help the disabled move artificial limbs using brain activity. It could also help those with dementia and other neurological conditions. A spokesperson said: "Our expectations from the dream study are quite high, but we are also looking carefully at the ethical aspects of the technology, which may allow a third person to look at somebody else's thoughts." Head researcher Yukiyasu Kamitani said, "dreams have fascinated people since ancient times, but their function and meaning has remained closed". He believes his research is, "a key step towards reading dreams more precisely".

Sources: *Science* / *Japan Times* / *IB Times*

Writing

Looking at other people's dreams is unethical and should not be pursued by scientists. Discuss.

Chat

Talk about these words from the article.

scientists / reading dreams / research / journal / speculation / predict / volunteers / research / unlock secrets / the unconscious mind / expectations / ancient times

True / False

- Scientists used CAT (Computer Axial Tomography) to read dreams. T / F
- The scientists say their research into decoding dreams is a world first. T / F
- Scientists said the private nature of dreams makes research difficult. T / F
- The researchers say their technology is less than 50% accurate. T / F
- The research is aimed at helping the disabled be more mobile. T / F
- Scientists say the research can't help those with neurological problems. T / F
- A spokesperson said they must look into the ethics of reading dreams. T / F
- A researcher said wanting to understand dreams is a newish thing. T / F

Synonym Match

- | | |
|----------------|----------------|
| 1. persistent | a. slowed down |
| 2. hampered | b. correctness |
| 3. objective | c. interested |
| 4. predict | d. synthetic |
| 5. accuracy | e. constant |
| 6. unconscious | f. forecast |
| 7. artificial | g. moral |
| 8. conditions | h. sleeping |
| 9. ethical | i. unbiased |
| 10. fascinated | j. illnesses |

Discussion – Student A

- Could dream-reading be dangerous?
- Would you buy technology that let you save dreams on your computer?
- Whose mind or dreams would you like to read?
- Could this technology cure the world's mental health?
- What are the ethical issues surrounding this technology?
- Who would you allow to read your deepest thoughts?
- How could this technology improve people's lives?
- What questions would you like to ask the scientists?

Phrase Match

- | | |
|-------------------------------------|--------------------------|
| 1. magnetic resonance | a. analysis |
| 2. the world's first decoding | b. aspects |
| 3. a topic of persistent | c. at studying the brain |
| 4. objective | d. imaging |
| 5. a 60 per cent | e. limbs |
| 6. a wider programme aimed | f. of night-time visions |
| 7. artificial | g. since ancient times |
| 8. dementia and other neurological | h. speculation |
| 9. looking carefully at the ethical | i. conditions |
| 10. dreams have fascinated people | j. accuracy rate |

Discussion – Student B

- What kinds of dreams do you have?
- Would you like to be able to read your dreams?
- Do you think this is a good use of technology?
- Would you like to be able to read everything in someone's mind?
- Would you like to volunteer for this research?
- How interested are you in the meaning of dreams?
- Has anything you've dreamt about come true?
- Do you ever dream in English?

Spelling

- dnocgdie of night-time visions
- published in the ljaunor "Science"
- a topic of persistent eupcnslaito
- hampered objective islaysna
- images their troseluenv had seen
- a 60 per cent rccayua rate
- the noinoucussc mind
- iiatifclr limbs
- other igeonarloclu conditions
- the halitec aspects
- dreams have tedaancisf people
- reading dreams more eelspyirc

Answers – Synonym Match

1. e	2. a	3. i	4. f	5. b
6. h	7. d	8. j	9. g	10. c

Role Play

Role A – Pro-dream reader

You think the ability to read dreams and thoughts is fantastic. Tell the others three reasons why. The technology could cure all mental illnesses. It could cure the world's mental health and we would all love each other. You think most people would love to look back at their dreams.

Role B – Anti-dream reader

You think the ability to read dreams and thoughts is very dangerous. Tell the others three reasons why. You think it is ethically unsound to read dreams and thoughts. There is a reason why we cannot read dreams. You think this ability would change humans too much.

Role C – Troubled relationship person

You are having trouble with your partner. You think (s)he is seeing someone else. You are sure that if you read his/her dreams, you could find out the answer. You think dream-reading is a fantastic way of keeping marriages and relationships together.

Role D – Person X

You are incredibly rich and powerful and want to be a dictator. You want to invest in this dream-reading technology to control everyone in your country. Support everything the pro-dream reader says. Strongly disagree with the other two. Tell everyone nothing gets in the way of science.

Speaking Other's Thoughts

Rank these and share your rankings with your partner. Put the ones you want to know most at the top. Change partners often.

- | | |
|-------------------------|--------------------------|
| • past relationships | • the future |
| • feelings about you | • their fears |
| • their biggest secrets | • their secret desires |
| • their politics | • their level of honesty |

Answers – True False

a	F	b	T	c	T	d	F	e	T	f	F	g	T	h	F
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Answers to Phrase Match and Spelling are in the text.