

I 次の英文を読み、下の問いに答えなさい。

How do migrating birds find their way? First we must ask, what possible clues are there? If birds are flying over land, where there are features below that are distinct and stay the same for year after year — rivers, roads, forests, coastlines — then, of course, they can use their eyes. There is plenty of evidence that birds do just this. Many, for example, follow coastlines and thread their way through straits and mountain passes.

When they get very close to where they want to be, many use their sense of smell. Homing pigeons give a clue to this. (“Homing” is not the same as migration. It suggests that pigeons can find their way home when taken by train or truck to some far-distant place and then released. But homing surely has some of the same mechanisms as migration does, and so can give clues to how it works.) It seems that as pigeons get fairly close to their home, they first pick up general smells that tell of bird dwellings — perhaps the general tempting stink of ammonia. As they get nearer, the smells become more specifically pigeon-like. Finally, as they get very close, they recognize the very particular odor of their own flock in its own space. More and more evidence is revealing that humans, too, have a wonderful awareness of odor, even if they do not consciously recognize it, such that they find particular men or women attractive or disgusting according to their primitive substances such as sweat: no doubt a cooling thought for those who like to suppose that human beings have risen above such things. We do not normally think of birds (^(A) ①) creatures that attach importance to smell, but many of them do, in many contexts.

But what use are visual clues when a bird is above some apparently ^(B) boundless ocean? What value is smell when it is a thousand miles from where it wants to be? What else is there?

Quite a lot, is the answer. On the visual front, there is the sun by day and the moon and stars by night. These are hard to make good use of unless the bird

also has some sense of time, so it knows where the sun or the moon ought to be at a particular time; but birds do have a sense of time.

Human beings navigate by the heavenly bodies, too, but we make a great science of it. The skills of the navigator were among the most complex and prized in all the world's navies until well into the nineteenth century, when sailors in danger could find out where they were by radio. Traditional long-distance sailors needed telescopes and charts, and pages and pages of tables, to help them work out where they were. Birds have to do all this in their heads, in their bird brains, on the wing. The problem conceptually is the same as we meet in discussing the diving of fish-eating seabirds (how they always fold their wings at exactly the right time). In each case the math is immensely complicated, once you spell it out. But presumably birds on the wing, not familiar (②) mathematics, don't spell it out. They must have some practical rules that (C) instantly translate the cues that are offered by the sun and stars and moon into directives for purposeful action.

Again, there are clues and stories that seem to be throwing some light. For instance, many kinds of birds are known to use star maps. In the early weeks of life the baby birds sit in their nests and study the night sky — and are somewhat confused if those early weeks are too cloudy. But they do not, as human amateur astronomers might do, spend their time learning the individual constellations — how to recognize Orion or trace the fanciful outline of Taurus, or whatever. Instead, they focus (③) the part that does not move as the night progresses, which in the Northern Hemisphere means the North Star. They can see, if they look at it long enough, that as the night progresses, all the stars in the sky, including the mighty Orion and the notional Taurus, seem to revolve around the Pole Star, which sits in the middle like the central part of a giant cartwheel. Once they recognize the central part, the most fundamental problem (D) is solved. The creature that can do this knows where north is and everything

else can be figured out. I don't know what the equivalent would be in the Southern Hemisphere, but undoubtedly there is one. Navigation simply does not seem to need the details of astronomy. (adapted from Colin Tudge, *The Bird*)

注 *constellation 星座 *Orion オリオン座 *Taurus 牡牛座

問 1 下線部(A)について、筆者が言おうとしていることを、本文に即して具体的に日本語で説明しなさい。

問 2 下線部(B)を日本語に訳しなさい。

問 3 下線部(C)を日本語に訳しなさい。

問 4 下線部(D)の意味を、本文に即して具体的に日本語で説明しなさい。

問 5 本文中の空欄①～③に適切な前置詞を一つずつ入れなさい。

II 次の英文を読み、下の問いに答えなさい。

When I was young I was a fairly good judge of age. No longer. Everyone between twenty and forty looks more or less the same to me, and so does everyone between forty and sixty. But for some reason I can tell the ages of children very accurately: I can see the difference between three and a half and four, or eight and nine.

Also, my friends do not age. They all seem around forty-five. Some are in fact around forty-five and some are less: over the years I've made several young friends, partly with selfish calculation ^(A) — in case I live long, I won't find myself friendless, the friends of my age having died off. But even the older ones seem around forty-five. If I make a serious effort to recall their age, I always come up with the age they were when I first learned it, as if our friendship has persisted in a timeless world. This is true even of the friends who are what is called “a certain age” — the women, that is, for it is invariably women who attain a certain age; men have a number. ^(B)

“A certain age.” As if the actual number were too shameful to say. A phrase rich with contempt in the guise of respect. Cancer was spoken of that way not so long ago. People didn't want to embarrass the poor sufferer by speaking the word. And they were inclined to believe in superstition — it might happen to them if they even let the word float over their tongues. “He has a growth,” they would say. “It's fatal,” if they were brave. A certain age is fatal too. I will surely die of it in time.

Now that I myself may be a certain age — I'm not sure when it starts, since it is never defined clearly — I think about age all the time. I think about age the way younger people think about love. I haven't stopped thinking about love, but its mysteries no longer annoy me. I know a lot about love at my certain age. But age is still a mystery, so I think about it. I watch for its visible signs. Those are horrible in their gradualness and irreversibility, and I work hard at slowing

their progress. I imagine a contest between my efforts and age's invasions. I know, of course, who the winner will be; the thrill of the contest is seeing how long I can delay its victory. The signs I watch for more closely are not the obvious ones but the negative ones, the little things I can no longer do, or do as well. The weakening of the body. So far there is little and I would not, at this point at least, dream of naming any specific things.

Thinking about age has borne prejudices. I have prejudices about people depending on their ages; I like to know people's ages so I can judge them properly. I favor the old. I have always had a kinship for the old, even when I was young. I like the way they look. I've never especially connected beauty with youth and am always surprised when someone says of an older woman, a woman of a certain age, she must have been a great beauty, since to me she still is.

The old are more substantial, even when physically weak. Time has deepened their nature and their words along with their skin and their voices. I tend to think the opinions of people under thirty-five can be ignored; by the time they're forty or so they may be worth paying attention to. People over fifty are trustworthy; over sixty, they're either wise or they should be. All this is very wrong, I know. Older people tolerated me and listened to me when I was young. I appreciate now how tolerant they were. And yet, I cling to my prejudices as truth.

Even worse, I feel the only people who can understand and properly appreciate me are around my age. I used to allow a ten-year range for this understanding, then a five-year range. Now I feel the most kinship for people within two or three years of my age, and the time may come when I can speak freely and wholeheartedly only to people born in the same month as I was.

One of the many things young people don't know is that everyone no longer young in their real age is privately young, or at least younger; we all have an age at which, subjectively, we stop aging. We are comfortable there and remain there: perhaps it's the age at which we feel fully ourselves, or feel finally grown

up. But if we each have a perfect age, what happens when we pass it? We lead a kind of double life, one life in the actual world, where the numbers pile up, and the other in an ageless land. (adapted from Lynne Schwartz, "At a Certain Age," *The Threepenny Review* [Spring, 1999])

問 1 下線部(A)を日本語に訳しなさい。

問 2 下線部(B)の a number とは何か, 日本語で具体的に説明しなさい。

問 3 下線部(C)を日本語に訳しなさい。

問 4 下線部(D)の my prejudices とはどのようなものか, 本文に即して 40 字以内の日本語で説明しなさい(句読点を含む)。

問 5 下線部(E)の意味を, 本文に即して分かりやすく日本語で説明しなさい。

Ⅲ 次の英文は、留学生 Joe と Mark の会話です。この会話を読んで、下の英語の質問にあなたはどうか答えますか。自分の考える返答を英語で書きなさい。

JOE: Hi, Mark. How is it going? Did you finally get your bath boiler fixed in your apartment?

MARK: Well, actually not yet. I'm still waiting for the people to let me know when they are going to come and fix it. And the worst thing about it is that they want to make me pay for it, even though I just moved in. There's no way that's going to happen. The place was built around thirty years ago or so. How's it with you?

JOE: I didn't expect Sendai to be this cold in April. I need to get a room heater or more blankets or something soon. I can't study in my room; it's just too cold. I usually just get home as late as possible, then take a bath and go to bed.

MARK: Speaking about studying, I wanted to ask you how your classes are going. I'm OK in my Chinese class, but I can't really follow the Japanese lectures in my other classes very well. How about you?

JOE: My Japanese is pretty good and I have been taking notes in my classes. I can lend you my notes for the classes that we have together.

MARK: Awesome. That would be great if you could lend me them just long enough to copy. That reminds me, for the Japanese history class, I've ordered some books about Japanese history that are in English from the on-line bookstore. It sure beats trying to read that stuff all in Japanese. I can share them with you too when they arrive, if you like.

JOE: Hey great. By the way, do you have any plans for this Friday evening? I discovered a really cool live-music place that you might like. It has an open stage and the customers can play what they like. Some bring their own guitars.

MARK: Sounds cool. Let's check it out.

Question: How do you think Mark is going to use the books that he ordered from the on-line bookstore?

Ⅳ 次の文章を読み、下線部(A), (B)を英語に訳しなさい。

[立花隆『知のソフトウェア』より一部変更]

都合により省略