

The Mind Machine?

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Although intelligence has been studied, and the brain has been studied, there is little understanding of how the brain works to produce intelligence. This has something to do with the fact that the brain contains around 100 billion cells (about the number of the stars in the Milky Way).

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One of the continuing myths about the relationship between intelligence and the brain is that the brains of very clever people are somehow physically different from those of ordinary people. At the beginning of the century an American scientist called E.A. Spitzka produced a list of the weights of the brains of important, well-known men. The heaviest brain on the list was that on Turgenev, the Russian novelist, at 2000g. However, the brain of another great genius, Walt Whitman, weighed only 1282g.

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There are no significant differences between the intelligence levels of males and females. However, girls under seven score a little higher than boys in IQ tests and the highest IQ recorded is that of Marilyn vos Savant at 230. However, men and women do differ in the way they think. Generally, women are more skilled verbally and men do better on visual-spatial tasks. Interestingly, the fibers which join the two halves of the brain have been found to be larger in women than in men. This supports the theory that women can change from 'practical' to 'emotional' thinking more quickly than men.

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People with mental problems have often been treated extremely badly. Two hundred years ago, the mentally ill were swung around in revolving chairs, or holes were drilled in their skulls to release the evil spirits. From the 1930s, the mentally ill were subjected to electric shock therapy and lobotomy – the removal of part of their brain. In the 1960s and 70s, thousands of people were given drugs to cope with anxiety and then became addicted to them.

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The brain needs ten times as much blood as other organs of the body, as it can't store glucose for later use. This is different to muscles and other organs and although the adult brain makes up only two per cent of the body weight, its oxygen consumption is twenty per cent of the body's total.

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There are similarities between brains and computers, Computers can do complicated calculations at incredible speeds. But they work in a fixed way, because they can't make memory associations. If we need a screwdriver and there isn't one, we will think laterally and use a knife or coin instead. Computers can't do this. In fact, it is claimed that when it comes to seeing, moving and reacting to stimuli, no computer can compete with even the brain power of a fly.

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Most of our mental processes are deeply formed habits. Challenging your brain to do things differently helps it develop. Try changing routines as often as you can: take a bus instead of going by car, sit in a different chair. An extreme but useful exercise is to read something upside down – you can actually feel your brain at work.

Exercise more. Good health and fitness levels give you overall improved energy which leads to better concentration.

Cooking is a good all-round mental exercise. It needs mathematical, organizational and scientific skills as well as challenging memory and creative ability. Use recipes at first and then learn to guess amounts, combinations, reactions of ingredients and timing.

Do puzzles and play games. Teach yourself to work out codes and expand your vocabulary at the same time.

I. Find the words in the text that match the following definitions

1. A natural form of sugar found in fruit	
2. The bone of your head which encloses your brain	
3. A person's intelligence when measured by a special test	
4. A tool narrow at one end, used to put screws into something or remove them	
5. Structures like threads in your body	
6. The amount of something that someone, something uses	
7. Not able to stop doing or using something	
8. Someone's memory or their ability to think ,feel emotions and be aware of things	
9. Physical activity that you do to make your body strong and healthy	
10. The ability to do an activity or job well, especially because you have practiced it	
11. A game or activity in which you have to put pieces together or answer questions using skills	

_____ / 11 points

II. Read the article and choose the most suitable heading from the list below for each numbered part of article.

- A A horrifying history
- B Bloodthirsty
- C Is bigger better?
- D Make your brain work
- E How much do we know
- F The battle of the sexes
- G The super computer

_____ / 7 points

III. Answer the questions. Use full sentences

1. What is the story about the weight of the brain?

2. What skill are the women better at?

3. How was the anxiety treated in the past?

4. Name at least four mental exercises.

_____ / 12 points

USE OF ENGLISH

I. Complete the sentence for each situation. Study the example carefully.

1. You should take more exercise, because that's the way to get fit.
If you _____, you _____ fit.
2. Road travel is cheaper than rail travel in this country. As a result we have a lot of traffic jams.
If road travel _____ than rail travel in this country, we _____ lots of traffic jams.
3. I can't take much exercise because I don't have enough time.
If I _____, I _____.
4. Many people leave their cars unlocked when they park. This makes life easy for thieves.
If _____ people _____, life _____.
5. It's important to protect wildlife now. Otherwise there will be nothing for future generations.
If _____ we _____, there _____ for future generations.
6. People don't realize the importance of energy conservation, so they do nothing about it.
If people _____, they _____ something about it.

2 points for each sentence (12 points)

II. Circle the correct alternative.

1. My sister **has been/ was** interested in medicine ever since she **has been/was** a child.
2. How long **have you studied/did you study** before you **have qualified/got qualified**?
3. Where **have you first met/did you first meet** your boyfriend?
4. Is this the first time **you've cooked/ you cooked** pasta?
5. We **have wanted/wanted** to go to the cinema last night, but there **haven't been/ weren't** any seats.

6. What can we do? I'm sure something has happened to Alex. **We've been waiting/ We waited** for over an hour and he **hasn't phoned/ he hasn't been phoning** yet.
7. **I've posted/ I posted** that CD to you three weeks ago. If you **still haven't received/didn't receive** it, please e-mail me immediately.
8. I'm exhausted because **I've worked/ I've been working** in a restaurant for the past three weeks. **I've never realized/ I never realized** how hard it is.

1 point for each correct alternative (15 points)

III. Complete the sentence with the verbs from the box in the correct form: present perfect simple, present perfect continuous, present simple or present continuous:

Not/be deal	not finish	have	not know	live	see	not/see	not/speak	stare
stay	suffer	wait	not want	watch				

1. I _____ checking the emails, because I _____ with customers all morning.
2. Thank you, but I really _____ any more juice, I _____ two large glasses already.
3. Paul _____ from earache since the weekend. He _____ the doctor twice, but it is still not better.
4. We _____ why Sara is upset, but she _____ to us for ages.
5. Why _____ you _____ at me like that? I suppose you _____ a woman on a motorbike before!
6. I _____ with my cousin in London for a few days. I _____ here before, but he _____ here for several years, so he can show me around.
7. I'm sorry I'm late. _____ you _____ a long time?
8. We _____ this stupid film since lunch time. Let's switch to the other channel.

1 point for each correct alternative (16 points)

III. Put the verbs in the correct passive form.

1. Look, this is a secret. Come into the garden where we _____ (not/overhear).
2. This office is very inefficient. The phone _____ (never/answer) promptly, _____ no _____ proper _____ records

_____ (keep), and worst of all, no reports
_____ (write) since I started work here.

3. I've collected all the documents that _____ (need) for the sale of the house. Can you take them to the lawyer's office to _____ (sign)?
4. Before his lecture, professor Smith _____ (introduce) to us.

1 point for each sentence (7 points)

V. There are mistakes in some of these sentences. Correct the mistakes where necessary or write OK if the sentences are correct.

1. Please move on! shouted Trevor impatient _____
2. I believe she is a very lonely woman _____
3. I didn't like his plan, which seemed unnecessary complicated to me. _____
4. I'm sure you could win the match if you tried hardly. _____
5. My mother was ill last year, but she's good enough to go on holiday now _____
6. The reason Burke gets so tired is that he has an exceptional demanding job. _____
7. David ran as fast as he could , but he still arrived lately. _____
8. Jean always says she's short of money, but I happen to know she actually has a very good-paid job. _____

1 point for each sentence (8 points)

VI. Rewrite the sentences replacing the underlined verbs with the verbs from the box in the correct form.

Carry on come back cut down find out leave out look back on plug in put off put up with try out turn down work out
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1. I'm sure we'll all remember this holiday with great pleasure.

2. She promised to return at the end of the summer, but he never saw her again.

3. He calculated that it would cost \$50. 000 to do a degree in the States.

4. This lead should be connected to the back of your computer.

5. You have omitted several important facts in your report.

6. We can't continue if you won't cooperate.

7. We can test this sound system in the shop before we buy it.
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8. He was offered a new job, but he refused it because he didn't want to move house.
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9. We moved house because we couldn't bear the noise from the motorway any longer.
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10. He had to leave when his boss discovered what he had done.
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11. Potential customers were discouraged by the difficulty of parking near the restaurant.
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12. The company has succeeded in reducing the amount of packaging used by 25 %.
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1 point for each sentence (**12 points**)