READING TEST B2+/C1

TASK 1

During a lab meeting, one of our PhD researchers recalls how her father would forbid her from using paper to help solve maths homework problems by writing them down. Another admits that she sometimes still uses her hands to make small calculations, although she does so while hiding them behind her back. When we realise that all of us use our fingers in order to answer demands for the "third, fifth, and seventh digits" of our secret online banking password, we laugh in relief. We are not so daft after all, or at least we are not alone.

Our ability to think and reason has been trained and tested in real world situations that restrict our ability to use our hands. At school, children quickly learn to count "in their heads", without using their fingers as props. At university, we ask our students to take "closed-book" exams, relying only on that information committed to memory. Job applicants take intelligence tests during which their interaction with the world is limited to a tick-box (or computer key-press) to mark their selected answers. The implicit assumption that underpins these practices is that truly intelligent behaviour originates from the inner parts of the brain, and the brain alone.

Of course educators are well aware that props are a great help in teaching young children to reason with numbers and solve problems. Likewise, neuropsychologists use props to assess memory loss in the elderly. In other words, it's acceptable to engage with the material world to support your thinking if your mental abilities are still developing or if you are losing your cognitive powers. For the rest of us, however, it's seen as a sign of cognitive weakness.

It is this view we aim to challenge, rejecting the metaphor of mind as computer according to which thoughts ultimately emerge from the brain's processing of information from the outside world. The insidious consequence of this metaphor is that it implies that simulating a situation in your head while you think is equivalent to living through that situation while you think. In both cases, your answer will depend only on how (well) your brain processes the information. Our research strongly challenges this assumption. We show instead that people's thoughts, choices and insights can be transformed by physical interaction with things. In other words, thinking with your brain alone – like a computer does – is not equivalent to thinking with your brain, your eyes, and your hands – as humans frequently do.

The mind in the world

In the course of problem solving, we naturally tend to recruit artefacts and manipulate them to augment and transform our ability to think and to explain ourselves. Consider a game of Scrabble: players naturally touch, move and re-arrange the tiles they receive. If thinking were simply done "in the head", what's the purpose of these moves?

In fact, these moves are integral to the process of generating words. As players reconfigure the physical properties of their environment, they are not simply making it easier for them to think; they are thinking. Moves can be deliberate or serendipitous. This suggests that thinking is fundamentally relational: it unfolds along a series of physical changes in the environment that at times affects, and at times is affected by, a series of biological changes in the brain.

To put this to the test, we design thinking tasks under laboratory conditions during which people can physically interact with the properties of the problem. Interactivity inevitably benefits performance. In part this is because changes in the physical environment make it easier for people to remember what information they are considering. But also dynamically changing the problem's configuration prompts new possibilities for action, or unveils new ways of solving problems. People are more creative and more efficient when solving problems with their hands: thinking is an embodied activity embedded in a physical environment.

We recently applied this approach to a study of creativity and insight. While posing a problem presented using a classic pencil and paper format never led to a breakthrough, those who could use physical artefacts to build a model of the problem were much more likely to reach some insight, no matter the difference between the participants' cognitive abilities.

We also applied this approach to the study of complex statistical reasoning. Previous research had found that, depending on the ease of mentally representing the statistical information presented, between 11 per cent and 40 per cent of people succeeded in solving these reasoning problems using just pen and paper.

We presented the same information on a pack of cards which reasoners were free to spread out and rearrange in any way they liked. Not all participants fully engaged with the cards – perhaps unwilling to be judged as poor thinkers for doing so. Yet the success rate for those who made the most of this opportunity to use the material world to boost their thinking leapt to 75 per cent.

So the next time your child counts using her fingers, or you see your employees spread out information over their desk and walls, be reassured: they are not limited in their capacity to think well, nor are they handicapping their ability to do so. In fact, they are enhancing their ability to think. Your mind does not think like a computer, it thinks with the objects (including computers) and people around you. And our capacity to think and reason well at any given moment depends as much on our cognitive abilities as it does on the richness – or paucity – of material things with which to support our thinking and decision-making.

1. Which of these options is an appropriate synonym for the verb *to forbid* in the sentence "her father would forbid her from using paper" (paragraph 1)?

Foster

Sanction

Ban

2. Which of these is a grammatically correct paraphrase of the subordinating conjunction *in order to* in "When we realise that all of us use our fingers in order to answer demands for the "third, fifth, and seventh digits" of our [...] banking password, we laugh in relief" (paragraph 1)?

When we realise that all of us use our fingers *owing to* answer demands...

When we realise that all of us use our fingers *so that* we can answer demands...

When we realise that all of us use our fingers *so* can answer demands...

3. When it comes to thinking and reasoning, which of these options has been regarded more favourably according to what is said in the text?

The combined use of visual and cognitive abilities.

The use of our fingers.

The exclusive use of our brain.

4. Which of these statements is INCORRECT according to what is said in the first four paragraphs of the text?

The brain is the only organ that is involved in human reasoning.

The use of external materials is not frowned upon in the case of specific age groups.

The author objects to the view of the mind as a computer.

5. Which of these statements is true according to what is stated in the text?

When thinking, biological changes in the brain can affect physical changes in the environment, but not the other way around.

Thinking is argued to be relational because biological changes in the brain and physical changes in the environment may affect each other.

Thinking unfolds along a series of physical changes in the environment and this means that it develops or occurs outside such external changes.

6. If you *put something to the test* as the author of the text says in paragraph 7, you...

Prove the validity of something by simply giving a counter-example.

Use a practical implementation of an idea or theory to evaluate its validity.

Succeed in proving a hypothesis.

7. Which of these options is a suitable paraphrase of the idea conveyed in the following sentence from paragraph 8? "Those who could use physical artefacts to build a model of the problem were much more likely to reach some insight, no matter the difference between the participants' cognitive abilities".

In spite of the difference between the participants' cognitive abilities, the likelihood of arriving at some insight increased if physical artefacts were used.

The use of physical artefacts made it easier to reach some insight, but whether or not an insight was attained ultimately depended on the differences that existed between the participants' cognitive abilities.

Insights of some kind were more likely attained when physical artefacts were used, as long as there were no differences between the participants' cognitive abilities.

8. According to the text, why did not all participants fully engage with the cards?

The author thinks it might have been because they felt that they had already been deemed poor thinkers.

Because they said they were compelled to do so.

It could have been the case that they didn't want others to think less of them.

TASK 2

Section A: The first step is the key to all the rest. Yes, our daily lives are undoubtedly contributing to climate change. But that's because the rich and powerful have constructed systems that make it nearly impossible to live lightly on the earth. Our economic systems require most adults to work, and many of us must commute to work in or to cities intentionally designed to favor the automobile. Unsustainable food, clothes and other goods remain cheaper than sustainable alternatives. And yet we blame ourselves for not being green enough. As the climate essayist Mary Annaïse Heglar writes, "The belief that this enormous, existential problem could have been fixed if all of us had just tweaked our consumptive habits is not only preposterous; it's dangerous." It turns eco-saints against eco-sinners, who are really just fellow victims. It misleads us into thinking that we have agency only by dint of our consumption habits — that buying correctly is the only way we can fight
climate change.

Section B: Even if we manage to zero-out our own contributions to climate change, it would be practically a full-time job, leaving us little time or energy for pushing for the systemic changes we need. And the avoided emissions would be tiny compared with the scale of the problem. Each person in the United States emitted an average of 16 metric tons of energy-related carbon dioxide in 2018, according to the Energy Information Agency. The entire country emitted 5.28 billion metric tons of energy-related carbon dioxide that year. I have chosen to fight against a proposed gas pipeline, liquefaction facility and liquefied natural gas export terminal that the Canadian company Pembina wants to build in Oregon, where I live. If built, the project would result in emissions of over 36.8 million metric tons of carbon dioxide equivalent per year. Some 42,000 people submitted comments to a state agency asking it to deny permits for the project. If we manage to stop construction, each of those people could claim credit for preventing one forty-two-thousandth of those emissions — some 876 metric tons per person! It would take 54 years of individual zero-carbon living to make the same dent. My point is that the climate crisis is not going to be solved by personal sacrifice. It will be solved by electing the right people, passing the right laws, drafting the right regulations, signing the right treaties — and respecting those treaties already signed, particularly with indigenous nations. It will be solved by holding the companies and people who have made billions o our shared atmosphere to account.

Section C: These sweeping, systemic changes are complicated and will be hard won. No single person alone can make them happen. Luckily, there are already dozens, if not hundreds, of groups dedicated to climate activism. Some are local and focused on stopping particular fossil-fuel projects, like Rogue Climate in Southern Oregon, with which I am working. Others are national and focused on changing federal policy, like Zero Hour and the Sunrise Movement. Still others, like Greta Thunberg's Fridays for Future, are international and focused on putting moral pressure on climate negotiators and governments around the world. Groups like Project Drawdown research the nuts and bolts of decarbonizing the world.
Climate change is linked to income inequality and injustice, so if your passion is fighting for racial justice, the rights of the poor, or indigenous rights and sovereignty, that works, too. Or you might volunteer for a climate-focused local or national political candidate. The power of these groups is not simply strength in numbers. They work well because they divide up the work that needs to be done and give each task to those best suited to it. This also makes the fight less daunting. Instead of trying to become an expert in international regulatory law, global supply chains, atmospheric science and the art of protest, you can offer the skills and resources you already have, and trust that other people with complementary skills are doing what they can do, too. If you are a writer, you can write letters to the editor, newsletters and fliers. If you are strong, you can lift boxes. If you are rich, you can donate money.

Only you know what and how much you can reasonably do. Take care not to overdo it at first and risk burning out. Set a sustainable level of involvement for yourself and keep it up. As a bonus, working with a group will increase the richness and diversity of your personal relationships, and may well temper your climate anxiety and depression.

Section D: As we fight, it is important for our mental health and motivation to have an image in mind of our goal: a realistically good future. Imagine dense but liveable cities veined with public transit and leafy parks, infrastructure humming away to remove carbon dioxide from the atmosphere, fake meat that tastes better than the real thing, species recovering and rewilding the world, the rivers silver with fish, the skies musical with flocking birds. This is a future where the economic inequality, racism and colonialism that made decades of inaction on climate change possible has been acknowledged and is being addressed. It is a time of healing. Many ecosystems have changed, but natural resilience and thoughtful human assistance is preventing most species from going extinct. This is a future in which children don't need to take to the streets in protest and alarm, because their parents and grandparents took action. Instead, they are climbing trees. This future is still possible.

1. It is beneficial to stay focused on the long-term objective.

Section A

Section B

Section C

Section D

2. Estimates regarding the emissions of a specific source of pollution are provided.

Section A

Section B

Section C

Section D

3. The way the world is makes it hard for us not to pollute in one way or another.

Section A

Section B

Section C

Section D

4. Joining a collective of any scale can be effective and worthwhile.

Section A

Section B

Section C

Section D

5. Our individual footprints pale in comparison to those of big corporations, companies, etc.

Section A

Section B

Section C

Section D

6. An imagined tomorrow is described.

Section A

Section B

Section C

Section D

7. What will really make a difference are our political choices, legal measures, etc.

Section A

Section B

Section C

Section D

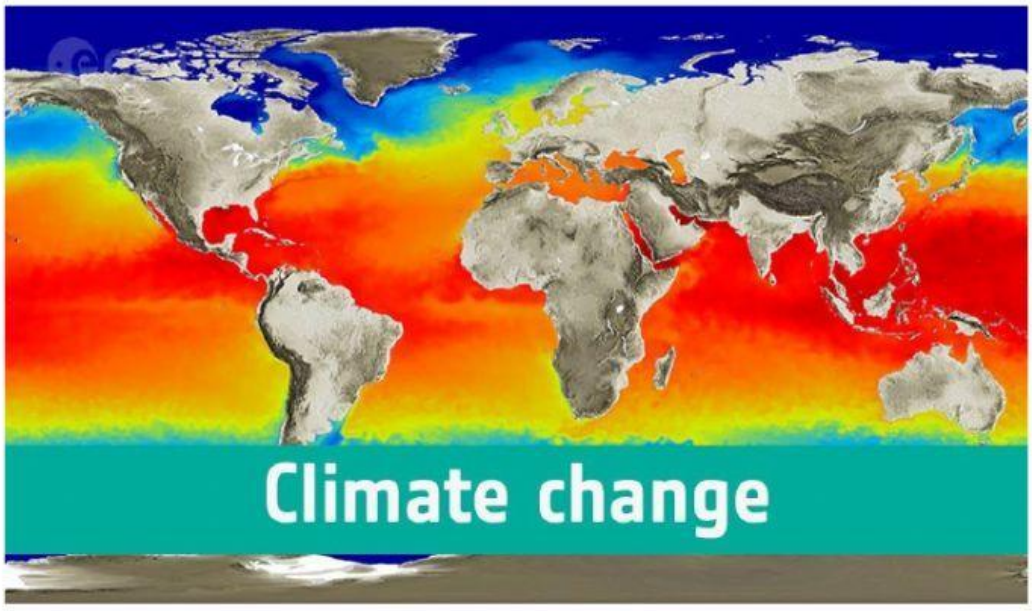
8. Whatever you are good at can be put to use.

Section A

Section B

Section C

Section D



TASK 3

Reviewer A: In the end, while Lawrence delivers as sincere a performance as anyone could, her character is the film's biggest problem. Black Swan mined psychological horror with an intensity and focus that earned its scenes of either magical realism or delusion. In Mother! there is no sense that Lawrence's character ever read a poem, much less a poem of her husband's.
The character is flat, which is not the same as universal or symbolic. She seems to represent pure self-sacrifice, but why? The only evidence on screen suggests it's because Aronofsky declared her to be. Maybe there's an allegory there in which the writer-director is God, but that would be another conversation entirely.

Reviewer B: As it is, the movie, which stars Jennifer Lawrence as a woman who slips down a rabbit hole of paranoid *could this- be-happening?* reality, is far from a masterpiece. It's more like a dazzlingly skillful machine of virtual reality designed to get nothing but a rise out of you. It's a baroque nightmare that's about nothing but itself.

Reviewer C: Unfortunately, soup is the perfect word to describe this pretentious mess of a film. It is full of vapid characters and overwrought imagery, which Aronofsky seems to think add up to allegory.

Reviewer D: As for the performances, there really isn't a false note amongst the high-profile cast. Jennifer Lawrence is terrific in the lead, a sort of Mother Earth in human form. Bardem is given the daunting task of essentially playing God, and as usual, this soft-spoken thespian is up to the challenge. As well made and as audacious as "Mother!" is, though, it's far from perfect.
Throwing in everything but the kitchen sink does not a masterpiece necessarily make, and make no mistake: "Mother!" isn't a masterpiece. It's not even a masterpiece by Aronofsky standards. He's made stronger, more provocative films that pack a much more dramatic wallop in the past (see "The Fountain," "The Wrestler," and "Requiem For a Dream"). That said, there's a lot to admire about "Mother!" For all its cynical nature and ribbing at other belief systems, it certainly isn't lacking in passion, and again, it's stunning to look at.

1. Which reviewer expresses a different opinion from the others in acknowledging that there are also positive aspects to the movie?

Reviewer A

Reviewer B

Reviewer C

Reviewer D

2. Which reviewer agrees with reviewer A regarding Lawrence's acting?

Reviewer B

Reviewer C

Reviewer D

3. Which reviewer expresses a similar view to reviewer A on the fact that (some of) the roles are uninteresting?

Reviewer B

Reviewer C

Reviewer D

4. Which reviewer shares reviewer D's and B's opinion that the movie is not an exceptional work of art?

Reviewer A

Reviewer C