ハイレベル読解問題演習 81

（東京大 2007）

次の英文の下線部(1), (2), (3)を和訳せよ。(2)については、it が何を指すか明らかになるように訳すこと。

The nature and function of medicine has gradually changed over the past century. (1)What was once a largely communicative activity aimed at looking after the sick has become a technical enterprise able to treat them with increasing success. While few would want to give up these technical advances and go back to the past, medicine's traditional caring functions have been left behind as the practices of curing have become more established, and (2)it is criticized now for losing the human touch that made it so helpful to patients even before it knew how to cure them.

The issue looks simple: human communication versus technique. However, we all know that in medicine it is never easy to separate the two. Research on medical practice shows that a patient's physical condition is often affected by the quality of communication between the doctor and the patient. (3)Even such an elementary form of consideration for the patient as explaining the likely effects of a treatment can have an impact on the outcome. We are also aware that in the cases where medicine still does not offer effective cures the need for old-style care is particularly strong. Hence it is important to remember the communicative dimension of modern medicine.

ハイレベル読解問題演習 82

（東京大 2007）

次の英文の内容を、80～100 字の日本語に要約せよ。句読点も字数に含める。

We usually think of the meaning of a poem — or any other literary work — as having been created and fixed by the writer; all we readers have to do is find out what the author intended to say. However, although it is indeed the poet who gives verbal form to his or her idea or vision, it is the reader who translates this verbal shape into meaning and personal response. Reading is in reality a creative process affected by the attitudes, memories, and past reading experiences of each individual reader. It is this feature of reading which allows for the possibility of any poem having more than one interpretation.

This emphasis on the reader as the source of meaning can, however, be problematic since it is sometimes difficult to draw the line between what we can all agree is a reasonable interpretation and one that appears wild and unjustifiable. Readers often seem eager to produce their own meanings out of their encounters with poems, meanings which, however reasonable or satisfying they are to the readers themselves, may not have been intended by the poet and may not be shared by other readers.

So who actually has the authority to determine meaning? Any strict distinction made between the reader and the writer as the source of meaning is not helpful. Of course, it is in some ways useful to think about and to discuss the differences in the contributions of reader and writer, but this does not alter the fundamental fact that reading is a kind of interaction. It would be misleading to think that the meaning or value of a poem was under the exclusive control of one or the other.

（草稿用）

									80
									100

（解答用）

									80
									100

ハイレベル読解問題演習 83

（一橋大 2019）

次の英文を読み、下の問いに答えなさい。

While conducting research on emotions and facial expressions in Papua New Guinea in 2015, psychologist Carlos Crivelli discovered something startling. He showed Trobriand Islanders* photographs of the standard Western face of fear — wide-eyed, mouth wide open — and asked them to (　A　) what they saw. The Trobrianders didn't see a frightened face. Instead, they saw an indication of threat and aggression. In other words, what we think of as a universal expression of fear isn't universal at all. But if Trobrianders have a different interpretation of facial expressions, what does that mean? One emerging — and increasingly supported — theory is that facial expressions don't reflect our feelings. (1)Instead of reliable displays of our emotional states, they show our [　　].

The face acts "like a road sign to affect the traffic that's going past it," says Alain Fridlund, a psychology professor who wrote a recent study with Crivelli. "Our faces are ways we direct the course of a social interaction." That's not to say that we actively try to manipulate others with our facial expressions. Our smiles and frowns may well be unconscious. But (2)our expressions are less a mirror of what's going on inside than a signal we're sending about what we want to happen next. Your best 'disgusted' face, for example, might show that you're not happy with the way the conversation is going — and that you want it to take a different course.

While it may seem sensible, this theory has been a long time coming. The idea that emotions are fundamental, instinctive, and expressed in our faces is deeply fixed in Western culture. But (3)this viewpoint has always been criticized. New research is challenging two of the main points of basic emotion theory. First is the idea that some emotions are universally shared and recognized. Second is the belief that facial expressions are reliable reflections of those emotions.

That new research includes recent work by Crivelli. He has spent months living with the Trobrianders of Papua New Guinea as well as the Mwani of Mozambique*. With both native groups, he found that study participants did not (　B　) emotions to faces in the same way Westerners do. It was not just the face of fear, either. Shown a smiling face, only a small percentage of Trobrianders declared that the face was happy. About half of those who were asked to describe it in their own words called it "laughing": a word that deals with action, not feeling. In other words, Crivelli found no evidence that what is behind a facial expression is universally understood.

Making matters more complicated, even when our facial expressions are interpreted by others as exhibiting a certain feeling, those people might (　A　) an emotion we're not actually experiencing. In a 2017 analysis of about 50 studies, researchers found that only a minority of people's faces reflected their actual feelings.

If our expressions don't actually reflect our feelings, there are enormous consequences. One is in the field of artificial intelligence (AI)*, specifically robotics*. "A good number of people are training their artificial intelligence and their social robots using example faces from psychological textbooks," says Fridlund. But if someone who frowns at a robot is signalling something other than simple unhappiness, the AI may (　C　) to them incorrectly.

For most of us, though, the new research may have most of an effect on how we interpret social interactions. (4)It turns out that we might communicate better if we saw faces not as mirroring hidden emotions ― but rather as actively trying to speak to us. People should read faces "kind of like a road sign," says Fridlund. "It's like a switch on a railroad track: do we go here or do we go there in the conversation?" That frown on your friend's face may not be actual anger; maybe she just wants you to agree with her point of view.

Take laughter, says Bridget Waller: "when you laugh and how you laugh within a social interaction is absolutely crucial." A poorly-timed laugh might not (　D　) your inner joy at what's going on ― but it might show that you're not paying close attention to the conversation, or may even signal hostility.

For Crivelli, our faces may even be more calculating than that. He compares us to puppeteers*, with our expressions like "invisible wires or ropes that you are trying to use to manipulate the other." And, of course, that other person is manipulating us right back. We're social creatures, after all.

(出典: Why our facial expressions don't reflect our feelings, BBC Future)

注	Trobriand Islander	トロブリアンド諸島の住民
	the Mwani of Mozambique	モザンビークのムワニ民族
	artificial intelligence (Al)	人工知能
	robotics	ロボット工学
	puppeteer	操り人形師

1. 下線部(1)に続く空欄［　　］に入れる語句として最も適切なものを以下の選択肢イ～ニから一つ選びなさい。

イ) beliefs and moral values
ロ) intentions and social goals
ハ) likes and dislikes
ニ) opinions and level of intelligence

2. 下線部(2)を和訳しなさい。

3. 下線部(3)の指す内容を日本語で説明しなさい。

4. 下線部(4)を和訳しなさい。

5. 空欄(　A　)～(　D　)に入れる語として最も適切なものを、以下の選択肢イ～への中からそれぞれ一つずつ選びなさい。ただし、各選択肢は1回のみ使用できるものとする。また、(　A　)は本文中に2度出てくるので注意すること。

イ attribute	ロ examine	ハ explain
ニ identify	ホ respond	ヘ reveal

ハイレベル読解問題演習 84

（一橋大 2019）

次の英文を読み、下の問いに答えなさい。

Today, the majority of poor renting families in America spend over half of their income on housing, and at least one in four dedicates over 70 percent to paying the rent. Millions of Americans are evicted, or forced to move out, every year because they can't afford rent. In Milwaukee, a city of fewer than 105, 000 renter households, landlords* evict roughly 16, 000 adults and children each year. That's sixteen families evicted through the court system daily. But there are other ways, cheaper and quicker ways, for landlords to remove a family than through the order of a court. Some landlords pay tenants* a couple hundred dollars to leave by the end of the week. Some take off the front door. Nearly half of all forced moves experienced by renting families in Milwaukee are "(1)informal evictions" that take place in the shadow of the law. If you count all forms of involuntary displacement*, you discover that between 2009 and 2011 more than 1 in 8 Milwaukee renters experienced a forced move. The numbers are similar in Kansas City, Cleveland, Chicago, and other cities. In 2013, 1 in 8 poor renting families nationwide were unable to pay all of their rent.

Fewer and fewer families can afford a roof over their head. (2)This is among the most urgent and pressing issues facing America today, and acknowledging the breadth and depth of the problem changes the way we look at poverty. For decades, we have failed to fully appreciate how deeply housing is involved in the creation of poverty.

For almost a century, there has been broad consensus in America that families should spend no more than 30 percent of their income on housing. Until recently, most renting families met this goal. But times have changed across America. Every year in this country, people are evicted from their homes not by the tens of thousands or even the hundreds of thousands but by the millions. (3)Until recently, we simply didn't know how immense this problem was, or how serious the consequences, unless we had suffered them ourselves. For years, social scientists, journalists, and policymakers all but ignored eviction, making it one of the least studied processes affecting the lives of poor families. But new data and methods have allowed us to measure the frequency of eviction and its effects. We have learned that eviction is common in poor neighborhoods and that it causes great difficulties for families, communities, and children.

Residential stability creates a kind of psychological stability, which allows people to invest in their home and social relationships. It creates school stability, which increases the chances that children will (　A　) and graduate.

And it creates community stability, which encourages neighbors to form (B) bonds and take care of their block. But poor families enjoy little of that because they are evicted at such high rates. Instability is not inherent to poverty. Poor families (C) .

Along with instability, eviction also causes loss. Families lose not only their home, school, and neighborhood but also their possessions: furniture, clothes, books. It takes a good amount of money and time to establish a home. Eviction can erase all that. Eviction can cause workers to lose their jobs. This likelihood is roughly 15 percent higher for workers who have experienced an eviction. Often, evicted families also lose the opportunity to benefit from public housing because Housing Authorities* count evictions and unpaid debt as strikes* when reviewing applications.

This — the loss of your possessions, job, home, and access to government aid — helps explain why eviction has such a profound effect on what social scientists call "material hardship." Material hardship assesses, say, whether families experience hunger or sickness because they can't afford food or medical care; or go without heat, electricity, or a phone because they can't afford those things. The year after eviction, families experience 20 percent higher levels of material hardship than similar families who were not evicted.

Then there is the damage eviction causes to a person's spirit. The violence of displacement can drive people to depression and, in extreme cases, suicide. One in two recently evicted mothers reports multiple symptoms of depression, double the rate of similar mothers who were not forced from their homes. Even after years pass, evicted mothers are less happy, energetic, and optimistic than their peers.

(4)<u>All this suffering</u> is shameful and unnecessary. We have affirmed basic nutrition, twelve years of education, and a pension in old age to be the right of every citizen because we have recognized that human dignity depends on the fulfillment of these fundamental human needs. And it is hard to argue that housing is not a fundamental human need. Decent, affordable housing should be a basic (D) for everybody in this country. The reason is simple: without stable shelter, everything else falls apart.

注	landlord	家賃を取って部屋や家を貸す人、家主
	tenant	家賃を払って部屋や家を借りている人
	involuntary displacement	強制退去
	Housing Authority	住宅を管轄する公的機関
	strike	マイナス要因

1. 下線部(1)の指す内容を文脈に即して 40 字以内の日本語(句読点を含む)で説明しなさい。

									40

2. 下線部(2)の指す内容を文脈に即して 30 字以内の日本語(句読点を含む)で説明しなさい。

									30

3. 下線部(3)を和訳しなさい。

4. 下線部(4)の内容として本文で述べられていないものを以下の選択肢イ～ニから一つ選びなさい。

イ) コミュニティにおける生活の安定性を失う。
ロ) 職業を失い、公共住宅に住む権利を奪われる。
ハ) 精神の安定を失い、家庭内暴力と少年犯罪が増える。
ニ) 食べ物やライフラインを確保できない困窮状態に陥る。

5. 空欄(A)と(B)に入れる語の組み合わせとして最も適切なものを以下の選択肢イ～ニから一つ選びなさい。

(A)	―――	(B)
イ excel		fragile
ロ excel		strong
ハ struggle		fragile
ニ struggle		strong

6. 空欄(　C　)に入れるのに最も適切なものを以下の選択肢イ～ニから一つ選びなさい。

イ) cannot move so much because they are poor
ロ) do not move because they are forced to
ハ) move so much because they are forced to
ニ) rarely move because they are forced to stay

7. 本文の論旨に即して、空欄(　D　)に入れるのに最も適切な 1 語を同じ段落から抜き出しなさい。

ハイレベル読解問題演習 85

（一橋大 2013）

次の英文を読み、下の問いに答えなさい。

Why does *anything* happen? That's a complicated question to answer, but it is a more sensible question than "Why do bad things happen?" This is because there is no reason to single out bad things for special attention unless bad things happen more often than we would expect them to, by chance; or unless we think there should be a kind of natural justice, which would mean that bad things should only happen to bad people.

Do bad things happen more often than we ought to expect by chance alone? If so, then we really do have something to explain. You may have heard people refer jokingly to "Sod's Law." This states: "If you drop a piece of toast and marmalade on the floor, it always lands marmalade side down." Or, more generally: "If a thing can go wrong, it (A) ." People often joke about this, but at times you get the feeling they think it is more than a joke. They really do seem to believe the world is out to hurt them.

(1)Recently, a film crew with whom I was working chose a location where we felt sure there should be a minimum of noise, a huge empty field. We arrived early in the morning to make doubly sure of peace and quiet — only to discover, when we arrived, a lone Scotsman practicing the bagpipes. (2)"Sod's Law!" we all shouted. The truth, of course, is that there is noise going on most of the time, but we only *notice* it when it is an irritation, as when it interferes with filming. There is a bias in our likelihood of noticing annoyance, and this makes us think the world is trying to annoy us deliberately.

In the case of the toast, it wouldn't be surprising to find that it really does fall marmalade side down more often than not, because tables are not very high, the toast starts marmalade side up, and there is usually time for one half-rotation before it hits the ground. But the toast example is just a colorful way to express the gloomy idea that "if a thing can go wrong, it (A) ." Perhaps this would be a better example of Sod's Law: "When you toss a coin, the more strongly you want heads, the more likely it is to come up (B) ." That, at least, is the pessimistic view. There are optimists who think that the more you want heads, the more likely the coin is to come up (C) . Perhaps we could call that "Pollyanna's Law" — the optimistic belief that things usually turn out for the good.

When you put it like that, you can quickly see that Sod's Law and Pollyanna's Law are both nonsense. Coins, and slices of toast, have no way of knowing the strength of your desires, and no desire of their own to

frustrate them ― or fulfill them. Also, what is a bad thing for one person may frustrate a good thing for another. (3)There is no special reason to ask, "Why do bad things happen?" Or, for that matter, "Why do good things happen?" The real question underlying both is the more general question: "Why does *anything* happen?" So, we have seen that bad things, (D) good things, don't happen any more often than they ought to by chance. The universe has no mind, no feelings and no personality, so it doesn't do things in order to either hurt or please you. Bad things happen because things happen. Whether they are bad or good from our point of view doesn't influence how likely it is that they will happen. Some people find it hard to accept this. They'd prefer to think that sinners get their punishment, that virtue is rewarded. Unfortunately the universe doesn't care what people prefer.

1. 下線部(1)を和訳しなさい。

2. 下線部(2)について、その状況は"Sod's Law"と合致していると言えるかどうか、60 字以内の日本語(句読点を含む)で説明しなさい。

									60

3. 下線部(3)について、なぜそのように問うべきではないのか、80 字以内の日本語(句読点を含む)で説明しなさい。

									80

4. 空欄(　A　)に入れるのに最も適切な語を以下の選択肢イ～ニから一つ選びなさい。

イ　may　　ロ　may not　　ハ　will　　ニ　will not

5. 空欄(　B　)と(　C　)に入れる語の組み合わせとして最も適切なものを以下の選択肢イ～ニから一つ選びなさい。

(　B　)	―――	(　C　)
イ　heads		heads
ロ　heads		tails
ハ　tails		tails
ニ　tails		heads

6. 空欄(　D　)に入れるのに最も適切な語句を以下の選択肢イ～ニから一つ選びなさい。

イ　but for　　ロ　like

ハ　notwithstanding　　ニ　if not

ハイレベル読解問題演習 86

（一橋大 2013）

次の英文を読み、下の問いに答えなさい。

The competition for jobs has shifted from one largely restricted within clearly defined national boundaries to a global auction open to competition across borders. We are all familiar with art auctions held by Sotheby's* and those on eBay*. In these auctions, the highest bidder* wins. For the majority of American, British, or German workers, a Sotheby's-type, regular auction was assumed to reflect the increasing value of investments in what economists call human capital.

But the global auction for jobs increasingly works in reverse to an auction where the highest bidder wins. In (1)a reverse auction, bids decline in value, as the goal is to drive down prices. These auctions are becoming more popular on the Internet. The German Web site *jobdumping.de* offered a clear example of a reverse auction. Certain types of jobs were offered by employers with a maximum price for the job; those looking for employment then underbid each other, and the winner was the person willing to work for the lowest wages.

People are aware that the reverse auction is being extended to American college-educated workers. The impact of this bidding war is not just restricted to the size of an employee's wages, but it also includes longer working hours, inferior benefits, declining career opportunities, and greater job insecurity. In a reverse auction, workers are expected to do more for less.

In the early stages of globalization, the reverse auction was limited to American workers with low skills. Today, (2)three major forces are working together to create a price competition for high skills, forcing American students, workers, and families into a cruel fight for those jobs that continue to offer a good standard of living.

First, there has been an *education explosion* in the supply of college-educated workers. Even when limited to wealthy societies, this expansion poses a problem because widening access to a college education lowers the value of credentials* in the competition for jobs.

Second, there has been a *quality-cost revolution* resulting in a rapid increase in productivity levels and quality standards. The new competition is no longer based on quality *or* cost but on quality *and* cost, offering companies more strategic choices about their global distribution of high-skill as well as low-skill work. Western companies are developing more sophisticated approaches to outsourcing more of their highly skilled jobs to low-cost locations. (3)As a result, many of the things we only thought could be done in the West can now be done anywhere in the world not only more

cheaply but sometimes better.

(4)The final trend relates to what is described as the global *war for talent*. Just as more individuals invest in their human capital and governments invest in increasing the national stock of skilled workers, the relationship between learning and earning is being called into question from within the business community. Companies assert that the relationship between learning and earning needs to be revised, because it is less applicable in today's competitive world. It fails to reflect differences in performance, especially the productive contribution of a talented minority of top performers.

Concerns about hiring the next generation of talented employees led corporations to be attracted to global elite universities, because they are believed to have the best and brightest students. This focus on attracting, retaining, and developing top talent leads to greater inequality of treatment, and it also contributes to widening income inequalities within middle-class occupations and differences in career opportunities among people with the same credentials, experience, or levels of skills.

These trends result in many college-educated Americans becoming part of a (　A　) workforce. Previously, differences in income were assumed to reflect individual achievement. This relationship has never been straightforward, but it is now in crisis as the relationships among jobs, rewards, and education are being changed.

注	Sotheby's	英国の有名なオークション業者
	eBay	米国のインターネット・オークション・サイト
	bidder	オークションに参加して、値段を提示する人
	credentials	資格、信用証明。日本で言えば「学歴」に近い

1. 下線部(1)の具体的な内容を、なぜ“reverse”なのかを明確にしながら、60 字以内の日本語(句読点を含む)で説明しなさい。

									60

2. 下線部(2)で述べられている「三つの主要な影響力」のうちの一つ目を 60 字以内の日本語(句読点を含む)で説明しなさい。

									60

3. 下線部(3)を和訳しなさい。

4. 下線部(4)はどのようなことを指すか、以下の選択肢イ～ニから一つ選びなさい。

イ. 才能あるエリートの数が減っており、それを獲得する競争が激化している。

ロ. ビジネス界は、トップの才能の持ち主を増やすために、グローバルなエリート大学を増やすべきだと主張している。

ハ. 学歴と収入のあいだの関係が考え直されることによって、収入の格差は不公平だとみなされなくなっている。

ニ. ビジネス界はトップの才能に対して相応の収入を与えるべきだと主張し、そのために収入の格差が広がっている。

5. 空欄(A)に入れるのに最も適切な語句を以下の選択肢イ～ニから一つ選びなさい。

イ low-skill, high-wage　　ロ high-skill, low-wage

ハ low-skill, low-wage　　ニ high-skill, high-wage

ハイレベル読解問題演習 87

（大阪医科薬科大 2019）

以下の英文を読み、設問に答えよ。

Regret is an emotion, and it is also a punishment that we administer to ourselves. The fear of regret is a factor in many of the decisions that people make ("Don't do this, you will regret it" is a common warning), and the actual experience of regret is familiar. According to some psychologists, regret is "accompanied by feelings that one should have known better, by thoughts about the opportunities lost, and by wanting to undo the event and to get a second chance." (1)Intense regret is what you experience when you can most easily imagine yourself doing something other than what you did.

Regret is one of the counterfactual emotions that are triggered by the availability of alternatives to reality. After every plane crash there are special stories about passengers who "should not" have been on the plane; they were, for example, supposed to fly a day earlier but had had to postpone. The common feature of such stories is that they involve unusual events — and unusual events are easier than normal events to undo in imagination. An abnormal event activates the idea of the event that would have been normal under the same circumstances.

To appreciate the link of regret to normality, consider the following scenario: *Mr. Brown almost never picks up hitchhikers, while Mr. Smith frequently does. Yesterday each gave a man a ride and was robbed.* Who of the two will experience greater regret? The results are not surprising: 88% of respondents said Mr. Brown, 12% said Mr. Smith.

Regret is not the same as blame. Other participants were asked another question about the same incident: Who will be criticized most severely by others? The results: Mr. Brown 23%, Mr. Smith 77%.

Regret and blame are both evoked by a comparison to a norm, but the relevant norms are different. The emotions experienced by Mr. Brown and Mr. Smith are dominated by what they usually do about hitchhikers. Taking a hitchhiker is an abnormal event for Mr. Brown, and most people therefore expect him to experience more intense regret. A judgmental observer, however, will compare both men to conventional norms of reasonable behavior and is likely to blame Mr. Smith for habitually taking unreasonable risks. (2)We are tempted to say that Mr. Smith deserved his fate and that Mr.

Brown was unlucky. But Mr. Brown is the one who is more likely to be kicking himself, because he acted out of character in this one instance.

Decision makers know that they are prone to regret, and the anticipation of that painful emotion plays a part in many decisions. Consider the following example: *Paul owns shares in company A. Considering switching to stock in company B, he decided against it. George owned shares in company B, but switched to stock in company A. It turns out that both men would have been better off by $1,200 if they had had stock in company B.* Who feels greater regret? The results are clear-cut: 8% of respondents said Paul, 92% said George. This is curious, because the situations of the two investors are objectively identical. The only difference is that George got to where he is by acting, whereas Paul got to the same place by failing to act.

This short example illustrates that (3)people expect to have stronger emotional reactions (including regret) to an outcome that is produced by action than to the same outcome when it is produced by inaction: This has been verified in the context of gambling: people expect to be happier if they gamble and win than if they refrain from gambling and get the same amount. The asymmetry is at least as strong for losses, and it applies to blame as well as to regret.

The asymmetry in the risk of regret favors conventional and risk-avoiding choices. The bias appears in many contexts. Even life-or-death decisions can be affected. Imagine a physician with a gravely ill patient. One treatment fits the normal standard of care; another is unusual. The physician has some reason to believe that the unconventional treatment improves the patient's chances, but the evidence is inconclusive. The physician who prescribes the unusual treatment faces a substantial risk of regret, blame, and perhaps lawsuits. It will be easier to imagine the normal choice; the abnormal choice will be easy to undo. (4)True, a good result will contribute to the reputation of the physician who dared, but the potential benefit is smaller than the potential cost because success is generally a more normal outcome than is failure.

(出典: Daniel Kahneman. *Thinking, Fast and Slow.* Farrar, Straus and Giroux. 2011. 一部変更あり)

(1) 下線部(1)を和訳せよ。

(2) 下線部(2)について、我々がスミス氏、ブラウン氏についてそれぞれこのように言いたくなるのはなぜか、60 字以内の日本語（句読点を含む）で答えよ。

									60

(3) 下線部(3)を和訳せよ。

(4) 下線部(4)を和訳せよ。

ハイレベル読解問題演習 88

（大阪医科薬科大 2019）

以下の英文を読み、下線部を和訳せよ。

One of the typical features of the new science of learning is its emphasis on learning with understanding. Intuitively, understanding is good, but it has been difficult to study from a scientific perspective. (1)At the same time, students often have limited opportunities to understand or make sense of topics because many areas of curriculum have emphasized memory rather than understanding. Textbooks are filled with facts that students are expected to memorize, and most tests assess students' abilities to remember the facts. When studying about veins and arteries, for example, students may be expected to remember that arteries are thicker than veins, more elastic, and carry blood from the heart; veins carry blood back to the heart. A test item for this information may look like the following:

Select the best of the answer choices given.

1. Arteries
   a. Are more elastic than veins
   b. Carry blood that is pumped from the heart
   c. Are less elastic than veins
   d. Both a and b
   e. Both b and c

The new science of learning does not deny that facts are important for thinking and problem solving. Research on expertise in areas such as chess, history, science, and mathematics demonstrates that experts' abilities to think and solve problems depend strongly on a rich body of knowledge about subject matter. However, the research also shows clearly that "usable knowledge" is not the same as a mere list of disconnected facts. Experts' knowledge is connected and organized around important concepts; it is "conditionalized" to specify the contexts in which it is applicable; it supports understanding and transfer (to other contexts) rather than only the ability to remember.

For example, people who are knowledgeable about veins and arteries know more than the facts noted above: they also understand why veins and arteries have particular properties. They know that blood pumped from the heart exits in spurts and that the elasticity of the arteries helps accommodate

pressure changes. (2)They know that blood from the heart needs to move upward (to the brain) as well as downward and that the elasticity of an artery permits it to function like a one-way valve that closes at the end of each spurt and prevents the blood from flowing backward. Because they understand relationships between the structure and function of veins and arteries, knowledgeable individuals are more likely to be able to use what they have learned to solve novel problems — to show evidence of transfer. For example, imagine being asked to design an artificial artery — would it have to be elastic? Why or why not? An understanding of reasons for the properties of arteries suggests that elasticity may not be necessary — perhaps the problem can be solved by creating a conduit* that is strong enough to handle the pressure of spurts from the heart and also function like a one-way valve. (3)An understanding of veins and arteries does not guarantee an answer to this design question, but it does support thinking about alternatives that are not readily available if one only memorizes facts.

(出典: John D. Bransford, et al. (eds.). *How People Learn: Brain, Mind, Experience, and School.* National Research Press. 2000. 一部変更あり)

*conduit: a pipe or channel through which a liquid passes

ハイレベル読解問題演習 89

（大阪医科薬科大 2018）

以下の英文を読み、下線部(1)～(4)を和訳せよ。ただし、(1)の“they”と(4)の“Both”が何を指すかを明らかにして訳すこと。

Thought, or reflection, is the mental act of discerning the relation between what we try to do and what happens in consequence. No experience having a meaning is possible without some element of thought. But we may contrast two types of experience according to the proportion of reflection found in them. All our experiences have a phase of "cut and try" in them — what psychologists call the method of trial and error. We simply do something, and when it fails, we do something else, and keep on trying till we hit upon something which works, and then we adopt that method as a rule-of-thumb*[1] measure in subsequent procedure. Some experiences have very little else in them than this process. In these cases, we see *that* a certain way of acting and a certain consequence are connected, but we do not see *how* they are. We do not see the details of the connection; the links are missing. Our discernment is very gross.

In other cases we push our observation farther. We analyze to see just what lies between so as to bind together cause and effect, activity and consequence. This extension of our insight makes foresight more accurate and comprehensive. (1)The action which depends simply upon the trial and error method is at the mercy of circumstances; they may change so that the act performed does not operate in the way it was expected to. But if we know in detail upon what the result depends, we can look to see whether the required conditions are there. This method extends our practical control. For if some of the conditions are missing, we may, if we know what the needed conditions for an effect are, set to work to supply them; or, if they are likely to produce undesirable effects, we may eliminate some of the superfluous*[2] causes and economize effort.

In discovery of the detailed connections of our activities and what happens in consequence, the thought implied in cut and try experience is made explicit. Its quantity increases so that its proportionate value is very different. Hence the quality of the experience changes; the change is so significant that we may call this type of experience "reflective". The deliberate cultivation of this phase of thought constitutes "thinking". (2)Thinking, in other words,

is the intentional endeavor to discover specific connections between something which we do and the consequences which result, so that the two become continuous. The occurrence is now understood; it is explained; it is reasonable, as we say, that the thing should happen as it does.

Thinking is thus equivalent to an explicit rendering of the intelligent element in our experience. It makes it possible to act with an end in view. It is the condition of our having aims. As soon as an infant begins to expect he begins to use something which is now going on as a sign of something to follow; he is, in however simple a fashion, judging. For he takes one thing as evidence of something else, and so recognizes a relationship. Any future development, however elaborate it may be, is only an extending and a refining of this simple act of inference. (3)All that the wisest man can do is to observe what is going on more widely and more closely and then select more carefully from what is noted just those factors which point to something to happen. The opposites to thoughtful action are routine and capricious*[3] behavior. The former accepts what has been customary as a full measure of possibility and omits to take into account the connections of the particular things done (it says, in effect, "let things continue just as I have found them in the past"). The latter makes the momentary act a measure of value, and ignores the connections of our personal action with the energies of the environment (it says, virtually, "things are to be just as I happen to like them at this instant"). (4)Both refuse to acknowledge responsibility for the future consequences which flow from present action. Reflection is the acceptance of such responsibility.

(出典: John Dewey, Democracy and Education: *An Introduction to the Philosophy of Education.* The Macmillan Company. 1916. 一部変更あり)

*[1] rule-of-thumb: based on practice rather than theory

*[2] superfluous: more than sufficient or required

*[3] capricious: likely to change one's mood or behavior unexpectedly

ハイレベル読解問題演習 90

（大阪医科薬科大 2018）

以下の英文を読み、下線部を和訳せよ

Humans are unlikely to ever blow out more than 125 candles on their birthday cake, according to research that suggests that our lifespan has already hit its natural limit.

The oldest human who ever lived, according to official records, was 122-year-old Frenchwoman Jeanne Louise Calment, who died in 1997. Now a team of American researchers suggests (1)she is unlikely to lose the top spot any time soon, as their research shows that though more people reach old age each year, the ceiling for human lifespan appears to be stuck at around 115 years. "The chances are very high that we have really reached our maximum allotted lifespan for the first time," said Jan Vijg, co-author of the research.

Some scientists have previously claimed that the first person to reach 1,000 years old is likely to be alive today. But the new study suggests that is highly unlikely. The upshot, says Vijg, is that people should focus on enjoying life and staying healthy for as long as possible; "That's where we have to invest our money."

The notion of extending the human lifespan has captured imaginations for millennia. Among scientists, enthusiasm for the idea has grown in recent years with a host of Silicon Valley companies springing up to join academic institutions in making various attempts to work on issue of longevity.

But the new study describes how analysis of records from a number of international databases suggests there is a limit to human lifespan, and that we have already hit it. Using data for 41 countries and territories from the Human Mortality Database, the team found that life expectancy at birth has increased over the last century. That is due to a number of factors, including advances in childbirth and maternity care, clean water, the development of antibiotics and vaccines and other health measures. But while the proportion of people surviving to 70 and over has risen since 1900, the rate of improvements in survival differ greatly between levels of old age. Large gains are seen for ages 70 and up, but for ages 100 or more the rate of improvement drops rapidly. "For the oldest old people, we are still not very good at reducing their mortality rates," said Vijg.

(2)The researchers also found that the maximum reported age at death rapidly increased between 1970 and the early 1990s, rising by around 0.15

years every year, but it has remained stable at around 115 years since the mid-90s. The apparent limit to human lifespan, the authors say, is not due to a set of biological processes specifically acting to call time on*[1] life. Rather, it is a byproduct of a range of genetic programmes that control processes such as growth and development.

Henne Holstege from VU University, Amsterdam, who works on ageing of centenarians*[2], says the new study suggests "there seems to be a wall of mortality that modern medicine cannot overcome". "If you die from heart disease at 70, then the rest of your body might still be in relatively good health. So, a medical intervention to overcome heart disease can significantly prolong your lifespan," she said. "However, in centenarians not just the heart, but all bodily systems, have become aged and frail. If you do not die from heart disease, you die from something else." (3)Medical interventions, she says, cannot solve the problem of overall decline, with the only promising approach lying in slowing down the ageing process itself. But, she added, "It is however not yet clear if and how this can be accomplished."

(出典: *The Guardian*, 5 October 2016. 一部変更あり)

*[1] call time on ...: decide that it is time to end ...

*[2] centenarian: a person who is 100 years old or older