



Daniel Kahneman: Thinking, fast and slow

Quick quiz:

- A bat and ball costs \$1.10. The bat costs \$1 more than the ball. How much does the ball cost? **\$0.05**
- If it takes 5 machines 5 minutes to make 5 widgets, how long does it take 100 machines to make 100 widgets? **5 minutes**
- In a pond there is a patch of lily pads. Every day the patch doubles in size. If it takes 48 days for the patch to cover the entire pond, how long does it take to cover half the pond? **47 days**

These questions test your reliance on logic versus intuition, or as Daniel Kahneman puts it, your fast mind versus your slow mind.

Vocabulary:

Which words imply *thinking fast* and which imply *thinking slow*?

Impulsive	Deliberate	Calculating	Cautious	Hasty	Abrupt	Pondered
Thoughtful	Automatic	Intuitive	Emotional	Conscious	Instinctual	Considered

Ask questions which elicit responses that allow students to use these words.

Questions:

- When is thinking fast important? **E.g. Life or death situations.**
- When is thinking slow important? **E.g. Situations that require mental effort.**
- Can you give an example of a time when your fast mind got you into trouble?
- How has your tendency to think fast or slow changed as you have aged?

Video and Comprehension:

Add the correct prepositions to this passage:

Usually, when faced **with** a situation it can't comprehend, System 1 calls on System 2 to help solve the problem, but sometimes System 1 is tricked. For example **in** the Bat-and-Ball problem when it perceives the problem as simpler than it is, and incorrectly assumes it can handle it **on** its own.

The issue these kinds of problems expose is our innate mental laziness. When we use our brain we tend to use the minimum amount of energy possible for each task. In other words, if our mind thinks it can get by without using System 2, it will.

This laziness is important, because using system 2 is an important aspect of our intelligence. Research shows that practicing System 2 tasks, like focus and self-control, lead to higher intelligence scores. The bat-and-ball problem illustrates this as our minds could have checked the answer by using System 2 and thereby avoiding making this common error.

<https://www.youtube.com/watch?v=PirFrDVRBo4>

- What examples of *thinking fast* does Kahneman mention in the video? **What is 2+2? How do you feel when someone says 'mother' etc.**
- Explain Kahneman's chess analogy and how he uses it to show when we can 'trust our gut'? **When you are in expert in a situation that allows you to use that expertise then trusting your gut is statistically a good idea.**
- Write down 3 situations where *you* think you can trust your gut and explain why.

Things to look out for:

The halo effect - the tendency for a positive impression in one area to influence in another.

Example: **People now buy new iphones because of previous good experiences, not because of any significant difference in quality with competitors.**

Priming - exposure to a stimulus to influence a later stimulus.

Example: **S__P - what is this word if you are hungry? If you need a shower? If you are at sea?**

Substitution heuristic - answering a question that is easier than the one actually posed.

Example: **When we ask ourselves if someone would be a good president we often ask ourselves if someone looks like a president. This is a much easier, but largely irrelevant, question.**

Availability heuristic - overestimating the probability of something due to relevant information being highly frequent or overly reported.

Example: **In the USA you are more likely to die from a falling coconut than from an act of terrorism. The news does not reflect that.**

Base rate neglect - regression to the mean is very hard to avoid.

Example: **If you average 5 goals per month and you score 10 goals in the first month but only 2 in the second, your manager should be happy with you as over two months you have performed above your average. It is more common to overreact to the dip in goals scored however.**

Action Points:

- Recognise that repeated exposure to things with no bad consequences are not inherently good.
- Don't be influenced by rare statistical events that are over reported. You probably won't be killed in a terrorist attack if you visit London.
- Mood affects creativity and intuition. Work on being happy.