

Unit 8 Academic reading

The science of optimism

1 Work in groups. Discuss these questions.

optimist /'ɒptɪmɪst/ (noun) someone who tends to expect that _____ things will happen
pessimist /'pesɪmɪst/ (noun) someone who always expects that _____ things will happen

- 1 Which words are missing from the two dictionary definitions?
- 2 Do you consider yourself to be more of an optimist or a pessimist? Why?
- 3 Who is the most optimistic / pessimistic person you know?
- 4 Do you know these English expressions about optimism and pessimism, connected to the pictures? What similar expressions do you have in your language?

If you say someone *sees the glass as half full / half empty* it means you think they are an optimist (half full) or a pessimist (half empty).



If you say someone *sees the world through rose-tinted glasses*, it means you think they see everything in a positive light.

2 Read the article *The science of optimism* and match the paragraphs A–E with these descriptions (1–5).

- 1 A summary of the benefits of being an optimistic person.
- 2 A question that scientists had not been able to answer.
- 3 A theory about an additional outcome of the research project.
- 4 A description of how an experiment was carried out.
- 5 An explanation of how parts of the brain interact with each other.

SKILLS FOCUS: Note taking

It is important to make notes when you read, then review your notes regularly in order to remember information better. There is no one best way to take notes, but these are some useful strategies.

- Write phrases and key words, not full sentences.
- Use headings, underlining and colours to highlight key ideas.
- Use bullet points and numbers to show different ideas clearly.
- Use arrows to show steps in a sequence, or cause and effect.
- Use abbreviations to help you to write more quickly.

3 Look at these different styles of notes taken for paragraphs B and C of the article. Read the article again and complete the notes. Use one or two words in each gap.

Paragraph B

Who?

- Tali Sharot – works at New York Uni as a **1**

What?

- Discovered the **2** in our brains that makes us optimistic

How?

- Participants had to remember past events & imagine future events & say how positive, clear & **3** they were
- They also had to say whether they were experiencing it **4** or as an observer
- Participants' optimism was assessed using a **5**

Paragraph C

When volunteers imagined future events that were **6**, two parts of the brain were strongly activated and linked

the **7**

↓

provides the connection between our emotions and other activities our brains are involved in, such as **8**

the RACC

↓

helps us to hope and dream, while evaluating emotions and events that happened to us in the **9**

The RACC creates a hopeful outlook by limiting **10** emotions – the link between the two areas is increased in people who are **11**

4 Work in pairs. Discuss which style of notes, B or C, you prefer and why. What kind of information is the layout in C useful for?

5 Now make notes on paragraphs D and E. Compare your notes with your partner.

6 Recognizing two sides of an argument. A writer can try to give a balanced view of an argument by showing both sides. Look again at paragraph D and underline the two parts where the writer admits there might be a problem with being optimistic.

7 Look at the parts you have underlined with your partner. Which linking words does the writer use? What modal verbs does the writer use? Why?

8 Work in groups and discuss these questions.

- Do you agree that people in general are more optimistic than pessimistic? Why? / Why not?
- Do you agree that there are negative consequences to being optimistic?

The science of optimism

A Psychological experiments have consistently shown that humans are an optimistic species. We expect our future successes to be better than our past ones and when we compare ourselves to others, we believe we are more likely to live longer, have a more successful career and less likely to suffer divorce or ill health. But up until recently, researchers were not sure where this optimism came from.

B Tali Sharot, a neuroscientist from New York University, has found the neural circuit in the brain that generates this glass-half-full outlook. In her research she asked people to remember past events such as the end of a relationship, or imagine future ones such as winning an award. She then asked the participants to describe what they were imagining in several ways, like how positive, vivid and emotional the thoughts were and whether in their mind they were imagining the experience first-hand or observing it from afar. Finally, each person completed a standard questionnaire to score how optimistic they are.

C While the volunteers were describing their thoughts, Sharot was busy scanning their brains with a technique called functional magnetic resonance imaging (fMRI). She identified two parts of the brain that were more strongly activated when they thought about positive future events compared to negative ones – the rostral anterior cingulate cortex, or RACC, and the amygdala. The amygdala is a small structure deep in the brain that is the link between our emotions and our higher brain functions like memory and decision-making. The RACC is a region of the brain known to help us think about preferences, hopes or dreams. Sharot's brain scans revealed that the RACC and amygdala were strongly linked when volunteers imagined happy future events, but not negative ones. Sharot believes that the RACC helps us to imagine a future event by assessing and summing up the emotions and experiences from our past. But it emphasizes the positive and reduces any negative emotional responses from the amygdala. Thanks to the RACC, we can happily distance ourselves from negative past experiences and move towards positive ones. And the RACC was more strongly activated in volunteers who scored higher in the optimism questionnaire – the more optimistic a person is, the stronger the connection between the two structures becomes.

D The participants in Sharot's study rated future happy events more positively than past ones and they believed that these events would happen much sooner than negative events would. They also saw happy future events in their mind from a first-hand viewpoint, while they were more likely to see sad future events from an outsider's perspective. This belief that the future will be much better than the past and present is known as the optimism bias. Seeing the future through rose-tinted glasses may be a bit naïve, but it's also useful. A tendency to expect successful outcomes could provide us with motivation for achieving our goals. While extreme optimism can lead us to harm by underestimating risks, paying too much attention to negative predictions can impact badly on our daily lives. Hope stops us from worrying, lowers our stress levels and improves our physical health. Researchers who studied patients with heart-disease found that optimists were more likely to take vitamin supplements, eat a more healthy diet and do more exercise, which means they reduced their overall risk of heart-disease.

E By identifying the neural circuits involved in optimism, Sharot may also have provided useful insights into its opposite number – depression. Depression is associated with pessimism and an inability to view the future in detail. It could be that the circuit connecting the RACC to the amygdala is faulty in the brains of depressed people, so that they cannot downplay negative experiences when thinking about the future.

neural circuit (n) /'njʊərəl 'sɜ:(r)kɪt/ the pathway that carries information from the brain to other parts of the body
naïve (adj) /naɪ'vi:/ innocent and simple