

英	語
(問 題)	
2011年度	

〈H23051121〉

### 注 意 事 項

1. 問題冊子および記述解答用紙は、試験開始の指示があるまで開かないこと。
2. 問題は2～8ページに記載されている。試験中に問題冊子の印刷不鮮明、ページの落丁・乱丁および解答用紙の汚れ等に気づいた場合は、手を挙げて監督員に知らせること。
3. 解答はすべて解答用紙の所定欄にHBの黒鉛筆またはHBのシャープペンシルで記入すること。
4. 試験開始後、記述解答用紙の所定欄（2か所）に受験番号および氏名を、マーク解答用紙の所定欄（1か所）には氏名のみを記入すること。

記述解答用紙の所定欄の受験番号は正確に間違いに記入すること。読みづらい数字は採点処理に支障をきたすことがあるので、注意すること。

数 字 見 本	0	1	2	3	4	5	6	7	8	9
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5. マーク欄ははっきり記入すること。また、訂正する場合は、消しゴムで間違いに、消し残しがないようよく消すこと（砂消しゴムは使用しないこと）。

マークする時	● 良い	○ 悪い	○ 悪い
マークを消す時	○ 良い	○ 悪い	○ 悪い

6. 試験終了の指示がでたら、すぐに解答を止め、筆記具を置くこと。
7. 試験終了後、問題冊子は持ち帰ること。
8. いかなる場合でも、解答用紙は必ず提出すること。

## READING SECTION

All answers must be indicated on the MARK SHEET.

I Answer the questions below after reading the following passage.

Human intelligence is a puzzle. Although using IQ scores as a measurement of intelligence is controversial, some scientists believe we can use them to argue that intelligence is higher, on average, in some places than in others. And it seems to have been rising in recent decades. Why these two things should be true is also controversial. Recently, however, a group of researchers at the University of New Mexico have suggested the same explanation for both: the effect of infectious disease<sup>1</sup>. If they are right, it suggests that the control of such diseases is crucial to a country's development in a way that had not been understood before. Countries that have a lot of parasites<sup>2</sup> and pathogens<sup>3</sup> not only suffer the weakening effects of disease on their workforces, but also on the personal development of individuals.

Christopher Eppig and his colleagues make their suggestion in the *Proceedings of the Royal Society*. They note that the brains of newly-born children require 87% of those children's metabolic<sup>4</sup> energy. In five-year-olds the figure is still 44% and even in adults the brain—a mere 2% of the body's weight—uses about a quarter of the body's energy. Any competition for this energy is likely to damage the brain's development, and parasites and pathogens compete for it in various ways. Some feed on the host's body directly to reproduce. Some, particularly those that live in the stomach, can prevent a person absorbing food. And all parasites and pathogens provoke the host's immune system<sup>5</sup> into activity, which prevents valuable energy from being used for more productive purposes.

There is a clear relationship between a country's disease burden and the average IQ scores of its people. The higher the country's disease burden, the lower the average IQ scores of its people. This is an example of an inverse correlation. To calculate the disease burden, the researchers used data from the World Health Organization (WHO). The WHO has developed the concept of a "disability-adjusted life year" (DALY), which is a measure of overall disease burden. The DALY measures not only potential years of life lost due to early death, but also years of healthy life lost by a person as a result of their being in a condition of poor health or disability.

The WHO is able to calculate the DALYs which are lost as a result of the impact of 28 infectious diseases. These data exist for 192 countries. The IQ scores came from work carried out earlier this decade by Richard Lynn, a British psychologist, and Tatu Vanhanen, a Finnish political scientist, who analyzed IQ studies from 113 countries, and from subsequent work by Jelte Wicherts, a Dutch psychologist.

At the bottom of the list of average IQ scores is Equatorial Guinea, followed by St Lucia. Cameroon, Mozambique and Gabon tie at third from bottom. These countries are also among those that have the highest infectious disease burden. At the top of the list of countries with the highest average IQ score is Singapore, followed by South Korea. China and Japan tie in third place. These countries all have relatively low levels of disease. America, Britain and a number of European countries follow behind the leaders.

The correlation between disease burden and lower IQ scores is about 67%, and the possibility that this strong statistical relationship occurred by chance is less than one in 10,000. Researchers are always trying to identify strong statistical correlations. They then hope to be able to explain the cause of these correlations. There may be many different possible causes, and researchers have to examine as many possible causes as they can, to give themselves a better chance of identifying the real cause correctly. As scientists say, "correlation is not causation"—identifying a statistical relationship does not explain why that relationship exists—so Mr. Eppig and his colleagues tried to eliminate other possible explanations.

Previous research teams have tried to suggest that income, education, low levels of agricultural labor (which is replaced by more mentally stimulating jobs), and climate (the challenge of surviving extreme weather might provoke the evolution of intelligence) could all be explanations for national differences in IQ scores. However, most of these possible causes are also likely to be linked to disease. By careful

statistical analysis, Mr. Eppig and his colleagues show that all of these alternative possible causes of the correlation either disappear or are reduced to a small effect, when the consequences of disease are taken into account.

Importantly, there is also clear evidence that infections and parasites, such as malaria<sup>6</sup> and intestinal worms<sup>7</sup>, have a negative effect on the development of the brain. A study of children in Kenya who survived the version of malaria that occurs in the brain suggests that one-eighth of them suffer long-term damage. In the view of Mr. Eppig and his colleagues, diarrhea<sup>8</sup> is the biggest threat. Diarrhea strikes children hard. It accounts for one-sixth of infant deaths, and even in those it does not kill, it prevents the absorption of food at a time when the brain is growing and developing rapidly.

The researchers predict that one type of health problem will increase with rising intelligence. Asthma<sup>9</sup> and other allergies are thought by many experts to be rising in frequency because the immune systems of young children, unchallenged by infection, are turning *against* the cells of the body that they are supposed to protect. Some studies already suggest a correlation between a country's allergy levels and its average IQ. Mr. Eppig and his colleagues predict that future work will confirm this relationship.

The other prediction, of course, is that as countries conquer disease, the intelligence of their citizens will rise. A rise in IQ scores over the decades has already been noticed in rich countries. It is called the "Flynn effect" after James Flynn, who discovered it. Its cause, however, has been mysterious — until now. If Mr. Eppig is right, the almost complete absence of serious infections in rich countries, as a result of vaccination<sup>10</sup>, clean water and the proper treatment of human waste, may explain much if not all of the Flynn effect.

When Dr. Lynn and Dr. Vanhanen originally published their IQ data, they used them to suggest that national differences in intelligence were the main reason for different levels of economic development. This new study reaches the opposite conclusion. It is actually lack of development, and the many health problems this brings, which explains the difference in IQ scores. No doubt, in a vicious circle, those differences help to keep poor countries poor. But the new theory offers a way to break the circle. If further work by researchers supports the ideas of Mr. Eppig and his colleagues, they will have done enormous good by providing policymakers with yet another reason why the elimination of disease should be one of the main aims of development.

[Adapted from an article in *The Economist*, July 1st 2010]

注 <sup>1</sup> infectious disease: 伝染病; <sup>2</sup> parasites: 寄生虫; <sup>3</sup> pathogens: 病原菌; <sup>4</sup> metabolic: (新陳) 代謝の;

<sup>5</sup> immune system: 免疫システム; <sup>6</sup> malaria: マラリア; <sup>7</sup> intestinal worms: 回虫; <sup>8</sup> diarrhea: 下痢; <sup>9</sup> asthma: ぜん息;

<sup>10</sup> vaccination: 予防接種

- (1) Choose the best way to answer each of the questions in accordance with the content of the passage.
1. Why are researchers especially concerned about the effects of parasites and pathogens on young children?
    - A Their developing brains require more energy than those of adults.
    - B Their immune systems are not yet as developed as those of adults.
    - C They have a higher rate of infection than adults do.
    - D They have a lower rate of recovery than adults do.
    - E None of the above
  2. What was the concept of the DALY (disability-adjusted life year) developed to measure?
    - A The adjusted average life expectancy
    - B The daily rate of parasite infections in developing countries
    - C The inverse correlation between disability and health
    - D The potential years of active life lost as a result of death or illness
    - E None of the above
  3. How does Japan's DALY score compare to other countries' scores?
    - A As high as Singapore
    - B As low as Cameroon
    - C Equivalent to that of South Korea
    - D Higher than that of China
    - E None of the above
  4. Which of the following was NOT used by previous researchers to explain national differences in IQ?
    - A Climate
    - B Education
    - C Ethnicity
    - D Income
    - E None of the above
  5. What is true of diarrhea according to the passage?
    - A It causes brain damage in one-eighth of children in Kenya.
    - B It increases with intelligence.
    - C It kills 25% of all babies.
    - D It prevents the absorption of food among children.
    - E None of the above
  6. According to the study by Mr. Eppig and his colleagues, what is the correct sequence of cause and effect?
    - A Lack of development together with health problems leads to low national IQ scores.
    - B Low levels of income and education lead to low national IQ scores.
    - C Low national intelligence leads to lack of development and health problems.
    - D The challenge of an extreme climate leads to high national IQ scores.
    - E None of the above
- (2) Which of the following statements agree with what is written in the text? Mark your answers true (T) or false (F).
1. An inverse correlation means that as X increases, Y decreases, or vice versa.
  2. A number of studies suggest that there is a positive correlation between the frequency of asthma in a country and that country's average IQ scores.
  3. The "disease burden" of a country refers to the cost of providing medical care to people who are ill.
  4. The research of Eppig and his colleagues helps to explain why IQ has been rising in rich countries.
  5. The research of Eppig and his colleagues largely supports the conclusions of earlier research by Lynn and Vanhanen.
  6. The research of Eppig and his colleagues shows that lack of education is an important factor in explaining the national differences in IQ.

## II Answer the questions below after reading the following passage.

① A feature of English in the last 200 years or so has been the birth of a number of national varieties. It is important to note, however, that the different varieties are relatively similar to each other; for the most part, speakers of one variety can understand speakers of another without much difficulty since the grammar of English is essentially the same around the world. The varieties differ in a relatively small amount of vocabulary, which usually serves to make a variety interesting rather than particularly difficult to understand. The main difference between varieties is usually in the pronunciation, which can make comprehension difficult, but which has little to do with the underlying structure of the language itself. English started its international expansion only a few centuries ago and that has not been enough time for major differences among varieties to develop. Also, English-speaking countries tend to be highly literate. This, combined with the development of mass communications, has exposed most speakers to the standard forms of English, and this in turn has tended to limit major variation. Therefore, when we speak of the differences in national varieties, it is important to remember just how similar all the forms of English are.

② So the varieties of English are relatively similar around the world at present, but will this situation last? In the short term, the answer is probably yes. Language change takes time, and we are unlikely to see big changes in the near future. But beyond this, language change is very difficult to predict. It depends on the factors that support or suppress language diversification, and to understand these, we need to understand the purposes for ( a ) a language is used. According to David Graddol, a British linguist who has written on the future of English, English has two main functions in the world: as a means of international communication and as a means to create cultural identities. The first function serves to push English toward greater uniformity, with the ideal being a "standard international variety" of English that people all around the world could speak, thus making international communication easier. However, the second function leads to an increasing number of local or regional varieties, each of which is identified with a local culture. In this way, the people of a particular place can possess their own version of English, thus maintaining their cultural identity while at the same time gaining the benefits of using a language which is well-known internationally.

③ Given the prominent position of English in the world today, it might be assumed that the "international communication" function will win out and that the varieties of English will eventually merge into a single World Standard English. This may well happen, given English's very strong position at present, but it is not guaranteed. There are a number of factors that may cause a World Standard English not to develop. First, the priority of printing (which leads to a standard form) is weakening, with more electronic forms of information available online all the time. The new electronic technology often leads to the creation of forms of English that are shortened and which are different from the standard written language in various ways; ( b ), e-mail is currently one of the most common forms of electronic information transfer, and it is often written in a stream of consciousness fashion and sent without being spell-checked or revised. In this way, it often resembles conversation more than conventional written language. This is not surprising, because the original reasons for e-mail were its speed and convenience, and the need to revise carefully would reduce these advantages.

④ Another recent phenomenon is text messaging on mobile phones. The phones do not have a full keyboard, and keying in text messages via the number keyboard is somewhat awkward; ( c ), users use abbreviations and symbols to minimize the number of keystrokes required. Also, some phone companies limit text messages to a certain number of characters (for example, 160 characters, including spaces), which encourages the use of various shortened forms. Some examples are given below.

b4	before
f?	(do you want to be) friends?
gdm8	g'day mate
hf	have fun
musm	miss you so much
t+	think positively
u r	you are

⑤ The following text dialogue between two University of Nottingham students contains a number of short forms.

*Student A:* Hey how r u? went 2 C band last nite wit Matt. Was gr8. Went 4 drink after @ Crown. U? x

*Student B:* Had a good 1 wit Ben. Cooked me meal, Chick + pasta, notin' changes! U in 4 dnr?

*Student A:* Yep, lectures til 5. CU then. x

The full English translations of these messages would look like this:

*Student A:* Hey, how are you? I went to see a band last night with Matt. It was great. We went for drinks after at the Crown pub. How about you? (kiss)

*Student B:* I had a good one (evening) with Ben. He cooked me a meal, chicken and pasta. Nothing changes! Are you coming for dinner?

*Student A:* Yes. I have lectures until 5 p.m. See you then. (kiss)

⑥ E-mail and text messaging and the shortcuts they use have raised many questions relating to the spelling and presentation of English. Because speed is important in both, normal rules of capitalization and spelling are often ignored, and shortened forms are common. Will these developments affect the writing of English generally? So far, the effects on the writing system seem to be confined mainly to the matter of capital letters. They are not given high priority, and people who would never normally dream of writing their own name without initial capital letters find themselves doing so in electronic addresses (e.g., *firstname.lastname@somewhere.com*). Use of small letters ( d ) capitals in the texts of e-mails is increasingly common, and teachers have noticed the habit in students' homework, too. It is also becoming more common in other areas as well, such as advertising.

⑦ Thus, electronic forms of communication are producing new written forms of English and some of these reduce the distinction between the written and the spoken forms of the language. This may be more acceptable to societies now than before, as there appears to be a general movement toward a greater tolerance of diversity. Whereas in former times there might have been complaints about incorrectly written English, nowadays people seem increasingly comfortable with the idea that different types of English might be suitable for different purposes and media. These trends may push toward greater diversification of English rather than toward standardization.

⑧ A second factor possibly acting against the establishment of a World Standard English is the changing nature of broadcasting. Initially, the development of satellite broadcasting had a unifying influence on English, as large numbers of people in many countries around the world were exposed to standard varieties. But the people watching these programs were mainly the educated and wealthy viewers, ( e ) formed only a small percentage of the potential audience. Because of this, there is now a trend toward international broadcasters "localizing" their programming to reach wider audiences. This involves shaping the programming to the local context, with more locally created material, using local talent, and broadcasting in the local language. Thus, the formerly unifying nature of satellite broadcasting may instead turn into a force for diversification.

⑨ A third factor is the nature of English language teaching (ELT). Previously, most of the internationally available, commercially produced materials have used a small number of varieties, most notably American, British, and Australian English, leading to a similar underlying English being taught. The existing commercial ELT producers are unlikely to go away, ( f ) other producers will probably join them. As regional Englishes develop, and perhaps become widely used within regional economic trade zones, countries in those zones may begin to publish aggressively and promote their own materials. It is not difficult to predict that this will happen in China, ( g ) there is a huge internal market, and a number of Chinese publishers are working to meet demand. These publishers may also attempt to market their material in the wider Asian region, especially as China becomes economically more powerful. We can already see similar things happening in other countries. Malaysia is working to become a provider, rather than a recipient, of English language education, exporting English materials to other countries around the region and setting up universities to attract students from around the Southern Hemisphere. The overall effect may be that teaching materials in a number of English varieties will compete for ELT business, thus moving away from the standardized ELT materials in use at present.

⑩ In sum, the prominent position of English in the world today suggests that English may well become more unified in the future. However, there are also several factors working against this. Graddol suggests that the most likely scenario for English in the future is that a number of English varieties will continue to compete for usage in the world.

(1) Choose the best way to complete the following sentences about paragraphs ① to ⑨. Do not use the same answer twice.

- 1 Paragraph ① describes
- 2 Paragraph ② describes
- 3 Paragraph ③ describes
- 4 Paragraph ④ describes
- 5 Paragraph ⑤ describes
- 6 Paragraph ⑥ describes
- 7 Paragraph ⑦ describes
- 8 Paragraph ⑧ describes
- 9 Paragraph ⑨ describes

- A an example text message together with a standard English version of the same message.
- B how electronic communication compares to spoken and written English.
- C how publishers in Asia are beginning to produce materials for English teaching.
- D how students are beginning to use e-mail abbreviations in their homework.
- E how the design of mobile phones has had an effect on the way English is used in text messages.
- F how the different national varieties of English are still quite similar despite differences in pronunciation.
- G how World Standard English will develop thanks to the establishment of satellite broadcasting.
- H the effect of e-mail and text messaging on the use of capitalization in English.
- I the fact that educated and wealthy people are likely to be promoters of World Standard English.
- J the fact that English speakers are becoming accustomed to different forms of English for different purposes.
- K the functions of language which work to make the varieties of English more similar or more diverse.
- L the ways in which satellite broadcasters are adapting their programs to local audiences.
- M why people around the world prefer to use teaching materials produced in the U.S., U.K., or Australia.

(2) Choose the best word or phrase to put in each of the spaces ( a ) to ( g ). Do not use the same answer twice.

- |               |               |         |               |       |
|---------------|---------------|---------|---------------|-------|
| A apart from  | B as a result | C but   | D for example | E if  |
| F in addition | G instead of  | H where | I which       | J who |

[Adapted from Schmitt and Marsden, *Why Is English Like That?*, 2006]

## WRITING SECTION

- III Read the following English passage and briefly summarize the main points in JAPANESE. Write your answer within the box provided on the ANSWER SHEET.

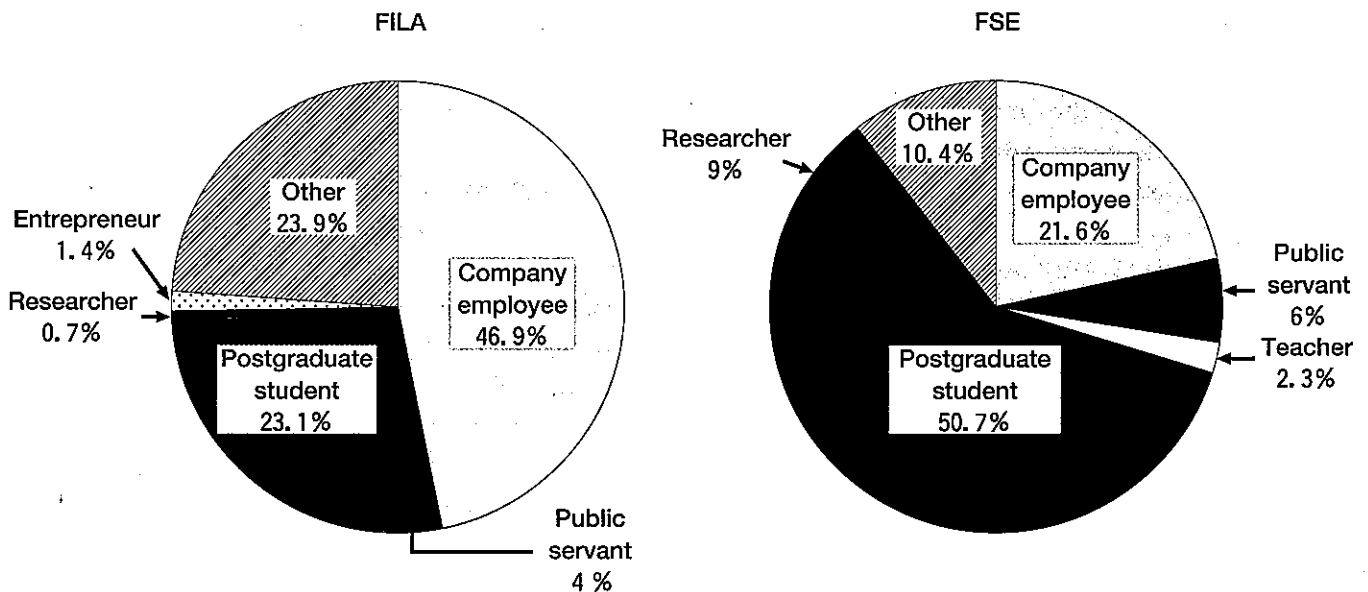
Learning to read begins the first time an infant is held and read a story. How often this happens, or fails to happen, in the first five years of childhood turns out to be one of the best predictors of later reading. A little-discussed class system invisibly divides our society, with those families that provide their children with environments which are rich in oral and written language opportunities gradually set apart from those who do not, or cannot. A prominent American study separates some children in linguistically impoverished homes from their more stimulated peers. In some environments the average young middle-class child hears 32 million more spoken words than the young underprivileged child by the age of five.

Children who begin kindergarten having heard and used thousands of words, whose meanings are already understood, classified, and stored away in their young brains, have an advantage on the playing field of education. Children who never have a story read to them, who never hear words that rhyme, who never imagine fighting with dragons or marrying a prince, have a severe disadvantage.

- IV The graphs below show the career ambitions of students from the Faculty of International Liberal Arts (FILA) and the Faculty of Science and Engineering (FSE).

Describe the differences in the ambitions of the students from the two faculties. Write your answer in ENGLISH within the box provided on the ANSWER SHEET.

Student Plans after Graduation



注 Company employee: 民間企業; Public servant: 公務員; Entrepreneur: 起業家

Adapted from 『2009年度 大学生生活調査報告書』

〔以下 余 白〕