

大阪医科大学

平成24年度入学試験問題(後期)

英 語

注 意

1. 合図があるまで表紙をあげないこと。
2. 受験票は机に出しておくこと。

I 下線部を和訳せよ。ただし、下線部(4)に関しては、“the latter”の指示内容を明確にすること。

Individuals of many animal species exploit the experience and hard work of others by learning things from them socially. When individuals socially learn to the degree that different populations of a species develop different ways of doing things, ⁽¹⁾ biologists now speak of culture. In this very broad perspective, many animal species live in culturally distinct groups, including a variety of species of birds, marine mammals, and primates.

Humans, of course, are the paradigmatic cultural species. Unlike their nearest great-ape relatives, who all live in Africa or Asia in the general vicinity of the equator, humans have spread out all over the globe. Everywhere they go, they invent new artifacts and behavioral practices for dealing with the exigencies of the local environment. In the Arctic, indigenous populations build igloos and hunt whales in kayaks, whereas in the Tropics they build straw huts and hunt terrestrial mammals with bows and arrows. For humans such artifacts and behavioral practices are not niceties but necessities. Few humans could survive in either the tundra or a tropical rainforest in the absence of a cultural group possessed of relevant, preexisting artifacts and behavioral practices. In terms of the number of things an individual human must socially learn, ⁽²⁾ human culture, as compared with that of other animal species, is quantitatively unique.

But there are two clearly observable characteristics of human culture that mark it as qualitatively unique as well. The first is what has been called cumulative cultural evolution. Human artifacts and behavioral practices often become more complex over time (they have a “history”). An individual invents an artifact or way of doing things that is adequate to the task, and others quickly learn it. But then if another individual makes some improvement, everyone, including developing children, tends to learn the new and improved version. This produces a kind of cultural ratchet*, as each version of the practice stays solidly in the group’s repertoire until someone comes up with something even newer and more improved. This ⁽³⁾ means that just as individual humans biologically inherit genes that have been adaptive in the past, they also culturally inherit artifacts and behavioral practices that represent something like the collective wisdom of their ancestors. To date, no animal species other than humans has been observed to have cultural behaviors that accumulate modifications and so ratchet up in complexity over time.

The second clearly observable feature of human culture that marks it as unique is the creation of social institutions. Social institutions are sets of behavioral practices governed by various kinds of mutually recognized norms and rules. For example, all human cultures engage in mating and marriage in the context of their own rules. If one violates these rules, one is sanctioned in some way, perhaps even ostracized** totally. As a part of the process, humans actually create new culturally defined entities, for example, husbands and wives (and parents), who have culturally defined rights and obligations. As a different example, all human cultures have rules and norms for sharing or possibly trading food and other valuable objects. In the process of exchange, some objects may be accorded the cultural status of money (e.g., specially marked paper), which gives them a certain, culturally backed role. Other sets of rules and norms create leaders of the group, such as chiefs and presidents, who have special rights and obligations to make decisions, or even create new rules, for the group. As for the cultural ratchet, so for social institutions: No animal species other than humans has been observed ⁽⁴⁾ to have anything even vaguely resembling the latter.

(出典：Michael Tomasello, *Why We Cooperate*, MIT Press, 2009. 一部変更あり)

*ratchet: a machine part consisting of a wheel or bar with teeth on it, which allows movement in only one direction

**ostracize: exclude from the society or group

II 下線部を和訳せよ。

We are all natural-born runners, although many of us forget this fact. I will never forget when I first ran barefoot as a child on the warm sand of a lonely wooded road in Germany, where I smelled the pines, heard wood pigeons coo, and saw bright green tiger beetles running or flying ahead of me. I will never, *never* forget running on asphalt pavement on October 4, 1981, more than thirty years later. On that day I raced a 100-kilometer distance in Chicago with 261 other men and women. When I began to think about what running is all about for us humans, and why I raced, I was surprised at the vividness of my distant memories, and at my new revelations. There were many worlds between the small boy running barefoot on the sand and the forty-one-year-old biologist wearing Nikes on the Chicago pavement. But now these memories were intertwined in my mind with the larger scheme of human existence that relates to our kinship with animals and goes back to the dawn of humankind. Those thoughts gave new meaning to this race.

Movement is almost synonymous with life. With elongating stems and twirling tendrils, plants race one another toward light. Similarly, the seeds of many plants compete to be first on the right piece of ground. Some may travel hundreds of miles by ingenious and diverse mechanisms: being carried by wind or water, or being ferried by berry-eating birds or fur-bearing mammals.

Animals move primarily on their own power: They harness chemical energy by means of muscles. But like plants, we humans have recently harnessed the wind, water, and other animals to carry us. And increasingly, our species, unlike any other, is tapping the energy from coal, oil, and the atom for locomotion.

Throughout the hundreds of millions of years of animal evolution, there has been selective pressure on some species to be able to travel farther and quicker, and to do it more economically and under ever more adverse conditions than either their competitors or their predators. Both predators and prey have to move faster or die. An anonymous runner captured the notion in this now-famous aphorism: “Every morning in Africa, an antelope wakes up. It knows it must outrun the fastest lion, or it will be killed. Every morning in Africa, a lion wakes up. It knows it must run faster than the fastest antelope, or it will starve. It doesn’t matter whether you’re a lion or an antelope — when the sun comes up, you’d better be running.” Of course, these animals don’t need to know — they must only be fast.

With the help of our infinite imagination and the technologies it has produced, we now travel faster, more economically, and well beyond the range of our muscle power. But for millions of years, our ultimate form of locomotion was running. We are, deep down, still runners, whether or not we declare it by our actions. And our minds, as much as our lungs and muscles, are a vital force that empowers our running. Whenever one of us jogs down a road or when we line up to race in a marathon, we are not only celebrating life in general and our individual aliveness but we are also exercising our fantasies while acknowledging reality. We are secure in the knowledge that there is no magic. Which is not to say the world is only of simple logic, because although it may be simple in its design, it is awesomely complex in its details.

I’ve run at varying distances and intensities almost all of my life, probably because the primal unadorned simplicity of running appeals to me. Various games incorporate running, but only running itself touches the pure and basic essence of their tension between speed and endurance, stripped bare of our everyday world of technology.

(出典：Bernd Heinrich, *Why We Run*, Harper Collins, 2002. 一部変更あり)

III 下線部を英訳せよ。

最近の研究によると、ある種のスズメの歌に「方言」があることがわかった。スズメを含む多くの鳥類は、歌を親鳥や近所の鳥から習う。その学習の過程で、世代から世代へと受け継がれていく間違いがあり、それによって同じ種の中で異なる方言が作り出されるのだ。 ⁽¹⁾ 実験を行った研究者たちは、メスは、オスの歌が耳慣れたものであるときにはそのオスに四倍反応しやすいことを発見した。⁽²⁾ メスが近所のオスの方を好むことによって、いつか新たな種が生じることになるかもしれない。 ⁽³⁾

英語 (後 期)

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受 験 番 号

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II

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III

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