

[1] 次の英文を読み，設問に答えなさい。(神戸)

Natural selection occurs because of the reproductive advantages of some individuals. This view of the world implies that all individuals are in competition with each other and will behave to (1) further their own interests. From a philosophical viewpoint, the idea that the world is full of selfish individuals clashes with many of the values we hold for human societies, such as cooperation, community spirit, and selflessness. Does the variety of behaviors that we observe in animals, even the (2) apparently cooperative ones, really arise from the interactions of selfish individuals? Can traits evolve that favor the larger interests of a group or society? Does evolution lead only to selfishness? These are key questions that interest social scientists, philosophers, and biologists. (a) Biologists do not think that individuals ever act for the good of the species, but there are many situations in which what appear to be selfish individual behaviors actually benefit a group.

It is easy to imagine that populations of selfish individuals might overexploit the available resources and become extinct, whereas populations that have evolved social behaviors preventing overexploitation of resources might have better long-term survival prospects. Natural selection for traits that favor groups rather than individuals is termed group selection. The idea that groups of animals could evolve self-regulating mechanisms that prevent overexploitation of their food resources was first argued in detail in 1962 by (b) V. C. Wynne Edwards, an ecologist in Scotland. Despite its intuitive appeal, group selection is not considered very important in producing changes in species traits. Group selection operates much more slowly than individual selection, making it a much weaker selective force in most circumstances.

Imagine, for example, a species of bird, such as the puffin that lives in large colonies and lays only a single egg. Could laying a single egg have evolved in puffins by group selection to limit population growth and maintain an adequate food supply for the long-term good of the puffin colony? The answer is no. Any genetic change that increased the number of eggs laid would be favored only if individuals laying two eggs leave more copies of their genes to the next generation, compared with birds laying a single egg. But ecologically speaking, costs would increase as well as benefits. A puffin with two eggs would have to collect more calcium to lay two eggs and would have to fly more to feed two young. There are ecological costs to increasing (3) the clutch size in puffins. Consequently, genes for laying two eggs would not spread through the population unless the benefits would exceed (c) the costs.

Individual selection favors the small clutch size in puffins. Short-term advantages to selfish individuals will develop much more quickly than long-term advantages to the group, so it is difficult to see how traits favored by group selection can be maintained in a population unless they are also favored by individual selection.

But this does not mean that all behavior must be selfish and that (4) altruism does not exist. To understand apparently cooperative behaviors that benefit the group or society, we need to look for the benefits to individuals. Individual selection can produce behaviors that are a benefit for the group.

問1 下線部(1)～(4)の語(句)の本文中での意味に最も近い表現を、下からそれぞれ1つ選びなさい。

(1) further

(あ) control (い) promote (う) separate (え) throw away

(2) apparently

(あ) certainly (い) clearly (う) oddly (え) seemingly

(3) the clutch size

(あ) the amount of available food resources
(い) the distance of flight required to obtain food
(う) the quantity of eggs laid in a single nest
(え) the size of a colony in one area

(4) altruism

(あ) egoism (い) helplessness
(う) individualism (え) selflessness

問2 下線部(a)を日本語に訳しなさい。

問3 下線部(b)の V. C. Wynne Edwards の考えはどういうものか。50字以内の日本語で説明しなさい。ただし、句読点も1字に数える。

問4 下線部(c)の具体例を50字以内の日本語で書きなさい。ただし、句読点も1字に数える。

[2] 次の英文を読み，設問に答えなさい。(一橋)

There are, of course, many motivating factors in human behavior, but we would claim that nationalism is particularly worthy of study. Why is it particularly significant? (1)Its significance lies in its power to arouse passionate loyalties and hatreds that motivate acts of extreme violence and courage; people kill and die for their nations. Of course it is not alone in this: people are driven to similar extremes to protect their families, their extended families or 'tribes,' their home areas with their populations, and their religious groups and the holy places and symbols of their religions. However, these other loyalties are often rather (a) to understand than nationalism. Parents making supreme sacrifices for their children can be seen (b) obeying a universal law in life forms, the instinct to protect one's own genetic material. This instinct can also be seen at work in the urge to protect one's extended family; but then the extended family, or on a slightly larger scale the 'tribe,' can also be seen, in perhaps the majority of circumstances in which human beings have existed, (c) essential for the survival of the individual and of the nuclear family. The nation is not generally essential to survival in this way. Of course, if the entire nation were to be wiped out, the individuals and their families would die, but the (d) of the nation as a social unit would not in itself pose a threat to individual or family survival; (2)only if it were to be accompanied by ethnic violence or severe economic collapse would it be life-threatening, and such disastrous events are not an inevitable consequence of the loss of political independence. Conversely, there is no logical connection between the gaining of political independence by a subject nation and increased life chances for its citizens. In many, perhaps the vast majority, of modern nations there is likewise no evidence that in (A) [one, the, one's, own, genetic, nation, defending, is, defending] material; the notion that the citizens of modern nations are kinsfolk, while the citizens of (potentially) hostile neighbors are aliens, makes no sense in view of the highly varied genetic make-up of most modern populations.

1. 下線部(1)を日本語に訳しなさい。
2. 下線部(2)を日本語に訳しなさい。
3. 空欄(a)に入れるのにふさわしい "e" で始まる英語 1 語を書きなさい。
4. 空欄(b), (c)には同一の語が入る。その英語 1 語を書きなさい。
5. 空欄(d)に入れるのにふさわしい "dis" で始まる英語 1 語を書きなさい。
6. 下線部(A)の[]内に与えられた語を正しい語順に並べ替えなさい。

[3] 次の日本語を英語に訳しなさい。

時間を正確に守らないのは、忙しすぎる人と、暇すぎる人に多いようだ。前者は、他人は自分ほど忙しくないだろうから、少しぐらい待ってもらっても許されるだろうと考え、後者は、他人にも暇な時間がたっぷりあると考えている。どちらも自己中心の考え方であることは言うまでもない。

- ・時間を正確に守らないのは、... する人と～する人に多い＝時間を正確に守らない人の多くは... する人か～する人（のどちらか）である
- ・前者(＝前者のタイプの人々) 前者、後者は単数形でも、この場合は複数扱い
- ・少しぐらい待ってもらっても許されるだろう＝少しの間待たせ(続け)てもかまわないだろう / ... してもかまわないだろう＝could ...