

熊本大学

英語

問題

2019年度入試

- 【学部】 文学部、教育学部、法学部、理学部、医学部、工学部
- 【入試名】 前期日程
- 【試験日】 2月25日
- 【試験時間】 120分



「過去問ライブラリーは、(株)旺文社が刊行する「全国大学入試問題正解」を中心とした過去問、研究・解答(解答・解説)を掲載しています。本サービスに関する知的財産権その他一切の権利は、(株)旺文社または各情報提供者に帰属します。本サービスに掲載の全部または一部の無断複製、配布、転載、譲渡等を禁止します。各設問に対する「研究・解答」は原則として旺文社が独自に作成したものを掲載しています。掲載問題のうち★印を付したものは、著作権法第67条の2第1項の規定により文化庁長官に裁定申請を行った上で利用しています。

裁定申請日 【2017年】8/1 【2018年】4/24、9/20 【2019年】6/20

1 次の英文を読んで問1～問6に日本語で答えなさい。

In the first recorded encounter between Sapiens and Neanderthals, the Neanderthals won. About 100,000 years ago, some Sapiens groups migrated north to the Levant, which was Neanderthal territory, but failed to secure a firm footing. This might have been due to nasty natives, a difficult climate, or unfamiliar local parasites. Whatever the reason, the Sapiens eventually retreated, leaving the Neanderthals as masters of the Middle East.

This poor record of achievement has led scholars to speculate that the internal structure of the brains of these Sapiens was probably different from ours. They looked like us, but their cognitive abilities — learning, remembering, communicating — were far more limited. Teaching such an ancient Sapiens English, persuading him of the truth of Christian teachings, or getting him to understand the theory of evolution would probably have been ⁽¹⁾hopeless undertakings. Conversely, we would have had a very hard time learning his language and understanding his way of thinking.

But then, beginning about 70,000 years ago, *Homo sapiens* started doing very special things. Around that date Sapiens bands left Africa for a second time. This time they drove the Neanderthals and all other human species not only from the Middle East, but from the face of the earth. Within a remarkably short period, Sapiens reached Europe and East Asia. About 45,000 years ago, they somehow crossed the open sea and landed in Australia — a continent hitherto untouched by humans. The period from about 70,000 years ago to about 30,000 years ago witnessed the invention of boats, oil lamps, bows and arrows and needles (essential for sewing warm clothing). ⁽²⁾The first objects that can reliably be called art date from this era, as does the first clear evidence for religion, commerce and social order.

Most researchers believe that these unprecedented accomplishments were the product of a revolution in Sapiens' cognitive abilities. They maintain that the people who drove the Neanderthals to extinction and settled Australia were as intelligent, creative and sensitive as we are. If we were to come across them, we could learn their language and they ours. We'd be able to explain to them everything we know — from the adventures of Alice in Wonderland to the paradoxes of quantum physics — and they could teach us how their people view the world.

The appearance of new ways of thinking and communicating, between 70,000 and 30,000 years ago, constitutes the Cognitive Revolution. What caused it? We're not sure. ⁽³⁾The most commonly believed theory argues that accidental genetic change modified the inner wiring of the brains of Sapiens, enabling them to think in unprecedented ways and to communicate using an altogether new type of language. We might call it the Tree of Knowledge mutation. Why did it occur in Sapiens DNA rather than in that of Neanderthals? It was a matter of pure chance, as far as we can tell. But it's more important to understand the consequences of this change than its causes. ⁽⁴⁾What was so special about the new Sapiens language that it enabled us to conquer the world?

It was not the first language to exist. Every animal has some kind of language. Even insects, such as bees and ants, know how to communicate in sophisticated ways, informing one another of the whereabouts of food. Neither was it the first vocal language. Many animals, including all ape and monkey species, have vocal languages. For example, green monkeys use calls of various kinds to communicate. Zoologists have identified one call that means, 'Careful! An eagle!' A slightly different call warns, 'Careful! A lion!' When researchers played a recording of the first call to a group of monkeys, the monkeys stopped what they were doing and looked upwards in fear. When the same group heard a recording of the second call, the lion warning, they quickly scrambled up a tree. Sapiens can produce many more distinct sounds than green monkeys, but whales and elephants have equally impressive abilities. A parrot can say anything Albert Einstein could say, as well as mimicking the sounds of phones ringing, doors slamming and sirens wailing. Whatever advantage Einstein had over a parrot, it wasn't vocal. What, then, is so special about our language?

The most common answer is that our language is amazingly flexible. We can connect a limited number of sounds and signs to produce an infinite number of sentences, each with a distinct meaning. We can thereby receive, store and communicate a large amount of information about the surrounding world. A green monkey can yell to its comrades, 'Careful! A lion!' But a modern human can tell her friends that this morning, near the bend in the river, she saw a lion tracking a herd of bison. She can then describe the exact location, including the different paths leading to the area. With this information, the members of her band can put their heads together and discuss whether they should approach the river, chase away the lion and hunt the bison.

A second theory agrees that our unique language evolved as a means of sharing information about the world. But the most important information that needed to be conveyed was about humans, not about lions and bison. Our language evolved as a way of gossiping. According to this theory *Homo sapiens* is primarily a social animal. Social cooperation is our key for survival and reproduction. It is not enough for individual men and women to know the whereabouts of lions and bison. ⁽⁵⁾It's much more important for them to know who in their band hates whom, who is sleeping with whom, who is honest, and who is a cheat.

The amount of information that one must obtain and store in order to track the ever-changing relationships of even a few dozen individuals is vast. (In a band of fifty individuals, there are 1,225 one-on-one relationships, and countless more complex social combinations.) All apes show a keen interest in such social information, but they have trouble gossiping effectively. Neanderthals and archaic *Homo sapiens* probably also had a hard time talking behind each other's backs — a much disliked ability which is in fact essential for cooperation in large numbers. The new language skills that modern Sapiens acquired about 70,000 years ago enabled them to gossip for hours on end. Reliable information about who could be trusted meant that small bands could expand into larger bands, and Sapiens could develop tighter and more sophisticated types of cooperation.

Most likely, both ⁽⁶⁾the gossip theory and the there-is-a-lion-near-the-river theory are valid. Yet the truly unique feature of our language is not its ability to transmit information about men and lions. Rather, it's the ability to transmit information about things that do not exist at all. As far as we know, only Sapiens can talk about entire kinds of entities that they have never seen, touched or smelled.

Legends, myths, gods and religions appeared for the first time with the Cognitive Revolution. Many animals and human species could previously say, 'Careful! A lion!' Thanks to the Cognitive Revolution, *Homo sapiens* acquired the ability to say, 'The lion is the guardian spirit of our tribe.' This ability to speak about fictions is the most unique feature of Sapiens language.

(問1) 下線部(1)のように言える理由を簡潔に述べなさい。

(問2) 下線部(2)を日本語に直しなさい。

(問3) 下線部(3)を日本語に直しなさい。

(問4) 下線部(4)に対する筆者の解答を簡潔に述べなさい。

(問5) 下線部(5)のように言える理由を簡潔に述べなさい。

(問6) 下線部(6)の2つの説を70字程度で説明しなさい。(ただし、句読点も字数に含む。)

SOURCES

- Yuval Noah Haran. *Sapiens: A Brief History of Humankind*, 2014. Penguin Random House. (一部変更)

2 Read the following passage and answer Questions 1 – 6 according to the text.
A Simple Experiment Reveals How Social Media Has Come to Encode a Range of Social Behaviors

Three years ago, on his birthday, a law professor watched his e-mail inbox fill with Facebook notifications indicating that friends had posted messages on his wall. The messages made him sad. The flooded inbox was annoying, but what really upset him was having disclosed his birth date to Facebook in the first place. It's not necessary for social networking or to comply with privacy laws, as some people mistakenly believe. He hadn't paid much attention when he signed up — as with most electronic contracts, there was no room for negotiation or ⁽¹⁾deliberation of terms. He followed Facebook's instructions, entered the data and clicked a button.

A few days later, the law professor decided to change the birth date on his Facebook profile to avoid the same situation in the following year. But when the fake date rolled around, his inbox again flooded with Facebook notifications. Two of the messages were from close relatives, one of whom he had spoken with on the phone on his actual birthday!

How could she not realize that the date was fake?

Our hypothesis: ⁽²⁾she'd been programmed!

The law professor is one of the authors of this article, and it confirmed his suspicions that most people respond automatically to Facebook's prompts to provide information or contact a friend without really thinking much about it. That's because digital networked technologies are engineering humans to behave like simple stimulus-response machines. This is one of the core arguments he explores with Evan Selinger in *Re-Engineering Humanity*, a new book that examines a wide range of different human-computer interfaces, including social media.

Social media plays a tremendous role in modern life. Facebook, LinkedIn and Twitter have become the primary ways of keeping in touch with friends, family, classmates and colleagues. To date, however, researchers have not fully explored the degree to which these systems are literally programming human responses. Social media systems encode a range of social behaviors: Facebook notifies us when it is time to wish our friends a happy birthday; LinkedIn prompts us to congratulate contacts on their work anniversaries; Twitter shows us tweets that many of our friends have liked. As a result, social interactions are often reduced to the click of a button.

So we decided to test the hypothesis. In the summer of 2017, after obtaining institutional review board (IRB) approval, we conducted a field experiment to demonstrate the way in which Facebook has re-engineered the practice of wishing people a "Happy Birthday." We recruited 11 people to change their birth dates on Facebook to a randomly assigned day, and then waited to see if people ⁽³⁾_____. Overall, 10.7 percent of their combined 10,042 friends wished them a happy birthday on their fake date. Another group of people sent texts and direct messages or made phone calls to wish them well. A vanishingly small number of people realized the birth dates were fake. When we compared the rate of fake birthday wishes to those received in 2016 and 2015, the results were statistically indistinguishable. Basically, people get the same number of well-wishes on their real birthdays as the fake ones we assigned.

Beyond the initial decision to respond to the notification stimulus, people might stop and think about what to say as they compose a message. Yet even here, it seems Facebook may engineer habitual responses. We observed a remarkable similarity in content, as if people followed standardized scripts. Surprisingly, 27 percent of the messages were nothing more than "HBD" or "Happy Birthday" and didn't even mention the person's name!

Facebook may increase the number of people to whom we wish a happy birthday with a few clicks of a button; it's not as if we remember the birth dates of that high school classmate or distant cousin. But if it becomes programmed behavior, is it even meaningful? As for people who aren't on Facebook or don't post their birth dates publicly, the control they have over their data comes at a cost: they don't receive scores of well-wishes from far-away contacts. After all, it's still nice to be thought of, even if just once a year.

Our story ends on a sad note: we submitted a grant application to support future studies, but after initial approval we were told that the funder decided to back out. An official explained that funding social media experiments was too risky in the wake of recent scandals surrounding researcher access to people's personal information on social networks. Even though we reminded him that we conducted research approved by our IRB, ⁽⁴⁾it was to no avail. This is worrisome for reasons that go well beyond our own research.

Now more than ever, society needs ethical social science at the intersection of technology and humanity. Social network systems are shaping what it means to be human, and we can't rely on the systems to police or research themselves. In the meantime, when your birthday rolls around, enjoy the warm feelings from friends sending their regards — but remember that ⁽⁵⁾_____.

1. Which word is closest in meaning to "deliberation" in Underline (1)?

- (A) administration (B) consideration (C) contribution (D) memorization (E) registration
2. Explain what happened to the woman in Underline (2). You may write from 15 to 25 words in English. Do not count punctuation such as periods and commas as words.
3. Choose the best phrase for Underline (3).
 (A) changed it (B) deleted it (C) realized it (D) signed off (E) signed on
4. Underline (4) is closest in meaning to “_____.”
 (A) he did not ignore us (B) he rejected us (C) it did not help
 (D) it was available for us (E) it went through
5. Choose the best answer that completes the authors’ viewpoint for Underline (5).
 (A) they are more than likely to obtain IRB approval in the future
 (B) they can also choose to conduct another field experiment
 (C) they don’t agree with core arguments explored in *Re-Engineering Humanity*
 (D) they don’t know when your birthday really is any more than you do theirs
 (E) they might have found your birthday by breaking privacy laws
6. Which statement is true about the passage?
 (A) Facebook reduced the number of people who sent birthday wishes.
 (B) More than 10 percent of people combined their friends with others’ friends.
 (C) People’s birthday wishes in the field experiment varied.
 (D) The law professor intentionally signed up for Facebook on two occasions.
 (E) The number of birthday wishes in 2017 roughly equaled those in 2015 and 2016.

SOURCES

2 Brett Frischmann and Katherine Haenschen. How Facebook Programmed Our Relatives, *Scientific American*, 2018. <https://blogs.scientificamerican.com/observations/how-facebook-programmed-our-relatives> (一部変更)

- 3 Read the following short news story and choose a position (agreement or disagreement) regarding the introduction of casinos in Japan. You may write up to 100 words to support your position. Count the number of your own words and put the number in the box provided. Do not count punctuation such as periods and commas as words.

LAWMAKERS APPROVE CASINOS

In July of 2018, Japanese lawmakers approved a bill that allows for the establishment of integrated resort (IR) facilities including casinos. The IR facilities will be built at three different locations and casinos will be introduced under the following conditions: 1) Japanese locals will only be able to visit the casinos three times per week, or ten times a month, 2) Japanese visitors will be charged a 6,000 yen entrance fee, and 3) national and regional governments will collect a 30% tax on revenues generated by the resorts.

SOURCES

3 Original text.

4 The following is an English-language radio interview, here in Japan, with a fictional Japanese professional rugby player named Daisuke Yamashita. Write the most appropriate word for each blank using the first letter provided. A sample answer (*) is given on the answer sheet. [編集部注：解答欄には welcome という語が与えられている]

Interviewer: Hello to all our listeners, and (*)w_____ to the program. As we all know so well, the Olympics will be held in Tokyo next year. But what some of us are less aware of is that Japan will be hosting the Rugby World Cup this year which is almost as important, and for rugby fans in Japan possibly even more important. In fact, it's the third largest international sports event in the world after the Soccer World Cup and the Olympics. So here in the studio we are lucky to (1)h_____ Daisuke Yamashita. He's a professional rugby player in the Top League, and is a (2)c_____ for the national team, the Brave Blossoms. He's kindly agreed to talk to us about rugby in Japan. Welcome to the studio, Daisuke!

Daisuke: Thank you. It's my pleasure to be here with you and talk about my favorite (3)s_____.

Interviewer: Let's start by giving the listeners some idea of the history of the Rugby World Cup, and maybe even tell us a bit about the history of rugby itself. Could you give us a summary on this without too much detail?

Daisuke: Yes, sure. Well to cut a (4)l_____ story short, it basically started in England in the 1800s at Rugby School in Warwickshire. Games (5)s_____ to soccer had been played for centuries in England, but it was at this time that picking up the ball and running with it became (6)p_____. So rugby originally came from soccer, although with some big changes in rules. Interestingly, and on a side note, American football has its origins in rugby. As for the Rugby World Cup, well, the first one was (7)h_____ in 1987, and it's grown in international importance ever (8)s_____ then — with the 1995 World Cup in South Africa even becoming the subject of a movie starring Morgan Freeman. The movie was directed by Clint Eastwood.

Interviewer: And what about rugby in Japan? How long has it been played here?

Daisuke: Rugby has been played here in Japan almost as long as it's existed. In fact, it was first played from about 1866 at the Yokohama Foot Ball Club, although it was only about 30 years (9)l_____ that local Japanese people started to play it. This happened mostly (10)t_____ its popularity at Keio University starting around 1899. It expanded in the 1920s and (11)c_____ to grow as a sport in Japan today. Oh yes, one more interesting point, about the Yokohama Foot Ball Club back then, is that one of the (12)p_____ on the rules committee was actually educated at Rugby School. So Japan has very early connections to the birth of rugby.

Interviewer: (13)W_____ would you say have been some turning points in the development of rugby in Japan?

Daisuke: Well, I suppose the formation of the Top League in 2003 has (14)t_____ be one important turning point. This league helps to put company sponsorship into the game in Japan, and helps to (15)i_____ participation and competition at the local level. But as far as the fan base of the sport goes in Japan, the World Cup victory against South Africa in the pool games in 2015 has to be (16)m_____. I think many Japanese people who were not following Japan at the Rugby World Cup in 2015 (17)w_____ a bit shocked when they realized that this was their team making international breaking news. After this game there was a sudden rise in the number of rugby fans in Japan.

Interviewer: So what do you think Japan's chances are this year?

Daisuke: It's always hard to say what will happen in a World Cup. The result of a World Cup does not always reflect the international rankings. Luck is involved to some extent. Once the pool games are over, the high-risk games start with the last eight teams participating in the quarter finals. One loss and you are out. I would (18)s_____ that Japan has been close to being in the top ten internationally for some time now, so expectations for reaching the last eight are not unreasonable. But we'll see. Each team has to go in with a dream, and we should dream of (19)w_____ the Cup against all odds.

Interviewer: Indeed. Sport is always about the dream. Thanks for coming in, Daisuke. Maybe we could have you (20)b_____ again in the lead-up to the World Cup. Good luck with selection for the Brave Blossoms!

Daisuke: It's been my pleasure. Thanks for promoting rugby on your program, and yes, I'd be happy to come back.

SOURCES

- ❶ Original text.