

平成 27 年度入学試験問題

外国語 (英語)

注意事項

- 1 この問題冊子は、試験開始の合図があるまで開いてはならない。
- 2 問題冊子は、全部で8ページある。(落丁、乱丁、印刷不鮮明の箇所などがあつた場合は申し出ること。)
- 3 解答は、すべて解答用紙の指定された箇所に記入すること。
- 4 受験番号は、各解答用紙の指定された2箇所に必ず記入すること。
- 5 解答時間は、教育学部学校教員養成課程教科教育コース英語教育専修が100分、教育学部(学校教員養成課程教科教育コース英語教育専修を除く)およびその他の学部は90分である。解答すべき問題(○印)および解答用紙の枚数は、下表のとおりである。

受 験 者	解答すべき問題(○印)				解答用紙の枚数
	I	II	III	IV	
人文学部	○	○	○		3
教育学部(学校教員養成課程教科教育コース英語教育専修を除く)	○	○	○		3
教育学部(学校教員養成課程教科教育コース英語教育専修)	○	○	○	○	4
法学部	○	○	○		3
経済学部	○	○	○		3
理学部	○	○	○		3
医学部	○	○	○		3
歯学部	○	○	○		3
工学部	○	○	○		3
農学部	○	○	○		3

教育学部学校教員養成課程教科教育コース英語教育専修のリスニングテストは、試験開始70分後に約15分間実施する。

- 6 下書きは、問題冊子の余白を使用すること。
- 7 問題冊子は、持ち帰ること。

I

〔全学部受験者用〕 次の英文を読んで、下の問いに日本語で答えなさい。

Over the last 20,000 years, the human brain has shrunk by about the size of a tennis ball. Palaeontologists found this ^(a) out when they measured the fossilized skulls of our prehistoric ancestors and realized they were larger than the modern brain. This is a remarkable discovery by any standards, since for most of our evolution the human brain has been getting larger. A shrinking brain seems at odds with the assumption that advancing science, education and technologies would lead to larger brains. Our cultural stereotypes of large egg-headed scientists or super-intelligent aliens with bulbous craniums fit with the idea that smart beings have big brains.

Small brains are generally not associated with intelligence in the animal kingdom; this is why being called 'bird-brained' is regarded as an insult (though in fact not all birds have small brains). Animals with large brains are more flexible and better at solving problems. As a species, humans have ^(b) exceptionally large brains — about seven times larger than should be expected, given the average body size. The finding that the human brain has been getting smaller over our recent evolution runs counter to the generally held view that bigger brains equal more intelligence, and that we are smarter than our prehistoric ancestors. After all, the complexity of modern life suggests that we are becoming more clever to deal with it.

Nobody knows exactly why the human brain has been shrinking, but it does raise some provocative questions about the relationship between the brain, behaviour and intelligence. First, we make lots of unfounded ^(c) assumptions about the progress of human intelligence. We assume our Stone Age ancestors must have been backward because the technologies they produced seem so primitive by modern standards. But what if raw human intelligence has not changed so much over the past 20,000 years? What if they were just as smart as modern man, only without the benefit of thousands of

generations of accumulated knowledge? We should not assume that we are fundamentally more intelligent than an individual born 20,000 years ago. We may have more knowledge and understanding of the world around us, but much of it was garnered from the experiences of others that went before us rather than the fruits of our own effort.

Second, the link between brain size and intelligence is naively simplistic for many reasons. It is not the size that matters but how you use it. There are some individuals who are born with little brain tissue or others with only half a brain as a result of disease and surgery, but they can still think and perform within the normal range of intelligence because what brain tissue they do have left, they use so efficiently. Moreover, it's the internal wiring, not the size, that is critical. Brain volume based on fossil records does not tell you how the internal microstructures are organized or operating. Relying on size is as ridiculous as comparing the original computers of the 1950s that occupied whole rooms with today's miniature smartphones that fit into your pocket but have vastly more computing power.

(Bruce Hood, *The Domesticated Brain*, 2014)

〔注〕 palaeontologist 古生物学者

bulbous cranium 球根のような形の頭蓋 garner 獲得する

問 1. 下線部(a)の具体的な内容を述べなさい。

問 2. 下線部(b)を和訳しなさい。

問 3. 下線部(c)について、筆者はどのような具体例を挙げているか。句読点を含め、80字以内で述べなさい。

問 4. 下線部(d)を和訳しなさい。

II

〔全学部受験者用〕 次の英文を読んで、下の問いに日本語で答えなさい。

In 2010, my feelings about books got a major boost from science, as two^(a) major studies published that year confirmed things that I have believed for years: that children (like all other people) should own books, that libraries are wonderful things for children but cannot substitute for book ownership, and that books owned impact children's lives much more than books borrowed. The first study was conducted in low-income school districts across the United States. Researchers found that students who received free books each summer for three years performed substantially better on reading tests than students from the same districts who did not receive books. The researchers in this study made no attempt to determine whether or not the students actually read the books they were given. Book ownership was the only variable under consideration and the only variable that correlated with higher achievements in reading.

The second study, a very thorough one that examined more than 70,000 subjects in twenty-seven countries, found that students who grow up in homes with books stay in school an average of three years longer than students who grow up in homes without books. The large sample size in this study allowed researchers to control carefully for other factors that could influence school longevity; they found that the students received the same advantage "independent of their parents' education, occupation, and class" and that the results "hold equally in rich nations and poor; in the past and in the present; under Communism, capitalism, and Apartheid; and, most strongly, in China."

These studies, and others over the past twenty years, suggest that book ownership can enhance literacy in ways that cannot be attributed to any other factor, including book readership. This does not mean that reading books is unimportant, of course, or that children must own every book that they read. It does mean that something happens to a child's self-perception when he or she is a book owner that does not happen to those who read books without^(b)

owning them. “It’s not the physical presence of the books that produces the biggest impact,” David Brooks writes in the *New York Times*, commenting on the first study and paraphrasing an anonymous book donor, “it’s the change in the way the students see themselves as they build a home library. They see themselves as readers, as members of a different group.” *Salon* columnist Laura Miller agrees: “As much as we love libraries, there is something in possessing a book that is significantly different from borrowing it, especially for a child. You can write your name in it and keep it always. It transforms you into *the kind of person who owns books*, a member of the club, as well as part of a family that has them around the house. You’re no longer just a visitor to the realm of the written word: you’ve got a passport.”

And this is my experience exactly. In a very real way, books changed my life — ultimately because I read them, but initially because I owned them. Having my own library of classic books made me a different kind of person — namely, the kind of person who owns a library of classic books. Reading them, loving them, and learning from them followed naturally from this ontological position. Though I still own more books than I have read, the number ^(c) has been shrinking for years. But will never, I hope, get to zero.

(Adapted from Paul Socken (ed.), *The Edge of the Precipice*, 2013)

[注] anonymous 匿名の *Salon* 『サロン』(オンラインマガジン名)
ontological 存在論的な

問 1. 下線部(a)の結果わかったことを、それぞれ句読点を含め、70字以内で述べなさい。

問 2. 下線部(b)を和訳しなさい。

問 3. 下線部(c)は何の「数」か。30字以内で述べなさい。

Ⅲ

〔全学部受験者用〕 次の問題A, Bに答えなさい。

問題A. 下線部(a), (b)を英訳しなさい。

Hackers around the world are getting better at stealing passwords. ハッカーとはコンピュータを使って許可なく情報を手に入れようとする人のことです。 (a) Now, some computer scientists are trying to stop hackers by not using passwords.

One research project that will make passwords a thing of the past is called Active Authentication. このプロジェクトに携わっている科学者たちは、スマートフォンのような電子機器をハッカーから守るのに、人の個人的な特徴を使おうとしています。 (b) For example, the movement of a person's hands when they use a smartphone can be read by sensors. The phone can remember those signs and observe them. The phone locks when someone other than the owner tries to use it.

(Adapted from 'Scientists Trying to Do Away With Passwords,' VOA Learning English, August 14, 2014)

問題B. Read the email below. Imagine that you are Shizuka. In reply to Tom's email, write your advice about his problem in about 80 words in English.

Subject: English or Japanese?

From: Tom

To: Shizuka

Hi, Shizuka. Thanks for your last email. As you know, I'm at summer school in Tokyo studying Japanese. There are students here from all over the world. In my class there are people from Korea, India, Germany and Italy. Most of the students at the school speak English, so it is easy for us to communicate in English. However, this is causing a lot of problems because the students speak English too much in class. Our teacher, Mr. Yamamoto, said, if we want to get better at Japanese we should use only Japanese in class. But one of the students, Hans from Germany, disagreed. He said, because his Japanese is not very good, if he has a problem, or if he can't understand something in class, it is better for him to ask for help in English. Another student, Misha, from India, agreed with Hans. She said, because we can all speak English, we should use that language to communicate until we get better at Japanese.

What do you think? Should we use only Japanese in class or should we use Japanese and English?

I look forward to hearing from you soon.

Tom

(注：解答欄末尾の所定の箇所に語数を「(80 words)」のように記すこと。ただし、解答欄に印刷されている部分およびピリオドやコンマなどの句読点は語数に含めません。)